

Seeing Through the Frosted Glass: Assessing Chinese Local Governments' Creditworthiness

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Summary

We believe it is necessary to employ a top-down rating approach to assess Chinese local governments (LG)' credit profiles as we believe it better reflects with the nation's vertically integrated governing structure.

In our opinion, the higher the level of an LG, the more power it possesses to shape intra-governmental relations, mobilise external financial resources and the more state-owned assets and enterprises it may control. Higher-Level LGs (HLG), such as at provincial level, should have better creditworthiness than a municipal level LG and so forth. The political influence of each provincial region has shifted overtime, which can shed light on national strategies. We believe the political influence of the region of Xinjiang, the municipality of Chongqing and the province of Hainan has gradually increased over the past two decades.

LGs' fiscal revenue growth has been muted in recent years. They have started feeling this deficit and Covid-19 could make things worse.

In our view, the main revenue generators of LGs like the taxes, non-tax fees and land sales proceeds have been curbed by the central government's proactive fiscal strategy and real estate policies. All the while, expenditures have remained strong so deficits have surged and to counter Covid-19's impact, we expect LGs will experience even heavier deficits in 2020 than ever before.

LGs' debts have expanded rapidly with the direct debt growth outpacing hidden debt.

Seeing their fiscal imbalances exacerbated, LGs have resorted to borrowing to prop up their expenses and so the whole debt pile has swollen. Hidden debt is still the bulk of LG's debts but has been reined in by the central government's stringent hand. On the other hand, however, direct debt (LG bonds) has surged and the sector has been in the spotlight in the domestic bond market in recent years. LG Bonds accounted for 23% of the total outstanding domestic bonds at the end of May 2020 and this is expected to continue growing in coming years.

Based on our assessment, provincial-level governments' credit ratings should be no lower than 3 notches below that of the sovereign.

We believe the central government will keep provincial level governments' creditworthiness in close range to its own but that does not mean provincial-level governments' creditworthiness will be identical. While some gaps exist among provincial LGs in facets such as local economy, budgetary performance, debt burden and liquidity so far, all provincial LGs have managed to maintain strong credit profiles.

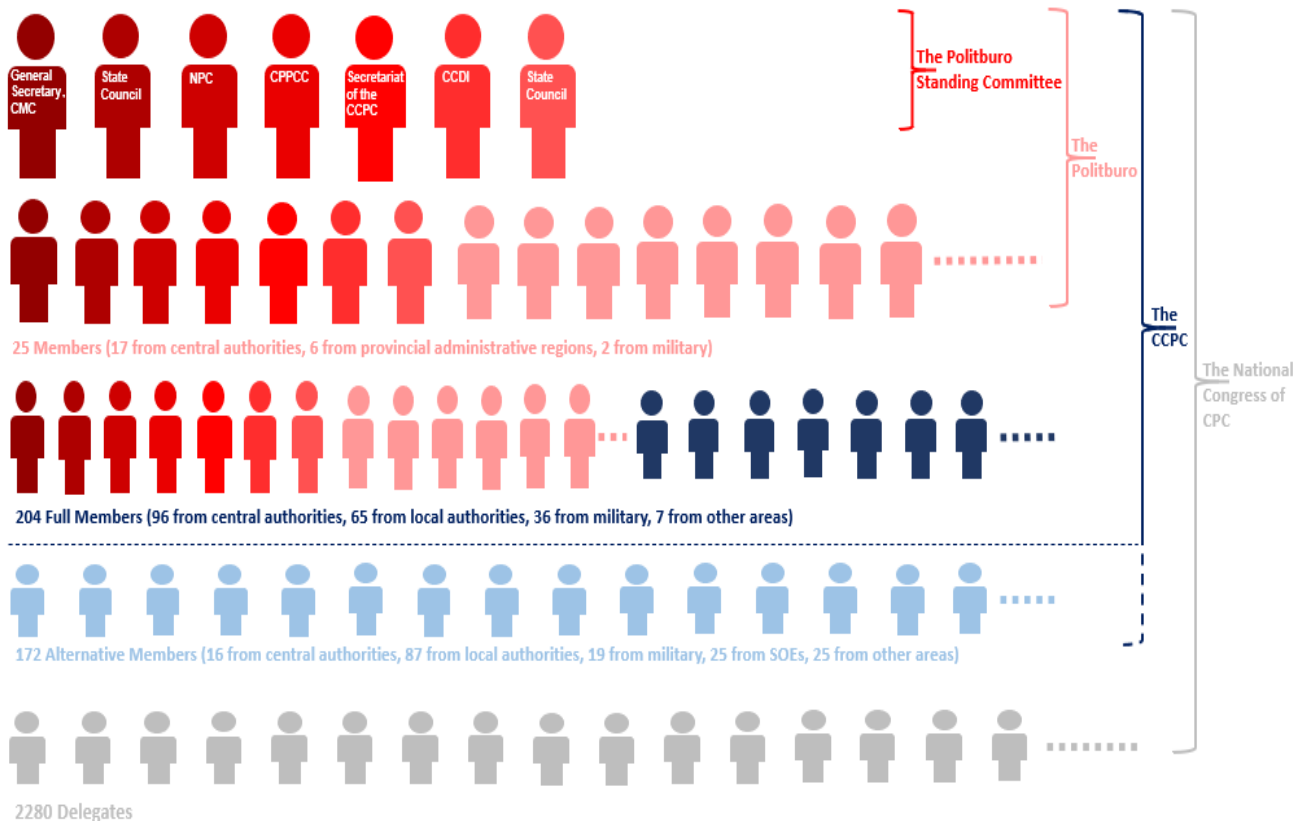
The difference in creditworthiness among prefecture-level city LGs can be huge and the gap is even wider among lower district and county LGs.

Provincial capitals and cities with independent planning (CWIP) boast stronger credit profiles among the prefecture-level cities due to their unique economic and political status. We estimate the prefecture-level LGs in eastern China by and large have better budgetary strength than the LGs in other parts of the country and the LGs in the west have seen greater divergence in their performances relating to revenue and debt.

China's centralized governing network leads to a top-down rating structure for LGs

People's Republic of China (PRC) has been ruled by the Communist Party of China (CPC or the Party) ever since its founding in 1949. "CPC leads everything" has always been regarded as a very principle of state governance. With over 90 million members, the party has established a top-down and extensive structure to manage the country, and the lower levels are subordinate to higher levels. To understand the govern system of China, it is necessary to comprehend the organization structure of CPC from the central level to the local levels (Exhibit 1).

Exhibit 1: The leadership structure of Communist Party of China (CPC)



Note: 1. The structure is based on the results of election in the 19th Central Committee of the Communist Party of China (CCPC) in Oct 2017. 2. CMC= Central Military Commission; NPC= National People's Congress; CPPCC= Chinese People's Political Consultative Conference; CCDI= Central Commission for Discipline Inspection.

Source: people.cn, Pengyuan international

At the central level, the structure of the CPC is like a pyramid with several tiers. Political influence ratchets up from the bottom tier towards the top tier. The CPC's reach extends throughout the country, but the power is highly concentrated at the center, particularly in the Politburo and its Standing Committee. According to records from the past two decades, the Central Committee of CPC (CCPC) typically elects 22 to 25 members of the Politburo who then form the Standing Committee of Politburo which historically contained five to nine persons that are regarded as the power core of the state.

From our perspective, apart from the Standing Committee of Politburo, the concurrent 25 Politburo members have the most widespread political clout in the country. The Politburo members convene nearly every month to discuss and determine all the crucial issues in the country such as national security, foreign affairs, personnel appointments, economy, discipline inspection, legislation and so on. Six members of the Politburo are leaders of provincial administrative regions including the province of Guangdong, the autonomous region of Xinjiang and the municipalities of Beijing, Shanghai, Tianjin and Chongqing, so these regions can be seen as having unique political status compared to their peers.

The CCPC is also an important organisation, which is elected by the National Congress of the CPC every five years. The CCPC embraces the vital and high-ranking officials in the country who convene at least once a year to discuss and approve the macro and long-term policies of the nation. The CCPC is typically made up of about 200 full members and 130 to 180 alternative members who have been picked from the central authorities, local authorities, military and state-owned enterprises,

as well as elites from all fields. Conventionally, the top leaders of the provincial-level regions are members in the CCPC and the CCPC meeting has been an essential way for them to engage in the formulation of national policy. In this regard, we comb through the provincial-level regions in mainland China and estimate their political influence based on the integrated political status of their leadership (Exhibit 2).

Exhibit 2: The political influence of each province shifts over time

	19th National Congress of the CPC (2017 - 2022)					18th National Congress of the CPC (2012 - 2017)					17th National Congress of the CPC (2007 - 2012)					16th National Congress of the CPC (2002 - 2007)					15th National Congress of the CPC (1997 - 2002)				
Region	PM	CCPCF	CCPCA	PPS	PPS/mnp	PM	CCPCF	CCPCA	PPS	PPS/mnp	PM	CCPCF	CCPCA	PPS	PPS/mnp	PM	CCPCF	CCPCA	PPS	PPS/mnp	PM	CCPCF	CCPCA	PPS	PPS/mnp
Xinjiang	1	3	3	31	1.27	1	3	2	30	1.34	1	2	3	27	1.29	1	3	2	30	1.57	0	3	3	15	0.87
Tianjin	1	1	4	24	1.54	1	1	3	23	1.63	1	0	4	20	1.79	1	1	3	23	2.28	0	2	3	11	1.15
Shanghai	1	1	3	23	0.95	1	0	2	18	0.76	1	1	2	22	1.07	1	1	2	22	1.35	1	1	2	22	1.51
Guangdong	1	1	2	22	0.20	1	1	4	24	0.23	1	0	4	20	0.21	1	1	5	25	0.28	1	1	5	25	0.32
Chongqing	1	0	6	22	0.72	1	1	5	25	0.85	1	0	3	19	0.67	0	3	1	13	0.42	0	2	2	10	0.33
Beijing	1	1	0	20	0.92	1	1	3	23	1.11	1	1	2	22	1.31	1	1	3	23	1.62	1	2	3	27	2.18
Tibet	0	3	2	14	4.15	0	3	2	14	4.55	0	1	2	6	2.08	0	4	2	18	6.74	0	2	4	12	4.84
Hebei	0	2	4	12	0.16	0	2	2	10	0.14	0	2	2	10	0.14	0	2	2	10	0.15	0	3	3	15	0.23
Jiangsu	0	2	3	11	0.14	0	2	4	12	0.15	0	1	2	6	0.08	0	1	2	6	0.08	0	2	3	11	0.15
Guangxi	0	2	3	11	0.23	0	1	4	8	0.17	0	0	4	4	0.08	0	2	3	11	0.23	0	2	3	11	0.24
Hainan	0	2	3	11	1.19	0	2	2	10	1.13	0	1	0	4	0.47	0	2	1	9	1.12	0	2	2	10	1.35
Sichuan	0	2	3	11	0.13	0	1	3	7	0.09	0	2	2	10	0.12	0	2	3	11	0.13	0	2	3	11	0.13
Hubei	0	2	2	10	0.17	0	2	3	11	0.19	0	0	4	4	0.07	1	1	2	22	0.37	0	2	3	11	0.19
Anhui	0	2	2	10	0.16	0	2	2	10	0.17	0	2	3	11	0.18	0	1	2	6	0.09	0	2	2	10	0.16
Hunan	0	2	2	10	0.15	0	2	2	10	0.15	0	2	4	12	0.19	0	2	2	10	0.15	0	1	3	7	0.11
Gansu	0	2	2	10	0.38	0	2	2	10	0.39	0	0	3	3	0.12	0	2	1	9	0.35	0	1	2	6	0.24
Guizhou	0	2	2	10	0.28	0	2	2	10	0.29	0	0	5	5	0.14	0	2	3	11	0.29	0	2	3	11	0.31
Shanxi	0	2	2	10	0.27	0	1	3	7	0.19	0	2	3	11	0.32	0	2	4	12	0.36	0	2	4	12	0.38
Shaanxi	0	2	2	10	0.26	0	1	2	6	0.16	0	1	1	5	0.13	0	2	2	10	0.27	0	2	3	11	0.31
Shandong	0	2	1	9	0.09	0	2	3	11	0.11	0	3	1	13	0.14	0	1	4	8	0.09	1	1	3	23	0.26
Zhejiang	0	2	1	9	0.16	0	1	5	9	0.16	0	1	1	5	0.10	0	2	3	11	0.24	0	3	2	14	0.32
Henan	0	2	1	9	0.09	0	2	3	11	0.12	0	2	2	10	0.11	0	2	3	11	0.11	0	2	3	11	0.12
Inner Mongolia	0	2	1	9	0.36	0	2	3	11	0.44	0	1	2	6	0.25	0	2	3	11	0.46	0	2	3	11	0.47
Yunnan	0	2	1	9	0.19	0	2	3	11	0.24	0	1	3	7	0.16	0	2	2	10	0.23	0	1	4	8	0.20
Ningxia	0	2	1	9	1.32	0	1	2	6	0.93	0	1	2	6	0.98	0	2	2	10	1.75	0	1	2	6	1.13
Jiangxi	0	1	4	8	0.17	0	2	4	12	0.27	0	1	2	6	0.14	0	2	3	11	0.26	0	2	2	10	0.24
Heilongjiang	0	1	4	8	0.21	0	2	1	9	0.23	0	1	2	6	0.16	0	2	4	12	0.31	0	2	3	11	0.29
Fujian	0	1	3	7	0.18	0	2	4	12	0.32	0	1	3	7	0.19	0	2	1	9	0.26	0	2	2	10	0.30
Jilin	0	1	3	7	0.26	0	2	3	11	0.40	0	1	4	8	0.29	0	2	2	10	0.37	0	2	4	12	0.46
Liaoning	0	1	3	7	0.16	0	2	2	10	0.23	0	1	3	7	0.16	0	2	3	11	0.26	0	2	1	9	0.22
Qinghai	0	1	2	6	1.00	0	1	3	7	1.22	0	1	2	6	1.09	0	2	2	10	1.89	0	2	2	10	2.02
Total Local HRO	6	52	75	379		6	51	88	388		6	33	80	308		6	58	77	405		4	58	87	383	
Total In CCPC	25	204	172			25	205	171			25	204	167			23	198	158			22	193	151		

Note: 1. PM=Politburo Member, CCPCF=CCPC Full Member, CCPCA=CCPC Alternative Member, PPS=Political Power Score, mnp=million population, HRO=Higher-Ranking Officials, PPS is calculated as :16xnumber of PM + 4xnumber of CCPCF + number of CCPCA.

Source: people.cn, Pengyuan international

Since 2007, the autonomous region of Xinjiang, the province of Guangdong, the direct controlled municipalities of Tianjin, Shanghai, Chongqing and Beijing have had superior political influence in our estimation. With Politburo members being their top leaders, the political power scores of these regions are outstanding.

Not only is the political power score taken into account by us when gauging a region's political influence, but also the political power per million population. The region of Tibet and the province of Hainan are regarded as having higher political influence than most of their peers as both their political power score and the PPS/mnp number rank at the higher end among the provincial-level regions (Exhibit 2 & 3).

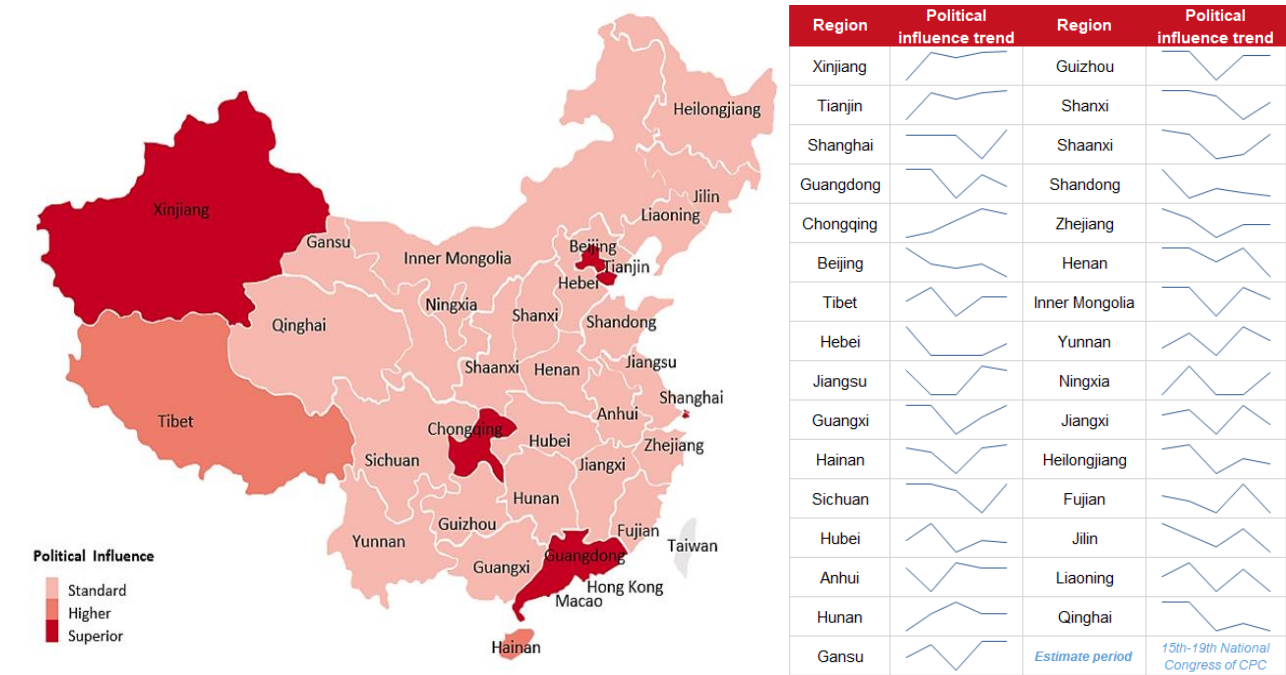
As a significant frontier area connecting with western Asia, the region of Xinjiang is naturally a critical military spot. Added to that its abundant energy resources and complicated ethnic structure and we have seen the region's political influence shift up in recent years by our estimation.

Chongqing's political influence has also risen substantially since it became a centrally-directed municipality in 1997 due to China's Western Region Grand Development strategy. Ever since, we saw Chongqing's economy took off and investments poured in from all over the country and worldwide.

We reckon that Hainan province has been gaining political clout relatively quickly in recent years not only because of its crucial location on the South China Sea but also because it carries the central government's long-term vision to build a new pattern of reform and the opening up of a free trading zone.

Higher political standing doesn't automatically guarantee higher central government support in all circumstances, but it definitely represents a stronger voice in the formation of policies and has advantages in the fight for resources and supports.

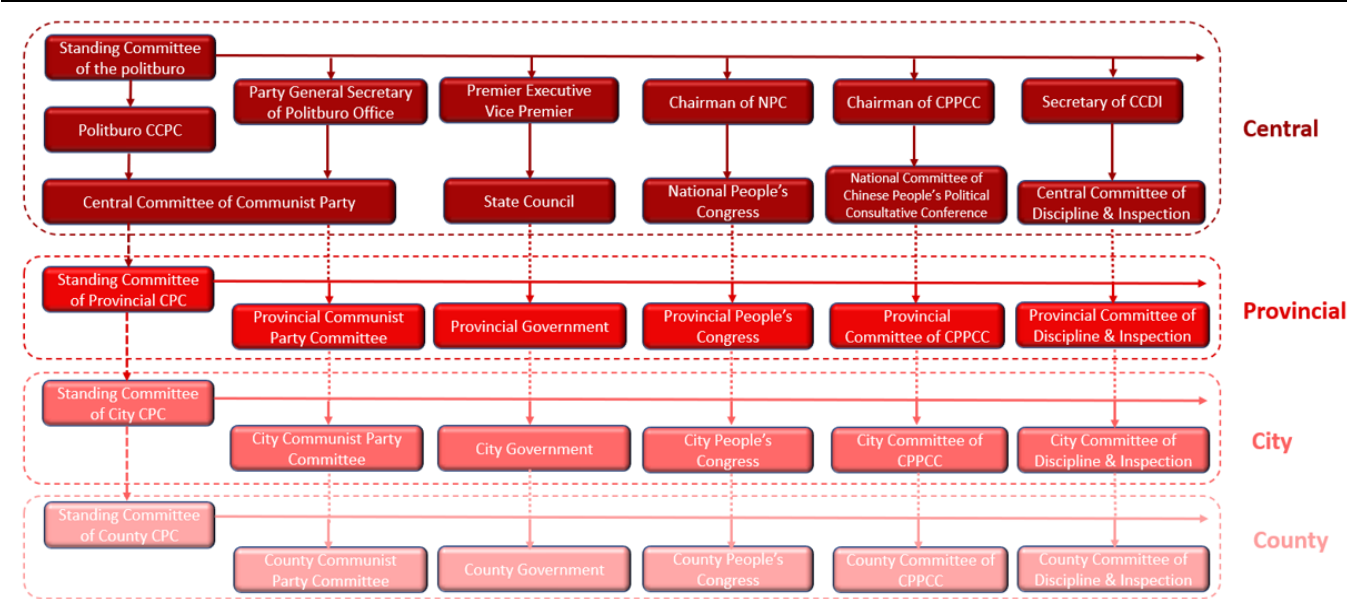
Exhibit 3: Most regions have similar political influence but there are some outperformers



Source: people.cn, Pengyuan international

Party organisations exist in all administrative regions in China including provinces, autonomous regions, municipalities, cities and counties. They have the similar governing structure as at the central level (except the existence of the Politburo) with the Standing Committee of CPC being their leading body which guides and supervises the work of the government, People's Congress, Committee of CPPCC, Committee of Discipline & Inspection, and other power groups (Exhibit 4).

Exhibit 4: Each administrative level has its Standing Committee of CPC being the top boss



Source: Pengyuan International

Taking the provincial level as an instance, the Standing Committee of provincial CPC has around 11-13 members, typically embraces the secretary of the provincial CPC, the provincial governor, deputy secretary of provincial CPC, executive vice governor, secretary of provincial Committee of Discipline and Inspection, secretary of the provincial Committee of Political and Legal, head of provincial Commission for Organization, head of provincial Commission for Publicity, general secretary of provincial CPC Commission, political commissar of provincial Military Area Command (or commander), secretary of provincial capital CPC and sometimes secretary of sub-provincial city CPC.

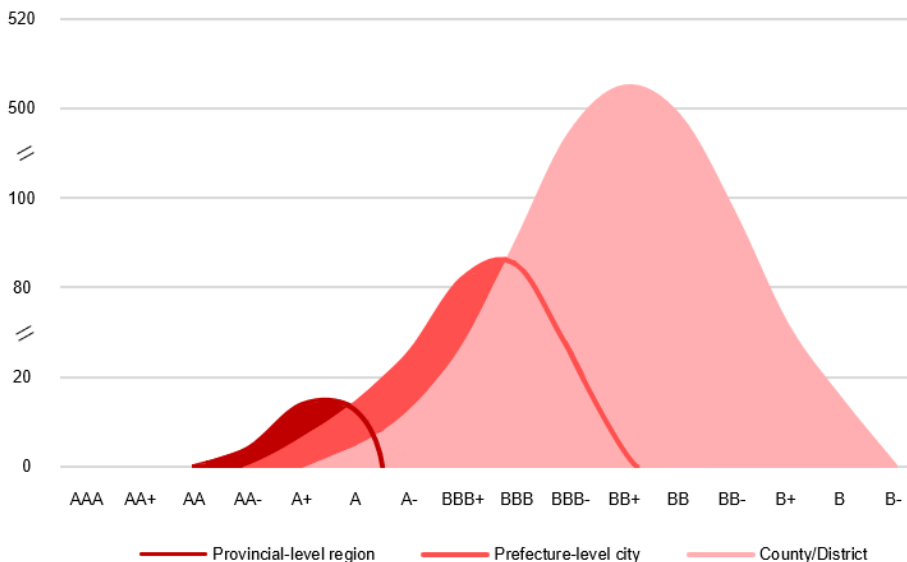
The government is the essential apparatus taking direct responsibility for administration in its jurisdiction of areas such as economic development, market regulation, social management, public service, etc. Each level of governments in China is directly led by the Standing Committee of the CPC at the same level. In practice, the Standing Committee of CPC will coordinate all other governmental or power bodies in a region who in turn manage all local issues so we could regard the whole set of governing organisations of a region as a government in the broad sense.

In an effort to better reflect the creditworthiness of LGs within the top-down governing network of China, we apply a downward notching adjustment to the credit rating of a Chinese LG versus the immediate HLG overseeing the LG. The higher the level of an LG, the more power it possesses to shape intra-governmental relations, mobilise external financial resources and the more state-owned assets and companies it is likely to control. Therefore, the creditworthiness of an LG is generally lower than that of its HLG.

As for the provincial-level governments which are the LGs that directly subordinate to the central government, the differentiation in their creditworthiness can be limited since the central government has endeavored to contract the wealth gaps among provincial regions and balance their revenue strength. Thus, the provincial-level government's credit rating should be no lower than 3 notches below that of the sovereign in our view. However, the creditworthiness divergence of LGs will widen as we go down administrative levels meaning creditworthiness gaps among prefecture-level governments can be large, and even larger among county-level governments.

Our general rating distribution of China's LGs can be seen in Exhibit 5.

Exhibit 5: Rating distribution of Chinese LGs at different level



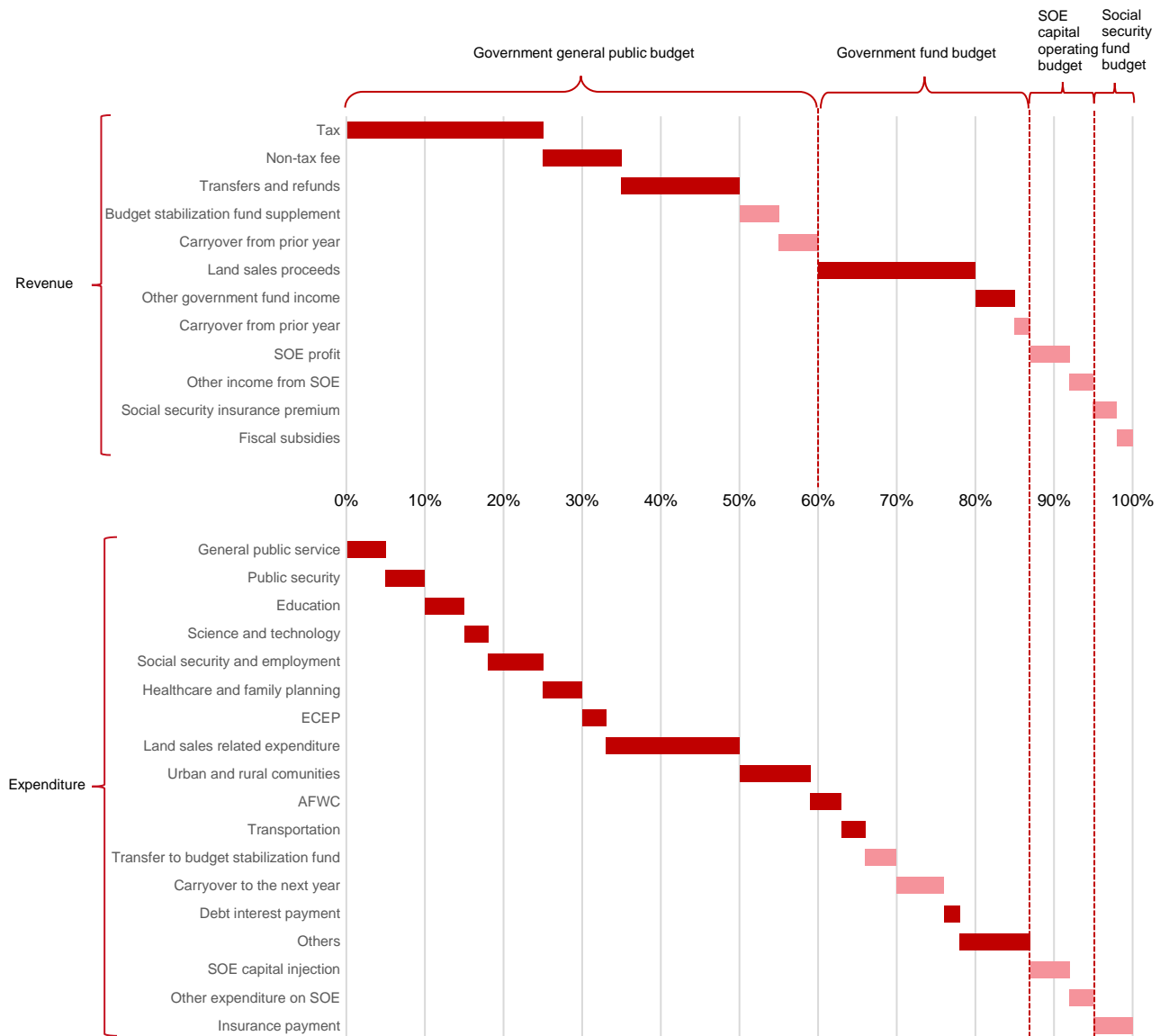
Source: Pengyuan International

Note: This is a schematic graph, not our actual rating results.

Chinese LGs have seen fiscal imbalances ratchet up in recent years

Chinese LGs have unique revenue and expenditure compositions, which are inclusive of four sets of budgets—Government general public budget, Government fund budget, SOE capital operating budget and Social security fund budget (Exhibit 6).

Exhibit 6: The fiscal revenue and expenditure packages of Chinese LGs



Note: The compositions of revenue and expenditure are hypothetical. AFWC=Agriculture, forestry and water conservancy; ECEP=Energy conservancy & environment protection

■ We consider these components as the operating revenue and expenditure of an LG.

Source: Pengyuan International

The government general public budget and the government fund budget are the two major budgets of Chinese LGs. Tax and non-tax fees are the basic sources of an LG's general public revenue and are highly subject to the local economic activities.

Transfers and refunds are from the LGs' higher-level governments and act as a supplementary revenue source. This is a strategy of revenue reallocation aimed at balancing out the gaps among LGs' incomes. Hence, LGs with poor economic fundamentals are more likely to have greater proportion of transfers and refunds in their revenue packages.

Land sales proceeds are the essential element of an LG's government fund revenue. Very often, the bulk of this revenue will be reinvested in land sales related expenditures such as land expropriation, demolition and renovation. This sector has been

an important source of cash flow to bolster the LGs' general expense. We have observed that typically the regions with a booming land market tend to possess greater land sales proceeds as compared to other regions.

The carryover from prior year and the budgetary stabilization fund supplement however, are not considered as the operating revenue of an LG because we consider them as withdrawals from the fiscal deposit that have accumulated in the years, and likewise we do not regard carryover to the next year and the transfer to the budgetary stabilization as operating expenditure of an LG.

We reckon the SOE capital operating budget and social security fund budget are relatively isolated sets of budgets in which the revenues are typically devoted to meet the expenditures in the same budget sets. Though there is a chance that part of the SOE capital operating revenue might be transferred to government general public budget when needed; or other budgets might transfer to the social security fund budget when a shortage appears, these cases usually involve relatively minor amounts that have little impact on an LG's operating cash flow in our opinion.

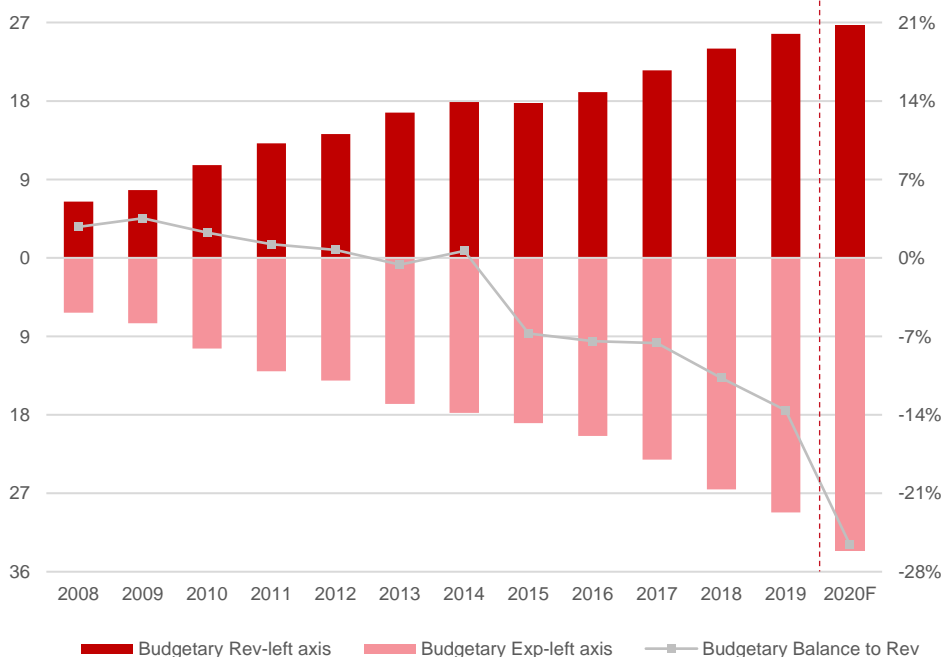
Above all, the components we take into account as an LG's operating revenue could be regarded as sustainable cash flow that could basically cover all of an LG's overhead expenditure such as general public service, public security, education, etc. With this, we could attain an objective and practical statues of an LG's budgetary balance and fiscal performance.

LGs in China, as a whole, rarely felt the weight of a deficit burden prior to 2015. Since then the imbalance between fiscal revenue and expenditure of LGs has widened rapidly and materially (Exhibit 7).

First and foremost we reckon that the main revenue sources of the national LGs have been dampened: the government general public revenue has been reined by the proactive fiscal policies like the tax cuts and fee slashes; the government fund revenue, particularly the land sales, has been curbed by the initiative of real estate control. Yet despite the slowdown in revenue growth, expenditure at LGs has continued to grow in an effort to support waning economic growth. As a result, budgetary balances of LGs turned sharply red in the past few years. In the year of 2019, we saw national LGs (all LGs combined) with a record of budgetary deficit ratio of -13.6%.

We believe the outbreak of Covid-19 at the beginning of the 2020 will further drag down all LGs' revenue, and it could be very likely to see an even larger deficit on LGs this year under the instruction of "a proactive fiscal policy will be even more proactive" from the central government.

Exhibit 7: Budgetary revenue and expenditure of national LGs in China (RMB trillion)

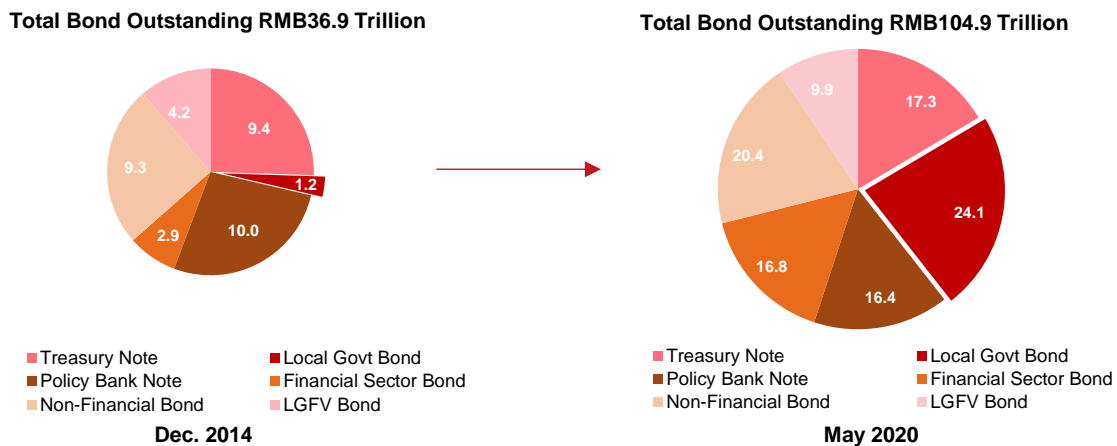


Source: MOF, Pengyuan International

Debt, especially direct debt, has grown rapidly at Chinese LGs

Since the launch of the New Budget Law in 2015 which permitted provincial LGs and five selected city LGs to directly issue bonds for their own financing, LGs have joined the domestic bond market and rapidly became the pivotal player. As a result, outstanding LG bonds skyrocketed from RMB1.2 trillion at the end of 2014 to RMB24.1 trillion at the end of May 2020 (Exhibit 8).

Exhibit 8: Domestic bond market in China from 2014 to May 2020 (RMB trillion)



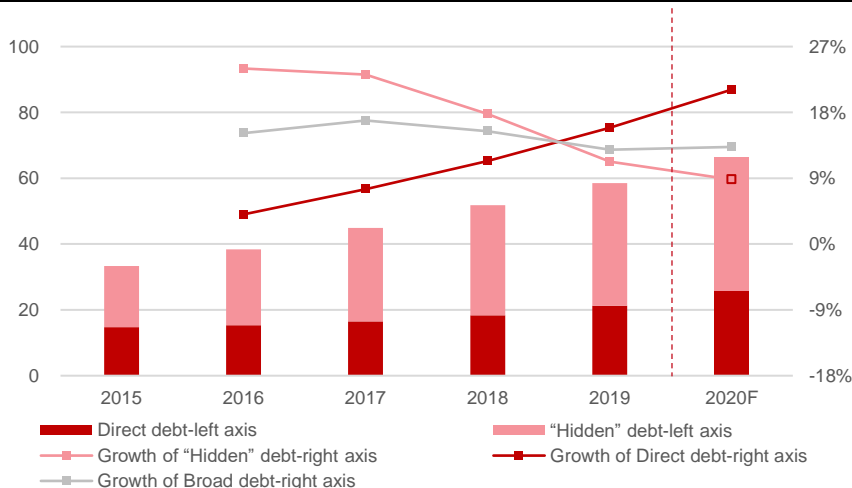
Source: China Bond, Wind, Bloomberg

In addition to LG bonds, which are direct debts of LGs, hidden debt or contingent liabilities of Chinese LGs are also a considerable part of LGs total debt load. This type of debt can exist in various forms such as bank loans, bonds and non-standard financing products mostly carried by government related entities (GREs) which we believe have been potentially and implicitly underwritten by the LGs. Even though the central government has banned LGs from directly guarantee GREs' liabilities, in our opinion there is firm belief in the whole society that LGs will honour some of the GREs' obligations, particularly those of local government financing vehicles (LGFV), to the best of their ability just the same as their direct debts: especially those funds that have been put into use for public welfare as a proxy of fiscal expense.

If a GRE defaults, the LG's creditworthiness may be questioned by lenders, investors, vendors and even the dwellers in its jurisdiction and this can have a thorny domino effect. Thus, although there is an absence of clear guarantee documents, we think LGs will underpin part of these non-direct debts and so we regard some of these debts as the LG's hidden debt.

Hidden debt has been a prevailing form of financing of LGs in China for decades, but the central government has tightened its grip on this chunk of debt in recent years in a bid to mitigate the potential risk on LGs' debt burden. Hence, hidden debt growth of LGs has slowed while direct debt growth has shifted upwards (Exhibit 9).

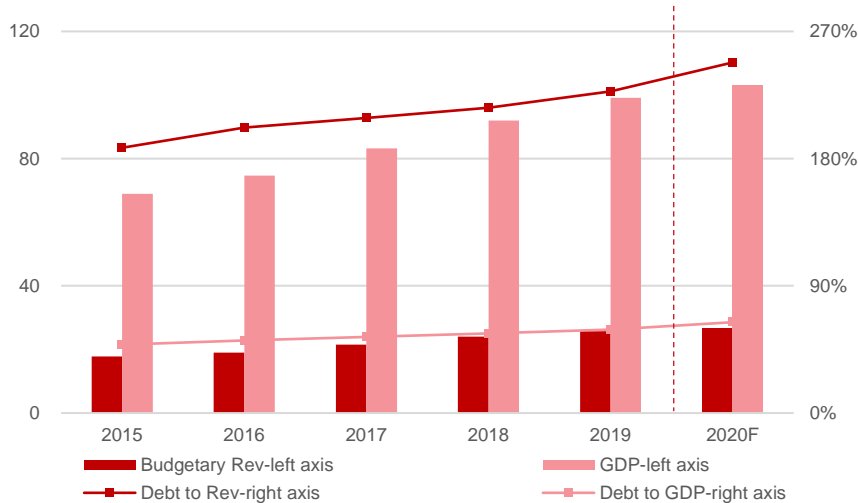
Exhibit 9: The debt structure and growth of national LGs (RMB trillion)



Source: MOF, Pengyuan International

As the imbalance between fiscal revenue and expenditure of LGs in China has intensified in recent years, the leverage of LGs has been mounting. The debt to revenue ratio of national LGs rose from 188% in 2015 to 228% at the end of 2019 while the debt to GDP ratio crept up from 48% to 59% in the same period, and we expect the leverage of national LGs will keep rising in 2020 (Exhibit 10).

Exhibit 10: The leverage of national LGs has been climbing (RMB trillion)



Source: MOF, Pengyuan international

Provincial LGs have by and large decent credit profiles

There are obvious economic gaps among provincial regions in China with the eastern-coastal regions are generally more well-off than the western regions and the northeastern regions (Exhibit 11). Regions, whose economies are fueled by heavy industry or energy/resource related industries have seen slower economic growth in the past few years - provinces such as Liaoning, Jilin, Heilongjiang and Shanxi. Some of the western and deep inland regions are greatly investment-driven.

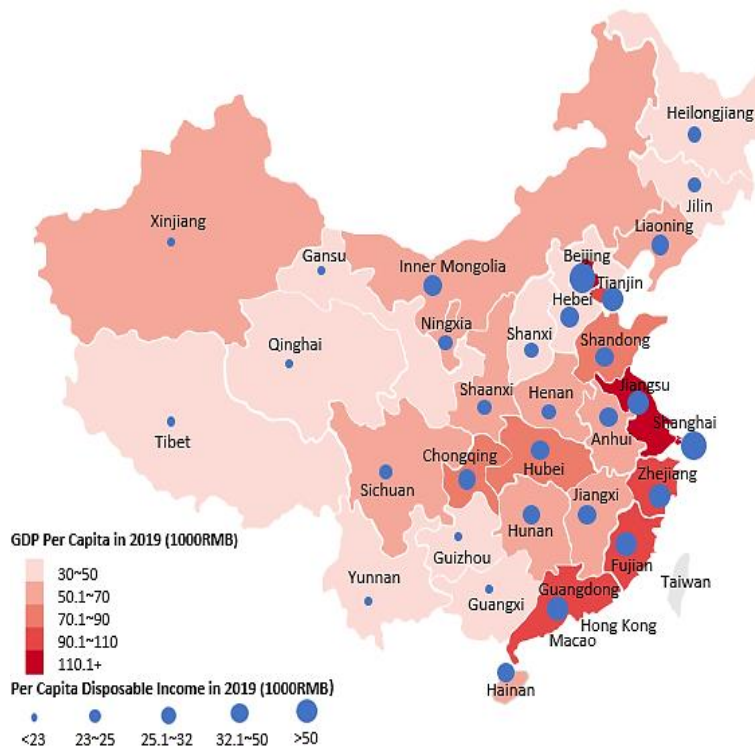
The deficit to revenue ratio reveals the deficit weight on LGs in the nation (Exhibit 12). The central government has been bent on eliminating the poverty in China by offering greater fiscal support to less developed regions such as Tibet, Qinghai and Gansu. Hence, these governments' budgetary revenues have relied heavily on the transfers and refunds from the central government. Land sales to revenue ratio offers an idea of the LGs' fiscal dependence on land sales and also hint at the heat of the regions' land markets.

In terms of debt burden, the debt to revenue and the debt to GDP ratios are two key indicators reflecting the LGs' leverage (Exhibit 13). Some wealthy regions in China might carry large sums of broad debt which combines direct debt and hidden debt (deduced from the investment in certain public sectors), yet their leverage remains moderate relative to their massive revenue and GDP scale.

We employ the liquidity coverage ratio to demonstrate the liquidity state of an LG, which is a broad concept considering all liquidity sources and liquidity use (Exhibit 14). We also calculate the internal liquidity ratio which only comprises fiscal deposit, deficit and debt service to give simple insight to an LG's liquidity condition. The new debt issuance capacity offers another view of the government's ability to finance, especially in some stressful scenarios.

In addition to the above four dimensions, we consider many other factors in an effort to obtain a comprehensive and insightful perspective on LG's creditworthiness. Overall, the better developed east and south coastal provinces have stronger credit profiles than inland provinces and regions.

Exhibit 11: Provincial Economic Strength

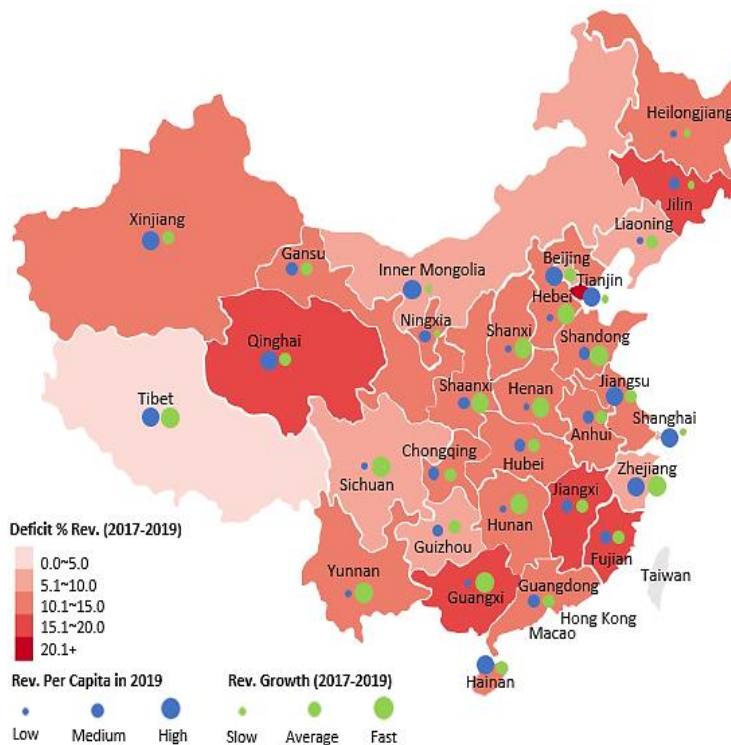


Region	Avg. GDP growth(2015-19,%)	Capital Formation Ratio(2017,%)	Total Dependency Ratio(2018,%)
Guizhou	9.8	69.1	50.6
Tibet	9.7	105.0	41.3
Yunnan	8.8	94.6	38.2
Jiangxi	8.7	50.1	42.9
Chongqing	8.7	53.4	45.8
Fujian	8.3	57.5	35.5
Anhui	8.3	50.8	46.6
Hubei	8.0	58.8	38.6
Hunan	8.0	51.9	47.0
Sichuan	7.9	48.7	45.7
Henan	7.8	69.7	47.8
Shaanxi	7.6	65.8	34.3
Ningxia	7.5	110.6	41.0
Zhejiang	7.4	44.0	36.4
Qinghai	7.4	148.5	37.3
Xinjiang	7.3	99.7	42.4
Jiangsu	7.3	43.5	38.9
Guangdong	7.2	44.2	33.6
Guangxi	7.1	50.6	46.8
Shandong	7.0	50.1	49.6
Hainan	6.8	63.1	37.7
Hebei	6.7	56.1	45.3
Shanghai	6.7	39.8	33.0
Beijing	6.6	39.1	27.8
Gansu	6.4	51.0	40.7
Tianjin	6.1	56.4	26.9
Inner Mongolia	5.9	64.0	30.1
Shanxi	5.5	46.1	35.0
Heilongjiang	5.4	61.2	29.5
Jilin	5.2	66.8	32.7
Liaoning	3.2	43.3	33.6

Note: The Capital Formation Ratio is defined as gross fixed capital formation divided by GDP; The Total Dependency Ratio is the number of dependents aged zero to 14 and over the age of 65, compared with the total population aged 15 to 64.

Source: NBS, local governments' bureaus, Pengyuan international

Exhibit 12: Provincial Budgetary Strength

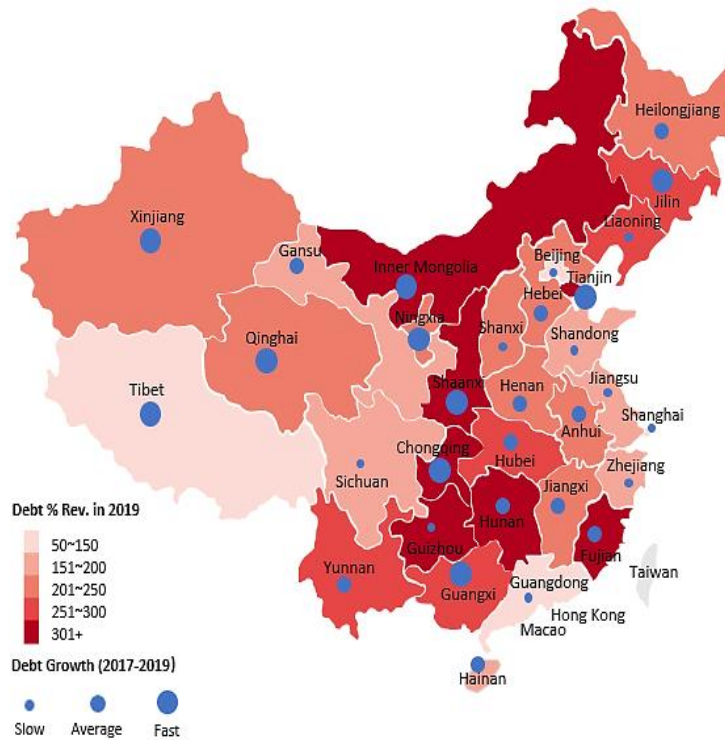


Region	Revenue(2017-19 Avg., bn)	Rev/GDP(%)	Transfer & Refund/Rev(%)	Land Sales/Rev(%)
Guangdong	1,977	20	9.6	27.1
Jiangsu	1,864	20	10.8	40.0
Zhejiang	1,626	28.2	6.5	41.4
Shandong	1,477	21.1	18.2	32.6
Sichuan	1,193	28.4	41.7	24.1
Henan	1,136	22.9	33.5	23.7
Shanghai	999	28.7	8.6	19.9
Hubei	969	23.6	33.1	28.8
Hebei	944	27.4	30.1	20.4
Anhui	938	29	33.8	33.2
Beijing	915	28.8	12.1	24.4
Hunan	861	23.4	37.9	21.6
Jiangxi	698	31.1	30.6	27.0
Fujian	658	17.6	16.0	32.4
Yunnan	649	32.4	52.9	14.1
Chongqing	638	29.8	29.7	31.7
Shaanxi	612	25.6	38.7	17.1
Liaoning	599	25	39.7	11.5
Guizhou	597	39.2	46.4	20.5
Guangxi	596	30.1	46.5	18.8
Xinjiang	507	40.8	60.6	9.4
Inner Mongolia	506	30.7	48.7	6.9
Shanxi	486	30	33.1	6.7
Heilongjiang	474	33.8	65.6	5.2
Tianjin	414	27.6	12.0	28.6
Jilin	394	31.8	56.1	12.3
Gansu	376	46.4	66.2	7.7
Tibet	201	132.4	86.0	n/a
Hainan	198	40.4	41.6	14.9
Qinghai	166	59.7	71.2	4.6
Ningxia	141	39.4	61.8	5.5

Note: The ratios of Rev/GDP, Transfer & Refund/Rev and Land sales/Rev are calculated based on the average number from 2017 to 2019.

Source: NBS, local governments' bureaus, Pengyuan international

Exhibit 13: Provincial Debt Burden

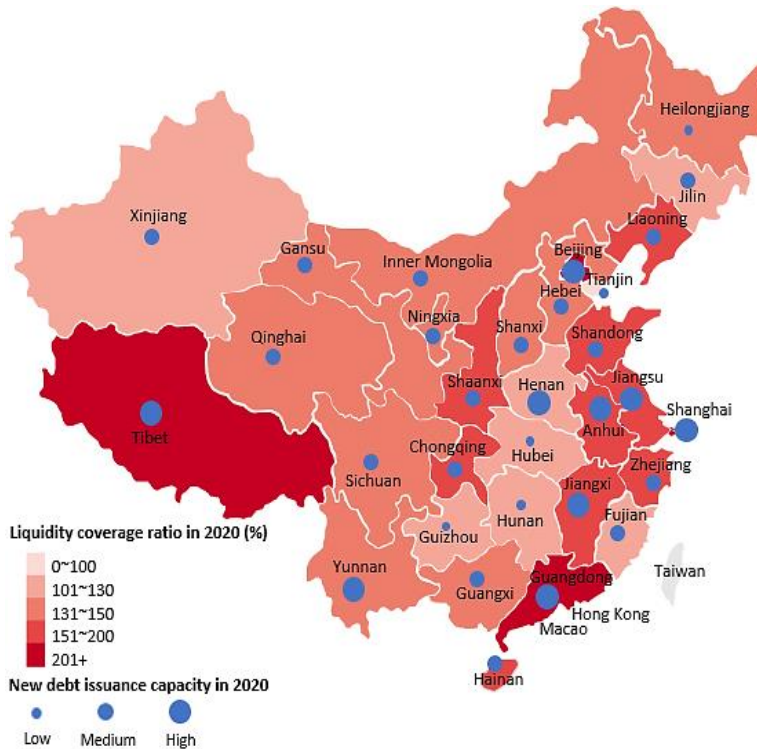


Region	Broad Debt (2019, bn)	Direct Debt/GDP(%)	Hidden Debt/GDP(%)
Jiangsu	3,876	14.9	24
Zhejiang	3,336	19.7	33.8
Shandong	3,123	18.5	25.5
Guangdong	3,116	11.1	17.8
Hunan	3,039	25.6	50.8
Henan	2,903	14.6	38.9
Hubei	2,675	17.5	40.8
Shaanxi	2,673	25.3	78.3
Hebei	2,458	24.9	45.1
Sichuan	2,421	22.5	29.4
Guizhou	2,396	57.7	85.2
Fujian	2,376	16.6	39.5
Anhui	2,314	21.4	41
Chongqing	1,965	23.7	59.5
Liaoning	1,915	35.7	41.2
Yunnan	1,901	34.2	47.6
Inner Mongolia	1,860	42.4	65.6
Guangxi	1,789	29.9	54.3
Jiangxi	1,719	21.5	48
Tianjin	1,391	35.2	63.4
Xinjiang	1,310	35.7	60.7
Jilin	1,128	37.1	59.1
Shanghai	1,105	15	14
Shanxi	1,081	20.8	42.6
Heilongjiang	1,032	34.9	40.9
Beijing	931	14	12.3
Gansu	702	35.7	44.8
Qinghai	414	70.9	68.7
Hainan	413	42	35.8
Ningxia	354	44.1	50.2
Tibet	118	14.8	54.8

Note: The ratios of Direct Debt/GDP and Hidden Debt/GDP are calculated based on 2019's number.

Source: NBS, local governments' bureaus, Pengyuan international

Exhibit 14: Provincial Liquidity



Region	Fiscal Deposit (2019, bn)	Budgetary Deficit (2020, bn)	Debt Service (2020, bn)	Internal Liquidity Ratio (2020, %)
Guangdong	356	297	117	86.1
Shanghai	311	67	76	217.2
Zhejiang	245	214	127	71.7
Jiangsu	236	273	231	46.9
Hebei	168	249	103	47.6
Hubei	161	214	90	53.0
Shandong	160	199	147	46.1
Sichuan	160	205	176	42.0
Beijing	157	100	76	89.6
Anhui	130	172	96	48.4
Hebei	127	173	68	52.5
Hunan	111	124	128	43.9
Chongqing	107	103	71	61.8
Fujian	102	170	86	39.7
Liaoning	96	58	148	46.5
Yunnan	90	145	101	36.6
Tibet	86	8	2	925.3
Heilongjiang	85	91	59	56.9
Xinjiang	80	125	61	43.3
Shaanxi	63	84	88	36.7
Shanxi	60	87	43	46.1
Henan	60	245	79	18.5
Qinghai	51	35	24	88.0
Guangxi	49	104	78	26.8
Guizhou	47	89	155	19.3
Jilin	45	92	62	29.2
Inner Mongolia	44	69	115	23.9
Gansu	33	77	41	28.1
Hainan	31	35	29	48.7
Tianjin	24	152	53	11.7
Ningxia	16	31	18	33.0

Note: New debt issuance capacity is a measure of the gap between an LG's direct debt balance and its direct debt ceiling set by the central government.

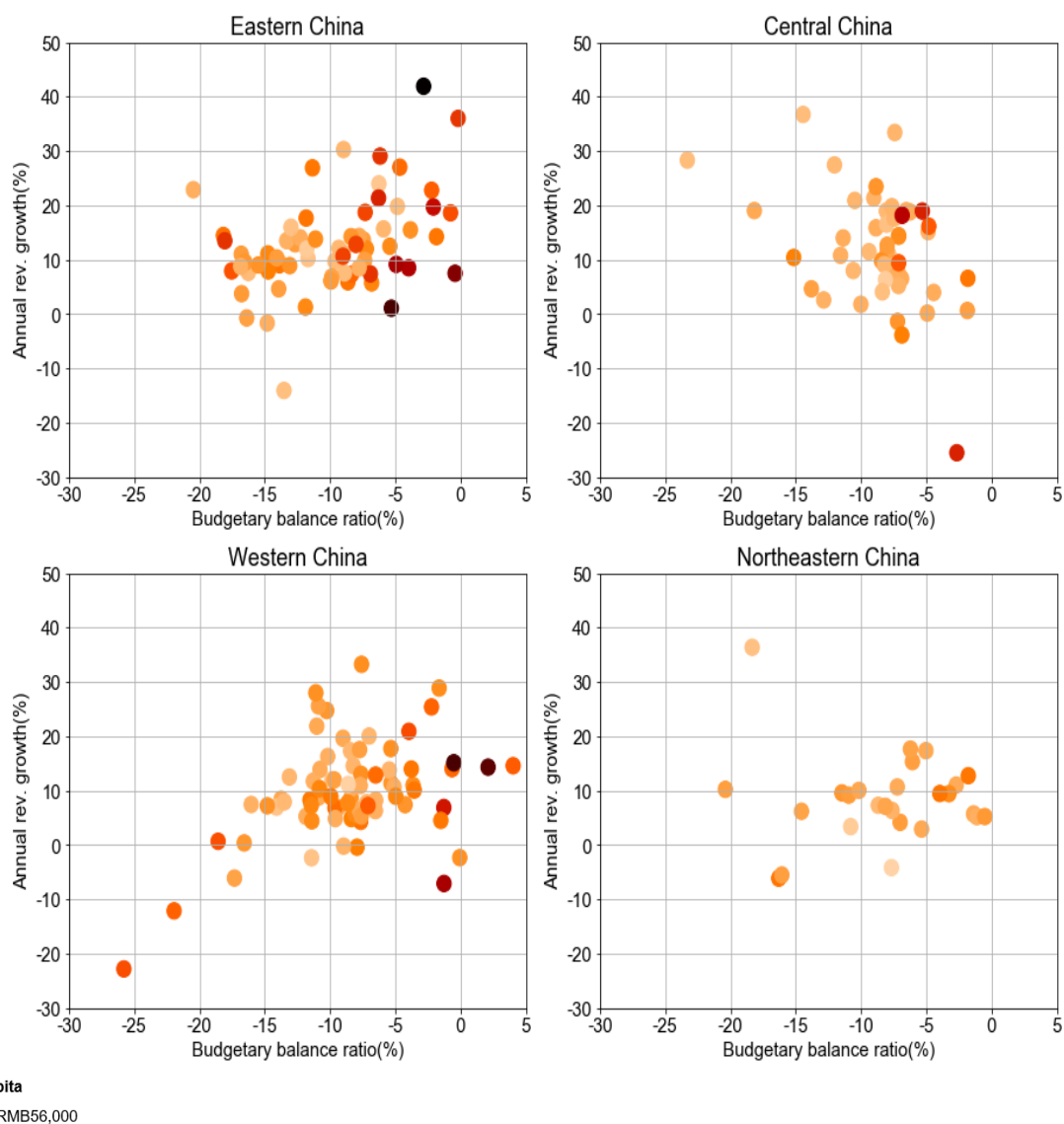
Source: NBS, local governments' bureaus, Pengyuan international

Prefecture-level city LG creditworthiness varies greatly in China

Capital cities and CWIPs play a crucial political, economic and social role in the country and regions. While this means that virtually all possess stronger credit profiles than most of the other prefecture-level cities in China, it doesn't mean they have the same creditworthiness as the provinces. We selected a sample of prefecture-level cities in China and split them based on their locations to present their performance in facets of economy, budget and debt pressure.

In terms of the budgetary balance ratio (surplus or deficit to revenue), there are only a few prefecture-city LGs in China that have had budgetary surpluses in the past few years and these are mainly situated in the western China (Exhibit 15). Generally, the LGs in eastern China tend to see higher revenue per capita due to their stronger economy, which has been in a stark contrast to the LGs in the northeastern China. Most city LGs' annual revenue growth in the past several years ranged from 0% to 30% while the LGs in northeast were basically in the 0-20% spectrum.

Exhibit 15: Revenue strength of sample prefecture-city LGs

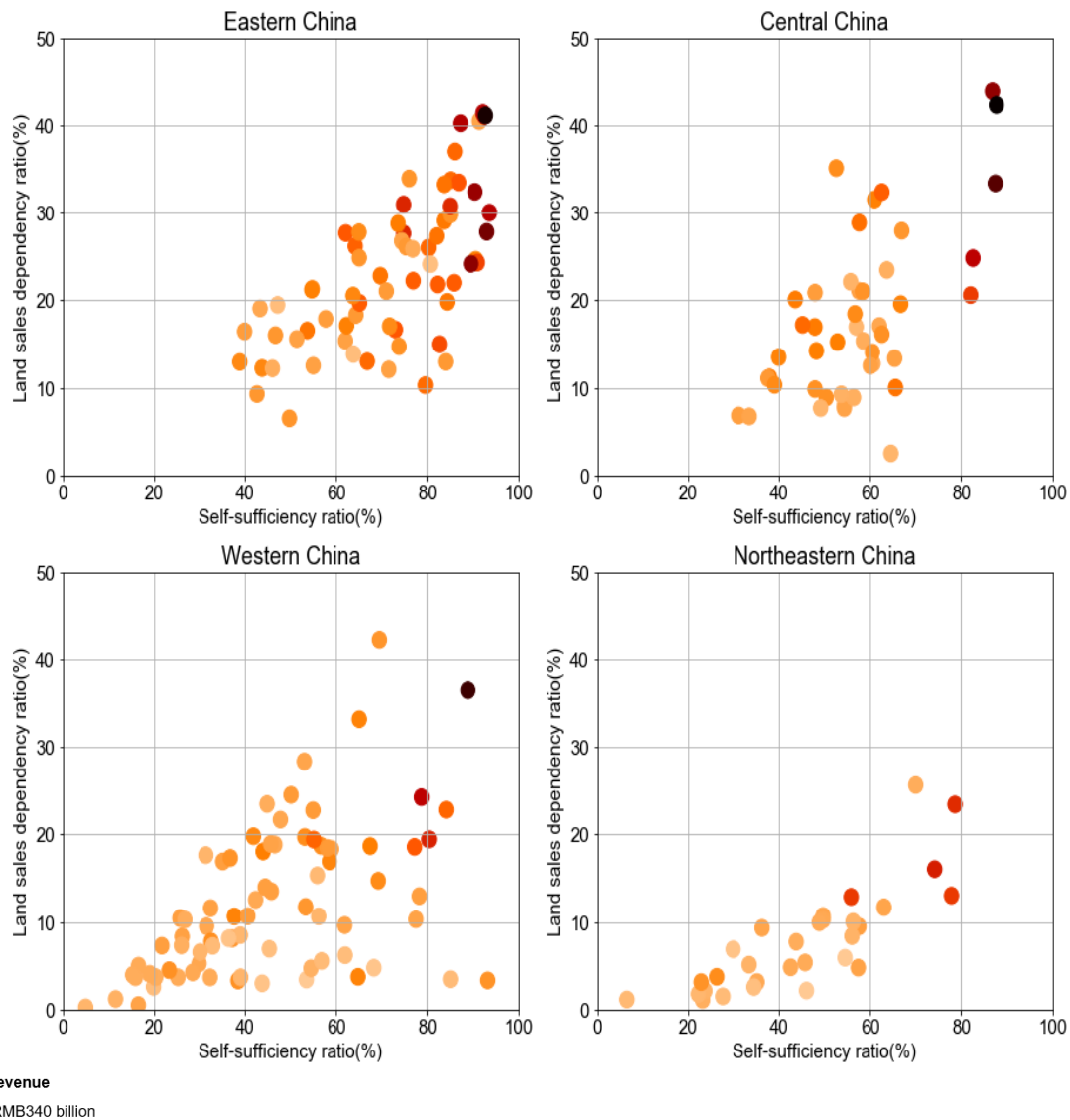


Note: All indicators were calculated based on the four-year-average from 2015 to 2018, and extreme values were excluded.

Source: Local governments' bureaus, Wind, Pengyuan international

In addition, we adopt the fiscal self-sufficiency ratio (revenue without transfers and refunds/revenue) and land sales dependency ratio (land sales/ revenue) to take a closer look at the city LGs' revenue structure and composition. Eastern city LGs have higher fiscal self-sufficiency ratios than LGs in other places with many of the eastern city self-sufficiency ratios surpassing 80%. This is rarely the case in other areas (Exhibit 16). A booming land market may be the cause as eastern city LGs have had a greater proportion of land sales in their revenue compared to their peers in recent years while LGs in northeast have the lowest.

Exhibit 16: Revenue structure of sample prefecture-city LGs

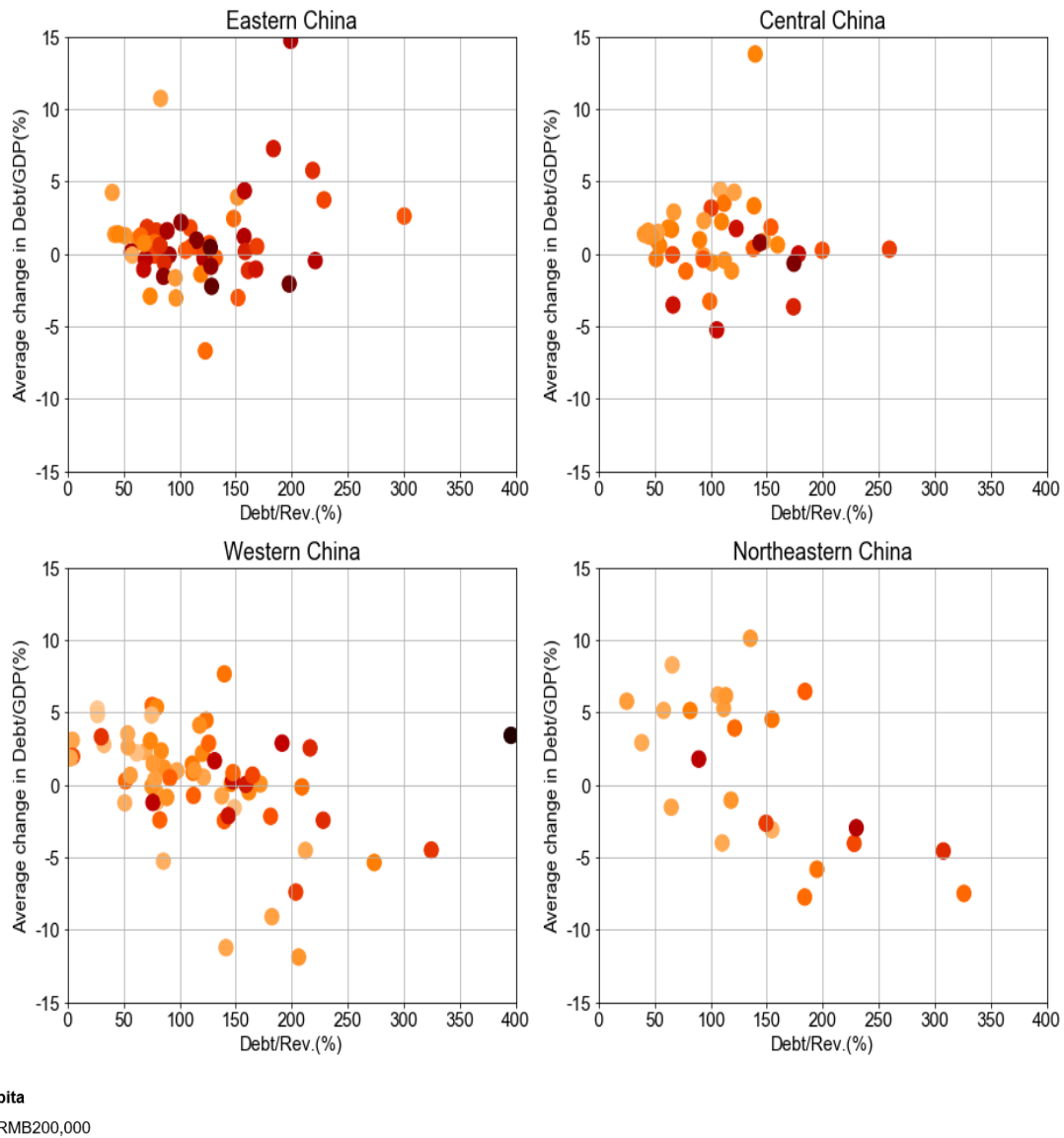


Note: All indicators were calculated based on the four-year-average from 2015 to 2018, and extreme values were excluded.

Source: Local governments' bureaus, Wind, Pengyuan international

We employ the debt to revenue ratio to estimate an LG's leverage, and use the average change in debt to GDP ratio to see the trajectory of an LG's debt growth. The debt to revenue ratios of most of the LGs in the eastern and central China fall in the territory of 50%-200%, and the distribution is relatively concentrated, yet the ratios of the LGs in the western and northeastern China are rather dispersed, ranging from 0 to 400% (Exhibit 17). A similar situation appears in the distribution of the LGs' average change in debt to GDP ratios, as the distribution of eastern and central LGs' ratios is more condensed than that of the LGs in the west and northeast of China.

Exhibit 17: Debt burden of sample prefecture-city LGs



Note: All indicators were calculated based on the four-year-average from 2015 to 2018, and extreme values were excluded.
Source: Local governments' bureaus, Wind, Pengyuan international

Our issuer credit rating reports could be accessed through:

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