

Debt analysis of prefecture-level city LGs in Zhejiang and Jiangsu provinces

Content

Summary	1
The variance of debt ratios among Zhejiang's LGs is smaller and overall debt levels are lower than their peers in Jiangsu province	3
Hidden debt makes up the bulk of broad debt in Jiangsu prefecture-level LGs and their hidden debt burden is generally higher than LGs in Zhejiang	4
Debt growth varies more, and we see higher growth in debt-to-GDP ratio among prefecture-level LGs in Zhejiang than Jiangsu	4
Average maturity of newly issued bonds and average residual maturity of outstanding LG bonds in Jiangsu were shorter than those of Zhejiang .	5

Summary

- Situated in the lower reaches of the Yangtze River and bordering the municipality of Shanghai, both Zhejiang province (AA-/Stable) and Jiangsu province (A+/Stable) are coastal provinces in eastern China (AA/Stable) and adjacent to each other. They are major economic provinces in China with vigorous economic development and economic strength in the front rank of the country. They have the highest and second-highest gross domestic production (GDP) per capita among Chinese provincial-level regions (excluding direct-administered municipalities).
- According to our analysis of government debt (including direct debt and hidden debt) of 11 prefecture-level local governments (LGs) in Zhejiang province and 13 prefecture-level LGs in Jiangsu province; we believe these prefecture-level LGs as a whole have a strong ability to support debt repayment. This is backed by their advanced economies and solid budgetary revenues. Our calculations show that debt ratios of most of the prefecture-level LGs in the two provinces were lower than the nation-wide local governments' average in 2019.
- We believe the overall debt levels of Zhejiang's prefecture-level LGs to be significantly lower than their peers in Jiangsu province and the variance of debt ratios to be smaller. Based on our calculations, the average broad-debt-to-revenue ratio of Zhejiang's prefecture-level LGs was 110% in 2019, 56 percentage points below that of Jiangsu. The city of Suzhou in Jiangsu province had the lowest government debt level, whereas the city of Zhenjiang in the same province had the highest among all LGs in the two provinces. The range of debt ratios in Jiangsu prefecture-level LGs is 254 percentage points while in Zhejiang the range is 150 percentage points.
- We believe hidden debt burden (referring to contingent liabilities with potential government support) is generally heavier in Jiangsu than in Zhejiang, as more than half of the broad debt in most of the prefecture-level LGs in Jiangsu was actually in the form of hidden debt. Our assessment reveals that the average hidden-debt-to-total-debt ratio of all LGs in 2019 was 58% in Jiangsu and 45% in Zhejiang. In addition, the average hidden-debt-to-revenue ratio was 95% in Jiangsu and 50% in Zhejiang. We believe the high hidden debt ratio of Jiangsu's prefecture-level LGs was mainly the result of its heavy investment in infrastructure in the recent decade. The LGs were financed by debt, especially borrowing through local government financing vehicles (LGFVs), resulting in a large number of LGFVs and significant amount of interest-bearing debts.
- Overall, the increase in debt-to-GDP ratio is not only higher on average but also diverged more greatly among prefecture-level LGs in Zhejiang province than those in Jiangsu province. Based on our calculations, when normalized by GDP, the city of Zhenjiang in Jiangsu province had the highest direct debt growth among all prefecture-level LGs in the two provinces during the 2017-2019 period. Hidden debt in the city has been under heavy pressure in recent years, so the Zhenjiang LG increased new direct debt to replace hidden debt. But the city of Zhoushan in Zhejiang province had the highest growth of hidden-debt-to-GDP ratio.

Contacts

Primary Analyst

Name Jameson Zuo
 Title Associate
 Tel. +852 3615 8341
 Email jameson.zuo@pyrating.com

Secondary Analyst

Name Lisa Hu
 Title Analyst
 Tel. +86 755 8321 0225
 Email li.hu@pyrating.com

This report is a translation of the original in Chinese, "[浙江省与江苏省地级市地方政府债务简析](#)", published on 16 July 2020. If there is any inconsistency or ambiguity between these two versions, the Chinese original will prevail.

- Our calculations show that both the average maturity of newly issued LG bonds and the average residual maturity of outstanding LG bonds in Jiangsu province were shorter than those of Zhejiang province. Usually, the majority of LG bonds are actually issued by provincial-level governments on behalf of city-level and county-level governments to fund the local projects. As a result, we believe that analysis of the bond maturity structure of provincial-level governments gives some insights into that of prefecture-level LGs. The average maturity of newly issued LG bonds has increased materially in both Zhejiang and Jiangsu provinces over the past five years and is clearly longer in Zhejiang. We believe such longer new issuance maturity is mainly a result of the relaxed issuance policies in place. In general, the stronger the budgetary strength an LG has, the longer bond maturity is. However, LGs often have flexibility in determining their bond issuance maturity based on their own needs. In terms of the residual maturity of existing bond outstanding, as of June 2020, Jiangsu is clearly shorter than Zhejiang and the nation-wide local governments' average.

Table 1: General government's debt of prefecture-level cities in Zhejiang and Jiangsu provinces (2019) [RMB 100 million]

City	Province	Broad debt/Rev.	Broad debt/GDP	GG's Rev.	GDP	Direct debt ¹	Hidden debt ²	Broad debt	Direct debt/Rev.	Hidden debt/Rev.
Suzhou	Jiangsu	74%	16%	4,208*	19,236	1,391	1,737	3,128	33%	41%
Jinhua	Zhejiang	76%	20%	1,220*	4,560	808	122	930	66%	10%
Wenzhou	Zhejiang	86%	32%	2,484	6,606	1,278*	851	2,129	51%	34%
Ningbo	Zhejiang	91%	27%	3,597	11,985	1,922	1,356	3,278	53%	38%
Taizhou	Zhejiang	93%	27%	1,479*	5,134	987	389	1,376	67%	26%
Hangzhou	Zhejiang	94%	32%	5,286*	15,373	2,541	2,407	4,948	48%	46%
Quzhou	Zhejiang	108%	40%	582	1,574	463	167	630	79%	29%
Zhejiang's prefecture-level cities		110%	34%	19,382	62,353	11,725	9,625	21,350	60%	50%
Jiaxing	Zhejiang	112%	31%	1,465	5,370	987	659	1,646	67%	45%
Xuzhou	Jiangsu	126%	25%	1,424*	7,151	938	856	1,794	66%	60%
Wuxi	Jiangsu	132%	22%	1,959	11,852	1,205	1,375	2,580	62%	70%
Lishui	Zhejiang	149%	41%	411*	1,477	526	86	612	128%	21%
Nantong	Jiangsu	152%	29%	1,807*	9,383	1,563	1,180	2,742	86%	65%
Suqian	Jiangsu	160%	35%	673	3,099	667	411	1,078	99%	61%
Jiangsu's prefecture-level cities		166%	34%	20,406	99,977	14,355	19,442	33,797	71%	95%
Changzhou	Jiangsu	168%	40%	1,774*	7,401	1,007	1,981	2,988	57%	112%
Shaoxing	Zhejiang	192%	48%	1,449*	5,781	1,039	1,740	2,779	72%	120%
Zhoushan	Zhejiang	194%	71%	503	1,372	442	534	976	88%	106%
Yangzhou	Jiangsu	194%	29%	882*	5,850	850	864	1,714	96%	98%
Taizhou	Jiangsu	199%	36%	921	5,133	759	1,078	1,837	82%	117%
Nanjing	Jiangsu	208%	52%	3,526*	14,030	2,585	4,743	7,329	73%	135%
Huzhou	Zhejiang	226%	66%	906*	3,122	733	1,314	2,047	81%	145%
Yancheng	Jiangsu	238%	46%	1,097	5,702	1,177	1,428	2,605	107%	130%
Huai'an	Jiangsu	253%	48%	734*	3,871	586	1,274	1,861	80%	174%
Lianyungang	Jiangsu	259%	54%	653*	3,139	531	1,161	1,692	81%	178%
Zhenjiang	Jiangsu	328%	59%	747*	4,127	1,097	1,354	2,450	147%	181%

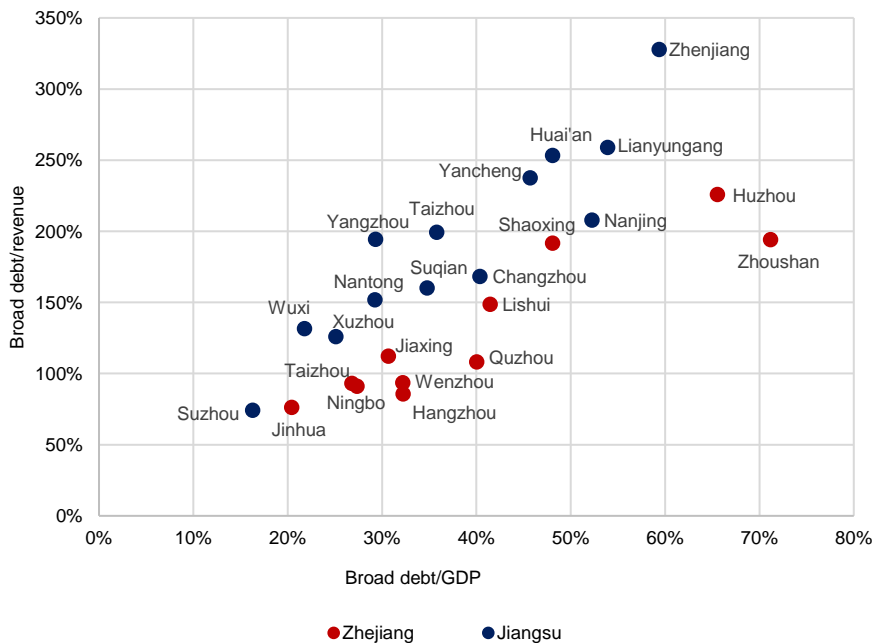
Note: 1. Direct debt is the reported debt balance at end of year by the government. 2. Hidden debt refers to the government's contingent liabilities, based on the calculation method of LGFVs' interest-bearing debts. 3. "*" indicates the data are estimations. Wenzhou's direct debt is estimation; except for Suqian, Taizhou, Wuxi, Yancheng, Zhoushan, Wenzhou, Jiaxing, Quzhou, Ningbo, subsidies from higher-level LG of other cities are estimated with reference to data in 2018.

Source: CSCI Pengyuan database, local governments' bureaus, Pengyuan International calculates.

The variance of debt ratios among Zhejiang's LGs is smaller and overall debt levels are lower than their peers in Jiangsu province

- When assessing debt levels, for the most part we consider the general government's (GG's) broad-debt-to-revenue ratio as this directly reflects the financial ability of LGs for debt payment. In addition, we use the GG's broad-debt-to-GDP as a supplementary indicator. We believe the overall debt levels of prefecture-level LGs to be significantly lower in Zhejiang than in Jiangsu and the variance of debt ratios to be smaller.
- According to our assessment, the average broad-debt-to-revenue ratio of Zhejiang's prefecture-level LGs was 110% in 2019, 56 percentage points below that of Jiangsu. The average broad-debt-to-GDP ratio of Zhejiang's LGs was closer to Jiangsu's, standing at about 34%.
- Our analysis shows that in terms of broad-debt-to-revenue ratio, the city of Zhenjiang in Jiangsu province had the highest GG's debt level and the city of Suzhou in the same province had the lowest among all LGs in the two provinces. The difference of the two cities' debt ratios is 254 percentage points, 104 percentage points higher than the maximum difference between any Zhejiang's prefecture-level LGs. When measured by broad-debt-to-GDP ratio, the city of Zhoushan in Zhejiang province with the smallest GDP had the highest debt ratio in 2019 among all prefecture-level LGs in the two provinces. Northern Jiangsu (including Lianyungang, Huai'an, and Yancheng) generally has a heavier GG's debt burden compared to Southern Jiangsu. The maximum difference of broad-debt-to-GDP ratios between any Zhejiang's prefecture-level LGs is 51 percentage points, slightly higher than 43 percentage points of Jiangsu's.
- We believe LGs in Zhejiang and Jiangsu provinces have strong ability to support debt repayment, backed by their advanced economies and solid budgetary revenues. Our calculations show that in 2019 the broad-debt-to-revenue ratio of most of the prefecture-level LGs was lower than the nation-wide local governments' average level of 228%, and the broad-debt-to-GDP ratio was below the nation-wide local governments' average of 59%.

Exhibit 1: General government's broad-debt-to-revenue ratio and broad-debt-to-GDP ratio of prefecture-level LGs in Zhejiang and Jiangsu provinces (2019)

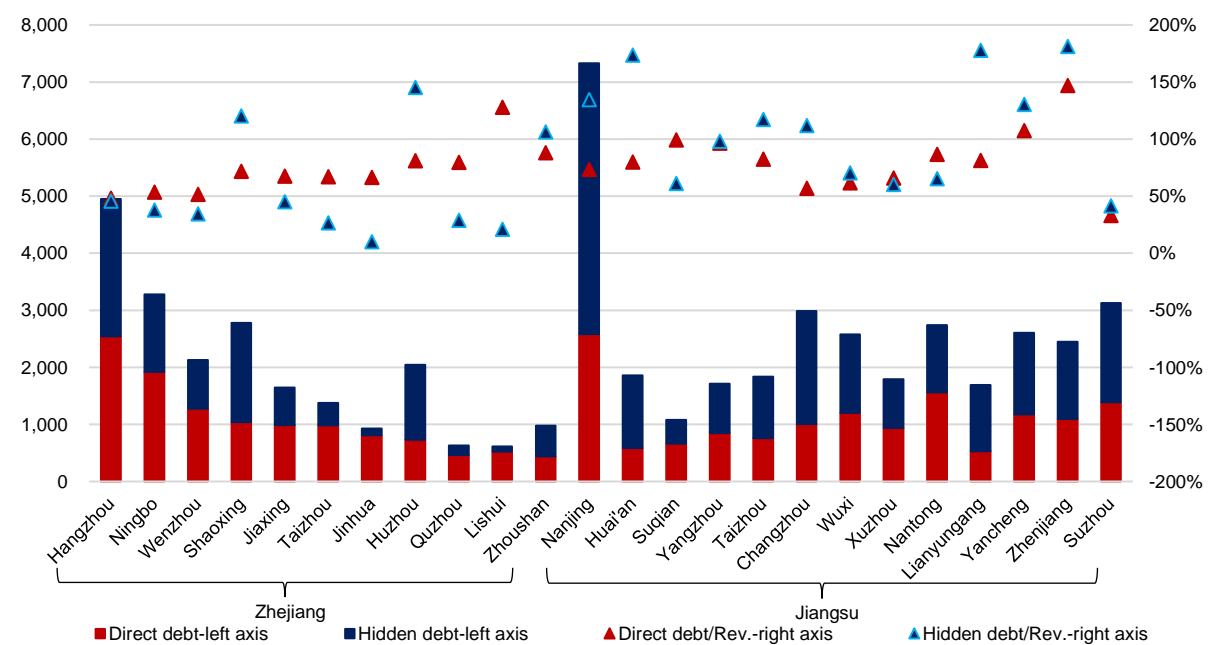


Source: CSCI Pengyuan database, local governments' bureaus, Pengyuan International calculates.

Hidden debt makes up the bulk of broad debt in Jiangsu prefecture-level LGs and their hidden debt burden is generally higher than LGs in Zhejiang

- Our calculations show that although Nanjing, Jiangsu's capital, had the highest absolute amount of direct debt and hidden debt in 2019 among the prefecture-level LGs in both provinces, its debt-to-revenue ratio and debt-to-GDP ratio were at lower middle range, supported by a strong local economy and solid budgetary revenue base.
- In terms of debt structure, we think direct debt accounted for more than half of the broad debt in most of the prefecture-level LGs in Zhejiang, whilst most of the broad debt was in the form of hidden debt in Jiangsu. In our assessment, the average hidden-debt-to-total-debt ratio of prefecture-level LGs in 2019 was 58% in Jiangsu versus 45% in Zhejiang.
- We believe the hidden debt ratios of Jiangsu's prefecture-level LGs are generally higher than their peers in Zhejiang. Based on our calculations, the average hidden-debt-to-revenue ratio of Jiangsu's prefecture-level LGs was 95% in 2019, but that of Zhejiang's LGs was 50%. In our view, Jiangsu province invested heavily in infrastructure in the past decade with limited support from the financial budget, so LGs mobilized funds through borrowing (particularly via LGFVs), which gives rise to a large number of LGFVs and significant amount of interest-bearing hidden debt.

Exhibit 2: General government's direct debt and hidden debt of prefecture-level cities in Zhejiang and Jiangsu provinces (2019) [RMB 100 million]



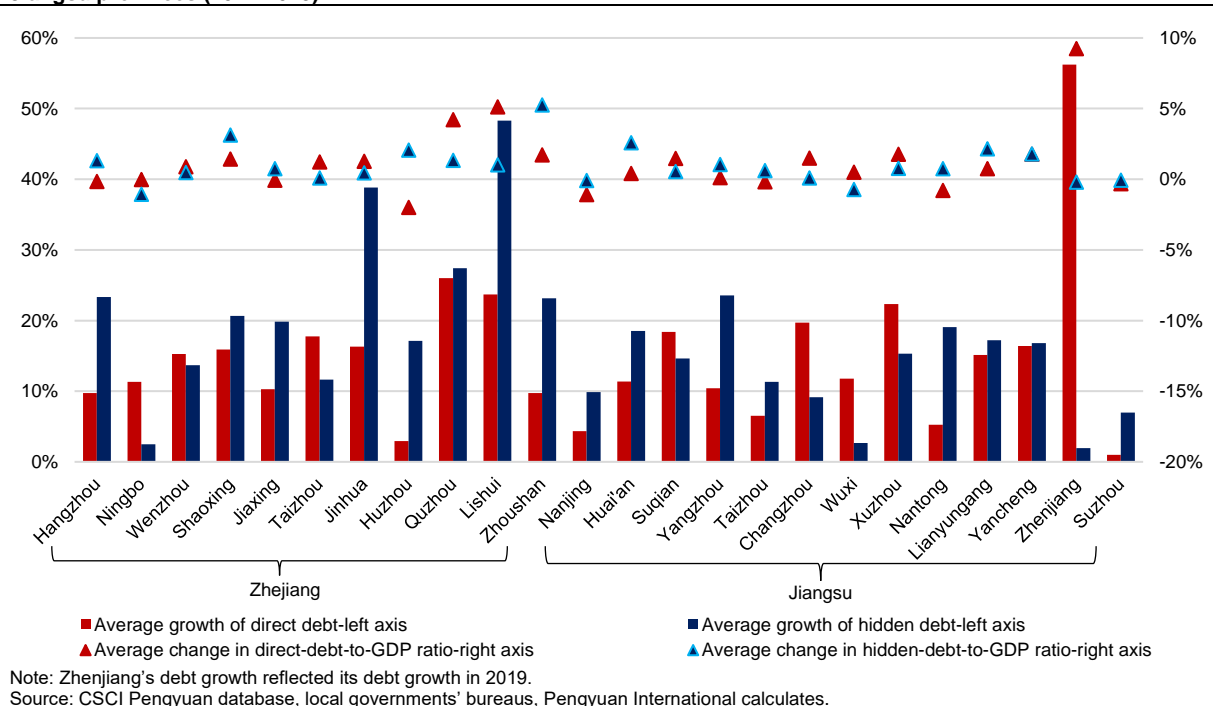
Source: CSCI Pengyuan database, local governments' bureaus, Pengyuan International calculates.

Debt growth varies more, and we see higher growth in debt-to-GDP ratio among prefecture-level LGs in Zhejiang than Jiangsu

- Our calculations show that in terms of the absolute debt growth and the rate of change of the debt-to-GDP ratio, the city of Zhenjiang had the fastest direct debt growth from 2017 to 2019 in both provinces. We believe this is related to its mounting hidden debt pressure, which has been partially resolved by replacing its hidden debt with direct debt (hidden debt increased by a lower percentage over the period). The city of Lishui had the highest absolute hidden debt growth, primarily as its hidden debt was relatively small and the LG accelerated public welfare projects through hidden debt funding in recent years. The city of Zhoushan had the biggest average change in hidden-debt-to-GDP ratio over the same period. We believe this was mainly due to the small size of its direct debt ceiling and having its direct debt balance close to the debt limit. The LG resorted to hidden debt to fund investment and drive economic growth.

- We believe when normalized by GDP, the average debt growth rate and the variance in the debt growth rates among prefecture-level LGs are higher in Zhejiang than in Jiangsu. According to our assessment, apart from Zhenjiang, the mean of average change in the direct-debt-to-GDP ratio and hidden-debt-to-GDP ratio of prefecture-level LGs in Jiangsu from 2017 to 2019 was -0.05 and 0.45 percentage points respectively while in Zhejiang it was 0.22 and 0.85.

Exhibit 3: General government's direct debt growth and hidden debt growth of prefecture-level cities in Zhejiang and Jiangsu provinces (2017-2019)



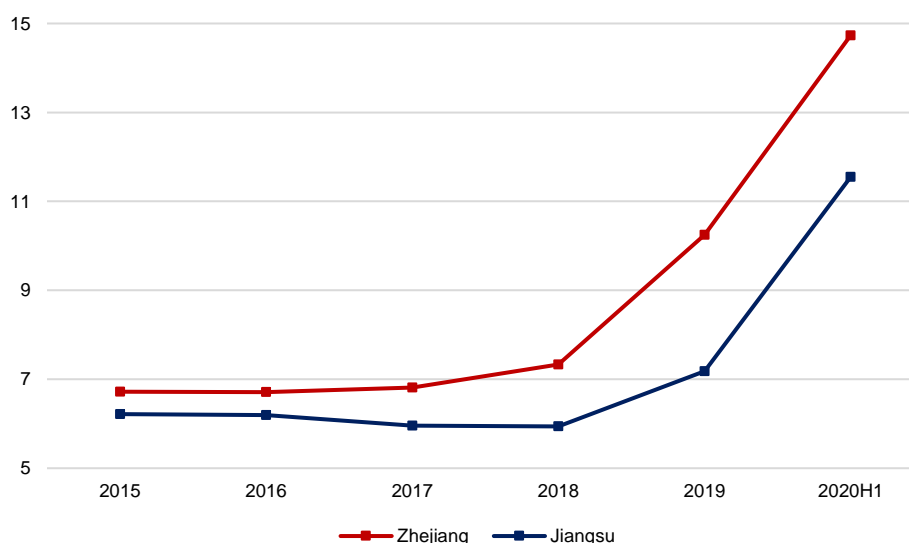
Average maturity of newly issued bonds and average residual maturity of outstanding LG bonds in Jiangsu were shorter than those of Zhejiang

- According to the new Budget Law and regulations on the administration of the issuance of LG bonds, LGs can only raise debt through the issuance of LG bonds, and only provinces, autonomous regions, direct-administered municipalities and cities under separate state planning can issue LG bonds. If prefectural-level and county-level governments need to raise debt, provincial-level governments will issue LG bonds and then re-lend to them. Because of this, we believe that analysis of the bond maturity structure of provincial-level governments gives some insights into that of prefecture-level LGs.
- Our assessment shows that the average maturity of newly issued LG bonds has increased materially in both Zhejiang and Jiangsu and is clearly longer in Zhejiang with a widening gap between the two provinces. The average maturity of new LG bonds in Zhejiang has risen from 6.7 years in 2015 to 14.7 years in the first half of 2020, and has increased from 6.2 years to 11.5 years in Jiangsu over the same period. The difference between Zhejiang and Jiangsu has widened from 0.5 years to 3.2 years. We believe such longer new issuance maturity is mainly a result of the relaxed issuance policies in place. In August 2018, China's Ministry of Finance (MOF) issued the "Opinions Concerning Properly Performing Local Government Special Bond Issuance" ((No. 72 [2018] of the Ministry of Finance), which mentioned that MOF would not set a constraint on the maturity structure of special bonds. In April 2019, MOF promulgated the "Opinions Concerning Properly Performing Local Government Bond Issuance" ((No. 23 [2019] of the Ministry of Finance), which clearly stated that MOF would no longer restrict the maturity structure of local bonds and that local finance departments have the right to decide maturity of newly issued LG bonds. The average maturity of new LG bonds has increased significantly in Zhejiang and Jiangsu provinces over the past two years accordingly. In general, we believe the stronger

budgetary strength an LG has, the longer bond maturity is. However, LGs often have the flexibility in determining their bond issuance maturity based on their own needs.

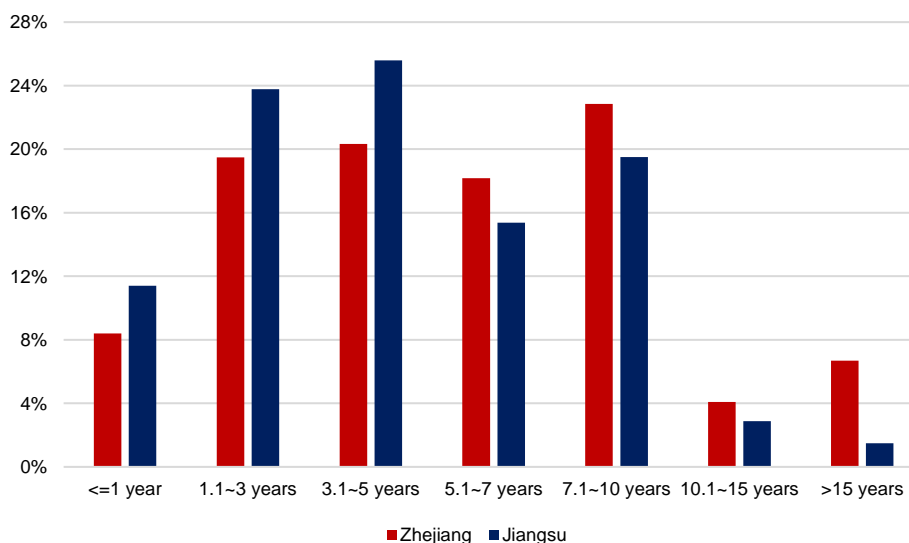
- Our calculations show that the average residual maturity of outstanding LG bonds in Jiangsu province was shorter than that of Zhejiang province. As of the end of June 2020, the average residual maturity of outstanding LG bonds in Jiangsu was 5 years, clearly shorter than the 6.4 years in Zhejiang and the nation-wide local governments' average of 6.1 years. Over the same period, existing LG bonds outstanding with a residual maturity of 5 years or less accounted for 60.8% in Jiangsu and 48.2% in Zhejiang. In particular, LG bonds with maturity less than one year reached 11.4% in Jiangsu, but only 8.4% in Zhejiang. Hence, we believe Jiangsu provincial government is under heavier short-term debt repayment pressure than Zhejiang.

Exhibit 4: Average maturity of newly issued LG bonds in Zhejiang and Jiangsu provinces (2015-First half of 2020) [Year]



Source: Wind, Pengyuan International calculates

Exhibit 5: Distribution of residual maturity of LG bonds in Zhejiang and Jiangsu provinces (June 2020)



Source: Wind, Pengyuan International calculates

Appendix I Major calculation indicators

Indicator	Calculation formula
GDP per capita	Local GDP/ residents (population)
GG's budgetary revenue	General budgetary revenue + government fund revenue, including transfers and refunds from higher-level government
GG's budgetary expenditure	General budgetary expenditure + government fund expenditure, including outflows transferred to higher-level government
GG's budgetary revenue per capita	GG's budgetary revenue/ residents (population)
GG's budgetary balance	GG's budgetary revenue - GG's budgetary expenditure
GG's-budgetary-balance-to-revenue ratio	GG's budgetary balance/ revenue x 100%
Budget-self-sufficiency ratio	GG's budgetary revenue (excludes transfers and refunds)/ GG's budgetary revenue x100%
General budget revenue final accounts/ budgets	General budget revenue final accounts/ budgets x100%
General budget expenditure final accounts/ budgets	General budget expenditure final accounts/ budgets x100%
Government fund budget revenue final accounts/ budgets	Government fund budget revenue final accounts/ budgets x100%
Government fund budget expenditure final accounts/ budgets	Government fund budget expenditure final accounts/ budgets x100%
GG's broad debt	Direct debt + hidden debt
New debt issuance capacity	Debt Ceiling – direct debt balance at the end of last year
Debt revolving capacity	Direct debt principal payments
Liquid assets coverage ratio	(Fiscal deposit at the end of last year)/ (debt principal and interest payments)
Internal liquidity coverage ratio	(Fiscal deposit at the end of last year + GG's budgetary surplus)/ (GG's budgetary deficit + debt principal and interest payments)
Broad liquidity coverage ratio	(Fiscal deposit at the end of last year + GG's budgetary surplus + new debt issuance capacity + debt revolving capacity)/ (GG's budgetary deficit + debt principal and interest payments)

Note: Unless otherwise specified, the above-mentioned data are data for the current year.

Appendix II Introduction to CSCI Pengyuan Database

Most of the data in this report comes from the China Securities Credit Investment (CSCI) Pengyuan Database. The database is a repository for Chinese local government (LG) financial data and Chinese bond default data. It boasts data enquiry and data export functionality.

Chinese LG fiscal data is divided into government data and related indicator calculations covering 31 provincial-level governments and 293 prefecture-level city governments in China. Government data comes from official website data and budget reports of relevant departments, statistical yearbooks and other official channels. Government data contains budgets, execution budgets and final accounts of items from general budgets, government fund budgets, state-owned capital operating budgets, social security fund budgets, government current assets and realizable assets, and government debts. The data caliber is divided into full caliber (including the local level and lower level governments under the jurisdiction) and local level caliber, which is convenient for our users to have a full knowledge of LG finances in China. Related indicator calculations are mainly based on our criteria¹, automatically generating indicator calculation results for budgetary strength, debt burden, liquidity etc. This allows users to better evaluate the credit profiles of Chinese LGs. Users may conduct a keyword query and put a check or several checks at the same time to enquire about financial data and indicators in several regions. The data can then be exported.

Chinese bond default data is divided into default summary, historical default and repayment. This covers basic information of defaulted bonds, issuer information, default, repayment etc. As for Chinese bond default data, users can perform a keyword search or use advanced search criteria including issuer, bond code and bond name. This data can also be exported.

Note: 1. For more information, please refer to our “Chinese Local Government Rating Criteria”:

<https://www.pyrating.com/static/clientlibs/pengyuancms/pdf/Criteria/Governments/Chinese%20Local%20Government%20Rating%20Criteria%20-%20updated.pdf>

DISCLAIMER

Pengyuan Credit Rating (Hong Kong) Company Ltd (“Pengyuan International”, “Pengyuan”, “the Company”) prepares various credit research and related commentary (collectively “research”) in compliance with the established internal process. The Company reserves the right to amend, change, remove, publish any information on its website without prior notice and at its sole discretion.

The research is subject to disclaimers and limitations. **RESEARCHES AND CREDIT RATINGS ARE NOT FINANCIAL OR INVESTMENT ADVICE AND MUST NOT BE CONSIDERED AS OUR COMMENDATION TO BUY, SELL OR HOLD ANY SECURITIES AND DO NOT ADDRESS/REFLECT MARKET VALUE OF ANY SECURITIES. USERS OF RESEARCH AND CREDIT RATINGS ARE EXPECTED TO BE TRAINED FOR INDEPENDENT ASSESSMENT OF INVESTMENT AND BUSINESS DECISIONS.**

This research is based solely on the public data and information available to the authors at the time of publication of this research. For the purpose of this research, the Company obtains sufficient quality factual information from sources believed by the Company to be reliable and accurate. The Company does not perform an audit and undertakes no duty of due diligence or third-party verification of any information it uses in the research. The Company is not responsible for any omissions, errors or inconsistencies of the public information used in the research.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS OR COMPLETENESS OF ANY INFORMATION GIVEN OR MADE BY THE COMPANY IN ANY FORM OR MANNER. In no event shall the Company, its directors, shareholders, employees, representatives be liable to any party for any damages, expenses, fees, or losses in connection with any use of the information published by the Company.

This research focuses on observing trends from the credit markets. This research has not been made available to any issuer prior its distribution to the public. The company does not receive compensation for its research.

The Company reserves the right to disseminate its research through its website, the Company’s social media pages and authorised third parties. No content published by the Company may be modified, reproduced, transferred, distributed or reverse engineered in any form by any means without the prior written consent of the Company.

The Company’s research is not indented for distribution to, or use by, any person in a jurisdiction where such usage would infringe the law. If in doubt, please consult the relevant regulatory body or professional advisor and ensure compliance with applicable laws and regulations.

In the event of any dispute arising out of or in relation to our research, the Company shall have absolute discretion in all matters relating to resolving the dispute, including but not limited to the interpretation of disclaimers and policies.

Copyright © 2020 by Pengyuan Credit Rating (Hong Kong) Company Ltd. All rights reserved.