AXA Investment Managers

18 October 2024

Investment Institute *Macroeconomics*

Bonds, bridges, and burdens: China's local government debt in focus

Macroeconomic Research

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Key points

- China's decades-long period of investment-driven growth has undoubtedly fuelled impressive economic development; however, its debt-financed investments now weigh heavily on the slowing economy. This is particularly true for local governments, which bear the largest share of the debt
- So-called 'land finance' has been a key mechanism behind China's economic miracle, transmitted via local governments and bolstered by the once-booming property market
- Triggered by the property market's downturn, this once positive, self-reinforcing feedback loop has swung into reverse, in turn constraining local governments' fiscal capacities and putting pressure on the banking sector
- Ultimately, only China's central government can resolve these issues through immediate fiscal support and long-term reforms to its fiscal framework, ensuring a sustainable model for all levels of government

The core of China's policy entanglement

It is widely acknowledged that China's "economic miracle" over the past three decades was largely driven by industrialisation – shifting from an agrarian economy to an industrialised one. The impressive GDP growth during this period was accompanied by rapid infrastructure development, a historic property market boom, and high demand for Chinese manufactured goods from Western economies. This was a capital-intensive process, especially for a country emerging from predominantly agricultural roots. Inevitably, debt levels surged over these decades as it invested in a new future but it suited China's political landscape to see local governments shoulder much of this burden.

However, as China's economy cooled over the past two years – a consequence of the pandemic's aftermath and an unprecedented asset price adjustment – risks have emerged from the intertwined relationship between the property market, the banking system, and local governments. We have already examined the property market[1] and China's banking system's[2] role in this journey. This final note in this trilogy of papers introduces the central player in this entanglement: local governments.

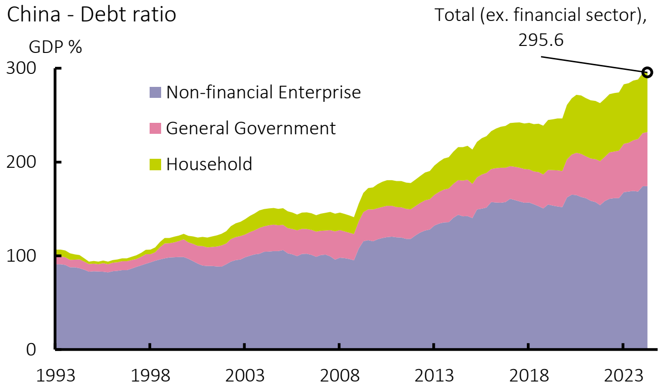
Mounting debt

China's rapid economic growth over recent decades was primarily driven by investment across various sectors, including infrastructure and real estate. However, alongside this economic expansion came rising debt levels (Exhibit 1). The overall debt level (excluding the financial sector) hovered around 100% of GDP in the early 1990s but by 2024 it had tripled. While non-financial enterprises still hold most of the debt, their share has declined significantly. Meanwhile, household debt has risen from under 3% in 1995 to a peak of over 23% in 2021. Much of this household debt is tied to mortgages, a consequence of the rapid growth in China's private property market, as discussed in our first note on this topic[1].

Similarly, government debt[3] has increased seven-fold since 1993 when it was just 8% of GDP. In response to the 1997 Southeast Asian financial crisis, China issued a record amount of treasury bonds in 1998 – over 600bn renminbi (RMB), equivalent to 7.4% of GDP. This caused government debt to jump to over 15% of GDP. Approximately RMB 100bn of the 1998 bonds were allocated to infrastructure development, a stimulus measure that became a key driver of growth over the next two decades, but also a major contributor to rising debt.

Following 1998's surge in government debt, bond issuance continued to grow, fuelled by increasing funding demands for infrastructure and the emerging manufacturing sector, particularly after China's accession to the World Trade Organization (WTO) in late 2001. When Western economies were hit by the global financial crisis, weak external demand put immense pressure on China's exports, hurting economic growth. Additionally, natural disasters in early 2008 caused substantial economic losses. As a result, in late 2008 the Chinese government launched an extraordinary stimulus package worth RMB 4trn – 12.5% of GDP at the time – primarily for infrastructure and property investment. Government debt surpassed 30% of GDP in 2009. By 2020, the pandemic pushed the debt ratio above 40%, and it has since risen to nearly 60% by mid-2024.

Exhibit 1: The debt ratio in China has risen rapidly



Source: CEIC and AXA IM Research, October 2024

While increasing government debt had previously not caused concern, as it spurred significant economic growth, worries have emerged as GDP growth has slowed in recent years without a corresponding reduction in debt growth. This has sparked fiscal sustainability concerns, particularly as implicit government debt at the local level has surged alongside explicit debt, creating pressure to deleverage.

Local government's heavy lifting

Initially, in response to rising capital intensive infrastructure demands from the late 1990s, local authorities faced strict fiscal constraints, creating difficulties in meeting capital requirements solely dependent on local revenues. Under China's Budgetary Law (prior to its 2014 amendment), local governments were legally prohibited from engaging in direct debt financing[4]. To circumvent this, they created Local Government Financing Vehicles (LGFVs)[5] in the early 2000s — these off-balance sheet borrowings allowed them to fund regional development projects. The number and scale of LGFVs grew rapidly throughout the decade[6], especially after financial deregulation[7] linked to the 2009-2010[8] stimulus period, leading LGFV debt to increase by over half to reach 15.7% of GDP by 2009 (Exhibit 2). But growth fuelled by this investment helped pull the economy out of a downturn and contributed to the staggering double-digit growth pace of the early 2010s.

[1] Wang, Y., "*Brick by brick: Unravelling China's property puzzle*", AXA IM Macroeconomic Research, 2 May 2024.

[2] Wang, Y., "Resilience and realignment: Opportunities and risks in China's banking sector", AXA IM Macroeconomic Research, 6 September 2024.

[3] On balance sheet debt.

[4] Exemptions could occur based on central government approval.

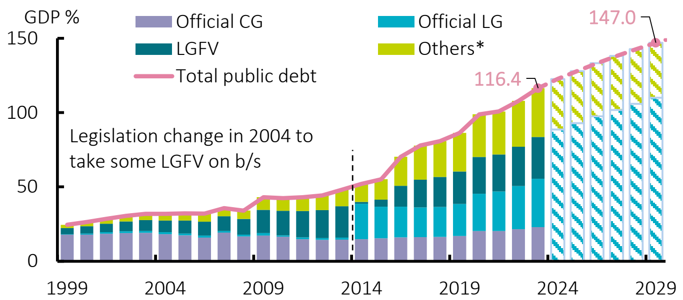
[5] The Chinese government has never provided a legal definition of LGFVs, they are widely recognised as "local government-owned and government-controlled legal entities that carry out government investment projects", according to Zhang, Z., and Xiong, Y. "*Infrastructure financing*". The Handbook of China's Financial System, 2020.

[6] Hui, J. & Rial, I., *"Regulating local government financing vehicles and public-private partnerships in China",* International Monetary Fund, Sep 2016.

[7] Whatever effective constraints were on local government reliance on LGFVs, they were relaxed after the global financial crisis.

[8] Bai, C. E., Hsieh, C. T., & Song, Z. M., "*The long shadow of a fiscal expansion*", National Bureau of Economic Research, Nov 2016.

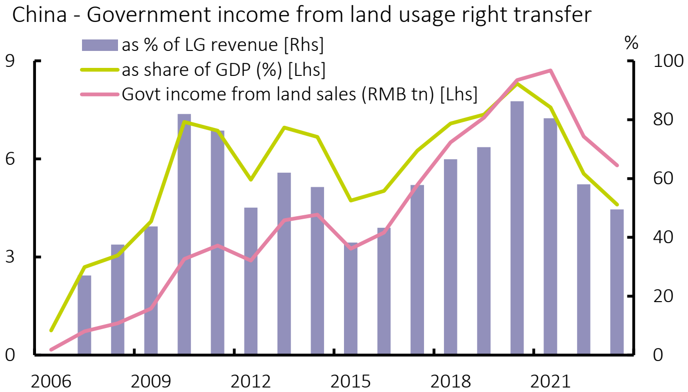
Exhibit 2: Rise in debt at subnational level driving up public debt



Note: 'Others' includes government guaranteed debt or "possible to be recognised debt," and debt tied to special construction and government-guided funds. Dashed line and shaded areas showing IMF projections; b/s: balance sheet.
Source: IMF Fiscal Monitor, IMF Artical IV, CEIC and AXA IM Research, October 2024

Underpinning local governments' off-balance-sheet financing is China's complex 'land finance' system. This involves local governments (including LGFVs), the real estate market, and local commercial banks. Land finance refers to local governments' significant reliance on urban land-related financing for local urbanisation development, which was central to the country's remarkable urbanisation progress that accompanied its industrialisation. Land sale revenues have been an important source of local government[9] income. Total revenue from land sales surged from 2006 and peaked in 2021, with land sales accounted for 86% of total local government budget revenue[10] (Exhibit 3).

Exhibit 3: Income from land sales dipped in 2015 and 2022-23

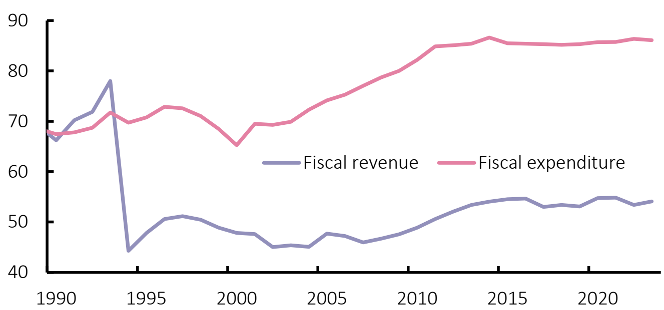


Source: CEIC and AXA IM Research, October 2024

Local governments unlock a virtuous circle

Local governments were in part driven down this avenue by changes from the central authority. In 1994, the central government reformed the tax system, significantly altering its tax-sharing with local government. Local government's share in total fiscal income dropped sharply to less than 50% from 80% prior to the reform and has averaged around 50% since. But the reform did not reduce the obligations and responsibilities of local governments, with local government's share of total fiscal expenditure remaining unchanged at around 70% (Exhibit 4). Nevertheless, central government's fiscal transfer payments have been insufficient to offset the difference.

Exhibit 4: Mismatch between fiscal revenue and expenditure



Note: fiscal revenue excludes the fiscal transfer from contral govenrment.
Source: CEIC and AXA IM Research, October 2024

Hence tasked with responsibility for local growth and left with a shortfall in budgets, local governments began to pursue urban development and soon discovered a fruitful, self-reinforcing positive feedback loop: prosperous regions, with a higher quality of life would have higher land prices[11], which enhanced a local government's capacity to raise funds through land sales. This cycle was instrumental in China's rapid economic development. Local governments spent most of the funding, that is either generated directly from the land sales revenue or from the saleable land[12] backed debt issuance, on infrastructure investments and/or firm subsidies, which improved urban amenities and the business environment to attract more firms, resulting in higher land prices[13] and eventually boosting local economic growth, creating sufficiency of the land finance.

[9] "Local government" in this paper only include prefecture- and county -level local governments. China's government hierarchy consists of five layers: central, provincial, prefecture, county, and township. According to the Land Administration Low, urban land resources are state owned and controlled by the prefectural-level (city) governments and the county-level governments under the supervision of the provincial-level government. So "land sales" in this paper refers to *granting the right of using the land for several decades* (a license). For example. for residential land, the local government would be the freeholder and the real estate developer would be the leaseholder who has the right of using the land for 70 years.

[10] Gyourko, J., Shen, Y., Wu, J., & Zhang, R., "*Land finance in China: Analysis and review*", China Economic Review, Sep 2022.

[11] Roback, J., "*Wages, rents, and the quality of life*", Journal of political Economy, Dec 1982.

[12] To be precise, "saleable land" means the land's using right is transferrable.

[13] Sometimes the land value would start to appreciate as early as the infrastructure planning permission was granted.

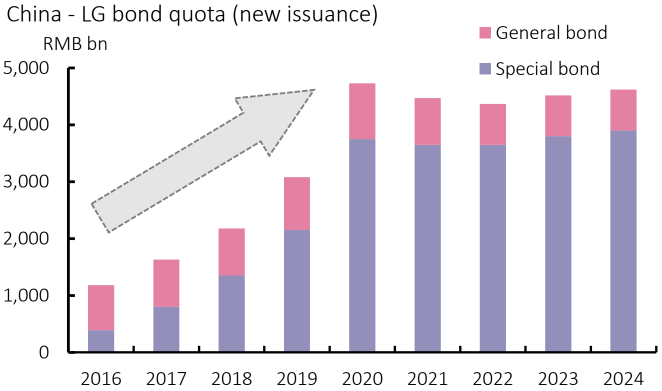
LGFVs provided a useful tool in this system but their debt financing activities are intimately linked to the land finance system. LGFVs can sometimes use newly developable land as collateral to secure financing if the land is tied to an already sold or developed plot. However, this formal arrangement is relatively rare[14]. As such local governments more commonly prefer an informal arrangement that uses future land sales revenues as an implicit guarantee for LGFV debt financing[15]. This practice gained traction during the stimulus period of 2009-2010, when China's Ministry of Finance allowed local governments to fund projects through various means, including budgetary revenues, land revenues, and borrowed funds via LGFVs[8]. The banking system, especially the regional commercial banks, are heavily involved in this, lending to LGFVs against the collateral of future land revenues. As a result, local governments, real estate markets, and the banking system became increasingly entangled.

While hard evidence of this complex web is scarce, empirical studies suggest that fluctuations in house prices significantly and positively affect bond ratings and negatively yield spreads[16]. Conversely, when land-sale revenues drop, the credit quality of the local government declines accordingly[17]. Cities that imposed Home Purchase Restrictions saw their LGFV bond issuance fall significantly[18], reflecting the importance of land values as an implicit guarantee for local government debt. This system worked well for decades (during a period of rising property prices), but the incentives embedded in this entangled system not only significantly impact local governments' urban land supply decisions[19] but brought up the LGFVs' debt rapidly as the investment demand kept expanding.

By 2014, the lack of transparency surrounding LGFV debt posed significant credit risks. In response, China's central government tightened regulations under the policy of *'closing the back door and opening the front door'*. To *'open the front door'*, the amended 2014 Budget Law effectively allowed debt financing of infrastructure investments. In the following year, local governments in China started issuing local government bonds and special local government bonds with quotas set by the State Council (Exhibit 5), aiming to improve the transparency and management of the hidden debt (including LGFVs) and keep the risks under control.

Then, to *'close the back door'*, most LGFV debt (equivalent to 22% of GDP) was brought onto local governments' balance sheets in 2014, increasing official local government debt to nearly 24% from less than 1.5% of GDP in 2013 (Exhibit 2). In addition, a bond-swap programme[20] equivalent to 25% of GDP was introduced to replace short-term LGFV debt with longer-maturity local government bonds[21].

Exhibit 5: Local government bond quota soared



Source: CEIC and AXA IM Research, October 2024

However, while the 2014 Budget Law was intended to improve transparency, it effectively created an additional tool for local government borrowing, without closing off the original. LGFV and official on-balance-sheet government debt grew from 2015 onwards. By the end of 2023, local government debt, including LGFVs, was estimated at RMB 76trn, more than 60% of GDP.

When feedback loops go into reverse

The self-reinforcing feedback loop which once fuelled China's economic growth has now reversed, leaving serious consequences for local governments and the broader economy. The positive feedback loop originated from land finance, which fostered a property bubble over the decades[1], but is now unwinding as the fundamental factors that underpinned the

[14] According to Zhang, Nian and Liu (2018), among all the bank loans with land collateral in China in 2009, only 6.6% (RMB 257bn) of that was borrowed by LGFVs. Zhang, L., Nian, Y., & Liu, J., "*Land market fluctuations and local government debts: Evidence from the municipal investment bonds in China*". China Economic Quarterly, 2018.

[15] Liu, C., & Xiong, W., "*China's real estate market*", National Bureau of Economic Research, Nov 2020.

[16] Ambrose, B. W., Deng, Y., & Wu, J., "*Understanding the risk of China's local government debts and its linkage with property markets*" SSRN, Dec 2015.

[17] Mo, J., "*Land financing and economic growth: Evidence from Chinese counties*", China Economic Review, Aug 2018.

[18] Zhang, L., Nian, Y., & Liu, J., "*Land market fluctuations and local government debts: Evidence from the municipal investment bonds in China*". China Economic Quarterly, 2018.

[19] Research suggests local governments typically make land supply decisions to maximise land finance-related revenues or profits, which need not be consistent with simply meeting local demand for space. As such, this type of land supply behaviour may lead to the misallocation of land recourses. Wang, Y., & Hui, E. C. M., "*Are local governments maximizing land revenue? Evidence from China*". China Economic Review, Apr 2017.

[20] The three-year bond swap programme was launched in 2015, to replace the costly and short-duration debt with local government bond with maturities of two to 20 years.

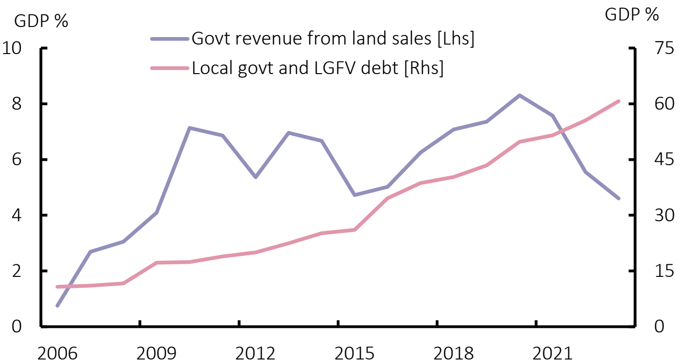
[21] Schipke, M.A., Rodlauer, M.M. & Zhang, M.L. eds., "*The future of China's bond market*", International Monetary Fund, Mar 2019

property price gains, including urbanisation and population growth, have passed their peak and weakening demand has resulted in an unprecedented price correction.

Through the land finance mechanism, this negative adjustment in the property sector has generated an adverse impact on local governments' fiscal position. Slower growth of land sales is increasingly misaligning with still-rising LGFV debt (Exhibit 6). With local government's role central to fiscal distribution, this risks the ongoing implementation of fiscal policy. It also risks a quasi-credit tightening impact, given the role of local governments in the Chinese credit system, while at the same time challenging the stability of the banking system, which is also closely linked to land finance[2].

Exhibit 6: Weakening land sale revenue with rising LGFV debt

China - land sales revenue and LGFV debt



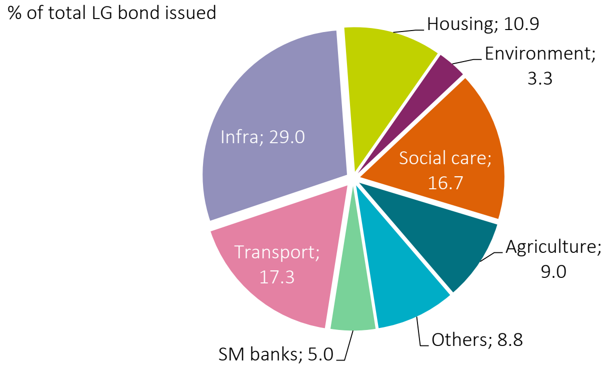
Source: CEIC and AXA IM Research, October 2024

Two further factors play a role. First, local government's role at the heart of driving infrastructure investment (Exhibit 7), to the benefit of the regional and headline GDP growth in recent years, has also been a benefit to the local government balance sheet. However, as well as more limited fiscal space, China also faces a weakening return from its infrastructure investments in part echoing some of the investment saturation witnessed by countries like Japan in the past, which in part points to increasing resource misallocation. The returns on local government investments are starting to slow while the debt burden is growing.

Second, local officials, whose performance is judged by regional economic growth, often make decisions on local land supply based on maximising land finance-related revenues or profits to satisfy their demand of fund[22], rather than meeting local demand for land or housing[23]. This has led to widespread misallocation of land resources, including excessive conversion of rural and farming land for urban usage in certain regions. In some cases, local governments may also have deliberately restricted land supply to inflate prices, distorting both land and housing markets[24]. Political corruption has been a continued concern.

Exhibit 7: Large portion of issued bonds used on infrastructure

China - LG bond investment target (2023)



Source: CEIC and AXA IM Research, October 2024

Beijing's 2016 Party Accountability Act imposed 'lifetime accountability' on government officials for their decisions[25] and sought to address these distortions[26].

However, the policy has also made local officials more risk-averse, discouraging necessary risk-taking and crucial economic decisions suggesting a principal-agent problem. This reluctance has become more pronounced during the current economic downturn and appears to be contributing to *de facto* fiscal austerity at the local level, despite central government intentions, limiting the effectiveness of central government stimulus policies.

Local governments and banking exposure

The RMB 4trn stimulus package in 2009, designed to cushion the impact of the financial crisis, successfully revitalised China's economy, leading to several years of strong economic growth despite the global malaise. At the time, local governments were not legally permitted to borrow directly, so to facilitate and expedite the stimulus plan Beijing explicitly encouraged local authorities to borrow through their LGFVs, with bank loans as the primary funding source.

[22] Pan, J. N., Huang, J. T., & Chiang, T. F., "*Empirical study of the local government deficit, land finance and real estate markets in China*", China Economic Review, Feb 2015.

[23] Lichtenberg, E., & Ding, C., "*Local officials as land developers: Urban spatial expansion in China*", Journal of Urban Economics, Jul 2009.

[24] Du, J., & Peiser, R. B., "*Land supply, pricing and local governments' land hoarding in China*", Regional Science and Urban Economics, Sep 2014.

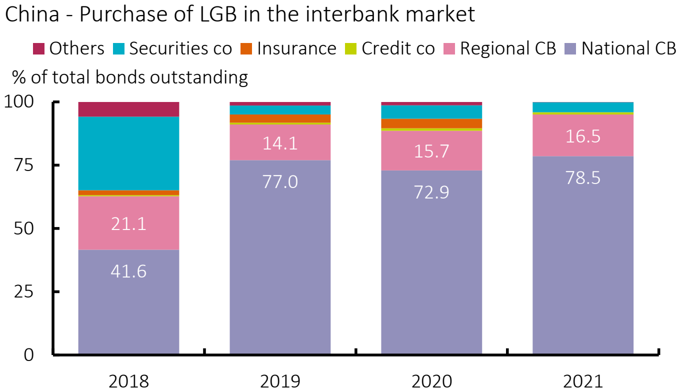
[25] Including but not limited to decisions around land finance.

[26] Some indirect evidence may have shown the positive impact. For example, the land supply for property use, which had the most server distortion during the boom in the private housing market, started to decline in 2013 and stayed at record lows between 2016 and 2017, while investment and sales of residential buildings continued to rise.

This approach led to a surge in bank lending and investments, which helped absorb the negative economic impacts of the financial crisis. However, it also left local governments with substantial bank debt. It is estimated that around 90% of the newly incurred local government debt during the post-crisis stimulus period came in the form of bank loans[8]. Although this proportion had fallen to around 60% by 2023, as alternative funding sources have been introduced, banks remain a key source of finance for LGFVs.

Moreover, commercial banks in China have been the largest holders of local government bonds (Exhibit 8). While the growing exposure to these bonds may not threaten the overall stability of China's banking system[2], the risk is unevenly distributed across different type of banks in the economy. Regional commercial banks are particularly vulnerable, with relatively large holdings of local government debt relative to smaller franchises, weaker funding profiles, and minimal central government support compared with their state-owned counterparts. The regional commercial banks also often hold the debt of the governments of their own region. This risks a lack of risk diversification in regions that fare poorly.

Exhibit 8: Commercial banks' local government bond holdings



Source: CEIC and AXA IM Research, October 2024

The extensive reliance on banks for this local government funding has intertwined the health of local government finances with the resilience of the banking system. As China's growth slows and infrastructure-driven investment becomes less sustainable, the pressure on local governments and banks, particularly regional ones, is likely to intensify. This structural entanglement will require careful policy coordination to avoid exacerbating any future fiscal and financial risks.

Solutions rest with Beijing

As the Chinese saying goes, "only the person who tied the bell can untie it". In this case, only Beijing has the power and fiscal capacity to address the local government debt issue. However, time is of the essence. In the short term, a rapid deleveraging under current economic conditions could prove disastrous in an economy already teetering on the brink of a demand-deficient deflation trap. Instead, targeted and timely fiscal support is likely necessary to ensure local governments have sufficient fiscal space to effectively provide support for struggling regional economies.

In the longer term, structural reforms to China's administrative and fiscal framework will be necessary to rebalance the responsibilities and fiscal capacities of the central and local governments. This could involve redefining revenue streams and expenditure responsibilities to ensure that all levels of government operate sustainably, ultimately laying the groundwork for more resilient future growth.

Getting the balance right is a difficult task in any economy, with the deflation of property bubbles casting long shadows over large economies, including the US and Japan. However, China's task appears more challenging given the complicated and intertwined nature of local governments in both fiscal and credit transmission mechanisms. Creating the appropriate short and long-term incentive mechanisms will be challenging and may cause further conflicts with China's broader ideologies. As such, we welcome the boost that recent discussion of central government issuance and stimulus can provide. However, we continue to suggest that China's economic growth outlook will likely slow over the coming years – although we are increasingly hopeful – in a gradual manner.

Our Research is available online: www.axa-im.com/investment-institute

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