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PEOPLE'S REPUBLIC OF CHINA

2021 ARTICLE IV CONSULTATION—PRESS RELEASE; STAFF REPORT; AND STATEMENT BY THE EXECUTIVE DIRECTOR FOR THE PEOPLE'S REPUBLIC OF CHINA

January 2022

Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. In the context of the 2021 Article IV consultation with the People's Republic of China, the following documents have been released and are included in this package:

- A **Press Release** summarizing the views of the Executive Board as expressed during its January 14, 2022 consideration of the staff report that concluded the Article IV consultation with the People's Republic of China.
- The **Staff Report** prepared by a staff team of the IMF for the Executive Board's consideration on January 14, 2022, following discussions that ended on November 10, 2021, with the officials of the People's Republic of China on economic developments and policies. Based on information available at the time of these discussions, the staff report was completed on December 21, 2021.
- An **Informational Annex** prepared by the IMF staff.
- A **Statement by the Executive Director** for the People's Republic of China in response to the staff report and Executive Board discussion.

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PRESS RELEASE

PR22/17

IMF Executive Board Concludes 2021 Article IV Consultation with the People's Republic of China

FOR IMMEDIATE RELEASE

Washington, DC – January 28, 2022: The Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation[1] with the People's Republic of China.

China's recovery is well advanced, but it lacks balance and momentum has slowed. The slowdown is attributed to the rapid withdrawal of policy support, the lagging recovery of consumption amid recurrent COVID-19 outbreaks despite a successful vaccination campaign, and slowing real estate investment following policy efforts to reduce leverage in the property sector. GDP growth is projected at 7.9[2] percent in 2021 and 4.8 percent in 2022, with the deceleration in 2022 partly reflecting the fading of base effects, while subdued private consumption and real estate investment are adding headwinds. As a result, significant slack in the economy is expected to remain in 2022 with core CPI inflation projected to stay subdued and below the target of about 3 percent. The current account surplus is expected to narrow in 2022 to 1.5 percent of GDP from 1.8 percent in 2021 as demand for pandemic-related exports normalizes.

The significant tightening of macroeconomic policy support has added to the slowing growth momentum. Fiscal policy turned strongly contractionary at the beginning of 2021, reflecting policymakers' shifting focus away from supporting the recovery to deleveraging. The withdrawal largely represented decreases in public investment, although some targeted fiscal support continued, including select tax and fee cuts for small firms. The augmented general government primary deficit (including estimated off-budget spending) is projected to have decreased from 19.4 percent of GDP in 2020 to 15.4 percent in 2021. Monetary policy tightened moderately compared to 2020, as key money market rates increased relative to their pandemic lows, and overall credit growth slowed in 2021 despite the continuation of structural credit policies to steer bank credit to small firms.

Structural reforms—a requisite for China's transition to high-quality growth, growth that is balanced, inclusive and green—have progressed unevenly across core areas. While China's climate strategy has begun to take shape with the release of detailed action plans, there was little or no progress in key real-sector reforms, including in the area of state-owned enterprises and competitive neutrality between private and state-owned firms. A wave of regulatory policy measures targeting technology sectors, while intended to strengthen competition, consumer privacy, and data governance, has increased policy uncertainty that has been further heightened by the financial stress faced by large property developers following policy efforts aimed at deleveraging.

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[1] Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board.

[2] The data presented in the Press Release is based on information as of December 15.

Executive Board Assessment[3]

Executive Directors highlighted that China's recovery from the COVID-19 shock is well advanced thanks to the strong and swift policy actions taken by the authorities, including the high vaccination rate. Noting that the recovery has slowed and remains unbalanced and subject to risks, Directors called for continued appropriate policies that support the economy and its rebalancing and for progress in key structural reforms to transition to "high-quality"—balanced, inclusive, and green—growth.

Directors generally agreed that fiscal policy should support the recovery. In particular, they recommended that fiscal support further strengthen social protection, which would reduce households' precautionary savings, promote a rebalancing toward consumption and the services sector, and facilitate the transition to high-quality growth. Directors also supported an accommodative monetary policy given currently low core CPI inflation and the still-negative output gap. In this context, some Directors agreed that the current monetary policy stance should be maintained, while some others saw room for further easing. Directors encouraged further modernization of the monetary policy framework and greater exchange rate flexibility. Some Directors also noted the benefits of further improving the transparency of foreign exchange interventions and the central parity formation for the daily trading band.

Directors agreed that to sustain growth going forward, it will be essential to lift productivity by re-accelerating key real-sector reforms. They underscored the importance of further opening up domestic markets, enhancing corporate governance, and ensuring market neutrality between private firms and state-owned enterprises (SOEs). Most Directors also recommended that these reforms be accompanied by the removal of implicit guarantees for SOEs. However, a few Directors noted the authorities' view that SOEs are separate commercial entities and bear potential legal and financial consequences on their own. Directors agreed with the authorities on the importance of enhancing fair competition, consumer privacy, and data governance. In this context, they recommended that regulatory measures, including those targeting the technology sector, be implemented in a transparent and predictable manner to reduce policy uncertainty. Directors also emphasized the importance of addressing macroeconomic data gaps. They noted the progress made in developing a digital fiat currency, e-CNY.

Directors welcomed the authorities' efforts to reduce financial vulnerabilities. They emphasized the importance of guarding against risks in the property sector by strengthening monitoring, transparency on risk exposures, and policy coordination and communication. Directors also recommended adopting macroprudential and structural measures to reduce longer-term risks in property markets. They welcomed the authorities' ongoing efforts to address high corporate leverage and encouraged them to strengthen market-based insolvency and resolution frameworks.

Directors welcomed that China's climate strategy has begun to take shape and the milestones recently introduced. Noting the plans to reach peak carbon emissions by 2030, most Directors agreed that accelerating decarbonization efforts would save costs and reduce risks of delays in achieving carbon neutrality by 2060. A few Directors supported a more gradual decarbonization path, including to ensure a balance between climate objectives and energy

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[3] At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summings up can be found here: http://www.IMF.org/external/np/sec/misc/qualifiers.htm.

security. Directors recommended relying on a comprehensive approach that combines economic rebalancing toward a more consumption-based growth model coupled with the use of carbon pricing tools and leveraging green finance.

Directors welcomed China’s continued role in the global fight against the pandemic, including facilitating access to vaccines. They also welcomed China’s rechanneling of part of its SDRs to support the recovery of low-income and vulnerable countries. Directors underscored that China has a key role in the multilateral efforts to address global challenges, including timely and full implementation of the G20 Common Framework for debt treatment to put the debt of low-income countries on a sustainable footing; tackling climate change to help the world secure a broad-based, green recovery; and contributing to building a more open, stable, and rules-based international trade system.

China: Selected Economic Indicators [1/]

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
						Projections					
	(Annual percentage change, unless otherwise indicated)										
NATIONAL ACCOUNTS											
Real GDP (base=2015)	6.9	6.9	6.8	6.0	2.3	7.9	4.8	5.2	5.1	5.0	4.9
Total domestic demand	7.9	6.8	7.4	5.3	1.7	7.3	5.0	5.4	5.3	5.1	5.0
Consumption	8.4	7.2	7.9	6.3	-0.8	9.8	5.1	5.8	5.4	5.6	5.4
Investment	7.3	6.3	6.8	4.0	5.1	4.2	4.9	4.9	5.2	4.5	4.5
Fixed investment	7.4	6.2	7.3	5.3	4.6	3.7	5.1	5.0	5.4	4.7	4.7
Inventories (contribution)	0.0	0.1	-0.2	-0.5	0.3	0.2	0.0	0.0	0.0	0.0	0.0
Net exports (contribution)	-0.8	0.3	-0.5	0.7	0.6	0.8	-0.1	0.0	0.0	0.0	0.0
Total capital formation (percent of GDP)	42.7	43.2	44.0	43.1	43.1	42.5	42.5	42.3	42.1	41.8	41.4
Gross national saving (percent of GDP) 2/	44.4	44.7	44.1	43.8	45.0	44.1	44.0	43.7	43.4	42.8	42.2
LABOR MARKET											
Unemployment rate (annual average) 3/	5.0	5.0	4.9	5.2	5.2	4.9	...	...	...	...	...
Employment	-0.1	-0.2	-0.4	-0.4	-0.5	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
PRICES											
Consumer prices (average)	2.0	1.6	2.1	2.9	2.4	1.0	1.6	1.6	2.0	2.0	2.0
GDP Deflator	0.9	3.9	3.5	2.1	1.2	2.0	1.5	1.7	2.1	1.8	2.0
FINANCIAL											
7-day repo rate (percent)	2.7	5.4	3.1	3.1	2.6	...	...	...	...	...	...
10-year government bond rate (percent)	3.0	3.9	3.3	3.2	3.2	...	...	...	...	...	...
Real effective exchange rate (average)	-4.8	-2.9	1.4	-0.7	2.1	...	...	...	...	...	...
Nominal effective exchange rate (average)	-5.4	-2.5	1.5	-1.8	0.9	...	...	...	...	...	...
MACRO-FINANCIAL											
Total social financing	30.5	14.1	10.3	10.7	13.3	10.5	9.4	8.4	8.2	7.9	7.7
In percent of GDP	241.9	248.4	247.9	253.7	277.6	278.7	286.7	290.4	292.9	295.5	297.6
Total non-financial sector debt 4/	16.8	14.4	10.8	10.8	13.2	10.6	9.8	8.7	8.4	8.0	7.8
In percent of GDP	240.5	247.5	248.2	254.3	277.9	279.2	288.1	292.8	295.9	299.0	301.2
Domestic credit to the private sector	12.4	11.6	8.3	9.0	9.6	7.2	6.8	5.7	6.1	6.0	6.4
In percent of GDP	168.0	168.8	165.5	166.7	176.5	171.9	172.6	170.4	168.5	167.1	166.2
House price 5/	11.3	5.7	12.3	8.6	7.5	4.9	2.0	3.0	3.5	4.0	4.0
Household debt (percent of GDP)	44.7	48.9	52.3	55.8	61.6	62.7	63.2	64.2	64.7	65.6	66.4
Non-financial corporate domestic debt (percent of GDP)	123.3	119.9	113.2	110.9	114.9	109.3	109.4	106.1	103.8	101.5	99.9
GENERAL BUDGETARY GOVERNMENT (Percent of GDP)											
Net lending/borrowing 6/	-3.7	-3.8	-4.7	-6.3	-11.2	-7.9	-8.1	-7.6	-7.6	-7.6	-7.6
Revenue	28.2	27.8	28.3	27.8	25.3	25.8	25.5	25.5	25.5	25.5	25.5
Additional financing from land sales	2.0	2.5	2.8	2.9	3.3	3.0	2.8	2.6	2.4	2.3	2.1
Expenditure	33.9	34.2	35.8	37.0	39.8	36.6	36.4	35.7	35.6	35.4	35.2
Debt 7/	36.7	36.2	36.5	38.5	45.4	47.3	50.6	53.2	55.5	57.8	59.9
Structural balance	-3.4	-3.6	-4.5	-6.0	-9.9	-7.4	-7.6	-7.2	-7.3	-7.4	-7.5
BALANCE OF PAYMENTS (Percent of GDP)											
Current account balance	1.7	1.5	0.2	0.7	1.8	1.6	1.5	1.4	1.3	1.0	0.8
Trade balance	4.4	3.9	2.7	2.7	3.5	3.0	2.7	2.9	3.0	2.7	2.5
Services balance	-2.1	-2.1	-2.1	-1.8	-1.0	-0.7	-1.0	-1.6	-1.8	-1.9	-2.0
Net international investment position	17.7	16.8	15.2	16.0	14.5	13.8	14.0	14.3	14.5	14.5	14.2
Gross official reserves (billions of U.S. dollars)	3,098	3,236	3,168	3,223	3,357	3,448	3,696	3,976	4,280	4,560	4,846
MEMORANDUM ITEMS											
Nominal GDP (billions of RMB) 8/	74,598	82,898	91,577	99,071	102,592	112,919	120,122	128,548	137,914	147,419	157,694
Augmented debt (percent of GDP) 9/	66.6	73.0	76.6	81.6	95.7	101.6	109.9	116.7	121.8	126.2	129.3
Augmented net lending/borrowing (percent of GDP) 9/	-15.9	-13.5	-11.8	-12.6	-19.9	-16.5	-16.3	-15.7	-14.7	-14.0	-13.0

Sources: Bloomberg; CEIC: IMF International Financial Statistics database; and IMF staff estimates and projections.

1/ Historical data up to date as of December 15, 2021.

2/ IMF staff estimates for 2020.

3/ Surveyed unemployment rate.

4/ Includes government funds.

5/ Average selling prices estimated by IMF staff based on the data of national housing sale values and volumes published by the National Bureau of Statistics.

6/ Adjustments are made to the authorities' fiscal budgetary balances to reflect consolidated general budgetary government balance, including government-managed funds, state-administered SOE funds, adjustment to the stabilization fund, and social security fund.

7/ The estimation of debt levels assumes zero off-budget borrowing from 2015 to 2026.

8/ Production side nominal GDP.

9/ The augmented balance expands the perimeter of government to include government-managed funds and the activity of local government financing vehicles (LGFVs).

INTERNATIONAL MONETARY FUND

PEOPLE'S REPUBLIC OF CHINA

STAFF REPORT FOR THE 2021 ARTICLE IV CONSULTATION

December 20, 2021

KEY ISSUES

Context. China's recovery is well advanced—but it lacks balance and momentum has slowed, reflecting the rapid withdrawal of fiscal support, lagging consumption amid recurrent COVID-19 outbreaks despite a successful vaccination campaign, and slowing real estate investment following policy efforts to reduce leverage in the property sector. Regulatory measures targeting the technology sector, intended to enhance competition, consumer privacy, and data governance, have increased policy uncertainty. China's climate strategy has begun to take shape with the release of detailed action plans. Productivity growth is declining as decoupling pressures are increasing, while a stalling of key structural reforms and rebalancing are delaying the transition to "high-quality"—balanced, inclusive and green—growth.

Policies. A set of mutually reinforcing policies can help achieve high-quality growth.

- *Adjusting the policy mix to promote economic rebalancing.* Greater fiscal support focused on strengthening social protection would reduce households' precautionary savings and facilitate the transition to consumption-driven and inclusive growth. Monetary policy should be accommodative and interest rate-based, as core CPI inflation is projected to remain muted.
- *Adopting a multi-pronged approach to decarbonization.* Implementation of China's climate strategy will be most successful if based on an early start and a comprehensive approach that combines economic rebalancing towards a more consumption-based growth model coupled with the use of carbon pricing tools, including an improved national emissions trading scheme, market-based sectoral policies, and a leveraging of green finance to help achieve the climate goal.
- *Implementing complementary reforms to revitalize productivity growth.* A further opening up of domestic markets, reforming state-owned enterprises, and ensuring competitive neutrality, combined with a strengthening of regulations to ensure fair competition and consumer protection in a transparent and predictable manner, will spur innovation and improve business dynamism.
- *Addressing financial and property sector risks in a coordinated fashion to protect the recovery.* Ongoing efforts to address high corporate leverage and phase out implicit guarantees should be accompanied by improving market-based insolvency and resolution frameworks, which will strengthen banks and improve their capacity to support growth. Policymakers should guard against systemic contagion in property markets by improving risk monitoring and policy coordination and adopt structural measures to reduce longer-term risks.
- *Stepping up multilateral efforts to address global challenges.* China can help end the pandemic crisis and secure an inclusive and green recovery by continuing its COVID-19 vaccine distribution and debt relief efforts, greening the Belt and Road Initiative, and contributing to building a more open, stable, and rules-based international trade system.

Approved By
Krishna Srinivasan and Sanjaya Panth

Discussions took place by video conference October 28–November 10, 2021. The team comprised H. Berger (head), D. Cerdeiro, W. Chen, F. Han, J. Kang, A. Oeking (all APD), J. Ralyea (FAD), H. Hoyle (MCM), C. Ruane, F. Zhang (all RES), Y. Wu (SPR), and S. Barnett, P. Jeasakul, and X. Li (Resident Representatives). K. Srinivasan (APD) joined the concluding meetings. Z. Jin, Z. Zhang, and X. Bai (all OED) joined the official meetings. A. Balestieri, N. Dubost, I. Hussiada, R. Davico, J. Li, Q. Shan, and C. Zhou supported the mission.

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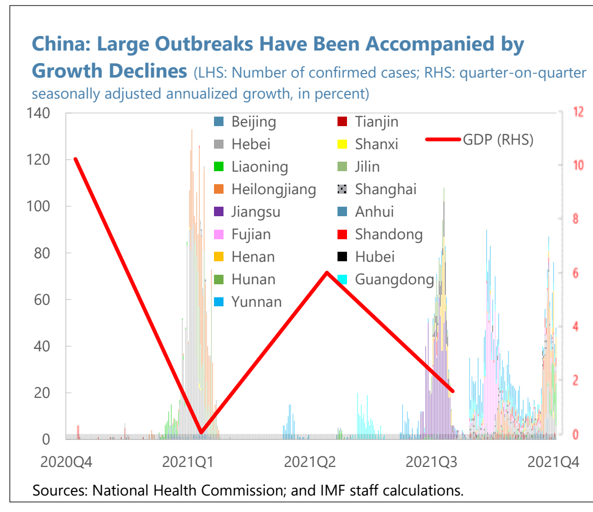
CONTEXT: COVID-19, REGULATION, AND CLIMATE

1. A vast majority of Chinese have been vaccinated but increasingly frequent outbreaks of more contagious variants have forced repeated lockdowns.



China: Large Outbreaks Have Been Accompanied by Growth Declines (LHS: Number of confirmed cases; RHS: quarter-on-quarter seasonally adjusted annualized growth, in percent)

Sources: National Health Commission; and IMF staff calculations.

- *The combination of more frequent outbreaks and a zero-COVID tolerance approach has forced China's economic activity into a stop-and-go pattern.* The COVID-19 playbook of rapid lockdowns and mass testing is facing challenges as new virus mutations become more transmissible. COVID-19 outbreaks of the Delta variant are occurring at closer intervals and infecting wider areas, with three large outbreaks taking place between July and November, and the latest recording over 1,300 cases across 21 out of 31 provinces, making it the most widespread Delta outbreak in China so far. Many regions introduced sweeping curbs, barring entry for people from high-risk areas and cutting off transportation from virus hot spots. The repeated outbreaks have made a complete resumption of pre-COVID-19 activity difficult, especially in the services sector.

- *Although China's vaccination program is well advanced, it remains unclear whether it will allow for lockdowns to be phased out.* China has surpassed the stated goal of inoculating 80 percent of the population by year-end, having administered an impressive 2.5 billion doses as of beginning-December—more than a third of the global total—with 82.5 percent of the total population having been fully vaccinated. However, even with booster shots and children's vaccination under way, the efficacy of vaccines against the Delta variant may be waning, and new variants such as Omicron may pose additional challenges, making achieving herd immunity difficult.

2. A wave of regulatory policy measures and limited progress in pursuing key structural reforms has raised concerns about state intervention using non-market-based measures. With the 2021 growth target of "above 6 percent" an easy reach, the authorities prioritized corporate and local-government deleveraging and regulatory tightening. The regulatory efforts were aimed, among other things, at enhancing competition, consumer protection and data governance in the technology and fintech related sectors. However, the multitude, timing, seemingly uncoordinated, and discretionary nature of these interventions, is viewed by market participants as undercutting the role of private enterprises and has led to heightened policy uncertainty and financial market volatility. The lack of a clear, coordinated, and well-communicated policy response to financial stress faced by large property developers, following efforts aimed at reducing leverage in the real estate sector, has added to the uncertainty. At the same time, there was little or no progress in core areas of market-enhancing reforms such as removing implicit guarantees for state-owned enterprises

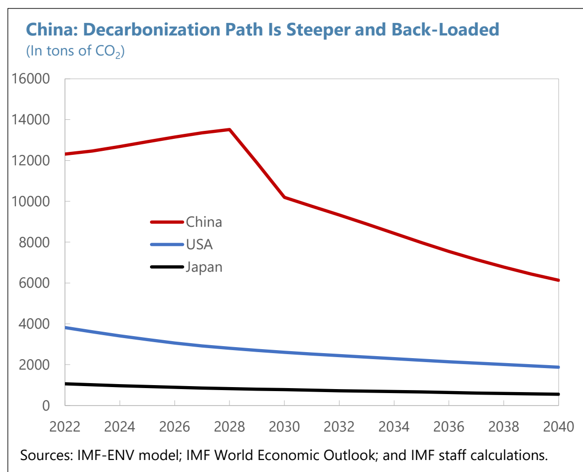
(SOEs). Indeed, there are signs that SOEs will continue to play a significant role in implementing government priorities going forward—for example, with regard to improving technological self-reliance and implementing the climate agenda.

3. The authorities are moving to implement their important but challenging climate agenda to first reach peak carbon emissions before 2030 and then carbon neutrality before 2060.

- *High-level coordination and action plans*. There are strong indications that all levels of government and ministry have started the process of implementing China's climate agenda, and a high-level group of key officials has been tasked with the planning and implementation of the overall strategy for carbon peaking and carbon neutrality. The authorities have published overarching working guidance on how to achieve carbon neutrality as well as a detailed carbon-peaking action plan, with more sector-specific directives to follow.

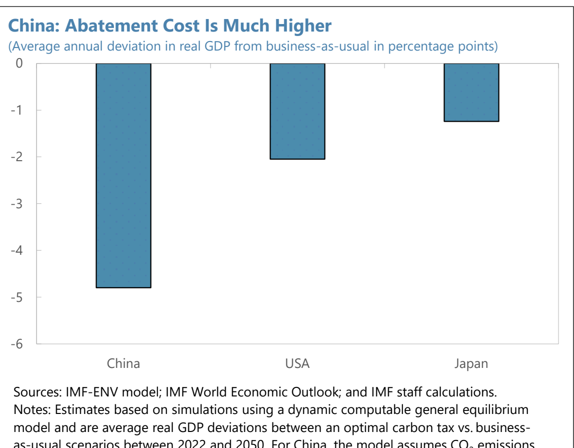
- *Steep, backloaded carbon path.* China's planned carbon path, while not yet completely spelled out, suggests a relatively steep adjustment. While existing regulatory limits on energy intensity growth have contributed to recent power shortages, the overall adjustment path is significantly backloaded and allows for the level of carbon emissions to further increase until 2030. Shifting adjustment to the future drives up the cost of adjustment overall because the required green investment is compressed into a shorter period in the future and there is less time to reap the economies of scale and positive technological spillovers from developing renewables and other helpful technology. The steepness of the adjustment path and the higher decarbonization costs due to backloading translate into a high theoretical shadow price of carbon, estimated at around US$285/ton by 2040.[1] The same factors also imply that the overall level of decarbonization costs associated with China's climate commitments are relatively high compared to other countries—however, it must be noted that model-generated

China: Decarbonization Path Is Steeper and Back-Loaded
(In tons of CO_2)



Sources: IMF-ENV model; IMF World Economic Outlook; and IMF staff calculations.

China: Abatement Cost Is Much Higher
(Average annual deviation in real GDP from business-as-usual in percentage points)



Sources: IMF-ENV model; IMF World Economic Outlook; and IMF staff calculations.
Notes: Estimates based on simulations using a dynamic computable general equilibrium model and are average real GDP deviations between an optimal carbon tax vs. business-as-usual scenarios between 2022 and 2050. For China, the model assumes CO_2 emissions peak in 2030.

[1] This shadow price of carbon is identified using an "ideal" carbon tax in a computable general equilibrium (CGE) model, the IMF-ENV model, in S. Black, J. Chateau, W. Chen, F. Jaumotte, I. Parry, and K. Zhunussova, "A Comprehensive Package of Macroeconomic Policy Measures for Implementing China's Climate Mitigation Strategy." (*forthcoming*).

projections of costs and prices are highly assumption-driven and inherently difficult to compare across countries.

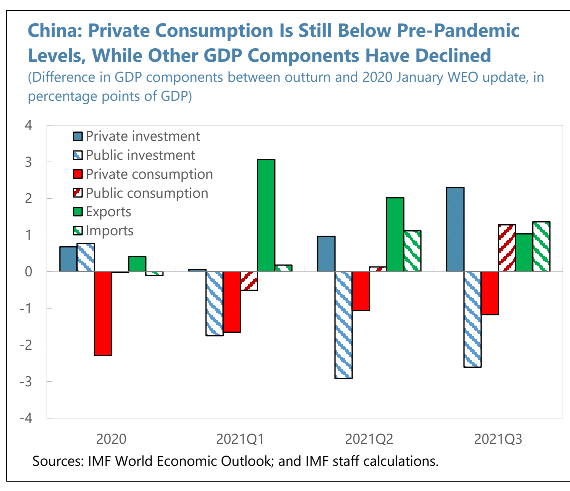
- *Large financing needs*. The authorities have signaled large investment needs for the decarbonization efforts—including upgrades to their power grid system—a significant share of which they expect to mobilize through private sector sources via green finance. They have started the process of bringing green finance disclosure requirements closer to international standards and unifying financial products' green classification. Recent progress includes ongoing work with the European Commission detailing commonalities and differences between their respective green taxonomies. The People's Bank of China (PBC) has recently rolled out a new lending facility to support bank lending to firms conducting green projects, while another planned relending facility has been announced to promote clean and efficient processing of coal.

4. The external environment has become more difficult with decoupling pressures broadening from technology access to financial markets. While there has been closer cooperation between the U.S. and China in tackling the threat of climate change, several open issues remain. China has tightened regulations on U.S. listings by technology and data-heavy firms, potentially impeding their access to international financial markets. The current U.S. administration has yet to lower the high tariffs on imports from China and has maintained the previous administration's restrictions on technology exports, the threat of secondary sanctions on financial entities in response to the national security law in Hong Kong SAR and forcing compliance of U.S.-listed Chinese firms with U.S. auditing requirements to avoid de-listing. China and the European Union (EU) reached a comprehensive agreement on investment, but the European Parliament has voted to freeze its ratification.

DEVELOPMENTS: SHIFTING POLICY FOCUS AMID A STILL-UNBALANCED RECOVERY

A. Macroeconomic Policy Tightening and Slowing Momentum

5. The growth momentum is slowing as consumption continues to lag, leaving some slack in the economy and keeping domestic CPI inflation pressures low. Recently, temporary power curbs have increased supply-side headwinds.



Sources: IMF World Economic Outlook; and IMF staff calculations.

- *The early path of recovery relied on public demand followed by robust exports and still-solid investment, but its momentum has slowed notably in the second half of 2021.* While exports continue to benefit from pandemic-related

demand, public investment and real estate investment are expected to contract by -7 and -2 percent, respectively, in 2021, with the latter reflecting various policy measures to rein in property speculation—including curbing developers' financing conditions, raising mortgage rates, and reforms to land auction schedule. The escalation of liquidity stress faced by some property developers, coupled with contracting housing sales, has added to the slowdown of real estate investment.

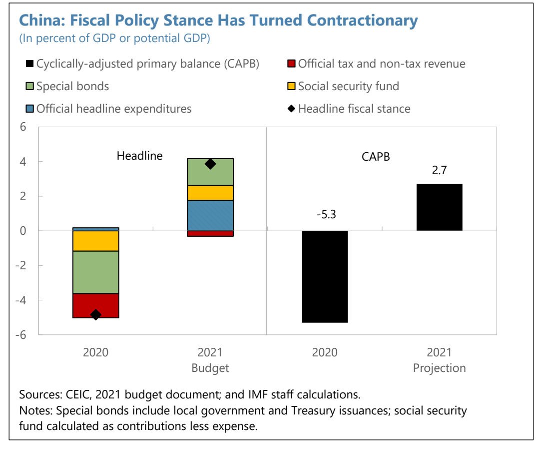
- *While average sequential headline GDP growth has reached its pre-crisis trend, the level of private consumption is still well below its pre-crisis forecast* (see Figure 1). The lingering weakness in consumption and still-elevated household savings are likely the result of prolonged uncertainty surrounding the virus and vaccine efficacy and a still-soft labor market as new urban job creation is still hovering below 2019 levels. This leaves a negative output gap estimated at 1.5 percent for 2021.

- *A confluence of factors including coal shortages, a strong but unbalanced recovery, and regulatory limits on energy intensity have led to temporary power curbs*. Coal shortages from curtailed domestic production, restrictions on coal imports, global coal price surge and the underperformance of non-fossil fuel energy sources exacerbated power supply issues but have since been largely addressed. Heavy reliance on energy-intensive production made it challenging to fulfill long-standing climate targets with local governments resorting to power rationing and curbing high-energy intensity production, including steel.[2]

- *Despite recent surges in producer prices, domestic inflation pressures have remained low.* Higher global commodity and domestic steel prices—the latter due, in part, to local efforts to reduce carbon emissions—have lifted producer prices but have been slow to pass through to consumer prices (1.5 percent year-on-year in October 2021) as these upstream inputs account for a relatively small share of materials purchased by producers of final consumption goods, and because private consumption remains relatively weak.

6. Macroeconomic policies have tightened significantly (see Box 1). Most of the tightening came from fiscal policy, which turned strongly contractionary at the beginning of 2021, reflecting the authorities' shifting policy focus away from supporting the recovery to regulatory tightening and deleveraging. The augmented cyclically adjusted primary deficit (CAPB) is expected to narrow by about 2.7 percent of potential output in 2021, compared with a projected neutral stance at the conclusion of the last Article IV consultation in December 2020. The withdrawal largely

China: Fiscal Policy Stance Has Turned Contractionary
(In percent of GDP or potential GDP)



Sources: CEIC, 2021 budget document; and IMF staff calculations.
Notes: Special bonds include local government and Treasury issuances; social security fund calculated as contributions less expense.

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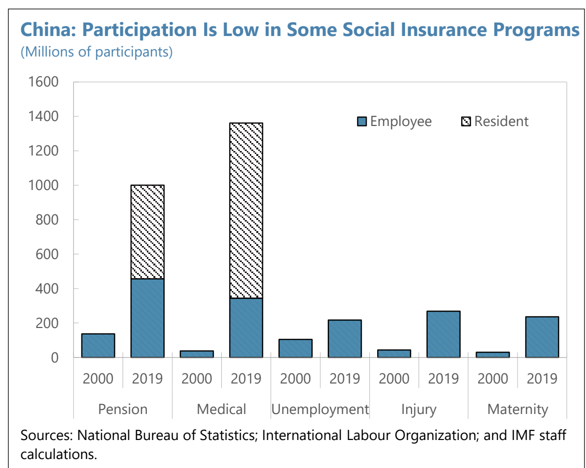
[2] Another factor making it harder to abide by the existing regulation is that the 2020 pandemic lockdowns helped push annual energy consumption growth in 2021 far above permitted levels, but renewable energy has been exempted from the consumption growth target as of early October 2021.

represents decreases in public investment—the primary channel of fiscal stimulus during the pandemic—the removal of most COVID-19-related exemptions on social security contributions, and general reduction of expenditures by all levels of government.[3] Overall, government spending in 2021 is projected to be lower than in 2019 (see Figure 2). Monetary policy has tightened moderately compared to 2020, as key money market rates increased relative to their pandemic lows, and overall credit growth slowed in 2021 (both in year-on-year and sequential terms) despite the continuation of structural credit policies to steer bank credit to small firms and specific sectors (see Figure 6).[4]

7. Shortcomings in the social protection system have added to widening income inequality and the halting recovery of household demand. Despite ongoing reform efforts, the coverage provided by China's social protection system is still incomplete and benefit levels remain inadequate (see Box 2 and Selected Issues Papers (SIPs) 1 and 2). For example, less than half of urban employees are covered by unemployment insurance, and urban households generally enjoy much higher benefits than rural ones—about 230 million migrant workers were left out of urban unemployment insurance benefits during the pandemic, in part, because of lack of household registration in cities (*hukou*). While China's basic medical insurance coverage is high, its low adequacy leaves households, especially the poor and in rural areas, exposed to high medical costs exceeding benefit payments, including from emergency or chronic illnesses. These gaps were exacerbated during the pandemic.

China: Participation Is Low in Some Social Insurance Programs
(Millions of participants)



Sources: National Bureau of Statistics; International Labour Organization; and IMF staff calculations.

8. The investment-driven recovery has reversed earlier, hard-won progress in rebalancing, adding to the challenges of achieving sustainable high-quality growth over the medium term (see Figure 4)**.** Rebalancing towards consumption regressed sharply in 2020 and normalization is projected to have remained slow in 2021. The contribution of services to GDP growth has fallen throughout the pandemic, with services employment growing slower than industrial employment for the first time since 2012. With many of the negative effects especially on the services industry concentrated in urban areas, the urban-rural income gap continued to drop—but this came at the expense of urban workers and amid growing income inequality within urban areas.

[3] Fiscal analysis and recommendations in this report are based on staff's augmented general government deficit and debt concepts, which differ from the authorities' official data (see Appendix III and Article IV, 2020). Fiscal reporting could be improved. For example, China does not report expenditure classification by economic type and official general government data excludes local government financing vehicles (see Informational Annex). See "Database of Country Fiscal Measures in Response to the COVID-19 Pandemic" for a detailed description of China's measures.

[4] Some interest rates have declined slightly since 2021Q2, reflecting both weakened credit demand amid cooling domestic activity and the cuts in the reserve requirement ratio (RRR) in July and December 2021.

Authorities' Views

9. The authorities acknowledged that the zero-COVID tolerance strategy is impacting the recovery of private consumption but saw its benefits outweighing any economic costs. While pointing out that periodic lockdowns are curbing the overall level of contact-intensive spending, they stressed that total final consumption, including public consumption, has had a large contribution to growth in 2021. Separately, they saw the impact of power shortages as temporary and noted that they have been swiftly alleviated by increases in coal output, support to coal power companies to increase power supply, reforms and improvements in the market formation mechanism of coal power prices, and the resolute curbing of the blind development of high-energy consumption and high-emission projects.

10. The authorities viewed that macroeconomic policies have been supportive of the recovery. They stressed that fiscal policy orientation in 2021 remained proactive (the official deficit-to-GDP ratio in 2021 is lower than in 2020), maintained a relatively high intensity of expenditure and focused on improving the quality, efficiency, and sustainability of fiscal activity. While appropriately reducing the deficit-to-GDP ratio and the quota for new special local government bond issuance, targeted fiscal support was provided, including by implementing specific tax and fee cuts, normalizing the direct funding mechanism, further optimizing the spending structure, and improving the efficiency of spending, etc. The authorities also saw monetary policy support for the economy remaining strong, pointing to the strong base effect lowering annual credit growth in the second half of 2021. They noted that corporate borrowing rates have declined, providing a conducive environment for investment. The authorities continued to view structural credit policies as effective in supporting small and medium enterprises (SMEs) as well as adding to aggregate liquidity.

B. Financial Vulnerabilities Remain High

11. A broad regulatory campaign to reduce leverage and other risks in the real estate sector has triggered financial stress among property developers. After years of welcome but unsuccessful attempts to limit the buildup of sectoral leverage and speculative investment in real estate, the authorities redoubled their efforts in August 2020, imposing stringent benchmarks (the "three red lines") on developers to limit borrowing.[5] These were complemented by new property lending concentration rules for banks and local-level initiatives to restrict the quantity of new mortgage approvals. These policies not

China: An Increasing Portion of Property Developers Are Facing Tighter Financing (In percent of GDP)

Sources: Capital IQ; and IMF staff calculations.
Notes: The bars show selected liabilities of property developers according to their compliance with the "three red lines" regulatory criteria that were introduced in August 2020. The criteria are described in footnote 5.

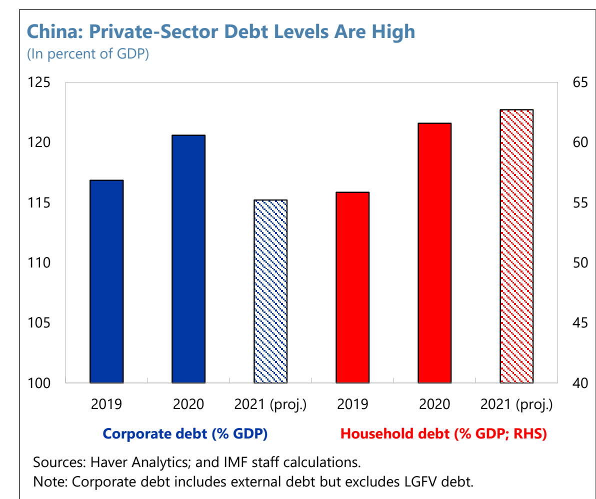
[5] The "three red lines" policy stipulates that property developers in need of refinancing have to be assessed against the following three criteria: (i) liability-to-asset ratio of less than 70 percent, (ii) net debt to equity less than 100 percent, and (iii) cash-to-short-term debt ratio of at least 1. If developers fail to meet one, two, or all three of the criteria, regulators would place limits on the extent to which they can borrow.

only slowed real estate investment and sales, reduced inventories, and tamped down house price growth, but also exposed existing vulnerabilities among property developers. Unable to comply with the "three red lines" framework, some large and highly leveraged developers are facing severe liquidity stress owing in part to a sector-wide tightening of borrowing conditions, particularly in the bond markets. These strains are jeopardizing their ability to honor their debt obligations and complete the large stock of unfinished homes paid for in advance by households.

12. The authorities have moved to avert a credit crunch among developers, but policy action has come in a piecemeal fashion and uncertainty remains elevated, exacerbated by the lack of data. The authorities pledged to support the stability of the property market, while taking steps to ensure delivery of ongoing housing projects. However, defaults and other signs of financial stress among property developers remain elevated and housing sales have slowed. Poorly disclosed off-balance sheet risks among developers and their opaque linkages to banks and the shadow credit sector have further added to uncertainty.

13. The pandemic has elevated already-high financial vulnerabilities among other corporates, households, and local governments.

- *Exceptional financial support measures have led to higher corporate and household debt* (see Figure 5). While these measures helped avoid a potential credit shortfall during the pandemic, their continuation contributes to the delay in the recognition of problem assets and exacerbates credit misallocation (see below).



- *Financial conditions are tightening for local government financing vehicles (LGFVs) and local SOEs.* Rightly concerned about high leverage and rising financial vulnerabilities, the authorities have implemented new restrictions on local governments' off-balance sheet financing channels. This has elevated liquidity risks for LGFVs and local SOEs with large and growing debt but limited debt-servicing capacity, especially in fiscally weak provinces, many of which have significant interconnectedness with local banks (see SIP 3).[6]

Authorities' Views

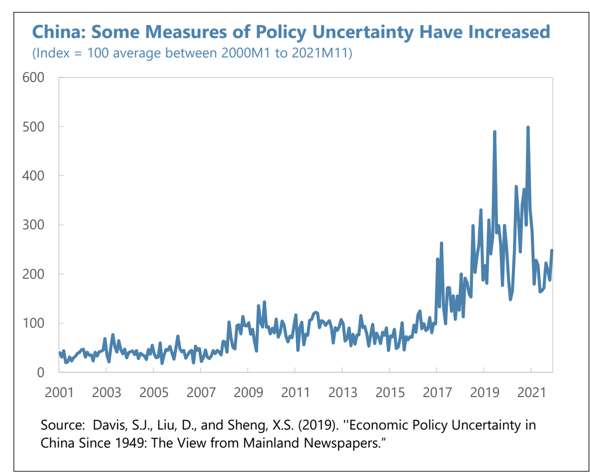
14. The authorities saw the property sector as generally healthy and financial risks under control. The authorities attributed the recent stresses in the financing of a few developers to their operating difficulties due to past mismanagement. They considered the spillover risks from these strains to the financial industry as limited as these developers' financial liabilities are dispersed and

[6] Also see GFSR, Apr 2021 and GFSR, Oct 2021.

individual lending institutions have relatively small risk exposures. The authorities emphasized that they have taken actions to avoid the sudden tightening of credit to the broader real estate industry and noted that operational and financial conditions of most other real estate developers remain healthy. More broadly, they also assessed overall financial sector risks as manageable. The authorities pointed out that China's total debt-to-GDP ratio has declined slightly in recent quarters and that the banking sector has remained stable with strong risk buffers and low non-performing loan ratios.

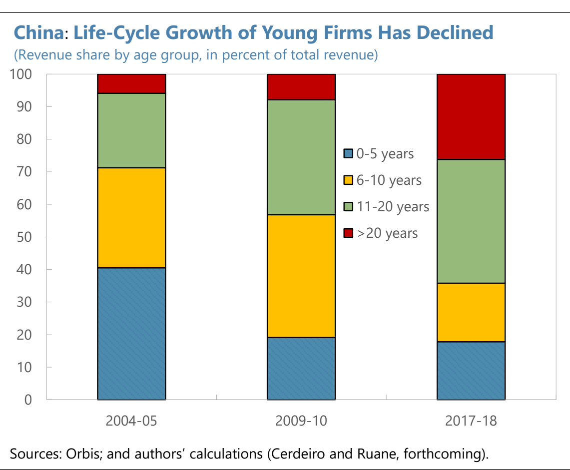
C. Structural Policies Focusing on the Data and Technology Sector

15. A slew of sudden, new, and wide-ranging regulatory policy measures has taken financial markets by surprise, creating policy uncertainty, and possibly adding headwinds to growth. In rapid succession, the authorities have rolled out regulations for businesses in food delivery, online education, gaming, liquor, cosmetics, and online pharmacy, driven by changing government priorities around competition, consumer protection, data governance, technological self-reliance, and—in the context of the overarching policy shift toward "common prosperity"—inequality. Some of these regulatory actions against technology companies are intended to improve competition—reinforced by recent amendments to the Anti-Monopoly Law that will increase regulators' discretionary power—and financial stability and, if well implemented, have the potential to support growth going forward. However, the short-term effect of these multiple regulatory initiatives included large selloffs of Chinese equities across markets (see Figure 6), reflecting increased investor discomfort with a rapidly changing business environment that is viewed by market participants as undercutting the role of private enterprises and paving the way toward more state control over economic activity. The worsening of market sentiment could, in turn, raise financing costs for firms and lower investment.



Source: Davis, S.J., Liu, D., and Sheng, X.S. (2019). "Economic Policy Uncertainty in China Since 1949: The View from Mainland Newspapers."

16. Market dynamism and productivity growth have slowed and are unlikely to revive in the absence of SOE and competitive neutrality reforms. China's business dynamism has been on a declining trend since the early 2000s (see SIP 4). While a more active competition policy in the technology sector can help, it is unlikely to reverse these aggregate trends. All available evidence suggests that the still-large role of SOEs



Sources: Orbis; and authors' calculations (Cerdeiro and Ruane, forthcoming).

is a key factor in this regard.[7] SOEs are, on average, 20 percent less productive than private firms in the same sector, and the decline in business dynamism is particularly pronounced in sectors and regions with large SOE presence. Yet, the role of SOEs in the economy remains significant even as profitability is declining (see Table 7)—in part reflecting SOE contributions to economic stabilization efforts during the crisis (see Box 3). Moreover, SOEs are being asked to help with the implementation of China's climate goals and to increase R&D spending for the development of homegrown technologies against the backdrop of increasing technological decoupling pressures, contributing to competitiveness concerns amongst trading partners.

Authorities' Views

17. The authorities noted that the recent wave of regulatory measures was warranted to achieve medium- and long-term goals. The authorities emphasized the long-term benefits of addressing abuses of market power and facilitating market entry, enhancing consumer protection and data governance, safeguarding financial stability, and promoting productivity growth. They noted that new amendments to the Anti-Monopoly Law will further reduce uncertainty by clarifying what constitutes abuse of market power in new technology and online platform sectors and by increasing penalties against monopolistic behavior. They noted that the Regulations on Prohibition of Unfair Competition on the Internet, which will be promulgated within this year, will provide a basis for law enforcement to regulate unfair competition on the Internet and promote sustainable and healthy development of the digital economy.

18. The authorities agreed that reforms remain key to lift productivity growth going forward. While they saw continued urbanization as a potential source for improving productivity, they also agreed on the need for deepening reform efforts to counteract a declining trend in productivity growth. In particular, the authorities shared staff's views on the beneficial role of market incentives and pointed to SOE reforms that aim to improve corporate governance as well as competition policies that seek to address local protectionism. At the same time, they stressed that external decoupling pressures are adding critical headwinds to productivity growth which, in their view, necessitate an increased role of SOEs in strategic sectors.

OUTLOOK: STRENGTHENING THE RECOVERY

19. Economic activity is projected to grow by 7.9 percent in 2021, following which growth is expected to slow to 4.8 percent in 2022, before accelerating to 5.2 percent in 2023. While the deceleration in 2022 partly reflects the fading of base effects, subdued private consumption and real estate investment are adding headwinds. As a result, the output gap is expected to remain negative in 2022 before narrowing in 2023.

[7] See W. Guo, F. Han, S. Jahan, E. Jurzyk, and C. Ruane. 2021. "Chinese State-Owned Enterprises, Resource (Mis)allocation, and Productivity." China Article IV, 2020, *Selected Issues Paper*.

- *Critically, the forecast anticipates the pandemic will continue to impede the recovery of consumption—especially services—before loosening its grip in 2023,* which will likely require a combination of more efficacious vaccines and relaxation in the zero-tolerance strategy toward the virus.

- *Private investment is expected to remain subdued in 2022*. While the forecast assumes that property market stress will remain contained, the effects of financial tightening in the sector are expected to carry over to 2022 and hold back real estate investment. Lackluster growth in construction will, in turn, have a negative impact on the labor market and add further pressures on private consumption. Non-real-estate investment, also affected by these headwinds, will be supported by the continued gradual composition shift in exports away from pandemic-related products and towards investment goods. Going into 2023, private investment growth is expected to pick up pace driven by the projected recovery in consumption. The forecast also assumes power curbs will play little or no role for manufacturing or investment in 2022-23.

- *The growth projection assumes a significant slowdown in the speed of fiscal consolidation*, with the augmented CAPB tightening only by 0.5 percent of potential GDP in 2022, about one fifth of the pace projected for 2021. Monetary policy is also assumed to shift from a moderately tight stance in 2021 to a neutral stance in 2022, with a continuation of structural credit policies (e.g., relending facilities) to support SMEs and climate goals. Total social financing (TSF) growth is expected to stabilize at about 10½ percent by end-2021 and decline gradually to about 9½ percent by end-2022.

20. The current account surplus is expected to further narrow in 2022 with the normalization of pandemic-related export demand (see Figure 7). The goods and services trade surplus is expected to narrow to 1.7 percent in 2022 from a projected 2.3 percent in 2021, as the pandemic-related export boost fades, while external travel restrictions will leave services trade largely unchanged. On a preliminary basis and adjusting for remaining transitory pandemic-related factors, the external position in 2021 is broadly in line with the level implied by medium-term fundamentals and desirable policies (see Appendix I).[8]

21. Growth will continue to slow over the medium-term reflecting slowing market dynamism and a shrinking workforce. China's impressive productivity growth in the early 2000s has been attributed to large-scale reforms, including those taken in the context of the World Trade Organization (WTO) entry and a series of simultaneous domestic structural reforms that enhanced

[8] Staff assessment is very preliminary and subject to revision in the 2022 External Sector Report to be published in July 2022.

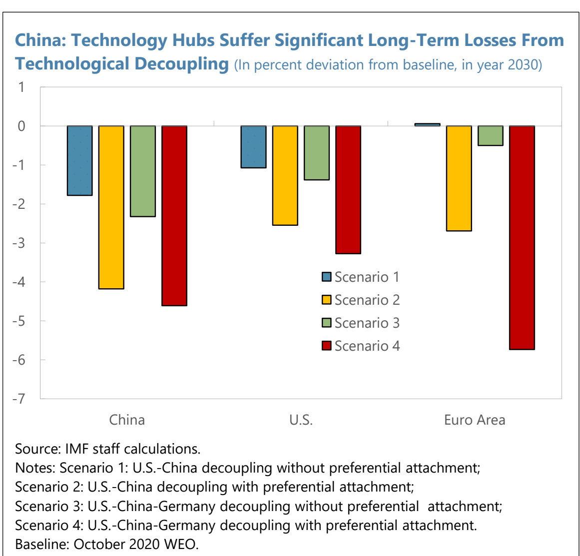
the role of markets (see SIP 4).[9] However market dynamism has been losing steam recently, and, absent a significant uptick in relevant reforms, China's total factor productivity (TFP) growth is expected to continue at or below the relatively low recent average pace of 0.7 percent. In addition, demographic change is forcing a reduction in China's workforce, with current estimates suggesting that the number of workers could drop by 35 million (more than 4 percent of the labor force as of 2019) in the next five years alone.

22. Real-sector risks around the baseline remain predominantly on the downside (see Appendix II)**.**

- *Macroeconomic policy could adjust more forcefully in 2022 in response to economic developments.* On the one hand, recognizing the expected slowdown of growth under the baseline, policymakers might slow fiscal consolidation further than currently assumed or turn to an expansionary monetary policy stance. On the other hand, however, similar to the surprisingly strong contractionary turn in 2021, concerns about already high sovereign debt levels could prompt a more contractionary stance than assumed under the baseline.

- *Private consumption could surprise in either direction.* Even more frequent COVID-19 outbreaks—including from new variants—could hinder the already-slow recovery in private consumption under the zero-COVID tolerance strategy. Subdued services activity would affect household incomes and add to still-soft labor market conditions, lowering consumer confidence while encouraging more savings. This would, in turn, slow business confidence and manufacturing investment, especially amid ongoing tightening financing and regulatory conditions. On the upside, a combination of more efficacious vaccines and treatments and relaxation in the zero-tolerance strategy towards COVID-19 could also bring a faster recovery in private consumption.

- *Medium-term risks remain predominantly negative.* Technological decoupling could accelerate to damaging levels, with losses ranging from around 2 to 5 percent of GDP in the longer term depending on the scenario.[10] Similarly, growth could slow from more rapid financial decoupling owing to increased external tensions, a faster decline in domestic productivity growth as SOE-focused R&D strategies fail and market dynamism weakens



China: Technology Hubs Suffer Significant Long-Term Losses From Technological Decoupling (In percent deviation from baseline, in year 2030)

Source: IMF staff calculations.
Notes: Scenario 1: U.S.-China decoupling without preferential attachment;
Scenario 2: U.S.-China decoupling with preferential attachment;
Scenario 3: U.S.-China-Germany decoupling without preferential attachment;
Scenario 4: U.S.-China-Germany decoupling with preferential attachment.
Baseline: October 2020 WEO.

[9] See, for example, C. T. Hsieh and Z. Song. (2015). "Grasp the Large, Let Go of the Small: The Transformation of the State Sector in China." *Brookings Papers on Economic Activity*.

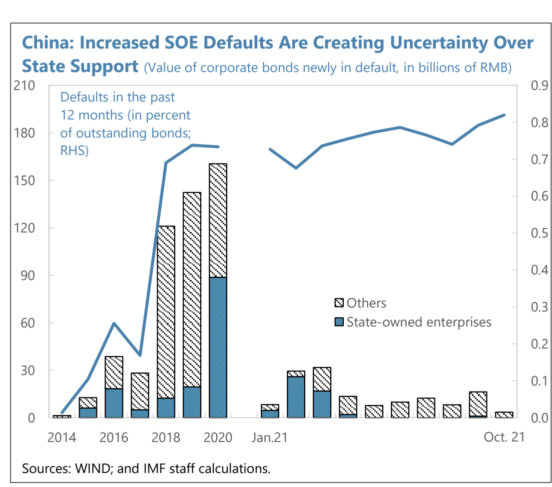
[10] See D. Cerdeiro, R. Mano, J. Eugster, D. V. Muir, and S. J. Peiris, "Sizing Up the Effects of Technological Decoupling", *IMF Working Paper* WP/21/69, 2021.

faster, and investors retreating more permanently amid the deepening regulatory actions and rapidly changing policy priorities.

23. A sharper-than-expected slowdown in the property sector could trigger a wide range of adverse effects on aggregate demand, with negative feedback loops to the financial sector and could generate international spillovers (see Box 4)**.** Financing conditions have already tightened considerably for real estate firms resulting in construction delays and financial distress, with the resulting uncertainty weakening demand for homes. A rapid escalation of these developments could lead to more significant fall in property sales and prices that would significantly reinforce developer strains and create negative spillovers to upstream sectors. This would reduce bank asset quality and the broader availability of credit, particularly from smaller banks which tend to have weaker buffers and risk management. The resulting large property market strains could also trigger a very sharp retrenchment of real estate investment and weigh heavily on private consumption, through weaker income and employment and wealth effects. In addition, a collapse in land sales, an important source of income for local governments, could have major negative consequences for public finances, particularly in provinces with weak balance sheets. Finally, a sudden and dramatic slowdown in China's growth would create international spillovers through sizable (direct and indirect) trade links and commodity prices, as well as deterioration in global risk appetite.

24. Elevated corporate debt amid rising uncertainty about the prospect of continued state support also poses risks to financial stability. Investor concerns about state support for some faltering local SOEs, combined with local government debt overhangs, could spread more widely through the corporate sector, tightening financial conditions, and creating potential negative feedback loops between corporate, bank, and local government balance sheets. Further deterioration in asset quality in small local banks could potentially curtail their lending to corporates, mainly small businesses, that are already struggling, derailing the recovery.

China: Increased SOE Defaults Are Creating Uncertainty Over State Support (Value of corporate bonds newly in default, in billions of RMB)



Sources: WIND; and IMF staff calculations.

25. Climate change is threatening economic and financial stability. China might be particularly affected as its annual average surface temperature has increased by 0.26 degree Celsius every 10 years from 1951 to 2020, significantly higher than the global average increase of 0.15 degree Celsius in the same period.[11] Higher temperatures have a direct effect on productivity and are strongly linked to more frequent and more imminent extreme weather events that pose risks to economic growth, health, livelihoods, food security, water supply, and human security, which are

[11] China Meteorological Administration Blue Paper, 2021.

likely to affect the most vulnerable the most.[12] At the same time, the path of decarbonization can entail extensive policy, legal, technology and market changes that are associated with additional risks, including for financial stability. For example, if not managed carefully, financial vulnerabilities of carbon-intensive firms could result in stranded assets, loss of markets, reduced returns on investment and financial penalties.[13] With many firms in carbon-intensive sectors facing liquidity risk, tighter credit conditions could prompt potential wave of defaults. As provinces with weaker public finances also tend to be relatively more exposed to larger corporate debt from these sectors, some regions might suffer disproportionately higher number of defaults with negative feedback loops on the local economy (see Appendix II).

Authorities' Views

26. The authorities remained confident about achieving robust growth in 2022. They expected private consumption to strengthen as contact-intensive activities recover with less frequent and more targeted lockdowns over time and household saving rates gradually fall due to continued improvement in the labor market. The authorities viewed that investment momentum would benefit from the improving consumption outlook and the anticipated shift in exports toward investment goods as the world economy exits the pandemic. With the pandemic fading, they expected the growth rate of the trade surplus in goods to slow down, with the trade deficit in services slowly rising from a low level. Overall, they expected the current account surplus-to-GDP ratio to narrow and remain within a reasonable and balanced range.

27. The authorities were mostly concerned with external risks for the growth outlook in 2022 and beyond. In addition to technological decoupling, they also saw the risks of persistently high global inflation leading to a sustained period of tight global financial conditions. Other concerns included renewed virus outbreaks around the world, shortages of key supply chain components, and shipping bottlenecks.

POLICIES: REBALANCING REMAINS AN IMPERATIVE TO SECURE SUSTAINED HIGH-QUALITY GROWTH

28. The right combination of policies can promote the smooth transition to the long-held goal of high-quality growth—growth that is not only balanced but also inclusive and green. Continuing further on the path of unbalanced growth would not only drive up the already-excessive investment share of GDP and accelerate the decline in returns to capital (see Box 5) but due to the high carbon-intensity of investment—including from construction—also make it much more difficult to reach China's climate goals. Conversely, rebalancing offers more sustainable and equitable growth benefitting more households and helps the quest for carbon neutrality by reducing the trade-offs between growth and climate goals. Similarly, decisive action towards decarbonization

[12] United Nation's Intergovernmental Panel on Climate Change (IPCC), 2021.

[13] United Nation's IPCC, 2020.

today will not only help prevent temperature rises and a worsening of natural disasters in the future, but it will also avert negative repercussions for growth. And revitalizing productivity, including reversing the declining trends in market dynamism, will reap large benefits when started early while supporting income growth and consumption as well as a sustainable tax base to help strengthen the social protection system and support climate policies.

29. Where reforms are needed, a measured approach that is well-communicated, transparent, and predictable will minimize transition costs and reduce market uncertainty. For example, while an unexpected and oblique shift in the approach to curb market power can create policy uncertainty and become an obstacle to entrepreneurial activity, a well-understood reform that supports the market entry and growth of young firms is likely to foster investment and innovation. Similarly, clearly laying out the goals and plans for implementation of larger-scale SOE reform or long-term climate adjustment will not only greatly improve the probability of success but also help avoid potential backtracking and limit unintended negative consequences in both the short- and long-run.

A. Supporting Balanced and Inclusive Growth

Adjusting the Fiscal Policy Stance and Strengthening Social Protection

30. In the short term, fiscal policy should shift to neutral to slow the drag on growth and secure the handoff to private demand. As fiscal consolidation has already been frontloaded to 2021, a neutral stance in 2022 would balance the need between protecting the recovery and sustainability. Moreover, a reprioritization of spending away from infrastructure investment and towards spending that boosts private consumption—for example, targeted direct income support to vulnerable households who have a higher propensity to consume given tighter budget constraints—would lower high household savings, help rebalance the recovery, and help close the negative output gap. For example, annual government subsidy payments to the individual pension accounts of resident pension program participants can be increased to raise disposable income and incentivize consumption, while ushering in support for the social protection system. This can be enhanced by a more neutral augmented CAPB, with emphasis on domestic rebalancing. Once a balanced recovery is secured, fiscal policy should return to a gradual pace of consolidation, driven by higher tax revenues. An annual tightening in the augmented CAPB by an average of 0.75 percentage points of potential GDP over 2023-2026 would reduce the headline augmented net lending/borrowing deficit from 16.5 percent of GDP in 2021 to 13 percent of GDP by 2026 and pave the way to stabilize augmented general government debt over the long term (see Box 6 and Appendix III).

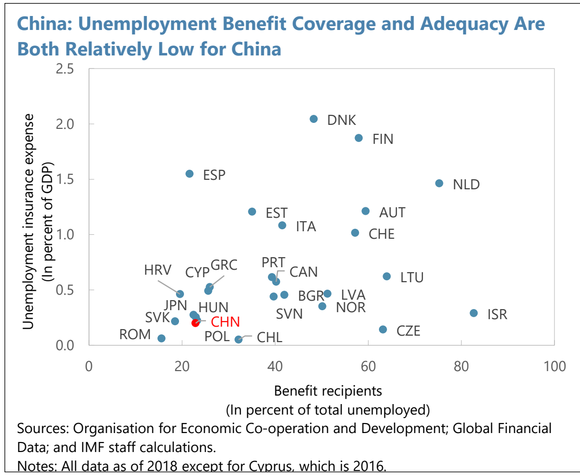
31. Going forward, structurally strengthening the social protection system will reduce households' need to insure against individual risks through precautionary savings and promote rebalancing towards consumption. Key proposals are (see SIPs 1 and 2):

- *Increasing social assistance and strengthening countercyclical policies.* The successful pilot of direct cash transfers to households via e-CNY wallets and cards could be scaled up nationwide

to improve the efficiency and targeting of existing fiscal support.[14] This could be combined with a rules-based automatic activation of spending measures linked to the state of the economy (e.g., the unemployment rate) to ensure a robust countercyclical response and as a form of income insurance for the targeted population, thus, reducing uncertainty and lessening any drop in consumption after an adverse shock.[15]

- *Expanding coverage and adequacy of the social insurance program.* Increasing medical and unemployment benefits, improving benefit portability and service delivery through greater centralization, and bringing "gig" workers under the contribution-based plans would provide greater financial security to households. A better social insurance program combined with child allowances can also support the recently announced three-child policy. By allowing the social insurance system overall to accrue deficits during cyclical downturns and accumulate surpluses during upturns, it can, in addition, contribute to smoothing household consumption over time.

China: Unemployment Benefit Coverage and Adequacy Are Both Relatively Low for China



Sources: Organisation for Economic Co-operation and Development; Global Financial Data; and IMF staff calculations.
Notes: All data as of 2018 except for Cyprus, which is 2016.

- *Pension reforms to improve adequacy and ensure financial viability in light of an aging population*. Raising the monthly social pension for rural and non-salaried urban residents to the rural poverty line (from RMB 170 to 192) would represent a significant increase in social pension income (up to 14 percent), while implying only a small cost to the fiscal budget (0.05 percent of GDP). The most direct way to address growing pension spending pressures is by raising the retirement age, which could also increase employment and growth. The development of a well-designed "Third Pillar" that offers long-term financial investment products—including potentially for green finance—could actually lower overall savings as households would be able to diversify investment risk away from an overreliance on real estate as a vehicle for retirement savings.

32. At the same time, broadening the revenue base in a progressive manner could help ensure long-term fiscal sustainability and reduce inequality. Further rationalization of value added tax (VAT) rates by consolidating the existing multiple rate structure to a single positive rate, reducing the range of VAT exemptions, and finalizing and implementing the existing draft comprehensive VAT law would make the tax system more efficient and fairer while raising revenues. Measures to improve compliance with existing laws and regulations for social contributions would also boost revenue. Moreover, a more progressive tax system, combined with a more generous and fair social protection system, would help lessen income inequality (Article IV, 2020). Implementation

[14] Smart contracts that enable users to spend e-CNY within a specific timeframe could help strengthen countercyclical policies. See SIP 5 for recent developments and key macro-financial benefits and risks of the e-CNY.

[15] See WEO, April 2020.

of a recurrent property tax would boost local government revenue, lessening the need to rely on off-budget debt, including LGFVs, and at the margin, help dampen property speculation and address increasing wealth inequality. Other tax measures that could make the tax system more progressive include implementation of an inheritance tax and/or wealth tax and lowering the personal income tax threshold at which higher personal income tax rates become applicable. As for non-tax revenues, boosting SOE dividend payments from profitable SOEs to the budget would provide further resources to meet pressing social spending needs.

Providing Monetary Support

33. With low core CPI inflation and still significant slack in the economy, monetary policy should be accommodative, focusing on interest rate-based measures. With average CPI inflation expected at 1.6 percent for 2022, monetary policy can be eased through policy rate cuts to provide a more supportive stance until private demand has returned to pre-pandemic trends. The use of non-interest rate monetary policy instruments to steer credit to targeted sectors, while helpful during the crisis, should be phased out now that the recovery is taking hold. In particular, structural credit policies, especially those with lending rate caps, tend to be less market-based and potentially allow non-viable firms to remain afloat, crowding out resources from more productive firms, thus, exacerbating credit misallocation and mispricing problems. To increase the efficiency of interest-rate transmission, the modernization of the monetary policy framework should be continued (Article IV, 2020).

34. Further increasing exchange rate flexibility remains key to ensure the effectiveness of monetary policy and facilitate external adjustment as the global economy continues to adapt to the pandemic. A more flexible exchange rate can act as a shock absorber against sudden external shocks, enhance the potency of domestic market-based monetary policy and, through it, the efficient allocation of credit, and support progress made on the rebalancing of external demand. As the capital account continues to become more open, a more flexible exchange rate would allow for less business cycle volatility. Publishing information on FX intervention would improve the transparency, credibility, and communication of the policy framework, enhancing the latter's efficiency. Other measures to allow for a more flexible exchange rate include more transparency in the central parity formation for the daily trading band.

Managing Risks from the Property Sector

35. In the near term, the authorities need to guard against systemic contagion within the property sector. The priority should be to prevent developer sector stresses from creating large-scale negative spillovers to housing demand and economic activity while still allowing market forces to reduce vulnerabilities. This will require intensifying risk monitoring efforts by regulators and lenders while strengthening the central government's coordinating role in policy responses, including ensuring comprehensive data collection that captures interlinkages with other entities. Other important efforts include facilitating the swift restructuring of troubled developers and ensuring the timely completion of pre-sold housing inventories to avoid destabilizing declines in confidence.

36. As stress recedes, structural and prudential reforms are needed to ensure that property sector risks decline to safer levels. Once immediate risks are contained and the sector stabilizes, macroprudential and other real estate policies will need to be re-adjusted to prevent property demand from overshooting and to support the continued reduction of real estate-related financial vulnerabilities. Key measures include curbing risks from pre-sales practices, including legal controls to limit developers' capacity to use pre-sale receipts as general-purpose liquidity, and strengthening property-related data, surveillance, and risk management frameworks, both within government and regulated financial institutions. The introduction of a property tax and strengthening alternative savings options like retirement savings schemes would also help by curbing property speculation. Reducing local government incentives to boost property markets is also necessary and will require fiscal reforms and improved restructuring frameworks. Finally, ad-hoc property sector interventions by local governments should be phased out in favor of a risk-focused macroprudential approach that maintains minimum prudent underwriting standards and avoids procyclicality.

Responding to Materializing Downside Risks

37. The appropriate response to downside risks will depend on which one of the aforementioned risk scenarios materializes. In particular:

- *Macroeconomic policy support has to rise even more if private demand falls short of the current baseline forecast*—for example, due to a more persistent surge in COVID-19 outbreaks or escalation in the property market stress that significantly affect aggregate demand. China has the fiscal space to revert to an expansionary stance if needed, but the composition of such fiscal stimulus should decisively shift toward providing targeted support for vulnerable and low-income households. A more accommodative monetary policy stance focusing on conventional policy rate cuts would make fiscal support more effective.

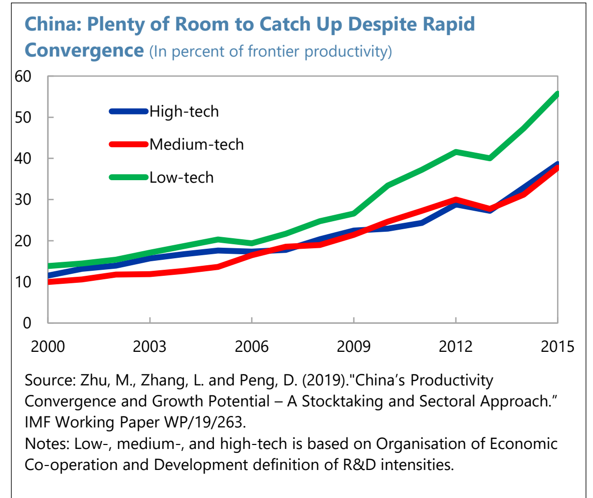
- *Dealing with escalating property sector stress.* Government backstops for liquidity provision to stressed developers and guarantee mechanisms for completion of presold housing may be needed if severe housing market stress threatens economic and financial stability. These measures should be temporary, subject to strict safeguards to minimize moral hazard, and paired with public commitments to structural measures that will curb financial risk-taking in housing markets (see above).

- *Containing systemic financial stress.* Distressed but systemically important non-financial entities —in the property sector or elsewhere—need to be reorganized or liquidated in an orderly fashion within the existing corporate restructuring framework, with loss recognition and burden sharing preceding any potential use of public funds. During this process, to safeguard the financial system, the PBC should stand ready to ensure the functioning of core funding markets and provide emergency liquidity assistance to viable banks facing liquidity shortfalls, subject to appropriate safeguards. The PBC should also act promptly with other regulators to resolve failing financial institutions to avoid systemic stress.

Reaccelerating Structural Reforms

38. While regulatory strengthening to ensure fair competition and consumer protection are important, they should be implemented in a transparent and predictable manner to reduce policy uncertainty. Recent antitrust policy actions to enhance digital platform competition can be helpful in promoting a more level playing field between large incumbents and smaller firms. Similarly, the new regulations to protect consumer privacy and data governance represent significant steps in enhancing China's online privacy protection. It is important, however, that these policies are applied in a transparent and predictable manner to preserve market efficiency and financial inclusion benefits that these technologies can bring and be appropriately phased, while minimizing policy uncertainty.

39. With increasing decoupling pressures, closing productivity gaps becomes more important and requires larger and deeper reform efforts. Despite remarkable growth over the last decades, there are still large productivity gaps to the global frontier. The key elements of reforms to close the gaps are:



China: Plenty of Room to Catch Up Despite Rapid Convergence (In percent of frontier productivity)

Source: Zhu, M., Zhang, L. and Peng, D. (2019)."China's Productivity Convergence and Growth Potential – A Stocktaking and Sectoral Approach." IMF Working Paper WP/19/263.
Notes: Low-, medium-, and high-tech is based on Organisation of Economic Co-operation and Development definition of R&D intensities.

- *Re-accelerating market reforms and easing market entry.* Lowering entry barriers for domestic and external firms will narrow productivity gaps, especially in non-strategic sectors. Removing regulatory barriers across regions and all sectors will help increase competition and improve factor allocation by facilitating firm entry and mobility across regions in all sectors, and allowing for dynamic gains, boosting domestic innovation and technological upgrading. Opening up domestic markets could also help improve business dynamism and raise productivity overall.

- *Strengthening the services sector.* With its large presence of SOEs and far away from the global productivity frontier, opening up the services sector promises large gains from convergence (Article IV, 2020). For instance, removing obstacles to the efficient movement of factors of production and leveling the playing field between services and industrial firms will help spur investments into the former.[16] Moreover, strengthening the services sector complements demand-side rebalancing from investment to consumption, translating into more balanced and sustainable growth, and being relatively low carbon-intensive, it would help with China's climate goals.

- *Restarting SOE reforms.* The average productivity gap between SOEs and private firms across sectors in China is estimated to be about 20 percent. Reforms aimed to close this big gap could

[16] See WEO, April 2018.

raise output by around 4 percent over the medium to long term (Article IV, 2020).[17] They include the removal of preferential access to credit and implicit guarantees for SOEs to ensure competitive neutrality between private and state-owned firms and improving SOE governance to limit the potential economic and fiscal costs arising from weak governance and mismanagement.[18]

40. Continuing government supported R&D, digitization, and green investment could help foster innovation, boost productivity, and secure climate goals. Support for basic R&D can help address externalities, such as those related to knowledge spillovers.[19] However, they should be deployed with minimal market distortions. International experience suggests that such measures should be transparent, incorporate strong governance, and be timebound to avoid generating new excess-capacity sectors. Complementary reforms in product markets can also help boost the returns to R&D.[20]

Authorities' Views

41. The authorities emphasized that fiscal policy stands ready to support stable and inclusive growth over the medium term. They noted that fiscal policy will remain proactive in 2022 to assist in countering economic headwinds. Specific measures will include additional targeted tax cuts to support SMEs and innovation, increasing nominal expenditure on investment, rural development, and social protection, while improving government expenditure efficiency. In the medium term, the overall tax burden will remain generally stable and provide sustained support for economic stability and inclusive growth.

42. The authorities concurred that a stronger social protection system could help reduce household precautionary savings and thus, boost private consumption. They also highlighted its importance to support the goals of "common prosperity." The authorities took note of staff's many recommendations on pension reforms including to gradually extend the statutory retirement age, deepen risk pooling, improve benefit portability, enhance contribution compliance, extend unemployment coverage, and raise unemployment insurance benefits. Moreover, the authorities noted that they are stepping up the establishment of a personal pension system ("Third Pillar") with tax policy support, individual voluntary participation, and market-oriented operation.

43. The authorities reiterated their commitment to continue prudent monetary policy to support economic growth and maintain financial stability. They viewed the RRR cut in July 2021 as a pre-emptive move to provide more liquidity in anticipation of elevated uncertainties in the

[17] See E. Jurzyk and C. Ruane, "Resource Misallocation Among Listed Firms in China: The Evolving Role of State-Owned Enterprises" *IMF Working Paper* WP/21/75, 2021.

[18] See Fiscal Monitor, April 2020.

[19] See Z. Chen, Z. Liu, J. Serrato and D. Xu, "Notching R&D Investment with Corporate Income Tax Cuts in China," *American Economic Review*, 111 (7) 2021.

[20] See M. König, K. Storesletten, Z. Song, and F. Zilibotti, "From Imitation to Innovation: Where is All that Chinese R&D Going?" *NBER Working Paper* 27404, 2021.

second half of the year and the RRR cut in December as a reaction to the slowdown in growth momentum. Going forward, the policy anchor will continue to be keeping money supply and TSF growth broadly in line with nominal GDP growth while maintaining appropriate liquidity. The authorities emphasized that they will continue to rely on structural credit policies to support SMEs until they have overcome the liquidity constraints caused by the pandemic, while noting that such policies helped improve credit allocation and that the SME loans from these policies have limited risks as they are carefully monitored. The authorities emphasized that they will adhere to prudent monetary policy, deliver good cross-cycle policy—policy that is designed to achieve longer-term structural objectives while maintaining policy stability, adjust the strength and pace of the policy in accordance with domestic and international economic and inflation developments, and focus on supporting financial services and the development of the real economy.

44. The authorities reiterated their policy of upholding the stability of the property market. To that end, they stressed the critical role of strong prudential rules to advancing the goal of reducing housing speculation and addressing financial risks in the sector. They noted close policy coordination among various ministries and local governments to resolve emerging risks from troubled real estate developers in a market- and law-based manner, with a focus on resuming construction of stalled projects and more broadly safeguarding the legitimate rights and interests of homebuyers.

45. The authorities stressed their policy of ensuring the stable and healthy development of the property sector going forward. They pointed to the establishment of a long-term mechanism for real estate regulation spanning prudential, land, tax, and other policies that share the objectives of reducing speculation, stabilizing house price expectations, and containing financial risks, within the larger goal of promoting high-quality development. The authorities saw merits in allowing local governments ample room to tailor real estate policies to local conditions.

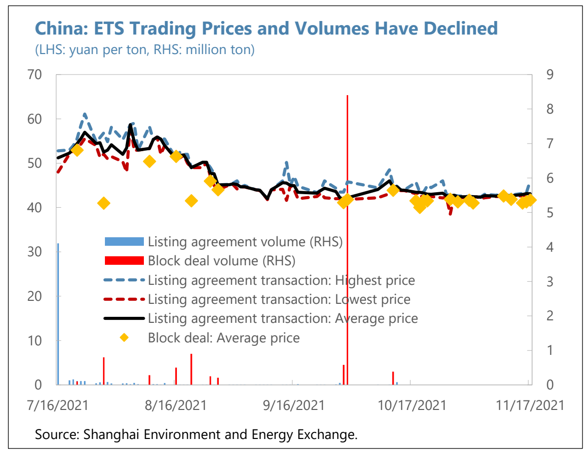
B. Promoting the Transition to a Green Economy

46. To be successful, China's climate strategy can combine three key approaches: (i) *rebalancing* to reduce the energy intensity of growth; (ii) making the best possible use of *carbon pricing mechanisms supplemented by market-based sectoral policies,* where needed, to steer the economy and minimize tradeoffs with GDP growth; and (iii) leveraging *green finance* to harness the power of private capital markets for the financing of climate investment needs.

47. Transitioning to a greener economy helps not only fight against climate change but will also reduce tradeoffs between climate goals and sustainable growth (see Box 7)**.** Rebalancing from traditional investment to more consumption-led growth would translate into a shift from heavy industry and construction, towards the less carbon-intensive service sector. This transition will reduce the energy and carbon emission intensity of output and therefore, reduce overall carbon dioxide (CO_2) emissions and contribute to more sustainable growth by lowering the excessive investment share of GDP. Decreasing the energy intensity of China's GDP through rebalancing would also lessen its energy demand and ease the pressure for energy security—in

particular, the dependence on coal, the largest source of energy generation. Based on scenario analyses using a computable dynamic general equilibrium (CGE) model,[21] simulation results show that rebalancing alone can reduce CO_2 emissions by as much as 15 percent compared to a no-rebalancing scenario under a similar GDP path.

48. However, rebalancing on its own will not be enough to reach China's climate goals, and the current approach to carbon pricing needs reinforcing. The rollout of the national Emissions Trading Scheme (ETS), a market-based carbon pricing scheme, represents a milestone—covering the power sector and about 40 percent of China's CO_2 emissions—that could ultimately transform the power sector by efficiently and cost-effectively reducing China's CO_2 emissions. In its current form, however, its impact will be limited as it allows for generous allocation of free and intensity-based permits, and ex-post adjustments. Moreover, the power sector is still predominantly state-owned, and prices are mostly set administratively, limiting the extent to which the ETS-implied carbon price will be passed on to downstream sectors and consumers and the incentives for power producers to adjust.



Source: Shanghai Environment and Energy Exchange.

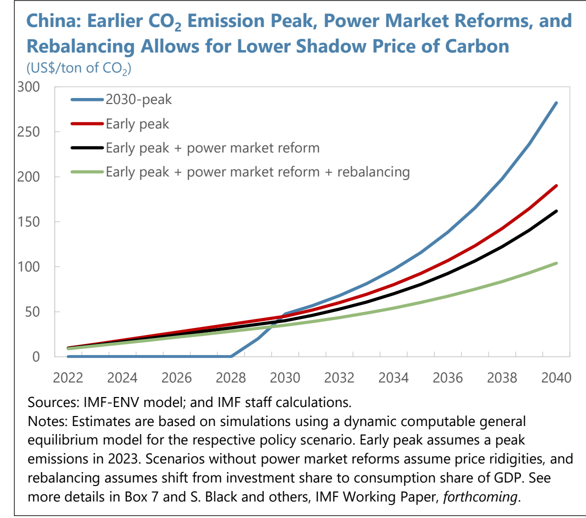
49. A combination of market-based policies and reforms as well as well-designed regulations can help steer the economy towards the carbon neutrality goal while reducing tradeoffs with growth. The main elements of the approach include:

- *Improving the national ETS to become an optimal carbon pricing tool.* Ideally, a robust carbon price commensurate with China's climate ambitions would be the approach of choice to rein in carbon emissions because it provides the right incentives for all market participants to seek and implement the most cost-effective ways of reflecting these goals. Even in the absence of further power market reforms, extending the ETS' coverage to other high-carbon sectors such as steel, iron, and cement, auctioning off allocation permits—using the proceeds as transfers to compensate vulnerable households and invest in green development, and consolidating the multiple intensity-based benchmarks into an absolute cap on emissions that is commensurate with an earlier peak year—would enhance its efficiency and make it closer to an optimal carbon pricing instrument.

[21] See S. Black and others, "A Comprehensive Package of Macroeconomic Policy Measures for Implementing China's Climate Mitigation Strategy," *IMF Working Paper*, *forthcoming*.

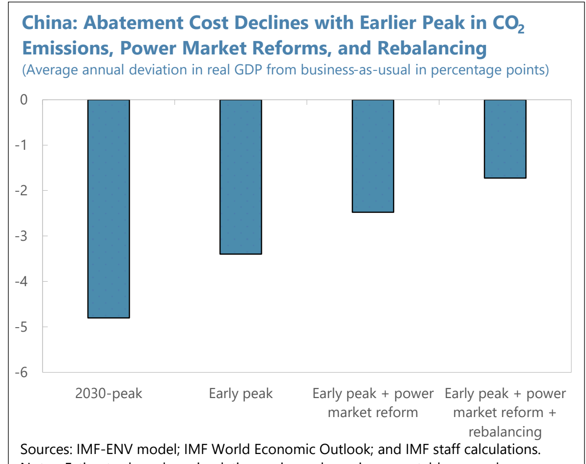
- *Market reforms to the power sector can make carbon pricing more effective.* Reforms to the power sector that will allow generators to adjust quantity and electricity price more freely to demand and supply—including between renewable power generators and firms through direct electricity trading—as well as to the carbon price signal of the ETS would enable the cost of decarbonization to be internalized and passed on to final consumers.

- *Implementing market-based sectoral policies to curb carbon emissions.* Sectoral policies and regulations include scaling up of an already-existing coal tax that is currently fairly modest and implementing feebates that combine fees to deter high energy- and carbon-intensive activities while rewarding energy-efficient and low-carbon activities. The applications of the feebate can range from waste management to electric utilities to vehicles.



China: Earlier CO_2 Emission Peak, Power Market Reforms, and Rebalancing Allows for Lower Shadow Price of Carbon
(US$/ton of CO_2)

Sources: IMF-ENV model; and IMF staff calculations.
Notes: Estimates are based on simulations using a dynamic computable general equilibrium model for the respective policy scenario. Early peak assumes a peak emissions in 2023. Scenarios without power market reforms assume price ridigities, and rebalancing assumes shift from investment share to consumption share of GDP. See more details in Box 7 and S. Black and others, IMF Working Paper, *forthcoming*.



China: Abatement Cost Declines with Earlier Peak in CO_2 Emissions, Power Market Reforms, and Rebalancing
(Average annual deviation in real GDP from business-as-usual in percentage points)

Sources: IMF-ENV model; IMF World Economic Outlook; and IMF staff calculations.
Notes: Estimates based on simulations using a dynamic computable general equilibrium model and are average real GDP deviations between the respective scenario vs. business-as-usual. Early peak assumes a peak emissions in 2023. Scenarios without power market reforms assume price ridigities, and rebalancing assumes shift from investment share to consumption share of GDP. See more details in Box 7 and S. Black and others, IMF Working Paper, *forthcoming*.

50. Intensifying decarbonization efforts sooner than currently envisaged will save costs and reduce unforeseen risks of delays and would bolster the credibility of the authorities' climate agenda. More intensive decarbonization efforts in the near term will allow for a smoother pace of adjustment that carries lower GDP costs and public financing needs as the climate benefits and positive technological spillovers from supporting green technologies will materialize earlier while costly subsidies can be phased out sooner. In addition, the absence of time-bound absolute caps on coal use and CO_2 emissions leaves room for emissions to increase in the short term, which could imply the need for much sharper policy shifts down the road. The risks of delay at the expense of future generations would be further amplified, if technology does not develop as expected or China's overall growth path changes unexpectedly to the downside. In fact, the IMF-ENV model simulation projection results comparing a sequence of layered policy scenarios—starting with 2030 peak emission, moving to an earlier peak in 2023, followed by power market reforms, and lastly, incorporating rebalancing—highlight a gradual decrease in the associated shadow price of carbon reflective of each scenario's policy, indicating reductions in inefficiencies. At the same time, the average annual GDP cost in the policy scenario relative to a business-as-usual baseline also declines as the policies progress from the 2030 peak scenario to a more optimal scenario with early peak in emissions, reforms in the power sector, and economic rebalancing.

51. Strengthening green finance will be essential to employ the power of private capital markets for the financing of China's very large climate investment needs.

- *On the way to carbon neutrality by 2060, investments are needed to ensure the deployment of renewables, update the electrical power grid system, and advance carbon abatement technologies.* The authorities have estimated that China will need to invest 1.5 to 2.0 percent of GDP (or RMB 2.2 trillion at current prices) per year to reduce carbon emissions until 2030, with the amount growing to RMB 3.9 trillion from 2030 to 2060. Improving data collection and disclosure requirements and aligning green bond issuance practice to international standards, including pre-issuance verification, monitoring and reporting, and more transparency on use of proceeds, would help China strengthen its green finance framework and mobilize private investment, from home and abroad (see Box 8).

- *At the same time, green finance policies should avoid adding to China's already-elevated debt and creating additional credit inefficiency problems.* To that end, regulators should refrain from directly or indirectly mandating green credit growth or lending targets, which tend to weaken risk management and can result in excess capacity. Equity, not debt, should take the lead where possible, particularly for riskier projects. While government incentives should play a role in overcoming market failure, it should be transparent and on-budget. Guarantees, if necessary, should be provided explicitly by specialized agencies backed by appropriate resources. All government support should be compatible with other fiscal policy objectives and overall debt sustainability.

52. Stronger prudential policies for climate risk would support financial stability and reinforce green-friendly credit allocation. Chinese lenders are exposed to large and growing portfolios of loans to coal firms and other carbon-intensive firms exposed to significant climate risk. Supervisors should require banks to establish comprehensive climate risk management practices, develop processes to evaluate the solvency impact of climate risk, and hold capital compatible with these evaluations.[22] This will help both improve financial system resiliency to the climate policy transition and strengthen incentives for shifting credit to greener firms. Incentivizing green finance through preferential risk weights should be avoided as it is incompatible with risk-based regulation and likely to cause unintended consequences, including undermining banks' capital buffers.

Authorities' Views

53. The authorities reaffirmed their commitment to carry out China's challenging climate ambitions but emphasized the need for a gradual implementation. While noting their recent submission of the updated nationally determined contribution and the mid-century long-term low greenhouse gas emission development strategy to the United Nations, they cautioned that recent power shortages have brought to the fore the need for balancing climate goals and safeguarding

[22] In the credit risk context, climate risks are usually considered either physical risks—risks from severe weather, rising sea levels, or changing climate—or transition risks, related to legal and policy changes stemming from climate change adaption efforts.

energy security. In their view, a gradual and orderly transition towards carbon neutrality entails allowing carbon emissions to grow before 2030 and for thermal power to play a supporting role, while vigorously developing renewable energy. The authorities agreed with staff's recommendation to rebalance the growth model towards consumption to soften tradeoffs between decarbonization and growth. They also confirmed the importance of optimizing and orderly expanding the existing ETS, and upgrading China's power grid system and energy storage capacities in preparation for a meaningful increase in renewable energy supply.

54. The authorities agreed on the importance of green finance. They emphasized recent progress in the areas of green taxonomy and green lending while stressed the need to develop transition finance mechanisms that support the gradual carbon reduction of existing high-carbon assets and activities.

C. Safeguarding Financial Stability

55. Exceptional financial support measures need to be phased out while strengthening micro- and macro-prudential frameworks to prevent further build-up of financial vulnerabilities. Supervisors should systematically review asset quality to ensure that banks properly recognize both legacy and emerging problem loans after the expiration of the repayment moratoria and hold adequate capital and liquidity buffers or submit credible restoration plans under heightened supervision. The authorities should continue upgrading systemic risk surveillance to effectively monitor vulnerabilities in the nonbank financial sector (particularly, fintech and asset management) and the property sector, as well as those related to local governments. This includes monitoring financial risks related to macrofinancial feedback loops and policy risks. Prudential policy should be used to contain excessive leverage, support proper risk-pricing and limit regulatory arbitrage.

56. A comprehensive bank restructuring approach is urgently needed to strengthen the banking system and improve its capacity to support the recovery.[23] A comprehensive, transparent, and predictable approach to address weak banks while containing moral hazard should require failing banks to exit with shareholders and creditors bearing losses in line with a clearly established hierarchy of claims. Depositors should be protected up to the coverage limit using deposit insurance and the use of public funds for recapitalization should be a last resort and only come after burden sharing by existing investors. This can maintain financial stability at a lower cost than the current case-by-case approach (see Figure 8). This requires:

- *Prioritizing common equity in bank capital.* The authorities have nearly completed the planned bank recapitalization using funds from the issuance of special local government bonds in an amount of RMB 200 billion. However, a large share of new capital is in the form of Additional Tier-1 or Tier-2 capital that absorbs losses only in severe stress scenarios, and more effort is

[23] See J. S. Kang and others, "Managing Down the Debt Overhang: Market-based Exit Mechanism for the Chinese Economy." IMF Departmental Paper, *forthcoming*.

needed to lift the still-low levels of common equity that will generally improve the capacity of banks to provide credit.

- *Adopting a reform of the legal framework for bank resolution in line with international standards*. While the introduction of aspects of a bank resolution regime in the proposed amendments of the Commercial Banking Law is a welcome step, the regime would benefit from establishing a single resolution authority with a clear mandate, adequate powers and legal protection, and sufficient institutional separation from bank supervision. In addition, resolution powers should be enhanced to enforce the recognition of losses, the sale and/or transfer of assets, the creation of bridge banks, the execution of bail-in, and the preservation of critical bank functions. Progress along these lines would help ensure that shareholders and creditors will bear losses in accordance with a clearly established hierarchy of claims.

57. As broad-based firm support is phased out, corporate restructuring and insolvency frameworks need to be strengthened to facilitate market-based exit of nonviable firms while ensuring financial stability. This entails:

- *A market-based corporate restructuring framework to facilitate deleveraging and exit of nonviable firms*. The framework should include all restructuring and insolvency options, be based on a triage of insolvent firms, and be conducive to loss recognition and burden sharing through out-of-court, hybrid restructuring, and the general corporate insolvency regime. Improving the existing insolvency procedures and their coordination with other restructuring options would help reduce excessive indebtedness in an orderly fashion. The capacity of the insolvency system will increase with further support to the specialization of judges and insolvency administrators.

- *A well-coordinated approach to phase out implicit guarantees.* Given the economic and financial importance of the SOE segment, a gradual approach paired with coordinated and well-communicated action to restructure financially vulnerable entities will avoid unintended adverse macrofinancial feedback loops between corporates, banks, and local governments, especially in regions with weak public finances.[24] Weaker provinces might require support, and most will benefit from reforms to improve the governance of local governments' public finances.

58. Continuing efforts to address weakness in the anti-money laundering and countering-financing of terrorism (AML/CFT) framework. The Financial Action Task Force noted progress in China upgrading its legal and institutional framework (technical compliance) in its second enhanced follow-up report (October 2021), in particular, amendments to the Measures for AML/CFT Supervision and Administration of Financial Institutions to better impose internal control requirements, and the issuance of measures to expedite foreign seizing, freezing and confiscation requests. The steps taken by the authorities to ensure the compliance of the e-CNY with AML/CFT regulations, including the planned AML/CFT guidelines for the e-CNY operating institutions, are welcome. Further efforts should go into increasing the transparency of beneficial owners of legal entities operating in China (also an anti-corruption measure), introducing a comprehensive legal

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[24] See GFSR, October 2021.

framework to implement United Nations-based targeted financial sanctions requirements, and improve financial sector supervision and preventive measures (e.g., customer due diligence and politically exposed persons).

Authorities' Views

59. The authorities noted their continuing efforts to address financial vulnerabilities and strengthen risk resolution mechanisms. They stressed PBC's ongoing improvements to its risk assessment mechanisms for banks and large nonfinancial firms as it explores the establishment of a financial stability policy framework. The authorities also emphasized that the procedures and conditions for dealing with weak lenders have been strengthened but will continue to be flexible and tailored to the circumstances of each case. They explained that the forthcoming revisions to the Commercial Banking Law are based on both international standards and Chinese experience and will provide additional detailed rules on market-based exit mechanisms for commercial banks.

SHARING THE BENEFITS OF HIGH-QUALITY GROWTH

60. China has much to give as to gain by contributing to multilateral solutions. By supporting multilateral efforts, China stands to reap benefits that are not only shared with other countries but also complementary towards its own quest for high-quality growth. These include tackling climate change, sharing gains from trade, COVID-19 vaccines, and continued opening up to facilitate technology spillovers.

61. China should continue to play a key role in the global effort to fight the pandemic and help the world secure a broad-based, green recovery. These efforts include China's important contributions to broaden access to vaccines and put the debt of low-income countries (LICs) on a sustainable footing, including by implementing in a timely manner the G20 Common Framework for debt treatment by all Chinese entities as well as recent announcement to channel at least 25 percent of its SDR allocation to support LICs. China is also a key contributor in supporting multilateral trade—including through WTO reform and finding common solutions to the issues complicating the economic relationship with important partners such as the U.S. and EU. Recent trade and investment agreements that China signed can potentially achieve significant progress in the areas of market access, intellectual property right protection, and further liberalization in services trade through those commitments (see SIP 6). The recent Regional Comprehensive Economic Partnership agreement between China and 14 other countries should also strengthen regional trade integration in Asia. Accepting and implementing the ambitious provisions of the Comprehensive and Progressive Agreement for Trans-Pacific Partnership agreement would be a positive step for China and would add further momentum for economic integration. China's leadership role in global climate efforts including the co-chairing of the G20 Sustainable Finance Study Group and cooperation with the EU on green investment standards contributes to a greener recovery. Moreover, a greener Belt and Road Initiative (BRI)—bolstered by China's recent announcement to cease funding of new coal projects abroad—can help China project its climate goals internationally (see Box 9). China can also use this platform to encourage the spread of good governance and anti-

corruption efforts, incentivizing countries that are part of the BRI to adopt and apply legal frameworks that prevent and sanction bribery, promote and protect whistleblowers, prohibit the signing of contracts with shell companies, and facilitate transparency and accountability (e.g., procurement rules consistent with international best practice, and the publication of information on contract formation and performance.)

Authorities' Views

62. The authorities reiterated their commitment to global cooperation. They concurred on the need to support continued efforts to end the pandemic, including through broad vaccine access and other means. The authorities noted the importance of pursuing further reforms to deepen regional and global trade integration and emphasized their continued commitment to an open and rules-based trading system. They stressed that the primary principle of overseas lending is strict compliance with host-country regulations to bring the autonomy and initiative of the host-government into full play. Meanwhile, the authorities recognized the value of countries adopting stricter environmental standards appropriate to their development stage and encouraged the implementation of such standards in overseas projects. The authorities also stressed their continued progress in the international cooperation of tackling climate change, including forging a Common Green Taxonomy with the EU and enhancing climate ambitions with the U.S.

STAFF APPRAISAL

63. China's recovery is well advanced but remains unbalanced and growth momentum has slowed. These trends reflect the rapid withdrawal of fiscal policy support, the further delay of the full recovery of consumption amid more frequent COVID-19 outbreaks and slowing real estate investment owing to policy efforts aimed at reducing leverage and the attendant strains on large property developers. Regulatory measures targeting the technology sector have increased policy uncertainty. Productivity growth is declining as decoupling pressures are increasing with only limited progress in key areas of structural reforms. On a preliminary basis and adjusting for remaining transitory pandemic-related factors, the external position in 2021 is broadly in line with the level implied by medium-term fundamentals and desirable policies.

64. China's climate strategy has begun to take shape with the release of detailed action plans. There are strong indications that all levels of government and key ministries have started the process of implementing China's climate agenda. However, the known plans suggest a relatively steep carbon adjustment that is backward loaded, allowing for further increases in carbon emissions levels until 2030. Greater frontloading of decarbonization efforts has significant merits, but the recent power shortages have also brought to the fore the potential for tradeoffs between climate goals and growth.

65. Large downside risks remain. The real-sector risks to the growth outlook remain predominantly on the downside. The recovery in private consumption might get derailed again by even more frequent COVID-19 outbreaks, and macroeconomic policy might fail to halt the slowing

growth momentum. A sharper-than-expected slowdown in the real estate sector could trigger a wide range of adverse effects and—along with elevated corporate debt—poses risks to financial stability. Climate change continues to be a constant threat to the economy, both from weather-related shocks induced by temperature increases and the path of decarbonization that can entail extensive changes—all associated with wide-ranging risks.

66. Appropriate policies supported by effective monitoring will allow China to contain downside risks and secure high-quality growth that is balanced, inclusive, and green. This will require deploying the available policy space to support the economy and rebalancing in the short term and comprehensive reforms to sustain high-quality growth going forward, while moving to address financial and property sector risks, including by stepping up surveillance of the ongoing property sector stress.

67. More expansionary macroeconomic policy would support short-term growth momentum and rebalancing. Fiscal policy should shift to neutral in 2022, with its composition adjusted to promote economic rebalancing. More fiscal support to strengthen social protection would reduce households' precautionary savings and facilitate the transition to consumption-driven and inclusive growth. Focusing on interest rate-based measures, monetary policy should be accommodative given low core CPI inflation and the still-negative output gap.

68. A multi-pronged approach will help realize China's climate goals. A successful strategy entails an early start and a comprehensive approach that combines economic rebalancing towards a more consumption-based growth model with the use of carbon pricing tools such as an improved national ETS, market-based sectoral policies, and leveraging green finance to help achieve the climate goal while supporting high-quality growth.

69. Reaccelerating structural reforms is key to secure a balanced recovery and raise productivity. Further opening up of domestic markets, reforming SOEs, and ensuring competitive neutrality, combined with a strengthening of regulations in a transparent and predictable manner to ensure fair competition and consumer protection, will spur innovation and improve business dynamism.

70. Financial and property sector risks need to be addressed in a coordinated fashion to protect the recovery. Ongoing efforts to address high corporate leverage and phase out implicit guarantees should be accompanied by improving market-based insolvency and resolution frameworks, which will also strengthen the banking system and improve its capacity to support the recovery. Policymakers should guard against systemic contagion in property markets by improving risk monitoring and policy coordination and adopt structural measures to reduce risks over the longer term.

71. China should continue to play an important role in multilateral efforts to address global challenges. China can help end the pandemic crisis and secure an inclusive and green recovery by continuing its COVID-19 vaccine distribution and put the debt of LICs on a sustainable footing, including by implementing in a timely manner the G20 Common Framework for debt

treatment by all relevant Chinese entities, greening the BRI, and contributing to building a more open, stable, and rules-based international trade system.

72. China should urgently address macroeconomic data gaps to further improve data credibility and strengthen policy making.

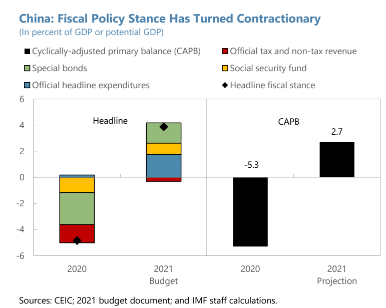
73. It is proposed that the next Article IV consultation with China takes place on the standard 12-month cycle.

Box 1. Macroeconomic Policy Stance[1]

The macroeconomic policy stance has tightened considerably since mid-2020 as the authorities' focus shifted from supporting the recovery to other policy priorities, including slowing the pace of growth in debt. Fiscal policy shifted to a strongly contractionary stance, while monetary policy tightened moderately overall as credit growth slowed and the policy rates remained unchanged.

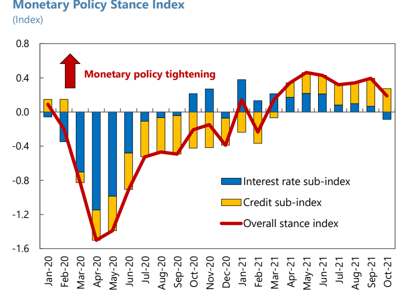
Fiscal Policy Stance: The authorities tightened fiscal policy significantly in the first half of 2021 after aggressively supporting the economy in 2020. The estimated fiscal impulse was a negative 4 percent of GDP in 2021H1 relative to 2020H1. The expiration of most COVID-19-related revenue measures, particularly the exemptions on employer social security contributions, as well as a growth-induced tax rebound drove revenue growth. Slow issuance of Special Local Government Bonds to finance investment, investment delays due to repeated COVID-19 outbreaks, and an emphasis on controlling current spending held back expenditures. For the full year, the fiscal consolidation is projected to be about 3.4 percent of GDP in the net lending/borrowing deficit. This implies a neutral to slightly expansionary stance in 2021H2. For the full year, the cyclically adjusted primary deficit is projected to narrow by 2.7 percentage points of potential GDP.

China: Fiscal Policy Stance Has Turned Contractionary
(In percent of GDP or potential GDP)



Sources: CEIC; 2021 budget document; and IMF staff calculations.
Notes: Special bonds include local government and Treasury issuances; social security fund calculated as contributions less expense.

Monetary Policy Stance Index
(Index)



Sources: CEIC; Haver Analytics; and IMF Staff calculations.

Monetary Policy Stance: Staff's monetary policy stance index suggests that monetary policy has tightened moderately compared to its average stance in 2020, as credit growth slowed in 2021 and market interest rates remained above their 2020 means. Market interest rates have declined somewhat recently, reflecting both slowing credit demand as domestic activity has cooled and the RRR cut in July. Policy rates have remained unchanged. Preliminary estimates suggest that the RRR cut in December could shift the monetary policy stance from moderately tight in 2021 to neutral going forward. The PBC traditionally relies on both interest rate-based (such as policy rates) and non-interest-rate policy instruments (such as credit policies) to provide monetary support to the economy, and the monetary policy stance index uses a two-step statistical approach that first aggregates the information contained in both interest rate-based and non-interest rate instruments into an *interest rate sub-index* and *credit sub-index*, respectively, and then aggregates the two sub-indices into an overall index.[2]

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[1] Prepared by Fei Han and John Ralyea.

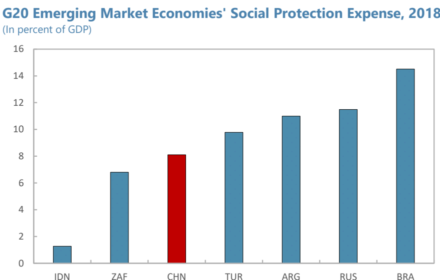
[2] In the first step, two sub-indices are estimated using the principal component analysis, with the first one capturing changes in policy rates and liquidity provision (such as RRR cuts and open market operations) that affect market interest rates (*interest rate sub-index*) and the other aiming to capture the credit provision such as credit growth targets (*credit sub-index*). The variables included in the calculation of the two sub-indices are: key short-term money market interest rates, 1-year benchmark lending rate/loan prime rate, change in reserve requirement ratios, and nominal effective exchange rate (for interest rate sub-index); and growth rates of M2 (excluding government deposits), bank lending in RMB, and TSF (excluding government bonds) (for credit sub-index). All variables are seasonally adjusted, detrended, and standardized by mean and standard deviation. In the second step, the two sub-indices are aggregated into an overall stance index through a simple or weighted average, with the weights obtained based on the impact of each sub-index on economic activity using a vector autoregression model.

Box 2. Improving Household Economic Security[1]

Despite a significant expansion in insurance coverage over the last decade, China's social protection system—that is, social insurance and social assistance—remains incomplete. Low benefit adequacy, particularly for rural residents, and unemployment insurance that covers less than half of urban workers leave households vulnerable to income, health, and old-age risks. Higher benefits and coverage would provide households with more security. Accelerated unification of the system would support these objectives and help address financial stability concerns.

China's social insurance consists of four separate funds: Endowment (Pension) Insurance, Medical Insurance (including maternity insurance), Unemployment Insurance, and Worker Injury Insurance. The pension and medical insurance fund have separate plans for urban employees and rural and non-salaried urban residents. The Social Insurance Law (2011) provides the legal framework for the social insurance system. Social assistance consists primarily of a minimum income guarantee program (*dibao*).

G20 Emerging Market Economies' Social Protection Expense, 2018
(In percent of GDP)



Sources: Government Financial Statistics (GFS); and IMF staff calculations.
Notes: 1. General Government, except Argentina and Brazil, which are central government including social security funds. 2. Health spending is excluded. 3. Data not available in GFS for India, Mexico, and Saudi Arabia.

Social protection spending has doubled over the last decade. However, at 8 percent of GDP, China's social protection spending is on the low side relative to G20 emerging market peers**.** The low spending reflects inadequate pension (for residents), medical, and unemployment benefits as well as poor coverage of unemployment insurance. In addition, the system is highly decentralized. This complicates broader risk pooling and benefit portability, with wide gaps in the financial health of social insurance systems within and between provinces exacerbate. Moreover, many migrant workers and a growing cadre of 'gig' workers remain outside the contributory insurance system.

Reforms would improve the generosity, coverage, and reliability of the social protection system. Accelerated implementation of 2011 Social Insurance Law would speed up unification, enhancing benefit portability and service delivery. Raising the medical insurance benefit cap and increasing the average resident pensions benefit to the absolute poverty line, as well as aligning the base for unemployment contributions and benefits, would improve benefit adequacy. Development of well-planned and coordinated third pension pillar with incentives would provide an avenue for 'gig' workers to save for retirement. Social assistance could be expanded and made more effective by introducing cash transfers to households linked to a macroeconomic trigger (e.g., changes in the unemployment rate) and a child allowance. To expand fiscal space for these measures, China could raise the statutory retirement age (a retiree's life expectancy is twice as long today as when the statutory age was set), better enforce contribution collections, develop a more progressive tax system, and reprioritize expenditures (See SIP 1).

[1] Prepared by John Ralyea.

Box 3. Progress on Structural Reforms[1]

Progress has been made in opening up, green transition, and hukou reform. At the same time, there remains significant room for SOE reform and strengthening the role of markets. Further reforms along these lines would help anchor growth, reduce external imbalances, and build a more resilient, green, and inclusive economy.

Opening up: significant progress. The government has adopted the nationwide negative list approach for the access of foreign investment, continued financial opening up, advanced reforms to facilitate trade, services, and investment in pilot regions. It published a notice on the equal treatment of foreign firms in government procurement, and will issue the 2021 negative list for foreign investment by year end. China completed the ratification of the RCEP agreement and has applied to join the CPTPP.

Rebalancing: limited progress. The government has taken steps to incrementally deepen reform of the health care system, but there is scope to further strengthen the overall social protection system to reduce households' precautionary saving and inequality.

Green transition: some progress. China has introduced a national Emissions Trading Scheme. In its current form, however, its impact is limited as it allows for generous allocation of free and intensity-based permits, and ex-post adjustments. Individual ministries and local governments rolled out action plans to respond to the country's carbon goals differently. A combination of market-based policies and reforms as well as well-designed regulations can help steer the economy towards carbon neutrality while reducing growth tradeoffs.

Labor and product markets: some progress. The government introduced measures to support flexible employment, and further relaxed *hukou* restrictions. Regulators issued anti-monopoly guidelines for the platform economy, and have published a draft amendment to the Anti-Monopoly Law, expanding regulation of the tech sector, and significantly increasing penalties. But there is scope to further unify markets by removing local protections, improving labor market flexibility through more comprehensive *hukou* reforms, and ensuring transparency and predictability in making regulatory changes to reduce policy uncertainty.

SOEs: limited progress. After a series of defaults by local SOEs, the government has focused on improving supervision. However, limited progress has been made in core reform areas such as removing implicit guarantees or tightening budget constraints of SOEs, and there are indications that SOEs will play a larger, rather than a smaller, role for R&D and other efforts to improve technological self-reliance going forward. Market dynamism anchored on the entry of young, innovative firms has declined in recent years.

Financial sector: some progress. As the government gradually tightened exceptional measures, the focus shifted back to risk prevention. The authorities strengthened supervision of real estate loans and non-bank payment institutions. The frameworks for supervision and administration of AML/CFT have been established, and measures were rolled out towards building a high-quality corporate bond market.

Policy frameworks: limited progress. The PBC has facilitated a technical adjustment to the calculation of the self-regulated upper limit of deposit interest rates. The modernization of the monetary policy framework should continue to enhance the interest-rate transmission, including by further moving towards an interest rate-based framework. Fiscal policy would benefit from efforts to modernize the budget management system, optimizing the tax structure, and developing a comprehensive medium-term fiscal framework.

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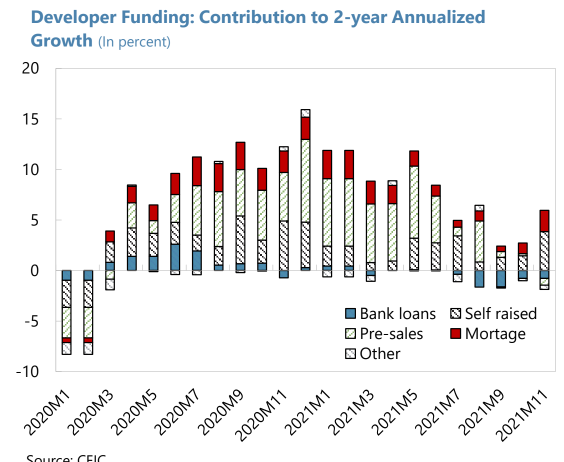
[1] Prepared by Diego Cerdeiro and Xin Li.

Box 4. Downside Risks from Property Developer Stress[1]

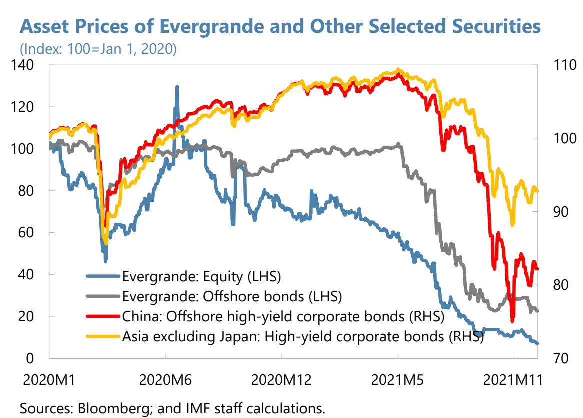
One of China's largest property developers, Evergrande, has begun restructuring talks with offshore creditors to alleviate rising financial stress following a tightening of regulations to rein in the highly-leveraged real estate sector. Funding pressures have since spread to other property developers, posing concerns of negative spillovers to the broader economy and global markets.[2] The authorities have the policy space and tools to contain these risks but will have to balance difficult trade-offs between financial stability and moral hazard. Over the long term, deeper structural reforms are needed to comprehensively address the risks from China's property market.

Developer Funding: Contribution to 2-year Annualized Growth (In percent)



Source: CEIC.

Asset Prices of Evergrande and Other Selected Securities (Index: 100=Jan 1, 2020)



Sources: Bloomberg; and IMF staff calculations.

Evergrande, one of China's largest property developers, has entered restructuring negotiations amid severe funding strains. With over US$300 billion in liabilities to creditors, suppliers, and households, the company's bond prices are trading at distressed levels. So far, contagion has spread mostly to other financially weak developers and lower-rated corporates in China, with limited impact on higher-rated developers. Markets in and outside of China initially reacted strongly to Evergrande's stress but subsequently stabilized following actions by the authorities to limit wider spillovers.

Evergrande's troubles follow a broad regulatory campaign to rein in China's highly leveraged real estate sector. Property plays a large role in both China's economy and financial system, accounting for about a quarter of both total fixed investment and bank lending over the past 5 years before the pandemic. On the demand side, the property sector's importance reflects massive household savings—linked, in part, to the inadequate social protection system (see Box 2)—and limited alternative investment options. After allowing private housing investment to function as a key countercyclical policy tool in the aftermath of the Global Financial Crisis, including through a significant run-up in leverage, the authorities have repeatedly sought to rein in the property sector owing to financial stability concerns. They redoubled these efforts after the initial recovery from last year's national pandemic lockdown, including by imposing tougher restrictions on new funding for developers.

New controls on developer credit bring to the fore concerns over the potential for intra-sector contagion. Like Evergrande, many property developers are also highly leveraged, with weak earnings and liquidity. Many developers are also exposed to inadequately disclosed risks, like sizeable but opaque off-balance sheet risks from guarantees and joint ventures. The sector's growing dependence on pre-sales of

Box 4. Downside Risks from Property Developer Stress (continued)

unfinished housing as a source of funding—now over one-third, up from 25 percent in 2014—increases its vulnerability to sector-wide confidence shocks and runs.[3] Some of this revenue is not properly escrowed, a risky practice which increases leverage and makes households creditors, despite their limited ability to monitor the risks of these loans. The failure to complete unfinished housing inventory by defaulting developers not only undermines consumer confidence, but also risks lowering households' willingness to buy homes via pre-sales with other developers, propagating liquidity strains within the sector. These vulnerabilities are compounded by survey-based evidence that points to high price-to-income ratios in various cities.

These vulnerabilities could potentially lead to a broader credit crunch among developers, raising risks of a downside scenario engulfing the wider real estate sector:

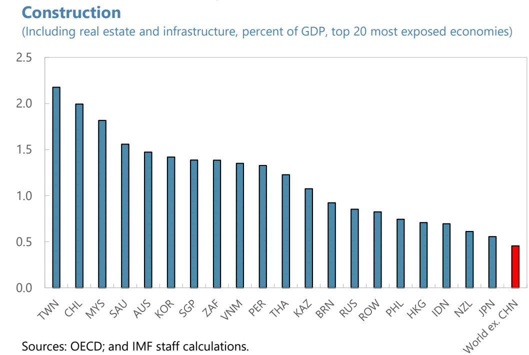
- Developer funding pressures could spill over to *property prices* if housing demand slumps or distressed developers are forced to sell inventories at a discount, reinforcing *contagion within the sector.*
- Falling prices and increasing construction delays could *halt pre-sales* and trigger a *sharp retrenchment of housing demand* by households generally, further amplifying financial stress for property developers.
- At this point, the financial system might be affected, causing *credit supply to contract* for developers and households alike. While *banks' loan exposure* to Evergrande is not systemic, lending to real estate firms represents 7 percent of total lending, residential mortgages are another 21 percent, and a large share of other bank loans are collateralized by property. In addition, banks are highly exposed to non-bank financial institutions, which in turn hold large exposures to developers and other land-exposed firms. Trusts, a type of NBFI, have financed between 16-22 percent of the rapidly growing real estate investment in China over the last four years.

A sharper-than-expected slowdown in the property sector could trigger a wide range of adverse effects on aggregate demand, with feedback loops to the financial sector. Domestically, this could include a sharp retrenchment of real estate investment, which in 2020 accounted for an estimated 8.7 percent of GDP. This would have knock-on effects on other private investment as the real estate sector accounts for 11 percent of total purchases of intermediate materials. Moreover, local governments may be forced into unwanted fiscal consolidation as revenues from land sales fall. And a sustained fall in house prices would likely weigh on private consumption, through weaker income and employment (construction represents 13 percent of total employment) and wealth effects (80 percent of households own their homes).

A sudden slowdown in China's growth would create spillovers through trade and commodity prices. Model-based simulations of a decline in investment in China due to financial stress suggest that a one-percent decline in China's output lowers growth in the rest of the world by about one-tenth of a percent (Dizioli and others, 2016). While real estate investment is less trade-intensive than other investment, direct and indirect trade exposures from the rest of the world are still sizeable. Foreign value added in China's construction sector (including both real estate and infrastructure) accounts for 0.5 percent of global (excl. China) GDP, with larger exposures for some Asian and commodity exporting economies. China's final demand in the construction sector absorbs a sizeable fraction of global value added in basic metals (14 percent), mining (6 percent) and oil and chemicals (5 percent) sectors.

Box 4. Downside Risks from Property Developer Stress (concluded)

Financial spillovers would mostly operate via a deterioration in global risk appetite. While direct nonresidents' holdings of Chinese financial assets have grown in recent years as a result of the inclusion of China in global benchmark indexes, with property developers being active issuers in offshore bond markets (US$200 billion of outstanding bonds), direct exposures to China remain relatively small. However, given strong trade-related spillovers, global risk appetite would likely be affected, which could lead to tighter financial conditions, especially in emerging markets (GFSR, Apr, 2016).



The policy response to property developer stress necessarily involves difficult trade-offs. In the short term, authorities have the policy space and tools to limit disorderly spillovers within the financial sector and lessen any adverse impact on the economy. The timing and extent of support, however, must balance the need to avert destabilizing confidence shocks with the imperative to minimize backtracking in efforts to curb moral hazard and contain leverage. Key elements of a policy response should include:

- *Guarding against systemic contagion*: For now, the priority should be to contain large-scale spillovers to housing demand and economic activity while still allowing market forces to reduce vulnerabilities. This requires intensifying risk monitoring efforts, strengthening the central government's coordinating role in policy responses, and facilitating the restructuring of troubled developers while ensuring the timely completion of pre-sold housing inventories.
- *Dealing with escalating risk*: if large-scale spillovers to housing markets threaten economic and financial stability, bolder steps will be needed including government backstops for liquidity provision to stressed developers and guarantee mechanisms for completion of presold housing. These measures should be temporary and subject to strict safeguards to minimize moral hazard (*see below*). Decisive macroeconomic easing would protect against shortfalls in aggregate demand.
- *Addressing structural shortcomings.* As soon as risks recede, ensuring property sector risks decline to safer levels will require curbing risks from pre-sales practices, introducing property taxes, and other measures to ease investment-related housing demand and reduce local government incentives to boost property markets.

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[1] Prepared by Diego Cerdeiro, Henry Hoyle and Phakawa Jeasakul.

[2] Escalating tensions in the real estate sector are part of the financial stability risk scenario, described as a medium-likelihood event in the Risk-Assessment Matrix (see Appendix II).

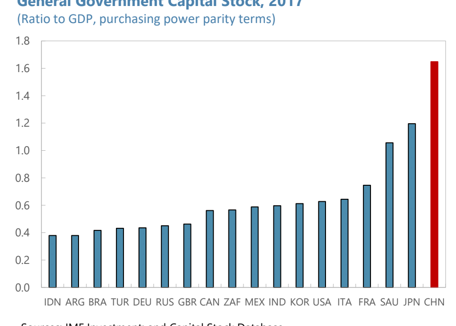
[3] Despite legal limitations on the use of pre-sale funds, many developers are believed to use these funds with limited oversight and for a wide variety of corporate purposes.

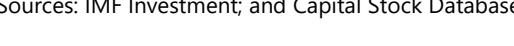
Box 5. Public Investment: Ripe for Reprioritization[1]

Investment driven development appears to have run its course in China. *China's general government capital stock is the highest among G20 members and overall investment returns are falling. Looking ahead, reprioritization of government spending toward households coupled with improved public investment management would likely deliver greater growth for each yuan spent.*

China's general government capital stock, measured in purchasing power parity terms, towers above peers. Since the Global Financial Crisis, growth in gross investment has accounted for than 50 percent of total annual growth, on average. Over time, such sustained high investment and consequent large capital stocks can have adverse implications. For example, the real return on capital in China has trended down the last quarter century. The primary driver of the fall has been the decline in the marginal physical product of capital.

General Government Capital Stock, 2017
(Ratio to GDP, purchasing power parity terms)

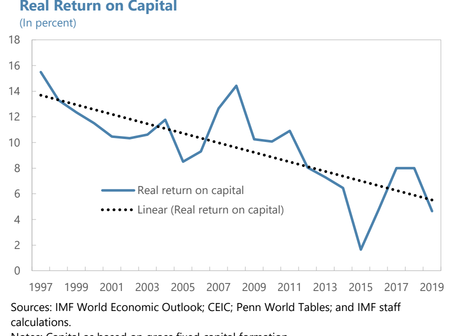



Sources: IMF Investment; and Capital Stock Database.

These stylized facts are derived from standard methodology. The total *capital stock* is estimated using the perpetual inventory method from annual gross investment less depreciation. Separate estimates are calculated for the public and private capital stock based on annual public and private gross fixed capital formation. The *real net rate of return on capital* has been estimated from:[2]

$$R_t = \frac{\propto_t - (\mu - 1)/\mu}{P_t^K K_t / P_t^Y Y_t} + [P_t^K - P_t^Y] - \delta_t$$

Real Return on Capital
(In percent)



Sources: IMF World Economic Outlook; CEIC; Penn World Tables; and IMF staff calculations.
Notes: Capital as based on gross fixed capital formation.

where $\propto_t$ is the capital share of income, μ adjusts for imperfect competition, i.e., the price of capital (P_t^K) includes a rough estimate of a markup of 10 percent over the marginal cost of capital, P_t^Y is the GDP deflator, Y_t is total income (i.e., constant GDP), P_t^K is the price of capital, K_t is the capital stock, and δ_t is the depreciation rate. The first term on the right-hand side of the equation provides an estimate of the return on capital. When the prices of capital and output are the same this becomes the marginal physical product of capital. The second term proxy's a real "capital gain" to capital (the rate of change in the price of capital in terms of consumables).

A very high capital stock and declining returns to investment suggest other uses of scarce fiscal resources. While there might be room to improve public investment management, reprioritizing spending to address household vulnerabilities to shocks and growing income inequality would likely yield particularly beneficial economic and social returns.

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[1] Prepared by John Ralyea.

[2] See C. Bai, C. Hsieh, and Y. Qian, "The Return to Capital in China," *Brookings Papers on Economic Activity*, 2:2006.

Box 6. Summary of Sovereign Risk and Debt Sustainability Analysis (SRDSA)[1]

China is a pilot country of the Fund's new methodology for assessing sovereign risk and debt sustainability.[2] The SRDSA, which complements the analysis using the MAC DSA (See Appendix III), shows that China has a moderate risk of sovereign stress over the medium term.

The Sovereign Risk and Debt Sustainability Framework (SRDSF) will replace the existing Debt Sustainability Framework for Market Access Countries (MAC DSA) to further strengthen analysis of debt-related vulnerabilities, including through improved predictive accuracy. The SRDSF assesses the risk of sovereign stress over three different time horizons: near-term (1-2 years), based on a multivariate (logit) model; medium-term (5 years) consisting of (i) a debt fan chart assessing prospects for debt stabilization, (ii) a granular analysis assessing rollover risks, and (iii) triggered stress-tests assessing specific risks (e.g., natural disasters, commodity price shocks, banking stress); and long-term (beyond 5 years). This box adopts this new framework to assess the risk of sovereign stress over the medium term in China.

Risk of Sovereign Stress

	Mechanical signal		Final assessment	Comments
	Budgetary 3/	Augmented 3/		
Medium term (overall)	Moderate	High	Moderate	The high debt level under the augmented scenario is the main medium-term sovereign stress risk. However, the feasible fiscal adjustment anticipated in the baseline, if continued, would stabilize debt in the long run. The general government's positive net financial worth—estimated to be 10.5 percent of GDP in 2017—low real borrowing cost, and a closed capital account mitigate the risk.
Gross financing needs (GFN)	Moderate	High	Moderate	
Debt fan chart	High	High	High	

The medium-term risk of sovereign stress is assessed to be moderate.[4]
Reflecting the elevated debt level forecast for 2026, the *debt fan chart analysis* signals a high risk of stress under both the budgetary and augmented scenarios over the medium term, with the probability of augmented debt stabilizing in the next five years being estimated to be less than 25 percent. However, gradual fiscal adjustment of about 0.75 percent of potential GDP per year would stabilize debt in the long run.

The *gross financing needs* (GFN) module signals a moderate to high risk of sovereign stress over the medium term, depending on the perimeter. In the augmented scenario, the average projected GFN remains large despite a gradual tapering in the primary deficit from a high level in 2020. However, staff assesses medium-term financing risks to be moderate due to the availability of liquid assets (government deposits in the banking system are a third of GDP), the ability of domestic financial institutions to absorb higher issuances in a stress scenario, and little external debt. For example, the largely state-dominated commercial banking system is estimated to hold over 80 percent of the augmented general government debt, but this is only a quarter of the system's assets.

[1] Prepared by John Ralyea.

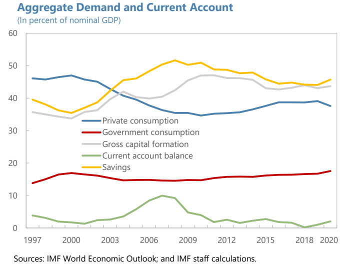
[2] See Review of The Debt Sustainability Framework for Market Access Countries, IMF Policy Paper 2021/003.

[3] See Appendix III for a description of the budgetary and augmented scenarios.

[4] Sovereign stress can manifest itself in the form of high/rising borrowing spreads, high/rising inflation, loss of market access, default, among others.

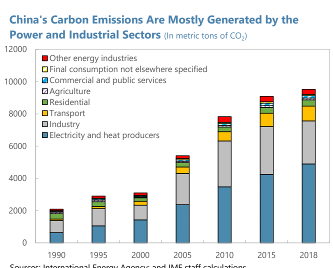
Box 7. Reaping a Double Dividend Through Rebalancing: Carbon Neutrality and High-Quality Growth[1]

A strong reform effort to rebalance growth from investment towards consumption will not only advance China's long-standing goal of achieving higher-quality growth. By lowering the carbon intensity of GDP growth, it will also make a significant contribution to fulfilling China's carbon neutrality pledge.

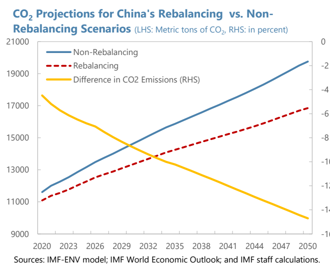


Aggregate Demand and Current Account
(In percent of nominal GDP)
Sources: IMF World Economic Outlook; and IMF staff calculations.

The share of investment in China's GDP remains high, pointing to continued domestic imbalances. While the share of private consumption has been rising during the last decade, it remains significantly below its end-1990s level and peer economies. A key driver is China's unusually high household saving rates,[2] partly reflecting precautionary savings needs related to gaps in the coverage and limits in the adequacy of the social protection system (see Box 2). Continued very-high investment, including in construction, will likely mean falling productivity and lower efficiency, drive up already-high debt and further elevating financial risks. Rebalancing towards a more consumption and services-based economy has been a consistent priority in the last several Five-Year plans.



China's Carbon Emissions Are Mostly Generated by the Power and Industrial Sectors (In metric tons of CO_2)
Sources: International Energy Agency; and IMF staff calculations.



CO_2 Projections for China's Rebalancing vs. Non-Rebalancing Scenarios (LHS: Metric tons of CO_2, RHS: in percent)
Sources: IMF-ENV model; IMF World Economic Outlook; and IMF staff calculations.

At the same time, China's investment-focused growth model has contributed to relatively high levels of carbon and other green-house gas emissions from heavy-industry production. The latter's high energy intensity coupled with dependence on carbon-intensive coal as its main source of energy has resulted in China becoming the world's single largest emitter of CO_2 and other greenhouse gases by total volume, accountable for almost one third of the world's total CO_2 emissions.

Rebalancing will support high-quality growth while reducing carbon emissions significantly. A shift away from heavy-industry such as construction and metal production and towards less carbon-intensive service sectors will reduce the energy and carbon emission intensity of output and therefore, reduce overall CO_2 emissions. Simulations[3] that compare two scenarios under similar GDP growth path—one assuming a reduction of 15 percentage points in the investment share of GDP, while the other keeps investment share at current levels—shows that rebalancing alone can significantly contribute to a reduction in CO_2 emissions, translating into a 15 percent reduction over the next three decades under the given assumptions. As a result, the fall in global CO_2 emissions is around 4.5 percent.

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[1] Prepared by Wenjie Chen.

[2] See L. Zhang, R. Brooks, D. Ding, H. Ding, H. He, J. Lu, and R. Mano, "China's High Savings: Drivers, Prospects, and Policies," IMF Working paper WP/18/277, 2019.

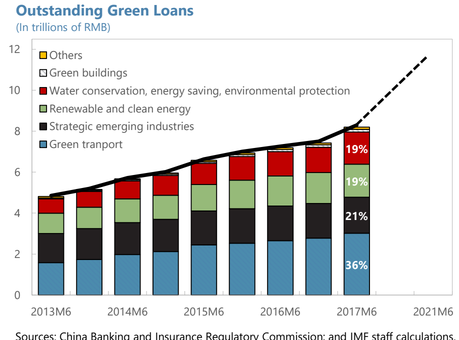
[3] See S. Black and others "A Comprehensive Package of Macroeconomic Policy Measures for Implementing China's Climate Mitigation Strategy." (*forthcoming*).

Box 8. Mobilizing Green Finance[1]

Green finance policies can play a key role in channeling private sector funds to support green investment and managing climate-related financial risks. Although China has a large green finance market, improving green finance frameworks and climate-related risk management could help mobilize resources in an efficient manner to support the transition toward a low-carbon economy.

China's outstanding stock of green financing is substantial, but there are sizeable deviations from international standards. Chinese banks have provided US$2.2 trillion of green loans as of mid-2021. Out of China's US$216 billion of total green bond issuances at end-2020, only a little more than half (US$130 billion) are aligned with commonly accepted international standards. Bonds that do not meet international standards often fund ineligible products (e.g., 'clean' utilization of coal) or more working capital than common in international practice (i.e., bonds regulated by the National Development and Reform Commission), and there is currently no international taxonomy for green loans. China's financial system is also exposed to climate-related financial risks, especially in carbon-intensive firms.

Outstanding Green Loans
(In trillions of RMB)



Sources: China Banking and Insurance Regulatory Commission; and IMF staff calculations.

Chinese authorities have recently made strides in improving green finance policies and promoting international cooperation. The 2021 Green Bond Catalogue has adopted the "no significant harm" principle and excludes fossil fuel-related projects going forward, bringing Chinese taxonomy closer to international standards. The PBC has taken an active role in designing and implementing green finance reforms, including promoting the provision of green finance along with enhancing management of climate-related financial risks (e.g., conducting initial stress tests) and improving mechanisms for setting carbon pricing. In the international realm, Chinese authorities are part of international efforts to build consensus around green finance policies, including working with the EU on to develop Common Ground Taxonomy.

Further enhancements to green finance policies are needed to attract more domestic and foreign funds, improve resource allocation for green activity, and minimize associated financial risks.

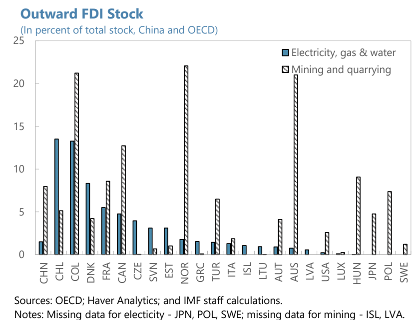
- *Strengthening the green finance framework.* China's taxonomy could adopt explicit thresholds for carbon emissions, while green bonds and loans should adopt more stringent requirements regarding use of proceeds, performance evaluation, and disclosures to be better aligned with international practices. Efforts could be made to promote sustainability-linked instruments, which reward/penalize issuers based on their sustainability performance.
- *Improving climate-related data collection and disclosure requirement.* Better data are needed to support financial risk monitoring and analysis by authorities, while timelier and more relevant information could better mobilize funds towards green investment via green bonds, green equities, and green investment funds. Firms, especially SMEs, can leverage the ongoing capacity building efforts in ETS-related monitoring, reporting and, verification of carbon emissions.

[1] Prepared by Wenjie Chen, Henry Hoyle, and Phakawa Jeasakul.

Box 9. Making the Belt and Road Initiative Greener[1]

China's large outward FDI stock in brown sectors implies potentially large environmental gains from updated guidelines on overseas investments. Stricter guidelines can help China project its climate goals internationally, also supporting the development of clean-energy industries.

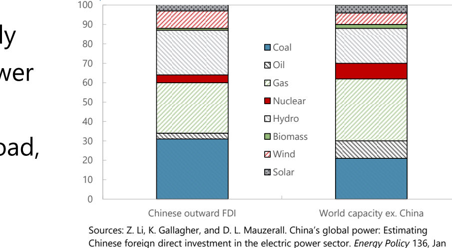
Outward FDI Stock
(In percent of total stock, China and OECD)



Sources: OECD; Haver Analytics; and IMF staff calculations.
Notes: Missing data for electicity - JPN, POL, SWE; missing data for mining - ISL, LVA.

China has one of the largest outward FDI stocks in brown sectors. Around 10 percent of China's total 2019 FDI stock of US$ 2.2 trillion is in mining, quarrying and electricity sectors, ranking third in the world in absolute US$ terms. Data for the period 2000-2016 suggest that the capacity mix in China's outward FDI was especially intensive in coal-fired power plants. In the leadup to China's announcement in fall 2021 to cease coal investments abroad, the most recent data suggests that overseas energy investments have declined across categories in 2020 at least in part as the pandemic slowed down some projects. In the first half of 2021, and for the first time since the BRI's inception, China did not finance any coal-fired power plant abroad.[2]

Technology Mix in Outward FDI
(In percent of total stock)



Sources: Z. Li, K. Gallagher, and D. L. Mauzerall. China's global power: Estimating Chinese foreign direct investment in the electric power sector. *Energy Policy* 136, Jan 2020.
Notes: Data for China correspond to 2000-2016. World data for 2016, and excluding China's domestic capacity.

The authorities have recently issued updated green guidelines on outward FDI. In July 2021, the Ministry of Commerce and the Ministry of Ecology and Environment issued new green guidelines for foreign investment. The voluntary guidelines state, inter alia, that Chinese firms should consider: adhering to international standards where those are more stringent than host-country rules and establishing consultation and complaint mechanisms with local stakeholders. New Green Investment Principles also entail a pledge by financial institutions to incorporate environmental considerations into projects.

However, China's current mandatory guidelines for overseas investments only emphasize the requirement to comply with host-country standards. Internationally, existing policies governing the environmental dimensions of overseas investments are mostly voluntary, except for the requirement to comply with host-country environmental regulations. This implies that current domestic environmental policies can be *de facto* stronger than those regulating overseas investments.[3]

A greener BRI can help China project its climate goals internationally. China would benefit from further strengthening of environmental standards in overseas financing. Changes should include a move from voluntary toward binding provisions, and the adoption of domestic (or international) standards wherever the host countries' environmental regulations are weaker. Avoiding a proliferation of standards by adopting, where appropriate, existing international standards could potentially also help the development of green finance (see also Box 8). Greater transparency, including in the classification of financing as BRI, will help not only the pursuit of climate goals, but also potentially help attract private investor participation. Making BRI greener would also support growing green industries and mitigate the risk of "stranded assets."

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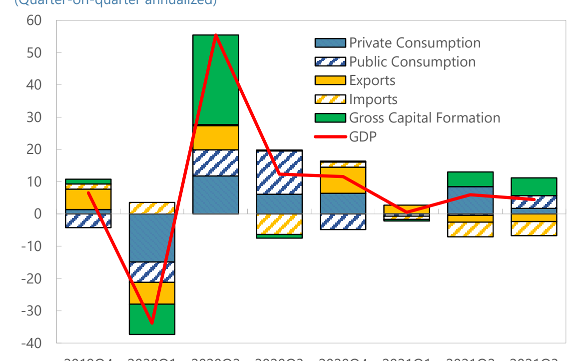
[1] Prepared by Diego Cerdeiro and Wenjie Chen.
[2] See C. N. Wang, "Coal phase-out in the Belt and Road Initiative (BRI)." IIGF Green BRI Center, 2021.
[3] See K. Gallagher, R. Bhandary. E. Narassimhan, and Q. T. Nguyen, "Banking on coal? Drivers of demand for Chinese overseas investments in coal in Bangladesh, India, Indonesia and Vietnam." *Energy Research & Social Science 71*, 2021.

Figure 1. China: Recent Developments—The Unbalanced Recovery Continues

Growth slowed down in Q1 and Q3, in part due to the large outbreaks…

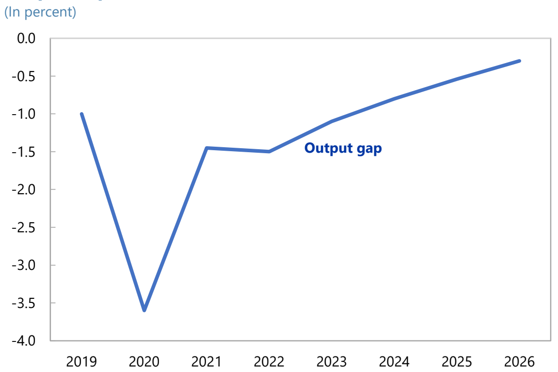
GDP Contributions
(Quarter-on-quarter annualized)



Sources: National Bureau of Statistics; and IMF staff calculations.

… and GDP remains below potential.

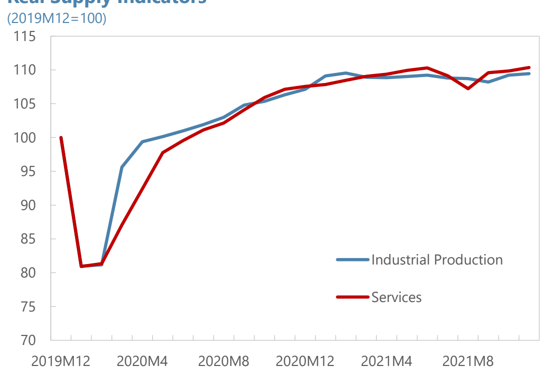
Output Gap
(In percent)



Sources: IMF World Economic Outlook; and IMF staff calculations.

Industrial production recently slowed, and the effect of the crisis on services sectors still lingers…

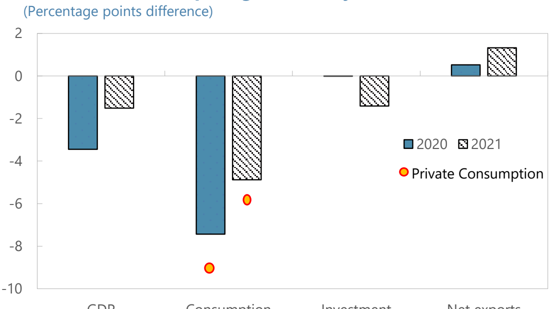
Real Supply Indicators
(2019M12=100)



Sources: National Bureau of Statistics; and IMF staff calculations.

…including due to still-lagging consumption…

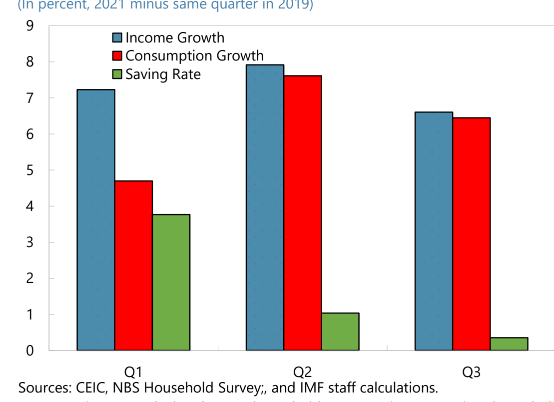
Demand Side: Comparing to January 2020 WEO
(Percentage points difference)



Sources: IMF World Economic Outlook; and IMF staff calculations.
Notes: For GDP/consumption/investment: percentage change of 2021 October WEO to 2020 January WEO. 2019=100 in each vintage. For net exports: difference in percentage points of GDP between 2021 November WEO and 2020 January WEO, 2019=100 in each vintage.

… as income and saving rates have yet to sustainably regain their pre-crisis levels.

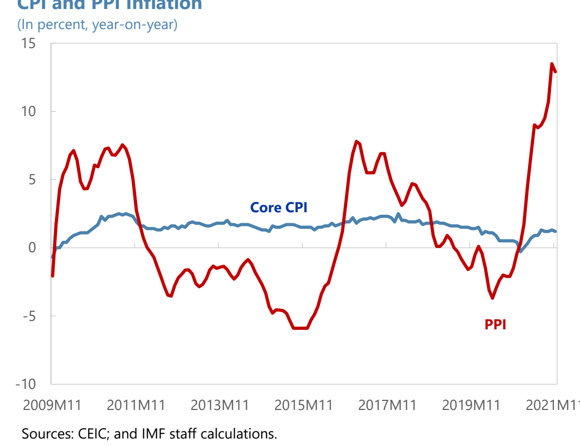
Private Income, Consumption, and Saving
(In percent, 2021 minus same quarter in 2019)



Sources: CEIC, NBS Household Survey;, and IMF staff calculations.
Notes: Saving rate calculated as (1 - household consumption per capita / household disposable income per capita).

The relative weakness in consumption, in turn, partly explains the low pass-through from producer to consumer prices.

CPI and PPI Inflation
(In percent, year-on-year)

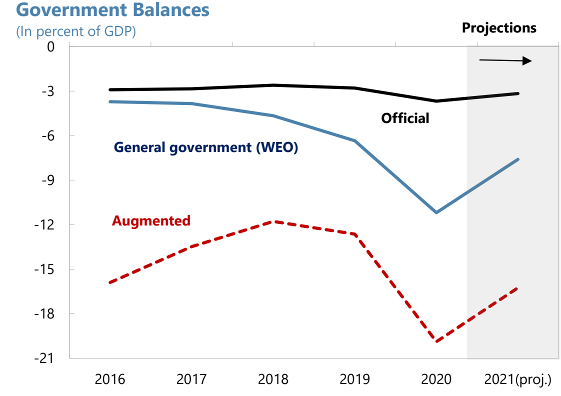


Sources: CEIC; and IMF staff calculations.

Figure 2. China: Fiscal—Significant Tightening Poses Drag on Growth

Fiscal tightening is a drag on growth in 2021…

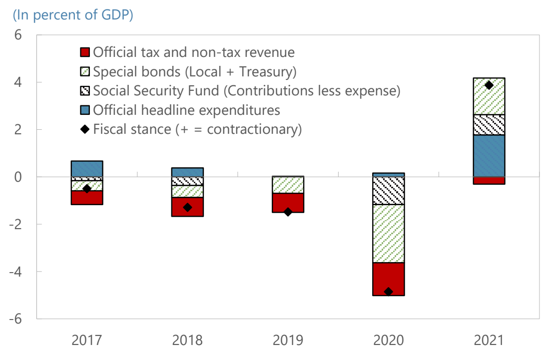
Government Balances
(In percent of GDP)



Sources: Authorities; and IMF staff calculations.
Notes: See Table 2 in staff report for definitions of government balances.

…with almost all of the consolidation coming from the authorities' budget.

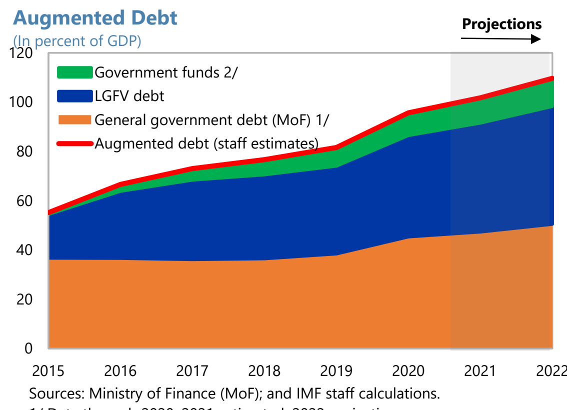
Measures of the Fiscal Stance
(In percent of GDP)



Sources: CEIC; Report on the execution of the central and local budgets for 2020 and on the draft central and local budgets for 2021; Government Debt Research and Evaluation Center of the Ministry of Finance.

With tighter fiscal policies, growth in China's elevated public debt level is projected to slow.

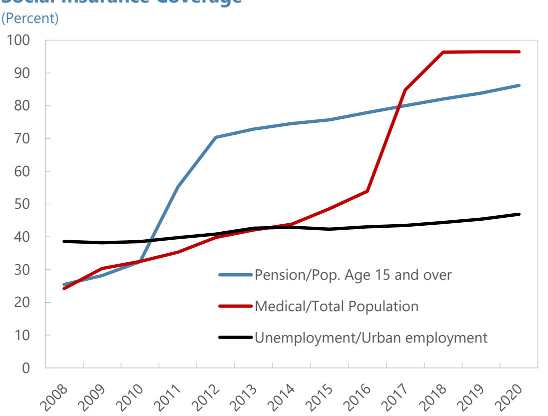
Augmented Debt
(In percent of GDP)



Sources: Ministry of Finance (MoF); and IMF staff calculations.
1/ Data through 2020, 2021 estimated, 2022 projection.
2/ Government guided funds and special construction funds (social capital portion only).

Despite impressive gains in pension and medical insurance coverage, unemployment insurance coverage remains poor …

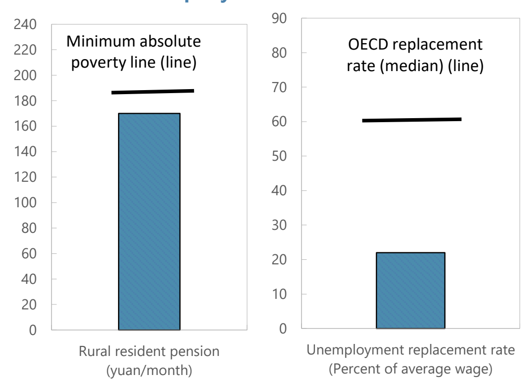
Social Insurance Coverage
(Percent)



Sources: CEIC; and IMF staff calculations.
Note: Population values extrapolated between decennial censuses.

…and the adequacy of insurance benefits for residents and unemployed individuals is low.

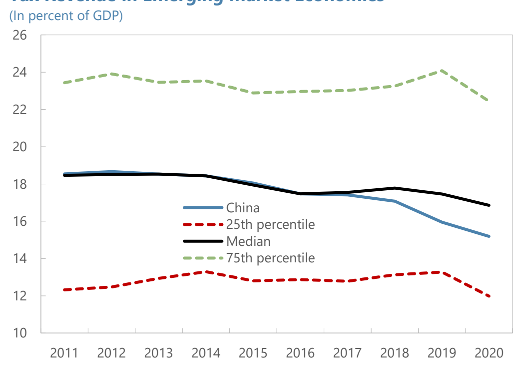
Social Insurance Adequacy



Sources: Ministry of Human Resources and Social Security; Organisation for Economic Co-operation and Development; CEIC; and IMF staff calculations.

To sustainably expand social protection and stabilize debt, reversing China's declining tax revenues will be necessary.

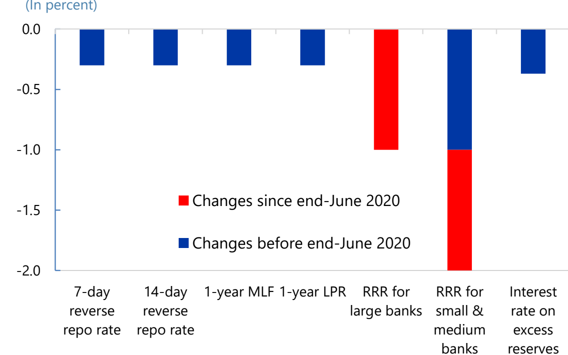
Tax Revenue in Emerging Market Economies
(In percent of GDP)



Sources: IMF World Economic Outlook; and IMF staff calculations.

Figure 3. China: Monetary—Tightened Policy Despite Below-Target Inflation

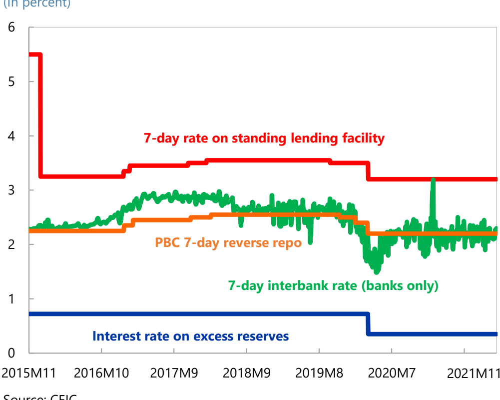
Since mid-2020, monetary policy support has relied on non-interest-rate instruments particularly liquidity injections, …



Sources: CEIC; Haver Analytics; and IMF staff calculations.
Notes: MLF = medium-term lending facility; LPR = loan prime rate; RRR = reserve requirement ratio.

…while the interest rate corridor has remained unchanged.

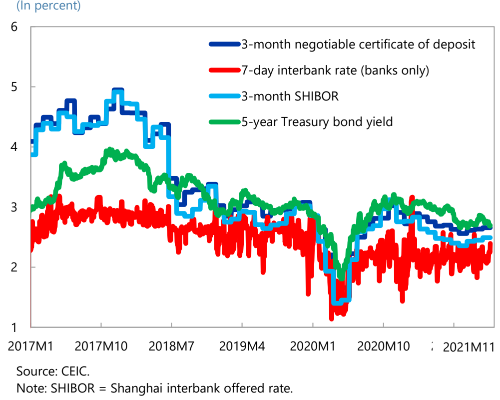
Interest Rate Corridor
(In percent)



Source: CEIC.

Market rates have broadly declined amid liquidity injections, except those with very short maturities.

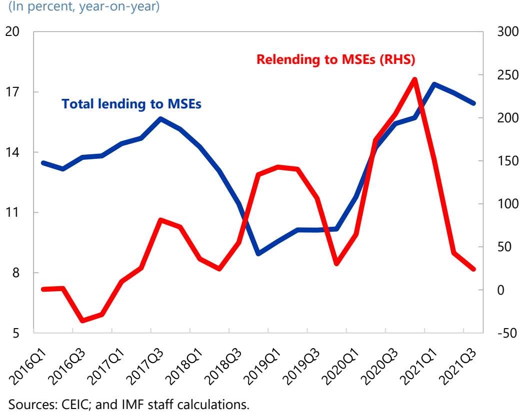
Key Market Interest Rates
(In percent)



Source: CEIC.
Note: SHIBOR = Shanghai interbank offered rate.

Bank lending to smaller firms has remained strong, even though the PBC has exited some relending facilities in 2021.

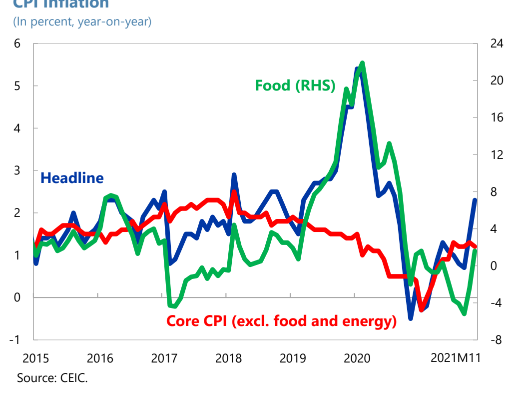
Lending to Micro- and Small-Sized Enterprises (MSEs)
(In percent, year-on-year)



Sources: CEIC; and IMF staff calculations.

Core inflation has started to pick up but remains well below the inflation target of about 3 percent, while food inflation remains subdued.

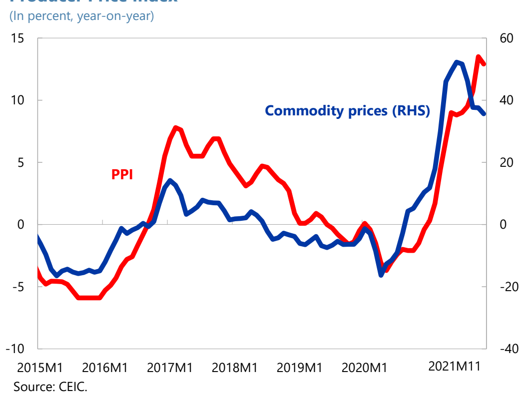
CPI Inflation
(In percent, year-on-year)



Source: CEIC.

PPI inflation has risen rapidly amid higher global commodity prices.

Producer Price Index
(In percent, year-on-year)

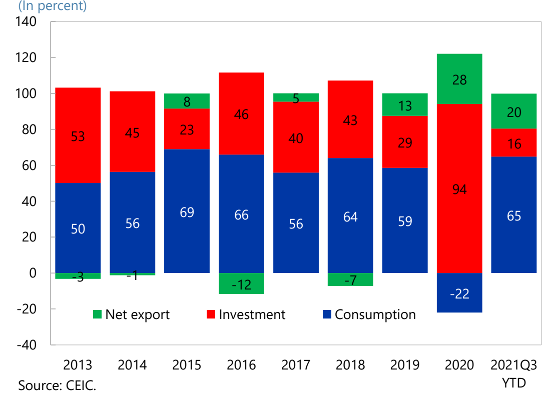


Source: CEIC.

Figure 4. China: Rebalancing—Slow to Revert to the Pre-Pandemic Trend

Rebalancing towards consumption regressed sharply in 2020. Growth contributions have normalized in 2021 but not sufficiently to compensate for the lost ground in the previous year…

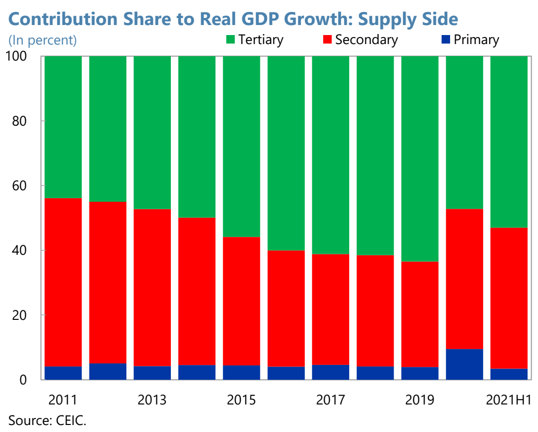
Contribution Share to Real GDP Growth: Demand Side
(In percent)



Source: CEIC.

…as can also be seen in the contribution of the tertiary sector to GDP growth.

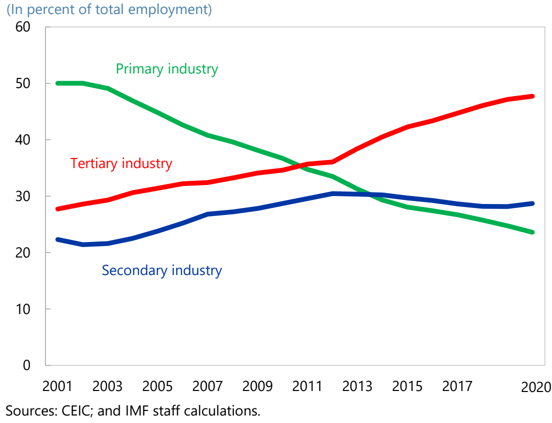
Contribution Share to Real GDP Growth: Supply Side
(In percent)



Source: CEIC.

In 2020, secondary-industry employment increased relative to tertiary industry for the first time since 2012…

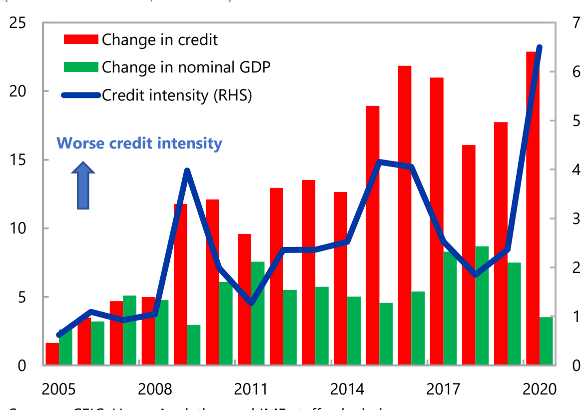
Sectoral Employment
(In percent of total employment)



Sources: CEIC; and IMF staff calculations.

…and credit intensity reached a historic high as monetary policy was loosened to support the recovery.

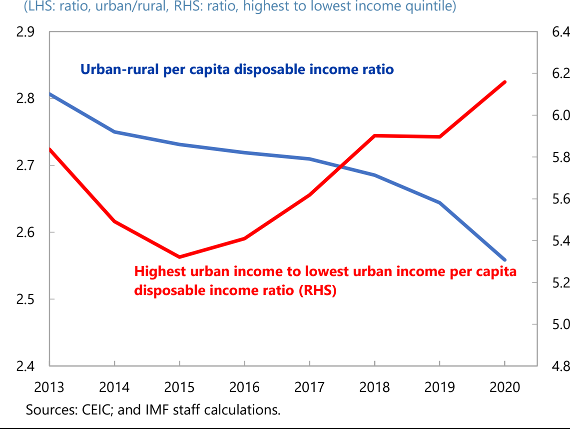
Credit Intensity
(LHS: in RMB trillions; RHS: ratio)



Sources: CEIC; Haver Analytics; and IMF staff calculations.

While the ratio of urban-rural income fell in 2020, urban income inequality increased notably.

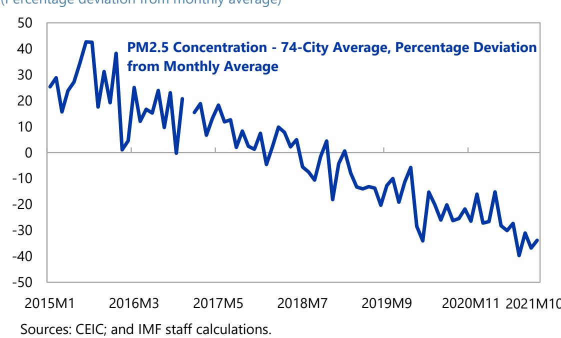
Urban Income Inequality and Urban-Rural Income Gaps
(LHS: ratio, urban/rural, RHS: ratio, highest to lowest income quintile)



Sources: CEIC; and IMF staff calculations.

The downward trend in air pollution continued but slowed in 2020.

PM2.5 Concentration - 74-City Average over Time
(Percentage deviation from monthly average)

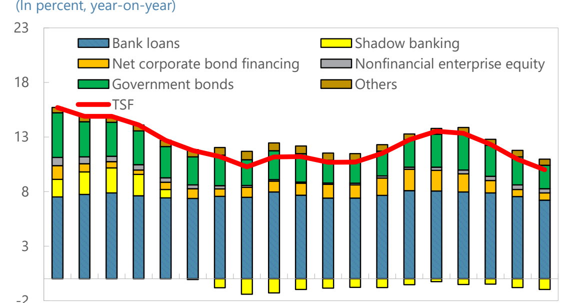


Sources: CEIC; and IMF staff calculations.
Note: PM2.5 concentration describes fine inhalable particles with diameters that are generally 2.5 micrometers and smaller.

Figure 5. China: Credit—Credit Growth Decelerated Amid Slowed Recovery

TSF growth has declined since 2020Q4, …

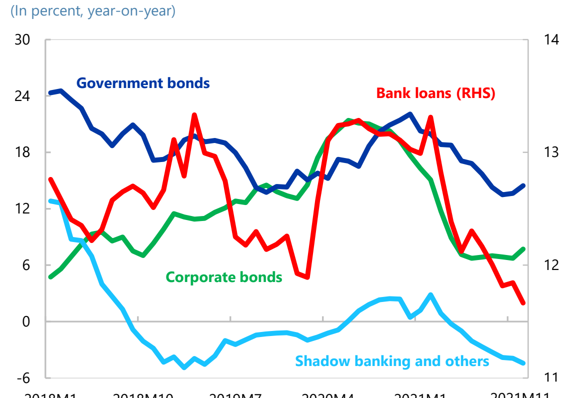
Contribution to TSF Stock Growth
(In percent, year-on-year)



Sources: Haver Analytics; and IMF staff calculations.
Notes: Since January 2017, asset backed securities (ABS), loan writeoffs, and local government special purpose bonds are included. Since December 2019, local government special purpose bonds are expanded to government bonds (including all central and local government bonds) traced back to 2017.

…mainly driven by slowdown in bond financing and bank lending, as the contraction in shadow banking continued.

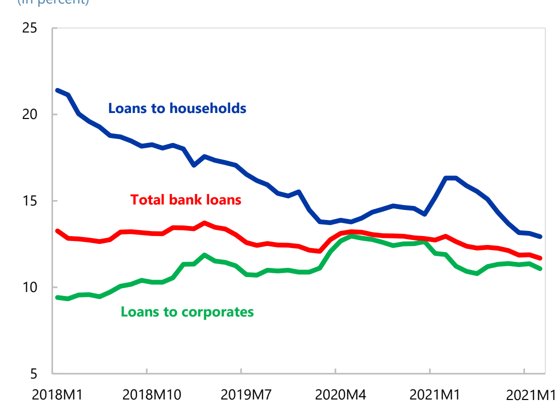
TSF Growth Rates by Component
(In percent, year-on-year)



Sources: Haver Analytics; and IMF staff calculations.

Corporate lending growth remains weaker than 2020, while household lending slowed since 2021Q2.

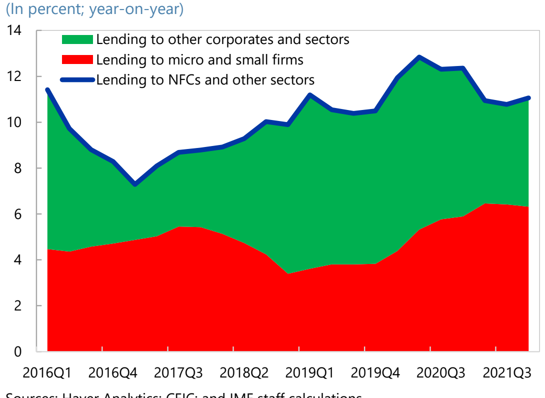
Growth Rate of Bank Loans by Borrower
(In percent)



Sources: Haver Analytics; and IMF staff calculations.

Lending to small firms contributed over half of the growth in corporate lending amid the authorities' continued support measures for these firms.

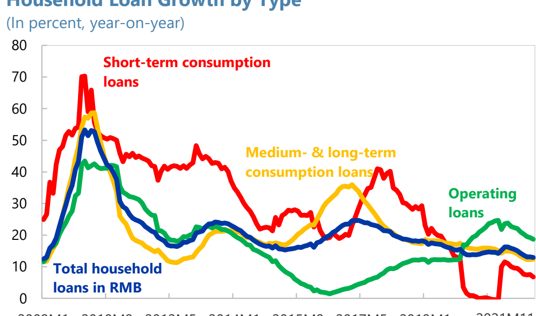
Contributions to Growth of Nonfinancial Corporate (NFC) Loans
(In percent; year-on-year)



Sources: Haver Analytics; CEIC; and IMF staff calculations.

The slowdown in household loan growth is broad-based across all types of lending.

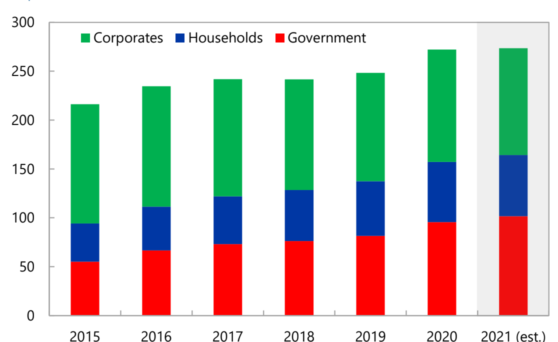
Household Loan Growth by Type
(In percent, year-on-year)



Sources: Haver Analytics; and IMF staff calculations.
Notes: There is a structural break in the stock data for short-term and mid-/long-term consumption loans in January 2020. To correct for the structural break, the components are estimated using the flow data of short-term and mid-/long-term household loans in RMB.

The increase in debt-to-GDP ratios is expected to slow in 2021 following the rapid increase in 2020.

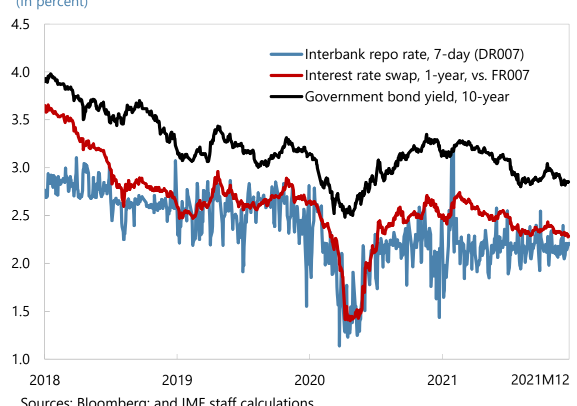
Non-Financial Sector Domestic Debt
(In percent of GDP)



Sources: CEIC; Haver Analytics; and IMF staff calculations.
Notes: Government debt includes debt of central and local governments, government funds, and LGFVs. Corporate debt excludes LGFV debt.

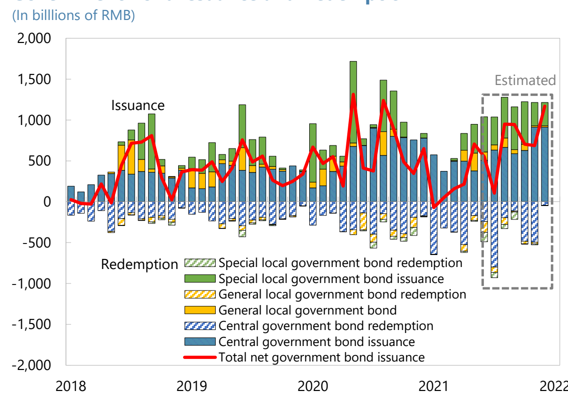
Figure 6. China: Financial Market—Funding Costs Have Declined Recently

Long-end government bond yields and shorter-term money market rates have declined after a surprise RRR cut in July.



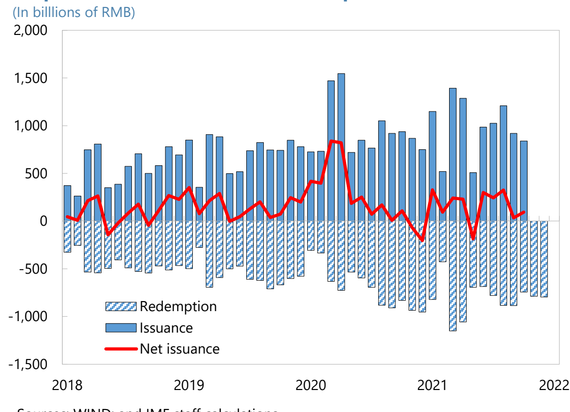
Sources: Bloomberg; and IMF staff calculations.

The PBC continues maintaining ample liquidity amid larger government bond issuances in the second half of 2021 and increased financial stress among property developers.



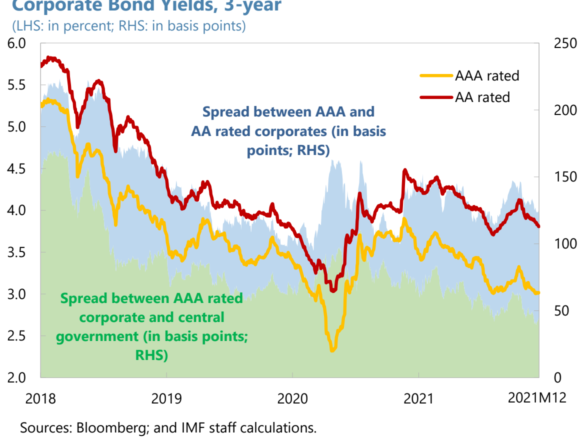
Sources: WIND; and IMF staff estimates.

Corporate bond issuance remains sluggish as credit conditions have tightened for some borrowers …



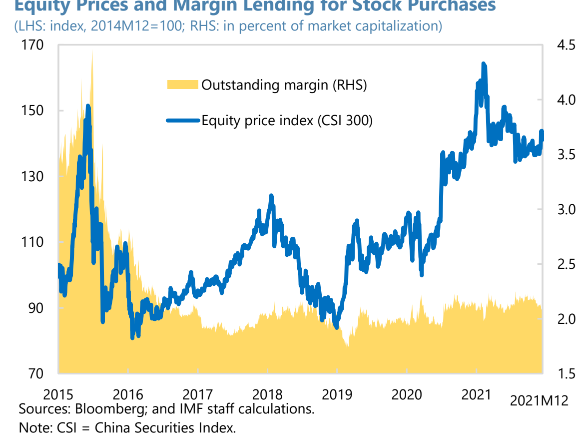
Sources: WIND; and IMF staff calculations.

… as reflected by the continuation of wide credit spreads between higher-rated and lower-rated bond issuers.



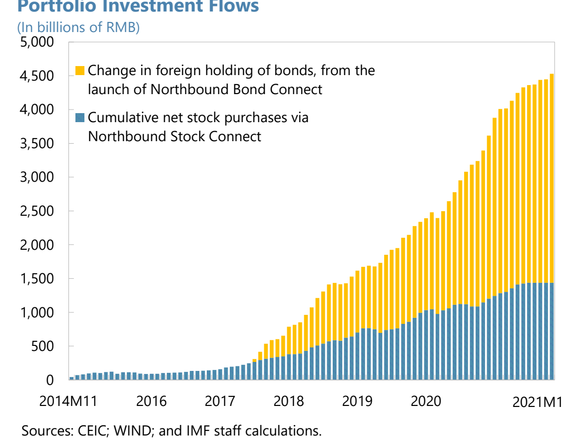
Sources: Bloomberg; and IMF staff calculations.

Equity prices have declined in 2021 following regulatory tightening, but limited leverage in stock markets helped contain spillovers to other parts of the financial system.



Sources: Bloomberg; and IMF staff calculations.
Note: CSI = China Securities Index.

Foreign investors continue to increase their holding of Chinese assets, especially bonds.

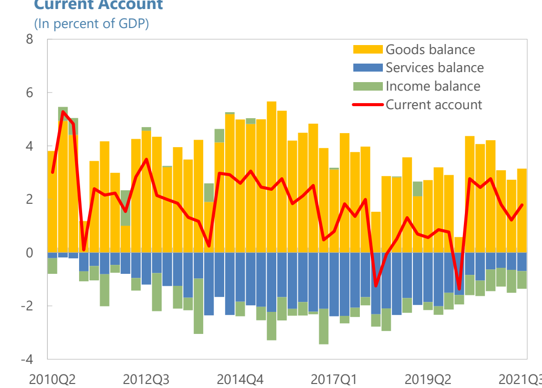


Sources: CEIC; WIND; and IMF staff calculations.

Figure 7. China: External—Narrowing Current Account Surplus and Volatile Capital Flows

Following a widening since 2020Q2, China's CA surplus narrowed in the first three quarters of 2021, reflecting a falling trade balance on the back of higher imports.

Current Account
(In percent of GDP)



Sources: CEIC; and IMF staff calculations.

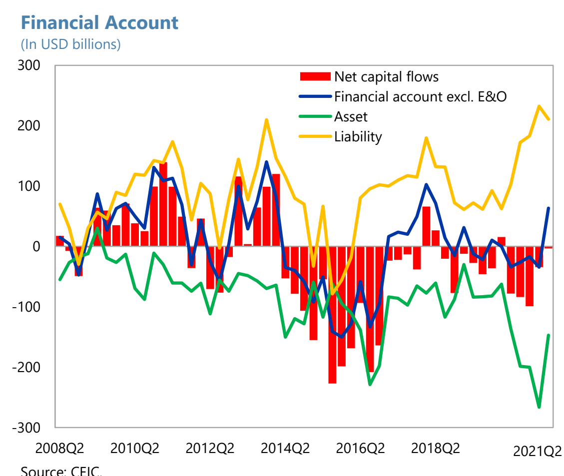
Exports have been resilient, led by strong demand for non-pandemic related goods which include mechanical/electrical products.

Goods Exports and Imports
(In percent, annualized growth over previous 2-year, 3-month sum)

Sources: Customs; Haver Analytics; and IMF Staff calculations.

Capital net outflows slowed in 2021H1, on the back of strong inward direct investment and portfolio inflows, which offset residents' stronger accumulation of other investment assets abroad.

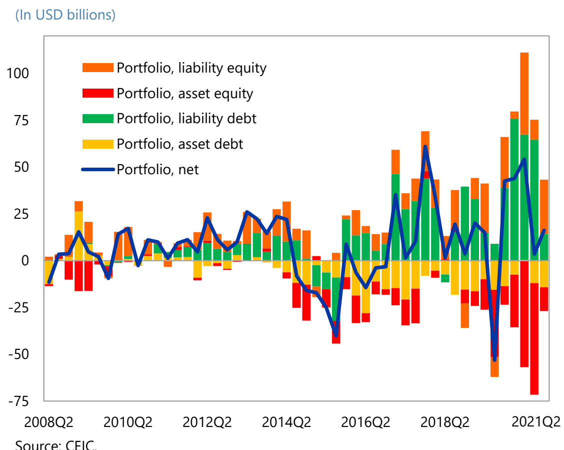
Financial Account
(In USD billions)



Source: CEIC.

In particular, portfolio investment recovered on the net in 2021Q2, with strong equity inflows.

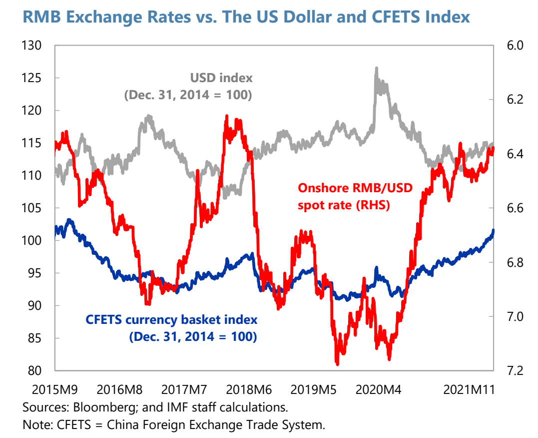
Financial Account: Portfolio Investment
(In USD billions)



Source: CEIC.

The effective exchange rate has appreciated over the last two years, with the RMB/US$ rate largely mirroring the U.S. dollar movement.

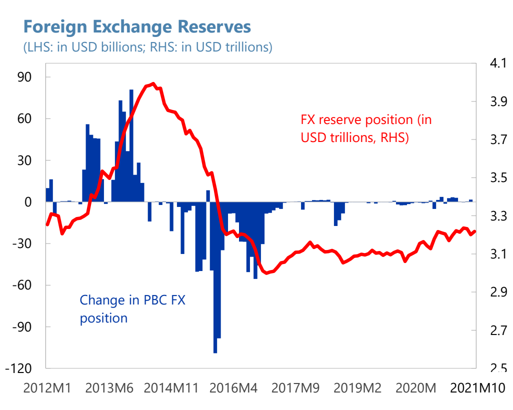
RMB Exchange Rates vs. The US Dollar and CFETS Index



Sources: Bloomberg; and IMF staff calculations.
Note: CFETS = China Foreign Exchange Trade System.

FX reserves have been broadly stable, with no indications of large FXI since 2017.

Foreign Exchange Reserves
(LHS: in USD billions; RHS: in USD trillions)



Source: Haver Analytics.

Figure 8. China: Banks—Problem Loans Continue to Weigh on Profitability

The expansion of bank balance sheets has moderated in line with slowing credit growth.

Growth of Banking Sector Assets

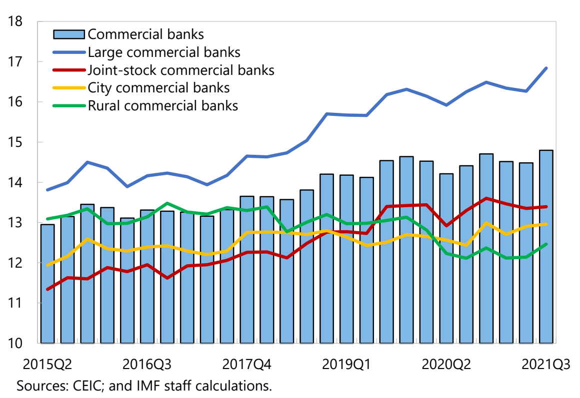
(In percent; year-on-year)

Sources: CEIC; and IMF staff calculations.

The system-wide capital ratio remains stable, with lower capital buffers at rural commercial banks.

Commercial Banks: Total Capital

(In percent of risk-weighted assets)

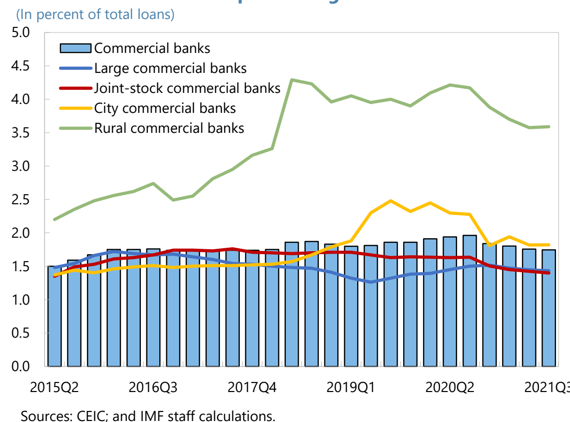


Sources: CEIC; and IMF staff calculations.

System-wide asset quality has improved in 2021, even though rural commercial banks are now holding a larger portion of non-performing loans.

Commercial Banks: Non-performing Loans

(In percent of total loans)

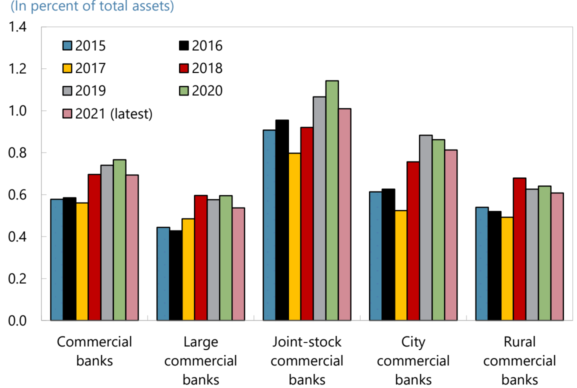


Sources: CEIC; and IMF staff calculations.

Banks have proactively recognized problem loans following supervisory guidance, ...

Commercial Banks: Impairment Expense

(In percent of total assets)

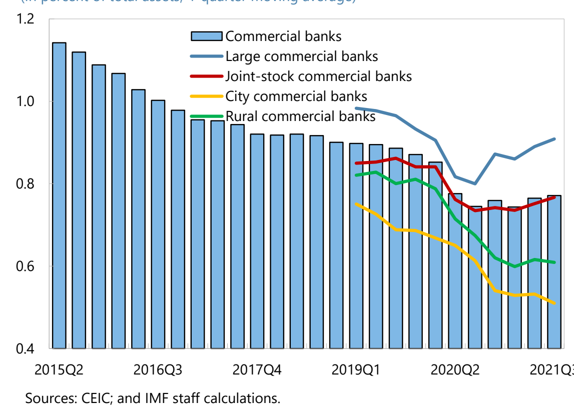


Sources: S&P Capital IQ Pro; and IMF staff calculations.

... weighing down on their profitability, along a slight compression of net interest margin after end-2019.

Commercial Banks: Net Profits

(In percent of total assets; 4-quarter moving average)



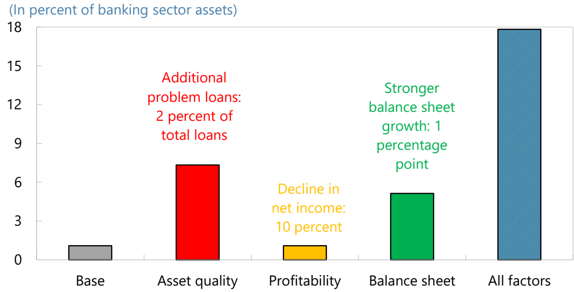
Sources: CEIC; and IMF staff calculations.

Going forward, some banks may face constraints if they are called to maintain strong credit growth while lowering their profits and cleaning up problem assets.

Bank Capital Constraints

Assets of banks facing capital constraints under hypothetical scenarios

(In percent of banking sector assets)



Sources: S&P Capital IQ Pro; and IMF staff calculations.

Notes: Key assumptions: In the base case, balance sheet grows at 7.9 percent (2017-19 average); return on assets remains unchanged at the 2020 level; the tax rate is 25 percent; there are no dividend payouts. Projections of bank capital are made for 2021-23. The sample covers about 75 percent of banking sector assets.

Table 1. China: Selected Economic Indicators[1]

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
						Projections					
	(Annual percentage change, unless otherwise indicated)										
NATIONAL ACCOUNTS											
Real GDP (base=2015)	6.9	6.9	6.8	6.0	2.3	7.9	4.8	5.2	5.1	5.0	4.9
Total domestic demand	7.9	6.8	7.4	5.3	1.7	7.3	5.0	5.4	5.3	5.1	5.0
Consumption	8.4	7.2	7.9	6.3	-0.8	9.8	5.1	5.8	5.4	5.6	5.4
Investment	7.3	6.3	6.8	4.0	5.1	4.2	4.9	4.9	5.2	4.5	4.5
Fixed investment	7.4	6.2	7.3	5.3	4.6	3.7	5.1	5.0	5.4	4.7	4.7
Inventories (contribution)	0.0	0.1	-0.2	-0.5	0.3	0.2	0.0	0.0	0.0	0.0	0.0
Net exports (contribution)	-0.8	0.3	-0.5	0.7	0.6	0.8	-0.1	0.0	0.0	0.0	0.0
Total capital formation (percent of GDP)	42.7	43.2	44.0	43.1	43.1	42.5	42.5	42.3	42.1	41.8	41.4
Gross national saving (percent of GDP) 2/	44.4	44.7	44.1	43.8	45.0	44.1	44.0	43.7	43.4	42.8	42.2
LABOR MARKET											
Unemployment rate (annual average) 3/	5.0	5.0	4.9	5.2	5.2	4.9	…	…	…	…	…
Employment	-0.1	-0.2	-0.4	-0.4	-0.5	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
PRICES											
Consumer prices (average)	2.0	1.6	2.1	2.9	2.4	1.0	1.6	1.6	2.0	2.0	2.0
GDP Deflator	0.9	3.9	3.5	2.1	1.2	2.0	1.5	1.7	2.1	1.8	2.0
FINANCIAL											
7-day repo rate (percent)	2.7	5.4	3.1	3.1	2.6	…	…	…	…	…	…
10-year government bond rate (percent)	3.0	3.9	3.3	3.2	3.2	…	…	…	…	…	…
Real effective exchange rate (average)	-4.8	-2.9	1.4	-0.7	2.1	…	…	…	…	…	…
Nominal effective exchange rate (average)	-5.4	-2.5	1.5	-1.8	0.9	…	…	…	…	…	…
MACRO-FINANCIAL											
Total social financing	30.5	14.1	10.3	10.7	13.3	10.5	9.4	8.4	8.2	7.9	7.7
In percent of GDP	241.9	248.4	247.9	253.7	277.6	278.7	286.7	290.4	292.9	295.5	297.6
Total non-financial sector debt 4/	16.8	14.4	10.8	10.8	13.2	10.6	9.8	8.7	8.4	8.0	7.8
In percent of GDP	240.5	247.5	248.2	254.3	277.9	279.2	288.1	292.8	295.9	299.0	301.2
Domestic credit to the private sector	12.4	11.6	8.3	9.0	9.6	7.2	6.8	5.7	6.1	6.0	6.4
In percent of GDP	168.0	168.8	165.5	166.7	176.5	171.9	172.6	170.4	168.5	167.1	166.2
House price 5/	11.3	5.7	12.3	8.6	7.5	4.9	2.0	3.0	3.5	4.0	4.0
Household debt (percent of GDP)	44.7	48.9	52.3	55.8	61.6	62.7	63.2	64.2	64.7	65.6	66.4
Non-financial corporate domestic debt (percent of GDP)	123.3	119.9	113.2	110.9	114.9	109.3	109.4	106.1	103.8	101.5	99.9
GENERAL BUDGETARY GOVERNMENT (Percent of GDP)											
Net lending/borrowing 6/	-3.7	-3.8	-4.7	-6.3	-11.2	-7.9	-8.1	-7.6	-7.6	-7.6	-7.6
Revenue	28.2	27.8	28.3	27.8	25.3	25.8	25.5	25.5	25.5	25.5	25.5
Additional financing from land sales	2.0	2.5	2.8	2.9	3.3	3.0	2.8	2.6	2.4	2.3	2.1
Expenditure	33.9	34.2	35.8	37.0	39.8	36.6	36.4	35.7	35.6	35.4	35.2
Debt 7/	36.7	36.2	36.5	38.5	45.4	47.3	50.6	53.2	55.5	57.8	59.9
Structural balance	-3.4	-3.6	-4.5	-6.0	-9.9	-7.4	-7.6	-7.2	-7.3	-7.4	-7.5
BALANCE OF PAYMENTS (Percent of GDP)											
Current account balance	1.7	1.5	0.2	0.7	1.8	1.6	1.5	1.4	1.3	1.0	0.8
Trade balance	4.4	3.9	2.7	2.7	3.5	3.0	2.7	2.9	3.0	2.7	2.5
Services balance	-2.1	-2.1	-2.1	-1.8	-1.0	-0.7	-1.0	-1.6	-1.8	-1.9	-2.0
Net international investment position	17.7	16.8	15.2	16.0	14.5	13.8	14.0	14.3	14.5	14.5	14.2
Gross official reserves (billions of U.S. dollars)	3,098	3,236	3,168	3,223	3,357	3,448	3,696	3,976	4,280	4,560	4,846
MEMORANDUM ITEMS											
Nominal GDP (billions of RMB) 8/	74,598	82,898	91,577	99,071	102,592	112,919	120,122	128,548	137,914	147,419	157,694
Augmented debt (percent of GDP) 9/	66.6	73.0	76.6	81.6	95.7	101.6	109.9	116.7	121.8	126.2	129.3
Augmented net lending/borrowing (percent of GDP) 9/	-15.9	-13.5	-11.8	-12.6	-19.9	-16.5	-16.3	-15.7	-14.7	-14.0	-13.0

Sources: Bloomberg; CEIC; IMF, International Financial Statistics database; and IMF staff estimates and projections.

1/ Historical data up to date as of December 15, 2021.

2/ IMF staff estimates for 2020.

3/ Surveyed unemployment rate.

4/ Includes government funds.

5/ Average selling prices estimated by IMF staff based on the data of national housing sale values and volumes published by the National Bureau of Statistics.

6/ Adjustments are made to the authorities' fiscal budgetary balances to reflect consolidated general budgetary government balance, including government-managed funds, state-administered SOE funds, adjustment to the stabilization fund, and social security fund.

7/ The estimation of debt levels assumes zero off-budget borrowing from 2015 to 2026.

8/ Production side nominal GDP.

9/ The augmented balance expands the perimeter of government to include government-managed funds and the activity of local government financing vehicles (LGFVs).

Table 2. China: General Government Fiscal Data

		2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
							Projections					
						(In RMB billions)						
Balance: General Budgetary (official)												
(1)	**Revenue (incl. adjustments) (1a)+(1b)**	16688	18273	19813	21255	20903	21442	22730	24619	26555	28359	30222
(1a)	Headline revenue	15960	17259	18336	19039	18289	19765	20681	22198	23816	25460	27217
(1b)	Adjustments 1/	727	1014	1477	2216	2613	1677	2049	2421	2739	2899	3005
(2)	**Expenditure (incl. adjustments) (2a)+(2b)**	18854	20626	22192	24013	24663	25012	26615	28567	30648	32764	35025
(2a)	Headline expenditure	18776	20309	22091	23886	24559	25012	26615	28567	30648	32764	35025
(2b)	Adjustments 2/	78	318	102	127	104	…	…	…	…	…	…
(3)	**Fiscal balance (official) (1)-(2)**	-2166	-2353	-2379	-2758	-3760	-3570	-3884	-3948	-4093	-4405	-4803
Balance: General Budgetary (Fund definition)												
(4)	**Revenue (1a)+(4a)+(4b)**	21048	23055	25891	27519	26001	29144	30661	32910	35309	37746	40350
(4a)	Social security revenue	4827	5538	7265	8084	7212	8918	9490	10185	10928	11682	12488
(4b)	SOE fund revenues 3/	260	258	290	396	500	461	491	526	565	604	646
(5)	**Expenditure (2a)+(5a)+(5b)+(5c)**	25309	28317	32758	36703	40479	41378	43749	46067	49179	52342	55721
(5a)	Social security expenses	4392	4895	6459	7499	7883	8641	9195	9869	10589	11320	12100
(5b)	SOE fund expenditures 3/	217	201	216	229	261	265	282	302	324	347	371
(5c)	Managed funds' expenditure financed by land sales, bond issuance or carryover 4/	1924	2912	3992	5090	7775	7460	7658	7329	7618	7911	8225
(5d)	of which: net expenditure financed by land sales	1498	2082	2604	2904	3007	3366	3366	3366	3366	3366	3366
(6)	**Net borrowing/lending (Fund definition) (4)-(5)+(5d)**	-2762	-3179	-4263	-6280	-11470	-8868	-9722	-9791	-10505	-11230	-12005
Balance: Augmented (staff estimates of general government)												
(7a)	Additional infrastructure spending financed by LGFV debt	7529	6168	4807	4368	4523	7631	7720	8186	7832	7573	6896
(7b)	Additional spending of special construction (SCF) and gov't guided funds (GGF)	1566	1825	1713	1874	1940	2134	2170	2228	1989	1926	1657
(8)	**Augmented net lending/borrowing (6)-(7a)-(7b) 5/**	-11857	-11172	-10783	-12522	-17933	-18632	-19611	-20205	-20326	-20729	-20558
Debt: General government												
(9)	**General budgetary debt (official) (10)+(11)**	27362	29987	33423	38114	46552	53395	60763	68450	76555	85249	94636
(10)	Central government debt 6/	12007	13477	14961	16804	20891	23444	26300	29204	32236	35565	39273
(11)	Explicit local government debt 7/	15356	16510	18462	21310	25661	29951	34463	39247	44319	49684	55363
(11a)	Non-swap LG bonds	2550	3904	5466	8516	12884	17346	21858	26641	31713	37078	42758
(11b)	Other recognized LG debt	12806	12606	12996	12794	12778	12606	12606	12606	12606	12606	12606
(12)	Additional LGFV debt likely/possible to be recognized 8/	20314	26726	31206	35084	39623	49884	57603	65789	73622	81195	88091
(13)	Additional debt tied to SCF and GGFs 9/	2006	3831	5544	7418	9358	11492	13662	15889	17878	19804	21461
(14)	**Augmented debt (9)+(12)+(13)**	49683	60543	70173	80615	95533	114771	132029	150129	168055	186247	204188
Memorandum items:												
(15)	Augmented excluding "possible to be recognized" 10/	35985	42886	49310	56587	68053	81740	94257	107404	120733	134478	148465
						(In percent of GDP) 11/						
Balance: General Budgetary (official)												
(1)	**Revenue (incl. adjustments) (1a)+(1b)**	22.4	22.0	21.6	21.5	20.4	19.0	18.9	19.1	19.2	19.2	19.1
(1a)	Headline revenue	21.4	20.8	20.0	19.2	17.8	17.5	17.2	17.2	17.2	17.2	17.2
(1b)	Adjustments 1/	1.0	1.2	1.6	2.2	2.5	1.5	1.7	1.9	2.0	2.0	1.9
(2)	**Expenditure (incl. adjustments) (2a)+(2b)**	25.3	24.9	24.2	24.2	24.0	22.2	22.2	22.2	22.2	22.2	22.2
(2a)	Headline expenditure	25.2	24.5	24.1	24.1	23.9	22.2	22.2	22.2	22.2	22.2	22.2
(2b)	Adjustments 2/	0.1	0.4	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
(3)	**Fiscal balance (official) (1)-(2)**	-2.9	-2.8	-2.6	-2.8	-3.7	-3.2	-3.2	-3.1	-3.0	-3.0	-3.0
Balance: General Budgetary (fund definition)												
(4)	**Revenue (1a)+(4a)+(4b)**	28.2	27.8	28.3	27.8	25.3	25.8	25.5	25.5	25.5	25.5	25.5
(4a)	Social security revenue	6.7	7.0	8.6	8.4	7.5	7.9	7.9	7.9	7.9	7.9	7.9
(4b)	SOE fund revenues 3/	0.3	0.3	0.3	0.4	0.5	0.4	0.4	0.4	0.4	0.4	0.4
(5)	**Expenditure (2a)+(5a)+(5b)+(5c)**	33.9	34.2	35.8	37.0	39.5	36.7	36.4	35.7	35.6	35.4	35.3
(5a)	Social security expenses	5.8	5.8	7.3	7.6	7.7	7.7	7.7	7.7	7.7	7.7	7.7
(5b)	SOE fund expenditures 3/	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2	0.2
(5c)	Managed funds' expenditure financed by land sales, bond issuance or carryover 4/	2.6	3.5	4.4	5.1	7.6	6.6	6.4	5.7	5.5	5.4	5.2
(5d)	of which: net expenditure financed by land sales	2.0	2.5	2.8	2.9	2.9	3.0	2.8	2.6	2.4	2.3	2.1
(6)	**Net borrowing/lending (Fund definition) (4)-(5)+(5d)**	-3.7	-3.8	-4.7	-6.3	-11.2	-7.9	-8.1	-7.6	-7.6	-7.6	-7.6
Balance: Augmented (staff estimates of general government)												
(7a)	Additional infrastructure spending financed by LGFV debt	10.1	7.4	5.2	4.4	4.4	6.8	6.4	6.3	5.7	5.1	4.4
(7b)	Additional spending of special construction (SCF) and gov't guided funds (GGF)	2.1	2.2	1.9	1.9	1.9	1.9	1.8	1.7	1.4	1.3	1.0
(8)	**Augmented net lending/borrowing (6)-(7a)-(7b) 5/**	-15.9	-13.5	-11.8	-12.6	-17.5	-16.5	-16.3	-15.7	-14.7	-14.0	-13.0
Debt: General government												
(9)	**General budgetary debt (official) (10)+(11)**	36.7	36.2	36.5	38.5	45.4	47.3	50.6	53.1	55.3	57.7	59.9
(10)	Central government debt 6/	16.1	16.3	16.3	17.0	20.4	20.8	21.9	22.7	23.3	24.1	24.8
(11)	Explicit local government debt 7/	20.6	19.9	20.2	21.5	25.0	26.5	28.7	30.4	32.0	33.6	35.0
(11a)	Non-swap LG bonds	3.4	4.7	6.0	8.6	12.6	15.4	18.2	20.7	22.9	25.1	27.1
(11b)	Other recognized LG debt	17.2	15.2	14.2	12.9	12.5	11.2	10.5	9.8	9.1	8.5	8.0
(12)	Additional LGFV debt likely/possible to be recognized 8/	27.2	32.2	34.1	35.4	38.6	44.2	48.0	51.0	53.2	54.9	55.7
(13)	Additional debt tied to SCF and GGFs 9/	2.7	4.6	6.1	7.5	9.1	10.2	11.4	12.3	12.9	13.4	13.6
(14)	**Augmented debt (9)+(12)+(13)**	66.6	73.0	76.6	81.4	93.1	101.7	109.9	116.5	121.5	126.0	129.2
Memorandum items:												
(15)	Augmented excluding "possible to be recognized" 10/	48.2	51.7	53.8	57.1	66.3	72.4	78.5	83.3	87.3	90.9	93.9

Sources: CEIC; China Ministry of Finance; National Audit Office; and IMF staff estimates and projections.

1/ Includes central and local governments' transfers to general budget from various funds, carry-over.

2/ Includes adjustments to budget stabilization funds.

3/ Including only revenues/expenditures for the year, and excluding transfers to general budget and carry over.

4/ Includes carry over counted as revenue, adjustments to local government spending, proceeding from issuing special purpose bonds, and net expenditure financed by land sales estimated by subtracting the acquisition cost, compensation to farmers, and land development from the gross land sale proceeds.

5/ The overall net lending/borrowing includes net land sale proceeds as a decrease in nonfinancial assets recorded above the line.

6/ Ministry of Finance debt only, excludes bonds issued for bank recapitalization and asset management companies.

7/ Includes local government bonds and explicit debt.

8/ Two-thirds of new contingent debt is assumed likely to be recognized as general government debt.

9/ Total social capital constribution to SCF and GGFs.

10/ Includes only 2/3 of LGFV debt, being categoried as government explicit debt according to NAO report (2013), and excludes the rest 1/3, being categorized as government guaranteed debt or "possible to be recognized" debt.

11/ GDP in this table refers to expenditure side nominal GDP.

Table 3. China: Balance of Payments

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
						Projections					
	(In percent of GDP, unless otherwise indicated)										
BALANCE OF PAYMENTS											
Current account balance	1.7	1.5	0.2	0.7	1.8	1.6	1.5	1.4	1.3	1.0	0.8
Trade balance	4.4	3.9	2.7	2.7	3.5	3.0	2.7	2.9	3.0	2.7	2.5
Exports	17.7	18.1	17.5	16.6	16.8	18.3	17.5	17.0	16.6	16.1	15.7
Imports	13.4	14.2	14.7	13.9	13.3	15.3	14.8	14.1	13.6	13.4	13.1
Services balance	-2.1	-2.1	-2.1	-1.8	-1.0	-0.7	-1.0	-1.6	-1.8	-1.9	-2.0
Income balance	-0.5	-0.1	-0.4	-0.3	-0.7	-0.7	-0.2	0.1	0.1	0.2	0.2
Current transfers	-0.1	-0.1	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
Capital and financial account balance	-3.7	0.9	1.3	0.1	-0.4	-0.6	-0.2	0.0	0.1	0.2	0.4
Capital account	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial account	-3.7	0.9	1.3	0.1	-0.4	-0.6	-0.2	0.0	0.1	0.2	0.4
Net foreign direct investment	-0.4	0.2	0.7	0.4	0.7	1.8	0.6	0.5	0.5	0.5	0.4
Foreign Direct investment	1.6	1.4	1.7	1.3	1.4	2.5	1.2	1.2	1.1	1.1	1.0
Overseas Direct Investment	-1.9	-1.1	-1.0	-1.0	-0.7	-0.7	-0.7	-0.6	-0.6	-0.6	-0.6
Portfolio investment	-0.5	0.2	0.8	0.4	0.6	0.2	0.3	0.4	0.5	0.6	0.7
Other investment	-2.8	0.4	-0.1	-0.7	-1.7	-2.7	-1.1	-1.0	-0.9	-0.9	-0.8
Errors and omissions 1/	-1.9	-1.7	-1.3	-0.9	-1.1	0.0	0.0	0.0	0.0	0.0	0.0
Overall balance	-4.0	0.7	0.1	-0.1	0.2	0.9	1.3	1.4	1.4	1.2	1.1
Reserve assets	4.0	-0.7	-0.1	0.1	-0.2	-0.9	-1.3	-1.4	-1.4	-1.2	-1.1
INTERNATIONAL INVESTMENT POSITION											
Asset	58.6	58.6	53.7	54.7	58.5	57.7	56.9	57.2	57.5	57.6	57.5
Direct investment	12.7	15.0	14.5	15.6	16.2	14.9	14.2	13.7	13.4	13.0	12.7
Securities investment	3.3	4.1	3.7	4.6	6.1	6.5	6.9	7.5	8.0	8.4	8.8
Other investment	15.0	13.1	12.6	12.0	13.6	16.0	16.1	16.4	16.6	16.7	16.7
Reserve assets	27.6	26.4	22.9	22.5	22.6	20.3	19.7	19.6	19.6	19.4	19.2
Liability	40.9	41.8	38.5	38.7	44.1	43.9	42.9	42.9	42.9	43.1	43.2
Direct investment	24.5	22.2	20.4	19.5	21.4	21.2	20.4	20.1	19.7	19.4	19.1
Securities investment	7.6	9.6	8.4	10.1	13.1	12.9	13.1	13.6	14.2	14.9	15.5
Other investment	8.8	9.9	9.6	9.0	9.5	9.8	9.4	9.2	9.0	8.8	8.6
Net international investment position	17.7	16.8	15.2	16.0	14.5	13.8	14.0	14.3	14.6	14.5	14.2
MEMORANDUM ITEMS											
Export growth (value terms, percentage change)	-7.2	11.4	9.1	-1.3	4.6	24.3	5.7	5.4	5.0	4.4	4.5
Import growth (value terms, percentage change)	-4.2	16.0	17.1	-2.1	-0.6	31.1	6.8	3.2	4.0	5.8	5.4
FDI (inward, billions of U.S. dollars)	175	166	235	187	212	419	230	237	244	252	259
External debt (billions of U.S. dollars)	1,416	1,758	1,983	2,071	2,401	2,819	3,103	3,404	3,725	4,068	4,433
As a percent of GDP	12.6	14.3	14.3	14.4	16.1	16.6	16.6	16.8	17.0	17.3	17.6
Short-term external debt (remaining maturity, billions of U.S. dollars)	866	1,145	1,280	1,320	1,463	1,698	1,857	2,025	2,205	2,397	2,602
Gross reserves (billions of U.S. dollars) 2/	3,098	3,236	3,168	3,223	3,357	3,448	3,696	3,976	4,280	4,560	4,846
As a percent of short-term debt by remaining maturity	357.7	282.6	247.4	244.2	229.4	203.1	199.1	196.3	194.1	190.3	186.3
Terms of trade (percentage change)	0.9	-5.1	-2.7	4.6	7.3	-7.1	-2.2	0.6	-2.3	-0.9	-0.3
Real effective exchange rate (2010 = 100)	123.7	120.1	121.7	120.9	123.4	...	...	...	...	...	...
Nominal GDP (billions of U.S. dollars)	11,227	12,265	13,842	14,341	14,867	16,961	18,741	20,311	21,882	23,515	25,260

Sources: CEIC; IMF, Information Notice System; and IMF staff estimates and projections.
1/ Includes counterpart transaction to valuation changes.
2/ Includes foreign currency reserves and other reserve assets such as SDRs and gold.

Table 4. China: Monetary and Credit Developments

	2016	2017	2018	2019	2020
MONETARY SURVEY					
			(Annual percentage change)		
Net foreign assets	-5.9	-4.0	1.0	3.5	1.9
Monetary authority (contribution)	-9.1	-2.4	-1.5	0.5	-0.3
Depository institutions (contribution)	3.1	-1.6	2.5	3.0	2.1
Domestic credit	20.1	11.3	10.4	10.6	12.3
Claims on government, net (contribution)	4.8	2.7	2.6	2.0	2.3
Claims on nonfinanical sectors (contribution)	8.6	7.7	9.1	9.2	10.2
Claims on other financial sectors (contribution)	6.6	0.9	-1.3	-0.6	-0.2
Broad money (M2)	11.3	9.0	8.1	8.7	10.1
M1 (contribution)	6.1	3.7	0.5	1.3	2.5
Quasi-money (contribution)	5.2	5.4	7.6	7.4	7.6
Reserve money	11.8	4.2	2.8	-2.0	1.9
TOTAL SOCIAL FINANCING					
			(In percent)		
TSF 1/	16.0	14.1	10.3	10.7	13.3
Bank loans (contribution)	8.5	7.6	7.5	7.4	8.0
Shadow banking (contribution)	0.8	2.0	-1.4	-0.8	-0.5
Net corporate bond financing (contribution)	2.3	0.4	0.9	1.2	1.7
Non-financial enterprise equity (contribution)	0.9	0.5	0.2	0.2	0.4
Others (contribution) 2/	3.5	0.6	0.8	0.6	0.6
			(In percent of GDP)		
TSF 1/	209.1	248.4	247.9	253.7	277.6
Bank loans	144.5	146.6	149.5	155.1	169.3
Shadow banking	31.4	32.4	26.2	22.4	20.4
Net corporate bond financing	24.0	22.7	22.6	23.7	26.9
Non-financial enterprise equity	7.7	8.0	7.7	7.4	8.0
Government bonds	30.3	34.0	36.0	38.1	44.9
Others 2/	14.6	4.6	5.9	6.9	8.1
MEMORANDUM ITEMS					
			(In percent)		
Non-performing loans (NPLs) ratio	1.7	1.7	1.8	1.9	1.8
Provision coverage ratio (provisions/NPLs)	176.4	181.4	186.3	186.1	184.5
Liquidity ratio (liquid assets/liquid liabilities)	47.6	50.0	55.3	58.5	58.4
Loan to deposit ratio	67.6	70.6	74.3	75.4	76.8
Return on assets	1.0	0.9	0.9	0.9	0.8
Return on equity	13.4	12.6	11.7	11.0	9.5
Capital adequacy ratio	13.3	13.7	14.2	14.6	14.7
Tier-1 capital adequacy ratio	11.3	11.4	11.6	12.0	12.0
Core tier-1 capital adequacy ratio	10.8	10.8	11.0	10.9	10.7
Net open FX position (in percent of capital)	3.5	2.5	2.4	2.7	2.1

Sources: Haver Analytics; People's Bank of China (PBC); and IMF staff estimates.

1/ The TSF numbers for 2016 are calculated based on the old TSF without government bonds and adjusted to include the local government debt swap. The TSF numbers from 2017 onward are the new TSF (revised by the PBC in December 2019) which includes all government bonds.

2/ Others include local government debt swap and other components in 2016, and include asset-backed securities, loan write-offs, and other components from 2017 onward.

Table 5. China: Nonfinancial Sector Debt

	(In RMB trillions)						(In percent of GDP)						Coverage	
	2018	2019	2020	2021	2022	2023	2018	2019	2020	2021	2022	2023		
Total non-financial sector debt	227	252	285	315	346	376	248	254	278	279	288	293		
Central government	15	17	21	23	26	29	16	17	20	21	22	23	Official Government Debt	Staff Estimate of General Government Debt ("Augmented")
Local government 1/	18	21	26	30	34	39	20	22	25	27	29	31		
Local government financing vehicles (LGFV)	31	35	42	50	58	66	34	36	41	44	48	51		
"Likely" to be recognized														
As per the 2014 audit	1	1	1	1	1	1	1	1	1	1	1	1		
New borrowing (staff estimate) 2/	15	18	22	27	33	38	16	18	22	24	27	30		
Additional debt possible to be recognized														
As per the 2014 audit	8	8	8	8	8	8	9	8	8	7	6	6		
New borrowing (staff estimate) 2/	8	9	11	14	16	19	8	9	11	12	14	15		
Government funds 3/	6	7	9	11	14	16	6	7	9	10	11	12		
Households	48	55	63	71	76	83	52	56	62	63	63	64		Private Sector Debt
Corporates (excluding LGFV)	109	116	124	130	138	144	119	117	121	115	115	112		
Domestic 4/	104	110	118	123	131	136	113	111	115	109	109	106		
External	6	6	6	6	7	7	6	6	6	6	6	6		
MEMORANDUM ITEMS														
Total domestic non-financial sector debt	221	246	279	309	339	369	242	248	272	274	282	287		
Corporates (including LGFVs)	140	151	166	180	196	209	153	152	162	159	163	163		
of which LGFVs	31	35	42	50	58	66	34	36	41	44	48	51		
Households	48	55	63	71	76	83	52	56	62	63	63	64		
General government (Official definition)	33	38	47	53	61	68	36	38	45	47	51	53		
Government funds 3/	6	7	9	11	14	16	6	7	9	10	11	12		
Nominal GDP	92	99	103	113	120	129								

Sources: CEIC; Bloomberg; Ministry of Finance; and IMF staff estimates.

1/ Including LGFV debt recognized as LG debt as of 2014 (by the 2014 audit).

2/ New LGFV borrowing estimates were re-estimated from 2016 onward based on aggregating debt of individual LGFVs using firm-level data from Bloomberg. Previously new LGFV borrowing was estimated based on infrastructure fixed asset investment data. Two-thirds of the new LGFV borrowing is assumed "likely" to be recognized and one-third is assumed "possible" to be recognized.

3/ Government guided funds and special construction funds (social capital portion only).

4/ Domestic corporate debt (excluding LGFV) for 2018 changed relative to the 2019 Article IV Staff Report due to the new LGFV borrowing estimates and the TSF data revisions in December 2019.

Table 6. China: Rebalancing Scorecard

External		Internal			Environment		Income Distribution	
Current acc.	Net exports contrib.	Cons/Inv	Industry/ Services	Credit	Energy	Air pollution	Labor income ratio	Income inequality

	Unit	2017	2018	2019	2020	2021 Projection / YTD
1. External rebalancing						
Contribution of net exports to GDP growth	%	0.3	-0.5	0.7	0.6	0.8
Current account balance	% of GDP	1.5	0.2	0.7	1.8	1.6
FX reserve coverage	months of imports	20.0	17.2	15.1	16.1	17.5
National saving rate	% of GDP	44.7	44.1	43.8	45.0	44.1
2. Internal rebalancing						
Demand side						
Growth contribution of consumption vs investment	%	1.4	1.5	2.0	-0.2	4.2
Share of private consumption (Nominal)	% of GDP	38.7	38.7	39.1	37.7	38.8
Share of investment (Nominal)	% of GDP	42.7	43.2	44.0	43.1	43.1
Supply side						
Growth contribution of Tertiary vs Secondary sector 1/	%	1.8	1.8	1.9	1.1	1.3
Share of Tertiary sector (Nominal) 1/ 2/	% of GDP	52.7	53.3	54.3	54.5	54.8
Share of Tertiary sector in total employment	%	44.7	46.1	47.1	47.7	...
Credit Side						
Private domestic credit	% of GDP	169	165	167	177	172
Credit intensity		2.5	1.9	2.4	6.5	2.0
Return on asset: SOE - private 1/ 2/	%	-5.6	-4.0	-3.9	-3.2	-1.2
3. Environmental rebalancing						
Energy intensity of output 1/	per unit of output	83.3	82.4	81	74	75
PM 2.5 (Weighted by usual residence) 1/	mcg per cubic metre	47.4	44.2	40.3	35.7	33.3
4. Income distribution						
Gini	index number	0.467	0.468	0.470	...	...
Labor income	% of GDP	60.1	59.1	59.1	58.1	58.5
Urban/rural income gap 1/ 2/	income ratio	2.71	2.69	2.64	2.56	2.61
Real disposable income growth: Median – Mean 1/ 2/	%	-1.7	-0.1	0.1	-0.9	-2.4

Note: The color coding is based on the change in each indicator relative to 2019. Color coding: red if the changes go in the opposite direction of rebalancing; yellow if some progress was observed; and green if there was substantial progress in rebalancing. For indicators that are ratios, changes are measured in simple differences and are considered substantial if larger than 0.5 percentage points. For indicators that are indices and for the credit indicators, changes are measured in annual percent change and are considered substantial if larger than 5 percent. See Zhang, L. (2016), "Rebalancing in China—Progress and Prospects," IMF Working Paper No. 16/183 for the framework.

1/ Reported values for 2021 are for 2021 YTD (through Q3), not full year projections. In addition, environmental indicators are significantly affected by the lockdowns in 2020 and 2021.

2/ Given the importance of seasonality for this indicator, the score is calculated from the difference in this share relative to 2021 H1 (YTD).

Table 7. China: SOE Performance

Variable	Indicator	2016	2017	2018	2019	2020	Trend
		(In percent unless otherwise indicated)					
Profitability	Return on assets - SOEs 1/	1.6	1.9	1.9	0.9		
	Return on assets - industrial SOEs	3.0	3.9	4.2	3.5	3.1	
	Return on assets - industrial private	8.9	8.5	7.4	7.3	6.3	
Efficiency	Cost per unit of income - SOEs	94.8	97.1	97.1	97.4	97.1	
Leverage	Debt to equity - SOEs 1/	190	192	183	182		
	-Central	217	213	210	209		
	-Local	171	174	165	165		
	Debt to asset - SOE 1/	65.5	65.7	64.7	63.9		
	-Central	68.4	68.0	67.7	67.0		
	-Local	63.1	63.5	62.2	61.6		
	Debt to asset - above-designated-size industrial	55.9	56.0	55.6	56.6	56.1	
	Debt to asset - industrial state holding enterprises	61.6	60.5	58.7	58.0	57.3	
	Debt to asset - industrial private	52.3	53.0	53.7	55.6	57.4	
	Number of zombies 2/	2041	841	141	102		
	Number of default SOE bonds	26	8	20	21	88	
Corporate governance	Central SOEs with board of directors	85	87	94	95	95	
	Number of Central SOEs 3/	102	98	96	97	97	
	Dividend payments to budget	10.1	7.6	7.4	7.6	9.1	
SOEs' share in the economy	Employment	14.9	14.3	13.2	12.7	11.8	
	Above designated size industrial sales	20.6	23.4	26.9	27.2	26.0	
	Asset (industrial state holding enterprises/total above designated size industrial)	38.5	39.2	38.1	38.7	37.6	
	Liability (industrial state holding enterprises/total above designated size industrial)	42.4	42.4	40.3	39.7	38.4	

Sources: CEIC; NBS; and Ministry of Finance.

1/ Since June 2019, the government no longer disclose non-financial SOE assets and liabilities. The debt ratios in 2019 is calculated as of June 2019.

2/ Number of zombies refers to legal entities of central SOEs. Number of zombies in 2019 refers to data as of 2019 Q3. According to SASAC's 3-year plan, all zombie enterprises will be cleaned up by 2020.

3/ There are 97 central SOEs and 39000 legal entities affilicated to these SOEs by 2019.

Table 8. China: External Vulnerability Indicators

	2016	2017	2018	2019	2020
Monetary and financial					
General government debt (in percent of GDP, narrow definition)	36.7	36.2	36.5	38.5	45.4
Broad money (M2: annual percentage change)	11.3	9.0	8.1	8.7	10.1
Foreign currency deposits to broad money (percent)	3.2	3.1	2.7	2.7	2.7
Local currency loans to the economy (annual percentage change)	13.5	12.7	13.5	12.3	12.8
Foreign currency loans to bank domestic credit (in percent)	3.4	3.1	2.8	2.5	2.3
Stock exchange index (end-of-period, December 19, 1990 = 100) 1/	3,250	3,463	2,611	3,196	3,640
Stock exchange capitalization (percent of GDP)	91.6	94.7	77.8	93.1	117.4
Number of listed companies (A-share)	3,034	3,467	3,567	3,690	3,925
Balance of payments					
Exports (annual percentage change, U.S. dollars)	-7.2	11.4	9.1	-1.3	4.6
Imports (annual percentage change, U.S. dollars)	-4.2	16.0	17.1	-2.1	-0.6
Current account balance (percent of GDP)	1.7	1.5	0.2	0.7	1.8
Capital and financial account balance (percent of GDP)	-3.7	0.9	1.3	0.1	-0.4
Of which: gross foreign direct investment inflows	1.6	1.4	1.7	1.3	1.4
Foreign Exchange Reserve					
In billions of U.S. dollars 2/	3,098	3,236	3,168	3,223	3,357
Coverage in terms of:					
Imports (in months)	18.6	20.0	17.2	15.1	16.1
Broad money (percent)	13.3	12.9	11.5	11.2	10.6
Short-term external debt by remaining maturity (percent)	358	283	247	244	229
ARA (range, in percent of ARA metrics) 3/	106-283	93-244	88-227	84-217	75-193
External debt and balance sheet indicators					
Total external debt (percent of GDP)	12.6	14.3	14.3	14.4	16.1
Total external debt (billions of U.S. dollars)	1,416	1,758	1,983	2,071	2,401
Short-term external debt by original maturity (billions of U.S. dollars)	866	1,145	1,280	1,320	1,463
Net foreign assets of banking sector (billions of U.S. dollars)	540	500	570	666	801
Total debt to exports of goods & services (percent)	64.4	72.4	74.8	78.7	87.9
Total debt service to exports of goods & services (percent)	39.6	47.4	48.8	46.0	48.4
Of which: Interest payments to exports of goods & services (percent)	0.2	0.2	0.2	0.2	0.2
Foreign-currency long-term sovereign bond ratings (eop)					
Moody's	Aa3	Aa3	Aa3	A1	A1
Standard and Poor's	AA-	AA-	AA-	AA-	A+

Sources: CEIC; Bloomberg; IMF, Information Notice System; and IMF staff estimates.
1/ Shanghai Stock Exchange, A-share.
2/ Includes foreign currency reserves and other reserve assets such as SDRs and gold.
3/ ARA short for assessing reserve adequacy. Range for the ARA metric under different assumptions of exchange rate regime and capital controls.

Appendix I. External Sector Assessment

<table>
<tr><td colspan="8"> Overall Assessment: On a preliminary basis, the external position in 2021 is broadly in line with the level implied by medium-term fundamentals and desirable policies. The CA surplus is projected to have narrowed slightly in 2021, reflecting stronger imports on the back of higher commodity prices despite the continuing influence of transitory factors linked to the global COVID-19 crisis such as elevated pandemic-related exports and limited outbound travel. Once these temporary factors fully dissipate, the CA surplus is expected to return to its medium-term downward trend as China's economy rebalances toward higher-quality, more consumption-driven growth. However, this assessment is highly uncertain given the lack of full-year data for 2021 and the unknown path of the COVID-19 crisis. A more complete analysis will be provided in the 2022 External Sector Report.
Potential Policy Responses: Policies that will ensure that the external position remains broadly in line with fundamentals include: (1) accelerating structural reforms—a further opening up of domestic markets, reforming SOEs, and ensuring competitive neutrality with private firms while promoting green investment—to boost potential growth; (2) shifting policy support towards strengthening social protection to reduce high household precautionary savings and free up income for consumption; and (3) further increasing exchange rate flexibility to help the economy adjust to the changing external environment. Fiscal policy should shift to neutral to slow the drag on growth and secure the handoff to private demand while monetary policy should stay accommodative given low inflation and remaining slack in the economy. </td></tr>
<tr><td>Foreign Asset and Liability Position and Trajectory</td><td colspan="7"> Background. The NIIP is projected to further decline to 13.8 percent of GDP in 2021, from the peak of 30.4 percent in 2008. The drop reflects higher inward direct investment and securities investment received amid relatively robust GDP growth, despite high CA surplus and the increase in loans extended abroad.
Assessment. The NIIP-to-GDP ratio is expected to remain positive, with a modest decline over the medium term. The NIIP is not a major source of risk, as assets remain high—reflecting large foreign reserves (US$3.4 trillion as of October 2021; 20 percent of GDP)—and liabilities are mostly FDI related. </td></tr>
<tr><td>2021 (% GDP)</td><td>NIIP: 13.8</td><td colspan="2">Gross Assets: 57.7</td><td colspan="2">Res. Assets: 20.3</td><td>Gross Liab.: 43.9</td><td>Debt Liab.: 16.6</td></tr>
<tr><td>Current Account</td><td colspan="7"> Background. The CA surplus is projected to narrow to 1.6 percent of GDP in 2021, from 1.8 percent in 2020. Preliminary analysis suggests a falling trade balance due to stronger imports on the back of higher commodity prices. However, pandemic-related factors continue to elevate the CA surplus in 2021, including medical trade, shifting of household consumption towards goods, and still subdued outbound tourism given the continuation of strict travel restrictions. The income balance deficit is projected to widen further, driven by a higher investment income deficit. Over the medium term, the CA surplus is projected to converge to about 0.5 percent of GDP based on the assumption of continued rebalancing toward higher-quality and more consumption-driven growth.
Assessment. On a preliminary basis, the EBA CA methodology estimates the CA gap in 2021 to be 2.1 percent of GDP. Considering that pandemic-related temporary factors raised the CA surplus by 1.6 percent of GDP (with contributions of 0.8 percentage points from the travel services balance, 0.4 percentage points from the shift in global household consumption from services to consumer goods, and 0.4 percentage points from the impact on medical goods trade, respectively), the IMF staff assesses the CA gap to range from −0.9 to 1.9 percent of GDP, with a midpoint of 0.5 percent. The range around the midpoint reflects several uncertainties, including about the persistence of the pandemic-related factors. Preliminary EBA-identified policy gaps are estimated to be around a half percent of GDP, driven by the wider fiscal policy gap reflecting less expansionary fiscal policy, inadequate social safety nets, and a relatively closed capital account. Continued reserve accumulation and relatively high credit growth largely offset each other. The overall gap is largely accounted for by the residual, which reflects factors not directly captured by the underlying model, including distortions that encourage high precautionary saving. </td></tr>
<tr><td>2021 (% GDP)</td><td>CA: 1.6</td><td>Cycl. Adj. CA: 1.9</td><td>EBA Norm: −0.1</td><td>EBA Gap: 2.1</td><td>COVID-19 Adj.: −1.6</td><td>Other Adj.: 0.0</td><td>Staff Gap: 0.4</td></tr>
<tr><td>Real Exchange Rate</td><td colspan="7"> Background. As of October 2021, the REER had appreciated by 3.5 percent from the 2020 average, largely driven by the NEER appreciation (7.4 percent). This continued the REER appreciation in 2020 (by 2.1 percent) after a depreciation of 11.7 percent during 2015–19. In the context of declining depreciation pressure, the use of a countercyclical adjustment factor was phased out in October 2020.
Assessment. The IMF staff CA gap implies a REER gap of −1.7 percent in 2021 (applying an estimated elasticity of 0.23). The EBA REER index regression estimates the REER gap in 2020 to be 2.1 percent and the EBA REER level regression estimates the REER gap to be 17.7 percent. Overall, the IMF staff assesses the REER gap to be in the range of −7.9 to 12.1 percent, with a midpoint of 2.1percent. </td></tr>
<tr><td>Capital and Financial Accounts: Flows and Policy Measures</td><td colspan="7"> Background. Amid ongoing opening up, net capital outflows (including errors and omissions) declined to US$56 billion (0.3 percent of GDP) in the first three quarters of 2021, compared to the annual outflows of $246 billion (1.7 percent of GDP) in 2020. The adjusted CFMs since December 2020 included: (1) the ceiling on cross-border financing under the macroprudential assessment framework was lowered to the original level in December 2020 for financial institutions and January 2021 for enterprises; and (2) QFII investors were allowed to trade commodity futures, commodity options and stock index options starting November 2021. 1/
Assessment. While currently absent, substantial net outflow pressures may resurface as the private sector seeks to accumulate foreign assets faster than nonresidents accumulate Chinese assets. Over the medium term, the sequence of further capital account opening consistent with exchange rate flexibility should carefully consider domestic financial stability. Specifically, further capital account opening is likely to create substantially larger two-way gross flows. Hence, the associated balance sheet adjustments and the shifts in market sentiment require prioritizing the shift to an effective float (while using FX intervention to counter disorderly market conditions) and strengthening domestic financial stability prior to a substantial further opening. Efforts should be redoubled to encourage inward FDI, which would support growth, and to improve corporate governance. CFM measures should not be used to actively manage the capital flow cycle or substitute for warranted macroeconomic adjustment and exchange rate flexibility. </td></tr>
<tr><td>FX Intervention and Reserves Level</td><td colspan="7"> Background. FX reserves continued to increase (by US$1.1 billion in 2020) to US$3.4 trillion as of October 2021, mainly reflecting valuation effects and adjustments in net forward positions, with no sign of large FX intervention.
Assessment. The level of reserves—projected at 70 percent of the IMF's standard composite metric at the end of 2021 (75 percent in 2020) and 111 percent of the metric adjusted for capital controls (120 percent in 2020)—is assessed to be adequate. The decline in the ratios reflects higher exports, broad money, external debt, and other liabilities, all of which raised the metric. </td></tr>
<tr><td colspan="8">1/ See 2020 IMF CFM Taxonomy for a list of China's existing CFMs and related policy advice.</td></tr>
</table>

Appendix II. Risk Assessment Matrix[1, 2]

Risks	Likelihood	Impact and policy response
Conjunctural shocks and scenarios		
Uncontrolled COVID-19 local outbreaks and subpar/volatile growth in affected countries. Outbreaks in slow-to-vaccinate countries force new lockdowns. For many Emerging Markets and Low-Income Countries, policy response to cushion the economic impact is constrained by lack of policy space, with some market access countries facing additional financial tightening as a reassessment of growth prospects triggers capital outflows, depreciations, and debt defaults.	High ↓	**High**. Even more frequent COVID-19 outbreaks and the continuation of the zero-tolerance strategy towards the virus could further delay the recovery in private demand. Macroeconomic policy should step up should growth falter. China has the fiscal space to revert to an expansionary stance if needed, with the composition of fiscal stimulus decisively shifting to targeted support for vulnerable and low-income households. A more accommodative monetary policy focusing on conventional policy interest rate cuts would make fiscal support more effective. The exchange rate flexibility should be further increased.
Disorderly transformations. COVID-19 triggers structural transformations, but the reallocation of resources is impeded by labor market rigidities, debt overhangs, and inadequate bankruptcy resolution frameworks. This, coupled with a withdrawal of COVID -19-related policy support, undermines growth prospects, and increases unemployment, with adverse social/political consequences. Adjustments in global value chains and reshoring (partly driven by geostrategic and national security concerns) shift production activities across countries.	Medium ↓	**High**. Limitations to China's access to the international technology frontier and resulting decline in knowledge diffusion across borders could lead to lower productivity growth. The policy response should include: accelerating the reforms needed to strengthen resolution frameworks; containing financial spillovers to ensure the functioning of credit markets, while addressing moral hazard; working with trading partners to address shortcomings in the global trading system; accelerating reforms to strengthen the role of markets, increase competition, foster openness, and tackle climate change.
De-anchoring of inflation expectations in the U.S. leads to rising core yields and risk premia. A fast recovery in demand (supported by excess private savings and stimulus policies), combined with COVID -19-related supply constraints, leads to sustained above-target inflation readings and a de-anchoring of expectations. The Fed reacts by signaling a need to tighten earlier than expected. The resulting repositioning by market participants leads to a front-loaded tightening of financial conditions and higher risk premia, including for credit, equities, and emerging and frontier market currencies.	Medium ↓	**Medium**. Further increasing exchange rate flexibility is important to facilitate adjustment to the changing external environment. The PBC should stand ready to ensure the functioning of core funding markets to contain financial spillovers and safeguard financial stability.

[1] The Risk Assessment Matrix (RAM) shows events that could materially alter the baseline path. The relative likelihood is the staff's subjective assessment of the risks surrounding the baseline ("low" is meant to indicate a probability below 10 percent, "medium" a probability between 10 and 30 percent, and "high" a probability between 30 and 50 percent). The RAM reflects staff views on the source of risks and overall level of concern as of the time of discussions with the authorities. Non-mutually exclusive risks may interact and materialize jointly. The conjunctural shocks and scenario highlight risks that may materialize over a shorter horizon (between 12 to 18 months) given the current baseline. Structural risks are those that are likely to remain salient over a longer horizon.

[2] Green upward and red downward arrows denote upside and downside risks respectively.

Risks	Likelihood	Impact and policy response
Financial stability risks materializing. Investor concerns about state support for some faltering local SOEs, combined with local government debt overhangs spread more widely through the corporate sector, tightening financial conditions, and creating potential negative feedback loops between corporate, bank, and local government balance sheets. In addition, tight policies and weakened demand in the real estate sector led to a significant fall in property prices, with developer funding be squeezed further with negative spillovers to upstream sectors, potentially contributing to banks' loan quality deterioration.	Medium ↓	**Medium.** Non-viable but systemically important non-financial entities need to be reorganized or liquidated in a coordinated and orderly fashion within the existing corporate restructuring framework, for example through out-of-court restructuring with loss recognition and burden sharing, to mitigate negative spillover effects within the sector or broader economy. During this process, to safeguard the financial system, the PBC should stand ready to ensure the functioning of core funding markets by providing emergency liquidity assistance with appropriate safeguard to viable banks facing liquidity shortfalls, and, with other regulators, acting promptly to resolve failing financial institutions to avoid systemic stress.
Structural risks		
Cyber-attacks on critical infrastructure, institutions, and financial systems trigger systemic financial instability or widespread disruptions in socio-economic activities and remote work arrangements.	Medium ↓	**High**. Put in place adequate firewalls and security measures. Enhance crisis preparedness for cyberattacks.
Higher frequency and severity of natural disasters related to climate change cause severe economic damage to smaller economies susceptible to disruptions and accelerate emigration from these economies. A sequence of severe events in large economies reduces global GDP and prompts a recalculation of risk and growth prospects. Disasters hitting key infrastructure or disrupting trade raise commodity price levels and volatility.	Medium ↓	**Medium**. A push for green investment, combined with well-sequenced climate change mitigation strategies, would boost the near-term recovery while promising large environmental, health, fiscal, and economic benefits over the long term.
A comprehensive reform package. Reforms that increase the role of markets, aided by greater openness could significantly boost productivity and potential growth.	Medium ↑	**High**. Implement a high-quality comprehensive reform package based on market-oriented policies.

Appendix III. Debt Sustainability Analysis[1]

The debt sustainability analysis (DSA) assesses government debt under both general "budgetary (official)" and staff's estimated general government "augmented" definitions. The expiration of pandemic-related support and a general tightening in expenditures narrowed the budget deficits considerably in 2021. While general "budgetary (official)" debt remains manageable, "augmented" debt and associated gross financing needs are high and debt, under both definitions, is on an upward trajectory. Medium-term fiscal adjustment is expected to stabilize official budgetary debt and augmented debt over the long term. External debt is 0.2 percent of GDP and considered sustainable.

1. China's public debt sustainability analysis (DSA) is based on the following assumptions:

Public debt coverage. Two definitions of debt are used. The main difference is the coverage of local government debt.

- The general budgetary (official) coverage scenario includes central government debt and "on-budget" local government debt identified by the authorities. For 2004–13, general government debt includes central government debt and local government bonds (issued by the central government). From 2014, general government debt includes central government debt and explicit local government debt (which consists of local government bonds and other recognized off-budget liabilities incurred by end-2014). The change of definition in 2014 is mainly a result of the change of official data coverage when 2/3 of local government financing vehicle (LGFV) debt was explicitly recognized as a government liability.
- *"Augmented"* debt is used in the broad coverage scenario. It adds other types of local government borrowing, including off-budget liabilities borrowed by LGFVs via bank loans, bonds, trust loans and other funding sources, estimated by staff.[2] It also covers debt of government-guided funds and special construction funds, whose activities are considered quasi-fiscal. The augmented deficit is the flow counterpart of augmented debt. Augmented data are staff's best estimate of general government data. Data limitations mean some nongovernment activity is likely included, and some LGFV and funds may have substantial revenues. It is also possible that some general government activity takes place outside of staff's augmented definition (e.g. public-private partnerships (PPPs)).

Macroeconomic assumptions: The projection reflects a projected softening in real GDP growth to 4.8 percent in 2022 and average real GDP growth of 5 percent through 2026 after a strong rebound in growth to 7.9 percent in 2021 from the pandemic-induced trough in 2020. The average GDP deflator growth is expected to be about 2 percent over the same period. The fiscal assumptions differ in the scenarios with budgetary government debt or augmented debt.

- *Fiscal balance in the general budgetary (official) coverage scenario.* This scenario assumes all

[1] Prepared by John Ralyea.

[2] The LGFV debt stock from 2016-2019 was revised upwards between RMB 4.2 trillion to RMB 6.7 trillion depending on the year, based on a new methodology for estimating LGFV debt, which aggregates individual LGFVs' debt based on firm-level data.

spending is done within the confines of the budget, and thus off-budget public investment is sharply reduced. Under this scenario, the primary deficit (excluding net revenue from land sales) is projected to decrease to 9.8 percent of GDP in 2021 from 13.5 percent in 2020, driven mainly by the lapse in pandemic-related fiscal support, such as the exemption on social security contributions for businesses and investment spending, and a general tightening of expenditures. The primary deficit is projected to further decline gradually to 8.4 percent of GDP in 2026. The authorities decreased the special purpose local government bond quota to RMB 3,470 billion in 2021 from RMB 3,750 billion in 2020. The proceeds from the issuance primarily finance local government investment projects.

- *Fiscal balance in the augmented scenario.* Off-budget local government spending (including interest payments) is projected to decline slightly to 8.6 percent of GDP in 2021 from 8.7 percent in 2020 as the authorities' efforts to tackle hidden debts begin to take hold, and gradually fall further to 5.4 percent in 2026. The augmented primary deficit, which includes the on-budget fiscal deficit and off-budget spending financed by LGFV debt and government funds, is projected to decrease from 19.4 percent of GDP in 2020 to 15.4 percent in 2021 and further down to 10.6 percent in 2026.
- *Asset sales and withdrawals.* Since 2016 the government has relied on net proceeds from land sales and asset withdrawals (e.g., use of stabilization fund balances) to help finance deficit spending and tax cuts. In 2021, net land sales and asset drawdowns are estimated to be 4.8 percent of GDP. The DSA assumes that asset-based financing declines gradually relative to GDP over the projection horizon as fiscal consolidation during this period eases financing needs.
- *Interest rates and amortization.* The effective interest rate for central government and local government bonds is projected to remain relatively flat over the medium term, averaging 2.5 percent reflecting expectations of lower global and domestic interest rates relative to the past. The interest rates of off-budget borrowing (only in the augmented scenario) are expected to taper slightly over the projection horizon to 4 percent in 2026 (based on the yield differential between sovereign bond and LGFV bank loans and other short-term instruments). Staff assume all maturing debt will be rolled over.

2. In both coverage scenarios, debt continues to rise, but the annual increase in percent of GDP is relatively limited over the projection horizon. A favorable growth-interest rate differential contributes to this result. Government debt under the general budgetary (official) coverage scenario increases to 60 percent of GDP in 2026 up from 45 percent of GDP in 2020.[3] Augmented debt rises to 129 percent of GDP in 2026 from 96 percent of GDP in 2020. The debt-stabilizing augmented primary balance is estimated to be -3.4 percent of GDP in the medium term, 7.2 percentage points of GDP higher than its projected 2026 level. Nonetheless, the gradual adjustment path assumed in the baseline, if maintained over the long term, will stabilize both debt-to-GDP ratios.

[3] To the extent that LGFV's or SOEs hold government debt, net government debt is lower.

3. Although China faces relatively low risks to debt sustainability under the general budgetary (official) debt scenario, the worsening debt dynamics of augmented debt pose large risks to debt sustainability.

- In the narrow coverage scenario, budgetary (official) government debt reaches 70-75 percent of GDP at the end of the projection horizon in all standard stress tests except for the one with a contingent liability shock, in which it reaches 93 percent of GDP.[4] In the stress tests, the increase in gross financing needs could be sensitive to market financing conditions and may entail rollover risks. China's large domestic savings mitigates this risk somewhat.
- In the broad coverage scenario, the augmented debt level approaches 150 percent of GDP or more in 2026 under the various stress tests.

4. That stability of China's debt profile will largely depend on the implementation of the fiscal adjustment envisaged in the baseline and the growth enhancing effects of an expected reduction of public investment and expansion of the social protection system.

- Based on the projected debt dynamics under the narrow coverage, which assumes a broadly neutral fiscal stance in the cyclically adjusted primary balance from 2022-26, China's debt profile is still manageable, especially given that it is mostly domestically financed.
- The broader debt dynamic crucially depends on the evolution of public investment, especially off-budget investment. The extent to which off-budget investment is undertaken strictly on a commercial basis will determine whether the realized size of the public debt stock is closer to the narrow-coverage scenario or the broad-coverage scenario. If local governments continue to incur off-budget liabilities, the broad-coverage scenario is a better guide for fiscal policy.

5. Stable and lower debt burdens that would accompany medium-term fiscal adjustment would also provide more room for handling fiscal risks.

- New borrowing avenues have emerged, such as less supervised PPP. Also, as overall SOE profitability remains weak and about a third of SOEs remain loss making, fiscal risks from SOE debt are on the rise especially given SOE assets may not be liquid. In addition to aggressively monitoring, actively mitigating, and effectively managing these risks, it would be prudent to ensure public debt levels provide room to absorb the potential realization of the those risks without leading to undue strain on funding markets or abrupt shifts in fiscal policy.

[4] Mechanically, the standard contingent liability shock in the IMF's DSA toolkit assumes that 10 percent of non-government banking system assets would turn into government liabilities. Non-government banking system assets were about 205 percent of GDP in 2020. It also assumes that the real GDP growth in 2021 and 2022 would be 1.8 percent lower (a one standard deviation shock).

Appendix III. Figure 1. China: Public Sector Debt Sustainability Analysis (Augmented Debt: Broad Coverage)

(In percent of GDP unless otherwise indicated)

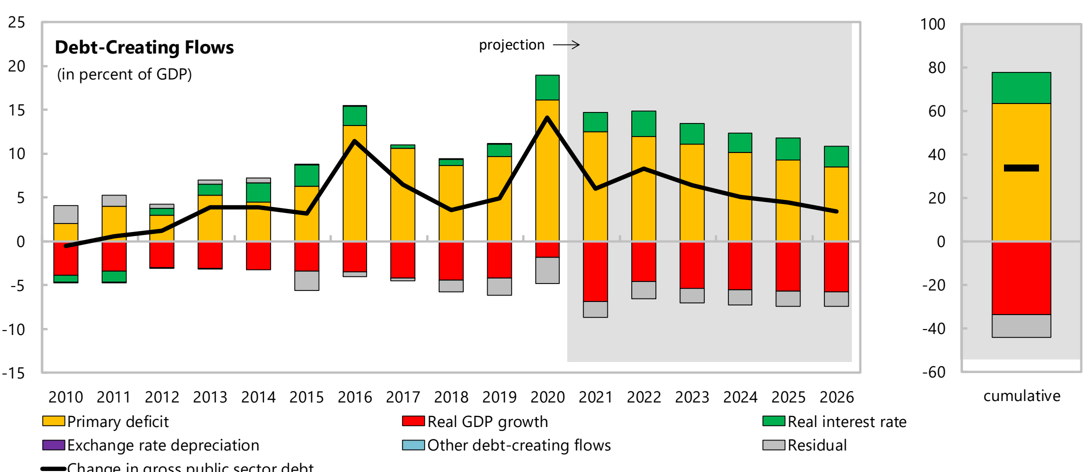
Debt, Economic and Market Indicators [1/]

	Actual			Projections					
	2010-2018 [2/]	2019	2020	2021	2022	2023	2024	2025	2026
Nominal gross public debt	55.7	81.6	95.7	101.7	110.0	116.4	121.4	125.8	129.3
Public gross financing needs	24.5	23.7	31.9	29.5	28.8	28.4	28.3	28.1	28.5
Real GDP growth (in percent)	7.9	6.0	2.3	7.9	4.8	5.2	5.1	5.0	4.9
Inflation (GDP deflator, in percent)	3.3	2.1	1.2	2.0	1.7	2.0	2.1	1.8	1.9
Nominal GDP growth (in percent)	11.4	8.2	3.6	10.0	6.5	7.3	7.3	6.9	6.9
Effective interest rate (in percent) [4/]	5.3	4.2	4.8	4.7	4.7	4.4	4.3	4.1	4.0

As of December 14, 2021		
Sovereign Spreads		
EMBIG (bp) 3/		144
5Y CDS (bp)		44
Ratings	Foreign	Local
Moody's	A1	A1
S&Ps	A+	A+
Fitch	A+	A+

Contribution to Changes in Public Debt

	Actual			Projections							
	2010-2018	2019	2020	2021	2022	2023	2024	2025	2026	cumulative	debt-stabilizing primary balance [9/]
Change in gross public sector debt	3.7	4.9	14.1	6.0	8.3	6.4	5.0	4.4	3.4	33.6	
Identified debt-creating flows	3.7	6.8	17.1	7.8	10.3	8.0	6.8	6.1	5.1	44.1	
Primary deficit	6.4	9.7	16.1	12.5	12.0	11.0	10.1	9.3	8.5	63.3	-3.4
Primary (noninterest) revenue and grants	27.6	27.8	25.3	25.8	25.6	25.6	25.5	25.6	25.6	153.7	
Primary (noninterest) expenditure	34.0	37.4	41.5	38.3	37.6	36.6	35.7	34.8	34.0	217.0	
Automatic debt dynamics [5/]	-2.7	-2.8	0.9	-4.7	-1.7	-3.0	-3.3	-3.1	-3.4	-19.2	
Interest rate/growth differential [6/]	-2.7	-2.8	1.0	-4.7	-1.7	-3.0	-3.3	-3.1	-3.4	-19.2	
Of which: real interest rate	0.9	1.4	2.8	2.2	2.9	2.4	2.2	2.5	2.4	14.5	
Of which: real GDP growth	-3.6	-4.2	-1.8	-6.9	-4.6	-5.4	-5.5	-5.7	-5.8	-33.7	
Exchange rate depreciation [7/]	0.0	0.0	0.0	…	…	…	…	…	…	…	
Other identified debt-creating flows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Net privatization revenues	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Please specify (2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Residual, including asset changes [8/]	0.0	-1.9	-2.9	-1.8	-2.0	-1.6	-1.7	-1.7	-1.7	-10.5	



Source: IMF staff.

1/ Public sector is defined as general government.

2/ Based on available data and historical data up to December 15, 2021.

3/ Long-term bond spread over U.S. bonds.

4/ Defined as interest payments divided by debt stock (excluding guarantees) at the end of previous year.

5/ Derived as $[(r - \pi(1+g) - g + ae(1+r)]/(1+g+\pi+g\pi))$ times previous period debt ratio, with r = interest rate; π = growth rate of GDP deflator; g = real GDP growth rate; a = share of foreign-currency denominated debt; and e = nominal exchange rate depreciation (measured by increase in local currency value of U.S. dollar).

6/ The real interest rate contribution is derived from the numerator in footnote 5 as $r - \pi (1+g)$ and the real growth contribution as -g.

7/ The exchange rate contribution is derived from the numerator in footnote 5 as $ae(1+r)$.

8/ Includes asset changes and interest revenues (if any). For projections, includes exchange rate changes during the projection period.

9/ Assumes that key variables (real GDP growth, real interest rate, and other identified debt-creating flows) remain at the level of the last projection year.

Appendix III. Figure 2. China: Public DSA — Composition of Augmented Debt (Broad Coverage) and Alternative Scenarios

Composition of Public Debt

By Maturity
(in percent of GDP)

Medium and long-term
Short-term
projection →

By Currency
(in percent of GDP)

Local currency-denominated
Foreign currency-denominated
projection →

Alternative Scenarios

Baseline
Historical
Constant Primary Balance

Gross Nominal Public Debt
(in percent of GDP)

projection →

Public Gross Financing Needs
(in percent of GDP)

projection →

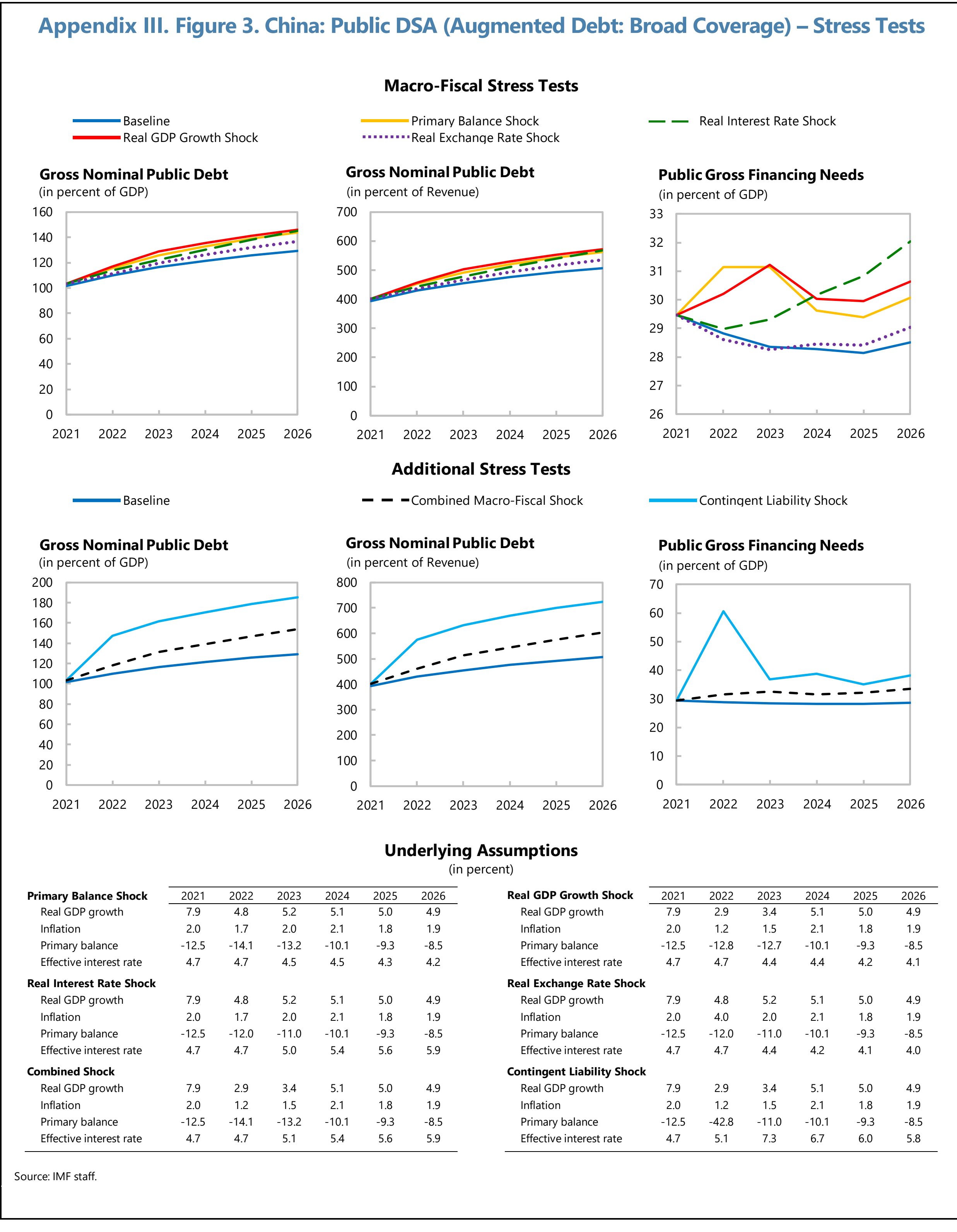
Underlying Assumptions
(in percent)

Baseline Scenario	2021	2022	2023	2024	2025	2026
Real GDP growth	7.9	4.8	5.2	5.1	5.0	4.9
Inflation	2.0	1.7	2.0	2.1	1.8	1.9
Primary Balance	-12.5	-12.0	-11.0	-10.1	-9.3	-8.5
Effective interest rate	4.7	4.7	4.4	4.3	4.1	4.0
Constant Primary Balance Scenario						
Real GDP growth	7.9	4.8	5.2	5.1	5.0	4.9
Inflation	2.0	1.7	2.0	2.1	1.8	1.9
Primary Balance	-12.5	-12.5	-12.5	-12.5	-12.5	-12.5
Effective interest rate	4.7	4.7	4.4	4.2	4.1	4.0

Historical Scenario	2021	2022	2023	2024	2025	2026
Real GDP growth	7.9	6.8	6.8	6.8	6.8	6.8
Inflation	2.0	1.7	2.0	2.1	1.8	1.9
Primary Balance	-12.5	-8.1	-8.1	-8.1	-8.1	-8.1
Effective interest rate	4.7	4.7	4.4	4.3	4.2	4.1

Source: IMF staff.

Appendix III. Figure 3. China: Public DSA (Augmented Debt: Broad Coverage) – Stress Tests



Underlying Assumptions

(in percent)

Primary Balance Shock	2021	2022	2023	2024	2025	2026
Real GDP growth	7.9	4.8	5.2	5.1	5.0	4.9
Inflation	2.0	1.7	2.0	2.1	1.8	1.9
Primary balance	-12.5	-14.1	-13.2	-10.1	-9.3	-8.5
Effective interest rate	4.7	4.7	4.5	4.5	4.3	4.2
Real Interest Rate Shock						
Real GDP growth	7.9	4.8	5.2	5.1	5.0	4.9
Inflation	2.0	1.7	2.0	2.1	1.8	1.9
Primary balance	-12.5	-12.0	-11.0	-10.1	-9.3	-8.5
Effective interest rate	4.7	4.7	5.0	5.4	5.6	5.9
Combined Shock						
Real GDP growth	7.9	2.9	3.4	5.1	5.0	4.9
Inflation	2.0	1.2	1.5	2.1	1.8	1.9
Primary balance	-12.5	-14.1	-13.2	-10.1	-9.3	-8.5
Effective interest rate	4.7	4.7	5.1	5.4	5.6	5.9

Real GDP Growth Shock	2021	2022	2023	2024	2025	2026
Real GDP growth	7.9	2.9	3.4	5.1	5.0	4.9
Inflation	2.0	1.2	1.5	2.1	1.8	1.9
Primary balance	-12.5	-12.8	-12.7	-10.1	-9.3	-8.5
Effective interest rate	4.7	4.7	4.4	4.4	4.2	4.1
Real Exchange Rate Shock						
Real GDP growth	7.9	4.8	5.2	5.1	5.0	4.9
Inflation	2.0	4.0	2.0	2.1	1.8	1.9
Primary balance	-12.5	-12.0	-11.0	-10.1	-9.3	-8.5
Effective interest rate	4.7	4.7	4.4	4.2	4.1	4.0
Contingent Liability Shock						
Real GDP growth	7.9	2.9	3.4	5.1	5.0	4.9
Inflation	2.0	1.2	1.5	2.1	1.8	1.9
Primary balance	-12.5	-42.8	-11.0	-10.1	-9.3	-8.5
Effective interest rate	4.7	5.1	7.3	6.7	6.0	5.8

Source: IMF staff.

Appendix III. Figure 4. China: Public DSA (Augmented Debt: Broad Coverage) – Risk Assessment

Heat Map

Debt level 1/	Real GDP Growth Shock	Primary Balance Shock	Real Interest Rate Shock	Exchange Rate Shock	Contingent Liability shock
Gross financing needs 2/	Real GDP Growth Shock	Primary Balance Shock	Real Interest Rate Shock	Exchange Rate Shock	Contingent Liability Shock
Debt profile 3/	Market Perception	External Financing Requirements	Change in the Share of Short-Term Debt	Public Debt Held by Non-Residents	Foreign Currency Debt

Evolution of Predictive Densities of Gross Nominal Public Debt

(in percent of GDP)

Baseline
Percentiles: 10th-25th 25th-75th 75th-90th

Symmetric Distribution

160
140
120
100
80
60
40
20
0
2019 2020 2021 2022 2023 2024 2025 2026

Restricted (Asymmetric) Distribution

180
160
140
120
100
80
60
40
20
0
2019 2020 2021 2022 2023 2024 2025 2026

Restrictions on upside shocks:
no restriction on the growth rate shock
no restriction on the interest rate shock
0 is the max positive pb shock (percent GDP)
no restriction on the exchange rate shock

Debt Profile Vulnerabilities

(Indicators vis-à-vis risk assessment benchmarks, in 2020)

China
Lower early warning
Upper early warning

600
200
139 bp
Bond spread
(in basis points) 4/

15
5
8%
External Financing Requirement
(in percent of GDP) 5/

1
0.5
0%
Annual Change in Short-Term Public Debt
(in percent of total)

45
15
0%
Public Debt Held by Non-Residents
(in percent of total)

60
20
0%
Public Debt in Foreign Currency
(in percent of total)

Source: IMF staff.

1/ The cell is highlighted in green if debt burden benchmark of 70% is not exceeded under the specific shock or baseline, yellow if exceeded under specific shock but not baseline, red if benchmark is exceeded under baseline, white if stress test is not relevant.

2/ The cell is highlighted in green if gross financing needs benchmark of 15% is not exceeded under the specific shock or baseline, yellow if exceeded under specific shock but not baseline, red if benchmark is exceeded under baseline, white if stress test is not relevant.

3/ The cell is highlighted in green if country value is less than the lower risk-assessment benchmark, red if country value exceeds the upper risk-assessment benchmark, yellow if country value is between the lower and upper risk-assessment benchmarks. If data are unavailable or indicator is not relevant, cell is white.

Lower and upper risk-assessment benchmarks are:

200 and 600 basis points for bond spreads; 5 and 15 percent of GDP for external financing requirement; 0.5 and 1 percent for change in the share of short-term debt; 15 and 45 percent for the public debt held by non-residents; and 20 and 60 percent for the share of foreign-currency denominated debt.

4/ Long-term bond spread over U.S. bonds, an average over the last 3 months, 15-Sep-21 through 14-Dec-21.

5/ External financing requirement is defined as the sum of current account deficit, amortization of medium and long-term total external debt, and short-term total external debt at the end of previous period.

Appendix III. Figure 5. China: Public Sector Debt Sustainability Analysis (General Budgetary (Official) Debt)

(In percent of GDP, unless otherwise indicated)

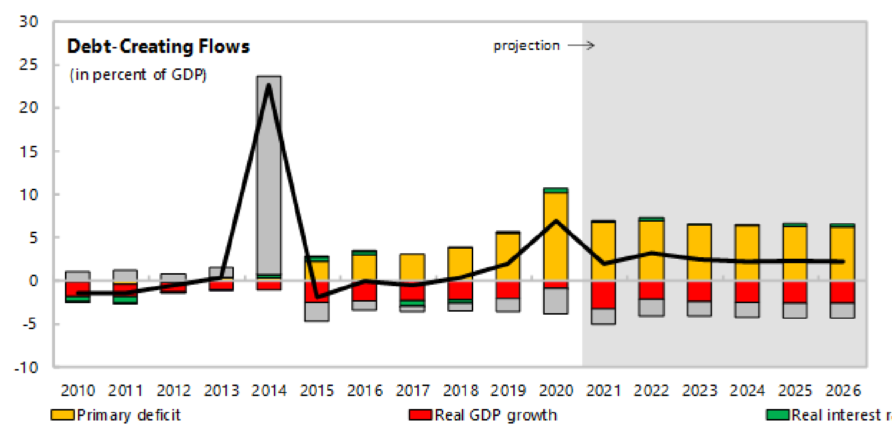
Debt, Economic and Market Indicators [1]

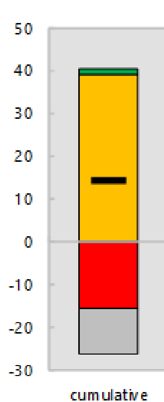
	Actual			Projections					
	2010-2018 [2]	2019	2020	2021	2022	2023	2024	2025	2026
Nominal gross public debt	27.8	38.5	45.4	47.3	50.5	53.0	55.2	57.6	59.8
Public gross financing needs	10.1	10.0	16.1	13.3	12.5	13.2	13.5	13.8	14.1
Real GDP growth (in percent)	7.9	6.0	2.3	7.9	4.8	5.2	5.1	5.0	4.9
Inflation (GDP deflator, in percent)	3.3	2.1	1.2	2.0	1.7	2.0	2.1	1.8	1.9
Nominal GDP growth (in percent)	11.4	8.2	3.6	10.0	6.5	7.3	7.3	6.9	6.9
Effective interest rate (in percent) [4]	2.8	2.5	2.6	2.5	2.4	2.4	2.4	2.5	2.5

As of December 14, 2021		
Sovereign Spreads		
EMBIG (bp) 3/		144
5Y CDS (bp)		44
Ratings	Foreign	Local
Moody's	A1	A1
S&Ps	A+	A+
Fitch	A+	A+

Contribution to Changes in Public Debt

	Actual			Projections							
	2010-2018	2019	2020	2021	2022	2023	2024	2025	2026	cumulative	debt-stabilizing primary balance [9]
Change in gross public sector debt	2.0	2.0	6.9	1.9	3.2	2.5	2.2	2.3	2.3	14.5	
Identified debt-creating flows	-0.5	3.6	9.9	3.7	5.2	4.1	4.0	4.1	3.9	25.0	
Primary deficit	1.4	5.5	10.2	6.8	7.0	6.5	6.4	6.3	6.3	39.3	-2.4
Primary (noninterest) revenue and grants	27.6	27.8	25.3	25.8	25.6	25.6	25.5	25.6	25.6	153.7	
Primary (noninterest) expenditure	29.0	33.3	35.6	32.6	32.6	32.0	31.9	31.9	31.8	192.9	
Automatic debt dynamics [5]	-1.9	-1.9	-0.4	-3.1	-1.8	-2.3	-2.4	-2.3	-2.4	-14.3	
Interest rate/growth differential [6]	-1.9	-1.9	-0.4	-3.1	-1.8	-2.3	-2.4	-2.3	-2.4	-14.3	
Of which: real interest rate	-0.1	0.1	0.5	0.2	0.3	0.1	0.1	0.3	0.3	1.3	
Of which: real GDP growth	-1.8	-2.0	-0.9	-3.3	-2.1	-2.5	-2.5	-2.6	-2.6	-15.6	
Exchange rate depreciation [7]	0.0	0.0	0.0	…	…	…	…	…	…	…	
Other identified debt-creating flows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Net privatization revenues	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Please specify (2)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Residual, including asset changes [8]	2.5	-1.6	-2.9	-1.8	-2.0	-1.6	-1.7	-1.7	-1.7	-10.5	





Primary deficit; Real GDP growth; Real interest rate; Exchange rate depreciation; Other debt-creating flows; Residual; Change in gross public sector debt

Source: IMF staff.

1/ Public sector is defined as general government.

2/ Based on available data and historical data up to December 15, 2021.

3/ Long-term bond spread over U.S. bonds.

4/ Defined as interest payments divided by debt stock (excluding guarantees) at the end of previous year.

5/ Derived as $[(r - \pi(1+g) - g + ae(1+r)]/(1+g+\pi+g\pi))$ times previous period debt ratio, with r = interest rate; π = growth rate of GDP deflator; g = real GDP growth rate; a = share of foreign-currency denominated debt; and e = nominal exchange rate depreciation (measured by increase in local currency value of U.S. dollar).

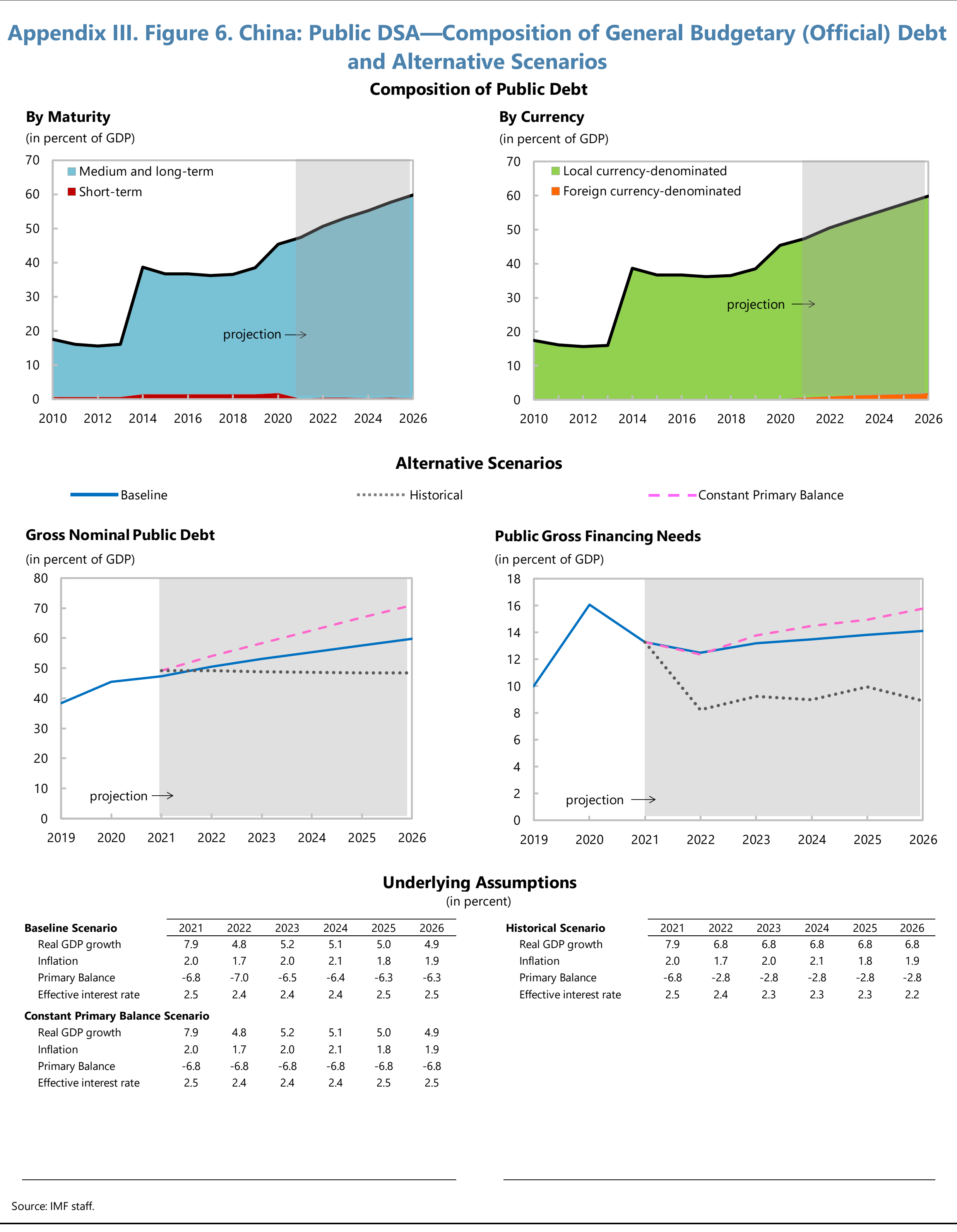
6/ The real interest rate contribution is derived from the numerator in footnote 5 as $r - \pi(1+g)$ and the real growth contribution as -g.

7/ The exchange rate contribution is derived from the numerator in footnote 5 as $ae(1+r)$.

8/ Includes asset changes and interest revenues (if any). For projections, includes exchange rate changes during the projection period.

9/ Assumes that key variables (real GDP growth, real interest rate, and other identified debt-creating flows) remain at the level of the last projection year.

Appendix III. Figure 6. China: Public DSA—Composition of General Budgetary (Official) Debt and Alternative Scenarios



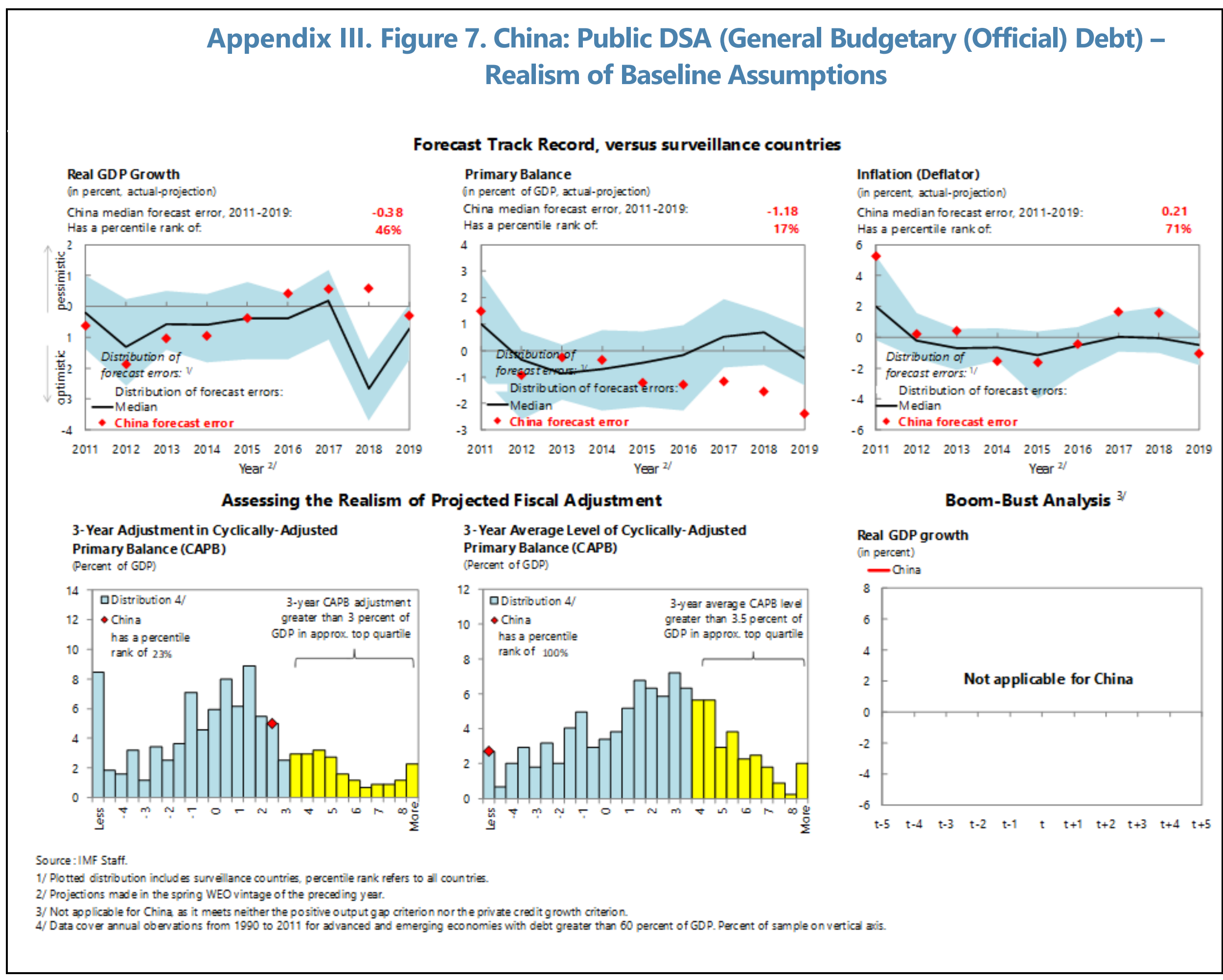
Underlying Assumptions
(in percent)

Baseline Scenario	2021	2022	2023	2024	2025	2026
Real GDP growth	7.9	4.8	5.2	5.1	5.0	4.9
Inflation	2.0	1.7	2.0	2.1	1.8	1.9
Primary Balance	-6.8	-7.0	-6.5	-6.4	-6.3	-6.3
Effective interest rate	2.5	2.4	2.4	2.4	2.5	2.5
Constant Primary Balance Scenario						
Real GDP growth	7.9	4.8	5.2	5.1	5.0	4.9
Inflation	2.0	1.7	2.0	2.1	1.8	1.9
Primary Balance	-6.8	-6.8	-6.8	-6.8	-6.8	-6.8
Effective interest rate	2.5	2.4	2.4	2.4	2.5	2.5

Historical Scenario	2021	2022	2023	2024	2025	2026
Real GDP growth	7.9	6.8	6.8	6.8	6.8	6.8
Inflation	2.0	1.7	2.0	2.1	1.8	1.9
Primary Balance	-6.8	-2.8	-2.8	-2.8	-2.8	-2.8
Effective interest rate	2.5	2.4	2.3	2.3	2.3	2.2

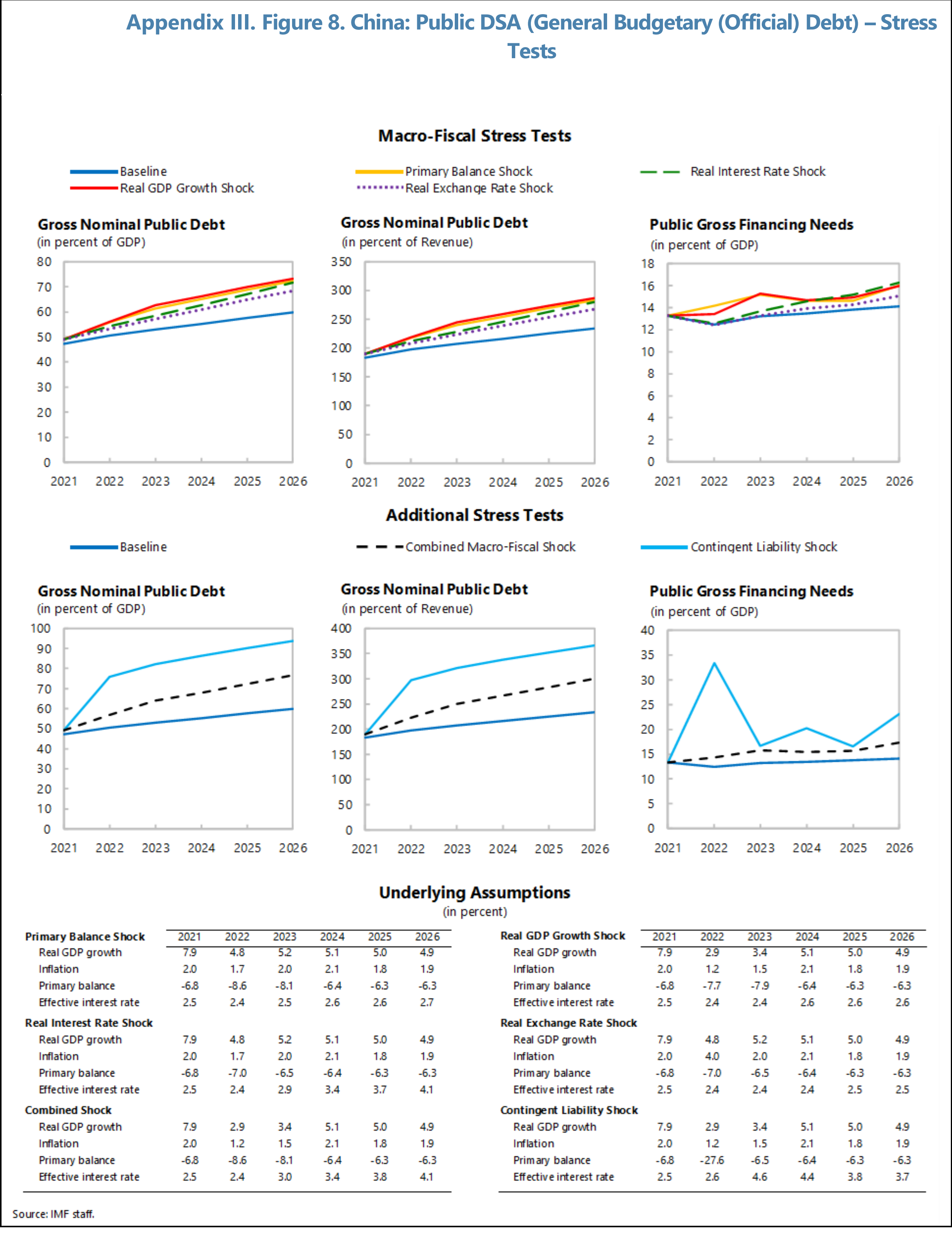
Source: IMF staff.

Appendix III. Figure 7. China: Public DSA (General Budgetary (Official) Debt) – Realism of Baseline Assumptions



Source: IMF Staff.
1/ Plotted distribution includes surveillance countries, percentile rank refers to all countries.
2/ Projections made in the spring WEO vintage of the preceding year.
3/ Not applicable for China, as it meets neither the positive output gap criterion nor the private credit growth criterion.
4/ Data cover annual observations from 1990 to 2011 for advanced and emerging economies with debt greater than 60 percent of GDP. Percent of sample on vertical axis.

Appendix III. Figure 8. China: Public DSA (General Budgetary (Official) Debt) – Stress Tests



Underlying Assumptions
(in percent)

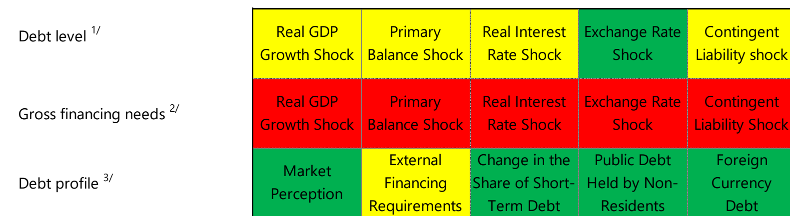
Primary Balance Shock	2021	2022	2023	2024	2025	2026
Real GDP growth	7.9	4.8	5.2	5.1	5.0	4.9
Inflation	2.0	1.7	2.0	2.1	1.8	1.9
Primary balance	-6.8	-8.6	-8.1	-6.4	-6.3	-6.3
Effective interest rate	2.5	2.4	2.5	2.6	2.6	2.7
Real Interest Rate Shock						
Real GDP growth	7.9	4.8	5.2	5.1	5.0	4.9
Inflation	2.0	1.7	2.0	2.1	1.8	1.9
Primary balance	-6.8	-7.0	-6.5	-6.4	-6.3	-6.3
Effective interest rate	2.5	2.4	2.9	3.4	3.7	4.1
Combined Shock						
Real GDP growth	7.9	2.9	3.4	5.1	5.0	4.9
Inflation	2.0	1.2	1.5	2.1	1.8	1.9
Primary balance	-6.8	-8.6	-8.1	-6.4	-6.3	-6.3
Effective interest rate	2.5	2.4	3.0	3.4	3.8	4.1

Real GDP Growth Shock	2021	2022	2023	2024	2025	2026
Real GDP growth	7.9	2.9	3.4	5.1	5.0	4.9
Inflation	2.0	1.2	1.5	2.1	1.8	1.9
Primary balance	-6.8	-7.7	-7.9	-6.4	-6.3	-6.3
Effective interest rate	2.5	2.4	2.4	2.6	2.6	2.6
Real Exchange Rate Shock						
Real GDP growth	7.9	4.8	5.2	5.1	5.0	4.9
Inflation	2.0	4.0	2.0	2.1	1.8	1.9
Primary balance	-6.8	-7.0	-6.5	-6.4	-6.3	-6.3
Effective interest rate	2.5	2.4	2.4	2.4	2.5	2.5
Contingent Liability Shock						
Real GDP growth	7.9	2.9	3.4	5.1	5.0	4.9
Inflation	2.0	1.2	1.5	2.1	1.8	1.9
Primary balance	-6.8	-27.6	-6.5	-6.4	-6.3	-6.3
Effective interest rate	2.5	2.6	4.6	4.4	3.8	3.7

Source: IMF staff.

Appendix III. Figure 9. China: Public DSA (General Budgetary (Official) Debt) – Risk Assessment

Heat Map

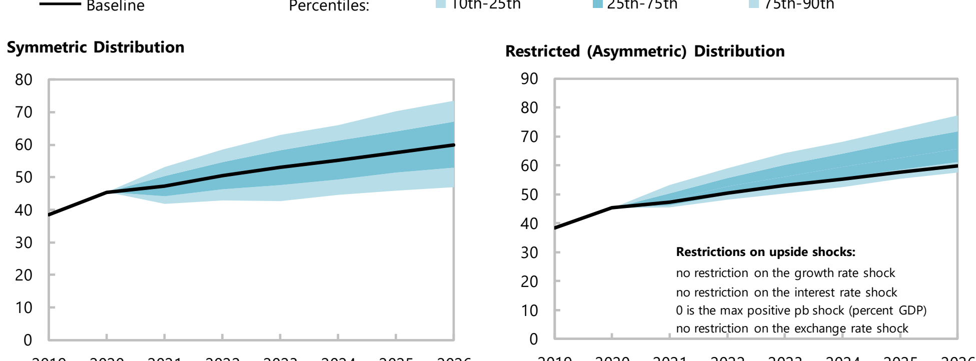


Debt level 1/	Real GDP Growth Shock	Primary Balance Shock	Real Interest Rate Shock	Exchange Rate Shock	Contingent Liability shock
Gross financing needs 2/	Real GDP Growth Shock	Primary Balance Shock	Real Interest Rate Shock	Exchange Rate Shock	Contingent Liability Shock
Debt profile 3/	Market Perception	External Financing Requirements	Change in the Share of Short-Term Debt	Public Debt Held by Non-Residents	Foreign Currency Debt

Evolution of Predictive Densities of Gross Nominal Public Debt

(in percent of GDP)

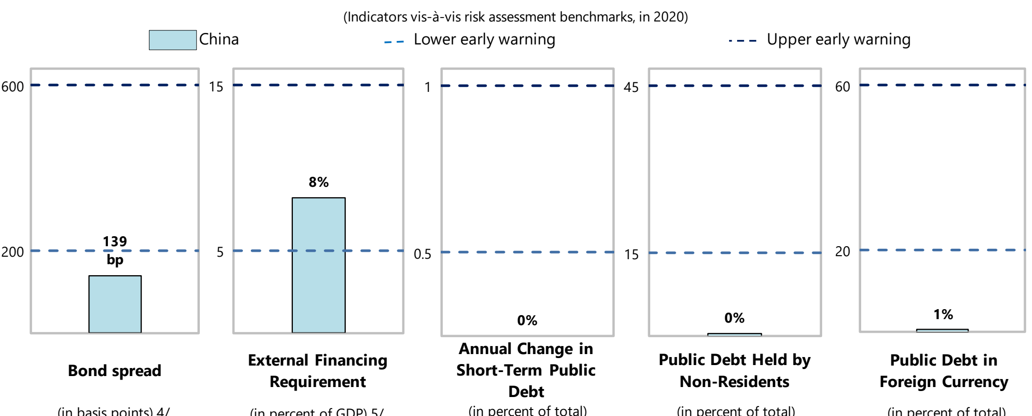
Baseline   Percentiles: 10th-25th   25th-75th   75th-90th



Debt Profile Vulnerabilities

(Indicators vis-à-vis risk assessment benchmarks, in 2020)

China   Lower early warning   Upper early warning



Source: IMF staff.

1/ The cell is highlighted in green if debt burden benchmark of 70% is not exceeded under the specific shock or baseline, yellow if exceeded under specific shock but not baseline, red if benchmark is exceeded under baseline, white if stress test is not relevant.

2/ The cell is highlighted in green if gross financing needs benchmark of 15% is not exceeded under the specific shock or baseline, yellow if exceeded under specific shock but not baseline, red if benchmark is exceeded under baseline, white if stress test is not relevant.

3/ The cell is highlighted in green if country value is less than the lower risk-assessment benchmark, red if country value exceeds the upper risk-assessment benchmark, yellow if country value is between the lower and upper risk-assessment benchmarks. If data are unavailable or indicator is not relevant, cell is white.

Lower and upper risk-assessment benchmarks are:

200 and 600 basis points for bond spreads; 5 and 15 percent of GDP for external financing requirement; 0.5 and 1 percent for change in the share of short-term debt; 15 and 45 percent for the public debt held by non-residents; and 20 and 60 percent for the share of foreign-currency denominated debt.

4/ Long-term bond spread over U.S. bonds, an average over the last 3 months, 15-Sep-21 through 14-Dec-21.

5/ External financing requirement is defined as the sum of current account deficit, amortization of medium and long-term total external debt, and short-term total external debt at the end of previous period.

Appendix IV. Implementation of Main Recommendations of the 2020 Article IV Consultation

Announced Reform Measures since November 2020	Date	Status
Supporting Growth and *the Handover to Private Demand*		
Maintaining a moderately expansionary fiscal stance		
MOF and STA announced to exempt small-scale taxpayers with monthly sales of less than 150,000 yuan from VAT. (link)	Mar-21	Implemented from April 1, 2021 to December 31, 2022
MOF and STA announced to implement preferential income tax policies for small and micro enterprises and individual industrial and commercial households. (link)	Apr-21	Implemented from January 1, 2021 to December 31, 2022
MOF and MIIT announced to continue to implement the policy of fee reduction, reward, and compensation for financing guarantee business for small and micro enterprises. (link)	Apr-21	Implementation in progress
Shift from infrastructure investment to household support		
State Council issued the "14th Five-Year Plan" Employment Promotion Plan, with a target of creating more than 55 million urban jobs by 2025. (link)	Aug-21	Implementation in progress
A permanent strengthening of the social safety net		
MOHRSS and 7 other ministries jointly issued Guidelines on Safeguarding the Rights and interests of Workers in New Forms of Employment. (link)	Jul-21	Implementation in progress
MOHRSS and 5 other ministries jointly issued a notice on consolidating and expanding the achievements of social insurance and poverty alleviation to empower the full implementation of the Rural Revitalization Strategy. (link)	Aug-21	Implementation in progress
State Council issued the Outline for the Development of Chinese Women (2021-2030) and The Outline for the Development of Chinese Children (2021-2030). (link)	Sep-21	Implementation in progress
State Council issued the Plan for Universal Medical Security during the 14th Five-Year Plan period. (link)	Sep-21	Implementation in progress
CPC Central Committee and State Council issued Opinions on Promoting high-quality Development of Modern Vocational Education. (link)	Oct-21	Implementation in progress
NDRC issued several Opinions on Promoting consumer Service Industry to Improve the Quality of People's Life through Strengthening Weak Links. (link)	Nov-21	Implementation in progress
Reforms to broaden the tax base and increase progressivity		
STA announced to further simplify and optimize some taxpayers' personal income tax withholding and prepayment methods. (link)	Dec-20	Effective from Jan 1, 2021

Announced Reform Measures since November 2020	Date	Status
Accommodative monetary policy focusing on conventional interest rate-based measures		
PBC cuts the deposit reserve ratio of financial institutions by 0.5%. (link)	Jul-21	Implemented
Exchange rate flexibility		
N/A		
Ensuring Financial Stability		
Phasing out exceptional financial support measures as the recovery takes hold		
N/A		
Strengthening regulatory and supervisory frameworks		
PBC and CBIRC jointly issued the measures for the assessment of systemically important Banks. (link)	Dec-20	Effective from Jan 1, 2021
PBC and CBIRC jointly issued the Notice on the establishment of a centralization management system for real estate loans of banking financial institutions. (link)	Dec-20	Effective from Jan 1, 2021
PBC and CBIRC jointly issued Notice on Matters Concerning Regulating Commercial Banks to Carry Out Personal Deposit Business Through the Internet. (link)	Jan-21	Implemented
MOHURD and the PBC worked on rules for capital monitoring and financing management of key real estate enterprises, known as the "three red lines". (link)	Jan-21	Effective from Jan 1, 2021
PBC issued the Measures for the Administration of Non-bank Payment Institutions' Reporting of Major Events. (link)	Jul-21	Implemented
China decides to establish Beijing Stock Exchange to deepen the reform of the New Third Board. (link)	Sep-21	Implementation in progress
PBC issued the Measures for the Administration of Credit Investigation business. (link)	Sep-21	Implemented
CBIRC issued the Measures for The Supervision and Rating of Commercial Banks. (link)	Sep-21	Implemented
CBIRC issued the Measures for Supervision on the Behavior of Major Shareholders of Banking and Insurance Institutions (Trial). (link)	Oct-21	Implemented
PBC and CBIRC jointly issued additional Regulatory Provisions on Systemically Important Banks (Trial). (link)	Oct-21	Effective from Dec 1, 2021
PBC, CBIRC and MOF jointly issued the Measures for the Management of the Total Loss-Absorbing Capacity of Global Systemically Important Banks. (link)	Oct-21	Effective from Dec 1, 2021
Strengthening anti-money laundering and countering-financing of terrorism (AML/CFT) framework		
PBC issued the Guidelines on The Risk Self-Assessment of Money Laundering and Terrorist Financing by Corporate Financial Institutions. (link)	Jan-21	Implemented

Announced Reform Measures since November 2020	Date	Status
PBC issued the measures for the supervision and administration of anti-money laundering and counter-terrorism financing. (link)	Apr-21	Effective from Aug 1, 2021
PBC publicly solicits opinions on the anti-money laundering law, which is the first amendment since its implementation on January 1, 2007. (link)	Jun-21	Implementation in progress
A comprehensive bank restructuring approach		
CBIRC issued the Interim Measures for implementation of Bank and Insurance Institution Recovery and Resolution Plan. (link)	Jun-21	Implemented
PBC issued the China Financial Stability Report (2021), calling for the improvement of financial risk prevention, early warning, handling, and accountability systems, and promoting the reform of small and medium-sized financial institutions. (link)	Sep-21	Implementation in progress
Corporate restructuring		
Six ministries and commissions jointly issued the guideline about promoting the high-quality corporate bond market reform. (link)	Aug-21	Implementation in progress
Maximizing Policy Space by Improving Policy Transmission		
Monetary Policy		
The deposit interest rate self-discipline upper limit is changed to a certain basis point on the basis of the deposit benchmark interest rate. (link)	Jun-21	Implemented
PBC announced to promote the implementation of carbon emission reduction support tools. (link)	Aug-21	To be implemented
PBC launched lending tool to cut carbon emissions. (link)	Nov-21	Implemented
Fiscal Policy (link)		
State Council announced the establishment of a normalized direct fiscal fund mechanism and expansion of the scope. (link1,link2)	Mar-21	Implementation in progress
State Council issued Opinions on further deepening the reform of the budget management system. (link)	Apr-21	Implementation in progress
China enacts stamp duty law. (link)	Jun-21	Effective from Jul 1, 2022
The Central Politburo meeting calls for a good macroeconomic policy inter-cyclical adjustment. (link)	Jul-21	Implementation in progress
MOF issued the Operational Guidelines for Adjusting the Use of Local Government Special Bonds. (link)	Sep-21	Implemented
MOF issued the Administrative Measures on Final Accounts. (link)	Oct-21	Implemented
Digital Technologies		

Announced Reform Measures since November 2020	Date	Status
PBC released the white paper China's Fintech Innovation Regulatory Tools. (link)	Oct-20	Implemented
PBC announced to promote the construction of a national financial technology risk monitoring center. (link)	Jan-21	To be implemented
PBC issued the Notice on Deepening the Development of the Project to Enhance the Financial Service Capability of Small, Medium and Micro Enterprises, use technology to empower small, medium and micro enterprises in financial services. (link)	Jun-21	Implementation in progress
PBC released a white paper on the R&D progress of China's digital renminbi. (link)	Jul-21	Implementation in progress
The Central Committee of CPC and the State Council issued the Implementation Outline for the Construction of a Government under the Rule of Law (2021-2025), clearly proposing the comprehensive construction of a digital government under the rule of law. (link)	Aug-21	Implementation in progress
CPC Central Committee and State Council issued Opinions on Improving Internet Civilization. (link)	Sep-21	Implementation in progress
PBC issued the Guiding Opinions on Optimizing Bank Account Services and Risk Prevention and Control of Small and Micro Enterprises. (link)	Oct-21	Implemented
PBC and 4 other ministries jointly issued the Opinions on Regulating the Application and Development of Open-Source Technology in the Financial Industry. (link)	Oct-21	Implementation in progress
Adjusting Macroeconomic Policy to the Pace of the Recovery		
PBC and SAFE reduced the macro prudential regulation parameters of cross-border financing of enterprises from 1.25 to 1. (link)	Jan-21	Implemented
SAFE clarified that one of the key tasks of foreign exchange this year is to prevent the risk of abnormal cross-border capital flows. (link)	Jan-21	Implementation in progress
PBC increased the amount of small reloans by 300 billion yuan and strengthened the rescue and assistance to small, medium, and micro enterprises. (link)	Sep-21	Implemented
CFETS issued a notice that it will halve transaction fees in the interbank foreign exchange market related to derivative transactions of micro, small and medium-sized enterprises. (link)	Oct-21	Effective from Jul 1, 2021
Re-Accelerating Reforms to Support Balanced Growth		
Further opening up of domestic markets		
NDRC and MOFCOM jointly issued the Catalogue of Encouraged Industries for Foreign Investment (2020 Version).	Dec-20	Implemented

Announced Reform Measures since November 2020	Date	Status
NDRC and MOFCOM unveiled the 2020 negative list for foreign investment access in the Hainan Free Trade Port.	Dec-20	Implemented
Circular of MOFCOM, NDRC, MOF, STA, SAMR on Expanding Trials for Cross-border E-commerce Retail Imports and Strictly Implementing Regulatory Requirements.	Mar-21	Implemented
The State Council agreed to carry out comprehensive pilot projects for expanding the opening up of the services industry. (link)	Apr-21	Implemented
State Council issued Notice on Several Measures to Promote the Reform and Innovation of Trade and Investment Facilitation in Pilot Free Trade Zones. (link)	Aug-21	Implemented
MOFCOM, together with Beijing Municipality and relevant departments issued the best practice case of the construction of Beijing national comprehensive demonstration zone for the expansion and opening up of the service industry.	Sep-21	Implemented
PBC will promote the full implementation of pre-access national treatment plus negative list management system. (link)	Sep-21	Implementation in progress
CPC and State Council vigorously promote the construction of the Guangdong-Hong Kong-Macao Greater Bay Area. (link)	Sep-21	Implementation in progress
PBC decided to carry out southbound cooperation in the interconnection of the bond markets between the Mainland and Hong Kong. (link)	Sep-21	Implemented
The State Council agreed to temporarily adjust the implementation of relevant administrative regulations and State Council documents in pilot areas for comprehensively deepening the innovative development of service trade. (link)	Oct-21	Implemented
Social safety nets, hukou and land reforms		
The General Office of CPC and State Council issued the Action Plan for Building a High-Standard Market System, announcing the trial implementation of a household registration system with the place of residence. (link)	Jan-21	Implemented
NDRC issued the Key Tasks for New Urbanization and Urban-Rural Integration Development in 2021. (link)	Apr-21	Implemented
The National Medical Insurance Administration and 7 other ministries and commissions jointly issued the Guiding Opinions on Procurement and Use of High-value Medical Consumables in a Centralized Quantity of National Organizations. (link)	Jun-21	Implemented
Market and SOE Reform, ensure competitive neutrality		
The State Council issued the Operational Guidelines for the Excess Profit-Sharing Mechanism of "Double Hundred Enterprises" and "Science Reform Demonstration Enterprises",	Jan-21	Implemented

Announced Reform Measures since November 2020	Date	Status
to further enhance the vitality of state-owned enterprises. (link)		
The SASAC issued the Guiding Opinions on Strengthening the Debt Risk Management and Control of Local State-owned Enterprises. (link)	Feb-21	Implemented
The State Council issues anti-monopoly guidelines on platform economy. (link)	Feb-21	Implemented
The State Council announced to clean up and standardize local financing platform companies, strip their government financing functions, and implement bankruptcy reorganization or liquidation in accordance with the law if they lose their ability to pay. (link)	Apr-21	Implementation in progress
SAMR, NDRC, MOF, MOFCOM, MOJ jointly issued the Detailed Rules for the Implementation of the Fair Competition Review System. (link)	Jun-21	Implemented
The SASAC issued the Working Rules for the Board of Directors of Central Enterprises (for Trial Implementation). (link)	Sep-21	Implemented
Personal Insolvency Regime Reform		
The General Office of CPC and State Council issued the Action Plan for Building a High-Standard Market System, announced to launch a pilot reform of the personal bankruptcy system. (link)	Jan-21	Implemented
Personal Bankruptcy Regulations of Shenzhen Special Economic Zone officially implemented. (link)	Mar-21	Implemented
Innovation and Green Investment		
MEE issued "National Carbon Emissions Trading Management Measures (Trial)". (link)	Dec-20	Implemented
MEE issued Guidelines on Coordinating and Strengthening work related to Climate Change and Ecological and Environmental Protection. (link)	Jan-21	Implemented
The State Council announced to increase the percentage of deductions for R&D expenses for manufacturing companies from 75% to 100%. (link)	Mar-21	Effective from Jan 1, 2021
The national carbon emission trading market officially operate. (link)	Jul-21	Implemented
NDRC released its 14th Five-Year Plan for the development of a circular economy. (link)	Jul-21	Implemented
The General Office of the State Council issued Several Opinions on Reforming and Improving the Management of Central Financial Research Funds. (link)	Aug-21	Implemented
NDRC announced that a leading group comprising relevant ministries is formed to formulate and improve the "1+N" policy system for carbon peaking and neutrality. (link)	Aug-21	In progress

Announced Reform Measures since November 2020	Date	Status
The Central Committee of CPC and State Council issued the "Guidelines for Building a Powerful Country with Intellectual Property Rights (2021-2035)". (link)	Sep-21	In progress
The General Office of the Central Committee of CPC and the General Office of the State Council issued the "Opinions on Deepening the Reform of the Ecological Protection Compensation System." (link)	Sep-21	In progress
The Central Committee of CPC and the State Council issued the "Opinions on the Complete, Accurate and Comprehensive Implementation of the New Development Concept to Achieve Carbon Peak and Carbon Neutrality." (link)	Oct-21	In progress
The State Council issued the "Carbon Peak Action Plan by 2030". (link)	Oct-21	In progress
The General Office of the State Council issued the "Guiding Opinions on Further Supporting College Students' Innovation and Entrepreneurship." (link)	Oct-21	In progress
China issued opinions on further promoting the green development of urban and rural construction. (link)	Oct-21	In progress
China promulgated the "Groundwater Management Regulations." (link)	Oct-21	Effective from Dec 1, 2021
The State Council issued the "14th Five-Year Plan for National Intellectual Property Protection and Utilization Plan". (link)	Oct-21	In progress
The Central Committee of the CPC and the State Council issued the "Opinions on Deepening the Battle of Pollution Prevention and Control." (link)	Nov-21	In progress
The General Office of the State Council issued the "Opinions on Encouraging and Supporting Social Capital to Participate in Ecological Protection and Restoration." (link)	Nov-21	In progress
Address global challenges		
Expanding access to COVID-19 vaccines		
China has provided 990 million COVID-19 vaccines to 105 countries and four organizations and exporting vaccines to more than 60 countries, the most in the world. (link)	Sep-21	In progress
Debt Relief to low-income countries		
China has participated in the Debt Service Suspension Initiative (DSSI) and Common Framework adopted by the G20 Finance Ministers and Central Bank Governors.	May-20, Nov-20	In progress
Tackling climate change		
China signed the MOU with multiple countries to enhance cooperation on climate change. (link)	ongoing	In progress
MOFCOM and MEE issued the Green Development Guidelines for Foreign Investment and Cooperation. (link)	July-21	Implemented

Announced Reform Measures since November 2020	Date	Status
Domestic measures carried out to support green transition of the Chinese economy in the previous section will contribute to the global collaboration on climate change.	Ongoing	In progress
Strengthening the rules-based multilateral trading system		
President Xi Jinping announced that China will favorably consider joining CPTPP. (link)	Nov-20	China steps up talk of joining CPTPP
President Xi Jinping and European announced that the two sides have completed investment agreement negotiations as scheduled. (link)	Dec-20	In progress
MOFCOM, CAC, MIIT jointly issued the Guidelines for Outward Investment Cooperation in Digital Economy. (link)	July-21	Implemented
RCEP will enter into force on Jan 1, 2022. (link)	Nov-21	Effective from Jan 1, 2022
China formally applied to join the Digital Economy Partnership Agreement (DEPA). (link)	Nov-21	Implementation in progress
Enhancing data quality and transparency		
China approved the Opinions on More Effectively Giving Full Play to the Role of Statistical Supervision. (link)	Aug-21	Implementation in progress
China issued the "National Standardization Development Program". (link)	Oct-21	Implementation in progress
Not yet announced		
Publishing data on foreign exchange intervention	n/a	n/a

Appendix V. Implementation of Main Recommendations from China's 2017 FSAP[1]

Recommendation	Priority Level	Timing Requirement	Measures Taken
Macroeconomic recommendations			
Reduce the relatively high GDP growth forecasts in national plans; these high forecasts encourage local governments to set high growth targets.	Highest	Near-term measures	The "Outline of the People's Republic of China 14th Five-Year Plan for National Economic and Social Development and Long-Range Objectives for 2035" ("14th FYP") was published on March 21, 2021. For the first time, this Five Year Plan specified that "GDP growth should be maintained within a reasonable range; annual targets will be determined and set each year." This language, primarily qualitative but with implied quantitative elements, both clearly expresses the position that GDP can no longer be simplistically used as a proxy for success; and implies the requirement to maintain consistent economic growth rates and economic growth potential. This language will help guide everyone toward prioritizing higher quality growth and higher productivity.
Systemic risk, macroprudential policies, and strengthening supervision			
Newly establish a financial stability sub-committee and entrust it with the sole function of maintaining financial stability.	Highest	Near-term measures	The State Council's Financial Stability and Development Committee regularly hears reports on the handling of risk, and organizes research into major issues around the handling of risk. At both plenary sessions and subcommittee sessions, most agenda items relate to the prevention, handling, and mitigation of risks.
Establish vigorous mechanisms for cooperation, coordination, and information sharing with participants in domestic and foreign financial security networks, including the	Highest	Near-term measures	**Domestically: First,** the PBC, CBIRC, CSRC, SAFE, National Bureau of Statistics, and State Administration for Market Regulation have established a data and information exchange mechanism, through which statistical data on securities and futures markets are shared. The PBC led the drafting of *Rules for the Accounting of Assets and Liabilities for Securities Industry Financial Institutions* and its supporting

[1] Information as reported by the authorities (as of September 30, 2021), with IMF staff providing translation.

Recommendation	Priority Level	Timing Requirement	Measures Taken
sharing of detailed financial data.			documents, which specify the mechanisms for sharing the data. **Second,** the CBIRC, CSRC, SAFE, CCDC, and Shanghai Commercial Paper Exchange established a mechanism for regular data exchange, improving risk monitoring for banks and insurers participating in the financial markets. **Third,** the CSRC is improving information sharing with the CBIRC. It is obtaining relevant data such as bank and insurance company balance sheets, income statements, OTC stock pledges, and asset management products. **Internationally: First, improved exchanges of information and sharing of financial data.** Since the start of the COVID-19 crisis, the **CBIRC** has been providing the Basel Committee with regular assessments on the total risk in the Chinese banking industry, and sharing the measures taken in response to the crisis. It has regularly submitted industry-level data, and where possible data on individual insurance organizations, to the International Association of Insurance Supervisors, to provide data support for the implementation of the *Holistic Framework for Systemic Risk in the Insurance Sector*, to assess and forestall systemic risk in the global insurance sector. The **CSRC** has submitted survey data on climate change to the Financial Stability Board, providing non-bank data on the size of funds under management. It engaged in a mutual exchange of data with the Hong Kong Securities and Futures Commission; and for the MSCI China A50 Connect Index Futures, it created mechanisms for cross-border regulation, data exchange, and emergency resolution. **Second, better regulatory collaboration.** The **CBIRC** continues to expand its cross-border information exchanges, cooperation, and collaboration, and is boosting its capacity for cross-border regulation. As of

Recommendation	Priority Level	Timing Requirement	Measures Taken
			the end of September 2021, it has signed 122 MoUs on bilateral regulatory cooperation or agreements on regulatory collaboration with financial regulators in 84 countries and regions. The CSRC is actively expanding cross-border regulation and enforcement cooperation with securities and futures regulators in other countries, and is an active participant in international financial governance. As of the end of September 2021, it has signed MoUs on bilateral regulatory cooperation and established mechanisms for regulatory collaboration with securities/futures regulators in 67 countries and regions. As a full member of the International Organization of Securities Commissions (IOSCO), the CSRC also faithfully fulfills its duty to cooperate in cross-border law enforcement under the multilateral MoU, working with its partners to crack down on cross-border securities crime.
Trigger the countercyclical capital buffer, assess bank capital requirements, and implement targeted capital replenishment (in some cases, substantial replenishment).	Highest	Near-term measures	No new developments.
Amend major laws to strengthen the operational and budgeting autonomy of the PBC and regulatory agencies and increase their resources.	Highest	Medium-term measures	The PBC is organizing the amendment of *the Law of the People's Republic of China on the People's Bank of China*, which will improve the PBC's financial accounting systems. The CBIRC is working to obtain policy support to boost headcounts for the regulatory system and provide more regulatory resources for the system at the local level. The CSRC is also actively increasing headcounts to ensure the fulfilling of its key mandates, and

Recommendation	Priority Level	Timing Requirement	Measures Taken
			is working with relevant ministries to obtain a reliable budget for key regulatory inspections. In December 2020, the CSRC added 420 permanent staff at its local offices.
Resolve data gaps that place constraints on systemic risk monitoring and effective financial regulation and supervision.	Highest	Medium-term measures	The National Basic Financial Database built by the PBC is now functioning smoothly. The basic data has been collected and entered into the database, and will help the development of aggregate statistics for the financial industry, providing better data support for the monitoring of systemic risk.
Evaluate and simplify the objectives and structure of the PBC's macroprudential assessments, and only use them as a means of monitoring by the financial stability sub-committee and its subordinate agencies.	Medium		The PBC continues to improve the MPA framework, to give more emphasis to the need to test key domains and weak links in the real economy, and is dynamically updating the relevant performance indicators.
Bank regulation and supervision			
Strengthen risk supervision of financial holding group companies, and upgrade supervision capabilities with respect to banks and their affiliated financial holding companies and their ownership structure, including identification of ultimate beneficiary owners.	Highest	Medium-term measures	The *Decision of the State Council on Implementing the Access Management of Financial Holding Companies* and *Trial Measures on Regulation of Financial Holding Companies* were issued in September 2020 and became effective on November 1, 2020. These regulations created the initial regulatory framework for financial holding companies. Based on the *Decision* and the *Measures*, the **PBC** has actively encouraged eligible non-financial enterprises to establish financial holding companies, and carries out comprehensive, ongoing, "look-through" regulation of financial holding companies. Through the mechanism of consolidated financial reporting, the PBC has been able to strengthen the regulation of key areas, such as capital structure, shareholder qualification,

Recommendation	Priority Level	Timing Requirement	Measures Taken
			corporate governance, risk management, and related-party transactions. It is able to ensure that financial holding companies are owned by qualified shareholders and are adequately capitalized; that the ownership structure is simple, clear, and transparent; and that real controllers and ultimate beneficiaries can be identified. The **CBIRC** and **CSRC** are working with the PBC to implement the *Trial Measures on Regulation of Financial Holding Companies*, and are supporting the applications of companies to lawfully establish financial holding companies. In October 2021, the CBIRC issued *Provisional Rules on Major Shareholders' Conduct of Banking and Insurance Institutions*, specifying that regulators would apply the principle of "substance over form" and step up "look-through" regulation and checks on major shareholders of banks and insurers. It will require each level of major shareholders to reveal its own ownership structure, until the real controllers and ultimate beneficial owners are revealed.
Stop considering the effects of collateral in loan classifications, restrict loan rollover to non-medium and small enterprise borrowers, and categorize all loans that are 90 days or more past due as non-performing loans.	Highest	Medium-term measures	In terms of institutional development, the CBIRC formally drafted the *Measures for the Risk Classification for Financial Assets of Commercial Banks*, based on the Basel Committee on Banking Supervision's *Prudential treatment of problem assets - definitions of non-performing exposures and forbearance*, and incorporating regulatory experience within China. This regulation requires commercial banks to focus on the capacity of the debtor to perform when classifying non-retail financial assets; and to strictly apply regulatory standards to assets under forbearance (including overdue loans), and explicitly specifies that loans overdue by 90 days or more must be classified as non-performing.

Recommendation	Priority Level	Timing Requirement	Measures Taken
			In terms of practice, commercial banks are already basically classifying loans 90 days or more past due as non-performing.
Strengthen implementation of "look-through" principles.	Medium		In terms of regulations: **First,** we are working on the amendment of the *Law on Commercial Banks*, and are exploring how to give regulators more authority over real controllers of commercial banks, to achieve "look-through" regulation of commercial bank ownership structures. **Second,** in September 2020 we issued *Notice on Matters Concerning the Investment of Insurance Funds in Debt-to-Equity Swap Investment Plans*, implementing "look-through" principles by imposing a ratio-based classification on debt-to-equity swap plans in which insurance funds are to be invested. **Third,** in June 2021 we issued *Notice on Matters Related to Regulating Wealth Management Products for the Purpose of Cash Management*, requiring that commercial bank and wealth management companies improve their risk management for interbank financing of cash management products, including managing maturity and controlling concentration. Applying the "look-through" principle, they are also required to carry out due diligence and impose market access management on their counterparties. In terms of regulatory actions: **First,** from 2017-2020 we carried our four annual regulatory projects targeted at lawless conduct in the financial markets. In each project, one of the key requirements was strict implementation of the "look-through" regulatory principle in the regulation of equities, corporate governance, tapering high risk shadow banking assets, and onsite inspections in cross-category financial products. **Second,** in 2020 and 2021, we ran back-to-back projects targeting lawless conduct in bank and insurance company equity holdings

Recommendation	Priority Level	Timing Requirement	Measures Taken
			and related-party transactions, strictly applying the "look-through" regulatory principle. **Third,** we are increasing "look-through" in regulation of the trust industry. We regularly carry out risk identification exercises for trust companies, including two-way "look-through" analyses of their trust services, to determine the real level of risk. Off-site surveillance of trust companies focuses on the compliance of trust products, "look-through," and risk monitoring. In trust services, we require that parties, sources of funds, and uses of funds are legible and properly understood. **Fourth,** advances in our technological capabilities are helping us to achieve the goal of "look-through" regulation. We have established a digital governance expert advisory coordination committee, and created a lab for smart inspections, which has developed tools for tracking funds. We are exploring the possibility of online inspections, and focusing on solving the tough "look-through" issues of funds flowing from one industry to another and from one province to another. Using the EAST data platform, we are tracking the movement of funds, with a focus on solving the tough issues in onsite inspections. In the course of onsite inspections in 2021, we worked with the agencies China Banking and Insurance Information Technology Management, China Trust Registration, and PICC Insurance Asset Registration and Trading System to introduce external data resources related to our regulatory focuses of ownership and related-party transactions. These helped us to "look through" to discover issues where our identification of related parties was incomplete, and our regulation of related-party transactions had not been fully successful.
Increase liquidity coverage ratio requirements for	Medium		No new developments.

Recommendation	Priority Level	Timing Requirement	Measures Taken
interbank products and off-balance-sheet financial products.			
Increase supervision reporting requirements, and collect more detailed supervision data, including bank investment information and corresponding provisions.	Medium		**The CBIRC continues to increase the level of detail in its reporting requirements, and to raise the required levels of data quality. First,** for off-site surveillance, reporting requirements have been increased on commercial banks for online lending, derivatives services, real estate financing, resolution of non-performing loans, and credit card business. Improvements have also been made in the accounting of on-balance sheet and off-balance sheet investments and provisions. The CBIRC is in the process of amending the reporting requirements for off-site surveillance for 2022, with increased data collection on key areas and major risks. **Second,** using the off-site surveillance system, the newly-developed regulatory platform, and other tools, the CBIRC is collecting all regulatory data, with a focus on the quality of bank loan and investment assets, provisions, and capitalization. **Third,** using the newly-developed corporate governance regulation system, the CBIRC is carrying out assessments of the corporate governance of large banks, and is able to monitor the management of bank equity and related-party transactions, and to assess progress in the correction of any problems that have been discovered. **Fourth,** the CBIRC has developed reporting requirements for special credit risks, such as creditors' committees, and requires banks to provide regular reports on them. It has increased the reporting frequency for some data, requiring banks to make some quarterly reports on a monthly basis. **Fifth,** the CBIRC has developed a dedicated reporting form for on-balance sheet and off-balance sheet investments by local commercial banks, with increased granularity in the reporting, and monitoring carried out on a quarterly basis.

Recommendation	Priority Level	Timing Requirement	Measures Taken
			Sixth, in addition to the reporting requirements for off-site surveillance, the CBIRC also requires trust companies to submit their trust accounts and risk accounts on a monthly basis, to clearly understand the development of trust business and its risks. Risk assessments are carried out quarterly, and now include trust companies' credit risk and liquidity risk, providing a complete picture of the levels of risk in this industry.
The CBRC should strengthen its forward-looking comprehensive risk analysis to identify vulnerabilities, question banks, and encourage intervention before the fact.	Medium		**The CBIRC makes targeted, forward-looking risk analyses and projections, by type of institution. First,** we encourage large banks to dynamically track and monitor economic and financial trends, to refine their analyses of the impact of COVID-19, and to improve their overall capacity to control risk. We particularly encourage large banks to focus on improving their credit risk controls, to make predictions on issues like how ending the moratorium will affect the quality of the assets on their balance sheets, and to increase their efforts to dispose of bad debts. **Second,** for local commercial banks, we are raising regulatory standards. In addition to comprehensive risk assessments, we also carry out focused risk assessments, liquidity stress tests, and governance assessments, and we also provide risk alerts. **Third,** we are tracking risk trends in the trust industry, sending risk notices and risk alerts as necessary. We dynamically update risk maps for institutions, and maintain different policies for organizations in different risk categories, to help them be more forward-looking and to prevent risk.
Stress testing			
To do a better job with stress testing and the assessment of systemic risk, data and information sharing among the "one bank	Highest	Medium-term measures	**Risk in the banking industry:** The PBC's 2021 stress tests included 4,015 banks, and it used more detailed supervision data and internal bank data to do a thorough "health check" on the banking system. It also further improved our

Recommendation	Priority Level	Timing Requirement	Measures Taken
and three commissions" must be substantially increased and systematized. Use more detailed supervision data in stress testing.			systems for detecting systemic risks and providing risk alerts. **Risk in the financial markets:** The PBC regularly carries out stress tests for risks in share pledge financing by major shareholders in public companies, and private fund liquidity risk. It is constantly improving the sharing of data and information among regulators. **For securities companies and fund managers:** When multiple stress tests assess the same scenario, we are now using more detailed data on industry entities and services.
In systemic risk assessments, substantially expand the scope of coverage for non-banking institutions and their relationship with other financial institutions and develop and integrate stress testing for collective investment plans.	Medium		In its 2021 stress tests, the PBC used a network model to assess connections and contagion between banks and between banks and non-bank institutions. For the first time, large private banks and foreign banks with significant exposure were included in the test. The CBIRC is exploring how to incorporate banks, insurance companies, trust companies, and other non-bank financial institutions (FIs) into a single framework, to carry out coordinated stress tests. It is testing a measurement of institutional contagion risk based on interbank transaction data for banks and non-bank institutions. The CSRC continues to improve its unified scenario assumptions and indicators for consistent tests of the securities fund industry. **First,** working with Capital Market Statistics and Monitoring Center, it is improving stress testing systems for important institutions in the securities and fund industry. During tests, it used debtor-creditor relationships for tracking institutional connectivity and risk contagion. Second, the CSRC organized the issuing of *Stress Test Guidelines for Public Fund Management*

Recommendation	Priority Level	Timing Requirement	Measures Taken
			Companies (Provisional) by the Asset Management Association of China, specifying the basic requirements and methods for stress tests for public fund companies. Companies participating in these stress tests include securities companies, fund companies and their subsidiaries, and the tests include collective investment schemes.
Strengthen inter-agency coordination and the analytical capabilities of the stress testing teams.	Medium		The **CBIRC** is exploring how to work with local offices for coordinated stress testing. The **CSRC** holds regular meetings for discussing a database of models and case studies for stress tests; exploring how to improve indicators for various stress test scenarios; building mechanisms to link stress tests with day-to-day regulation; and making stress tests better targeted and more effective.
Shadow banking and implicit guarantees			
Amend laws or supervisory regulations, to ensure the bankruptcy remoteness of collective investment plans (including wealth management products) when a manager or custodian goes bankrupt.	Highest	Medium-term measures	No new developments.
Conditioned on the elimination of implicit guarantees, gradually eliminate credit restrictions on certain industries.	Medium		The CBIRC guides banks to apply differentiated credit policies to different industries, on the principle that "differentiated treatment should be applied, with certain credits guaranteed and others controlled." Banks consider their own risk appetite, risk control capacity, and business strategy, and meet the reasonable capital needs of companies with advanced technologies, competitive products, and strong market demand. Financial support is strictly restricted for expansion projects that have not been

Recommendation	Priority Level	Timing Requirement	Measures Taken
			properly licensed, and for companies that fail to meet environmental, safety, or other standards.
Intervention measures in capital markets (including real estate and stock markets) should be limited to those in response to systemic risk.	Medium		No new developments.
Regulation and supervision of securities markets			
Improve information disclosure for collective investment plans and prohibit the stating of anticipated rate of return in the prospectuses of wealth management products.	Highest	Near-term measures	Regulators have issued a number of regulations forbidding the explicit mentioning of expected rates of return in wealth management product prospectuses. Regulatory documents released in the last year include: *Measures for the Supervision and Administration of Distributors of Publicly Offered Securities Investment Funds*, issued by the CSRC in August 2020, effective October 1, 2020. Article 24 states: "A fund distributor and its employees engaged in fund sale business shall not engage in the following:(2) Making a non-compliant commitment to returns, protection of the principal from loss, or a limit on the amount and proportion of loss. (3) Forecasting the investment performance of a fund, or advertising an expected rate of return." *Interim Provisions on the Administration of Publicity and Promotional Materials of Publicly Offered Securities Investment Funds*, issued by the CSRC in August 2020, effective October 1, 2020. Article 6 states: "Where the fund publicity and promotional materials include the past performance of a fund, it shall make a special announcement in a conspicuous position that the past performance of the fund does not predict its future performance and the performance of any other fund managed by the fund manager does not guarantee the

Recommendation	Priority Level	Timing Requirement	Measures Taken
			performance of the fund. No commitments shall be made regarding the future returns of a product either explicitly, implicitly, or in any other way." *Interim Rules on the Marketing of Wealth Management Products by Wealth Management Companies*, issued by the CBIRC in May 2021. This regulation forbids wealth management companies and their sales agents from providing or advertising an expected rate of return in the course of sales activities. They also may not use a performance comparator without explaining the reason for its selection, the underlying data, and how it is calculated; nor they may use or highlight any absolute value or range in isolation to illustrate a performance benchmark.
Introduce functional supervision, to ensure that similar products issued by different financial institutions are subject to similar supervision.	Highest	Medium-term measures	In September 2020, the CBIRC issued *Notice of Three Documents Including Detailed Rules for the Implementation of Portfolio Products for the Management of Insurance Assets*, providing stronger regulation of processes such as the development and operation of insurance asset manager products, and significantly raising risk management standards. In June 2021, the CBIRC and PBC jointly issued *Notice on Matters Related to Regulating Wealth Management Products for the Purpose of Cash Management*. The Notice brought the regulatory standards for wealth management products for the purpose of cash management broadly into alignment with the asset management standards in asset-specific products like money market funds.
Strictly control repo collateral qualifications and improve the discount rate	Medium		No new developments.

Recommendation	Priority Level	Timing Requirement	Measures Taken
calculation methodology.			
Strengthen systemic risk monitoring mechanisms, to ensure that the relationships among securities markets and between securities markets and other financial sectors is examined from a holistic perspective.	Medium		The PBC, in consultation with SASAC and the CSRC, has developed a monitoring and alert mechanism for bond defaults by state-owned enterprises at both the national and local levels, enabling better-coordinated regulation and better-targeted risk control.
Regulation and supervision of insurance			
Formulate a risk-based supervision plan that incorporates all issues and conduct of each insurance company (including market conduct).	Medium		**Improving prudential regulation: First,** we have amended the *Administrative Regulations for Insurance Group Companies*. The public consultation on this amendment is complete; once any changes have been made, the amendment will be promulgated at an appropriate time. This regulation will update and amend existing rules on key regulatory areas such as market access and exit, use of funds, risk management, and information disclosure, and takes into account the regulatory rules for financial holding companies in China and globally. It strengthens the regulation of consolidated balance sheets, and creates a comprehensive system of regulatory indicators for consolidated financial statements. We are carrying out corporate governance assessments and onsite inspections and requiring group companies to take responsibility for their subsidiaries, with increased scrutiny on consolidated financial statements and non-insurance subsidiaries, to prevent the emergence of risk in key areas such as use of funds and stock pledges. **Second,** in January 2021, we issued the amended *Provisions on the Administration of the Solvency of Insurance Companies*, which specifies the three-pillar regulatory framework for solvency, provides for

Recommendation	Priority Level	Timing Requirement	Measures Taken
			improved practices in solvency regulation, and will make solvency regulation better targeted and more effective. **Third,** completion of phase two of the China Risk Oriented Solvency System II (C-ROSS II). C-ROSS II is now complete, including 20 amended regulations. These will be passed to the State Council for promulgation, and are scheduled to be implemented in 2022. **Fourth,** in January 2021 we issued *Interim Measures on the Supervisory Rating of Insurance Asset Companies*, which defines five dimensions for assessing the operational capacity and risk management capacity of insurance asset management companies: corporate governance and internal controls; asset management capacity; comprehensive risk management; trading and operations; and information disclosure. To expand our tools for monitoring risk in the use of insurance funds, we have completed an initial model for risk monitoring that covers the core uses of funds, and are regularly assessing risk in the deployment of funds across the industry and by each insurance company. **Improving conduct in the industry: First,** we issued *Administrative Measures for the Management of Reserves for Non-Life Insurance Business of Insurance Companies* to deliver more consistent assessment, provisioning, and accounting of reserves by insurance companies. **Second,** we issued the amended *Measures for the Administration of Insurance Clauses and Insurance Rates of Property Insurance Companies*, which provides a stronger institutional foundation for product management, with improved regulation of product development and product reporting to improve product quality, protect consumer interests. **Third,** we issued the amended *Rules on the Administration of Reinsurance Business*,

Recommendation	Priority Level	Timing Requirement	Measures Taken
			which will help make the reinsurance market more healthy and sustainable with improved regulation for the soundness of reinsurance services, for reinsurance contracts, for the acceptance of reinsurance business by primary insurers, and for reinsurance agents. **Fourth,** introduced *Regulatory Measures for Accident Insurance Business*, which focuses on major issues such as low payouts, egregiously high commissions, and non-compliant sales conduct. It provides comprehensive regulation for accident insurance, including improving the market mechanisms for setting accident insurance premiums and requiring insurance prices to fully reflect historical data, industry experience, and market supply and demand. **Fifth,** *Notice on Further Regulating Online Personal Insurance Business of Insurance Institutions* attempts to regulate the risks of the currently chaotic online provision of personal insurance (i.e., life, health, personal injury insurance). It provides a set of standards for sales and services delivered through innovative channels. Its purpose is to support insurance companies that have the resources and capability and that respect the importance of compliance and good service, as they provide the public with high quality, convenient insurance services using the new technological tools of the Internet and big data.
Formulate a plan to gradually use more market-oriented means of valuation.	Medium		In terms of institutional development, in September 2020, the CBIRC issued the *Notice of Three Documents Including Detailed Rules for the Implementation of Portfolio Products for the Management of Insurance Assets*, requiring insurance asset management companies to apply net asset value management (i.e., no guaranteed returns) to all portfolio products. The estimated values of financial assets and net values of products should be calculated in a manner compliant with the *Accounting*

Recommendation	Priority Level	Timing Requirement	Measures Taken
			Standards for Business Enterprises, asset management regulations, and other relevant rules. In terms of practices, the GAAP+ system used in C-ROSS II meets the needs of the Chinese markets, and is one of the solvency assessment methods permitted by the Insurance Core Principles.
Supervision of financial market infrastructure			
China Securities Depository and Clearing Corporation Ltd. should make full use of delivery-versus-payment (DVP)	Highest	Near-term measures	No new developments.
Fully implement the principles of the Committee on Payment and Settlement Systems and the International Organization of Securities Regulators and strengthen the legal framework to increase the resilience of the financial market infrastructure.	Highest	Medium-term measures	The PBC, working with other relevant authorities, is implementing the *Work Plan for the Overall Regulation of Financial Infrastructure* and developing rules for a robust and comprehensive regulatory regime for financial infrastructure that reference the PFMI standards. The PBC is encouraging the financial infrastructure to connect and support the free flow of capital and other resources based on market demand, forming a resilient, open, flexible network of financial infrastructure. The CSRC completed the amendment of the *Administrative Measures for Futures Exchanges* in January 2021. And its internal regulations apply the PFMI principles on central counterparties, net settlement, etc.
Extend the services of the central bank to all systemically important central counterparties.	Medium		No new developments.
Anti-money laundering and combating the financing of terrorism			
Adopt stronger customer due diligence	Medium		The PBC is considering the amendment of the *Anti-Money Laundering Law* and its supporting

Recommendation	Priority Level	Timing Requirement	Measures Taken
measures with respect to domestic political and public figures based on risk.			regulations, in which it will make requirements about customer due diligence on domestic politically exposed persons (PEP). The public consultation process has been completed by now.
Ensure that more effective investigations are conducted for acts of self-laundering, and prosecute them as independent convictions.	Medium		In *the 2020 Amendment (11) to the Criminal Law*, self-laundering was defined as a crime, and convictions have been obtained in several self-laundering cases.
Crisis management			
The conditions that trigger government-led crisis responses should be more clearly defined and limited to systemic events that require the use of public resources.	Highest	Near-term measures	The PBC is working with the CBIRC to update the relevant laws, including amending the *Law on Commercial Banks* and drafting a *Law on Financial Stability* to clarify the conditions under which public resources will be used. For example, *the Law on Financial Stability* that is being drafted will improve the institutional arrangements for the resolution of systemic financial risk, specifying the triggering conditions and the processes for resolution of systemic financial risk. It will specify that the institution's own resolution funds and market-based funds must be used first, and set strict conditions for access to public funds; it will also specify repayment arrangements to ensure the security of public funds.
Formulate special resolution mechanisms for banks and systemically important insurance companies.	Highest	Medium-term measures	In December 2020, the PBC and CBIRC jointly issued *Measures for Assessment of Systemically Important Banks (SIBs)*, creating a framework for identifying SIBs. In October 2021, the PBC and CBIRC jointly issued *Supplementary Regulatory Rules for Systemically Important Banks (Provisional)*, along with a list of 19 SIBs. It specifies rules such as supplementary regulatory requirements, recovery and resolution plans, and resolvability assessments. On October 29, 2021, the PBC, CBIRC, and MoF issued

Recommendation	Priority Level	Timing Requirement	Measures Taken
			Administrative Measures on the Total Loss-absorbing Capacity of Global Systemically Important Banks, to ensure that a G-SIB has sufficient loss-absorbing and recapitalization capacity available in resolution. On June 3, 2021, the CBIRC issued *Interim Measures for the Implementation of Recovery and Resolution Plans by Bank and Insurance Institutions*, which requires recovery and resolution plans for deposit-taking institutions with exposure (denominator of the leveraging ratio) of CNY 300bn or higher, and insurance companies with total balance sheet assets of CNY 200bn or higher. Regulators may also require other banks or insurance providers to develop recovery and resolution plans based on the nature of their business, risk status, or the potential for spillovers.
The PBC should formulate a formal emergency liquidity bail-out framework.	Highest	Medium-term measures	No new developments.
Upgrade the institutional design of various types of protection funds to limit moral hazard.	Medium		**Insurance Protection Fund:** We have continued research into better regimes for insurance rates and scope and levels of coverage, and have published new ideas and strategies. These have been applied to the practical necessities of risk mitigation, and we are exploring feasible approaches to boosting the function of the Insurance Protection Fund. **Trust Protection Fund**: We are amending the regulatory systems around the Trust Protection Fund. We have developed core principles for preventing moral hazards in three areas: investors bearing investment risks, greater responsibility by the company and its shareholders to find bail-in solutions, and more responsibility for local regulators. We are also exploring how to regulate subscriptions and the use of fund by applying differentiated

Recommendation	Priority Level	Timing Requirement	Measures Taken
			subscription rates, and specifying the conditions for its use and the decision-making process. In this way we can prevent moral hazards arising from the asymmetry between rights and responsibilities, as well as from the misuse or the abuse of funds.
Inclusive finance			
Upgrade the legal, regulatory, and supervision framework for financial technology.	Medium		The People's Bank of China has been implementing *the FinTech Development Plan (2019–2021)* to improve the top-level design of fintech regulation, so as to accelerate the paces to improve the framework for fintech regulation that incorporates innovative regulatory tools and digital regulatory techniques around a core of regulatory rules. It has expanded the use of innovative regulatory tools for fintech by introducing standards for assessing intelligent algorithms and levels of data capability, improving the regulation of risk from the use of new technologies, and improving prudential regulation of fintech innovation. The CBIRC is always actively developing regulatory systems, following principles including "financial innovation must be carried out within the framework of prudential regulation" and "all financial activities must be brought into the regulatory framework by law." **First**, the CBIRC has issued a series of regulations, including: *Interim Measures for the Administration of Internet Loans of Commercial Banks*, *Notice on Further Regulating the Internet Loan Business of Commercial Banks*, *Administrative Measures on Internet Insurance*, *Notice on Matters Concerning the Regulation of Internet-based Personal Deposits of Commercial Banks*. These rules specify the regulatory rules for loan, insurance, and deposit business carried out over the Internet, and provide guidance on healthy, compliant operations for banks and insurance providers. **Second**, the CBIRC has improved the regulation of financial services

Recommendation	Priority Level	Timing Requirement	Measures Taken
			offered by companies running Internet platforms, providing stronger anti-monopoly protections and preventing the uncontrolled expansion of capital. It required that micro-lenders and financial guarantee companies owned by Internet platforms must align with and benchmark against regulatory standards such as *Regulation on the Supervision and Administration of Financing Guarantee Companies* (and associated schemas) and *Notice on Strengthening the Supervision and Administration of Small Loans Companies*, and instituted a system of internal audits and changes to lead companies toward compliant, healthy operations. **Third**, the CBIRC developed *Guiding Opinions on the Digital Transformation of Banking and Insurance Business* to provide a stronger regulatory framework that will support steady progress on the digitization of banking and insurance services. The CBIRC also issued the *Regulatory Measures for Risks in Information Technology Outsourcing by Banks and Insurance Organizations* to provide regulatory standards for risk management during the outsourcing of IT projects to third parties by banks and insurance providers. The CSRC is developing the regulatory framework for financial technology fintech in the field of securities and futures. **First**, the CSRC has helped draft and develop the *Law on Futures and Derivatives*, which specifies that the CSRC is the regulator for fintech and information security in the futures industry, and requires futures services institutions that offer services through information technology systems to file information with the CSRC. **Second**, securities and fund organizations that provide information technology services have been added to the scope of regulation by statute, and now must also file information with the CSRC. To date, 329

Recommendation	Priority Level	Timing Requirement	Measures Taken
			organizations have made at least one filing. Over this same period, the CSRC has been researching and developing regulatory measures for these organizations, and has specified operational regulations and minimum standards for specific services. It is now conducting onsite compliance checks. **Third**, the CSRC developed plans for pilot zones with faster fintech innovation in capital markets, and has created supporting regulations with increased tolerance for error and incentives. The pilot programs are already being implemented in five cities: Beijing, Shanghai, Shenzhen, Guangzhou, and Nanjing. **Fourth**, the CSRC continues to encourage the registration of mobile apps by securities and futures brokers, and to develop basic regulatory standards and rules for broker apps. **Fifth**, the CSRC continues to update technical standards and regulatory regimes for fintech, providing regulatory leadership, and building a modern fintech regulatory environment that is both prudential and open to innovation.

INTERNATIONAL MONETARY FUND

PEOPLE'S REPUBLIC OF CHINA

STAFF REPORT FOR THE 2021 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

December 20, 2021

Prepared By

Asia and Pacific Department
(In consultation with other departments)

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FUND RELATIONS

(As of November 30, 2021)

Membership Status: Joined 12/27/45; Article VIII (December 1, 1996)

General Resources Account:

	SDR Million	% Quota
Quota	30,482.90	100.00
Fund holdings of currency	23,687.99	77.71
Reserve position in Fund	6,794.95	22.29
Lending to the Fund		
New Arrangements to Borrow	424.40	

SDR Department:

	SDR Million	% Allocation
Net cumulative allocation	36,206.16	100.00
Holdings	37,152.21	102.61

Outstanding Purchases and Loans: None

Financial Arrangements:

Type	Approval Date	Expiration Date	Amount Approved (SDR million)	Amount Drawn (SDR million)
Stand-by	11/12/86	11/11/87	597.73	597.73
Stand-by	03/02/81	12/31/81	450.00	450.00

Projected Payments to Fund (SDR million; based on existing use of resources and present holdings of SDRs):

	Forthcoming				
	2021	2022	2023	2024	2025
Principal		0.00	0.00	0.00	0.00
Charges/interest		0.61	0.61	0.61	0.61
Total		0.61	0.61	0.61	0.61

Exchange Arrangements:

China's de facto exchange rate regime has been classified as other managed arrangement, effective June 22, 2018. The previous classification was crawl-like against the basket of currencies in the CFETS index since June 1, 2017. The de jure exchange rate arrangement is managed floating with a view to keeping the RMB exchange rate stable at an adaptive and equilibrium level based on market supply and demand with reference to a basket of currencies to preserve the stability of the Chinese

economy and financial markets. The floating band of the RMB's trading prices is 2 percent against the U.S. dollar in the interbank foreign exchange market: on each business day, the trading prices of the RMB against the U.S. dollar in the market may fluctuate within a band of ±2 percent around the midrate released that day by China's Foreign Exchange Trading System (CFETS). The People's Bank of China (PBC) indicated that the RMB's floating range would be changed in an orderly manner, based on the developments of the foreign exchange market and economic and financial situation. Within the trading band, banks may determine their RMB exchange rates to the U.S. dollar with their clients without any limit on the spread, based on market supply and demand (PBC No. 2014/188). On August 11, 2015, the PBC decided to further increase the flexibility of the RMB-to-USD exchange rate midrate quoting mechanism, thereby enhancing the market determination of RMB exchange rates, and giving market supply and demand an even greater role in exchange rate formation.

The CFETS publishes its exchange rate index (composed of 24 currencies since January 1, 2017, previously, 13 currencies), and other RMB indices based on the Bank for International Settlements (BIS) currency basket and the SDR currency basket.

China accepted the obligations of Article VIII, Sections 2, 3, and 4 of the Fund's Articles of Agreement on December 1, 1996. China maintains an exchange system free of multiple currency practices and restrictions on payments and transfers for current international transactions. However, China has notified measures to the Fund, pursuant to procedures under the Executive Board Decision 144 (52/51), which apply to measures imposed solely for national or international security reasons.

While exchange controls continue to apply to most capital transactions, the use of renminbi in international transactions has expanded over time. Effective October 1, 2016, the RMB was determined to be a freely usable currency and was included in the SDR basket as a fifth currency, along with the U.S. dollar, the euro, Japanese yen, and the British pound.

RELATIONS WITH OTHER INTERNATIONAL FINANCIAL INSTITUTIONS

World Bank: https://www.worldbank.org/en/country/china

Asian Development Bank: https://www.adb.org/countries/prc/main

STATISTICAL ISSUES

(As of November 30, 2021)

I. Assessment of Data Adequacy for Surveillance
General: While data are broadly adequate for surveillance, they are only barely so. Efforts at strengthening the statistical system and enhancing data transparency led to China's subscription to the Special Data Dissemination Standard (SDDS) in October 2015. Nevertheless, China's statistics continue to have gaps that hamper surveillance. The areas of concern relate mainly to national accounts data and government finance statistics. China has endorsed and is in the process of implementing the recommendations of the Data Gaps Initiative of the G-20.
National Accounts: The National Bureau of Statistics (NBS) compiles and disseminates annual GDP by activity and by expenditure in current prices, by activity at constant prices (2015), and quarterly estimates of GDP by activity at current and constant prices. The NBS is in a transition period from 1993 SNA to 2008 SNA. The 2008 SNA has been implemented in the calculation of financial intermediation services indirectly measured and in the capitalization of research and development. The techniques for deriving volume measures of some GDP components are not sound and need to be improved. Annual and quarterly GDP by expenditure is compiled at constant prices but is not published. Quarterly estimates of GDP are cumulative. Limited expenditure components' contributions to GDP are available on a quarterly basis. The NBS has made several improvements to the range and quality of national accounts data, the most important being improving the exhaustiveness of the GDP estimates by activity. Further improvements are intended for both the annual and quarterly accounts; however, no target dates have been set. As in other countries, rapid economic change, including the expansion of the private sector, presents new problems for data collection and compilation. The ability to change the data collection systems is restricted by the decentralized nature of the statistical system. Monthly index of services production, and fixed investment indices are disseminated as ratios with respect to the corresponding month of the previous year, but no chain-linked indices are produced. Data revisions tend to be made without publishing the entire revised series.
Price Statistics: The CPI covers approximately 500 areas throughout the country, including around 200 counties and around 300 cities. The national CPI is a composite of the CPIs calculated at the local and regional level, with approximately 2 million prices collected each month. The index is compiled using weights derived from the 2020 household expenditures. However, the weights are not published, which makes changes in the aggregate groups more difficult to interpret. The PPI is aggregated according to the 2020 production value weights for the industrial sector.. Expansion of the coverage to include services activities should be considered. A purchaser price index reflecting input prices paid by Chinese producers is also disseminated with the PPI. The NBS publishes residential property price indices (RPPIs) for both new and second-hand properties in 70 large and medium cities. The indices are compiled following a basic mix-adjustment methodology (by size). These data are not aggregated to the national level.
Government Finance Statistics: Serious data shortcomings continue to hamper fiscal analysis. Comprehensive data on the social security and extra budgetary funds are only provided annually and with a long lag. China currently reports GFS for general government with no breakdown of expenditure by economic type except interest, with no balance sheet data, but including data under

the Classification of Functions of Government for the GFS yearbook. Expenditure classification remains in need of improvement, mainly because expenditures by economic type are not published. The authorities have indicated an intention to begin collecting these data and to develop accrual based measures of fiscal performance over the medium term while also strengthening the compilation of cash based GFS. China has made a commitment under the G20 Data Gaps Initiative to develop quarterly general government data; however, little progress has been made. General Government coverage excludes the operations of the local government financing vehicles (LGFVs) which are substantial.

Monetary and Financial Statistics: In recent years, few improvements have been made in monetary and financial statistics. The monetary and banking surveys lack sufficient detail with regard to bank claims on the government, hampering the estimation of the fiscal deficit from the financing side. The reported net foreign assets position of PBC does not include exchange rate valuation effects and interest earnings on foreign reserves. The PBC has also ceased to report separate data on central government deposits in its balance sheet since April 2005 because the MOF no longer distinguishes between central and other government deposit accounts.
The monetary and financial statistics missions in March 2015 made several recommendations for improvements in monetary data compilation with a view to accelerating PBC's implementation of the standardized report forms (SRFs). The PBC is currently technically capable of compiling and reporting monetary statistics in the IMF-recommended format of SRFs at least for the central bank and other depository corporations. Nonetheless, reporting of SRFs has not yet begun pending internal review and approval processes. China reports data on some key series and indicators of the Financial Access Survey (FAS), including the two indicators (commercial bank branches per 100,000 adults and ATMs per 100,000 adults) adopted by the UN to monitor Target 8.10

Financial sector surveillance: China reports financial soundness indicators (FSIs) to the Fund for dissemination on the IMF's website. In addition to the 12 core FSIs, the authorities included in early 2015 two encouraged FSIs for deposit takers in their regular reporting to the Fund. The periodicity of data was also improved in May 2015 from annual to semi-annual frequency, and from semi-annual to quarterly frequency from the first quarter of 2019.

External sector statistics: The historic data series (balance of payments starting with data for 2005:Q1 and international investment position (IIP) starting with data for 2011:Q1) are compiled (in U.S. dollars) largely in accordance with the sixth edition of the *Balance of Payments and International Investment Position Manual* (*BPM6*) and are disseminated in the IFS. Similar information is also available on the website of the State Administration of Foreign Exchange (SAFE). The authorities continue their efforts to improve the coverage of balance of payments (BOP) and IIP statistics, and progress is being made in developing these statistics. However, with the transition to BPM6, data gaps remain in the BOP pertaining to the relevant series of merchanting and primary income data (portfolio investment income). Regular training programs for staff in the provincial offices of SAFE have been recommended, aiming at improving the granularity of the primary and secondary income accounts. China has made considerable efforts to improve the coverage of external sector statistics, including by (i) commencing participation in the Coordinated Direct Investment Survey (CDIS) in 2011, although only inward direct investment positions are currently recorded and no breakdown is available between equity and debt instruments; (ii) initiating reporting data for the Coordinated Portfolio Investment Survey (CPIS) at the end of 2015; (iii) reporting data to the Currency Composition of Foreign Exchange Reserves (COFER) since 2015; and (iv) compiling and disseminating the International Reserves and

Foreign Currency Liquidity Template starting September 2015. The latter does include the coverage on currency composition of reserves by groups of currencies with more than two-year lag.. There remains a need to strengthen external debt monitoring and compilation, including dissemination of granular data for the CDIS. In 2010, China started submitting total and public external debt data for the Quarterly External Debt Statistics (QEDS) database, a notable step forward.	
II. Data Standards and Quality	
China subscribed to the SDDS in October 2015.	No data ROSC has been conducted.

Table 1. China: Common Indicators Required for Surveillance
(As of December 15, 2021)

	Date of Latest Observation	Date Received	Frequency of Data[9]	Frequency of Reporting[9]	Frequency of Publication[9]
Exchange rates	Dec 2021	Dec 2021	D	D	D
International reserve assets and reserve liabilities of the monetary authorities[1]	Nov 2021	Dec 2021	M	M	M
Reserve/base money	Nov 2021	Dec 2021	M	M	M
Broad money	Nov 2021	Dec 2021	M	M	M
Central bank balance sheet	Nov 2021	Dec 2021	M	M	M
Consolidated balance sheet of the banking system	Nov 2021	Dec 2021	M	M	M
Interest rates[2]	Dec 2021	Dec 2021	D	D	D
Consumer price index[3]	Nov 2021	Dec 2021	M	M	M
Revenue, expenditure, balance and composition of financing[4]—general government[5]	2020	May 2021	A	A	A
Revenue, expenditure, balance and composition of financing[4]—central government	Oct 2021	Nov 2021	M	M	M
Stocks of central government and central government-guaranteed debt[6]	2021Q2	Sep 2021	Q	Q	Q
External current account balance	2021Q3	Nov 2021	Q	A, Q	A, Q
Exports and imports of goods and services[7]	Oct 2021	Nov 2021	M	M	M
GDP/GNP[8]	2021Q3	Oct 2021	A, Q	A, Q	A, Q
Gross external debt	2021Q2	Sep 2021	A, Q	A, Q	A, Q
International investment position	2021Q2	Sep 2021	A, Q	A, Q	A, Q

[1] Any reserve assets that are pledged of otherwise encumbered should be specified separately. Also, data should comprise short-term liabilities linked to a foreign currency but settled by other means as well as the notional values of financial derivatives to pay and to receive foreign currency, including those linked to a foreign currency but settled by other means.
[2] Both market based and officially determined, including discount rates, money market rates, rates on treasury bills, notes and bonds.
[3] Only 12-month growth rates are reported (price indices are not available).
[4] Data on financing (foreign, domestic bank and domestic nonbank financing) and the economic classification of expenditures is not available.
[5] The general government consists of the central (budgetary funds, extra budgetary funds, and social security funds) and state and local governments.
[6] Including currency and maturity composition.
[7] Goods and services trade data are both provided monthly, with services trade data release slightly lagging goods trade data release.
[8] For GNP, level data are available only on an annual basis.
[9] Daily (D), Weekly (W), Monthly (M), Quarterly (Q), Annually (A); Irregular (I); Not Available (NA).

CAPACITY DEVELOPMENT

Table 1. China: Summary of Capacity Development Activities, 2011–21 1/

Department	Purpose	Date
Tax System Reform		
FAD	Mission on Tax Gap Analysis	September 2011
FAD	Micro-Simulation Models	December 2013
FAD	Analysis of the Macroeconomic Impact of Tax Policy	March 2015
FAD	Reforming the Personal Income Tax	October 2015
FAD	The Future Design of Value-added Tax	September 2016
FAD	Tax Policy for promoting entrepreneurship and employment	September 2017
FAD	Social security contributions	March 2018
FAD	VAT policy	September 2018
FAD	Workshop on Microsimulation on Income Tax	November 2020
FAD	Workshop on Value-added Tax	July 2021
FAD	Workshop on Capital and Labor Income Taxation	October-November 2021
Tax Administration Reform		
FAD	Tax Policy And Administration	September 2011
FAD	Tax Administration (Peripatetic Expert Visit 4 Of 5)	October 2011
FAD	Tax Administration (Peripatetic Expert Visit 5 Of 5)	October 2011
FAD	Large Taxpayer Compliance	October 2011
FAD	Workshop on Practical Tax Analysis For Tax Officials	December 2012
FAD	Large Taxpayer Administration	January 2013
FAD	Tax Administration Follow-Up	April 2014
FAD	Tax Collection Law Revision	May 2014
FAD	Tax Collection Law Revision	July 2015
LEG	Mission on Reforming Tax Collection Law	July 2015
FAD	Reforming the Personal Income Tax	October 2015
FAD	Improving Tax Compliance on ODI by Chinese Enterprises	October 2016
FAD	Tax administration—outbound investment and Taxpayer services	October 2017
FAD	Evaluate implementation of multi-year tax administration modernization	January 2018
FAD	Tax administration—performance measurement	March 2018
FAD	Tax administration--PIT	November 2018
FAD	Workshop and report on tax modeling and analysis	April 2019
FAD	Improving International and Domestic Taxpayer Compliance through Strengthened Services and Supervision	October 2020
FAD	Administering the Value-added Tax on Cross-border Transactions	November-December 2020
FAD	Improving Taxpayer Compliance through Strengthened Services and Supervision	October 2021
FAD	International Practices in Compliance Risk Management and Data Management	November 2021
FAD	Administering the Individual Income Tax on Offshore Transactions	December 2021

Table 1. China: Summary of Capacity Development Activities, 2011–21 (continued)

Public Financial Management		
FAD	High-level Dialogue on PFM Institutions	June 2011
FAD	Medium-Term Expenditure Framework Seminar	November 2011
FAD	Medium-Term Revenue Administration Program And Policies Discussion	June 2012
FAD	High-Level Dialogue on PFM Institutions	November 2012
FAD	Mission on Introducing Advanced Treasury Reforms	February 2013
FAD	High-level Seminar on Fiscal Reforms	January 2014
FAD	Mission on Modernization of Government Accounting	April 2014
FAD	Mission on Medium Term Expenditure Frameworks	July 2014
FAD	Expert visit on Treasury management (accounting)	September 2014
FAD	Expert visit on Chart of Accounts Improvements	March 2015
FAD	Expert visit on Treasury Management (cash management)	March 2015
FAD	Mission on Strengthening Local Government Borrowing Reform	April 2015
FAD	Mission on Accounting Modernization	November 2015
FAD	Workshop on Medium-Term Expenditure Frameworks	April 2016
FAD	Seminar and Case Study on Local Government Borrowing and Bond Market Development	April 2016
FAD	Expert visit on Treasury – Central Bank Coordination	June 2016
FAD	Workshop on Medium-term Expenditure Frameworks	April 2017
FAD	Government accounting and financial reporting	April 2018
FAD	Performance Budgeting	April 2019
Statistics		
STA	Workshop On Special Data Dissemination Standard	April 2011
STA	Government Finance Statistics	May 2011
STA	Data Work: SRFS Data Development for OFCs/ FSI Data Reporting	April 2012
STA	Quarterly National Accounts	November 2013
STA	Total Social Financing(TSF) Indicators/Monetary and Financial Statistics	March 2014
STA	SDDS Assessment	August 2014
STA	Data Work: Monetary Data Reported in SRF	September 2014
STA	SDDS Assessment	December 2014
STA	TSF/Monetary Data Reported in SRFs	March 2015
STA	Multi-sector Mission: SDDS Metadata Development and Topical TA	June 2015
STA	Quarterly National Accounts	March 2019
Monetary Policy, Bank and financial Supervision, and AML/CFT		
LEG	AML/CFT Legislative Drafting	March 2011
LEG	Bank Resolution	May 2012
MCM	Seminar on Article VIII of IMF's Articles of Agreement	July 2017
MCM	Securities Markets Supervision Workshop	September 2017
MCM	Mission on Securities Market Supervision	March 2018
MCM	Regulatory and Prudential Framework	August 2018
MCM	Financial Sector Technical Assistance	September 2018
MCM	Financial Sector Technical Assistance	November 2018

Table 1. China: Summary of Capacity Development Activities, 2011–21 (continued)

MCM	Monetary Policy Implementation and Operations	January 2019
MCM	Financial Sector Technical Assistance	January 2019
MCM	Financial Sector Technical Assistance	April 2019
MCM	Workshop on Sovereign Bond Futures Market	April 2019
MCM	Indicator-based Framework for Systemic Risks Monitoring	May 2019
Training		
LEG	AML/CFT Legislative Drafting Mission	March 2011
INS	Course on Macroeconomic Management and Financial Sector Issues	March 2011
INS	Course on Macroeconomic Forecasting	April 2011
INS	Government Finance Statistics Course at CTP	May 2011
STA	Course on Government Finance Statistics	May 2011
STA	Course on Government Finance Statistics	June 2011
INS	BOP and IIP Course at CTP	June 2011
STA	Course on Balance of Payments Statistics	October 2011
INS	Monetary and Financial Statistics Course at CTP	November 2011
STA	Participate in OECD-NBS Workshop on National Accounts	March 2012
INS	FSI Course at CTP	September 2012
MCM	Medium Term Debt Management Workshop	November 2012
INS	BOP/IIP Course at CTP	April 2013
MCM	Workshop on Capital Account Convertibility and Exchange Rate Policy	June 2013
STA	SDDS Seminar	July 2013
INS	Introductory Course on Monetary and Financial Statistics in CTP	September 2013
STA	Quarterly National Accounts Seminar organized by NBS	November 2013
ICD	Macroeconomic Management & Financial Sector Issues	January 2014
MCM	Financial Statistics	March 2014
MCM	Workshop on Financial Regulation and Supervision	March 2014
ICD	Macroeconomic Management & Financial Sector Issues	March 2014
MCM	Course on External and Systematic Financial Risks	July 2017
ICD	Macroeconomic Diagnostics	September 2014
INS	Financial Soundness Indications in CTP	September 2014
STA	Seminar at Fund HQ for SAFE Officials on Experiences and Challenges in the Implementation of BPM6	September 2014
ICD	Macroeconomic Forecasting	October 2014
STA	OECD/NBS Workshop on Sectoral Accounts (with STA participation)	December 2014
ICD	Macroeconomic Management and Financial Sector Issues	March 2015
MCM/STA	Total Social Financing Indicator	March 2015
STA	Meeting: ECB Meeting with Delegation from China on Debt Securities & Data Issues	April 2015
STA	Meeting: BIS Meeting with Delegation from China on Debt Securities & Data Issues	April 2015
MCM	SDR Review/Operational Issues	June 2015
ICD	Macroeconomic Forecasting	June/July 2015
INS	Advanced Course on Monetary and Financial Statistics in CTP	August 2015
STA	SAFE-Course on Compilation of Balance of Payments Statistics	September 2015
ICD	Macroeconomic Diagnostics	September 2015
STA	Balance of Payments Statistics	September 2015
ICD/FAD	Fiscal Analysis and Forecasting	November 2015
FAD/ICD	Course on Fiscal Analysis and Forecasting	December 2015

Table 1. China: Summary of Capacity Development Activities, 2011–21 (continued)

STA	OECD/NBS China Workshop on National Accounts (with STA participation)	March 2016
MCM	Sub-national Debt Market Development	April 2016
MCM	Workshop on Securities Supervision	April 2016
STA	Seminar on Cross-border Position Statistics and Challenges in the Implementation of New Data Initiatives	June 2016
ICD	Macroeconomic Forecasting	June/July 2016
ICD	Macroeconomic Forecasting – Advanced	July 2016
ICD	Financial Sector Surveillance	June/July 2016
MCM	Workshop on Enforcement and Market Surveillance	September 2016
ICD	Dynamic Stochastic General Equilibrium Modeling	November 2016
ICD	Dynamic Stochastic General Equilibrium Modeling - China	November 2016
ICD	Financial Sector Surveillance	June 2017
ICD	Macroeconomic Forecasting –advanced course	June 2017
ICD	Monetary and Fiscal Policy Analysis with DSGE Models	August - September 2017
ICD	Dynamic Stochastic General Equilibrium Modeling – China	September 2017
STA	Cross-border Position Statistics	September 2017
ICD	Managing capital flows	March 2018
ICD	Macro-Econometric Forecasting and Analysis	May-June 2018
ICD	Fiscal Policy Analysis	June 2018
ICD	Financial Sector Surveillance	June 2018
ICD	Financial Development and Financial Inclusion	June-July 2018
ICD	Monetary and Fiscal Policy Analysis with DSGE models	August 2018
ICD	Monetary and Fiscal Policy Analysis with DSGE models(advanced)	August 2018
MCM	Stress Testing and Systemic Risks I	October 2018
ICD	Financial Programming and Policies	October 2018
ICD	Inclusive Growth	December 2018
MCM/ICD	Adapting Financial Supervision to New Financial Technologies	January 2019
SPR	Debt Sustainability Framework in Low-Income Countries and Fund	February-March 2019
MCM	Policies	March 2019
ICD/MCM	Stress Testing and Systemic Risk II	April 2019
ICD	Financial Markets and Instruments	April 2019
ICD	Financial Sector Policies	May 2019
MCM/ICD/LE	Macroeconomic Diagnostics	May 2019
ICD	Managing Capital Flows	June 2019
STA	Financial Sector Surveillance Debt Securities Statistics	June 2019
ICD	Monetary & Fiscal Policy Analysis with DSGE Models-Advanced Workshop	September 2019
ICD	Fiscal Sustainability	September 2019
LEG	Current International Issues in Tax Law Design	September 2019
MCM	Bank Restructuring and Resolution	September 2019
ICD	Macroeconomic Diagnostics	October-November 2019
STA	Cross-Border Position Training	November 2019
ICD	Financial Programming and Policies	December 2019
SPR	Virtual Workshop on Debt Sustainability Analysis and IMF Policies	July 2020
MCM	Virtual Course on Stress Testing and Systemic Risk	September 2020
ICD	Virtual Course on Macroeconomic Diagnostics	October 2020
ICD	Economic Issues in Regional Integration (ERIv)	November 2020
ICD	(Selected Issues in) Financial Sector Policies (FSSv)	November-December 2020
SPR/ICD/LEG	Debt Sustainability Analysis and IMF Policies	December 2020
ICD/MCM/LEG	Managing Capital Flows (MCFv)	December 2020

Table 1. China: Summary of Capacity Development Activities, 2011–21 (concluded)

ICD	Fiscal Policy Analysis (FPA)	December 2020
LEG	Corporate and Household Insolvency (CHI)	January 2021
ICD	Financial Markets and Instruments (FMI)	January 2021
LEG	International Issues in Tax Law Design (TLWD)	March 2021
MCM	Workshop on Regulation and Supervision of Issuers (RS)	April 2021
ICD	Fiscal Frameworks (FF)	July 2021
LEG	Implementing the International AML/CFT Standards (AMLS)	July 2021
ICD	Monetary and Fiscal Policy Analysis with DSGE Models(DSGE)	August 2021
SPR	Webinar on Implications of RCEP and CPTPP for China	September 2021
SPR/LEG	DSA AND IMF POLICIES WORKSHOP	September 2021
MCM	Course on Bank Restructuring and Resolution	November 2021
STA	Statistics on International Trade in Goods and Services	November-December 2021
MCM	Systemic Macro-financial Risk Analysis	November-December 2021
FAD	Applying the Tax Administration Diagnostic and Assessment Tool (TADAT)	December 2021

1/ The new Institute for Capacity Development (ICD) was formed from the merger of the former IMF Institute (INS) and Office of Technical Assistance Management (OTM) on May 1, 2012.

Statement by Jin Zhongxia, Executive Director for People's Republic of China

Executive Board Meeting

January 27, 2022

Our authorities would like to thank staff and management for the constructive policy dialogue during China's 2021 Article IV consultation. We value staff's comprehensive and well-focused analysis. We also appreciate staff's professionalism and hard work under the ongoing global pandemic circumstances. As China's economy continues to steadily recover from the COVID shock, the authorities remain committed to enhancing macroeconomic stability, maintaining economic development within appropriate range and promoting social stability, and fostering a green and high-quality growth.

I. COVID-19 Containment in China

Facing the challenge of pandemic, the Chinese government chose to put people and their lives in the most prioritized place, and continued the rapid and decisive response to the COVID, with comprehensive, targeted, stringent, and transparent containment measures. So far, more than 1.2 billion people in China have taken at least two doses of vaccine, and the vaccination rate has exceeded 82%. As the wave of Omicron variant surges across the world recently, China's "dynamic zero-COVID" strategy, which refers to cutting off the spread of new infections as soon as possible, has provided the country with pre-emptive defense against the threat.

The policy dealing with pandemic is also economic policy, as there is no durable end to the economic shocks without an end to the health crisis. It is true that implementing the "dynamic zero-COVID" strategy is not cost-free, and it particularly constrain the recovery of contact-intensive economic activities. Nonetheless, this strategy's benefits still outweigh its costs given China's specific circumstances. Going forward, China will continue to find the optimal balance between pandemic control and economic growth.

II. Recent Economic Developments in China

Thanks to the “dynamic zero-COVID” strategy, China’s economy continues to recover steadily. In the first three quarters of 2021, real GDP increased by 9.8 percent year on year (YoY), and the whole year’s growth would be around 8 percent. The economy continues to show resilience. Meanwhile, internal drivers of economic growth have been strengthened. In the first 11 months of 2021, the retail sales of consumer goods went up by 13.7 percent YoY. In the first three quarters of 2021, consumption has contributed to 64.8 percent of GDP growth, significantly higher than that of investment. Fixed-asset investment (FAI) maintained a steady growth, and the investment structure was improved. In the first 11 months of 2021, FAI rose by 5.2 percent YoY, with the investment of high-tech industries growing by 16.6 percent YoY. The manufacturing PMI and non-manufacturing PMI recovered to 50.3 and 52.2 respectively in December 2021. In the first 11 months of 2021, total profit of industrial enterprises increased by 38.0 percent YoY, and registered an average annual growth rate of 18.9 percent as compared with the same period two years ago.

Other indicators also point to a steady recovery. Consumer prices and employment rates have remained broadly stable. China’s outbound direct investments (ODI) in the first 11 months of 2021 was 129.79 billion USD, increasing by 9.2 percent YoY. China’s ODI to the Belt and Road regions amounted to 18 billion USD, increasing by 12.7 percent YoY. In the same period, the FDI into mainland China, in actual use, surged 21.4 percent YoY to 157.2 billion USD. According to a recent survey of foreign-owned banks in China, 97 percent of the interviewed banks plan to expand investments in China given the vast market, good growth perspectives and mature supply chains.

The expansion of domestic demand has led to increased imports, while rising external demand has supported export growth. As a result, imports and exports have both maintained strong momentum. In the first 11 months of 2021, China’s exports rose by 31.1 percent YoY to 3.03 trillion USD, and import volume surged 31.4 percent YoY to 2.44 trillion USD. China’s steady recovery has also contributed substantially to the global recovery. The robust trade growth is a reward to China’s effective management and control of the health crisis, and also a contribution to the resiliency and reliability of global supply chains.

The Chinese economy is facing increasing external uncertainties and risks, including a resurgence of COVID-19 variants, weak global recovery and demand, and heightened geopolitical tensions. However, we are confident that China's long-term prospect of steady economic growth remains unchanged. The Chinese economy will continue the "dual (internal and external) circulation" development pattern, relying more on domestic demand to drive growth, broadening access to Chinese markets, and making domestic and external demands complement each another. As we move into 2022, we are confident that the Chinese economy will continue its steady growth.

We think staff's projection should fully take into account China's ample policy space and potential policy calibration. China's YoY growth rate in 2021 has shown a "high to low" feature. This is because China's recovery was ahead of the rest of the world in 2020, by about six months. In 2022, we expect China's growth will very likely demonstrate a "low to high" pattern.

III. Broader Policy Issues

Monetary Policy

The monetary policy support for the economy remains strong, and China still has ample policy space to pursue a supportive monetary policy in an appropriate, targeted and sound manner. Along with the steady economic recovery, the YoY growth of money supply (M2) and aggregate financing to the real economy (AFRE) was 8.5 percent and 10.1 percent in November 2021, respectively, which is broadly in line with nominal GDP growth.

The People's Bank of China (PBC) has used a mix of monetary policy tools, such as Open Market Operations, the Medium-term Lending Facility, and Reserve Requirement Ratio, to maintain a reasonably adequate level of liquidity. In December 2021, the PBC lowered the Reserve Requirement Ratio by 0.5 percentage points, releasing around RMB 1.2 trillion of long-term funds. The one-year lending prime rate (LPR) was guided down from 3.85 percent to 3.8 percent. The overall corporate borrowing cost declined steadily to a historic low level below 5 percent in end-2021, and progress was made in encouraging financial sector to lower service costs in favor of non-financial businesses. **Some recent developments after the Article IV consultation meetings have yet to be reflected in the report.**

Financial services for micro and small businesses (MSBs) continued to improve. At the end of November 2021, the outstanding loans to MSBs amounted to RMB 18.7 trillion, increased by 24.1 percent YoY. From January 2022, the PBC decided to continue the use of two structural monetary policy tools with modified arrangement to ensure more precise liquidity injection to MSBs and provide more direct support to the real economy.

In 2022, the PBC will use various monetary policy tools to keep liquidity at a reasonable and adequate level, and to guide credits to grow at an appropriate pace. China will keep the growth of money supply and AFRE broadly in line with nominal economic growth.

The RMB purchasing power has remained basically stable, and its exchange rate moved in both directions based on market supply and demand with increased flexibility. At end-2021, the central parity of the RMB against the US dollar was 6.3757, appreciating 2.34 percent from end-2020. According to BIS statistics, from December 2020 to November 2021, the REER and NEER of the RMB appreciated 3.87 percent and 6.88 percent respectively, stronger than most of the other major currencies over the same period. Going forward, the PBC will continue to maintain the flexibility of the RMB exchange rate and help to rationalize market expectations, so as to keep the RMB exchange rate at its adaptive equilibrium level.

Fiscal Policy

In 2021, China continued to enhance the quality, efficiency, and sustainability of proactive fiscal policies. Considering the economic growth is well above the authorities' goal set at the beginning of 2021, China slightly cut the budget deficit-to-GDP ratio (from 3.6 percent in 2020 to around 3.2 percent in 2021) and the quota for new special local government bond issuance. Meanwhile, fiscal support was more targeted and maintained its high intensity. Fiscal authorities have further optimized and implemented its policies related to tax cuts and fee exemptions and helped market players recover their vitality. **Therefore, caution should be exercised when staff assess that fiscal policy has "tightened significantly".**

The authorities believe that both crowding out effect and inflationary effect of fiscal stimulus should be taken into account. Compared with 2020, China's general government deficit/GDP ratio (by IMF definition) in 2021 fell by 3.7 percentage points, which is in between the United States' decline of 4.1 percentage points and average emerging markets' decline of 3 percentage points. Staff's description of "surprisingly strong contractionary turn" may be a little bit exaggeration of China's actual fiscal situation of China.

Going forward, the proactive fiscal policy will be further improved in terms of quality, efficiency, and sustainability. The expenditure intensity will be maintained, and expenditure process will be accelerated. China will continue to secure the bottom line of the "Three Guarantees" at the grassroots level, which means to guarantee people's basic livelihood, wages and operation of local governments. That will also imply an ensurance of an appropriate pace of budgetary investment and issuance of local government bonds.

We have different view with staff's concept of augmented deficit/debt and assessment, which is inconsistent with China's practice and official data. A major reason for the difference arises from the treatment of debt issued by local government financing vehicles (LGFVs) after 2014. It is important to note that all debt burden of LGFVs issued after 2014 is clearly borne by issuing entities themselves, not the Chinese government.

Managing Financial Sector Risks and Regulatory Tightening

China's financial system remains broadly stable and resilient. China's macro leverage ratio is stable and has declined slightly in recent quarters, and the banking sector remains robust. By the end of 2021 Q3, the capital adequacy ratio of the banking sector was 14.8 percent. By November 2021, the banking sector's non-performing loan (NPL) ratio was 1.89 percent, reflecting a decrease of 0.04 percentage points from end-2020.

Problems of certain real estate firms brought some short-term uncertainties to the financial markets. However, risks were mainly caused by some developers' mismanagement and break-neck expansion, and the overall real estate industry remains healthy. Risks stemming from individual firms in the short term will not undermine the fund-raising function of the market in the medium and long run. China has actively taken actions to avoid the sudden

tightening of credit to the broader real estate industry, and total risk exposures of financial institutions to the problem real estate firms are limited and manageable. Housing sales, land purchases and financing have already returned to normal in China recently.

Regarding potential spillovers as discussed in the Staff Report, some Chinese property developers are beginning to buy back their overseas bonds. Investors are also starting to buy dollar bonds issued by Chinese property developers. China is committed to creating a level-playing field and advancing the two-way opening-up of its financial markets. The authorities will continue to communicate with their overseas regulatory counterparts. Firms issuing bonds overseas and their shareholders will be strictly constrained by market disciplines and be required to properly handle their debt issues based on legal and market principles. For those firms which would like to make outward remittances for debt repayment or bond buy-back purposes, relevant authorities in China will support and facilitate their efforts under the existing policy framework.

In 2021, regulators further refined the fintech regulatory framework and strengthened the coordination between China's regulatory authorities, in order to improve competition and protect consumer rights from abusive market power. The State Administration for Market Regulation (SAMR) also issued the*Amendments to the Anti-Monopoly Law* and *Anti-Monopoly Guidelines on the Sector of Platform Economies*, which aimed at preventing monopolistic behaviors, to ensure fair competition and strengthen anti-monopoly law enforcement. Under the new regulatory framework, companies engaged in financial business must be subject to financial supervision. Measures to contain risks related to internet financing and illegal fund-raising have also been strengthened. These measures have enhanced the legal basis for regulating unfair competition. They will lift productivity growth, improve consumer and data protection, and safeguard financial stability.

State-Owned Enterprise (SOE) Reform

Structural reforms including those mentioned above are medium- and long-term goals, and the short-term policy objective/priority is also critical in containing the impact of COVID. In 2021, there were many uncertainties in

the domestic and external environment, making it more difficult for China to implement some structural reforms.

SOE reform has made substantial progress amid the fight against COVID, while the modern corporate governance system has been strengthened based on the principle of competitive neutrality. Meanwhile, SOEs are making greater efforts in improving efficiency and profitability to boost recovery and offset downward pressure. China further implements the nation's three-year (2020-2022) action plan for SOE reforms, with 70 percent of the goals achieved by the end of 2021. In the first 11 months of 2021, the total profit and net profit of the central government-owned enterprises amounted to RMB 2.3 trillion and 1.75 trillion, respectively, with the profit growth of central government-owned enterprises reaching record high.

The report has suggested China should take a well-coordinated approach to phase out "implicit guarantees" to SOEs. Caution should be exercised when using the perception-based "implicit guarantee" concept. China's authorities have repeatedly stressed over the past few years that the SOEs are separate commercial entities from the government, and that there is no such implicit guarantee. The "implicit guarantees" is misleading to the market, and irresponsible to global investors. Investors who purchase the bonds issued by SOEs or provide credit to SOEs in China based on the misperception of "implicit guarantee" should bear potential legal and financial consequences by their own. Staff should explain the legal and financial risks for investors who may make their investment decision based on staff's concept of "implicit guarantee".

Some colleagues expressed their concern that China's SOE enjoy subsidized financing compared with their international competitors, due to perception based implicit guarantee. I would like to provide more observation from different angle for evaluation. Market statistics shows that currently the bond financing costs of China's best SOEs are at about 2%-3% with maturity of three years, which is significantly higher than 0.5%-1% of those best private firms in major developed countries. Meanwhile, many so-called SOEs in China, including large commercial banks, has already been transformed into listed companies and are subject to market discipline.

On the other hand, many Chinese companies, both public and private, complained that the extremely low interest rates accompanied with their exchange rate effect in major developed countries, have provided a blanket subsidy to all their companies. Large private companies in some major developed countries can legally lobby and collude with politicians and can enjoy implicit protection and preferential procurement. In addition, China's companies, both public and private, are victims of unfair competition in the form of technology and supply sanctions and market restrictions under the name of national security.

A healthy exchange of views between China and its trade partners will be helpful and constructive. We should build and trust a well-functioning multilateral trade system. We encourage staff to make more comprehensive analysis on the business environment of Chinese SOEs and all Chinese companies in general.

Inequality

In 2021, China has successfully achieved the goal of eradicating absolute poverty. The concept of "common prosperity" has been emphasized by the authorities, which reflects China's intention to address inequality by establishing a more effective and healthier market, as well as a modern taxation and redistribution system. The authorities will protect the most vulnerable groups and develop a more efficient and fair income redistribution system, and continue to rely on the markets to play a fundamental role in economic operations.

Staff pointed out that "shortcomings in the social protection system have added to widening income inequality". This statement has not accurately described the reality. Since the outbreak of COVID, China has stepped up efforts to protect the livelihood of vulnerable groups through introducing a series of measures to stabilize employment, increase household income, and strengthen the social protection system. The social protection system in China has been significantly enhanced over the recent years. In 2020, the ratio of urban/rural income was 2.56, deceasing by 0.08 compared to 2019, and this is the largest drop in recent years. In the past ten years, China's Gini coefficient also moved downward steadily amid fluctuation.

Staff also mentioned that “about 230 million migrant workers were left out of urban unemployment insurance benefits”. In fact, many rural migrant workers have arable lands at home as their backstop, which act as an effective social protection buffer. This unique and important shock absorber should be taken into consideration in assessing the overall social protection arrangement in China.

Population Aging

Aging could be a drag to China’s long-term growth. But its negative impact could be exaggerated in the report due to several factors. Shortage of labor will stimulate automation. China is now the largest user of robotics in the world. Well-developed transportation and communication infrastructure can transform travel time into working time, and greatly increase effective labor supply while nominal labor supply looks shrinking. China still has 180 million rural workers in the agriculture sector, which account for 23% of the whole population. At least half of the rural labor force will continue to transfer to non-agricultural sectors in the next decades.

Central Bank Digital Currencies (CBDCs)

The PBC continues to advance the research and development of the pilot e-CNY project in a prudent and orderly manner, with no preset timetable for the official rollout. The pilot program tested the business and technological designs as well as whether the e-CNY system is stable, the product is user-friendly, and the scenario is applicable. Smartphone-free hardware wallets based on smart visual cards were tested with an aim to bridge the digital divide. The PBC will continue to expand test to cover all possible scenarios in selected pilot regions, building on the experience from the previous pilot tests and taking into account the local circumstances.

The PBC has taken measures to mitigate the potential risks highlighted in the SIP, in particular the issue of personal information protection. To strike the right balance between safeguarding privacy and AML/CFT, the PBC collects information on e-CNY on a minimum and necessary basis, with strict controls in the storage and usage of personal information. The e-CNY system will collect less transaction information than traditional electronic payment. For example, the least-privileged e-CNY wallets (with lower transition

limits) can be opened without providing identities, reflecting the principle of managed anonymity.

While the focus of e-CNY is primarily on domestic retail payments, the PBC also actively responds to initiatives by G20 and other international organizations on improving cross-border payments, which involves more complicated issues such as foreign exchange policies as well as regulatory and compliance requirements. As the work on CBDCs is evolving in the international community, the PBC will continue to cooperate closely with other monetary authorities and international organizations under the three general principles of "no disruption", "compliance", and "interconnectivity".

Opening-Up and International Cooperation

In the wake of the COVID, China has adopted a range of pro-business policies that apply equally to all companies registered in China. China has been resolutely pushing forward the opening-up of the financial industry to create a market-oriented, law-based international business environment. China has significantly strengthened protection of intellectual property and the legal rights and interests of foreign investors, providing them with higher-quality services and an improved business environment. China will continue its efforts along this line.

China strongly supports the Fund's effort to accelerate global vaccination, which is extremely relevant given the spread of Omicron variant. As of end-2021, China has provided over 2 billion doses of finished and bulk vaccines to over 120 countries and international organizations. Meanwhile, China is willing to constructively work together with the Fund and other countries to support the recovery of low-income countries. President Xi has announced that China is ready to channel to African countries USD 10 billion from its share of the Fund's new allocation of Special Drawing Rights.

We appreciate the Fund's view in the 2021 *External Sector Report* that priorities should be phasing out/rolling back tariff and nontariff barriers, including on medical products, and addressing gaps in the rules-based multilateral trading system. Maintaining a reliable supply of medical and basic goods is extremely important to the world under the pandemic situation.

China is willing to work together with the international community to foster consensus and safeguard multilateralism.

Technical Decoupling

Staff's analysis on technical decoupling is very important. Blockade on technology is another type of apartheid policy, which is based on demonization of a whole country and its people. We continue to support a rules-based multilateral trading and investment system, based on mutual respect, trust and international division of labor. There are several factors that may under-estimate China's resilience in dealing with technological decoupling. China has the largest pool of STEM graduates and engineers. Historical record shows that China can independently develop its high-tech industry. Some of the most advanced and competitive sectors in China, such as the space industry, has never been exempted from sanction in the past several decades, and the human capital in these sectors are very young and competitive. Decoupling may generate some partial and short-term effect, while the long-term effect will depend on China's internal effort to build up its highly incentivized R&D and competitive business environment. Decoupling could stimulate China to develop its own technology in a more systematic way, and its result may be that countries in the world will have more choices.

Climate Change

China has made firm commitment to carbon neutrality and have integrated climate effort into the new five-year plan. The authorities issue the policy framework to boost the green and low-carbon recovery and implement the new development philosophy. China's national carbon emission trading schemes (ETS) made its debut in July 2021. At the end of 2021, total trading volumes of the ETS stood at 178.8 million tons of carbon emission, with carbon prices steadily increased to about USD 8.5/ton of carbon emission.

In recent years, China has actively practiced the idea of green development and keenly promoted green finance. At the end of the third quarter of 2021, China has the world's largest outstanding green loans, which amounted to around RMB 15 trillion, and increased by RMB 3 trillion from end-2020. The outstanding green bond in China exceeded RMB 1 trillion. The PBC has

introduced supportive tools to reduce emission, provided financial incentives to qualified financial institutions, and guided financial institutions to extend loans to key sectors with strong reductions in emission. The PBC has also taken concrete measures to unify the green finance standards, promote the disclosure of carbon emission information by financial institutions, and carried out climate risk stress tests among some commercial banks.

We notice staff's scenario analysis on an earlier emission peak in 2023. We understand the good intention of this analysis but would caution to avoid any big-bang approach and suggestion. An over-ambitious approach going beyond multilateral consensus and without a comprehensive and feasible action plan to address transition risks should be further scrutinized in a pragmatic manner. It is also noteworthy that while China has been urged to speed up its carbon reduction process, China has become the victim of some country's sanction policies. These policies have aimed to damage China's largest solar energy production region with unfounded accusations based on presumption of guilt, which is in conflict with innocence presumption in major developed country itself. China has been a victim of a covered unfair competition policy. Market trade and transfer of new technologies, which are by definition all green technologies, has also been increasingly subject to restrictions. We encourage staff to make deeper analysis on the impact of those conflicting requirements and restrictions.

Going forward, China will continue to build a low-carbon, safe and efficient energy system, and promote international cooperation in green finance. **We commend staff's in-depth analysis on climate change, and encourage staff to propose policy advices based on multilateral consensus under either WTO rules or the Paris Agreement.**

In addition, we will continue to make efforts to fill data gaps.

Lastly, I would like to thank Mr. Geoffrey Okamoto for your leadership. We also thank Mr. Krishna Srinivasan, Mr. Helge Berger and the entire China team for their arduous and professional work.