MOODY'S INVESTORS SERVICE

Infrastructure & Project Finance, Local Government Financing Vehicles – China

Fixed-Asset Investment Chartbook 2021

Growth in fixed-asset investment will build up in 2021 following COVID disruptions

SECTOR IN-DEPTH

17 MAY 2021

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1 Key takeaways

Summary

COVID impact

Fixed-asset investment (FAI) growth contracted in the first half of 2020 but improved in the second half of last year

Narrowing gaps in regional FAI

There were regional differences in the pace of recovery in 2020 but these are likely to narrow in 2021

Recovery on the way

FAI growth will be stronger in 2021 than the low-base level in 2020

Faster transportation investment

Transportation sector will accelerate its investment pace in 2021, particularly in toll roads, rail and airports, supported by China’s latest development plan for the national transportation network

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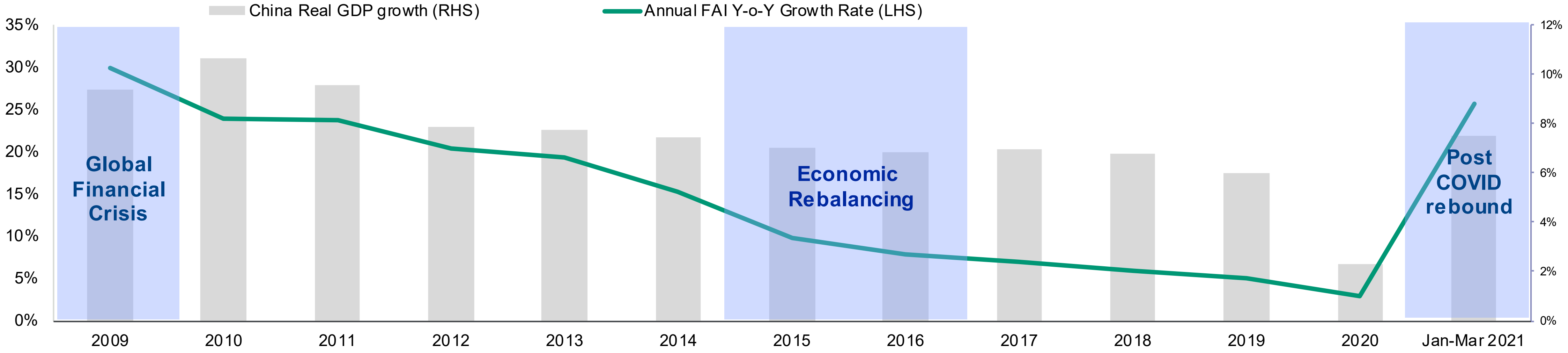
FAI credit trends

Declining FAI growth rate over the past decade amid economic rebalancing

- Over the past decade, China's FAI has grown at a gradually slower pace. In particular, the slower growth rate in 2010 was because of the higher fixed-asset base in 2009 when FAI was a focus to boost economic recovery after the global financial crisis. In 2015, the growth rate dropped to a single-digit from 15% the previous year, as a result of economic rebalancing from investment-driven economic growth to increased emphasis on domestic consumption.
- The slower growth rate has remained as the fixed-asset base has reached an enormous scale. For example, total fixed-assets amounted to RMB51.9 trillion (approximately $7.8 trillion) in 2020. That said, overall FAI in total is still climbing.
- In the first three months of 2021, FAI growth rebounded following COVID disruptions while the size of FAI was comparable to that of the same period in 2019. We expect FAI growth in 2021 will be stronger than in 2020. Growth momentum will be strong in the first half of the year, driven by government stimulus and because of a low base in 2020. However, the growth will likely ease in the second half of 2021 as fiscal support for the economy is reduced when the government gradually resumes its deleveraging efforts.

Declining FAI growth over the past decade but a recovery is likely in 2021 following COVID disruptions

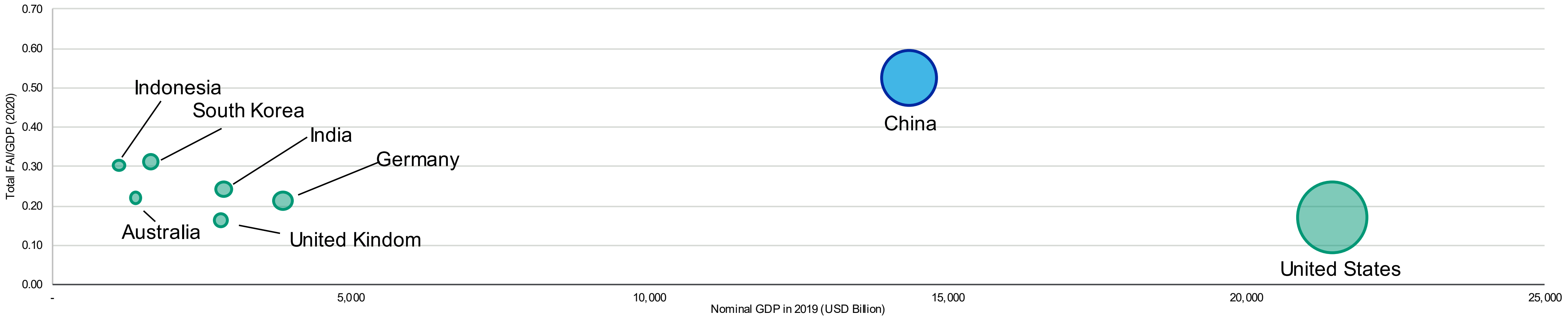


(1) National Bureau of Statistics makes yearly adjustments on the previous year fixed-asset investment data, and the growth rate was calculated on a comparable basis. (2) Real GDP growth in 2021 is based on Moody's estimates under full-year basis, instead of actual growth rate of Q1 2021.
Sources: National Bureau of Statistics; Moody's Investors Service in 2021

China's FAI is significant compared to other major economies

- China has the highest FAI to GDP ratio compared with other major developed countries and emerging markets.
- China's FAI was equivalent to $7,784 billion in 2020, much larger than many major economies. For example, China's FAI is 23 times bigger than that of Australia, 15 times that of UK, nine times that of Germany and 11 times that of India. Its FAI was around half that of the US in 2020 but its FAI-to-GDP ratio was more than double of that of the US in 2020.

China's FAI is large compared with other major economies

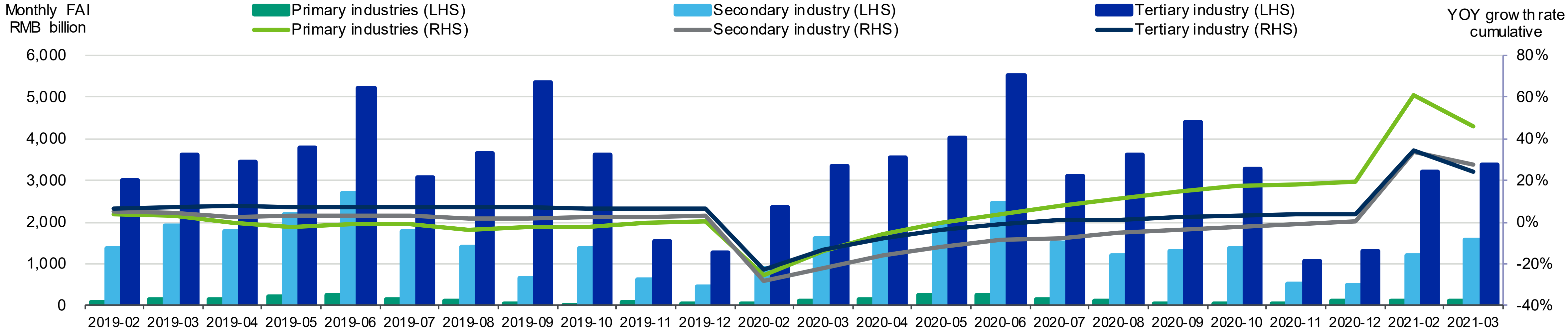


Bubble size represents countries' gross capital formation or fixed asset investment in 2019.
Sources: National Bureau of Statistics, FactSet, Moody's Investors Service

Strong recovery from COVID disruptions

- There was a strong rebound in investment in early 2021 from the contraction in 2020, particularly in manufacturing industries related to technology and medical supplies as well as property investment.
- We expect FAI growth will continue to grow, driven by the government's stimulus policy to support economic growth. Moody's forecasts China's GDP growth at 7.5% in 2021, compared to 2.3% in 2020. The emphasis on new infrastructure in the 14th Five-Year Plan will drive investment in related projects, covering renewable energy, transportation and water projects, as well as technology, digitalization, supply chain security. A general recovery of investment other than infrastructure and, to a lesser extent, consumer demand, will also support rebound in H1 2021.

FAI has gradually improved from the COVID-driven sharp fall in Q1 2020

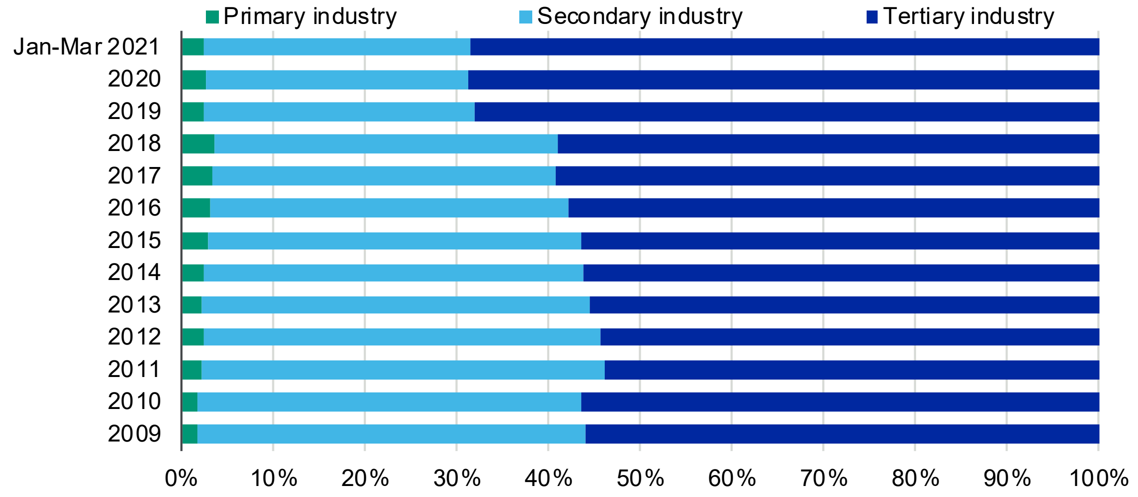


Sources: National Bureau of Statistics; Moody's Investors Service

Tertiary industry is the key driver

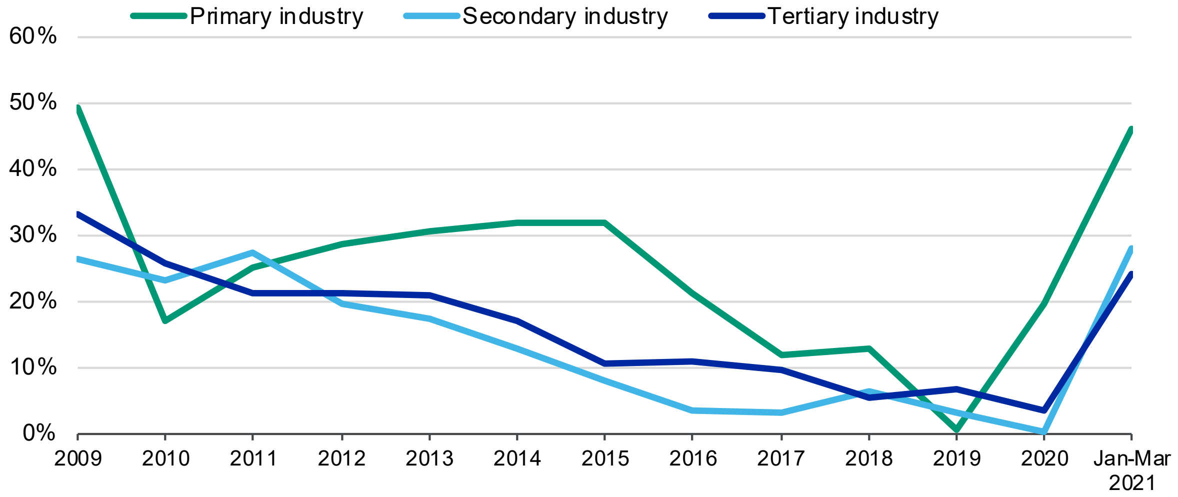
Tertiary industry has increased its share of total FAI in the past 10 years and will continue to drive FAI, supported by China's greater emphasis on domestic production, digitalization with a focus on innovation and R&D

Tertiary industry's share of aggregate FAI was close to 70% in 2020, up from 56% in 2009, mainly driven by increasing property investment



According to the National Bureau of Statistics in China, tertiary industry is industries other than the primary and secondary industries, such as services industry, financial services, property investment, telecommunication, R&D, education, legal services, medical services, tourism and catering services etc. Primary industry refers to agriculture, forestry, animal husbandry and fishery. Secondary industry refers to mining industry (excluding mining auxiliary activities), manufacturing industry, electricity, heat, gas and water production and supply industry, and construction industry.
National Bureau of Statistics makes yearly adjustments to the previous year's FAI data, and the growth rate was calculated on a comparable basis.
Sources: National Bureau of Statistics; Moody's Investors Service

Tertiary industry grew at a slower pace in 2020, followed by a surge in early 2021

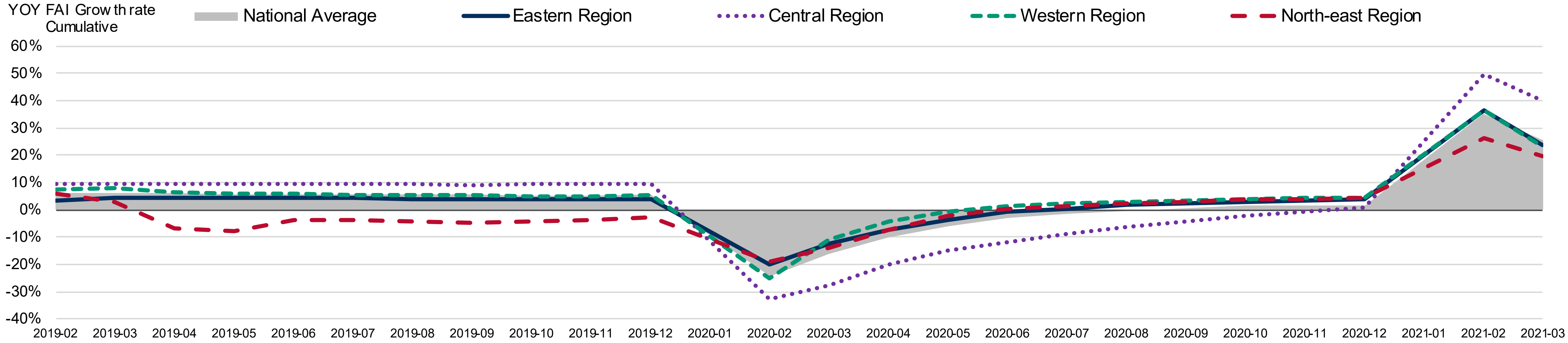


Primary industry refers to agriculture, forestry, animal husbandry and fishery. Secondary industry refers to mining industry (excluding mining auxiliary activities), manufacturing industry, electricity, heat, gas and water production and supply industry, and construction industry. Tertiary industry is the service industry, which refers to industries other than the primary and secondary industries.
National Bureau of Statistics makes yearly adjustments on the previous year's FAI data, and the growth rate was calculated on a comparable basis.
Sources: National Bureau of Statistics; Moody's Investors Service

Uneven recovery among regions but the difference narrows with a more accelerated pace of economic recovery

- Western and north-east regions showed a faster-than-national-average pace of recovery in FAI after Q1 2020.
- Central region's FAI growth recovered at the slowest rate as Hubei province was the center of the coronavirus outbreak in H1 2020. The region's severest contraction in FAI during COVID explained the comparatively slow recovery in 2020. Nevertheless, there was a strong rebound in early 2021 because of a low base in 2020.

Central region exhibited the biggest contraction and slowest recovery of FAI in 2020 but there was a strong uptick in early 2021

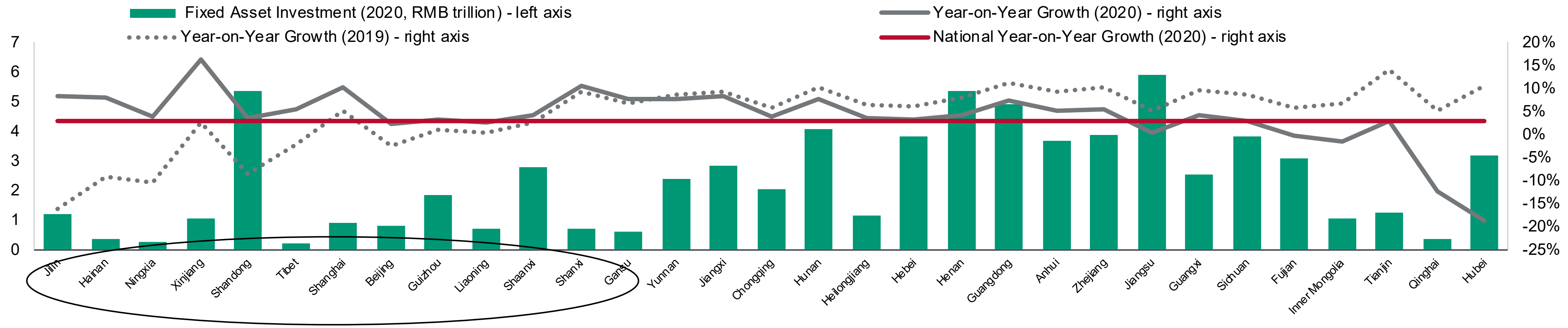


The eastern region includes Beijing, Tianjin, Hebei, Shanghai, Jiangsu, Zhejiang, Fujian, Shandong, Guangdong and Hainan. The central region includes Shanxi, Anhui, Jiangxi, Henan, Hubei and Hunan. The western region includes: Inner Mongolia, Guangxi, Chongqing, Sichuan, Guizhou, Yunnan, Tibet, Shaanxi, Gansu, Qinghai, Ningxia and Xinjiang. The North-east region includes Liaoning, Jilin and Heilongjiang.
Sources: National Bureau of Statistics; Moody's Investors Service

Over half of provinces recorded slower FAI growth during COVID

- Provinces that exhibited stronger year-on-year FAI growth in 2020 are mostly those with a smaller fixed-asset base in absolute terms, except for Shandong and Shaanxi. These two provinces were less affected by COVID disruptions, which was reflected in their near-or-above national GDP growth rate in 2020.
- Four provinces recorded lower FAI in 2020; Hubei, Qinghai, Inner Mongolia and Fujian. The decline in some provinces was because of the severe impact of the coronavirus (Hubei) while for some other provinces it was a result of 1) large infrastructure projects ending (Inner Mongolia); 2) a reduction in manufacturing sector investment (Qinghai with a significant yoy fall by 48%) and 3) a combination of lower infrastructure and manufacturing investments (Fujian).

About 60% of provinces had slower FAI growth in 2020 than 2019

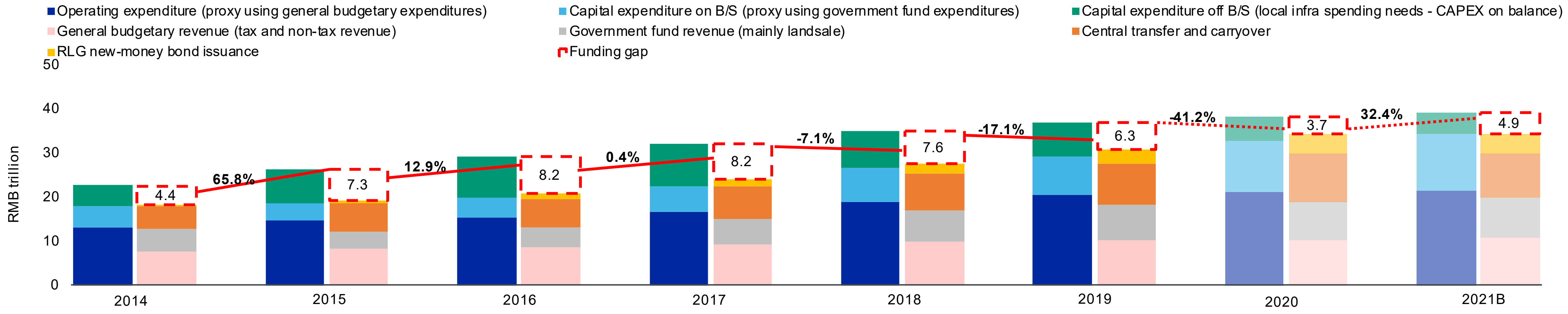


Sources: National Bureau of Statistics, Moody's Investors Service

Likely FAI growth in 2021 will drive persistent RLG funding gaps

- Capital spending, a material portion of which is reflected in FAI, accounts for a large portion (over 40%) of regional and local governments' (RLG) total spending. Persistent urbanization and infrastructure needs are likely to underpin FAI growth and result in persistent RLG funding gaps. Particularly, western and north-east regions may face more credit challenges to support sustainable investment funding in the remainder 2021 because of their relatively weaker economic fundamentals.
- LGFVs and provincial infrastructure platforms will likely remain as important funding vehicles for public infrastructure projects to support the continued funding gap of the local governments. The role of LGFVs will be even more important in regions where economic recovery is relatively weak.
- RLG funding gaps narrowed in 2020, mainly because of lower infrastructure spending as a result of COVID disruptions and a larger amount of bonds issued by RLGs.

We expect funding gaps to persist over the near term



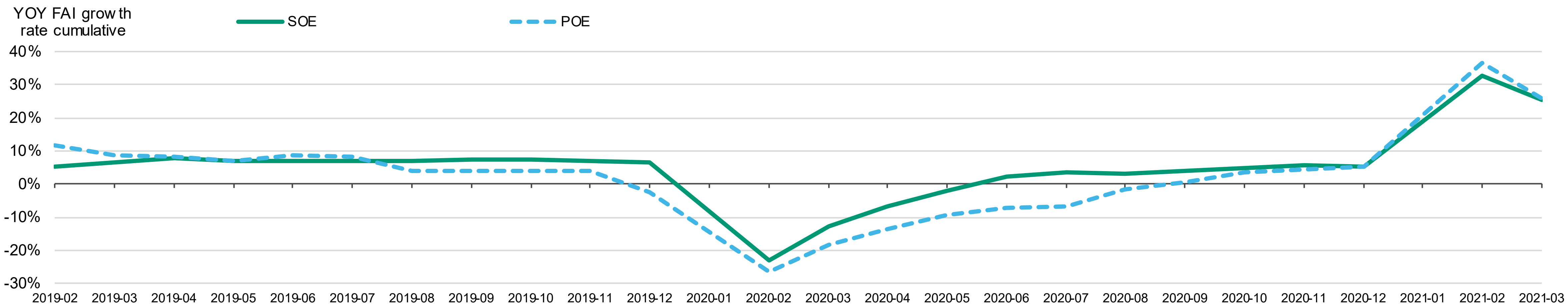
Sources: Provincial Bureau of Finance, Moody's Investors Service

SOEs will continue to be the pillar behind national FAI growth

» We expect state-owned enterprises (SOEs) will continue to drive national FAI given their policy mandates, their generally larger size and better access to funding. For example, SOEs will continue to play a key role in transportation investment, which is one of the key growth areas of national FAI, as they own and operate sizeable assets in this segment. The importance of SOEs in supporting FAI was reinforced during COVID, when the financial strength and funding access of privately owned enterprises (POEs) were strained by the resulting disruptions.

» Nevertheless, the government will continue to promote participation of POEs in FAI, especially in industries where POEs are more active such as information technology and property; and through alternative financing arrangements such as public-private partnerships and infrastructure REITs. There was a notable increase in POE investment in various industries in early 2021, such as infrastructure, manufacturing, property, education and agricultural and forestry.

SOEs will continue to lead the growth of FAI

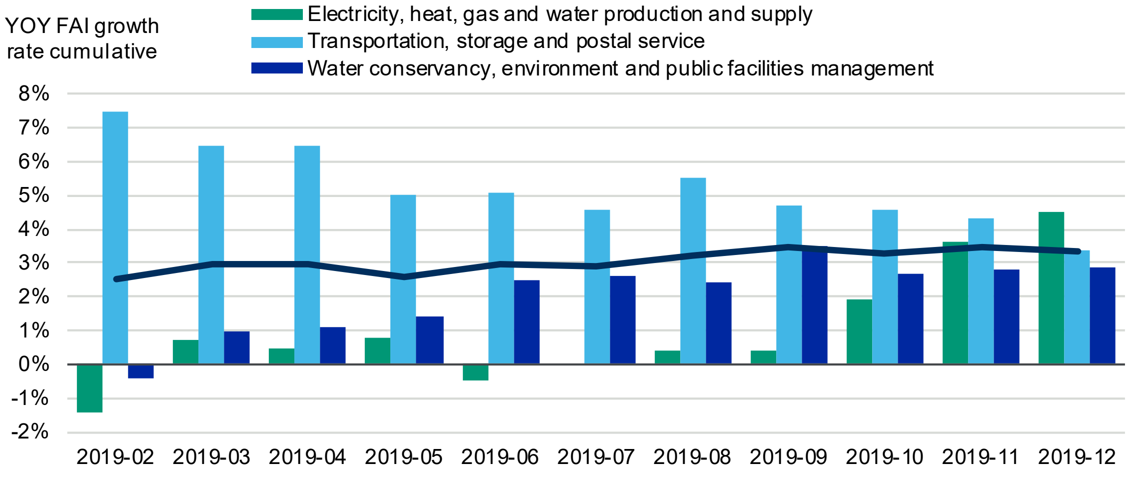


Sources: National Bureau of Statistics; Moody's Investors Service

Transportation sector will likely accelerate its investment pace

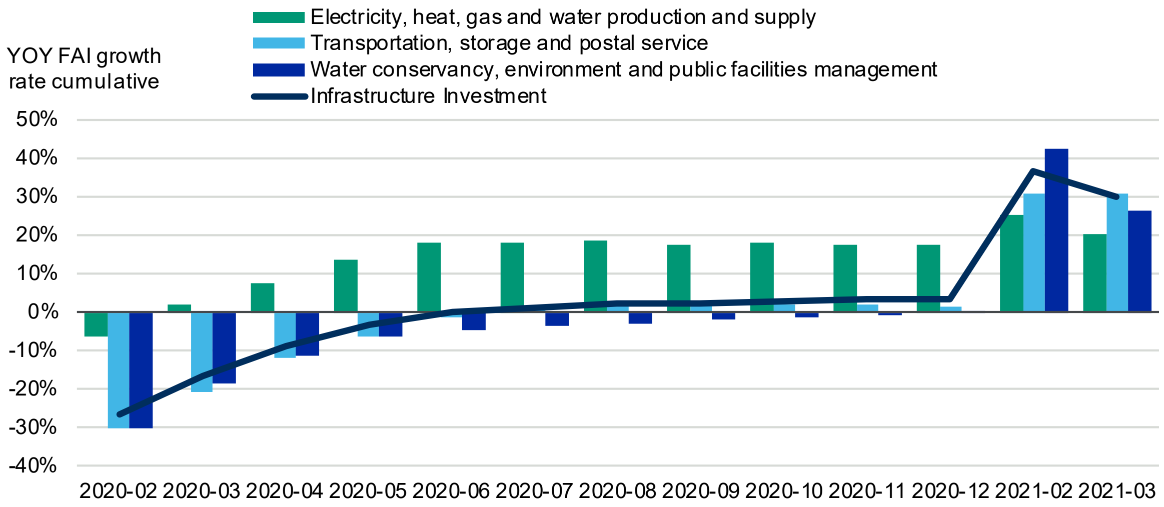
- We expect investment in the transportation sector to increase in 2021 in response to the various government targets for new builds in the sector, as highlighted in China State Council's Outlines on the National Comprehensive Transportation Network Plan (2021-2035), to facilitate economic recovery and strengthen the regional transportation network in the medium term. Toll roads, rail and airports are the investment focus in the sector.
- Utilities' FAI was resilient to COVID disruptions because of the ongoing expansion in clean energy and related supporting facilities. We expect continued investment in these sectors, driven by the ambitious decarbonization targets of the country and reflecting the 14th Five-Year Plan, which places an emphasis on clean energy and environmental protection.
- We expect LGFVs and regional infrastructure platforms will continue to drive FAI through investment in and construction and operation of infrastructure and utilities services as mandated by their respective RLG for regional development.
- A focus on R&D and innovation in the 14th Five-Year Plan will also drive investment in strategic sectors such as technology. The government's commitments to boost household income and strengthen the social safety net aim to improve living quality and create opportunities for investments in education and basic service providers.

Transportation was a backbone of infrastructure-related FAI in 2019



Sources: National Bureau of Statistics; Moody's Investors Service

Transportation will pick up its investment pace; utilities will benefit from expansion in clean energy



Sources: National Bureau of Statistics; Moody's Investors Service

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Moody's related publications

Moody's related publications

Sector Profile

» Province of Hunan (China): Weakening fiscal profile and rising debt burden weigh on ability to support government-related entities, 8 March 2021

» Province of Zhejiang (China): Dynamic private sector supports Zhejiang's strong economy but reliance on land sales poses risks, 15 January 2021

Sector research

» LGFV Bond Monitor: Fourth quarter 2020, 26 March 2021

» Growth of Asian infrastructure companies will strengthen in 2021 but pace will vary, 22 March 2021

» LGFVs in a province – Hunan province, 17 March 2021

» Government Policy: Five-Year Plan highlights cautious balance between growth, risks and stability, 15 March 2021

» China Sub-Sovereign Monitor: February 2021, 8 February 2021

» Policy support for infrastructure investment will aid economic recovery, 28 September 2020

» China Sub-sovereign Monitor: September 2020, 18 September 2020

Methodology

» Local Government Financing Vehicles in China Methodology, 29 July 2020

Outlook

» Global Macro Outlook 2021-22 (February 2021 Update): G-20 economies will return to growth in 2021 but recovery will not be uniform, 23 February 2021

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Appendix

Summary of key LGFV policy documents

Policies aim to regulate regional and local governments' contingent liabilities from LGFVs

Name	Date	Issuing Authorities	Implication
Doc 43: Guidelines to strengthen the supervision and management of local government debt	Oct-14	The State Council	» Prohibits RLGs from using LGFVs to borrow » Allows 36 high-tier RLGs to issue bonds directly » Introduces a bond-debt swap program to refinance legacy LGFV debt (incurred before year-end 2014) for which RLGs have repayment obligations
Doc 88: Guidelines for contingency plans for local government debt risks	Nov-16	The State Council	» Outlines the reporting framework and contingency plans to address situations in which RLGs are in financial distress » Reiterates the principles in Doc 43 regarding the separation of RLGs' obligations in corporate debt » However, RLGs could have rescue responsibilities for certain debt if defaults are likely to cause systemic risks and undermine social security » If creditors do not accept the bond-debt swap offer, LGFVs will have to pay legacy debt on their own
Doc 50: Further regulation of local governments' debt financing	May-17	Ministry of Finance, Ministry of Justice, People's Bank of China, China Securities Regulatory Commission, China Banking Regulatory Commission and the National Development and Reform Commission	» Six government ministries and commissions will make joint and coordinated efforts to supervise the debt and financing of RLGs and LGFVs » RLGs have to rectify non-compliant financing activities by 31 July 2017 » Prohibits RLGs from injecting public welfare assets or public land, or pledging future land sale proceeds into LGFVs to enhance the LGFVs' creditworthiness » Pushes LGFVs to become more market-oriented SOEs and to use market-oriented means to raise funds
Doc 87: Notice on resolutely curbing the illegal financing of local governments in the name of government procurement of services	May-17	Ministry of Finance	» Highlight's activities that should be excluded from Government Procurement of Service, which is directly linked to the fiscal budget of local government » These activities include goods purchase, infrastructure construction related to railway, highway, airport, utilities, education, medical service and financing provided banks non-bank financial institutions » Shantytown redevelopment and relocation of impoverished residents' projects are exceptions

Sources: The State Council of the PRC, Moody's Investors Service

Summary of key LGFV policy documents

Policies aim to regulate regional and local governments' contingent liabilities from LGFVs

Name	Date	Issuing Authorities	Implication
Doc 23: Notice on relevant issues on financial institutions regarding the investment and financing activities by local governments and state-owned enterprises	Apr-18	Ministry of Finance	» State-owned financial institutions shall not, except for purchasing RLG bonds, provide any forms of financing for local governments and their departments directly or indirectly through local SOEs and public institutions. » State-owned financial institutions should not finance the state-owned enterprises (including LGFVs) which participated in infrastructure development or PPP projects, for the equity portions
Doc 101: Guidelines to strengthen measures in addressing weak links in infrastructure sector	Nov-18	The State Council	» Increases financial support for projects under construction and key projects in weak fields based on the government's guidance » Financial institutions should meet reasonable funding needs of LGFVs as per market-oriented principle, and negotiate with LGFVs to refinance projects-under-construction to avoid projects being abandoned » Allows LGFVs to roll over debt, restructure debt or use other measures to maintain working capital turnover basis negotiation with financial institutions when they have repayment difficulty for outstanding contingent liabilities, on the premise that the size of local government's contingent liabilities will not increase
Doc 10: Notice on propelling the development of Public Private Partnership (PPP) criterion	Mar-19	Ministry of Finance	» Tightens regulatory requirements and scrutiny of PPP projects to prevent RLGs from exposure to contingent liabilities through improper PPP structure » Classifies scenarios likely to cause contingent liabilities of local governments » Clarifies projects that have increased local government's contingent liabilities should be removed from the registration and those accountable should bear legal consequence

Sources: The State Council of the PRC, Moody's Investors Service

Summary of key LGFV policy documents

Policies aim to regulate regional and local governments' contingent liabilities from LGFVs

Name	Date	Issuing Authorities	Implication
Doc 33: Notice on the division of financial authority and payment responsibility between central and local governments in transportation	Jun-19	The State Council	» Increases regulatory oversight and financial support from the central government in transportation » Clarifies allocation of spending responsibilities to address RLG funding gap and balance transport infrastructure development across China
Doc 666: Notice on registration regime for offshore bond issuance by local state-owned enterprises (SOEs)	Jun-19	National Development and Reform Commission	» Emphasizes the importance of reliability of fillings for bond registration » Specifies enterprises that qualify for offshore bond issuance should have no less than three years in operation » Emphasizes local SOEs should not receive guarantee from their local governments » Limits LGFVs' use of offshore bond proceeds to only refinance portion of mid- to long-term debt maturities due within one year
Notice on Chinese RLGs' special purpose bonds (SPBs) issuance for infrastructure project financing	Jun-19	The State Council, Central Committee of the Communist Party	» Allows RLGs to use special-purpose-bond proceeds for capital in certain infrastructure projects » Encourages financial institutions to provide funding to related project companies including LGFVs
Announcement on reduction of equity ratio for infrastructure projects	Nov-19	State Council Executive Meeting	» Reduces the minimum equity ratio for some infrastructure projects: 20% from 25% for ports and reductions of up to five percentage points for other projects including roads, rail, city construction, logistics » The reductions will be valid for projects that have a clear investment return mechanism, reliable revenue and manageable risk » Infrastructure project companies can also issue hybrid financial instruments as equity as long as the funds from hybrid capital do not exceed 50% of total project equity

Sources: The State Council of the PRC, Moody's Investors Service

Summary of key LGFV policy documents

Policies aim to regulate regional and local governments' contingent liabilities from LGFVs

Name	Date	Issuing Authorities	Implication
Doc 5: Notice on Further Deepening the Reform of the Budget Management System	Apr-21	The State Council	» Aims to strengthen the overall management of government resources and to standardize government revenue budget management and budgetary revenue planning » Tightens the government budget preparation process to enhance the overall integrity of fiscal budgets » Calls for RLGs to strengthen risk management and risk prevention measures and properly manage and eliminate hidden debt risk » Calls for RLGs to enhance fiscal transparency and promote the interconnection of budget information between central and RLGs » Suggests that insolvent LGFVs should go through debt restructuring or bankruptcy processes according to relevant laws
Doc 3: Guidelines for the Application of the Review Rules for the Issuance and Listing of Corporate Bonds at Shanghai Stock Exchange	Apr-21	Shanghai Stock Exchange	» Aims to strengthen the quality of corporate bond information disclosure » Highlights issuers conditions that require special attention, restricts use of proceeds, tightens disclosure requirements of issuing corporate bonds in China » LGFVs with total assets less than RMB10 billion, or with domestic ratings at AA or below, should enhance their repayment ability by measures such as applying proceeds from bond issuance for repayment of outstanding corporate bonds, considering their individual conditions including profitability, balance sheet and cash flow positions
Doc 1: Guidelines for the Application of the Review Rules for the Issuance and Listing of Corporate Bonds at Shenzhen Stock Exchange	Apr-21	Shenzhen Stock Exchange	

Sources: The State Council of the PRC, Moody's Investors Service