AMRO Annual Consultation Report

China – 2023

ASEAN+3 Macroeconomic Research Office (AMRO)

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Acknowledgments

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Executive Summary

1. **China's near-term recovery is underway, and it is timely to tackle long-term challenges.** With its sound economic fundamentals, China can consolidate the near-term recovery and enhance its efforts to sustain high-quality long-term growth. This entails addressing challenges related to population aging, high leverage, geopolitical tensions, and global trade fragmentation.

2. **China's economic recovery in 2023 was bumpy, with comprehensive policy measures helping to provide strong cushions against headwinds.** GDP growth rebounded from 3.0 percent in 2022 to a creditable 5.2 percent in 2023. This growth was marked by a strong rebound in Q1 after the reopening from the pandemic, a sharp slowdown in Q2, and a notable recovery in Q3-Q4. As China's macroeconomic fundamentals remain sound, the economic recovery is expected to further normalize in 2024. Consumption will continue to be the primary driver of growth this year, supported by further improvements in labor market conditions. Investment is expected to gain greater traction in 2024, driven by the expansion of traditional infrastructure, construction of modern and advanced infrastructure, and robust investments in high-tech manufacturing and services. Real estate investments may also start to recover gradually. Exports should pick up with the turnaround in the electronics cycle.

3. **Inflation in 2023 was exceptionally low at 0.2 percent and is anticipated to rise gradually in 2024.** The low inflation in 2023, in general, reflected a negative output gap stemming from weak growth in 2022, ample supplies in the consumer market, and falling global commodity prices. Inflation is projected to rise gradually in 2024 but will remain well contained, barring any unanticipated supply shocks.

4. **The banking system is sound, although there are pockets of weaknesses among a minority of city and rural commercial banks; overall credit growth and financing conditions should improve.** There is some uncertainty over banks' asset quality, particularly loans provided to corporates affected by the pandemic-induced economic downturn, property developers with borderline credit assessments, and strained local government financing vehicles (LGFVs). Despite these challenges, the banking sector's asset quality remains sound overall, and credit growth should pick up and become more supportive of the economic recovery in 2023. Funding conditions for LGFVs have generally been tight, reflecting restraint by both lenders and borrowers.

5. **The real estate sector remains weak.** Conditions in the real estate sector continue to be challenging and confidence remains low. Real estate sector fixed asset investment (FAI) has been subdued, and funding for real estate development is still tight. Many property developers still face challenges in obtaining credit, which comes at high costs. To ensure that the recovery process continues, the authorities have taken various policy measures, such as completing stalled residential property projects and strongly urging developers to make progress in resolving their financial difficulties through asset sales, deferred bond payments, and loan restructuring.

6. **China has continued to implement a proactive fiscal policy while maintaining fiscal sustainability.** Due to the economic recovery slowdown and the property market downturn in 2022 and 2023, government spending on support measures increased. This included transfer payments, employment subsidies, and a reduction in tax burden on enterprises and workers. Meanwhile, the government has maintained fiscal sustainability. The official general public

budgetary account deficit, which included net withdrawals from the government's stabilization fund, was 3.2 percent of GDP in 2021 (the actual implementation is 3.1 percent), 2.8 percent in 2022 and 3.8 percent in 2023.

7. **Overall, China's economy should continue to firm and return to its trend trajectory through 2024 and 2025.** AMRO forecasts GDP growth at 5.3 percent in 2024 – albeit with risks tilted to the downside – and 4.9 percent in 2025. Consumption will be the key driver of growth this year while investment is expected to gain greater traction in 2025. Notably, while there have been significant shifts in the supply chains within China over the past decade, there have also been relocation of manufacturing activities offshore recently, partly due to the reconfiguration of global supply chains by enterprises to build resilience against disruptions and to gain access to new markets. China maintains a sharp competitive edge in several industries, including renewable energy products, both in terms of costs and technologies.

8. **There are several challenges domestically and major uncertainties in the external sector.** The recovery in China's real estate market is likely to be gradual and could falter again. The heightened financial strains on some local governments could adversely impact the economic recovery of the affected regions. High leverage remains a key vulnerability in some sectors of the economy, and effective measures should be taken prudently to avoid the risk of financial distress, which could be a drag on the economy. The external environment poses notable challenges, particularly the short-term risk of a sharper-than-expected global economic slowdown. Geopolitical tensions could escalate further, including a broadening of the technological competition between China and the U.S., with adverse impact on not only China and the U.S., but also the global economy. Perennial challenges, such as population aging, socioeconomic disparities, and climate change require forward-looking policy actions. These near-term risks and longer-term challenges will put persistent pressure on China's financial resources and policy capacity, necessitating continuous efforts for structural reforms and policy adjustments.

9. **China's fiscal stance in 2023 is assessed to have been broadly neutral under a slightly negative output gap; in 2024, fiscal policy should continue to provide targeted support for economic recovery and job creation, with the fiscal impulse being moderately positive.** The authorities should retain targeted policy measures that enhance enterprises' technological capacity, facilitate skill upgrading for workers, and support workers and households who are lagging, and strengthen measures which support innovation by enterprises, bolster their competitiveness, facilitate affordable financing, and generate high-quality jobs. Should the economic recovery falter in the second half of 2023, there is room for fiscal and monetary policy to be more supportive. However, the support should be measured, and commensurate with the pace of economic slowdown, the monetary policy stance, and the effectiveness of other supportive technology and industrial policy adjustments.

10. **To sustain the economic recovery, credit policies should remain supportive.** It is crucial to strike the right balance among several objectives: (i) ensuring that financing conditions remain supportive of the economic recovery; (ii) containing the buildup of leverage and financial imbalances; and (iii) maintaining macro-financial stability.

11. **Policies for the real estate sector should continue to foster its sound development over the long term while supporting its nascent recovery in the near term.** In the short term, the authorities could implement measures to improve developers' financial positions and facilitate the completion of construction of housing units. For the longer term, reform measures are needed. It is important to ensure that funds in escrow accounts are withdrawn exclusively for

the completion of units, with disbursements tied to the progress of construction. There should be stricter caps on loan tenures to ensure that borrowers do not overstretch themselves.

12. Ensuring financial sector soundness is crucial, especially with the recovery of the economy and real estate sector still in their early stages. As total social financing (TSF) growth rebounds with the further strengthening of the economic recovery, banks' credit risk assessment must be stricter, and their lending practices must be prudent. Banks should improve their liquidity positions, including finding ways to secure longer-term funding sources such as term deposits or bonds. For the longer term, banks, particularly city and rural banks, should continue to build additional capital buffers. Smaller banks with weak balance sheets will need restructuring. The existing treatment of bad loans, which relies considerably on write-offs by banks and the sale of such loans to AMCs, should be complemented by additional measures that reduce contingent fiscal liabilities. Continued efforts should be made to enhance understanding of potential spillovers and contagion channels across banks as well as between banks and the corporate sector. There should be robust rules for ownership stakes and management roles in banks.

13. A multi-faceted strategy is necessary to ensure that China can achieve high-quality economic growth – resilient, inclusive, and sustainable. Chinese authorities are right to prioritize the efficient functioning of the labor market, strengthen training programs, and adjust the hukou system to enable workers to move across different parts of the country and industries, and promote job creation. Investments in research and development (R&D), technological innovation, education and training, and healthcare should be prioritized. A more conducive environment for entrepreneurship and technological advancements should be created, supported by the adoption of best practices for sustainable development across areas such as renewable energy, digital transformation, and environmental conservation. Some policies should prioritize micro-level issues that align seamlessly with the key overarching macroeconomic directions. These include devising strategies to upgrade traditional sectors, support strategic emerging sectors, strengthen the resilience of supply chains, and allocate investments to strategic industries to enhance self-sufficiency. Much of the investments in the coming years should focus on quickening technological advancements for priority industrial clusters, bringing about further digitalization, and making further progress in "greening".

14. China needs policies to boost its population growth, expand its labor force, and enhance its labor mobility. Comprehensive support for young couples who want (more) children can be achieved through initiatives such as more affordable childcare services, more friendly parental leave policies, and more flexible work arrangements. The statutory retirement age should be raised gradually to expand the workforce and reduce the dependency ratio. Greater labor mobility across the country and industries can be achieved through initiatives that enhance access to continuing education and vocational training, facilitate job matching, and ensure the portability of social benefits. The liberalization of the hukou system should be quickened. Investing in human capital and enhancing labor productivity are crucial for ensuring sustainable economic growth and development. This entails efforts to lift labor productivity through efficient resource allocation, technological advancements, and use of high-tech methods for production and distribution.

15. China can achieve major breakthroughs in boosting growth and resilience. The sheer size of China's economy, its huge domestic demand base, and its capacity for hosting entire production networks and supply chains are key advantages. There is scope for further digitalization across all sectors of the economy to raise productivity, including in "new economy" sectors and product lines such as semiconductors, new energy vehicles (NEVs),

computers, with positive spillovers. Strong progress in these aspects would strengthen the foundations for China to achieve potential growth of about 4 percent till 2035/2040.

16. To sustain high and inclusive growth, China must improve its social security system. Improving the coverage and adequacy of the social security system will strengthen consumption. This entails enhancing healthcare services, unemployment benefits, the pension system, and having more affordable housing programs for lower-income groups.

17. To boost its growth potential, China must strengthen structural reforms to raise its total factor productivity (TFP) growth and continue to promote the multilateral trading system through both bilateral and multilateral channels. China should prioritize the development of advanced technologies and innovation ecosystems, by increasing funding for R&D, which has already risen from about 2.1 to 2.54 percent of GDP over the past five years; and nurturing and providing financial and infrastructure support to top talents in the fields of science, technology, engineering, and mathematics (STEM), to drive breakthroughs in key sectors. China must further streamline regulations, reduce bureaucratic hurdles, strengthen antitrust laws, and encourage innovation through policies. China's efforts to identify opportunities and build linkages with more trade partners is commendable. China should continue to engage actively in multilateral trade agreements and forums, championing fairness and openness for global trade and investments.

18. Given the need to address structural challenges, to ensure fiscal sustainability, China must find more sources of revenue and enhance the efficiency of fiscal spending – including by reallocating some expenditures to higher-priority areas. The government should phase out temporary tax relief measures implemented during the pandemic. To address the long-term challenges, there are several options. One way is to redirect resources from conventional physical infrastructure to social infrastructure, specifically social security. At the same time, it is crucial to increase fiscal revenue by advancing tax reforms, potentially introducing new taxes aligned with China's evolving economic structure, making the income tax system, and providing local governments with stable and sustainable revenue sources. Additionally, there is a need to further improve the transfer payments system to ensure that the fiscal positions of local governments are sound, improve their debt management practices, and reduce their reliance on LGFV financing. The central authorities should require that local governments not set overly ambitious policy targets and borrow excessively.

19. China's pursuit of carbon neutrality is commendable. China's advantage in renewable energy – powered by a massive investment push, rapid technological advances, and an efficient, low-cost equipment supply chains – has put it in a strong position to achieve carbon neutrality before 2060. The financial sector has contributed to environmental sustainability by providing green loans and supporting the issuance of green bonds by businesses and governments. The authorities should continue enhancing the integration of climate change risks into their mandates and policy frameworks. Efforts to align data disclosures on climate change across countries and sharing of knowledge and experiences should continue, to foster a common understanding among stakeholders and improve the identification of climate change risks. These efforts will facilitate China's transition to a low-carbon economy and strengthen its contribution to global climate change efforts.

A. Recent Developments and Outlook

Setting the Context

1. China's economic reopening, following the decision to manage COVID-19 with measures against Class-B infectious diseases, has kickstarted its economic recovery. During the pandemic, health protection was a top priority. Chinese authorities took comprehensive measures to safeguard public well-being and proactively provided support for vulnerable individuals, communities, and strained enterprises. However, weak global demand, recurring COVID outbreaks, and the contraction in the real estate sector caused significant growth weakening in 2022. With one year having passed since the shift to COVID endemicity, China, with its sound fundamentals, can now consolidate its economic recovery. Targeted measures can help strengthen consumption and investment and mitigate the impact of subdued global demand.

2. Sustaining high-quality long-term growth entails addressing challenges related to population aging, high leverage, geopolitical tensions, and global trade fragmentation. While China's economic fundamentals are sound, the country faces several short-term risks and challenges, such as a further weakening of the real estate sector, and a sharper-than-expected slowdown of global growth. Moreover, there are several long-term challenges. Population aging puts pressure on China's social welfare system and affects labor supply and productivity. Risks related to high leverage can undermine financial stability and economic resilience. The adverse effects of geopolitical tensions can spill over into various domains – including trade, supply chains, technology, and market access. To keep up a brisk pace of economic growth and development, China must address these challenges head-on.

Real Sector Developments

3. China's economic recovery in 2023 was bumpy, with comprehensive policy measures providing strong cushions against headwinds. GDP growth rebounded from 3.0 percent in 2022 to 4.5 percent in the first quarter of 2023. It reached 6.3 percent (y-o-y) in the second quarter, with base effects pushing up the headline growth figure but sequential momentum easing. In the third quarter, growth was at 4.9 percent (y-o-y) as drags from the later-than-expected pick-up of consumption, strains in the real estate sector, subdued external trade, and cautious sentiment began to ease. The momentum of the recovery gained further traction in the fourth quarter, with the growth rate reaching 5.2 percent (Figure 1). For the entire year 2023, GDP growth was a creditable 5.2 percent, characterized by a strong rebound in Q1 after the reopening from the pandemic, a sharp slowdown in Q2, and a notable recovery in Q3-Q4. During the year, the official manufacturing Purchasing Managers' Index (PMI) reached a multiyear high before easing as global demand weakened (Figure 2). Fixed asset investment (FAI) grew 3.0 percent (Figure 3), driven by high-tech manufacturing and services. Retail sales increased 7.2 percent, with the momentum strengthening markedly in the last few months of the year (Figure 4). The recovery was supported by improvements in the labor market, with the urban surveyed unemployment rate falling significantly from 5.5 percent in 2022 to 5.2 percent in 2023. As China's economic fundamentals remain sound, the sequential momentum of the recovery is expected to further normalize in 2024. Consumption will be the primary driver of growth this year, supported by further improvements in labor market conditions. Investment is expected to gain greater traction in 2025, driven by the expansion of traditional infrastructure, construction of modern and advanced infrastructure, and robust investments in high-tech manufacturing and services. Real estate investments may also start

to recover gradually. Exports are expected to pick up with the turnaround in the global electronics cycle.

4. The unevenness of the recovery across economic activities and sectors – a recurring theme during the pandemic – continues to pose a significant challenge. Consumption is expected to drive GDP growth in 2024 and 2025, supported by pent-up spending, firm job creation, and brisker wage growth. However, investment may gain firmer traction only in 2025, as FAI remains weak for some sectors, especially the real estate sector. On the external front, while trade with the US is adversely affected by heightened geopolitical tensions, China's deepening linkages with ASEAN+3 and other countries provide a counterbalance. In 2023, China's exports increased by a modest 0.6 percent to RMB23.77 trillion. Shipments to key markets slowed markedly across the board, reflecting weak demand for manufacturing exports. (Figure 5) Imports shrank by 0.3 percent to RMB17.99 trillion, with subdued demand for intermediate goods a key factor (Figure 6). Looking ahead, strong investments by enterprises in several sectors, including high-tech manufacturers and software companies, should boost China's export competitiveness. The turnaround of the global electronics cycle, which is still at an early stage, will help, as will a broader stabilization of global demand in 2024 and 2025.

Figure 1. China GDP Growth	Figure 2. Purchasing Managers' Index (PMI)
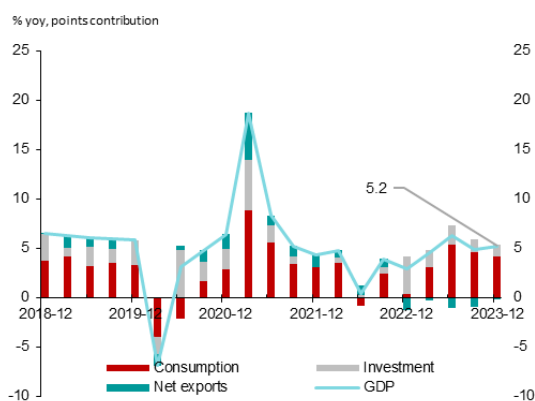
Source: China National Bureau of Statistics (NBS), Wind.
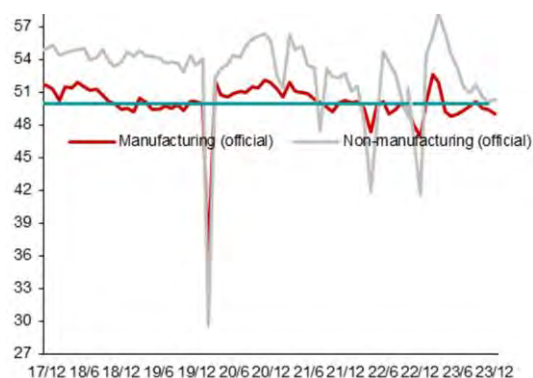
Source: China NBS, CEIC.

Figure 3. Fixed Asset Investment (FAI)	Figure 4. Retail Sales

Source: China NBS, Wind.

Source: China NBS, Wind.
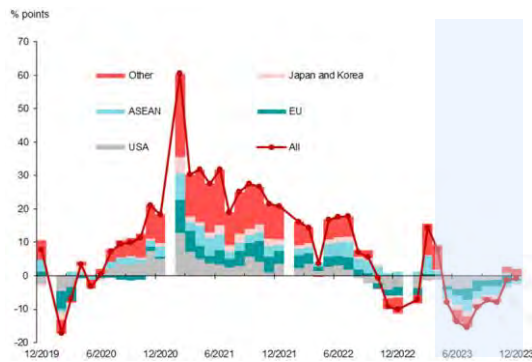
Figure 5. Exports	Figure 6. Imports

Source: China NBS, CEIC.
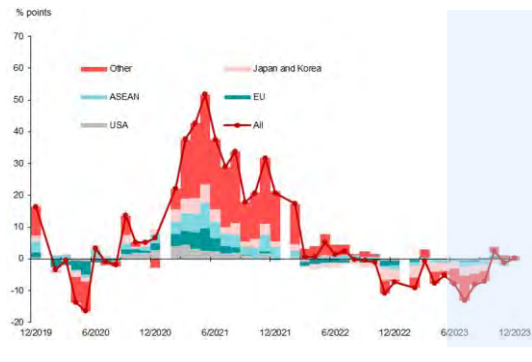
Source: China NBS, CEIC.

5. There have been significant shifts in production within China over the past decade, while there have also been some shifts in manufacturing activities and investments offshore recently, partly due to the restructuring of global industrial and supply chains.

- In China, certain provinces with resource advantages, a favorable business environment, and effective government support are the primary destinations for such relocations. For example, Sichuan province has abundant hydropower resources, a large market, rich labor supply, a solid industrial foundation, and its enterprises benefit from the local government's supportive policies. As a result, Sichuan has attracted manufacturing activities that used to be in the southeast coastal regions, and has established strong supply chains and industry clusters, such as electronic information, equipment manufacturing, new energy, and precision chemicals.

- China maintains a sharp competitive edge in these industries, both in terms of costs and technologies. There are also many enterprises in these industries that produce mostly for domestic markets. Over the past decade, there have been significant shifts in production within China to take advantage of the comparative advantage of various regions.

- In recent times, there have also been shifts in manufacturing activities and investments offshore. US-China tensions have led some multinational companies (MNCs) to diversify their supply chains to other countries. However, many Chinese companies are also moving their production offshore to reduce costs and to take advantage of overseas market.

- That said, from the perspective of businesses, especially foreign enterprises, China remains attractive in many ways. It offers a huge market, a strong ecosystem for production networks, and comprehensive supply chains.

(See Selected Issue 1:China's Industrial Transfer: Exploring in Inland Regions vs. ASEAN Countries?)

6. Labor market conditions have remained relatively stable, with room for further improvements. The urban surveyed unemployment rate, which peaked at 6.2 percent in February 2020, was at 5.2 percent in 2023. The creation of 10.2 million jobs in Q1-3 put China on track to exceed the official target of 12 million for 2023. In 2024, labor market conditions are likely to gradually improve, reflecting long-standing structural challenges and the varying pace of recovery across sectors. Challenges are particularly pronounced for low-skilled

migrant workers, recent college graduates, employees in the real estate sector, and those working in micro, small, and medium enterprises (MSMEs).

7. Inflation was exceptionally low in 2023 but is projected to rise gradually in 2024. CPI inflation remained close to zero for most of 2023, finishing at 0.2 percent for the year (Figure 9), while PPI inflation was negative at -3.0 percent (Figure 10). Core inflation was a notably firmer 0.7 percent. These outcomes can be attributed to several factors, including robust food harvests, some pandemic-induced weakness in consumer spending, recurrent softening of consumer demand after holiday periods, and high base effects from several months in 2022. In general, the low inflation in China reflects a negative output gap stemming from weak growth in 2022, ample supplies in the consumer market, and falling global commodity prices. Inflation is expected to rise gradually in 2024 but should remain well contained, barring any unanticipated supply shocks. The authorities hold the view that China's efficient supply chains and logistics networks have also helped to contain input and consumer price pressures. With China having large reserves of grains and key commodities, inflation should remain low throughout 2023. (See Box B: A Closer Look at Inflation in China: Recent Developments and Key Drivers)

Figure 7. Urban Surveyed Unemployment Rate
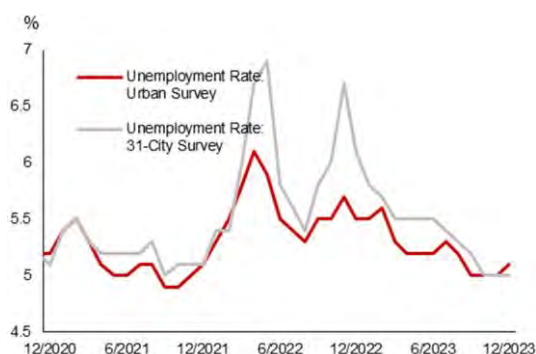
Source: China NBS, CEIC.

Figure 8. Employment Creation

Source: China NBS, CEIC.

Figure 9. CPI

Note: Numbers in brackets are the estimated weights of the CPI items.
Source: China NBS, CEIC.

Figure 10. PPI

Source: China NBS, CEIC.

Box A. A Closer Look at Inflation in China: Recent Developments and Key Drivers[1]

China is an outlier amid the recent global surge in inflation. While major advanced economies (AEs) and many emerging market economies (EMEs) in Asia are grappling with elevated price pressures, China has managed to keep inflation muted. In 2022, China's CPI inflation was 2.0 percent. Even after the reopening of the economy in 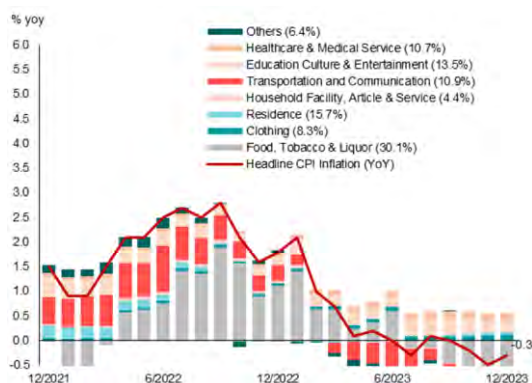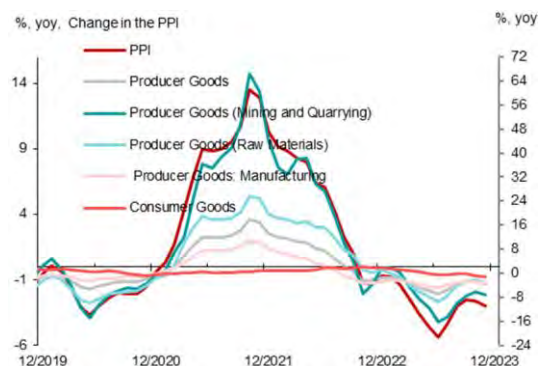2023, inflation did not experience a significant rebound, instead coming in at an exceptionally low 0.2 percent for the year. Core inflation also edged down to 0.7 percent in 2023 from 0.9 percent in 2022.

The low CPI inflation in China can be attributed to a confluence of factors: (1) persistent weakness in consumption; (2) sluggish expansion of wages; and (3) limited pass-through from PPI inflation to CPI inflation.

Firstly, persistent weakness in consumption has limited the demand-side pressure on prices. This weakness in consumer spending has endured due to the absence of fiscal transfers to households, as well as the lack of excess savings. Unlike many AEs and regional economies, China did not implement extensive cash handouts to households to boost spending. Consequently, the pace of recovery in goods consumption has lagged that of the production side, as evidenced by the short-lived uptick in consumer goods inflation around the onset of the pandemic (Figure A1). Moreover, "revenge spending" did not take place after China reopened – household savings increased, primarily driven by precautionary motives such as withdrawals from wealth management products or delayed property purchases (Zhang 2023). As a result, the post-reopening recovery in goods retail sales has been modest, coupled with fragile consumer confidence (Figure A2). Although service inflation picked up slightly after pandemic-related restrictions eased, it was offset by the decline in goods inflation.

Figure A1. CPI Inflation	**Figure A2. Consumption**
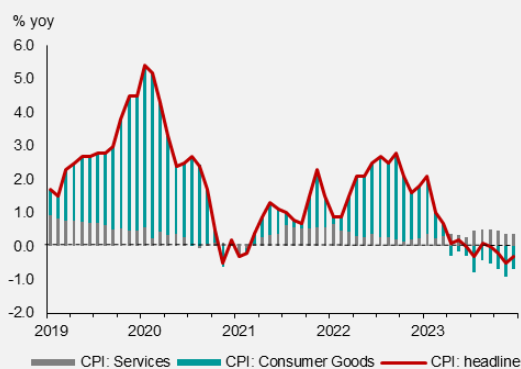
Source: China NBS, AMRO staff calculations.
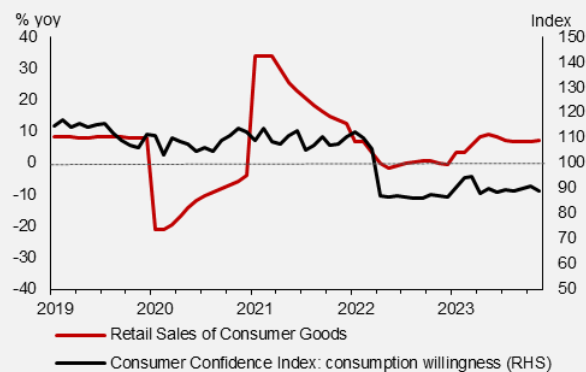
Note: Consumer Confidence Index readings above 100 indicate that consumers are optimistic while readings below 100 suggest that consumers are pessimistic.
Source: China NBS, AMRO staff calculations.

Secondly, wage growth has been sluggish, preventing an increase in disposable income and consequently leading to subdued spending. Unemployment rates have gradually recovered to pre-pandemic levels (Figure A3). The surveyed urban unemployment rate fell within the 5.0-5.6 percent range in 2023, compared to the 5.0-5.3 percent range in 2019. Notably, the youth unemployment rate was higher. Meanwhile, wage growth was slower than before the COVID-19 pandemic, suggesting restrained wage inflation in China. More importantly, the lack of excess savings and muted wealth effects amid the prolonged property downturn will likely impact the consumption recovery, making it more dependent on wage growth. Furthermore, slow wage growth may continue to weigh on consumer confidence, further dampening the prospects for a robust consumption recovery in China. Indeed, the Consumer Confidence Index on consumption willingness remains in negative territory despite a modest recovery since China's reopening, indicating still pessimistic sentiment (Figure A2).

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[1] Prepared by Ke Ji.

Figure A3. Unemployment Rate and Wage Growth

Source: China NBS, AMRO staff calculations.

Figure A4. PPI and CPI

Source: China NBS, AMRO staff calculations.

Lastly, there has been limited pass-through from PPI inflation to CPI inflation. During 2021 and 2022, the global surge in commodity and energy prices did contribute to an increase in PPI inflation in China. However, the extent of this impact varied along the supply chains, with PPI inflation more pronounced in upstream industries than in downstream industries. The impact on consumer prices was also limited (Figure A4). One possible explanation for this disparity is the highly competitive industry structure in downstream sectors, compared to upstream sectors (Jiao, 2022). Furthermore, large inventories due to weak consumer demand during the pandemic could also have been a contributing factor. Separately, the recent surge in global food prices has not affected domestic food prices in China either. This can be attributed to China's growing food production and substantial food reserves. Moreover, the supply of main food items, such as pork, has continued to increase since the reopening, leading to further downward pressure on food prices.

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Jiao, Z. (2022). "Should China's PPI and CPI Inflation Divergence be a Concern?" AMRO Analytical Note

Zhang, J. (2023). "China's Savings Conundrum". Project Syndicate

8. The real estate sector remains weak, but there are nascent signs of recovery, driven in part by the policy measures introduced starting in the second half of 2022. If financially strained but still-viable property developers improve their balance sheets, confidence should pick up, and the real estate sector can become stronger gradually.

- Since the implementation of policy measures in the second half of 2022 to provide support to distressed property developers and help boost confidence, there have been noticeable improvements. Prices of both new and resale residential properties have started to stabilize, and in some cases, increase slightly (Figure 11). Housing construction and property transactions (i.e., home sales) have started to stabilize (Figure 12). Financing conditions for property developers, including bank and bond financing, have also improved.
- Overall, the negative impact of the property sector on China's economy is diminishing, with its contribution to GDP growth estimated to have narrowed from -3.7 percent in 2022 to -1.8 percent in 2023, and it is expected to decrease further or turn positive in 2024.

Figure 11. Residential Property Price (Resale): Cities Across Three Tiers
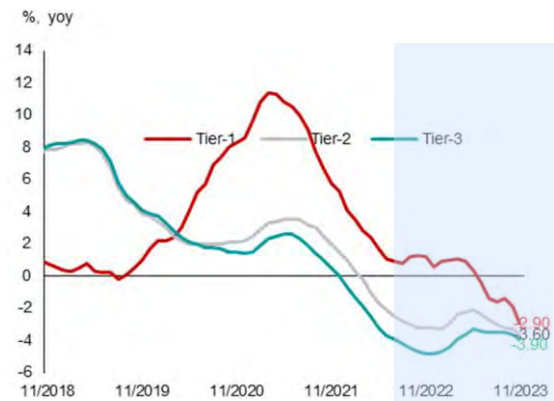
Source: China NBS, Wind.

Figure 12. Residential Property Transactions: Cities Across Three Tiers
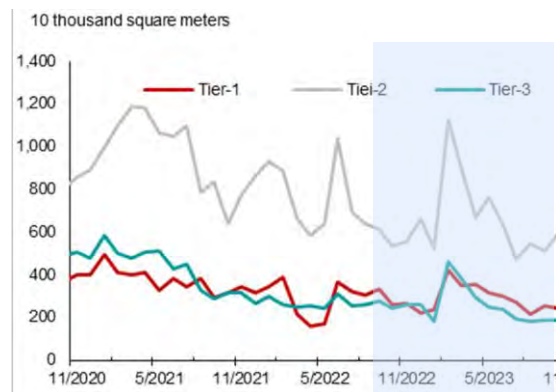
Source: China NBS, Wind.

- <u>However, many property developers still face stiff challenges in obtaining credit (Figure 13), which comes at high costs</u>. To ensure that the recovery process continues, the authorities have taken various policy measures, such as completing stalled residential property projects and strongly urging developers to make progress in resolving their financial difficulties through asset sales, deferred bond payments, and loan restructuring.

- <u>In 2023, there were nascent signs of financially strained but still-viable property developers becoming healthier.</u> If this continues, it could lead to a gradual restoration of confidence, stabilization of prices, and more transactions across cities of different tiers, benefiting enterprises, banks, bondholders, and local governments.

- <u>There are short-term challenges in the real estate sector, while medium to long-term prospects remain strong.</u> Real estate sector FAI has remained subdued, and funding for real estate development has continued to be tight. More critically, while state-owned developers and stronger private developers, which have investment grade ratings and larger cash buffers, have relatively good access to onshore funding, lower-rated developers continue to face difficulties in refinancing. This is primarily due to sluggish property sales and constrained access to financing. In addition, these developers also have sizable debt maturing in the coming several months (Figure 14). China's promotion of the three major real estate development initiatives[2] will help boost demand and create future space for the healthy development of the real estate sector. Currently, China has an urbanization rate of less than 65 percent, and the experiences of developed countries suggest this could increase by another 10-20 percentage points. In the future, another 100-200 million people could migrate from rural to urban areas, creating tremendous opportunity for the development of China's property sector and helping its medium to long term prospects remain strong.

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[2] These refer to the following: "affordable housing program" "dual (emergency and normal) use facilities" and "urban villages renovation".

Figure 13. Funding for Real Estate Development

Source: China NBS, CEIC.

Figure 14. Onshore and Offshore Bonds Maturing or Becoming Puttable By April 2024
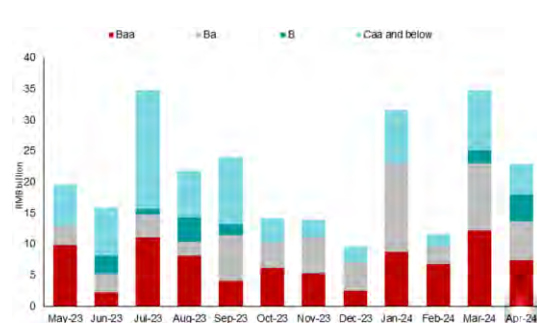
Source: Moody's

External Sector and the Balance of Payments

9. China has a strong external position with its sustained current account surpluses and ample foreign reserves. In the first three quarters of 2023, China's current account had a surplus of RMB1,461.8 billion (Figure 15). This included a surplus of RMB 3,201.2 billion under trade in goods, a deficit of RMB1,187.6 billion under trade in services, a deficit of RMB627.5 billion under primary income, and a surplus of RMB75.7 billion under secondary income. Foreign currency reserves remain substantial at US$3.238 trillion as of December 2023 and have served as a solid buffer against the sizeable capital outflows in recent months. Looking ahead, China's external position should remain strong (Figure 16). China is projected to maintain a sizable trade surplus in the near term, and it will likely continue to attract substantial capital inflows, including FDI. As the economic recovery strengthens, its foreign exchange reserves should remain generally stable. RMB internationalization should also gain more traction gradually as further progress in China's economic recovery and the strengthening of economic fundamentals anchor confidence in the currency. (See Box B: Building Momentum: Recent Development in RMB Internationalization)

Figure 15. Current Account Balance
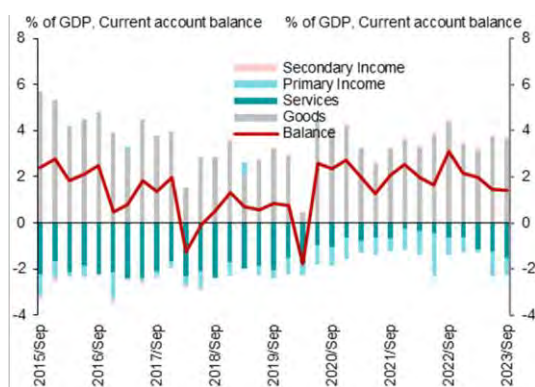
Source: China NBS, CEIC.

Figure 16. Overall Balance of Payments
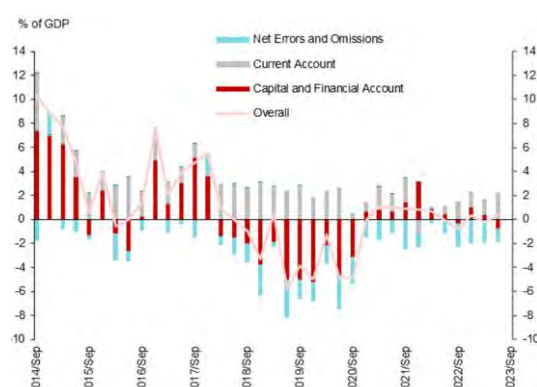
Source: China NBS, CEIC.

Box B. Building Momentum: Recent Developments in RMB Internationalization[3]

The internationalization of the RMB has gained momentum in recent years, achieving significant milestones. In 2022, the IMF raised the RMB's weight in the SDR basket from 10.92 percent to 12.28 percent underscoring its growing potential as a reserve currency. Moreover, the freezing of USD assets of Russian banks and imposition of measures restricting the use of USD payments for trade with Russia and other countries has further accelerated the global trend of diversifying currency choices and reducing reliance on the USD, bolstering the RMB's appeal as an alternative to major currencies given that China is the largest trading nation. Notably, Brazil and Argentina have taken significant steps by announcing an increase in RMB settlements for their trade with China, signalling growing confidence in the RMB's international usage. Another milestone was reached in May 2023, when China received its first-ever RMB-settled liquified natural gas (LNG) import from the UAE. Recent developments highlight the RMB's remarkable surge in cross-border settlement and its growing utilization for investment and financing purposes. However, as long as the RMB is not a fully convertible currency, its role as a reserve currency will be limited.

Cross-border settlement

Although the use of the RMB in global payments remains small, its cross-border transactions have increased materially, and it have overtaken the US dollar as the most used payment currency for China's cross-border settlement; policy efforts to further boost the use of the RMB were strong and effective. The RMB has risen to become the fourth most active currency for global payments according to SWIFT as of November 2023, but its share remains small at around 4.6 percent, compared to the dominant position of the USD at 47 percent (Figure B1). In contrast, in terms of China's cross-border transactions, the RMB has seen substantial growth both in terms of scale and market share. In 2022, the total amount of RMB cross-border receipts and payments reached an impressive RMB42.1 trillion, representing a remarkable 15 percent increase from the previous year. More important is the consistent rise in the share of the RMB in total cross-border transactions, surpassing the USD for the first time in March 2023 (Figure B2). This surge is partly due to improvements in RMB payment infrastructures[4] and the acceleration of policy initiatives aimed at expanding the use of the RMB for cross-border trade payments, including commodity trading denominations and settlements, amid heightened geopolitical tensions. Looking ahead, there is great potential for the RMB to play a larger role in cross-border payments, especially as many of China's key trading partners, in particular the ASEAN countries,[5] have pledged to promote local currency transactions. This commitment can contribute significantly to the continued growth of the RMB's prominence in international trade and financial transactions.

Figure B1. Share of Global Payments in SWIFT
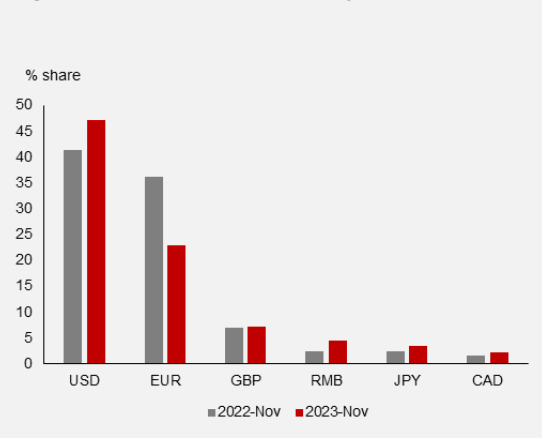
Source: SWIFT, AMRO staff calculations.

Figure B2. RMB Usage in China's Cross-Border Settlement
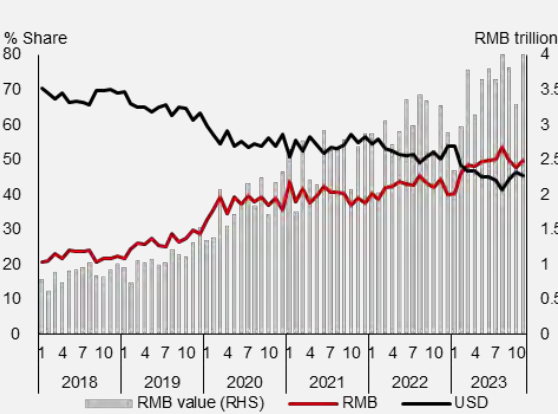
Source: People's Bank of China (PBC), AMRO staff calculations.

*Investments and financing*

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[3]Prepared by Ke Ji.
[4]China has been expanding the network of RMB clearing banks and improving the Cross-border Interbank Payment System (CIPS).
[5] ASEAN leaders signed an agreement in May 2023 signed an agreement to push for better regional payment connectivity and the use of local currency transactions.

As for investments, foreign holdings of domestic RMB assets and foreign exchange trading in RMB have generally trended up over the years. The progressive opening-up of China's capital markets and the inclusion of A-share and onshore bonds in major indexes have led to growing investments in RMB assets (PBC 2022). As a result, by the end of 2021, foreign holding of domestic RMB assets had surged to RMB10.8 trillion, more than double the figures from 2018, with notable contributions from bond and equity assets (Figure B3). However, this trend reversed in 2022, likely due to tightened global financial conditions and China's weaker economic performance. Furthermore, foreign exchange trading in RMB has also grown significantly, with its share of global OTC transactions rising to 7 percent in April 2022 from 4 percent in 2019 (Figure B4).

Cross-border RMB financing has been growing, driven by an increase in overseas loans and offshore RMB debt. In particular, the growth of cross-border loans by Chinese banks accelerated in 2022, facilitated by policy measures aimed at enhancing Chinese banks' offshore lending capabilities.[6] In addition, the outstanding international RMB debt securities by foreign borrowers have been rising rapidly since 2022 partly due to the attractive lower funding cost of the RMB compared to the USD (Figure B5). This has contributed to the increasing popularity of RMB-denominated debt instruments in international bond markets.

Figure B3. Foreign Holding of Domestic RMB Assets
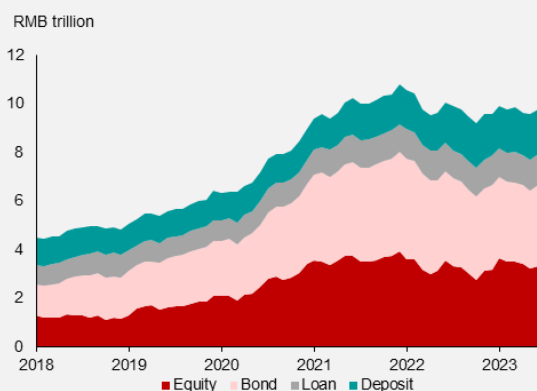
Source: PBC, AMRO staff calculations.

Figure B4. RMB in Global OTC Foreign Exchange Turnover
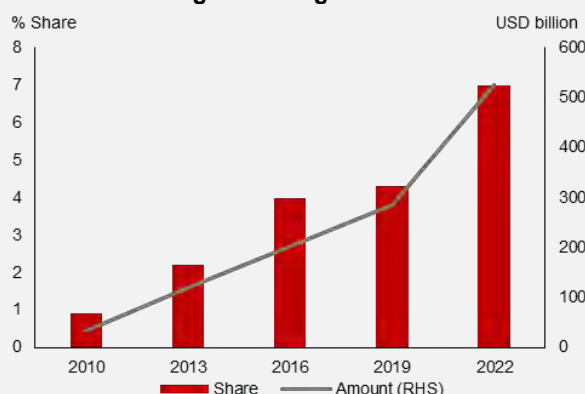
Note: Turnover is daily averages of April of each survey year.
Source: BIS Triennial Central Bank Survey OTC foreign exchange turnover, AMRO staff calculations.

International reserve currency

Despite the upward revision in the weight of the SDR by the IMF, the role of the RMB as a reserve currency has experienced some stagnation recently. As of the third quarter of 2023, global official reserves in RMB amounted to USD260.1 billion, representing 2.4 percent of total global foreign exchange reserves (Figure B6). The share of RMB in global reserves has in fact declined recently, possibly reflecting portfolio adjustments as the RMB weakens against the USD, even after the SDR weight revision in 2022. This indicates that while the RMB possesses considerable potential as a reserve currency, its path to becoming a prominent reserve asset will likely be gradual and contingent upon market conditions, further liberalisation of China's capital account (Prasad 2017), and the further development and liberalization of its financial markets.

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[6] PBC and SAFE Circular No. 27: A New Uniform Framework for Offshore Lending by PRC Banks

Figure B5. Outstanding RMB International Debt and Overseas RMB Loans of Chinese Banks

USD billion

RMB international debt securities
Oversea RMB Loans of Chinese banks

Figure B6. RMB Reserves Held by Global Central Banks

USD billion / %

Value — Share (RHS)

Source: IMF and AMRO staff calculations.
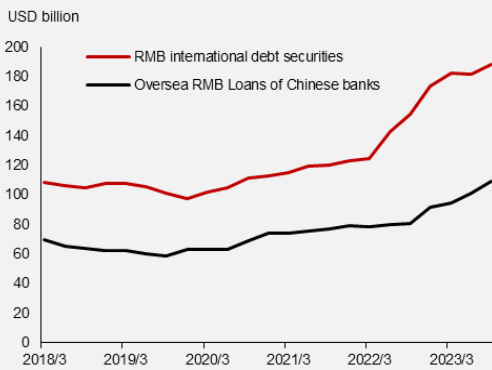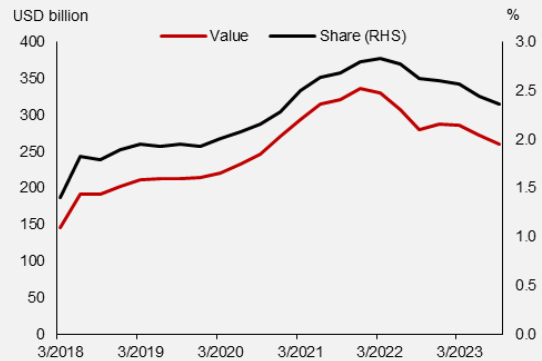
Note: 1) RMB international debt is the amounts outstanding of debt securities issued in international markets by non-residents. 2) Oversea RMB Loans of Chinese banks are the claims on foreign non-banking sector.
Source: BIS, SAFE, AMRO staff calculations.

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Monetary Conditions and Financial Sector

10. Overall credit growth should become increasingly supportive of the economic recovery in 2023. Total social financing (TSF), after slowing from 13.3 percent in 2020 to 10.0 percent in 2022, came in at a firm 9.8 percent in 2023 (Figure 17). Looking ahead, the economic recovery should lead to improvements in banks' asset quality and profitability, as well as confidence in both bank and bond financing. Guidance by the authorities and efforts by banks will drive further structural improvements in credit. The authorities have encouraged banks to increase lending to support targeted businesses and sectors, aiming to facilitate important projects such as energy grids, information and logistics, underground pipelines, and high-tech industries.

11. The banking sector remains sound, but there are pockets of weaknesses among a minority of city and rural commercial banks, especially those with large exposure to troubled property developers. Regulatory forbearance measures are due to expire in 2023, and forbearance loans could be about 5-10 percent of some banks' outstanding loans. The commercial banking system's NPL ratio decreased from 2.0 percent in 2020 to 1.6 percent in Q3 2023 (Figure 18), mainly on account of substantial write-offs and significant amounts of bad loan disposal through asset management companies (AMCs). City and rural commercial banks have the highest NPL ratios at 1.9-3.2 percent. They also have lower capital adequacy ratios (CARs), provision coverage ratios, and return on assets (ROAs), compared to other banks. Some city and rural commercial banks have outsized exposures to SME borrowers and property developers in Tier-3 cities. Overall, some uncertainty remains over banks' asset quality, particularly loans provided to corporates affected by the pandemic-induced economic downturn, property developers with borderline credit assessments, and strained LGFVs.

Figure 17. TSF Growth
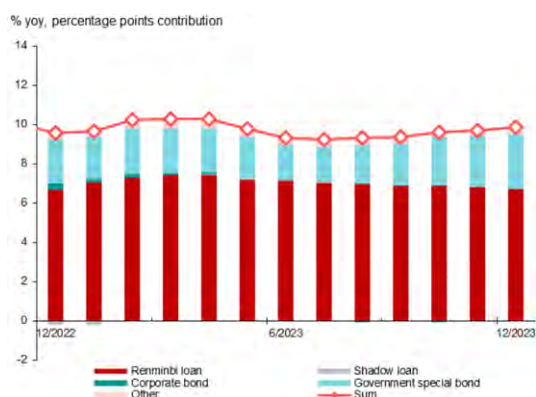
Source: China NBS, Wind.

Figure 18. Non-Performing Loan (NPL) Ratio
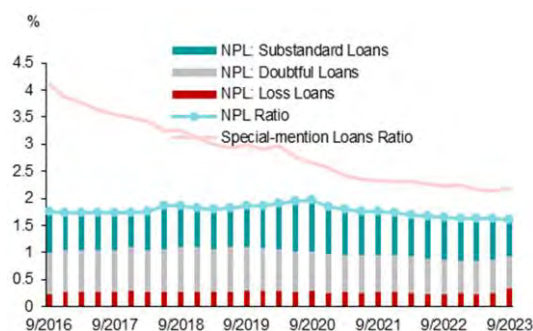
Source: China NBS, CEIC.

12. Financial conditions have been accommodative overall, characterized by supportive credit policies, low interest rates, and adequate liquidity in the financial system. The PBC has ensured that liquidity conditions are adequate and supportive (See Box C: The PBC's Monetary Policy Responses During the Pandemic). Key policy interest rates have been cut in a cautious manner, by a cumulative 60 bps since the end of 2019 to July 2023 (Figure 19), while money market operations have prioritized stability and confidence. Interest rates in money markets have remained generally stable (Figure 20). Recently, corporate credit spreads have narrowed as concerns related to weaker property developers and other lower-rated corporate entities have eased somewhat. Funding conditions for LGFVs have been tight, reflecting restraint by lenders and borrowers.

Figure 19. Loan Prime Rates (LPRs)
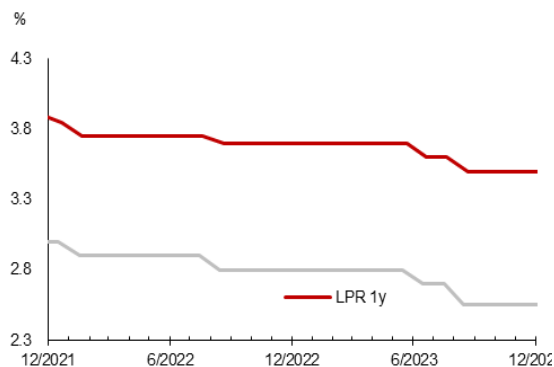
Source: China NBS, CEIC.

Figure 20. Money Market Interest Rates
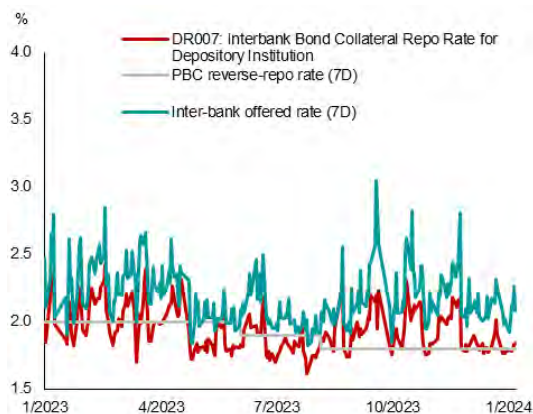
Source: China NBS, CEIC.

Box C. The PBC's Monetary Policy Responses During the Pandemic[7]

From the onset of the COVID-19 pandemic, the PBC has taken measures proactively to support the economy through a combination of diverse price- and quantity-based monetary policy tools. These tools have been applied in both targeted and broad-based approaches. The key policy measures are summarized in this Box article.

The PBC has gradually reduced its policy interest rates, resulting in record-low levels, with a cumulative reduction of 60 bps. (Figure C1) PBC's key policy interest rates include the rates on the 7-day reverse repo, a short-term liquidity injection tool that guides short-term money market interest rates, and the 1-year Medium-term Lending Facility (MLF), which influences medium-term funding costs. From the beginning of 2020 to July 2023, the PBC has implemented five rate cuts, totalling 60 bps for both rates. Accordingly, the 7-day standing lending facility (SLF) rate and the Interest on Excess Reserves (IOER), which serve as the ceiling and floor of the interest rate corridor, have also been reduced proportionally. Compared to ASEAN+3 peers, PBC's rate cuts has been relatively modest and gradual (Figure C2). As of July 2023, with the 7-day reverse repo and MLF rates at 1.90 percent and 2.65 percent respectively, the PBC still has room to ease policy further, if necessary.

Figure C1. PBC Policy Interest Rates

Source: PBC

Figure C2. Comparison of Policy Rate Cuts

Source: CEIC

Money market interest rates largely followed the trend of the PBC's reverse repo rate. Following the policy rate cuts in 2020 and 2022 (Figure C3), key short-term market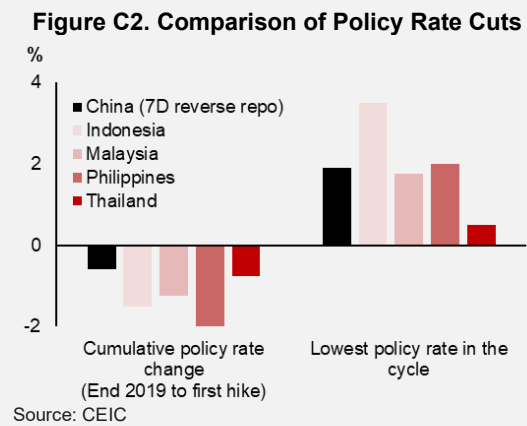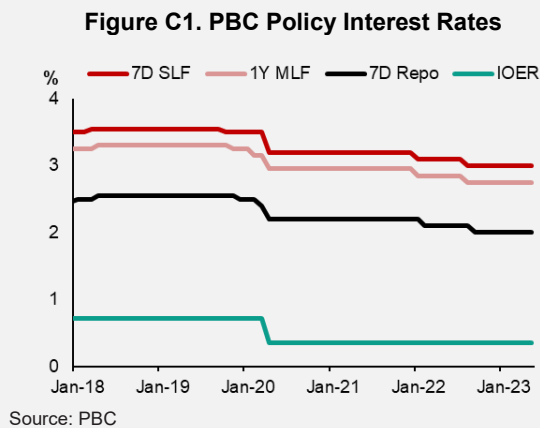 interest rates, such as the 7-day depository-institutions repo rate (DR007)[8] and the 7D Shanghai Interbank Offered Rate (SHIBOR), trended down. However, these rates were sometimes volatile for short periods and, at times, deviated as much as 100 bps above or below the policy rate due to fluctuations in liquidity supply and demand.

Meanwhile, the transmission to bank lending rates has been strong. Under the PBC's guidance, bank lending rates are priced by referencing the Loan Prime Rates (LPR)[9]. Currently, the LPRs are set monthly by a panel of banks using PBC's MLF rate as a base rate, representing the marginal cost for medium-term funding. This framework establishes a direct link between the MLF rate and bank lending rates, proving effective in driving lending rates down throughout the pandemic period. During the period between the end of 2019 and July 2023, with a 60-bps reduction in MLF rate, both the 1-year and 5-year LPR fell by 60 bps as well. During the same period, the average bank lending rates for general loans and individual housing loans fell by 121bps and 148bps, respectively, more than twice the size of the MLF rate cuts (Figure C4). The fall in government bond yields, reflecting funding costs in the capital market, might have also contributed to further easing in the lending rates (Figure C5), according to AMRO staff's estimates[10].

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[7] Prepared by Pim-Orn Wacharaprapapong.
[8] 7-day collateralized interbank rate among deposit-taking institutions.
[9] LPR represents the interest rates at which quoting banks offer to their prime borrowers. Since August 2019, they are quoted by adding a spread to the 1-year MLF rate and include 1-year and 5-year tenors.
[10] By regressing bank lending rate against MLF rate and 10Y government bond yields as explanatory variables, AMRO staff finds that a 100bps decline in bond yields is associated with 30 bps fall in bank lending rate in the same period.

Figure C3. Short-term Policy Rates and Market Rates
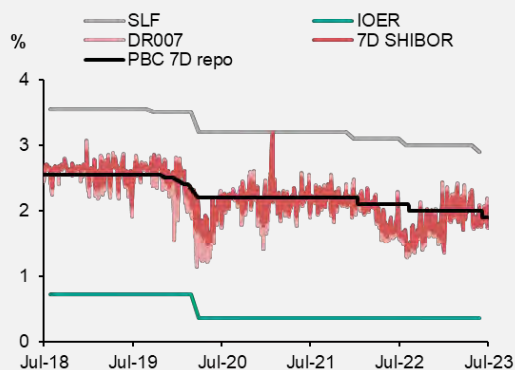
Source: PBC

Figure C4. Policy and Bank Lending Rates
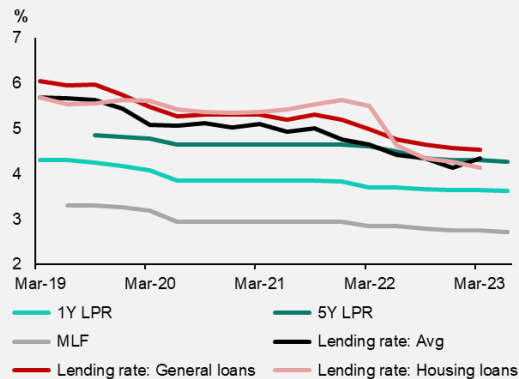
Source: PBC, CEIC, AMRO staff calculations.

Figure C5. Bank Lending Rates and Bond Yields
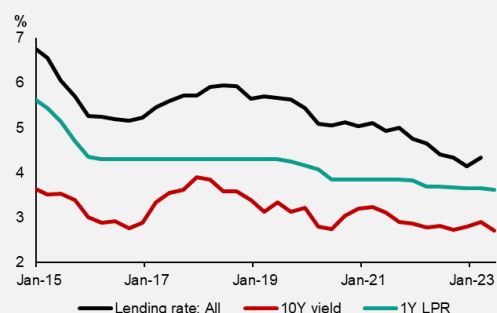
Source: PBC

Figure C6. Required Reserve Ratio
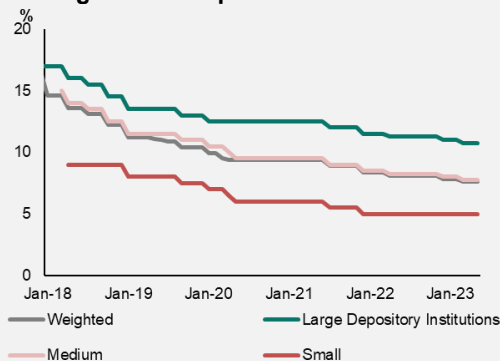
Source: PBC

The PBC attributes the strong transmission to bank lending rates, in part, to the successful implementation of interest rate reforms. As part of China's interest rate liberalization plan, the LPR was introduced in 2013 as a market-based reference for bank lending rates, effectively replacing the administrative Benchmark Lending Rate. Subsequently, in 2019, the PBC implemented further reforms to enhance the market-driven nature of LPR formation. First, starting from August 2019, LPR rates have been quoted in terms of MLF rate plus a market spread. This does not only establish a direct link between MLF and bank lending rates, as mentioned above, but also introduces a spread to reflect market conditions such as bank's funding costs, liquidity supply and demand, and risk premium [11]. Second, to encourage widespread use of LPR in loan pricing, since 2019, the PBC has made this a requirement in its Macroprudential Assessment of banks. Then, in April 2022, the PBC's deposit rate reform created more room for lowering lending rates. Banks were incentivized to price their deposits based on the 1-year LPR and 10-year government bond yield, both of which have been on a declining trend since 2020. By aligning deposit rates with these market-driven indicators, banks could gradually reduce their deposit rates. This, in turn, allowed them to bring down the lending rates further without compromising their net interest margins.

Moreover, the PBC's implementation of quantity-based monetary policy tools, particularly the Required Reserve Ratio (RRR) cuts, has been effective in reducing funding costs. Since the end of 2019, the PBC has implemented eight RRR cuts, leading to a significant decrease in the weighted average RRR from 10.4 percent to 7.6 percent (Figure C6). These reductions primarily targeted small and medium-sized banks, which play a crucial role in financing micro and small businesses. As a result, the RRR for large, medium, and small depository institutions were lowered to 9 percent, 7 percent, and 5 percent, respectively, the lowest levels ever recorded. According to reports by the PBC, the cumulative RRR cuts between 2020 and 2022 have provided approximately RMB5 trillion of liquidity into the banking system (Figure C7), thereby effectively reducing overall funding costs. Throughout this period, RRR cuts remained the principal channel of liquidity injection, compared to other available tools. Despite these measures, the RRR still remains higher than those in other EMEs, indicating that the PBC has room for further cuts to ease liquidity conditions in a broad-based manner.

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[11] Prior to the reform, the LPR generally tracked the Benchmark Lending Rate and thus did not reflect market conditions.

Structural lending tools have played an important role in reducing funding costs for vulnerable or targeted groups. Similar to soft loan schemes employed in many EMEs, the PBC's structural lending facilities provide concessionary loans to financial institutions, aiming either to boost lending to vulnerable groups, such as micro and small businesses (MSBs), or to support specific activities aligned with government priorities, such as carbon emission reduction or technological innovations. These facilities are designed to operate in various ways. Some provide funding to cover the principal of loans that banks have extended to target groups, while others compensate banks for interest rate reductions offered to borrowers. Since the end of 2019, the PBC has injected over RMB2 trillion through these facilities, equivalent to nearly half of the amount released through RRR cuts. Among the various lending facilities available, the most widely utilized one has been the inclusive MSB loan facility (Figure C8), underscoring the PBC's commitment to supporting micro and small businesses throughout the pandemic. In future, these structural lending facilities can continue to channel funding to targeted areas in accordance with policy priorities.

Figure C7. Net liquidity injection between 2020- Jun 2023
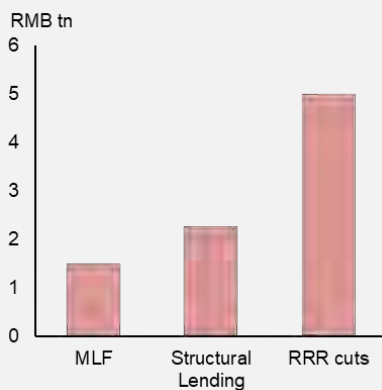
Source: PBC, CEIC, AMRO staff calculations.

Figure C8. Share of liquidity injection by structural lending tools
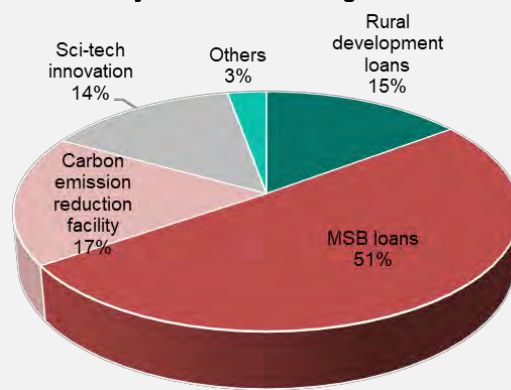
Source: PBC, CEIC

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Fiscal Sector

13. China has continued to implement proactive fiscal policy while maintaining fiscal sustainability. The economic recovery slowdown and property market downturn in 2022 led to pronounced pressures on revenue collection in China. Revenue (as a percentage of GDP) fell for the year, mainly due to a drop in tax revenue (including the impact of VAT allowance for tax refund), although there was a sharp increase in non-tax revenue. On the other hand, government spending remained elevated due to policy support measures, both at the central and local levels. A significant contributing factor to the fall in fiscal revenue was the contraction of revenues from the sales of land-use rights, which saw a substantial 23 percent decrease, amounting to RMB6.7 trillion. This contraction contributed significantly to the overall decline of fiscal revenue, equivalent to 1.7 percent of GDP. Also, policy measures were taken to reduce the tax burden on enterprises and workers. The general budget revenue rose slightly by 0.5

percent in 2022. At the same time, the general public budget expenditure rose significantly by 6.1 percent. Meanwhile, the government has maintained fiscal sustainability, with the general public budgetary account deficit at 3.1 percent of GDP in 2021 and 2.8 percent in 2022.[12] The general budget revenue rose more rapidly by 7.9 percent (yoy, ytd) in November 2023 (Figure 21). This was mainly due to the low base effect caused by the value-added tax (VAT) credit refunds implemented in 2022. At the same time, the general public budget expenditure rose at a slower 4.9 percent (yoy ytd) in November 2023, leading to a narrowing of the general public budgetary account deficit. In 2023, the Chinese government continued to implement a proactive fiscal policy and strengthened its effectiveness to support economic recovery. A budget deficit of 3 percent was set at the beginning of the year to maintain a reasonable level of expenditure. The budget also increased special-purpose bond and transfer payments from the central government to local governments. An additional 1 trillion yuan of government bonds were issued in the fourth quarter, pushing the deficit to 3.8 percent. At the same time, the government formulated and implemented a debt-mitigation package to address and resolve local government debt problems and enhance fiscal sustainability.

14. The fiscal outlook for 2024 hinges on the strength of the economic recovery and the recovery of the real estate sector. Base effects played a key role in the sharp rebound of revenue in 2023. For a more sustainable and robust recovery in 2024, two critical factors are key: growth gaining momentum and the recovery of the troubled real estate sector. Broadly speaking, these conditions should improve steadily. This will be crucial as China needs to further increase spending in various areas, including supporting the corporate sector and social welfare. These factors underlie the fiscal projections for 2024 and 2025.

Figure 21. Change in General Budget Revenue and Expenditure

Source: China NBS, CEIC.

Figure 22. General Public Budgetary Account Balance
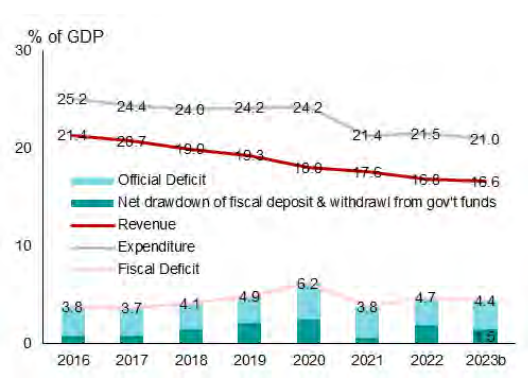
Source: China NBS, CEIC, AMRO staff calculations.

Summary

15. China's economy is expected to continue its recovery, returning to its trend trajectory in 2024 and 2025. The first quarter of 2023 was a transition period, reflecting a strong rebound with the economic reopening. This was followed by a sharp slowdown of growth momentum in the second quarter, and then a marked pick-up in the third and fourth quarters, helped by forceful policy measures. China's macroeconomic fundamentals are

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[12] According to the revised Budget Law promulgated in 2015, all government operations are presented in four accounts (or budgets): the general public finance budget, the government fund budget, the state capital operating budget, and the social security fund budget. The general public finance budget is the main account, covering revenues derived from taxes and administrative fees as well as expenditures for government operation and public services. The government fund budget comprises revenues from different extra-budgetary sources, with the biggest revenue component from land leases. The state capital operating budget comprises profit remittances of state-owned enterprises (SOEs). The social security fund budget comprises revenues and expenditures of the social insurance scheme. There is no consolidated budget that fully reconciles these accounts. After accounting for the net withdrawal from the budget stabilization fund and the transfer from the government fund account, the deficit in the general public budgetary account widened from 3.8 percent of GDP in 2021 to 4.7 percent in 2022.

sound, and its economy is poised to gain further momentum in 2024. GDP growth was a creditable 5.2 percent in 2023 and could reach 5.3 percent in 2024 and 4.9 percent in 2025. Consumption will be the primary driver of economic growth this year, supported by further improvements in labor market conditions. Investment is expected to gain greater traction in 2025, driven by the expansion of traditional infrastructure, construction of modern and advanced infrastructure, and robust investments in high-tech manufacturing and services. Real estate investments may also start to recover gradually. Exports should pick up in 2024 with the turnaround in the electronics cycle and an improvement in goods demand.

B. Risks, Vulnerabilities, and Challenges

Near-term Risks to the Macro Outlook

16. The balance of risks surrounding China's economy is tilted to the downside, with several stiff challenges domestically and major uncertainties in the external sector. The recovery in China's real estate market is likely to be a gradual one and could falter again. The heightened financial strains on some local governments could adversely impact the economic recovery of the affected regions. High leverage remains a key vulnerability in some sectors of the economy, and effective measures to address debt risks should be taken prudently to avoid the risk of financial distress, which could act as a drag on the economy. The external environment poses notable challenges, particularly the short-term risk of a sharper-than-expected global economic slowdown. Geopolitical tensions could escalate further, including a broadening of the technological competition between China and the U.S. to other areas of trade and investment, with adverse consequences for China and the global economy. Perennial challenges, such as population aging, socioeconomic disparities, and climate change require forward-looking actions to address them effectively. The multitude of near-term risks and longer-term challenges will put persistent pressure on China's financial resources and policy capacity, necessitating continuous efforts for structural reforms and policy adjustments.

Figure 23. China Risk Map
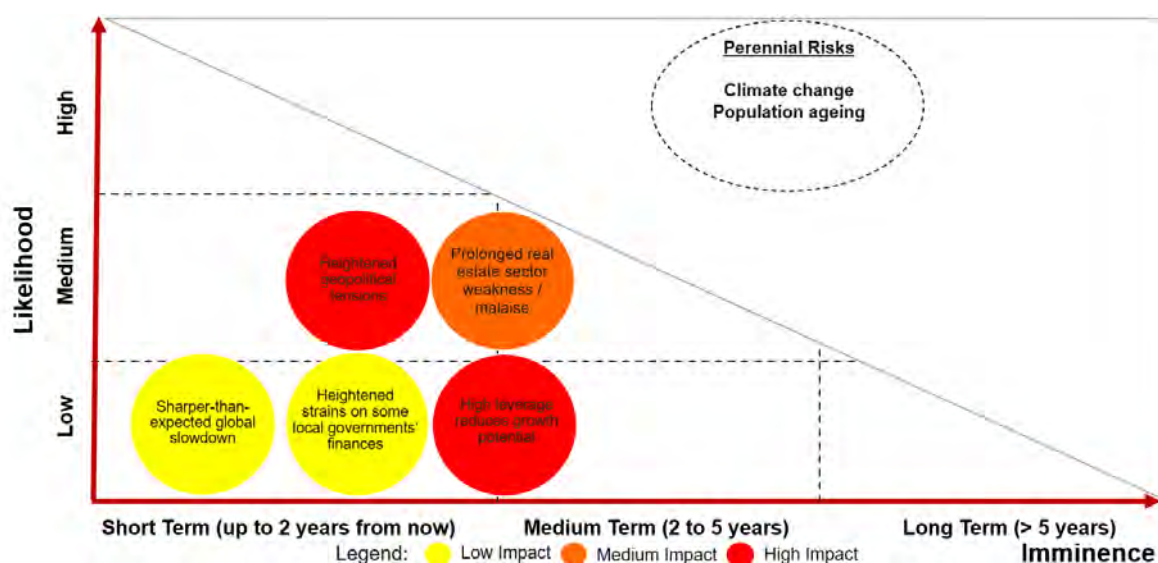
Source: AMRO staff.

17. Headwinds to global economic growth are strong, posing challenges for China. The euro area economy is expected to be very weak due to high inflation and monetary policy tightening. The U.S economy could slow more sharply than expected in 2023-2024 if inflation remains elevated and the Federal Reserve is forced to tighten its monetary policy further. These factors will likely lead to weaker demand for China's exports and become a major drag on the growth prospects for China and other economies in the ASEAN+3 region.

18. The recovery in China's strained real estate market is still nascent. The real estate sector is under pressure, and its recovery is still in its early stages. Nurturing this recovery requires strong efforts from strained property developers, their business partners, and

creditors, many of whom are also stressed (Figure 24). In such a scenario, highly stressed property developers may struggle to remain viable, businesses heavily reliant on the real estate sector may face financial challenges, and banks with substantial exposures may face capital buffer erosion. To prevent spillovers to the broader economy and financial system, central and local authorities need to fully implement their real estate support policies.

Figure 24. Share of Debt at Risk for Property-Related Companies
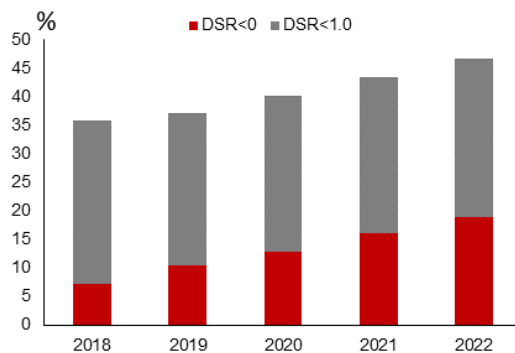
Source: Orbis of Moody's Analytics; and AMRO staff calculations.

19. The fiscal strains on local governments will likely persist over the medium term. The combination of the property sector downturn and the impact of the COVID-19 pandemic has exacerbated the fiscal difficulties of many local governments over the past three years, causing renewed concerns about local government debt repayment capacity. Moving forward, the slow, fragile, and uneven recovery of the property sector is likely to continue weighing on the revenue of local governments, derived from a variety of resources, including the sale of land-use rights. As a result, the fiscal positions of local governments with high debt but weak or modest growth prospects will remain challenging. Without interventions by the central government, some local governments may face difficulties maintaining public services and repaying or servicing their debt. The estimated size of local government and LGFV debt, especially that owed by weaker borrowers, suggests that this is unlikely to pose systemic risks to the financial sector. However, the rising risk of LGFV defaults could trigger market volatility, exacerbating financing pressures on local governments.

20. High leverage remains a key vulnerability for some sectors of the economy, and orderly deleveraging is necessary to avoid the risk of financial distress and its spillovers to the rest of the economy. China's overall corporate sector debt-to-GDP ratio is relatively high compared to peer EMEs, amounting to about 158 percent of GDP (Figure 26). (See Box E: Corporate Leverage and Debt Vulnerability and Box F: US Dollar Debt of Chinese Corporates) The financial strains on some property developers in the real estate sector are one manifestation of a broader challenge, involving the need to markedly reduce leverage across various sectors, especially among property developers, heavy industries, weaker SMEs, and some financial institutions. Weakened capital buffers in certain banks are constraining their lending capacity, primarily affecting small banks exposed to strained property developers, highly leveraged corporate borrowers, and MSMEs (Figure 27). AMCs also face pressures as reflected in credit rating downgrades. Achieving significant improvements in corporate sector earnings, financial buffers, debt profiles, and the banking

system's financial soundness would require tighter credit standards coupled with a sustained economic recovery over the next few years.

Figure 25. China: Corporate Sector Debt-to-GDP
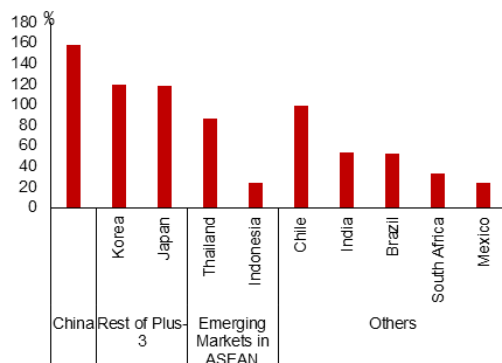
Source: BIS via HAVER Analytics.

Figure 26. China: Debt-Servicing Ratio by Firm Type
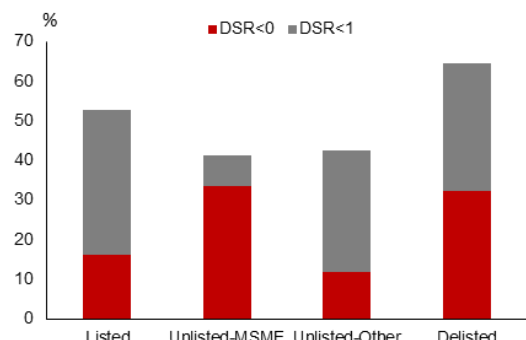
Source: Orbis of Moody's Analytics; and AMRO staff calculations.

Box D. Corporate Leverage and Debt Vulnerability[13]

In recent years, China has been grappling with persistent challenges related to high levels of corporate leverage. At present, the NFC debt, encompassing loans from banks and debt securities, accounts for about 158 percent of GDP. This figure is a significant increase compared to the levels of a decade ago (Figure D1). Data from the Bank for International Settlements (BIS), which employs a consistent definition across economies, reveals that China's NFC debt-to-GDP ratio in Q3 2022 was also higher than that of economies located within and beyond the ASEAN+3 region (Figure D2).

Figure D1. China NFC Corporate Debt-to-GDP
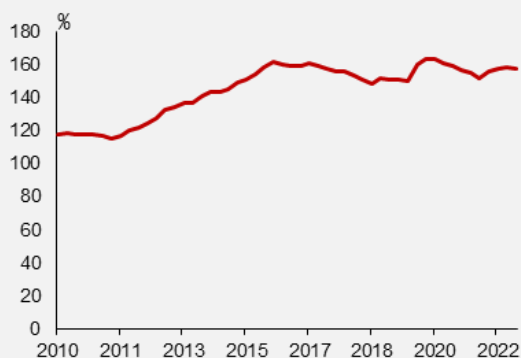
Source: BIS via HAVER Analytics.

Figure D2. NFC Corporate Debt-to-GDP by Economy, Q3 2022
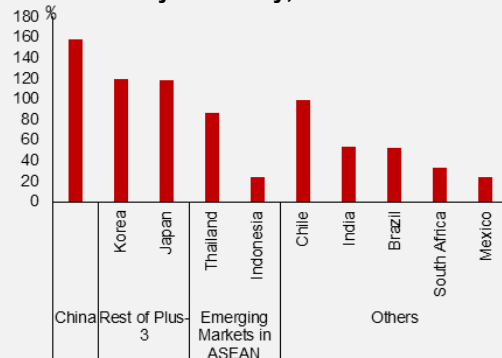
Source: BIS via HAVER Analytics.

NFC debt is distributed across various types of firms, mainly in four sectors: the property sector, raw materials and utilities, manufacturing, and transport and communications industries. These four sectors collectively account for over 75 percent of the corporate debt (Figure D3). While the stability of the large, publicly listed corporations is crucial due to their systemic nature, it is equally important to ensure the financial soundness of unlisted, smaller corporates, as a significant share of debt resides within this group (Figure D4). It is important to note that MSMEs play a vital role in economic stability, contributing over 60 percent of GDP and generating 79 percent of job opportunities (**OECD 2023**).

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[13]Prepared by Wong Siang Leng.

While the leverage of property developers remains a key area of concern, it is equally important not to disregard the proportion of debt at risk in some non-property-related sectors. For instance, when analyzing two commonly used solvency metrics, namely the debt-servicing ratio (DSR) and the interest coverage ratio (ICR), there is a substantial share of corporates in business services and retail and wholesale sectors that could face difficulties repaying their debt (Figures D5 and D6). A DSR of below one indicates the need for external funding to maintain corporate viability, while an ICR below 1.25X corresponds to a credit rating of CCC or below (**Damodaran 2016**).

Figure D3. Share of NFC Debt by Sector, 2022
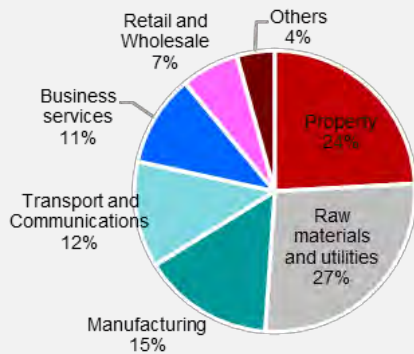
Source: Orbis of Moody's Analytics; and AMRO staff calculations.

Figure D4. Share of NFC Debt by Firm Type, 2022
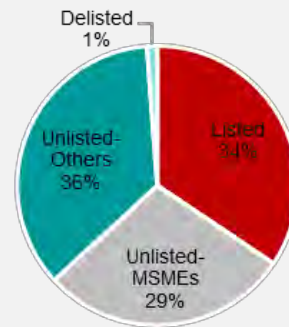
Source: Orbis of Moody's Analytics; and AMRO staff calculations.

Figure D5. Share of NFC Debt with DSR<1X by Sector, 2022
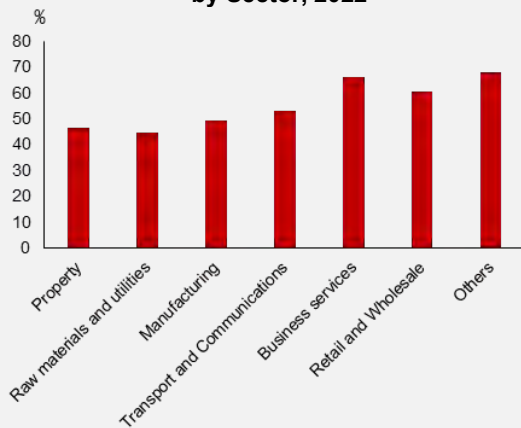
Source: Orbis of Moody's Analytics; and AMRO staff calculations.

Figure D6. Share of NFC Debt with ICR<1.25X by Sector, 2022
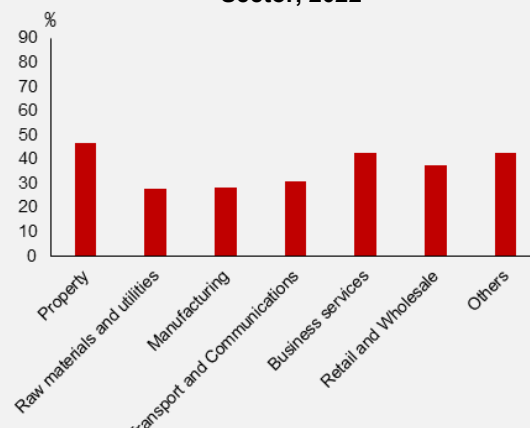
Source: Orbis of Moody's Analytics; and AMRO staff calculations.

Moreover, it is crucial to acknowledge that listed firms are not necessarily more resilient. While a smaller percentage of listed firms has an ICR below 1.25X, indicating less difficulties in meeting interest payments, a larger proportion of the listed firms have a debt-servicing ratio (DSR) below 1X (Figures D7 and D8), suggesting higher risks of defaulting on principal payments. This finding emphasizes the importance of ongoing efforts in reforming the state-owned enterprise (SOE) and achieving the right balance between the private and public sectors.

Efforts to bring about further corporate sector deleveraging should remain a priority. It is crucial to adopt a broad-based approach for this, considering that corporate debt is not concentrated in any single firm type or sector. The strategy for deleveraging corporates in China should be an eclectic one that includes encouraging prudent lending practices by banks, avoiding loan rollovers for non-viable firms, and facilitating the development and expansion of revenue streams for borrowers. By implementing these measures, China can make significant strides towards reducing corporate debt, contributing to a healthier and more sustainable economic environment.

Figure D7. Share of NFC Corporate Debt with DSR<1X by Firm Type, 2022
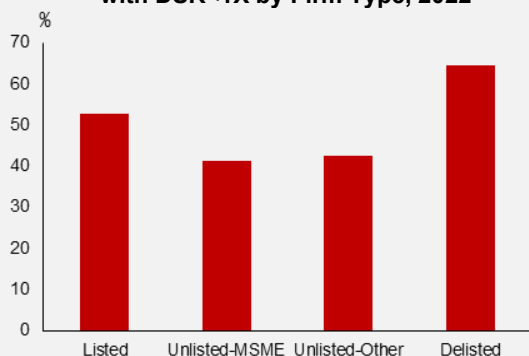
Source: Orbis of Moody's Analytics; and AMRO staff calculations.

Figure D8. Share of NFC Corporate Debt with ICR<1.25X by Firm Type, 2022
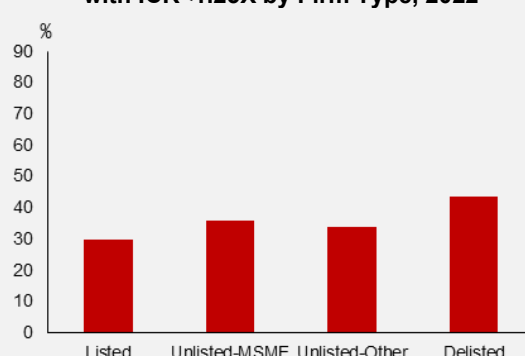
Source: Orbis of Moody's Analytics; and AMRO staff calculations.

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https://pages.stern.nyu.edu/~adamodar/New_Home_Page/valquestions/syntrating.htm.

OECD, 2023. "Financing SMEs and Entrepreneurs 2022: An OECD Scoreboard." Accessed 30 June 2023.
https://www.oecd-ilibrary.org/sites/a3891ad8-en/index.html?itemId=/content/component/a3891ad8-en.

Box E. US Dollar Debt of Chinese Corporates[14]

Since the GFC, Chinese NFCs have raised a sizable amount of US dollar bonds. This trend coincided with China's capital account liberalization, which eased restrictions on Chinese corporates' access to foreign currency bond market.[15] Most of these bonds are denominated in USD and issued offshore, making China a major contributor to the growing offshore USD corporate bond market. Currently, Chinese NFCs hold approximately USD285 billion in outstanding USD bonds, comprising 34 percent of the total for EMEs. While the overall risk may not be large, given that the outstanding offshore USD bonds of Chinese NFCs amount to less than 3.5 percent of GDP and 18 percent of foreign exchange reserves, there are pockets of vulnerability within riskier groups of borrowers.

The issuance of US dollar bonds by Chinese NFCs is concentrated in specific segments, notably LGFVs and property developers, which account for about 44 percent of the total issuance. These borrowers significantly increased their offshore USD bond issuance until recently when funding costs surged due to the US rate hikes (Figure E1). Typically, property developers and LGFV borrowers are more exposed to currency risks, as their primary business operations are mostly in China, which means that they have little or no foreign currency income. Firms issue USD bonds, not only to enjoy the lower funding costs and access a broader offshore market and investors, but also to engage in

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[14]Prepared by Ke Ji.

[15]The National Development and Reform Commission (NDRC) in 2015 removed a quota/approval system for corporate offshore debt financing and required only pre-issuance registration. See NDRC Circular 2044: "Promoting the Reform of the Filing and Registration Regime for Issuance of Foreign Debt by Corporate Entities."

carry trade transactions (**Ding 2019**), which makes them vulnerable to USD strengthening (**Bruno and Shin 2017**).

The strong USD and higher funding costs have led to an increase in defaults on Chinese NFCs' offshore bonds. In 2018, defaults increased to USD6.6 billion as the USD appreciated and borrowing costs rose. More recently, when the US monetary policy was tightened aggressively, defaults on Chinese NFC offshore dollar bonds surged to a record high of USD52 billion, with the majority originating from property developers (Figure E2). This was exacerbated by distress in the property market and tightened regulatory restrictions on debt financing by property developers. The debt vulnerabilities of property developers could persist should the USD strengthen further and the sluggish recovery in the real estate market continue. From November until the end of 2025, property developers face USD78 billion in maturing USD bonds, while Chinese NFCs as a whole have a total of USD248 billion in bonds coming due. Difficulties in refinancing these bonds could pose direct solvency risks for vulnerable firms and lead to losses for investors with substantial exposures.

Efforts to strengthen the regulatory framework for corporates' foreign debt are commendable. In January 2023, the NDRC announced new regulations on the foreign debts of Chinese firms[16], aimed at improving risk management. The rules include enhanced pre-issuance scrutiny, particularly regarding indirect borrowing by domestic enterprises and LGFVs. To further strengthen monitoring and regulation, firms are now required to regularly report their use of proceeds and any significant developments that might affect debt repayment. As market activities continue to evolve, it is important to keep refining the regulatory framework to address emerging challenges. The implementation of these regulations should be coordinated with other regulations governing corporate borrowing.

**Figure E1. Chinese NFCs'
Offshore USD Bond Issuance**
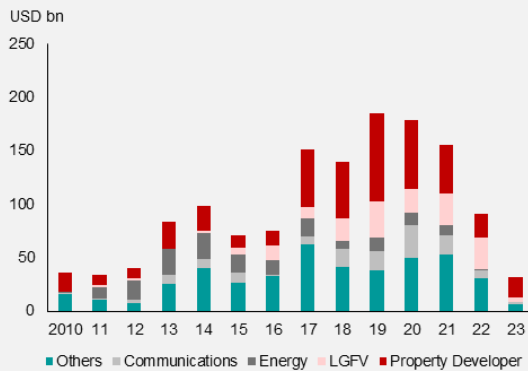
Source: Bloomberg, AMRO staff calculations.
Note: 2023 data is as of November 1.

**Figure E2. Offshore USD Bond Defaults
by Chinese NFCs**
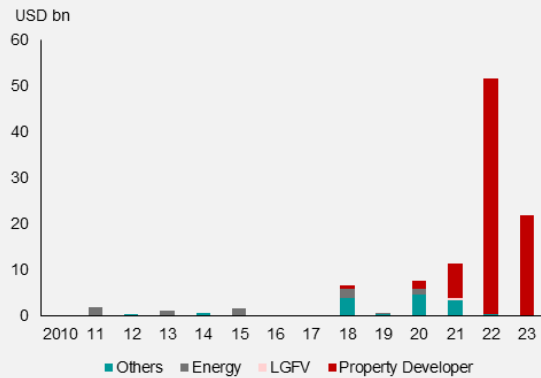
Source: Bloomberg, AMRO staff calculations.
Note: 2023 data is as of November 1.

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[16]NDRC 2023 No 56 "Administrative Measures for the Approval and Registration of Medium to Long-term Foreign Debts of Enterprises".

Figure E3. Maturing Offshore USD Bonds of Chinese NFCs

Source: Bloomberg, AMRO staff calculations.
Note: 2023 data is as of November 1.

References

Bruno, V., & Shin, H. S. (2017). "Global Dollar Credit and Carry Trades: A Firm-Level Analysis." The Review of Financial Studies, 30(3), 703-749. https://doi.org/10.1093/rfs/hhw099.

Ding, D. (2019). "Chapter 16 China's Offshore Corporate Dollar Bonds." In The Future of China's Bond Market. Washington, International Monetary Fund. https://doi.org/10.5089/9781484372142.071.ch016.

21. Heightened geopolitical tensions are having adverse effects on the economy. They are leading to the fragmentation of the global economic system and disruptions of global supply chains with implications for the development of China's high-tech sectors. China's economic recovery, especially in the high-tech sectors, could meet some setbacks due to supply chain disruptions arising from the persistence of U.S.-China tensions and its likely intensification from time to time. Many MNCs have adopted a "China Plus One" strategy in response to the geopolitical tensions. These MNCs generally assess that U.S.-China tensions will persist for the long term. This compels them to take an either-or approach in making choices about production sites and supply chain partner companies. The efforts by several EMEs – including those in the ASEAN+3 region – over the past several years to improve their infrastructure and manufacturing ecosystems have also made more alternatives available. (See Selected Issue 1: China's Evolving Trading Patterns Post the US-China Trade Conflict)

Longer-term Challenges and Vulnerabilities

22. In the medium to long term, China will face persistent pressure on its financial resources and policy space due to various challenges. These challenges include those related to population aging and climate change. Effectively addressing these challenges will require substantial financial and fiscal resources, effective coordination across different government agencies, and constant review and adjustment of policies.

23. In particular, population aging poses long-term challenges such as slower economic growth and higher fiscal spending related to social security needs. The Lewis turning point, which signifies the peak of the working age population in China, including migrant labor from the countryside to the cities, occurred around 2010. This means higher growth from demographic dividends and the exhaustion of productivity gains from rural-urban migration is starting to diminish. According to AMRO's preliminary analysis, population aging

could lower China's long-term growth to 4.5 percent within the next ten years. Therefore, China needs to rely more on productivity gains from innovation and technological advances to offset the drag from the shrinking labor force. Population aging also increases fiscal burdens related to social security needs. For example, the increasing number of elderly individuals requires substantial fiscal resources for healthcare, pensions, and other forms of support, and faces challenges in accessing adequate healthcare, employment opportunities, and social support systems. Targeted policies are needed to address these issues.

C. Policy Discussions and Recommendations

Calibrating Fiscal and Monetary Support

24. China's fiscal stance in 2023 is assessed to be broadly neutral under a slightly negative output gap; fiscal policy should continue to provide targeted support for economic recovery and job creation. As the recovery in 2022 was sluggish and uneven, various sectors have fallen behind, including SOEs and private companies, with SMEs and some segments of the workforce experiencing difficulties. As the recovery progresses, the authorities should retain targeted policy measures that enhance enterprises' technological capacity, facilitate skill upgrading for workers, and support workers and households that are lagging. Comprehensive policy measures that aimed to provide temporary support during the pandemic should be phased out. Measures that support innovation by enterprises, bolster their competitiveness, facilitate affordable financing, and generate high-quality jobs should be strengthened. In the event of an unexpected weakening of economic recovery in the second half of 2023, the authorities could take additional fiscal measures to support the economy. However, such measures should be targeted and commensurate with the extent of the economic slowdown, considering the prevailing monetary policy stance and the effectiveness of other supportive measures.

25. To sustain the economic recovery in an environment of low inflation, monetary and credit policies should remain accommodative. The authorities have maintained adequate short-term liquidity through regular open market operations (OMOs), adjusting their scale as necessary. Well-calibrated reductions of the RRR (such as those which are applied to some types of banks but not all banks) and the LPR have been implemented periodically to boost the funds for lending and reduce borrowing costs. It is crucial to strike the right balance between several objectives: (i) ensuring that financing conditions remain supportive of the economic recovery; (ii) containing the buildup of leverage and financial imbalances; and (iii) maintaining macro-financial stability.

Stabilizing and Strengthening the Real Estate Sector

26. Policies for the real estate sector should continue to foster its sound development over the long term while supporting its nascent recovery in the near term. Following the easing of the regulatory measures on leverage**,** the real estate sector has bottomed out, but the recovery is at a nascent stage. The restructuring of strained real estate developers remains incomplete. If the real estate sector were to falter and weaken further, that could cause banking sector asset quality to deteriorate, heighten strains on local government finances, and impede the overall economic recovery. In the short term, the authorities could take measures to complete the construction of buildings and improve developers' financial positions. This would help to strengthen the recovery of the real estate sector and improve confidence. Looking ahead to the longer term, once the real estate sector has recovered, the authorities

should continue with the reform measures to strengthen its foundations and stability. First, it is important to ensure that funds in escrow accounts are withdrawn exclusively for the completion of housing units, with disbursements tied to the progress of construction. Second, there should be stricter caps on loan tenures to ensure that borrowers do not overstretch themselves when they purchase a property (See Selected Issue 2: Property Market Developments in China: Key Drivers and Future Directions).

Mitigating Risks in the Banking System

27. Ensuring financial sector soundness is crucial, especially with the recoveries of the economy and real estate sector still in their early stages. China's banking sector remains generally sound, with outstanding loans to property developers constituting less than 6 percent of the total loans within the banking system. Additionally, over 90 percent of personal mortgage loans are first home loans which are generally of good quality. The entire commercial banking sector has an NPL ratio of only 1.6 percent and CAR of over 15 percent, 19 banks of systemic importance have recently passed the stress test. Nonetheless, vulnerabilities have emerged in some city and rural commercial banks that have large exposures to troubled property developers. As the economy rebounds with the reopening, banks' credit risk assessment must be stricter, and their lending practices must be prudent. Strong underwriting standards should be upheld, even as interest rates are lowered to support some sectors. For instance, regular stress tests are very helpful for checking whether mortgage borrowers can service their loans at higher rates. Furthermore, reducing lending or halting the rollover of loans to non-viable firms is important to reduce the risk of supporting zombie firms. As for banks' funding costs, the recent deposit rate cuts may help to reduce the pressure on some banks with squeezed profit margins. To ensure that the banking sector can continue to provide financing for economic growth, banks should improve their liquidity positions, including finding ways to secure longer-term funding sources such as term deposits or bonds.

28. For the longer term, further improvement in the quality of weak banks' loan books and strengthening of their capital buffers will become more critical. Banks, particularly city and rural banks, should continue to build additional capital buffers, through reductions of cash dividend payouts and issuance of stock dividends. Smaller banks, which persistently find it difficult to expand their business, maintain healthy profit margins, and increase their capital buffers, will need to be restructured, such as through consolidation and mergers, to become more viable and competitive over the long run. The treatment of bad loans should continue to be optimized and broadened. Continued efforts should also be made to enhance understanding of potential spillovers and contagion channels across banks as well as between banks and the corporate sector. There should be robust governance rules for ownership stakes and management roles in banks. Implementing rules that limit bank lending to related parties would help to reduce these risks.

Financial Digitalization – Maximizing Benefits While Containing Risks

29. It is imperative to strengthen measures that safeguard financial stability as financial digitalization (FinDig) transforms the monetary system and financial sector. With China's e-commerce market projected to grow rapidly by 12 percent annually over the next few years, there are likely to be more cyberattacks and larger spillover risks originating from digital asset markets. Therefore, the authorities should persist with efforts to enhance their monitoring of virtual asset markets and submissions of transactions, and expedite transaction reporting, enabling swift interventions when necessary. At the same time, promoting healthy

innovation within the FinDig ecosystem would not only support economic development but also contribute to financial stability. Encouraging cross-border collaboration, including the exchange of transaction data, knowledge sharing, and alignment of technical standards, would help to create a more robust and secure global financial environment.

Medium- and Long-Term Structural Challenges

30. A multi-faceted strategy is necessary to ensure that China can achieve high-quality economic growth that is resilient, inclusive, and sustainable. This is critical given the long-term challenges such as those related to population aging and US-China tensions. To achieve this, Chinese authorities are right to prioritize the efficient functioning of the labor market, strengthen training programs, and make adjustment to the hukou system to facilitate the movement of workers across different parts of the country and across industries and promote job creation. In addition, investments in research and development (R&D), technological innovation, education and training, and healthcare should be given high priority, to further develop the knowledge-based economy and enhance the well-being of the population. It is also essential to create a more conducive environment for entrepreneurship, creativity and innovation, technological advancements, and the adoption of best practices for sustainable development – across areas such as renewable energy, digital transformation, and environmental conservation. At the same time, certain policies should increasingly focus on more micro-level issues, in line with the broader macroeconomic directions. These include formulating strategies centered on the enhancement of traditional sectors, harnessing the potential of strategic emerging sectors, strengthening the resilience of supply chains, and allocating investments to areas that enhance self-sufficiency. In the coming years, more investments should be directed towards accelerating technological advancements in priority industrial clusters, advancing digitalization, and making further progress in "greening" to adapt to climate change needs.

Addressing Demographics and Human Capital Challenges to Boost Growth Potential

31. Given its population aging and shrinkage, China needs policies to boost its population growth, expand its labor force, and further enhance its labor mobility. Efforts should focus on addressing fundamental driving factors that shape long-term outcomes.

- The removal of the "One-Child Policy" was a significant step and recent measures to encourage more children per family are commendable. To further promote population growth, it is essential to improve the fertility rate by implementing measures that encourage young couples to have more babies. Comprehensive support for families is crucial and can be achieved through initiatives such as more affordable childcare services, more friendly parental leave policies, and more flexible work arrangements.

- Given the increase in the longevity of the population, there is a need to gradually raise the statutory retirement age to expand the workforce and reduce the dependency ratio. Furthermore, facilitating labor mobility across the country and industries is vital to mitigate the effects of workforce shrinkage and industry restructuring and automation. Policies should aim to remove barriers to internal migration to ensure that workers have access to opportunities in high-growth industries and regions. This can be achieved through initiatives that enhance access to continuing education and vocational training, facilitate job matching, and ensure the portability of social benefits.

- Considering that some features of the existing household registration system (*hukou*) limit rural-urban migration and impede the efficient allocation of human resources

across different regions of the country – including regions which have labor shortages, the authorities should quicken the liberalization of the hukou system.

- Investing in human capital and enhancing labor productivity are crucial for ensuring sustainable economic growth and development. By focusing on human capital development, including improvements in education and skills training, and the promotion of lifelong learning. China can equip its workforce with the necessary knowledge and abilities to thrive in a rapidly evolving economy. This includes efforts for enhancing labor productivity through efficient resource allocation, technological advancements, and the adoption of high-technology methods of production and distribution, including the use of robots and automation.

32. China could yet achieve major breakthroughs in spurring growth and boosting resilience – there are several potential game-changers in this respect. First, the sheer size of China's economy, its huge domestic demand base, and its capacity for hosting entire production networks and supply chains. Second, the scope for further digitalization across all sectors of the economy to raise productivity. Third, possibilities for further technological gains and innovation in "new economy" sectors and product lines such as semiconductors, new energy vehicles (NEVs), computers, with positive spillovers to downstream enterprises. Strong progress in these areas would strengthen the foundations for China to achieve average potential growth of about 4.5 percent till 2035/2040 and move into the ranks of advanced high-income economies.

Strengthening Social Safety Nets and Promoting Inclusive Growth

33. To ensure sustainable and inclusive growth, China must improve the coverage and adequacy of its social security system, which will strengthen domestic consumption. This entails enhancing healthcare services, unemployment benefits, the pension system, and having more affordable housing programs to help the younger population and lower-income groups. A stronger social security system would encourage households to reduce precautionary savings and increase consumption. This would also help to further enhance Dual Circulation and Common Prosperity.

Raising Total Factor Productivity: Structural Reforms and Collaborative Strategies

34. To boost its growth potential, China should strengthen structural reforms to raise its TFP growth and continue to promote the multilateral trading system through both bilateral and multilateral channels. AMRO's preliminary analysis points to the key role of TFP growth in China's economic development in the past decades; this is expected to continue in future. To achieve this, China should focus on three important areas: enhancing technology and R&D investment, strengthening market function and entrepreneurship, and working with other countries to strengthen the rules-based multilateral frameworks for trade and investments. (See Selected Issue 3: China's Demographic Headwinds and Long-term Growth)

- First, to enhance technology and R&D investments, China should prioritize the development of advanced technologies and innovation ecosystems. This can be achieved by increasing funding for R&D, which has already risen from about 2.1 to 2.54 percent of GDP over the past five years, supporting the expansion of research facilities and innovation centers, and fostering collaboration between academia, industry, and government. There should be a strong emphasis on educating and retaining top talents in the fields of science, technology, engineering, and mathematics (STEM), by creating more favorable working conditions and offering incentives for innovation. By creating a

conducive environment for technology and R&D, China can drive breakthroughs in key sectors, accelerate technological advancements, and enhance its competitiveness in the global economy.

- <u>Second, to ensure sustained long-term growth and to maintain competitiveness in the rapidly evolving global economy, China must prioritize the strengthening of market functions and entrepreneurship.</u> There is scope to streamline regulations and reduce bureaucratic hurdles. Further strengthening antitrust laws would also help to create a more level playing field for all businesses regardless of size and ownership. Encouraging innovation and creativity through favorable policies and incentives will foster entrepreneurship and spur economic dynamism. In particular, the support can be more comprehensive for start-ups and SMEs, including schemes for access to financing and partnerships among enterprises.

- <u>Third, given the rise of protectionist tendencies in several major economies, bolstering the global trade and investment regime has become even more crucial for China's long-term sustainable growth.</u> China's recent efforts to identify opportunities and build linkages with more trade partners within the region and across different regions reflects a proactive approach and is commendable. These include the RCEP, FTAs with both developed and developing countries, and the CAREC program. By expanding trade partnerships and diversifying export destinations, China can mitigate risks associated with trade disruptions from protectionism. Additionally, considering its central role in the global trading system, China should continue to engage actively in multilateral trade agreements and forums, championing fairness and openness for global trade and investments. This includes being an advocate for the resolution of trade disputes through dialogue and negotiation, and participating in initiatives that aim to remove trade barriers and promote investment facilitation. By contributing to the development of more robust rules-based international trade and investment regimes, China can help to strengthen global economic and financial stability, enhance market access, and create opportunities for economic growth amid challenging geopolitical dynamics.

Safeguarding Fiscal Sustainability in the Medium Term

35. Given the need to address structural challenges, to ensure long-term fiscal sustainability, China must find more sources of revenue and enhance the efficiency of fiscal spending – including by reallocating budget expenditures to higher-priority areas.

- In the past years, the reliance on tax incentives and public infrastructure investment to support economic growth has led to a gradual shrinkage of tax revenue relative to GDP and rapid accumulation of debt by local governments. Meanwhile, population aging has increased the need for more spending on healthcare, pensions, and other social services. These trends have posed significant challenges to long-term fiscal sustainability and weakened the capacity of public finance to support policy objectives effectively.

- As the economic recovery gains momentum, the government should phase out temporary tax relief measures implemented during the pandemic to restore its revenue collection and replenish its fiscal buffers.

- To address the long-term challenges, there are several options.

o One approach is to redirect resources from conventional physical infrastructure to social infrastructure, specifically the social security system. This would help to tackle challenges related to population aging and economic inequalities.

o At the same time, it is crucial to bolster fiscal revenue by advancing tax reforms, potentially introducing new taxes – such as property taxes and capital gains taxes – aligned with China's evolving economic structure, and providing local governments with stable and sustainable revenue sources.

o Moreover, there is a need to realign and rebalance the relationship between the central and local governments to enhance the fiscal positions of local governments. China has been strengthening its local government debt management system, including debt limit control, fund management and monitoring, information disclosure requirement, as well as accountability measures. To address risks of some over-leveraged provinces, China has set up working groups on a case-by-case basis and is implementing targeted measures. Despite these efforts, it is important to further strengthen the debt management practices of local governments. Focus should be on reducing the reliance of local governments on LGFV financing and implementing measures to mitigate non-repayment risks.

o At the same time, there is a need for central authorities to work more closely with local governments to ensure that they do not set overly ambitious policy targets, and do not borrow beyond their debt repayment capacity.

Strengthening Efforts for Climate Change

36. China's determined pursuit of carbon neutrality is commendable. The economy's strong advantage in renewable energy – powered by a massive investment push, rapid technological advances, and an efficient, low-cost equipment supply chains – has put it in an excellent position to become carbon neutral by 2060. The financial sector has contributed significantly to environmental sustainability by promoting green loans and supporting the issuance of green bonds by businesses and governments. It would be beneficial for the authorities to keep enhancing the incorporation of climate change risks into their mandates and policy frameworks. Efforts to align data disclosures on climate change across countries and sharing of knowledge and experiences should continue, to foster a common understanding among stakeholders and improve the identification of climate change risks. These collaborative efforts will facilitate China's transition to a low-carbon economy and strengthen its contribution to global climate change efforts.

Appendices

Appendix 1. Selected Figures for Major Economic Indicators

Figure 1.1. Real Sector

China's economy recovered creditably in 2023, with GDP growth being 5.2 percent.
[GDP Growth]
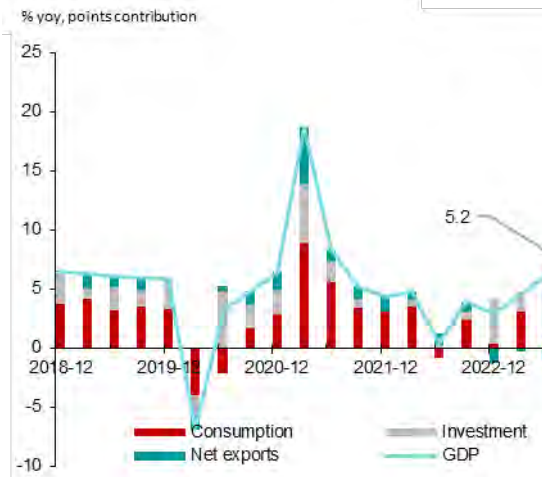
Source: China NBS, CEIC.

There are some weaknesses in key activities, especially industrial production and consumption.
[Industrial Production and Retail Sales]

Source: China NBS, Wind.

Investment has slowed, with real estate and infrastructure investment weaker than expected.
[Fixed Asset Investment]

Source: China NBS, Wind.

Trade was subdued with both external and domestic demand weakening.
[Exports]

Source: China NBS, CEIC.

CPI inflation was exceptionally low in 2023, due to a confluence of factors including the output gap and supply side policy measures.
[CPI Inflation]
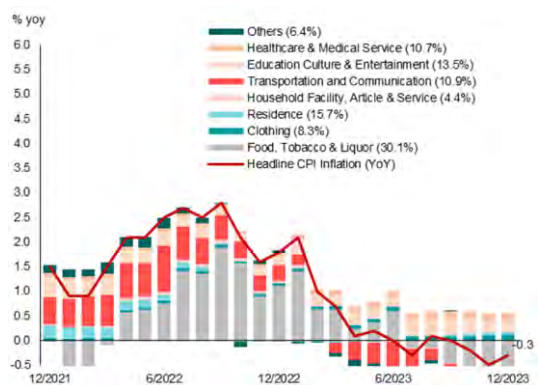
Source: China NBS, CEIC.

Urban unemployment rose in H2 2022 due to weak economic conditions but fell in 2023.
[urban Surveyed Unemployment Rate]
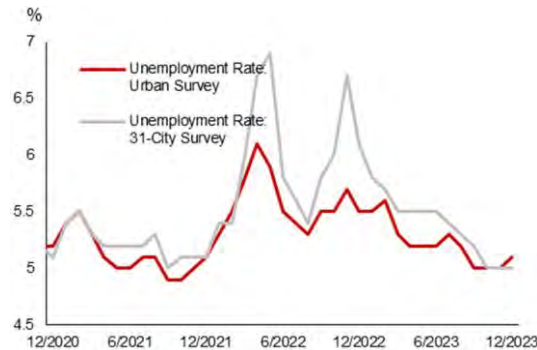
Source: China NBS, CEIC.

Figure 1.2. External Sector

The overall BOP position has remained healthy, driven by a significant current account surplus.
[Overall Balance of Payments]
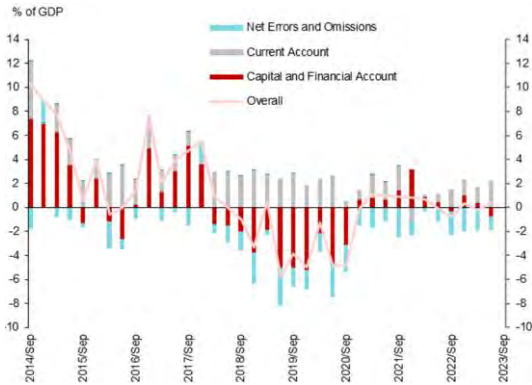
Source: China NBS, CEIC.

The goods account surplus has stayed strong despite weakening of external demand.
[Current Account Balance]
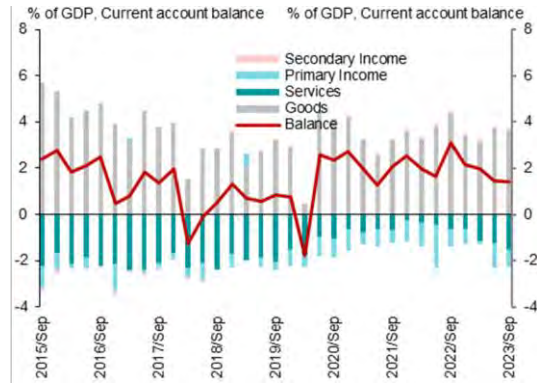
Source: China NBS, CEIC.

Exports grew by a marginal 0.6 percent in 2023 to reach RMB23.77 trillion.
[Exports]

Source: China NBS, CEIC.

Inward FDI has been resilient as China is an attractive production hub and key market.
[FD and ODI]
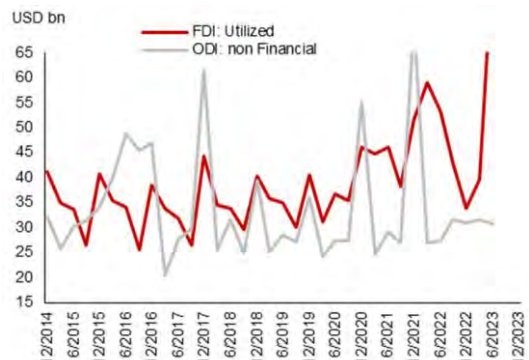
Source: China NBS, CEIC.

Capital flows were more volatile in 2022 and Q1 2023 compared to before but not destabilizing.
[Capital Flows]
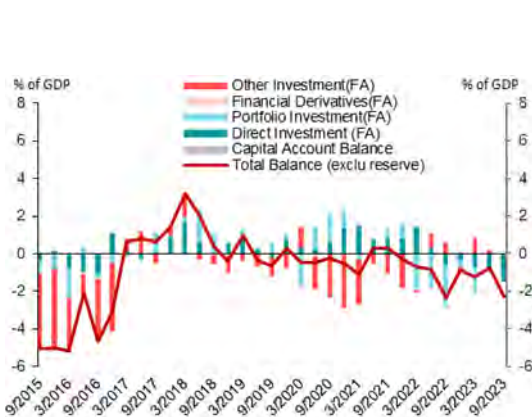
Source: China NBS, CEIC.

Foreign currency reserves have increased in recent months to stand at US$3.204 trillion.
[USD-RMB Exchange Rate and Foreign Currency Reserves]
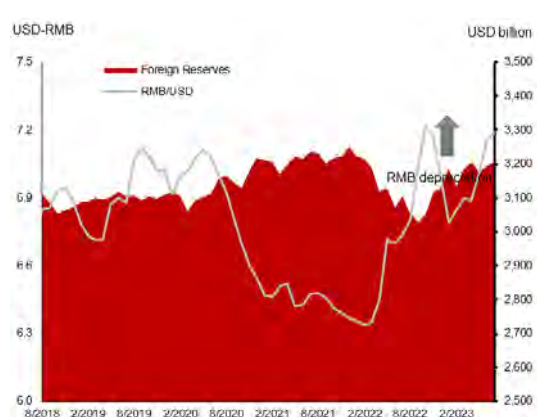
Source: China NBS, CEIC.

Figure 1.3. Fiscal Sector

Fiscal revenue growth slowed markedly in 2022 but recovered significantly in 2023.
[Total Fiscal Revenue and Expenditure]
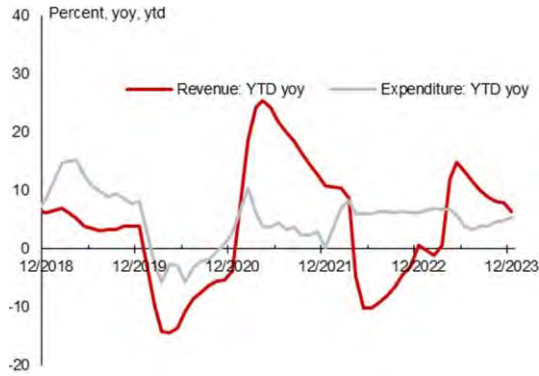
Source: China NBS, CEIC.

The recovery of fiscal revenue applies to both the central government and local governments.
[Central and Local Government Revenue]
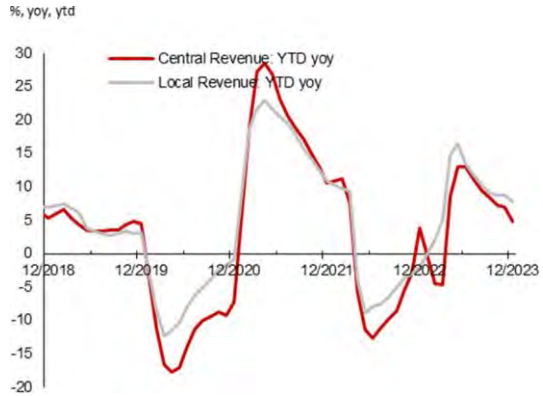
Source: China NBS, CEIC.

The pressure on tax revenue has eased significantly given the economic recovery.
[Tax Revenue and Non-Tax Revenue]
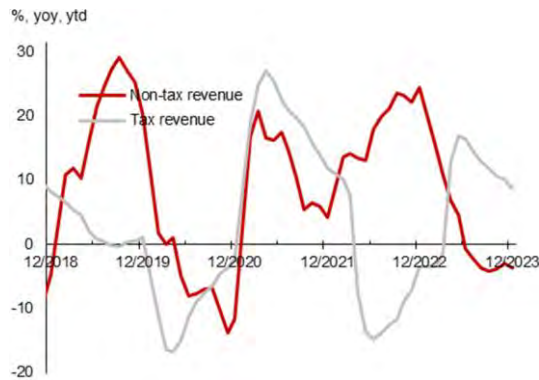
Source: China NBS, CEIC.

VAT revenue fell the most sharply in 2022 but improved significantly in 2023.
[Tax Revenue by Type]
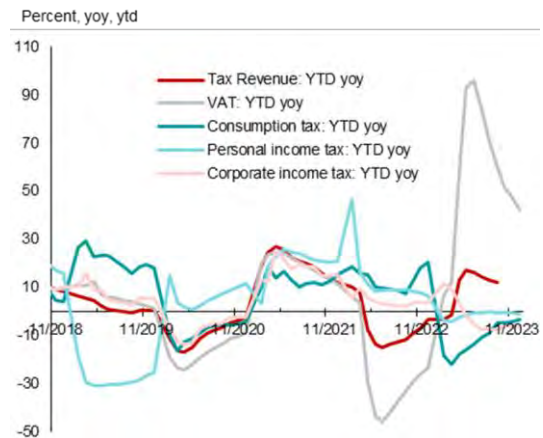
Source: China NBS, CEIC.

Land premium has dipped sharply due to the property market downturn and COVID measures.
[China Local Government Land Premium and Land-Related Expenditure]
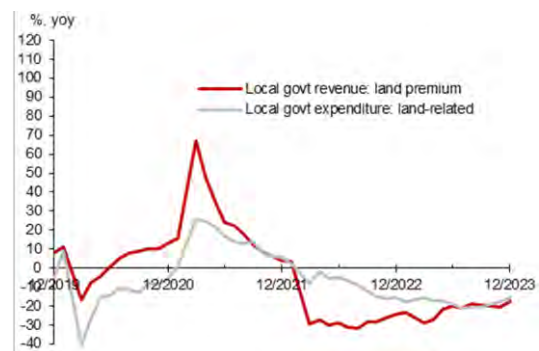
Source: China NBS, CEIC.

Local government bond issuance has supported businesses and workers in 2022 and 2023.
[Local Government Bond Issuance]
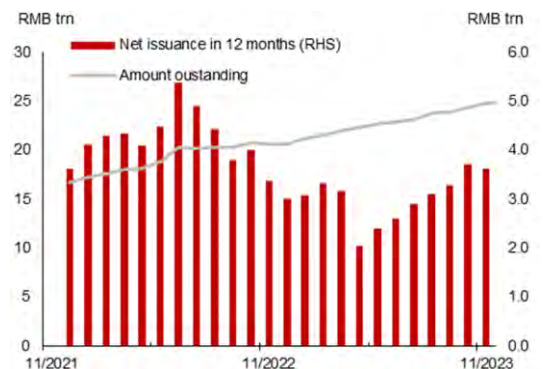
Source: China NBS, CEIC.

Figure 1.4. Monetary and Financial Sectors

Total social financing growth was a firm 9.84 percent in 2023 with policy guidance being key.
[Total Social Financing]

Source: China NBS, Wind.

Lending rates have been falling, as authorities implement measures to lower credit costs.
[Lending Rates]
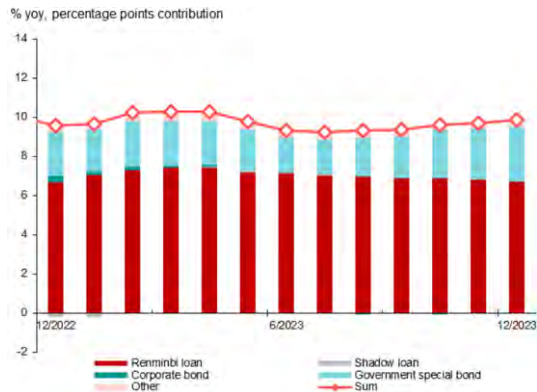
Source: China NBS, CEIC.

Banks' loan quality remains resilient despite the economic slowdown and property sector stresses.
[NPL Ratio and Special-Mention Loan Ratio]

Source: China NBS, CEIC.

Banks' capital ratios have also remained largely stable, but smaller banks face greater pressure.
[Capital Ratios]
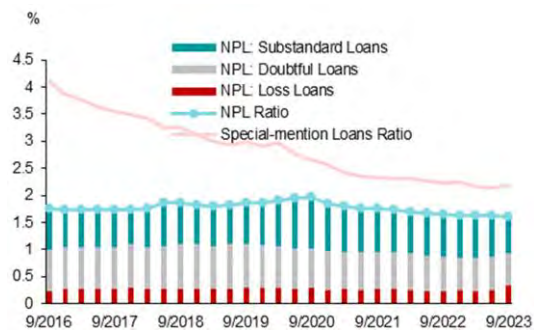
Source: China NBS, CEIC.

Short-term market interest rates have generally stayed low but exhibited occasional volatility.
[Short-Term Market Interest Rates]

Source: China NBS, CEIC.

Stocks markets sold off recurrently in 2022 and2023.
[Stock Market Indices]
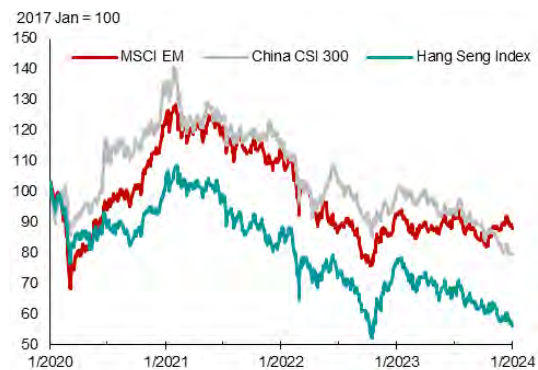
Source: China NBS, CEIC.

Appendix 2. Selected Economic Indicators for China

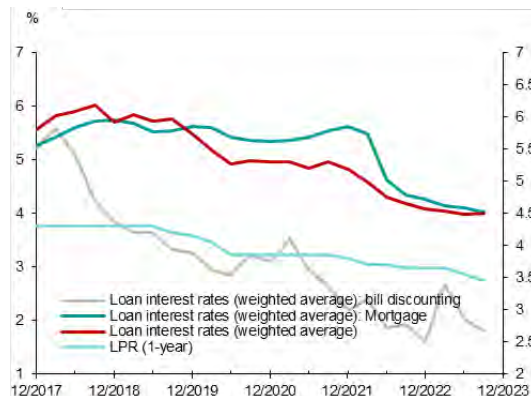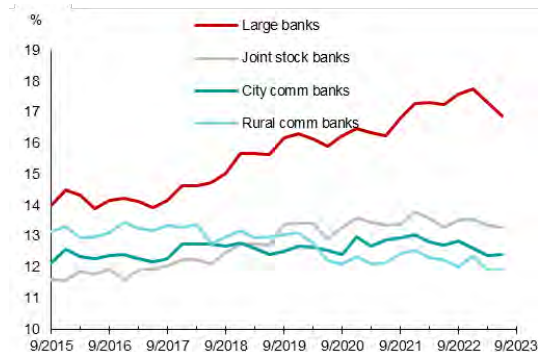| | 2019 | 2020 | 2021 | 2022 | Projections | | |
					2023	2024	2025
Real Sector	(In percent change unless specified)						
Nominal GDP (RMB trillion)	98.7	101.4	114.9	121.0	129.1	138.2	147.4
Nominal GDP (USD trillion)	14.3	14.7	17.8	16.8	18.4	19.7	21.7
Real GDP	6.0	2.2	8.4	3.0	5.2	5.3	4.9
Consumption	6.4	-0.3	9.8	1.8	5.7	5.1	5.0
Gross Capital Formation	4.0	4.3	2.6	5.1	3.0	5.9	4.5
PMI (Mfg)	49.7	49.9	50.5	49.2	…		
PMI (non-Mfg)	54.0	52.6	52.9	49.1	…		
Labor Market							
Newly-hired Urban Workers (Person mn)	13.5	11.9	12.7	12.1	12.2	12.0	11.8
Average Surveyed Unemployment Rate: Urban, %	5.2	5.6	5.1	5.5	5.2	5.1	5.0
Average Wages of Workers Employed in Urban Non-Private Establishments (RMB, thousand)	90.5	97.4	108.1	113.5	120.3	129.3	140.3
Average Wages of Workers Employed in Urban Non-Private Establishments	9.8	7.6	11.0	5.0	6.0	7.5	8.5
External Sector							
Exports (% yoy, USD)	0.5	3.6	29.9	7.7	0.3	6.0	5.0
Imports (% yoy, USD)	-2.7	-0.6	30.1	1.1	-0.5	4.5	4.0
Trade Balance (% of GDP)	0.9	2.4	2.6	3.2	2.5	1.3	1.5
Current Account (% of GDP)	0.7	1.7	2.0	2.2	1.1	1.6	1.4
Financial and Capital Balance (% of GDP)	0.2	-0.6	-1.2	-1.1	-1.0	0.6	0.5
FDI (% of GDP)	0.4	0.7	1.2	0.2	0.3	0.6	0.7
ODI (% of GDP)	-0.7	-0.7	0.7	0.6	1.0	0.5	0.5
External Debt, Gross (% of GDP)	14.4	16.1	15.5	14.1	14.2	14.0	13.7
Foreign Reserves (USD bn)	3,223.0	3,357.0	3,250.0	3,120.0	3,180.0	3,300.0	3,400.0
Exchange Rate (Against USD, Period Average)	6.91	6.90	6.45	6.74	7.07	7.00	6.80
Monetary sector							
M2 (% yoy)	8.7	10.1	9.0	11.8	10.0	10.0	9.5
Total Social Financing (% yoy)	10.7	13.3	10.3	9.6	9.7	10.0	9.5
Total Loans (% yoy)	11.9	12.5	11.0	11.1	9.5	9.5	9.2
Lending Rate (1y, Period End, %) for 2018; 1y Loan Prime Rate (Period End, %) for 2019 and after	4.15	3.85	3.80	3.65	3.45	3.85	3.85
CPI (Period Average, % yoy)	2.9	2.5	0.9	2.0	0.2	1.4	2.0
Core CPI (Period Average, % yoy)	1.6	0.8	0.8	0.9	0.7	1.1	1.3
Producer Price Index (Period Average, % yoy)	-0.3	-1.8	8.1	4.1	-2.5	2.2	2.0
Fiscal Sector							
Revenue (% y-o-y)	3.8	-3.9	10.7	0.6	7.7	5.8	
Expenditure (% y-o-y)	8.1	2.9	0.0	6.1	5.3	7.9	
Revenue (% of GDP)	19.3	18.0	17.6	16.9	17.4	17.3	
Expenditure (% of GDP)	24.2	24.2	21.4	21.6	21.8	22.0	
Deficit (% of GDP)	4.9	6.2	3.8	4.7	4.4	4.8	
Deficit (% of GDP) Official	2.8	3.7	3.1	2.8	2.9	3.3	
Government Debt (% of GDP)*	38.5	45.8	46.8	50.4	54.8	57.2	
Financial Sector and Property Markets							
Shanghai Stock Exchange Composite Index	3,050.1	3,473.1	3,640.0	3,089.3	2,974.9		
Shanghai Interbank Offered Rate, Overnight (%)	1.7	1.1	2.1	2.4	…		
10 Year Treasury Bond Yield (%)	3.2	2.9	2.9	2.9	2.7	3.0	3.0
Banking Capital Adequacy Ratio (%)	14.6	14.7	15.1	15.2	14.9	15.0	14.6
NPL Ratio (%)	1.9	2.0	1.7	1.6	2.0	2.0	1.8

Note: (i) The data is as of January 17 2024.
(ii) Government debt includes both central and local government debt.
Source: National Bureau of Statistics, Ministry of Finance, People's Bank of China, Ministry of Commerce, Ministry of Human Resources and Social Security, China Customs, China Banking Regulatory Commission, State Administration of Foreign Exchange, AMRO.

Appendix 3. Balance of Payments

	2018	2019	2020	2021	2022
	(In percent of GDP)				
Current account	**0.2**	**0.7**	**1.7**	**2.0**	**2.2**
Trade balance	**0.6**	**0.9**	**2.4**	**2.6**	**3.2**
Goods	2.7	2.8	3.5	3.2	3.7
Exports	17.4	16.7	17.0	18.0	18.6
Imports	14.7	14.0	13.6	14.9	14.9
Services	-2.1	-1.8	-1.0	-0.6	-0.5
Exports	1.7	1.7	1.6	1.9	2.1
Imports	3.8	3.5	2.6	2.5	2.6
Primary income	-0.4	-0.3	-0.8	-0.7	-1.1
Credit	1.9	1.9	1.7	1.8	1.1
Debit	2.4	2.2	2.5	2.5	2.1
Secondary income	0.0	0.1	0.1	0.1	0.1
Capital and financial account	**1.1**	**0.2**	**-0.6**	**-1.2**	**-1.7**
Financial account	1.2	0.1	-0.4	-0.2	-1.2
Direct investment, net	0.7	0.4	0.7	0.9	0.2
FDI	1.7	1.3	1.7	1.9	1.0
ODI	1.0	1.0	1.0	1.0	0.8
Portfolio investment, net	0.8	0.4	0.6	0.3	-1.6
Liabilities (net inflow)	1.2	1.0	1.7	1.0	-0.6
Assets (net outflow)	0.4	0.6	1.0	0.7	1.0
Other investment, net	-0.1	-0.7	-1.7	-1.4	0.3
Liabilities (net inflow)	0.9	-0.3	0.6	0.9	-0.5
Liabilities (Currency and deposits)	0.4	-0.4	0.6	0.4	-0.3
Liabilities (Loans)	0.2	0.3	-0.1	0.1	-0.1
Liabilities (Trade credit)	0.3	-0.2	0.1	0.2	-0.2
Assets (net outflow)	1.0	0.4	2.3	2.4	-0.8
Reserve assets	-0.1	0.1	-0.2	-1.1	-0.6
Net errors and omissions	**-1.3**	**-0.9**	**-1.1**	**-0.8**	**-0.5**
Overall Balance of Payments	**1.4**	**0.8**	**1.3**	**1.8**	**1.1**
Memorandum Items:					
Export growth (in USD, percentage change)	**9.1**	**-0.8**	**4.1**	**29.8**	**4.5**
Goods (contribution)	8.3	-1.2	4.7	25.8	3.7
Services (contribution)	0.8	0.4	-0.6	4.0	0.8
Import growth (in USD, percentage change)	**15.9**	**-2.5**	**-4.8**	**30.0**	**1.5**
Goods (contribution)	13.4	-1.7	0.2	27.5	0.8
Services (contribution)	2.4	-0.8	-5.0	2.5	0.7
External debt (percentage of GDP)	**14.3**	**14.5**	**16.3**	**15.4**	**13.7**
International reserves (in USD billion, end of period)	3072.7	3107.9	3216.5	3250.2	3127.7

Appendix 4. Statement of Central/General Government Operations

	2018	2019	2020	2021	2022
	(In RMB trillion)				
Revenue: General Budgetary	**18.3**	**19.0**	**18.3**	**20.3**	**20.4**
yoy	*6.2*	*3.8*	*-3.9*	*10.7*	*0.0*
Tax Revenue	15.6	15.8	15.4	17.3	16.7
Consumption	1.1	1.3	1.2	1.4	1.7
VAT	6.2	6.2	5.7	6.4	4.9
Corporate Income	3.5	3.7	3.6	4.2	4.4
Personal Income	1.4	1.0	1.2	1.4	1.5
Others	3.5	3.5	3.7	3.9	4.3
Non-Tax Revenue	2.7	3.2	2.9	3.0	3.7
Carry Over Balances and Transfer Funds	1.5	2.2	2.6	1.2	0.0
Expenditure: General Budgetary	**22.1**	**23.9**	**24.6**	**24.6**	**26.1**
yoy	*8.7*	*8.1*	*2.9*	*0.0*	*6.1*
General Public Services	1.8	2.0	2.0	2.0	…
National Defense	1.1	1.2	1.3	1.4	…
Public Safety	1.4	1.4	1.4	1.4	…
Education	3.2	3.5	3.6	3.7	3.9
Science and Technology	0.8	0.9	0.9	1.0	1.0
Social Security and Employment	2.7	2.9	3.3	3.4	3.7
Health Care and Family Planning	1.6	1.7	1.9	1.9	2.3
Urban and Rural Community Affairs	2.2	2.5	2.0	1.9	1.9
Transportation	1.1	1.2	1.2	1.1	1.2
Others	6.1	6.5	7.0	6.7	…
Balance	**-3.8**	**-4.8**	**-6.3**	**-4.3**	**-5.7**
	(In percent of GDP)				
Revenue: General Budgetary	**19.9**	**19.3**	**18.0**	**17.6**	**16.8**
Tax Revenue	17.0	16.0	15.2	15.0	13.8
Consumption	1.2	1.3	1.2	1.2	1.4
VAT	6.7	6.3	5.6	5.5	4.0
Corporate Income	3.8	3.8	3.6	3.7	3.6
Personal Income	1.5	1.1	1.1	1.2	1.2
Others	3.8	3.6	3.7	3.4	3.5
Non-Tax Revenue	2.9	3.3	2.8	2.6	3.1
Expenditure: General Budgetary	**24.0**	**24.2**	**24.2**	**21.4**	**21.5**
General Public Services	2.0	2.1	2.0	1.7	…
National Defense	1.2	1.2	1.3	1.2	…
Public Safety	1.5	1.4	1.4	1.2	…
Education	3.5	3.5	3.6	3.3	3.3
Science and Technology	0.9	1.0	0.9	0.8	0.8
Social Security and Employment	2.9	3.0	3.2	2.9	3.0
Health Care and Family Planning	1.7	1.7	1.9	1.7	1.9
Urban and Rural Community Affairs	2.4	2.5	2.0	1.7	1.6
Transportation	1.2	1.2	1.2	1.0	1.0
Others	6.6	6.6	6.9	5.9	…
Balance	**-4.1**	**-4.9**	**-6.2**	**-3.8**	**-4.7**
Official deficit (balance after tranfer adjustments)	**-2.6**	**-2.8**	**-3.7**	**-3.0**	**-4.7**

Appendix 5. Monetary Survey

	2019	2020	2021	2022	2023
Money supply	(Annual percentage change, unless otherwise specified)				
Broad money (M2) (percent of GDP)	402.7	431.5	414.7	442.3	463.7
Broad money (M2)	8.7	10.1	9.0	11.8	9.7
M1	1.5	4.4	8.6	3.5	3.7
M0	3.6	5.4	9.2	7.7	15.3
Money multiplier (times)	6.1	6.6	7.2	7.4	7.5
Reserve requirement ratio (RRR) (percentage of deposit liabilities)					
Large banks	14.5	13.0	12.5	11.5	11.0
Small and medium-sized banks	12.5	11.0	9.5	8.5	8.0
Total social financing	(Annual percentage change, unless otherwise specified)				
Total social financing (percent of GDP)	254.7	281.0	273.3	285.7	299.9
Total social financing	10.7	13.3	10.3	9.6	9.8
Bank loans (contribution)	7.4	8.0	7.0	6.7	6.7
Shadow banking (contribution)	-0.8	-0.5	-0.9	-0.2	0.0
Net corporate bond financing (contribution)	1.2	1.7	0.8	0.3	0.0
Net government bond (contribution)	2.1	3.3	2.5	2.3	2.8
Banks	(Annual percentage change)				
Deposits	8.7	10.2	9.3	11.3	10.0
Loans	12.3	12.8	11.5	11.1	11.0
Small and Micro Enterprise Loans	10.2	15.7	17.1	19.4	...
Real estate (RMB loan)	14.8	11.6	5.2	1.9	...
Mortgage (RMB loan)	16.8	14.5	11.3	1.3	...
Manufacturing (all currency)	6.9	19.9	22.5	26.5	...
Infrastructure (all currency)					
Water conservancy, environment and public facilities	11.1	...	...	...	...
Transportation, warehousing and postal services	12.6	...	...	...	...
Banking sector soundness indicators	(In percentage, unless otherwise specified)				
Non-performing loan ratio	1.9	1.8	1.7	1.6	...
Special-mention loan ratio	2.9	2.6	2.3	2.2	...
Provision coverage ratio (provisions/NPLs)	186.1	184.5	196.9	205.8	...
Loan-to-deposit ratio	75.4	76.8	79.7	78.8	...
Liquidity coverage ratio	146.6	146.5	145.3	147.4	...
Net interest margin	2.2	2.1	2.1	1.9	...
Return on assets	0.9	0.8	0.8	0.8	...
Return on equity	11.0	9.5	9.6	9.3	...
Capital Adequacy Ratio	14.6	14.7	15.1	15.2	...
Tier 1 capital adequacy ratio	12.0	12.0	12.4	12.3	...
Core Tier 1 Capital Adequacy Ratio	10.9	10.7	10.8	10.7	...
Interbank lending: weighted average interest rate: 7 days: current month value	3.0	2.5	2.4	2.1	2.1

Note: For M0, e-CNY in Circulation is covered in Currency in Circulation from December 2022. The amount of e-CNY in Circulation at end December 2022 is RMB 13.51 billion.

Appendix 6. Data Adequacy for Surveillance Purposes: a Preliminary Assessment

Key Indicators for Surveillance	Data Availability[i]	Reporting Frequency/ Timeliness[ii]	Data Quality[iii]	Consistency[iv]	Others, if any[v]
National Accounts	Available	Quarterly GDP, monthly CPI and PPI, monthly industrial production, monthly fixed asset investment, monthly retail trade	China has implemented a new quarterly GDP accounting measure since 2015.	-	More data for expenditure side data for real GDP would be welcomed.
Labor market	Available	Quarterly data for newly-hired workers and unemployment Quarterly data for new jobs and unemployment in urban areas	-	-	There is room to improve accuracy.
Balance of Payments (BOP) and External Position	Available	Quarterly BOP data released within 3 months after the quarter ends, monthly trade data within 3-4 weeks after the month ends.	Errors and omissions can sometimes be large.	-	Earlier release would be welcomed.
State Budget and Government/ External Debt	Available	Monthly fiscal data released within 3-4 weeks after the month ends. Quarterly foreign debt data released within 3 months after the quarter ends. Yearly government outstanding debt data released within 6 months after the year ends.	-	-	
Money Supply and Credit Growth	Available	Monthly data release within 2-4 weeks after the month ends	-	-	-
Financial Sector Soundness Indicators	Available	Quarterly data release within 3 months after the quarter ends.	-	-	Earlier release would be welcomed.
SOE Statistics	Some key data available	Monthly data release within 2 months after the month ends	-	-	More detailed data would be welcomed.

Annexes: Selected Issues

1. China's Industrial Transfers: Exploring in Inland Regions vs. ASEAN Countries?[17]

1. China's manufacturing industries are undergoing reconfigurations in response to rising domestic production costs, which has been accelerated by the disruptions due to the pandemic and heighted geopolitical tensions. To manage this transition effectively, the Chinese government is actively promoting the orderly transfer of industries within the country. However, some industries have chosen to relocate to ASEAN countries as a strategic move to decrease their reliance on China. This decision comes in the wake of the heightening of the U.S.-China trade conflict and the significant impact of the COVID-19 pandemic on industrial and supply chains.

2. Rising wages have emerged as a significant factor influencing industrial transfers in China. Starting in 2006, Chinese inland regions attracted a growing share of manufacturing investment compared to the coastal regions. This shift is largely attributed to the wage gap, which has driven manufacturing firms to relocate from coastal to inland areas (Zhang & Zhang, 2023). Meanwhile, the increase in the minimum wage has had a notable impact on the growth of outward FDI from China between 2001 and 2012. Approximately one-third of this outward FDI growth can be explained by the rise in the minimum wage during that period (Fan, 2018).

3. Chinese inland cities offer several advantages over their ASEAN counterparts when it comes to attracting industrial transfers. Firstly, inland cities feature a vast and thriving consumer market, driven by their substantial economic size and a rapidly expanding middle class. In fact, as of 2022, China's GDP is almost five times that of the entire ASEAN region. Within China, the inland regions contribute to nearly half of the country's GDP and retail sales, presenting attractive and profitable opportunities for businesses seeking to enter and grow in these markets[18]. Secondly, the inland cities possess well-developed infrastructure, including efficient railway, road, or waterway transportation facilities, as well as reliable telecommunications and stable power and utility supply. This infrastructure readiness facilitates smooth operations and logistical efficiency for businesses setting up or relocating in these areas. Thirdly, China's inland cities are renowned for having complete industrial supply chains, well-developed industrial ecosystems, and comprehensive industrial support networks. This advantageous setup provides businesses with the necessary resources and services to thrive and succeed. Moreover, China's workforce exhibits a high level of technical proficiency and industry-specific knowledge, making them invaluable for producing more sophisticated goods. Notably, the average number of school years completed by the workforce in China is higher than that in Vietnam, Indonesia, Thailand, and the Philippines, enhancing the skilled labor pool available to industries in the region.[19]

4. The Chinese government has implemented supportive policies that facilitate industrial transfers within the country. With the aim of promoting balanced regional development, accelerating industrialization and urbanization in the central and western regions, and driving economic upgrading in the eastern region, the State Council issued guidelines as early as 2010 to encourage industrial transfer to the central and western regions.

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[17] Prepared by Hongyan Zhao.

[18] Inland regions here encompass provinces not situated in the coastal area. Coastal provincial-level administrative regions include Liaoning, Tianjin, Hebei, Shandong, Shanghai, Jiangsu, Zhejiang, Fujian, Guangdong, Guangxi, and Hainan. The remaining provincial level administrative regions are considered inland regions. In 2022, the GDP and retail sales shares of inland regions, as a proportion of the entire country, stand at 47 and 49 percent, respectively.

[19] According to data from UNESCO and China's Seventh National Population Census, the average of school years for Vietnam, Thailand, and Philippines in 2019 are 8.37, 870, and 8.97, respectively, that for Indonesia is 8.56 in 2020, while that for China is 9.91 in 2020.

In response to these guidelines, inland regions introduced a series of policies designed to attract industrial transfers. These policies include subsidies, tax incentives, streamlined approval processes, labor supply assurance, and various cost reduction measures. In 2022, as global supply chains underwent accelerated reconfigurations and China's industrial chains faced security challenges such as those in the semiconductor industry, the government issued more guidelines to promote the orderly transfer of manufacturing industries. The key objective of these guidelines is to enhance the resilience and competitiveness of China's industries.

5. Inland provinces in China have received significant investment inflows in recent years. As a case in point, Hunan experienced a substantial average growth of 19 percent in investments from other provinces between 2015 and 2022. The figure exceeds the GDP growth rates of Hunan during the same period, which stood at 7.9 percent.[20] The remarkable increase in investment inflows attests to the growing attractiveness and potential of these inland regions as destinations for business ventures and industrial development. It also indicates the success of the policies and incentives implemented to encourage industrial transfers and balanced regional growth within China.

6. The ASEAN region has emerged as a favored destination for China's offshore industry transfers, particularly given escalating geopolitical tensions. With the U.S. putting restrictions on the proportion of Chinese-manufactured inputs allowed in their imports of final goods, Chinese firms are finding it advantageous to explore other options to maintain access to the U.S. market. As a result, moving production outside China to ASEAN countries has emerged as a solution. The disruptions caused by the pandemic to global supply chains have also added to the urgency of reducing reliance on China. In response, MNCs are actively seeking alternatives for production ("China Plus One" strategy), thereby further fueling the trend of offshore industry transfer to ASEAN. This strategic shift not only ensures access to key markets but also enhances the resilience of supply chains and mitigates potential risks associated with overdependence on a single manufacturing hub.

7. ASEAN has several relative advantages that contribute to its appeal as a destination for offshore industries. Firstly, the region has actively engaged in numerous FTAs with various nations and regional blocs, leading to lower tariffs and reduced trade barriers. Among ASEAN+3 economies, Chinese exports encountered the second-highest tariffs, with only Cambodia surpassing them in 2020. Among ASEAN economies, Thailand and Vietnam experienced a substantial reduction in export tariffs from 2015 to 2020 (Figure A1). Secondly, ASEAN countries benefit from convenient sea transportation through their numerous ports, which serve as crucial hubs for international trade. This strategic geographical advantage enhances their connectivity and accessibility to global markets. Moreover, ASEAN countries offer the distinct benefit of low labor costs. Wages in these countries are significantly lower than in China, making them highly attractive destinations for labor-intensive industries. At the same time, the expansion of the middle class in ASEAN countries and their growing purchasing power have also encouraged MNCs to site production in these countries to be close to consumer demand.

8. As a result, outward direct investment (ODI) from China into major ASEAN countries has shown a steady rise since 2010, with a notable focus on Vietnam and Indonesia (Figure A1.2). Moreover, China's ODI is no longer limited to natural resource sectors or traditional manufacturing sectors such as apparel, furniture, plastic materials, fabric, or food. Instead, it has diversified into more advanced industries, including electronics, batteries, motor

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[20]The data is from Hunan Province National Economic and Social Development Statistical Bulletin, (2016 and 2023).

vehicle parts, and semiconductors, and services such as e-commerce and hospitality. This expansion into high-tech and service sectors demonstrates China's growing interest in leveraging ASEAN's potential and resources to enhance its presence and competitiveness in the global market.

9. Decisions to relocate industries to either China's inland regions or ASEAN countries depend on specific characteristics and considerations, and whether the moves can lead to win-win outcomes rather than being zero-sum games. When companies make decisions regarding industrial transfer, they carefully assess the costs and benefits before making such choices. Different industries exhibit varying preferences based on their unique requirements and market strategies. Industries that primarily target the domestic market, require substantial industrial support (e.g., fine chemicals and machinery), and rely on a highly skilled labor force are more likely to relocate to China's inland cities. This choice allows them to leverage the vast consumer market and well-developed infrastructure within the country. On the other hand, industries that predominantly target overseas markets, are sensitive to tariff levels, operate on relatively thin profit margins, and have concerns about labor costs (e.g., apparel) may lean towards relocating to ASEAN countries. This option enables them to take advantage of free trade agreements, lower tariffs, and the availability of cost-effective labor in the region. In essence, the decision to transfer industries depends on the unique characteristics and market dynamics of each sector, and companies carefully evaluate these factors to arrive at the most suitable destination for their operations.

Figure A1.1 Effectively Applied Weighted Average Tariff
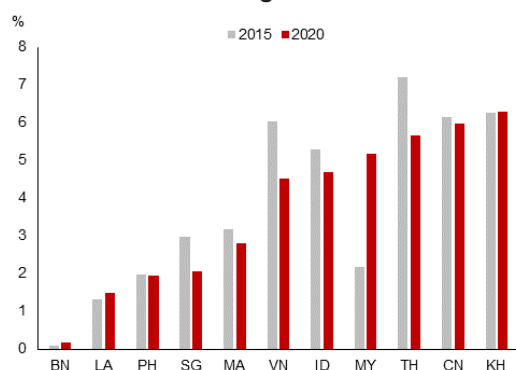
Source: WITS, AMRO staff calculations.

Figure A1.2 China's Outward Investment in ASEAN[21]
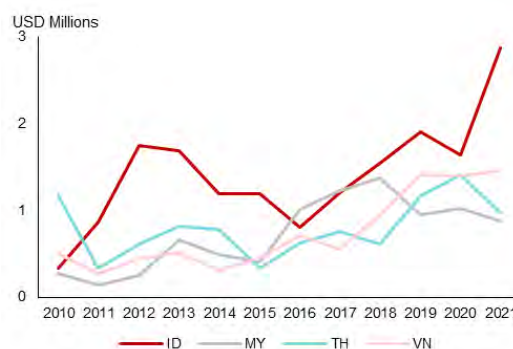
Source: CEIC, AMRO staff calculations.

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[21]Investment in Indonesia is driven by the mining of nickel as an input into batteries and EVs.

2. China's Evolving Trade Pattern Post the US-China Trade Conflict[22]

1. The U.S.-China trade conflict, which came to a head in 2018, has started to affect China's trading pattern. The imposition of U.S. tariffs on Chinese exports has been particularly noteworthy, with rates rising from 3.1 percent in early 2018 to 19.3 percent by 2020. These tariffs persist at this level, encompassing approximately 66.4 percent of China's total exports (Bown, 2023). In response, China has also imposed retaliatory tariff hikes on U.S. exports, leading to an increase in average tariffs from 8 percent at the beginning of 2018 to over 21 percent by 2020. These tariffs have remained constant, covering about 58.3 percent of U.S. exports. The ongoing trade conflict between China and US has raised widespread concern regarding its overall impact on bilateral trade, tariff pass-through, and output (e.g., Fajgelbaum et al., 2020). Furthermore, the trade conflict has prompted adjustments in China's trading partner structure. As a response to the heightened tariffs imposed by the U.S., firms are shifting their productions to countries not affected by the tariffs and realigning their trade partners. This behavior reflects a strategic shift in an attempt to mitigate the effects of the tariffs imposed by the U.S. and find alternative trading avenues. This SI aims to analyze the overall impact of the US-China trade conflict on China's trading pattern and its implications.

2. The significance of the U.S. market in China's exports has waned over time. Historically, the U.S. was a crucial destination for Chinese goods; however, this changed significantly due to the U.S.-China trade conflict in 2019. The trade conflict led to a substantial decline in China's exports to the U.S., both in terms of export value and export share. In 2019, China's exports to the US fell by 12.9 percent, causing its share in China's total exports to decrease from 19.3 percent in 2018 to 16.7 percent in 2019 (Figure A2.1). While the pandemic initially triggered a temporary reversal in these declines, this was a result of strong U.S. demand and not a sustainable trend. After the pandemic, the U.S.' importance as a destination for China's exports continued to diminish. By 2022, the U.S. accounted for only 16.2 percent of China's exports. Moreover, the U.S.' contribution to China's total export growth in 2022 was meagre, adding a mere 0.1 percentage point to the overall growth rate of 7 percent, a stark contrast to the period preceding 2018 (Figure A2.2).

Figure A2.1 Shares in China's Exports
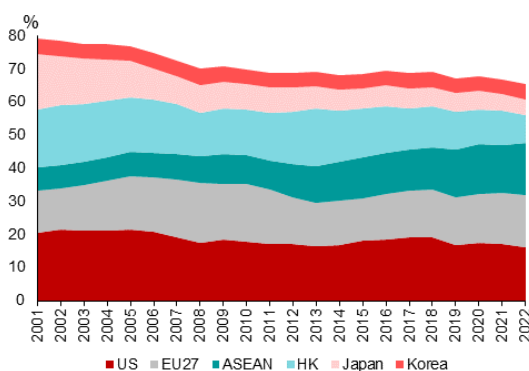
Source: CEIC, AMRO staff calculations.

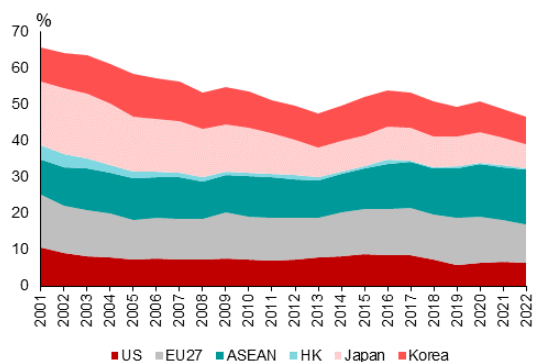**Figure A2.2 Contribution to China's Export Growth**
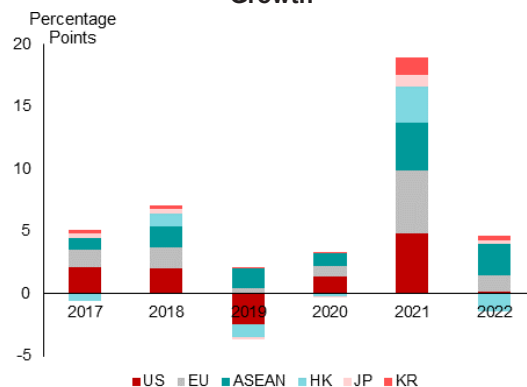
Source: CEIC, AMRO staff calculations.

3. China's imports from the U.S. have decreased as well. The implementation of tariff hikes in 2019 prompted China to reduce its imports from the U.S. by 21.3 percent. This reduction led to a decrease in the share of imports from the U.S. in China's total imports, which fell from 7.3 percent in 2018 to 5.9 percent in 2019 (Figure A2.3). Similar to China's exports to the U.S.,

[22] Prepared by Hongyan Zhao.

the impact of the pandemic temporarily reversed this decline in 2020 and 2021. However, China's imports from the U.S. resumed their downward trend in 2022. As a result, China's total import growth was hindered, with imports from the U.S. dragging down the overall import growth rate by 0.8 percentage points (Figure A2.4).

Figure A2.3 Shares in China's Imports

Source: CEIC, AMRO staff calculations.

Figure A2.4 Contribution to China's Import Growth
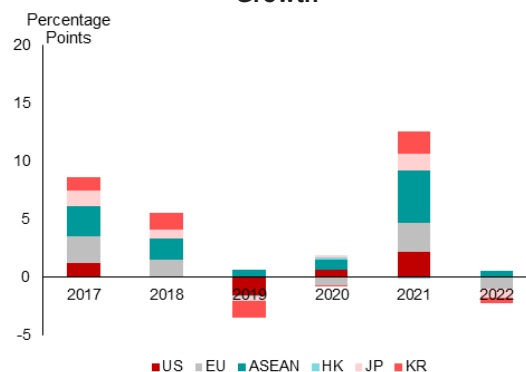
Source: CEIC, AMRO staff calculations.

4. ASEAN has emerged as a critical trade partner for China. During the period when China's exports to the U.S. declined, China's exports to ASEAN increased steadily, partly offsetting the loss in China's total exports. At the same time, ASEAN economies' exports to the U.S. increased, effectively filling the gap created by the decrease in China's direct exports to the U.S. (Figure A2.5). Moreover, China has strengthened its trade ties with ASEAN by increasing its imports from the region, making ASEAN the largest import source for China. This growth in imports further solidifies the economic relationship between China and ASEAN countries, highlighting the growing importance of the ASEAN market for China's trade.

5. On the other hand, China's trade with other regional economies has displayed diverse patterns. For example, China's exports to Hong Kong declined along with those to the U.S., due to Hong Kong's role as a re-export hub for goods destined for the U.S. However, China's exports to the EU have witnessed an increase, indicating a shift towards a final durable goods market that shares similarities with the U.S. in terms of income level or consumer preferences. Meanwhile, China's imports from Korea have exhibited similarities to its trade with the U.S. There was a decline in 2019, followed by temporary growth in 2020 and 2021, and another drop in 2022. At the same time, Korea has increased its exports to the U.S. (Figure A2.5). This pattern may be influenced by the close supply chain linkages between the US and Korea. Overall, China's trade interactions with different regional partners are shaped by distinct factors and economic dynamics, resulting in varying trade patterns that reflect the complex interplay of global supply chains and market preferences.

Figure A2.5 Trade Across Economies 2022 vs 2017 (Change in shares within an economy)

%	China	US	EU	ASEAN	HK	JP	KR
China		-2.9	1.7	3.4	-4.0	-1.2	0.0
US	-1.0		2.2	0.4	-1.3	-0.5	0.3
EU	-0.3	0.7	3.3	-0.3	-0.2	-0.1	0.0
ASEAN	0.5	4.1	-0.9	-0.5	-0.9	-1.3	-0.1
HK	3.3	-1.5	-0.4	-0.1		-0.9	0.3
JP	0.3	-0.7	0.4	0.7	-0.6		-0.4
KR	-2.3	3.9	1.9	1.6	-2.8	-0.2	

Exporting (row label) / Destination (column label)

Source: IMF Direction of Trade via Haver, AMRO staff calculations.

6. We also examine whether political closeness matters in shaping China's trade partnerships in an increasingly fragmented world. Following the U.S.-China trade conflict, China has displayed a tendency to reduce trade with the U.S., EU, or Korea, while strengthening trade ties with ASEAN countries. To assess the role of political factors, we employ the concept of "bilateral political distance," which measures the divergence in political orientation between countries based on their voting patterns in the United Nations General Assembly (Bailey et al. 2017).

7. Our empirical analysis indicates a negative relationship between China's export or import growth and the political distance of the destination after 2018. Before the trade conflict, there was no significant association between China's trade patterns and political distance until 2018 (Figures A2.6 and A2.7). However, after 2018, with the emergence of the trade conflict, a more apparent relationship between trade growth and political distance was observed (Figures A2.8 and A2.9). Specifically, China tended to prioritize trade with politically aligned nations to mitigate the potential disruptions to its exports and imports (Sheng & Zhao, 2023). If the political distance between China and a trading partner increases by one standard deviation (0.65 [23]), Chinese exports to that destination are expected to decrease by approximately 2.8 percent. Similarly, Chinese imports from that destination will decrease by approximately 7.7 percent. Before 2018, the effect of political distance on exports and imports between China and its trading partners was found to be insignificant. This suggests that the U.S.-China trade conflict in 2018 and the resulting economic fragmentation brought about a significant change in the trade pattern.

8. The observed relationship between China's trade growth and political distance after the 2018 trade conflict has significant policy implications. Policymakers must consider the growing impact of political factors on trade dynamics. Diversifying trade partnerships, fostering cooperation, and addressing geopolitical tensions are essential. Emphasizing an open global trading system promotes economic interdependence, innovation, and mutual prosperity. Transparency and a rules-based framework can build trust and inclusivity among nations. Constructive dialogue in multilateral forums helps resolve trade issues without resorting to protectionism or escalating tensions.

Figure A2.6 China's Export Growth and Political Distance to China (2012-2017)
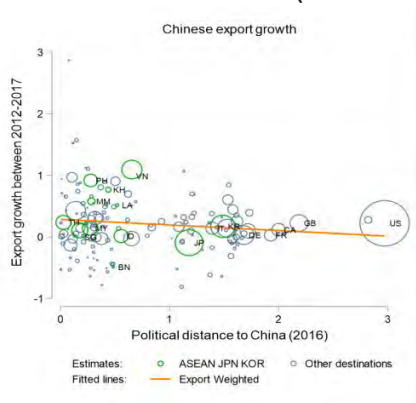
Note: The size of the circle represents the total amount of Chinese exports to destinations.
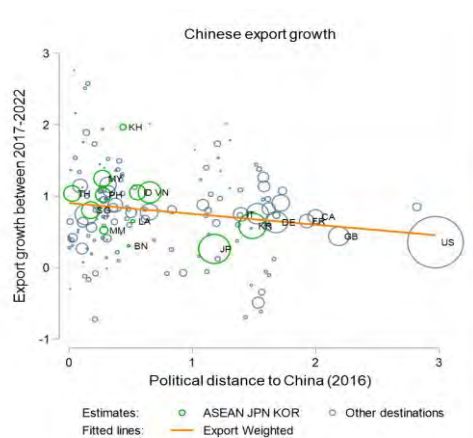Source: UNComtrade, Bailey, et al. (2017),and AMRO staff estimations

Figure A2.7 China's Import Growth and Political Distance to China (2012-2017)
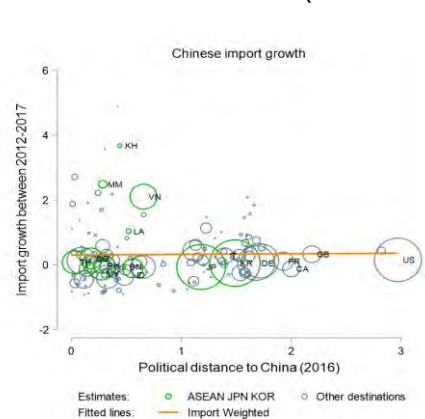
Note: The size of the circle represents the total amount of Chinese exports to destinations.
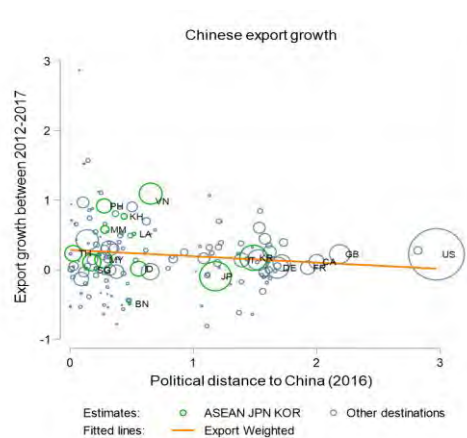Source: UNComtrade, Bailey, et al. (2017),and AMRO staff estimations

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[23]China's political distance to all ASEAN countries is within 1, to Japan and Korea is between 1 and 2, while that to the U.S. is close to 3. The size of 0.65 is almost the same as China's political distance to Indonesia and Vietnam.

Figure A2.8 China's Export Growth and Political Distance to China (2017-2022)

Note: The size of the circle represents the total amount of Chinese exports to destinations.
Source: UNComtrade, Bailey, et al. (2017),AMRO staff estimations.

Figure A2.9 China's Import Growth and Political Distance to China (2017-2022)

Note: The size of the circle represents the total amount of Chinese exports to destinations.
Source: UNComtrade, Bailey, et al. (2017), AMRO staff estimations.

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3. Property Market Developments in China: Key Drivers and Future Directions[24]

1. China's property sector plays an important role in the economy. In 2022, the added value of China's property sector accounts for 6.1 percent of GDP, the added value of construction industry accounts for 6.9 percent of GDP, and the two together account for 13 percent. Furthermore, an even more significant 40 percent of banking sector loans were allocated to developers or mortgage borrowers (**Sheng 2023**). Should the property sector experience a downturn, it could affect the economy and the banking system. Moreover, there could be concerns about potential spillover effects to the banking sector through developer share ownership in banks, such as China Evergrande Group's investments in financial institutions, including Huishang Bank, Sinolink Securities, and Shengjing Bank, among others. Furthermore, land sales, which constitute almost half of the fiscal revenue for many local and regional governments, have faced significant constraints as developers scaled back on land acquisition recently. As a result, safeguarding the property market has become imperative due to its extensive linkages with the banking system and the broader economy.

2. Given the critical importance of maintaining stability in the property sector, weaker Chinese real estate developers have encountered liquidity challenges. Using DSR to assess the share of developer loans at risk suggests there is a growing amount of debt-at-risk among property-related companies in recent years (Figure A3.1). The share of corporate debt with a DSR below 1, indicating an inability to cover debt obligations without external assistance, has increased from about 36 percent in 2018 to 47 percent in 2022. Furthermore, there have been reports of some developers missing interest and principal payments on offshore bonds (**Asia Financial 2022**), while others have sought extensions for debt repayments (**Niu and Wei 2022**).

3. Developer cashflow problems had significant repercussions on the rest of the property market, as indicated by delayed unit deliveries and a dampening of overall market sentiment. This downturn was reflected in various indicators, such as the completion rate of sold units (Figure A3.2), investment in real estate development, and residential building purchases (Figure A3.3), as well as property prices (Figure A3.4), all of which experienced a decline compared to previous years. However, it is worth noting that there have been modest signs of recovery since early 2023.

Figure A3.1. Share of Debt at Risk for Property-related Companies
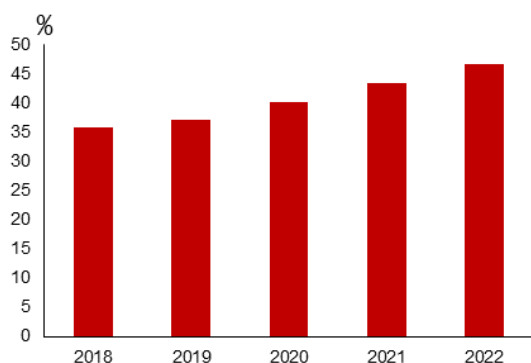
Note: Debt at risk estimated based on share of developer debts that have DSR less than one.
Source: Orbis of Moody's Analytics, AMRO staff calculations.

**Figure A3.2. Buildings Sold that were Completed**
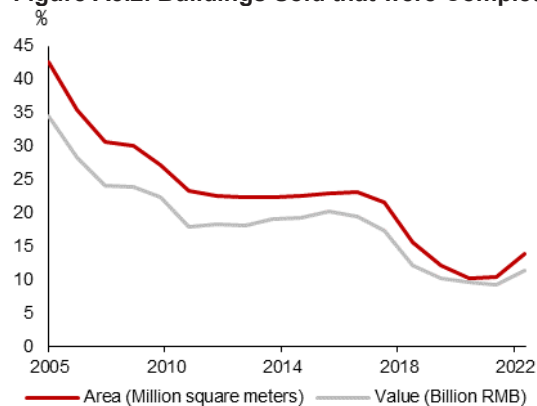
Note: Figures were computed based on the buildings sold and completed in December of each year.
Source: China NBS via HAVER Analytics, AMRO staff calculations.

4. Since September 2022, the government has implemented several policies aimed at stabilizing the property market. To ensure that developers have adequate liquidity,

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[24] Prepared by Siang Leng Wong.

outstanding developer loans were extended (**PBC 2022**), and relaxations were made to escrow accounts (**CBIRC 2022a** and **CBIRC 2022b**). Additionally, measures to support housing demand include the reduction of loan interest rates for first-time homebuyers through the housing provident fund (**PBC 2022**). Furthermore, a dynamic mortgage rate adjustment mechanism was introduced to lower the minimum mortgage rates for cities experiencing a consecutive three-month decline in monthly and yearly housing prices (**PBC 2023**). Collectively, these policy measures are aimed at supporting the property market and fostering a positive environment for prospective homebuyers and developers alike.

Figure A3.3. Property Investment and Transactions
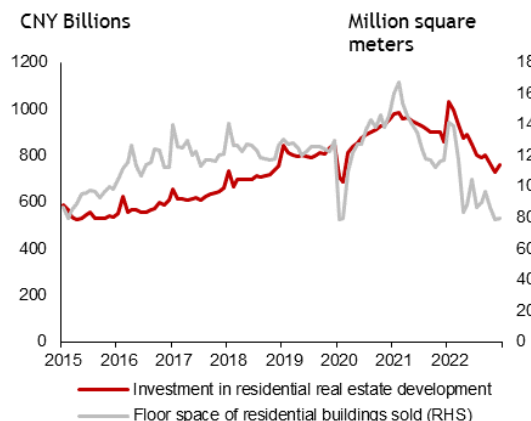
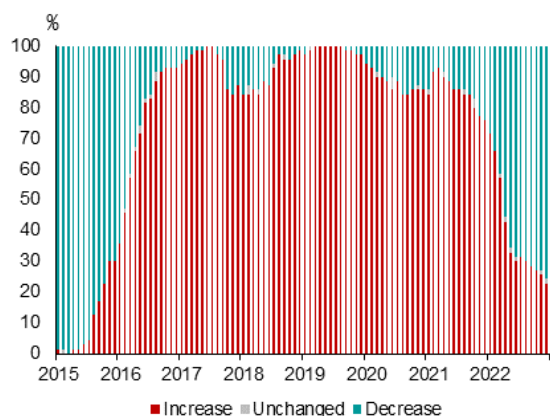Source: China NBS via HAVER Analytics, AMRO staff calculations.

Figure A3.4. Year-on-year Growth in Property Prices by City
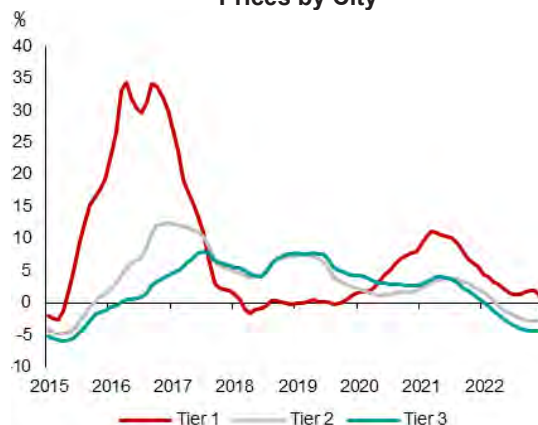
Source: China NBS via HAVER Analytics, AMRO staff calculations.

5. The property market performance exhibits variations across different segments. While house prices in Tier 2 and 3 cities have experienced year-on-year declines since early 2022, prices have continued to rise in certain Tier 1 cities (Figure A3.4, A3. 5, and A3.6).

Figure A3.5. Share of Cities for New Residential Properties by Price Change from a Year Ago

Source: China NBS via HAVER Analytics, AMRO staff calculations.

Figure A3.6. Share of Cities for Existing Residential Properties by Price Change from a Year Ago
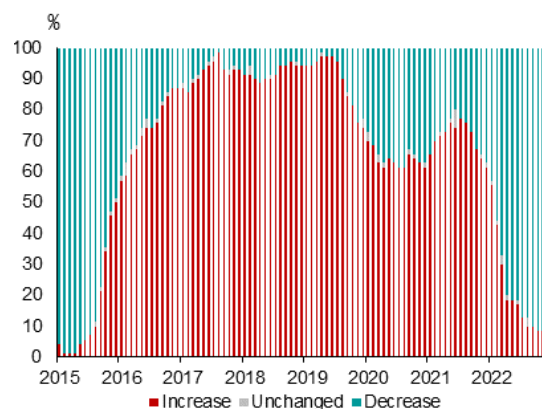
Source: China NBS via HAVER Analytics, AMRO staff calculations.

6. An analysis of China's residential property market dynamics was conducted using panel regression to examine the determinants of property price growth in six Chinese cities. The study utilized quarterly data from Q4 2009 to Q4 2021, and the results revealed that population growth, unemployment rate, mortgage rate, and government macroprudential measures play significant roles in driving housing prices (Table A3.1).

- **Population growth**: The size of the population is a key demand driver, particularly in higher density areas where supply is relatively inelastic (**Committee on the Global Financial System 2020**). The regression results confirmed the strong correlation between property price growth and population growth. The influx of rural-urban migration, leading to increased population in Tier 1 cities (Figures A3.7 and A3.8), likely contributed to the higher price growth observed in those cities.

- **Unemployment rate**: There is a negative correlation between the unemployment rate and changes in house prices (**Dvorkin and Shell 2016**). This relationship has been evident during past crises, as the unemployment rate is linked to bankruptcy and foreclosure (**Real Estate Asia 2021**). The results suggest that a lackluster economic environment with higher unemployment rates, partly attributable to the pandemic, could have exerted downward pressure on property prices.

- **Mortgage rate**: Central bankers in Southeast Asia raised their policy rates in the second half of 2022 to address inflation, resulting in higher borrowing costs for home ownership (**Lee 2023**). Higher mortgage rates reduce affordability, increasing the risk of a housing price correction in the Asia Pacific region (**IMF 2022**; **Wong 2023**). Though China's interest rates were kept stable, there was a chance that cost of borrowing could spike, which could weigh on property demand and borrowers' debt servicing abilities.

- **Macroprudential policies**: Macroprudential policies have been widely implemented to curb overheating in the property market. Previous studies have shown that such policies affect credit, transactions, and/or prices in the property market (**Kuttner and Shim 2013**). However, this analysis only considers banking-related policies, as fiscal-related measures are not included in China.

Table A3.1. Regression Results ─ Drivers of Property Prices

| Variable	Coefficient
Constant	0.46***
Growth in population (-2)	1.25***
Unemployment rate	-0.12*
Mortgage rate	-0.06***
Tightening of macroprudential policies (-1)	-0.01**
R-squared	0.48
Standard error of regression	0.09

7. The analysis suggests potential vulnerabilities in the property market. Such risks in the property market warrant careful consideration due to their potential ramifications, both within the market itself and in relation to the broader banking sector.

- Firstly, the trend of **rural-urban migration** is likely to continue due to China's relatively high share of rural population, which stood at approximately 35 percent in 2022 (Figure A3.9). The urbanization rate has room to increase to that of other major economies. Consequently, rural areas, particularly Tier 3 or 4 cities, may experience a decline in population, leading to reduced housing demand and potential price declines.

- Secondly, a **price-to-rent analysis** indicates that property prices increased at a faster rate than rents between 2018 and 2021, with six out of nine cities showing higher price-

to-rent ratios in 2021 compared to 2018 (Figure A2.10). Moreover, early signs of recovery in construction, investment, and prices suggest the market could turn around.

- Thirdly, while **support measures** have been introduced to stimulate the property market, they could have **unintended consequences**. Borrowers obtaining loans at lower interest rates may eventually face higher rates, affecting their debt-servicing ability. Some property developers may use escrow account funds for debt repayment instead of solely focusing on project construction. If left unchecked, there could be more incomplete construction projects and depleted escrow accounts. Such risks need to be closely monitored to ensure the stability and health of the property market.

Figure A3.7. Population in Tier 1 Cities
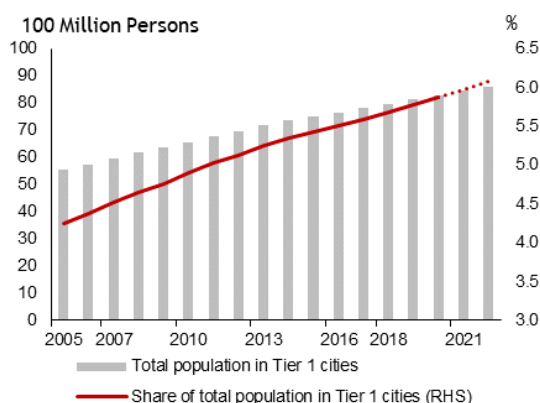
Source: China NBS, AMRO estimation.

**Figure A3.8. Share of Rural-Urban Population over Time**
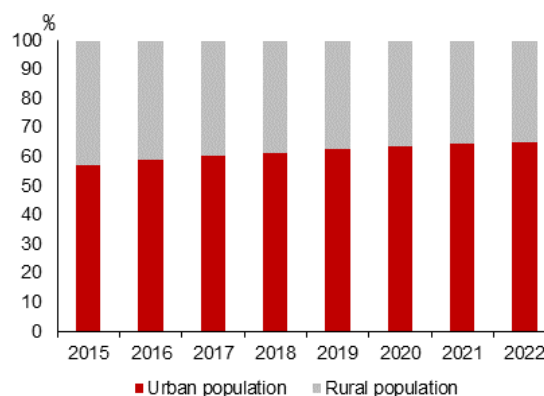
Source: China NBS, AMRO estimation.

8. Therefore, it is crucial to establish a structured framework to address these issues and ensure long-term sustainability. This can be achieved through measures focused on price stability and financial prudence.

- Firstly, **fiscal policies** could be implemented to mitigate overheating risks, particularly in Tier 1 cities facing an influx of rural migrants. These policies, such as targeted taxes, aim to discourage speculative purchases and emphasize the principle that housing is primarily for living, not for speculation (**PBC 2022**). Additionally, these taxes can generate continuous fiscal revenue for the government, derived from property sales to developers.

- Secondly, to protect consumer interests and boost market confidence, the **disbursement of funds from the escrow account** should be closely tied to the construction progress. This measure ensures that funds are released in line with actual progress, reducing the potential for mismanagement or delays.

- Thirdly, regular **stress tests**, including tests conducted at loan inception, are essential in assessing the ability of mortgage borrowers to service their loans under higher interest rate scenarios. By evaluating borrowers' financial resilience, banks can identify potential risks and make informed lending decisions, ultimately contributing to a more stable financial system.

- Lastly, it is important to set robust rules for ownership stakes and management roles in banks. This ensures transparency and accountability, reducing the possibility of conflicts of interest and enhancing the overall integrity of the banking sector.

Figure A3.9. Share of Rural Population by Economy in 2021
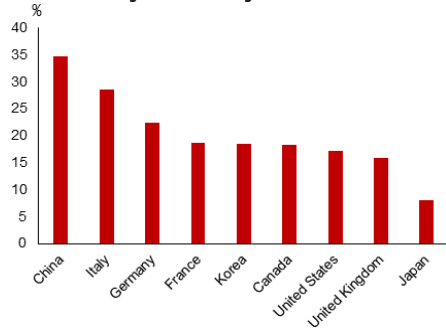
Source: China National Bureau of Statistics; and World Development Indicators.

Figure A3.10. Price-to-Rent Ratio
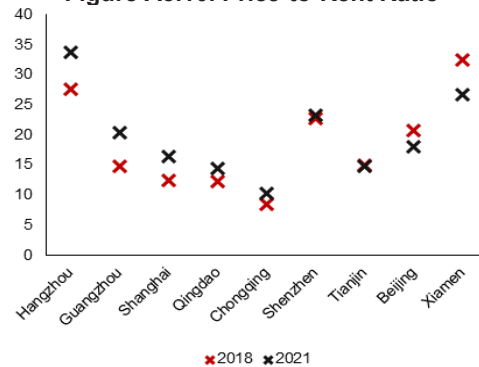
Note: Estimates are based on the average housing type in each province, where the housing price is divided by the annualized rent.
Source: ECA International; and AMRO estimation.

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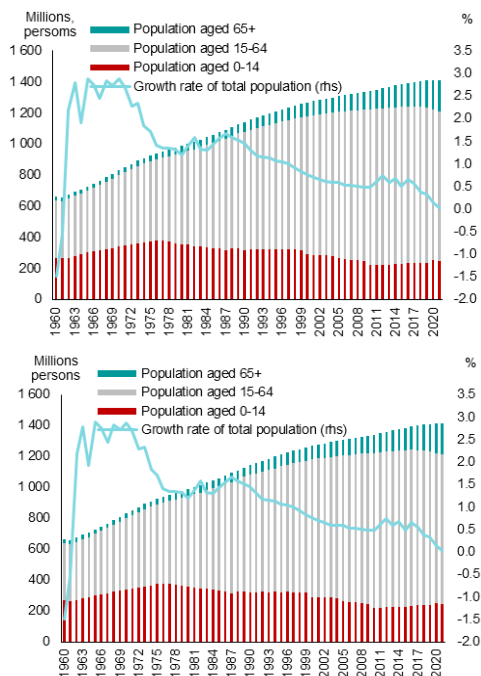https://www.bis.org/publ/cgfs64.htm.

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## 4. China's Demographic Headwinds and Long-term Growth[25]

1. China is undergoing a profound demographic reversal, characterized by an aging and shrinking population. The country's reform and opening-up initiatives over the past four decades, combined with favorable demographic dynamics, have been instrumental in driving rapid economic growth, lifting China to the status of global economic powerhouse. However, the demographic dividend that China has enjoyed for the past decades is now diminishing. Notably, the working age population (ages 15–64) reached its peak in 2013. China's total population also fell by 850,000 people in 2022 to 1.41 billion, marking its first drop since 1961 (Figure A4.1). This is primarily due to decreased fertility rates and increased life expectancy, leading to a notable increase in the proportion of an aging population. The proportion of working-age population has gradually decreased from its peak of 74.5 percent in 2010 to 68.2 percent in 2022. Concurrently, the elderly population aged 65 or above has increased from 8.9 percent to 14.9 percent of the total population. In this period, the old-age dependency ratio, which measures the number of elderly individuals relative to the working-age population, has risen from 11.9 percent to 21.8 percent (Figure A4.2).

Figure A4.1 China's Population and Growth Rate

Figure A4.2China's Dependency Ratio

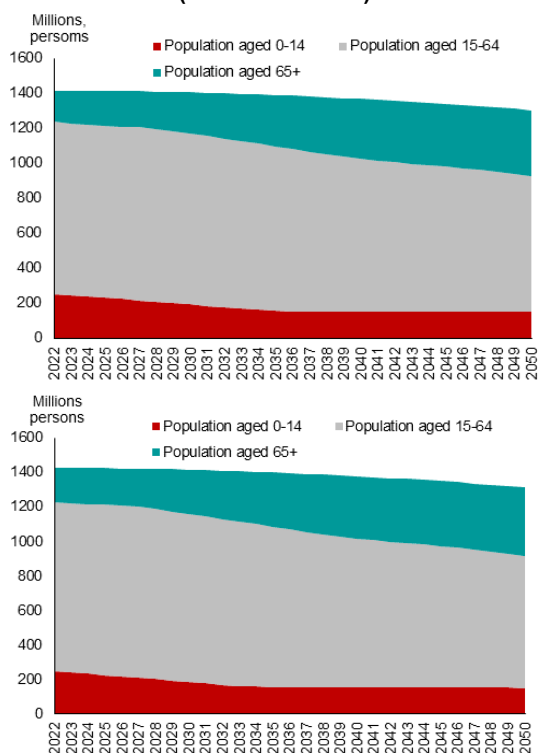Source: China NBS, United Nations Population Database
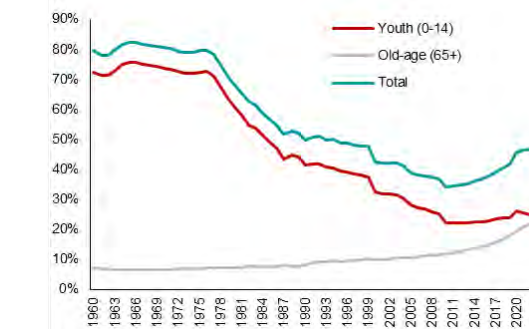
Source: China NBS, United Nations Population Database

2. The ongoing adverse demographic dynamics will persist as low fertility rate is hardly reversible. According to UN projections, the share of old-age population in China will double to 30.1 percent by 2050, significantly raising both the old-age dependency ratio and the total dependency ratio to 51 percent and 71 percent, respectively. Under this baseline projection, China's total population is expected to decrease by 7 percent to 1.31 billion by 2050, with more pronounced contractions in the youth and working-age populations (Figure A4.3).This trend suggests significant challenges in maintaining a productive and sustainable workforce. The UN's projection assumes a rise in China's fertility rate to 1.39 in 2050 and 1.44 in 2100. However, this projection may still prove to be overly optimistic considering the prevailing low birth rates observed in East Asian economies (Figure A4.4).

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[25] Prepared by Fan Zhai.

3. The shifting demographic forces in China will have significant implications for the country's growth prospect, impacting various aspects of its economy. One critical effect will be the reduction in the labor supply due to the fall in the working-age population. As the proportion of elderly individuals increases, overall workforce participation is expected to decline, as they tend to participate in the labor force at a lower rate. Population aging can also lead to a reduction in productivity, as the advantages of greater work experience might be offset by the depreciation of knowledge and skills, along with declining health among older workers. Empirical research has generally found a negative correlation between the age structure of population and aggregate productivity, although the degree may vary across different sector and types of jobs. In addition, population aging is often associated with higher government expenditure on health and social security to support the elderly population. This increased spending may require higher taxation or crowding out of potentially productive public spending, such as investments in education and research. Consequently, this can further hinder the country's long term growth potential.

Figure A4.3 UN Population Projection for China (medium variant)

Figure A4.4 Total Fertility Rate and per Capita Income in Selected East Asian Economies

Source: China NBS, United Nations Population Database.
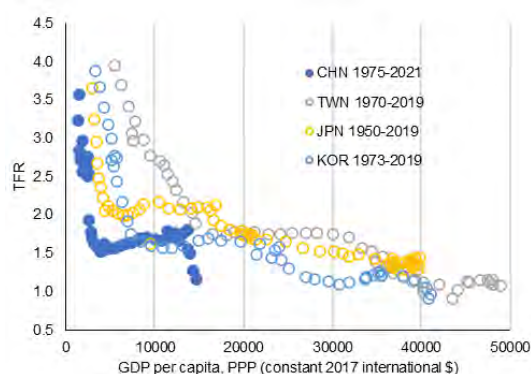
Source: China NBS, United Nations Population Database

4. Population aging is expected to depress investment. As the share of the labor force in the population decreases, aging raises the amount of capital per worker. In a typical emerging economy with high degree of complementarity between capital and labor, rising capital-labor ratio will lower the return to capital relative to return to labor, reducing the firms' incentive to invest. In China, with the total population shrinking at an accelerating pace and urbanization decelerating, the projected demographic changes may also dampen demand for investment in housing and infrastructure, the two key drivers of growth during the past two decades.

5. The links between population transition and savings are more complex. Falling fertility gradually reduces the number of dependent children and the related childcare spending, enabling people to save more for the future. Rising longevity and the motivation to finance old-

age consumption can also encourage household saving. Coupled with the rising share of prime savers, i.e., populations between 45 and 64 years of age, the early stage of population aging tends to lift private savings. In the late stage of aging in which the share of the 70-plus age group rises, private savings are expected to fall as the retired dissavers dominate savers.

6. In addition to demographic changes, China's economic growth in the coming decades may face additional challenges from rebalancing of the structure of demand and slower productivity growth. The ongoing domestic rebalancing may necessitate maintaining investment growth at a slower pace than GDP growth for an extended period, suggesting a diminishing contribution from capital accumulation to economic growth. Furthermore, China's productivity growth is also likely to decelerate due to the economy's shift from industry to services (Baumol, 1967), and the once high efficiency gains from market-oriented reform have largely been exhausted.

7. A standard growth accounting methodology is employed to project China's potential GDP growth in the coming three decades. The comprehensive analysis of labor, capital, and total factor productivity in this growth accounting exercise allows us to assess the key drivers of China's potential GDP growth and helps inform policy decisions to sustain and enhance the country's economic performance in the years ahead.

- **(Labor)** The projection of labor force relies on the UN's medium variant population scenario and assumes a constant labor force participation rate in the coming years. Additionally, human capital is assumed to grow steadily at its current pace of 0.95 percent annually over the next thirty years. As a result, China's human capital index is projected to reach the same level as Japan and Germany in 2019 by the year 2050.

- **(Capital)** As growth rebalancing continues, China's investment rate is expected to decline in the coming decades. Drawing insights from the historic experiences of Japan and Korea, it is assumed that China's share of gross fixed capital formation in GDP will decrease to 36 percent in 2030 and further to 30 percent in 2040, stabilizing thereafter.

- **(Total Factor Productivity)** Over the past decade, China's productivity gains have slowed significantly, partly attributed to its growth model that is heavily reliant on investment after the GFC (Brandt *et al*, 2020). The impact of the COVID-19 pandemic has further dampened the productivity growth during the years 2020-2022. Given the productivity headwinds outlined above, this projection assumes that China's TFP will grow by 1.7 percent per year from 2023 to 2050. The growth rate is 0.25 percentage points lower than the pre-pandemic level observed from 2010 to 2019.

8. The growth accounting results suggest that China's potential GDP growth could be around 3.2 percent in the coming three decades. The trend growth rate is expected to gradually decelerate from the current 4.9 percent to 3.7 percent by 2030, and further ease to around 2.4 percent in 2040s (Figure A4.5). Throughout the period, TFP progressively takes center stage as the primary driver of China's growth, contributing to 53 percent to overall economic expansion. The capital stock is projected to undergo a compound annual growth of 3.6 percent from 2023 to 2050, playing a significant role in contributing to 46 percent of the total GDP growth, although its contribution is expected to decrease over time. Despite a shrinking population, the anticipated increase in human capital is expected to fully offset the drag from a shrinking labor force.

Figure A4.5. Estimate and Projection of China Potential GDP Growth Rates
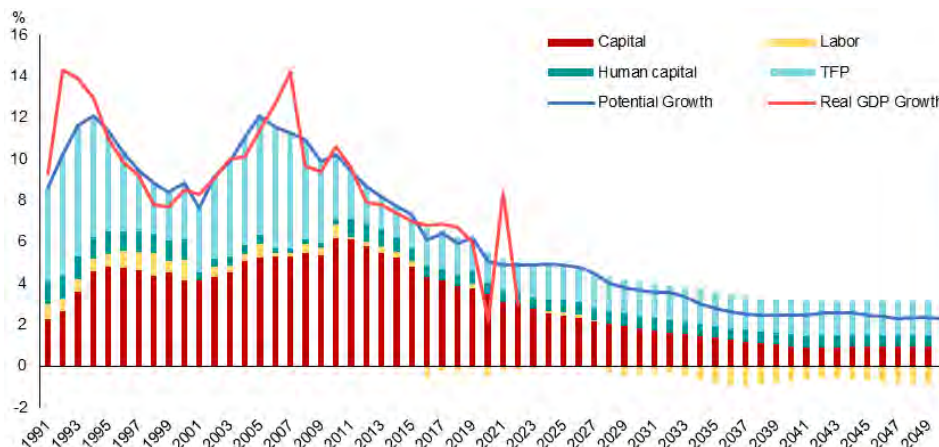
Source: Author's estimation

9. Our projection is broadly consistent with several recent estimates of China's growth potential. While earlier studies tended to be more optimistic about China's medium-term growth, most recent estimates of the potential growth rate of the 2021-30 period tend to cluster within a relatively narrow range of 4.0 percent to 5.0 percent (Table A4.1). Furthermore, the available estimates indicate a notable deceleration in growth during the 2030s. This suggests that China may face challenges in sustaining the higher growth rates witnessed in the past and may need to address potential factors contributing to the growth slowdown in the coming years.

	2021-30
This study	4.5
IMF – Oeking, Novta and Zhang (2023)	4.0 *(2023-2027)*
Zhang and Wang (2023)	5.0
ADB - Peschel and Liu (2022)	4.4
S&P - Kuijs (2022)	4.5
Lowy Institute - Rajah and Leng (2022)	4.2
Bank of Japan – Sasaki et al (2021)	5.2
People's Bank of China (2021)	5.1-5.7 (2021-25)

10. To bolster long-term growth, China needs a multi-pronged strategy to address the short- and long-term demographic challenges. Boosting fertility rates requires targeted policy efforts such as reducing the financial burden of raising children by addressing the high costs of childcare, education, and housing. Additionally, improving the economic prospects for the younger generation and investing in social infrastructure to support childbearing can positively impact fertility rates. Furthermore, facilitating labor mobility across the country is vital to mitigate the effects of workforce shrinkage. Policies should aim to remove barriers to internal migration, ensure that workers have access to opportunities in high-growth industries and regions. Considering China's relatively low statutory retirement ages, raising the retirement age and introducing more flexible retirement arrangements could incentivize older people to continue working, thereby boosting labor force participation among the older population. Leveraging automation technology presents a promising solution to offset the

adverse effects of a shrinking labor force. Reforming the public pension schemes is crucial for achieving greater equality and sustainability.

11. More importantly, to raise TFP and drive sustainable growth, China must continuously strengthen structural reforms. To achieve this, China should prioritize three critical areas, each playing a pivotal role in fostering sustainable development and global collaboration. Firstly, to remain at the forefront of innovation and productivity, China must continually invest in cutting-edge technologies and R&D initiatives. Secondly, a thriving market economy is essential to create a competitive environment that fosters entrepreneurship, innovation and efficiency. China should prioritize reforms that enhance market competition, reduce regulatory burdens, and create a level playing field for businesses of all sizes. Thirdly, collaboration on the global stage is indispensable in today's interconnected world. China should work closely with partner countries to strengthen the rules-based multilateral frameworks that facilitate trade, investment, and economic cooperation.

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