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Executive Summary

Since the start of 2021, faced with complicated and grave conditions at home and abroad as well as various risks and challenges, China has coordinated well Covid-19 containment efforts with socio-economic development. The 14th Five-Year Plan achieved a good start, with the main annual targets and tasks completed fairly well, the new development pattern making new strides, and progress in high-quality development. In 2021, the GDP grew by 8.4 percent year on year, making China one of the top performers in the world. Employment was generally stable, and the consumer prices grew moderately. The balance of payments was in basic equilibrium, and the size of foreign exchange reserves remained stable.

In line with the overall arrangements by the CPC Central Committee and the State Council and guided by the Financial Stability and Development Committee (hereafter referred to as the FSDC), the financial sector, sticking to the general principle of seeking progress amidst stability, has done well in "six stabilities"[①], comprehensively implemented the task of "six securities"[②], strengthened cross- and countercyclical adjustments of macro policies, beefed up support to the real economy, continued to deepen financial reform and opening-up, and made all-out efforts to forestall and defuse financial risks. **First**, significant achievements have been made in stabilizing the macro leverage ratio. Forceful, effective and appropriate macroeconomic policies helped to support rapid economic recovery, at the expense of relatively less new debts. The macro leverage ratio stood at 272.5 percent at end-2021, a decline of 7.7 percentage points from the end of the last year. **Second**, efforts to defuse risks of high-risk institutions have yielded good results. Financial authorities continued to dissolve risks associated with the

① "Six stabilities" refer to achieving stability in employment, financial sector, foreign trade, foreign investment, domestic investment and expectations.

② "Six securities" refer to ensuring security in employment, basic living needs, operations of market entities, food and energy, stable industrial and supply chains and normal functioning of primary-level governments.

“Mingtian Group” and the HNA Group. The number of high-risk financial institutions continued to drop. According to the results of the Central Bank Rating of Financial Institutions in the second quarter of 2022, the number of high-risk financial institutions fell by nearly half compared to its peak, and the combined assets of the 366 high-risk institutions merely accounted for 1.55 percent of the total assets of all rated institutions. **Third**, overall arrangements have been made for rectification of the asset management businesses, with notable achievements as the transition period for the new rules on asset management expired at end-2021. As the size of conduit business declined by a large margin and the share of net value-based products went up significantly, the asset management sector developed in a healthy manner. Fourth, the financial order has been comprehensively straightened. All the P2P institutions have quit operations, and Internet finance has been brought under regulators’ purview. Resolute efforts were made to fight against market monopolies and disorderly expansion of capital, and place all types of financial activities under regulation according to the law. A serious crackdown has been conducted on trading and speculation of cryptocurrencies, illicit fund-raising and other illegal financial activities. Fifth, the financial market has functioned in a stable manner. Comprehensive reforms have been conducted in the capital market, including establishing the Beijing Stock Exchange, and conditions for full implementation of the registration-based IPO system were gradually ready. The legal foundations for the bond market have been strengthened, and irregularities have been forcefully cracked down on. Improvements have been made to the integrated foreign exchange market management framework that combines both macroprudential management and microprudential regulation, to effectively guard against risks related to cross-border capital flows. Sixth, institutional arrangements have been improved to forestall and defuse financial risks. At the local government level, party and government leaders have been held responsible for dissolving fiscal and financial risks, and the local coordination mechanism under the leadership of the FSDC Office has played a positive role in this regard. Guidelines on macroprudential policies were announced to improve the macroprudential policy framework. The list of D-SIBs has been released, and additional regulatory requirements for D-SIBs and the *Administrative Measures on the Total Loss-absorbing Capacity of Global Systemically Important Banks* have been promulgated, with a view to improving regulation and supervision on systemically important financial institutions. The rule on filing-based management of financial holding companies’ appointment of directors, supervisors and senior executives have been released, and applications for incorporation of financial holding companies were delt with according to the law. The regulatory framework for financial holding companies was improved. The deposit insurance mechanism has continued to improve, with its function of prompt corrective actions achieving good results. The law on financial stability is being drafted, and active efforts have been made to set up the financial stability guarantee fund. In general, active progress has been made to prevent and resolve financial risks in a well-targeted, preemptive and reform-driven manner, and to strengthen institutional building. Financial risks have been generally well contained and controllable, which has enabled stable and healthy development of the financial sector.

While acknowledging the achievements, we should be fully aware of the difficulties and challenges for economic and financial development. On the international front, due to the pandemic and geopolitical tensions, supply chains and international trade have experienced bottlenecks, and prices of commodities such as food and energy have fluctuated considerably. Record high inflation has prompted the major advanced economies to accelerate monetary tightening, whose spillover effects cannot be overlooked. Volatility of the global economic growth, financial markets and cross-border capital flows may increase. On the domestic front, China's economy is under the triple pressures of shrinking demand, disrupted supply and weakening expectations. Consumption has been slow to recover. There are more difficulties to maintain steady growth in exports. Structural inflationary pressure has increased. Sporadic Covid-19 cases have weighed on the economic stability. As regional economic disparities have become more acute, risks of small- and medium-sized financial institutions have become more concentrated in certain regions.

Going forward, the fundamentals of China's economy supporting a good momentum for steady and long-term growth have remained unchanged, the factors of production supporting high-quality development have been unaltered, and the features such as strong resilience, huge potential and vast territory have persisted. No matter what changes take place in the international landscape, we will focus on our own rightful priorities. The financial sector should follow the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for the New Era, implement the spirit of the 20th National Congress of the Communist Party of China, and steadfastly take the financial development path with Chinese characteristics. In the general principle of pursuing progress while ensuring stability, we will implement the new development philosophy in full, in the right way, and in all fields of endeavor, accelerate the creation of a new development pattern, deepen reforms and opening-up in all respects, pursue innovation-driven development, and promote high-quality development. Focusing on supply-side structural reforms, efforts will be made to coordinate pandemic control with social and economic development, coordinate development with security, and continue to advance the work in “six stabilities” and “six securities”, with a view to stabilizing the economy and keeping major economic indicators within a reasonable range. The sound monetary policy should beef up support for the real economy, focus more on stabilizing economic growth, give a bigger play to the dual role of monetary policy instruments in adjusting both the aggregate and the structure, and keep steady growth of the credit aggregates. The market-oriented interest rate formation and transmission mechanism will be improved to reduce the overall financing costs for enterprises, and push the financial system to make interest concessions to boost the real economy, in particular the key areas and weak links in the economy. Efforts will be made to strengthen and refine modern financial regulation by increasing regulatory synergy and strengthening institutional weaknesses. Corporate governance of small- and medium-sized banks will be enhanced by capital replenishment through various channels and accelerating disposal of non-performing assets. The capital market reform will be deepened, focusing on full implementation of the registration-based IPO system. The legal framework for the bond market will be further improved to forestall and defuse risks, and efforts will made to steadily advance higher-standard opening-up of the bond market. Risks of key institutions will be dissolved in a prudent and orderly manner in accordance with the fundamental principles of “maintaining overall stability, ensuring coordination, implementing category-based policies, and defusing risks through targeted efforts”. In this process, local governments, financial regulators and government agencies overseeing the concerned industries will be held accountable in line with their division of labor, and enterprises should shoulder the primary responsibility to bail in themselves. Efforts will be made to reinforce the systems that safeguard financial stability, by setting up the financial stability guarantee fund, and giving play to the deposit insurance system and the guarantee funds of various sectors to defuse risks in a market-oriented and law-based manner. Adopting a holistic view, bottom-line thinking and awareness of unexpected challenges, the financial sector will strengthen risk warning and mitigation as well as capacity building, create a stronger and more effective financial safety net, and stick to the bottom line that no systemic financial risks arise.

Abbreviations and Acronyms

ABC	Agricultural Bank of China
AMP	Asset management product
BCBS	Basel Committee on Banking Supervision
BIS	Bank for International Settlements
BOC	Bank of China
BSE	Beijing Stock Exchange
CAR	Capital adequacy ratio
CBIRC	China Banking and Insurance Regulatory Commission
CCB	China Construction Bank
CCP	Central Counterparty
CCyB	Countercyclical capital buffer
CDB	China Development Bank
CDR	Chinese Depository Receipt
CET1	Common Equity Tier 1
CFETS	China Foreign Exchange Trade System
CMG	Crisis management group
CPC	Communist Party of China
CPI	Consumer price index
CPMI	Committee on Payments and Market Infrastructures
CSDC	China Securities Depository and Clearing Corporation Limited
CSRC	China Securities Regulatory Commission
D-SIB	Domestic systemically important bank
DSTI	Debt-service-to-income
EBA	European Banking Authority
ECB	European Central Bank
EME	Emerging market economy
ESRB	European Systemic Risk Board
EU	European Union
FDIC	Federal Deposit Insurance Corporation

FMI	Financial market infrastructure
FOF	Fund of funds
FPC	Financial Policy Committee
FSB	Financial Stability Board
FSDC	Financial Stability and Development Committee
FSOC	Financial Stability Oversight Council
FX	Foreign exchange
GDP	Gross Domestic Product
GFC	Global Financial Crisis
G-SIB	Global systemically important bank
G-SIFI	Global systemically important financial institution
G-SII	Global systemically important insurer
IADI	International Association of Deposit Insurers
IAIS	International Association of Insurance Supervisors
ICBC	Industrial and Commercial Bank of China
IFRS	International Financial Reporting Standards
IIF	Institute of International Finance
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
IPO	Initial public offering
ISSB	International Sustainability Standards Board
LCR	Liquidity Coverage Ratio
LEI	Legal Entity Identifier
LPR	Loan prime rate
LTV	Loan-to-value
MMF	Money market fund
MOF	Ministry of Finance
MPA	Macroprudential Assessment
MSME	Micro-, small- and medium-sized enterprise
NBFI	Non-bank financial intermediation
NBS	National Bureau of Statistics
NDRC	National Development and Reform Commission
NEEQ	National Equities Exchange and Quotations
NGFS	Central Banks and Supervisors Network for Greening the Financial Systerm
NPA	Non-performing asset
NPL	Non-performing loan
NSFR	Net Stable Funding Ratio

OLF	Orderly Liquidation Fund
OTC	Over the counter
P/E	Price-to-earnings
PBC	People's Bank of China
PCA	Prompt corrective action
PPI	Producer price index
QDII	Qualified Domestic Institutional Investors
QFII	Qualified Foreign Institutional Investors
RAP	Resolvability assessment process
RMB	Renminbi
ROA	Return on assets
ROE	Return on equity
ROI	Return on investment
RQFII	RMB Qualified Foreign Institutional Investors
RWA	Risk-weighted asset
SAFE	State Administration of Foreign Exchange
SASAC	State-owned Assets Supervision and Administration Commission of the State Council
Shibor	Shanghai Interbank Offered Rate
SIFI	Systemically Important Financial Institution
SME	Small- and medium-sized enterprise
SPV	Special purpose vehicle
SSB	Standard setting body
STAR	Sci-Tech Innovation Board
SyRB	Systemic risk buffer
TLAC	Total Loss-absorbing Capacity
U.S.	United States
UK	United Kingdom
USD	U.S. Dollar
WMP	Wealth management product
y-o-y	year-on-year

CONTENTS

Chapter I

Macroeconomic Performance

In 2021, facing a complex and challenging development environment both at home and abroad, as well as many risks and challenges, China responded to Covid-19 and pursued economic and social development in a well-coordinated way, and accomplished major goals and tasks set for the year, creating a good beginning for the 14th Five-Year Plan period. However, the Covid-19 is still lingering on in the world, the global economic recovery is sluggish, and commodity prices remain elevated and volatile, making the external environment even more complex, grave and uncertain. China is under the triple pressures of shrinking demand, disrupted supply and weakening expectations. Going forward, the financial system will continue to follow the general principle of pursuing progress while ensuring stability, implement the new development philosophy in full, in the right way, and in all fields of endeavor, accelerate the creation of a new development pattern, and comprehensively deepen reforms and opening-up in all respects. It will pursue innovation-driven and high-quality development, focus on supply-side structural reforms, coordinate Covid-19 response and social and economic development, and coordinate development with security. The financial system will continue to advance the work in "six stabilities" and "six securities", with a view to stabilizing the macro economy and keeping economic performance in a reasonable range, and maintaining social stability.

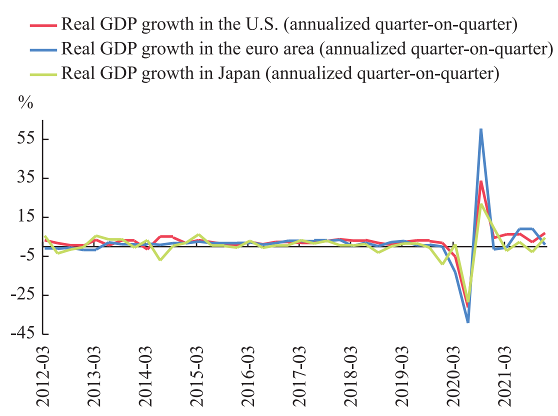
I. International Macroeconomic and Financial Developments

In 2021, the external environment was more complex, grave and uncertain. The global economic recovery slowed down, supply chain bottlenecks remained a thorny issue, inflationary pressures increased, and global financial markets became more volatile.

1. Economic Developments in Major Economies

The global economic recovery slowed down. In 2021, the global economic recovery was unstable. It moved in tandem with the development of Covid-19, losing momentum significantly in the second half-year. The annualized quarter-on-quarter GDP growth in the U.S. fell from 6.7 percent in the second quarter to 2.3 percent in the third quarter, posting 6.9 percent in the fourth quarter. The annualized quarter-on-quarter GDP growth in the euro area slid from 9.4 percent in the third quarter to 1.2 percent in the fourth quarter, while that in Japan dropped from 2.4 percent in the second quarter to -2.8 percent in the third quarter, registering 4.6 percent in the fourth quarter (Figure 1.1). For the whole year, the GDP in the U.S., the euro area and Japan increased by 5.7 percent, 5.3 percent and 1.7 percent respectively year on year.

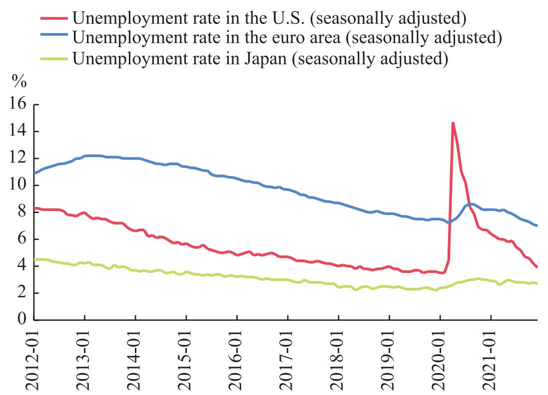
Figure 1.1 Growth Rates of Major Economies



Source: Wind.

Job market witnessed a labor shortage. In 2021, the unemployment rates in major advanced economies moved closer to pre-Covid-19 levels. In December, the unemployment rates in the U.S., the euro area and Japan dropped to 3.9 percent, 7.0 percent and 2.7 percent respectively (Figure 1.2). However, the labor participation ratio recovered slowly, resulting in an acute labor shortage and a widening labor gap.

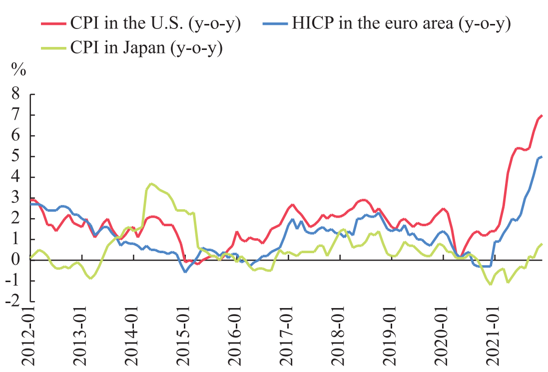
Figure 1.2 Unemployment Rates of Major Economies



Source: Wind.

Inflationary pressures continued to rise. In December 2021, the CPI in the U.S. rose by 7 percent year on year, a record high since 1982. Price indices in the euro area and Japan increased by 5.0 percent and 0.8 percent respectively (Figure 1.3). Inflationary pressures also remained high in some emerging market economies. In December, price indices jumped 10.1 percent and 8.4 percent year on year in Brazil and Russia respectively.

Figure 1.3 Price Indices of Major Economies

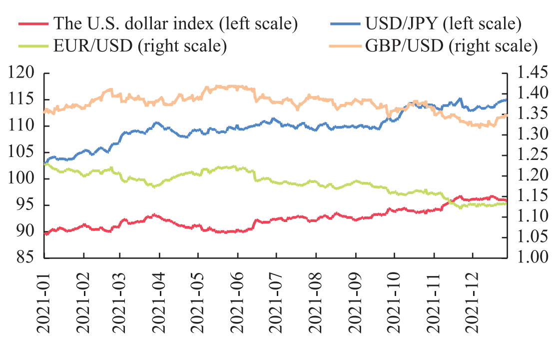


Source: Wind.

2. Volatility Increased in Global Financial Markets

The U.S. dollar index increased, while other major currencies depreciated. In 2021, the U.S. dollar index jumped to 96 at end-December from 90 at the beginning of the year, while the euro, the Japanese yen and the British pound depreciated against the dollar by 7.5 percent, 10.4 percent and 1.2 percent respectively (Figure 1.4). On the one hand, a stronger dollar is a result of monetary policy tightening in the U.S., which made dollar assets more attractive, as market participants anticipated higher interest rates in the U.S.. On the other hand, a stronger dollar also reflected rising uncertainties about global economic outlook, which triggered flight to safety.

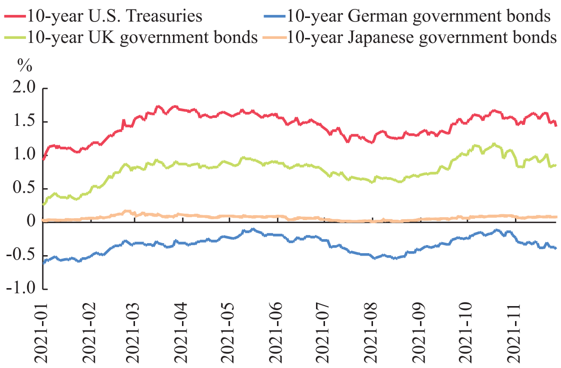
Figure 1.4 Exchange Rates of Major Currencies



Source: Wind.

The yields on government bonds in major advanced economies fluctuated upwards. In 2021, the yields on government bonds in major advanced economies jumped on two occasions. In the first quarter, investors increased holdings of cyclical risk assets and reduced government bonds and other safe assets, which pushed up the yields on government bonds. In the fourth quarter, as major advanced economies started to tighten monetary policy, market participants expected interest rates to rise, pushing up the yields on longer-term government bonds. As of end-2021, the yields on 10-year government bonds in the U.S., Germany, the UK and Japan went up by 59, 37, 72 and 5 basis points respectively compared with end-2020 (Figure 1.5).

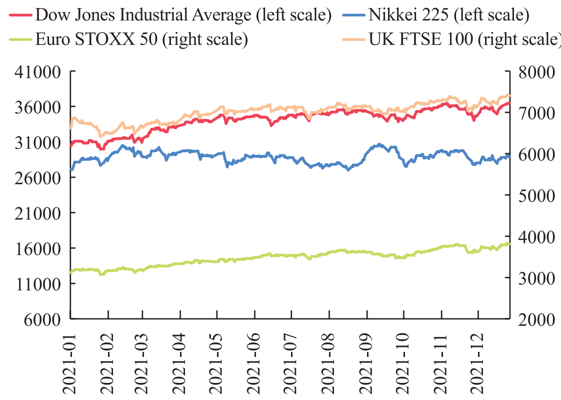
Figure 1.5 Yields on Government Bonds in Major Advanced Economies



Source: Wind.

Global stock markets went up, but volatility increased. In 2021, the stock markets in major advanced economies saw gains in general, but market volatility increased due to factors such as resurgence of Covid-19, weaker economic growth momentum and higher-than-expected inflation (Figure 1.6). The U.S. stock market saw three rounds of corrections of 4.2 percent, 4.5 percent and 6.6 percent respectively in June, September and November.

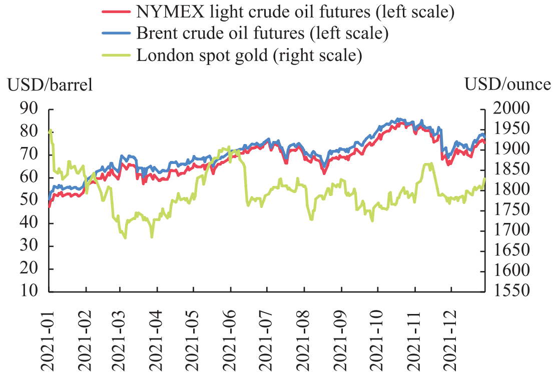
Figure 1.6 Movements of Major Indices



Source: Wind.

Commodity prices increased on several occasions. In 2021, global commodity prices experienced three hikes, starting with the rise of oil price from early February to early March. The second occasion, which was from early April to mid-May, featured a broad-based rise in metal prices. In particular, the price of black metals such as iron ore rose the most, followed by copper, aluminum and other non-ferrous metals. Thermal coal, coking coal, coke, soybeans, corns and other commodity prices also increased. From late September to mid-October, energy prices retook the lead in commodity price hike. Crude oil and gas prices increased the most, and the prices of other commodities such as thermal coal, copper, aluminum and cotton also rose notably. In 2021, the price of London Brent crude oil futures and NYMEX light crude oil futures jumped 53.82 percent and 59.35 percent respectively. The London spot gold price dropped 5.84 percent (Figure 1.7).

Figure 1.7 Movements of International Gold and Crude Oil Prices



Source: Wind.

3. Risks and Challenges

According to the IMF's forecast in October 2022, the global economy was projected to grow 3.2 percent in 2022, the same as its projection in July, and grow 2.7 percent in 2023, 0.2 percentage point lower compared with its July forecast. In particular, the advanced economies were projected to grow 2.4 percent and 1.1 percent respectively in 2022 and 2023, while the emerging market and developing economies to grow 3.7 percent for both of the two years. Looking ahead, the global economy may face the following risks and challenges.

Covid-19 and geopolitical risks are the major factors that may undermine global economic recovery. As new variants keep emerging, the Covid-19 situation is still uncertain. The resurgence of Covid-19 and geopolitical risks will slow down economic recovery by weighing on the recovery of production and supply capacity. This may further aggravate global economic divergence.

How long the high inflation will persist is uncertain, and this poses a challenge to monetary policy adjustments. Global inflation continues to rise, driven by a number of factors, including supply chain disruptions induced by Covid-19, the wage-price spiral caused by labor shortage, soaring commodity prices and earlier massive policy stimulus by advanced economies. Inflationary pressures in advanced economies are considerably higher than expected, which has already prompted a change in monetary policy stance. As monetary policy needs to strike a balance between containing inflation and supporting economic recovery, central banks may find policy adjustments harder.

Potential financial risks have increased. Asset prices in advanced economies have increased rapidly since the outbreak of Covid-19. The U.S. major stock market indices hit new highs, and the Case-Shiller Home Price Index, which tracks house prices in the U.S., once grew by more than 20 percent year on year, the fastest growth in nearly 20 years. Going forward, Covid-19 situation, progress in economic recovery, changes in inflation and geopolitical relations all could change market sentiments, leading to sharp swings in financial markets and asset prices. The debt burden on non-financial corporates in some economies remains high. Enterprise balance sheets are not fully repaired. For sectors and small- and medium-sized enterprises hit hardest by Covid-19, the short-term solvency risk and liquidity risk are high. In addition, as major advanced economies are tightening monetary policy, capital flows may be reversed easily and become more volatile, posing a grim challenge to emerging market economies.

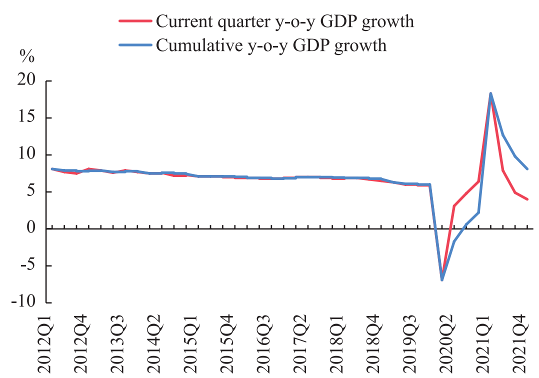
II. Domestic Macroeconomic Performance

In 2021, facing grim situations abroad and heavy tasks of pursuing reform, development and stability at home, China calmly coped with changes and a pandemic both unseen in a century. The economic development and Covid-19 response in China both delivered larger positive outcomes relative to other economies. China made new strides in the creation of a new development pattern, witnessed new achievements in high-quality development, improved the resilience of industrial chain and sharpened its edges, deepened reforms and opening-up, and ensured people's wellbeing through strong and effective policy support. All these have created an enabling environment for getting the 14th Five-Year Plan off to a good start.

1. Economic Growth Continued to Recover and the Development of Industries Appeared Resilient

In 2021, China's GDP registered RMB114.92 trillion, increasing by 8.4 percent year on year based on comparable prices. The year-on-year growth rate for each quarter was 18.3 percent, 7.9 percent, 4.9 percent and 4.0 percent respectively (Figure 1.8). Breakdown by industry shows that the added value of the primary industry added 7.1 percent over a year earlier to RMB 8.32 trillion, that of the secondary industry gained 8.7 percent over the prior year to RMB 45.15 trillion, and that of the tertiary industry was up by 8.5 percent from 2020 to RMB 61.45 trillion. When compared with 2020, the added value of the primary industry as a share of GDP dipped 0.5 percentage point to 7.2 percent, that of the secondary industry increased by 1.5 percentage points to 39.3 percent, and that of the tertiary industry dropped by 1.0 percentage points to 53.5 percent.

Figure 1.8 China's Economic Growth

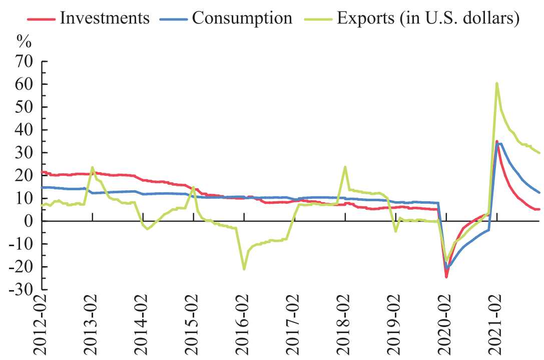


Source: The NBS.

2. Consumption Became the Main Driver of Growth, and the Balance of Payments was at an Equilibrium Level

In 2021, fixed asset investment (excluding those by rural households) stood at RMB 54.45 trillion, rising by 4.9 percent year on year, up 2.0 percentage points from 2020. Total retail sales of consumer goods reached RMB 44.08 trillion, jumping 12.5 percent from 2020, 16.4 percentage points higher than the growth in 2020. Exports and imports of goods totaled RMB 39.10 trillion, rising by 21.4 percent year on year, up 19.4 percentage points compared with the growth rate in 2020. In particular, exports surged 21.2 percent over the previous year to RMB 21.73 trillion, while imports jumped 21.5 percent from the prior year to RMB 17.37 trillion. The whole year ran a trade surplus of RMB 4.37 trillion (Figure 1.9). The demand structure improved, as domestic demand became the major driver of stable growth. In 2021, the contribution of final consumption expenditure to the GDP was 65.4 percent, adding 72.2 percentage points over the previous year, while that of gross capital formation slid 67.8 percentage points to 13.7 percent, and that of net exports of goods and services dropped 4.4 percentage points to 20.9 percent.

Figure 1.9 Cumulative Changes of the Three Major Demands



Sources: The NBS and the General Administration of Customs.

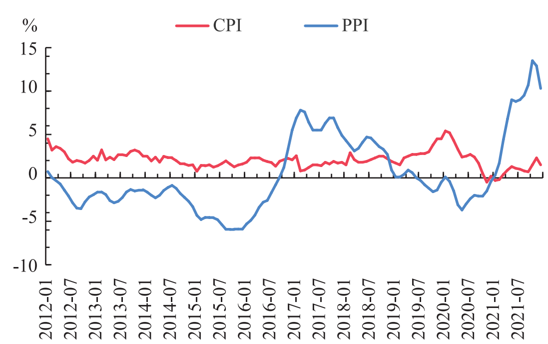
In 2021, China ran a current account surplus of USD 317.3 billion or 1.8 percent of GDP, up 0.1 percentage point compared with the prior year. The capital and financial account had a deficit of USD 149.9 billion. In particular, non-reserve financial account ran a surplus of USD 38.2 billion, and reserve assets increased by USD 188.2 billion. At the end of 2021, China's foreign exchange reserves posted USD 3.25 trillion, adding 1.0 percent or USD 33.6 billion over the end of 2020.

3. The CPI Increased Moderately, While the PPI Rose Fast

In 2021, the CPI rose 0.9 percent year on year, down 1.6 percentage points compared with 2020. During the four quarters, it increased 0 percent, 1.1 percent, 0.8 percent and 1.8 percent respectively year on year. In particular, food prices fell by 1.4 percent, down 12 percentage points from that of 2020, while non-food prices went up 1.4 percent, 1.0 percentage point higher compared with 2020. Consumer goods prices edged up 0.9 percent, losing 2.7 percentage points from that of 2020, whereas services prices gained 0.9 percent, up 0.3 percentage point from that of 2020.

In 2021, the PPI was up by 8.1 percent year on year, 9.9 percentage points higher than that of 2020. During the four quarters, it went up 2.1 percent, 8.2 percent, 9.7 percent and 12.2 percent respectively year on year (Figure 1.10). In particular, producer prices for consumer goods ticked up 0.4 percent, falling 0.1 percentage point from that in 2020, while producer prices for means of production jumped 10.7 percent, 13.4 percentage points higher than the growth in 2020. The Purchasing Price Index of Raw Materials, Fuel and Power (PPIRM) was up by 11.0 percent, 13.3 percentage points higher than that of 2020. It increased by 2.8 percent, 11.5 percent, 13.7 percent and 16.2 percent respectively year on year during the four consecutive quarters.

Figure 1.10 Monthly Movements of Major Price Indices



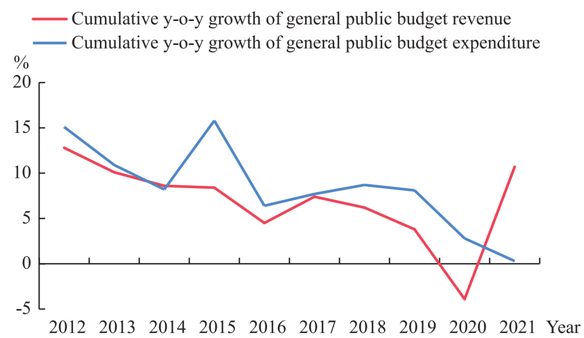
Source: The NBS.

4. Growth of Fiscal Revenue Recovered, and Spending in Key Areas was Guaranteed

In 2021, the national general public budget revenue rose by 10.7 percent year on year to RMB 20.25 trillion, 14.6 percentage points higher than the growth in 2020. By breakdown, the central government general public budget revenue added 10.5 percent compared with the prior year to RMB 9.15 trillion, accounting for 45.2 percent of the national general public budget revenue. The local government general public budget revenue jumped 10.9 percent from 2020 to RMB 11.1 trillion, taking up 54.8 percent of the national total. Breakdown by revenue structure shows that tax revenues advanced 11.9 percent year on year to RMB 17.27 trillion, representing 85.3 percent of the national general public budget revenue, while non-tax revenues went up 4.2 percent from the previous year to RMB 2.98 trillion, comprising 14.7 percent of the national total.

The national general public budget expenditure registered RMB 24.63 trillion in 2021, up 0.3 percent year on year, which guaranteed spending in key areas, such as Covid-19 response, scientific and technological innovation, basic well-being of the people, and ecological and environmental protection. By breakdown, the central government general public budget expenditure dipped 0.1 percent year on year, posting RMB 3.50 trillion, while the local government general public budget expenditure increased by 0.3 percent year on year to RMB 21.13 trillion (Figure 1.11).

Figure 1.11 Growth of Fiscal Revenue and Expenditure



Source: The MOF.

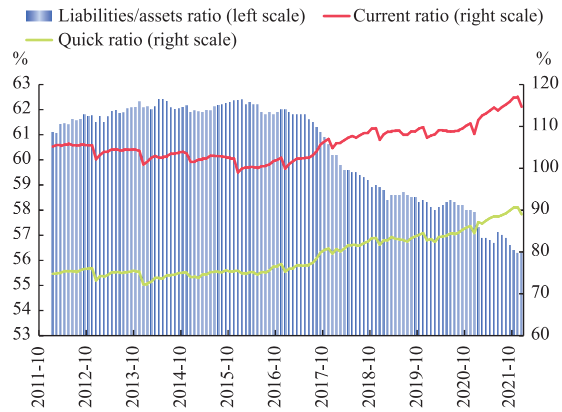
5. Profits of Industrial Enterprises Increased

In 2021, the main business revenues of industrial enterprises above designated size jumped 19.4 percent year on year to RMB 127.9 trillion, while the main business costs went up 19.1 percent compared with 2020 to RMB 107.1 trillion, achieving a total profit of RMB 8.71 trillion, surging 34.3 percent compared with 2020. The main business profit margin was 6.81 percent, up 0.76 percentage point[①]. Among the 41 industrial categories, 32 made more profits than in the previous year, whereas 9 industries witnessed declines in gross profits.

① According to the NBS, the above data are calculated on a comparable basis, taking into consideration adjustment in statistical coverage, improved statistical survey, deletion of overlapping data and other factors.

According to the survey of 5000 industrial enterprises conducted by the PBC, the business operation of industrial enterprises was improved in general. In terms of profits, the main business revenues and total profits of sample enterprises both maintained rapid growth. The main business revenues of 5000 industrial enterprises jumped 15.3 percent year on year in 2021, 15.7 percentage points higher than that of 2020[①]. The two-year average growth was 7.2 percent, up 4.0 percentage points compared with 2019. Total profits soared 39.6 percent from a year earlier, 37.1 percentage points higher than the growth in 2020. The two-year average growth was 19.6 percent, up 26.6 percentage points compared with 2019. In terms of asset turnover, the inventory turnover ratio and the total asset turnover ratio of sample enterprises climbed compared with 2020, increasing by 0.4 and 0.1 respectively to 6.0 and 0.8. The operating cycle was shortened by 8.6 days compared with a year earlier to 117.7 days. The solvency improved, as the liabilities/assets ratio of sample enterprises dropped by 1.6 percentage points from end-2020 to 56.3 percent at end-2021. The current ratio and quick ratio were 114.7 percent and 89.0 percent respectively, adding 6.5 percentage points and 14.5 percentage points compared with end-2020 (Figure 1.12). The interest coverage multiplier was 8.7 times, up 2.7 times compared with end-2020.

Figure 1.12 Liabilities/Assets Ratio, Current Ratio and Quick Ratio of 5000 Industrial Enterprises



Source: The PBC.

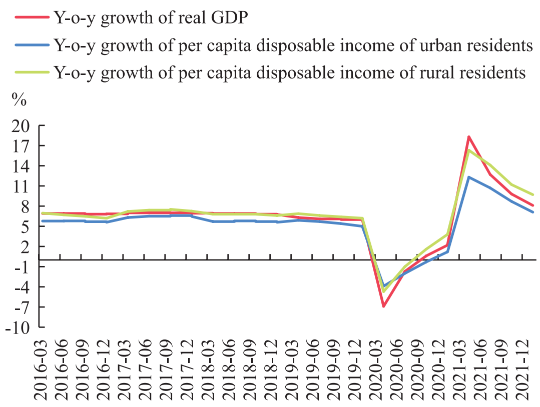
6. Employment Remained Stable and Income Disparity Between Urban and Rural Residents Further Narrowed

In 2021, 12.69 million new jobs were created in urban areas, a year-on-year gain of 0.83 million. The national surveyed urban unemployment rate was 5.1 percent at end-2021, down by 0.1 percentage point compared with end-2020. The per capita disposal income was RMB 35128, growing by 8.1 percent year on year after being adjusted for inflation, 6.0 percentage points higher than that of 2020. By breakdown, the per capita disposal income of urban residents was RMB 47412, an increase of 7.1 percent in real terms, while that of rural residents was RMB 18931, a gain of 9.7 percent in real terms (Figure 1.13). The urban-to-rural per capita disposal income ratio was 2.50, narrowing by 0.06

① Due to adjustment of sample enterprises, updates of financial data and other reasons, the data as of the end of 2020 are the latest and adjusted data, which may have some discrepancies if compared with data disclosed in last year's report.

compared with 2020.

Figure 1.13 Growth of Per Capita Disposable Income of Urban and Rural Residents and GDP



Source: The NBS.

III. Outlook

In 2022, the financial sector will continue to follow the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, and stick to the general principle of pursuing progress while ensuring stability. It will ground work in this new stage of development, implement the new development philosophy in full, in the right way and in all fields of endeavor, and expedite the creation of a new development pattern. It will deepen reforms and opening-up in all respects, pursue innovation-driven and high-quality development by centering on supply-side structural reforms. Efforts will be made to coordinate Covid-19 response and economic and social development, and coordinate development with security. The financial sector will continue to advance the work in "six stabilities" and "six securities", with a view to improving people's wellbeing, and stabilizing the macro economy to keep major economic indicators within an appropriate range.

China will continue to adopt sound and effective macroeconomic policies. The proactive fiscal policy and sound monetary policy will remain in place so as to keep policy continuity and improve policy effectiveness. The proactive fiscal policy should become more effectual, more targeted and more sustainable. The government will ensure the size of fiscal spending, expedite spending, and implement new tax cuts and fee reductions, with stronger support for such areas as micro-, small- and medium-sized enterprises (MSMEs), self-employed businesses, manufacturing and risk mitigation. Infrastructure investment will be front-loaded moderately. New implicit local government debt will be strictly curbed. The sound monetary policy should be both flexible and appropriate, with reasonably ample liquiditybeing maintained. Efforts will be made to tap the dual role of monetary policy instruments in adjusting both the aggregate and the structure to provide stronger support for the real economy, and to guide financial institutions to beef up support for the real economy, in particular small and micro businesses, scientific and technological innovation, and green development. The fiscal policy and monetary policy should work in tandem, and intertemporal adjustments should be combined with countercyclical adjustments. Some policies need to be front-loaded approriately and policy tools in reserve should be used in time to ensure steady economic performance.

Efforts will be continued to step up effective financial support for the real economy. The PBC will guide financial institutions to accurately understand credit policies and continue financing support for industries and enterprises hit hard by Covid-19, so as to prevent industry-wide lending restrictions, forced early repayment of loans, and arbitrary termination of loan agreements. Financial institutions will be encouraged to lower real lending rates and cut fees, so as to truly make it easier for market entities to access financing and achieve a considerable drop in overall financing costs. The PBC will work to make good use of policy finance and development finance. Efforts will be made to strengthen the capacity building for MSME financial services, improve the availability of supply chain financing to MSMEs, and improve supporting mechanism for MSME financing. The PBC will continue to consolidate and scale up poverty alleviation achievements, provide financial support to such fields as new types of agribusiness and the building of agricultural and rural infrastructures, and guide financial institutions to innovate tailored financial products and services to better meet the diversified financing needs of agro-related areas.

Efforts will be made to deepen financial reforms and speed up the institution building of the financial market. The PBC will focus on strengthening corporate governance, deepen the reform of large commercial banks, and put in place a modern financial corporation system with Chinese characteristics. The reform of development and policy financial institutions will continue so as to better serve the real economy and national strategies. The reform of rural credit cooperatives will gain speed, which will help improve the governance mechanism of rural credit cooperative unions at provincial (autonomous region) level to mitigate risks. Efforts will be made to deepen the capital market reform by focusing on fully implementing registration-based IPO system and protect the legal rights and interests of investors. The PBC will optimize the management framework for financial bond issuance, enhance information disclosure requirements and the regulation of intermediaries, implement outcomes of the development of the default resolution mechanism, and steadily promote higher-level bond market opening-up. The PBC will deepen the market-based exchange rate reform to make RMB exchange rate more flexible and keep it basically stable at an adaptive and equilibrium level. It will appropriately exercise prudential management of real estate finance to better meet the reasonable needs of homebuyers and to promote the healthy development of the real estate sector to foster a virtuous cycle. The PBC will provide strong, well-sequenced and effective support for green and low-carbon transition in economic and social development through promoting green finance. It will develop a standard system for green finance and transition finance, improve incentives and constraints, develop diversified financial instruments, and continue to deepen local pilot programs of and international cooperation on green finance.

Measures should be taken to improve the prevention, early warning, resolution and accountability systems for financial risks, and develop a long-term mechanism for preventing and mitigating financial risks. The PBC will further improve the macroprudential policy framework and governance mechanism, strengthen the regulation of systemically important financial institutions and financial holding companies, and enhance its capacity of monitoring, assessing and providing early warning of systemic risks. Efforts will be made to strengthen and refine modern financial regulation by increasing regulatory synergy and strengthening institutional weaknesses. Focusing on both regulation and development, the PBC will strengthen the regulation of capital and platform enterprises in accordance with the law, complete the special effort to rectify problems in large platform enterprises, and exercise regular regulation. The PBC will handle the risk resolution of key institutions in a prudent and orderly manner and firmly prevent all kinds of risks from resurfacing. It will ensure that responsibilities are fulfilled by all parties, and establish and refine the fiscal and financial risk resolution mechanism that falls into the remit of leading local Party and government officials so as to foster synergy in risk resolution. The PBC will further tap the role of deposit insurance as a market-based resolution platform, explore risk resolution in line with market principles and the rule of law, and support small- and medium-sized banks to mitigate risks and replenish capital. The financial stability guarantee fund to be set up will act as a backstop for resolving major financial risks. Efforts will be made to improve the accountability mechanism for financial risks so as to hold to account those responsible for major financial risks and effectively prevent moral hazards.

Special Topic 1 International Comparison and Analysis of Macro Leverage Ratio

The macro leverage ratio, a key gauge of country indebtedness, can provide important policy inputs for financial risk mitigation and financial stability efforts. In China, the increases in the macro leverage level have been stable since 2017, with an average annual growth of about 4.8 percentage points, 8.6 percentage points lower than the average growth from 2012 to 2016. If we look at the breakdown, it stayed at around 253 percent from 2017 to 2019, a preliminary progress in meeting the goal of stabilizing leverage; and then temporarily rose to 280.2 percent in response to the COVID-19 outbreak in 2020 before falling to 272.5 percent in 2021, making its increase still within a controllable range overall.

I. The Increase in China's Macro Leverage Ratio Since the Outbreak of the COVID-19 Pandemic was Manageable

Major economies have witnessed a rapid rise in their macro leverage ratios. According to the latest BIS statistics, the aggregate macro leverage ratio of all 43 reporting economies was 18.3 percentage points higher at end-2021 than that at end-2019, registering the biggest increase since 2010.

Global debt soared to a new record high, posing acute sovereign debt risks. According to the IIF, global debt hit an all-time high of USD 303 trillion in 2021. Default risk has increased in some developing economies, as limited capacity for COVID-19 pandemic containment, insufficient macro policy space and other factors weigh on their economic recovery. At end-2021, the average macro leverage ratio of developing economies was up by 24.8 percentage points compared with 2019, 9.3 percentage points higher than the increase in advanced economies. The global debt risk may rise in 2022 amid divergent counter-pandemic policy capacities, economic recovery paces and macro policy orientations. In particular, sovereign debt risk may be more exposed in some developing economies, as their debt burden and capital outflow pressure grow. This constitutes one of the major risk sources that undermines global financial stability and economic growth.

The increase in China's macro leverage ratio is manageable relative to that in major economies. According to BIS statistics, the macro leverage ratio in the U.S. (280.8 percent), Japan (419.9 percent) and the euro area (279.4 percent) at end-2021 rose 25.7, 39.5 and 21.4 percentage points respectively over end-2019. China's macro leverage ratio was 272.5 percent at end-2021, up by 16.5 percentage points compared with end-2019, which was 9.2, 23.0 and 4.9 percentage points lower than that in the U.S., Japan and the euro area respectively. This shows that China has witnessed fast economic recovery without incurring much new debt since the outbreak of the pandemic, and that the increase in its macro leverage ratio is relatively modest.

II. Analysis of Factors Contributing to a Manageable Rise in Macro Leverage Ratio

Notable progress in pandemic containment and sustained economic recovery are the main contributors to a stabilizing macro leverage ratio. The pace of the nominal GDP growth, as the denominator for the macro leverage ratio, has a bearing on leverage ratio changes. China's economy slowed down under the impact of the pandemic in 2020, which led to a temporary rise in the macro leverage ratio of 14.1, 7.4 and 4.1 percentage points for the first three quarters of 2020. However, as China became the first economy to bring the pandemic under control, to resume work and production and to post a positive growth, the Chinese economy grew more resilient, thereby contributing to the stabilization of leverage ratios. In 2021, the nominal GDP in China grew by 12.8 percent y-o-y, 10.1 percentage points higher than that in 2020, outpacing other major economies. As a result, the macro leverage ratio fell for five quarters in a row, dipping 1.4, 2.1, 2.2, 0.7 and 2.7 percentage points respectively from the fourth quarter of 2020 to the fourth quarter of 2021.

Macro policies stabilized economic performance with a manageable increase in debt. The PBC responded in time to the pandemic by making the prudent monetary policy more flexible, appropriate and targeted. In 2020, it rolled out over RMB 9 trillion yuan worth of monetary support measures, and encouraged financial institutions to waive profits of RMB 1.5 trillion yuan in favor of the real economy. The real sector increasingly felt the benefit. The fiscal policy was more proactive and effective in introducing a massive relief package to offset the impact of the pandemic. In the meantime, the PBC adhered to a normal monetary policy and refrained from flooding the market with an overdose of liquidity, and the monetary policy shifted to a normal stance after May 2020. Since 2021, the PBC has kept monetary policy preemptive, consistent and stable, and strengthened cross-cycle policy adjustments, so as to underpin economic recovery. Thanks to this, the debt of China's non-financial sector grew in a restrained and controllable manner. In 2021, it rose by 9.7 percent y-o-y, a relatively low rate on record. It was 2.7 percentage points lower compared with end-2020 and about 7.3 percentage points lower than the average total debt growth from 2009 to 2019.

Overall, well-coordinated macro policies and policy synergy stabilized the economy. The monetary policy keeps focusing on serving the real economy through stable monetary supply and credit growth. The LPR reform contributes to a notable drop in the financing costs of enterprises. The PBC adopted both interest rate-based and structural monetary policy tools, and took a tiered approach when rolling out financial support policies with a focus on making policies more targeted and direct. The government has also improved the quality, efficiency and sustainability of its fiscal policy. In addition, the campaign to defuse financial risks in the past few years has rectified the trend to direct funding resources into the financial system instead of the real economy and to use fund for aggressive expansion; financial reform has been carried out steadily, and financial services improved in both quality and efficiency. All these measures have increased the efficiency of financial support for the real economy, creating an enabling environment for China to support fast economic recovery without incurring much debt since the outbreak of the pandemic.

III. The Structure of Leverage Continued to Improve

1. The Leverage Ratio of the Corporate Sector Remained Basically Stable as Corporate Financing was Increasingly Regulated

In recent years, while continuously receiving financing support, the corporate sector has seen a stable leverage ratio level with an continuously optimizing structure. From 2017 to 2019, as the leverage stabilization policy was carried out in an orderly manner, the leverage ratio of the corporate sector saw a net drop for two consecutive years and stayed at around 152.2 percent. It then temporarily rose to 161.7 percent after the outbreak of the pandemic before falling to 153.7 percent in 2021. In the meantime, the debt structure of the corporate sector continued to optimize. First, the size of loans and bonds continued to grow, which effectively met the financing needs of the real economy. At end-2021, corporate loans and bonds combined accounted for 86.8 percent of the total debt of the corporate sector, up by 9.2 percentage points over end-2016. Second, off-balance sheet debt continued to dwindle, which reduced potential risks and created room for new debt. At end-2021, the ratio of corporate off-balance sheet debt (such as trust loans and entrusted loans) to GDP was 19.3 percentage points lower than that in 2016.

2. China's Government Debt Ratio was Lower Relative to Major Economies Despite Strong Policy Response to the Pandemic

In recent years, China has kept on regulating the debt financing activities by local governments. From 2015 to 2019, government debt ratio remained overall stable. From 2020 to 2021, China increased government debt as necessary while strictly controlling public debt risk. This enabled strong fiscal support for the pandemic relief measures, and played a key role in stabilizing the economy and keeping growth within a reasonable range. In 2021, China's government debt ratio was 47 percent, lower than the internationally-recommended warning threshold of 60 percent, and significantly lower than that in other major economies, such as the U.S., the UK, France and Japan, and some emerging market economies.

3. The Increase in Leverage Ratio of the Household Sector was Stable and Its Debt Structure Continued to Optimize

In recent years, the increase in the leverage ratio of China's household sector has stabilized, with a net drop in 2021. From 2008 to 2020, the leverage ratio of the household sector increased from 18.2 percent to 72.6 percent, an annualized increase of 4.5 percentage points with little y-o-y fluctuations. In 2021, it dropped by 0.4 percentage point, the first net drop since 2009.

Debt structure of household sector continued to optimize. First, the policy-supported inclusive business loans for individuals and MSEs grew rapidly, which has guaranteed and improved people's livelihood. Since the outbreak of the pandemic, macro policy adjustments focused on protecting market entities, those self-employed businesses and MSEs in particular, by rolling out direct policy support to stabilize their business and secure employment. The growth of personal business loans climbed from 12.5 percent in 2019 to over 19 percent in 2020 and 2021. Second, the growth of housing loans has decelerated overall. Since the first quarter of 2018, the growth of housing loans has gradually slowed down. In 2021, housing loans rose by 10.9 percent y-o-y, down by 3.0 percentage points from the previous year and 1.3 percentage points lower than the overall growth of household debt in the same period.

Special Topic 2 Promoting Enterprises' Exchange Rate Risk Management

Promoting exchange rate risk management by enterprises is an important measure to advance stability on the six fronts and security in the six areas, especially to keep foreign trade stable and to ensure operation of market entities. It is also a basis for furthering the market-oriented formation mechanism of RMB exchange rate. In recent years, the PBC and the SAFE, in accordance with the decisions of the CPC Central Committee and the State Council, have focused its work on advancing growth and deepening reform and open-up of the domestic foreign exchange market, so that the market can better support the adoption of the new development pattern and business operation of the micro, small and medium-sized enterprises (MSMEs); meanwhile, authorities have carried out the campaign on the exchange rate risk neutrality concept, improved the cost-sharing mechanism for exchange rate risk, and increased FX market stability by encouraging better exchange rate risk management capability on the part of enterprises.

I. Enterprises' Governance of Exchange Rate Risk Matters for FX Market Stability and Growth

Exchange rate risk management has implications not only on enterprises' business operation, but also on the stability of foreign exchange market. At the micro level, international trade and financial activities may bring earnings or losses to the balance sheets of foreign-related enterprises as a result of exchange rate fluctuations, reflected in changes in foreign currency-denominated assets or liabilities, such as payments and receipts. These risk exposures, if not properly managed, could exacerbate volatility in profits and damage sound business operation in the long-term, even causing material operational risks. At the macro level, enterprises with weak risk management capability tend to view exchange rate risk as a heavy concern, and lose their bottom-line control once exchange rate moves against their benefit during the accounting period. These together would trigger pro-cyclical activities, in which enterprises buy winners and sell losers, and further magnify unilateral fluctuations in the FX market, causing instability.

Effective management of FX risks is recommended by sound operation practices of enterprises home and abroad, and required by the needs to deepen reform. Since 1994, the RMB exchange rate formation mechanism has been continuously improved, and a managed floating exchange rate system based on market supply and demand and adjusted with a reference to a basket of currencies has gradually taken shape. China's economic fundamentals stay positive and will remain so in the period to come, enabling the RMB exchange rate to be overall stable on the equilibrium basis. As market supply and demand play a decisive role in the formation of the RMB exchange rate, domestic and foreign macroeconomic trends and changes in market expectation become important factors affecting the short-term trend of the RMB exchange rate. The two-way fluctuations and increased elasticity of RMB exchange rate have become a normal. This puts forward higher requirements for participants in the FX market, and it is no longer a long-term strategy to excessively rely on the prediction of exchange rate fluctuations, instead of good exchange rate risk management. To view exchange rate fluctuations dynamically, establish the concept of exchange rate risk neutrality and scientifically use exchange rate hedging tools to effectively manage FX exposures are important to ensure that foreign-related enterprises focus on primary business and maintain sound operation.

II. FX Market is in a Constantly Improving Condition to Support Enterprises' Exchange Rate Risk Management

In 2021, the FX market in China registered a trading volume of USD 36.9 trillion, an increase of nearly 27 times compared with that of 2005. According to a BIS survey in 2022, China's FX market is currently the tenth largest market in the world, and the RMB is the fifth largest trading currency in the global foreign exchange market. The healthy and orderly development of the foreign exchange market has laid a solid foundation for exchange rate risk management by foreign-related business entities.

The range of product type in the FX market has increased. At present, China's FX market has a mature international product system including spot, forward, swaps and options, which can meet the diversified needs of market entities for currency exchange and exchange rate risk hedging. The tradable currencies in the interbank foreign exchange market have expanded from five foreign currencies, i.e. US dollar, Euro, Japanese yen, Hong Kong dollar and British pound before 2005 to 29 currencies now, of developed and emerging market economies. There are more than 40 listed currencies in the bank counter foreign exchange market, basically covering available settlement currencies for China's cross-border receipts and payments.

Quality and efficiency of FX market infrastructure have enhanced. At present, the interbank market is aligned with the international market in terms of the availability of mainstream and diversified trading and clearing systems. The trading modes include three electronic trading modes, i.e. centralized bidding, bilateral inquiry and centralized matching under bilateral credit granting, as well as the voice brokerage services of currency brokers. The clearing modes include bilateral clearing or centralized clearing of CCPs. At the same time, post-trade confirmation, write-off, reporting and other businesses are also widely used in the interbank market, improving the market operation efficiency and risk prevention and control ability.

The FX market has a wide range of participants. By the end of 2021, there had been 515 banks qualified for spot settlement of foreign exchange and 124 qualified for derivatives business, and they can provide RMB-to-foreign exchange transactions for domestic and foreign institutions and individuals, effectively meeting the real and reasonable needs of market entities for foreign exchange. The interbank foreign exchange market has formed a pattern of coexistence of various domestic and foreign institutions with domestic banks playing the major role. There are a total of 764 participating institutions, including 112 non-bank financial institutions.

FX market continues to open up. Along with China's financial market open-up and the steady internationalization of the RMB, the domestic FX market has witnessed an orderly entry of overseas institutions including foreign central banks, RMB clearing banks and banks engaged in RMB purchase and sales. By the end of 2021, a total of 131 overseas institutions have become members of the interbank FX market. In addition, as a policy measure to attract more international investors to participate in the domestic capital market, qualified foreign investors for the interbank bond market are allowed to enter the foreign exchange derivatives market and provide FX risk hedging services for foreign investors engaging in the Bond Connect program, as well as QFIIs and RQFIIs. This helps to foster a positive interaction between the FX market, the bond market and the stock market in opening up to the world.

III. Enterprises' Exchange Rate Risk Management Should be Further Enhanced

Guide enterprises to shift their perception and approach to exchange rate risk management. The awareness of exchange rate risk neutrality should be further increased for enterprises with a large FX exposure but nil or little hedging practices. An adequate risk aversion regime should be introduced for enterprises who have only short-term risk management strategy and response to FX risk passively when fluctuations intensify. Hedging goals should be further clarified for enterprises with a a constantly changing hedged business ratio based on their personal judgement of the exchange rate trajectory, instead of a steadfast hedging strategy. A risk-neutral assessment approach should be established for enterprises who base their financial performance on hedging results, i.e. if it gains or loses by comparing the spot exchange rate on the maturity date with the forward locked rate.

Support MSMEs in improving their FX risk management. On the one hand, the MSMEs face a number of difficulties. These include common difficulties, i.e. inadequate awareness of exchange rate risk management, lack of familiarity with FX derivatives and concerns for financial losses, and difficulties specific to MSMEs, i.e. small size with relatively low resilience to risks and high sensitivity to exchange rate fluctuations; reliance of hedging strategies on subjective judgment instead of scientific assessment as a result of inadequate standard-aligning financial management system, sound exchange rate risk assessment mechanism and foreign exchange experts; high hedging costs from small capital volume, lack of economy of scale and potential defaults. **On the other hand,** banking services are insufficient for MSMEs. First, line of credit and margin are commonly-used risk control tools for derivatives transactions. However, MSMEs tend to report a low willingness for hedging as they have limited access to credit, available mortgages and funds. Second, banks favor those low-risk and large-scale enterprise borrowers over MSMEs, which is aggravated by the lack of local staff familiar with derivative business. Third, MSMEs are usually out of the perimeter of banking services. The large-number and sparsely-distributed feature of MSMEs are disproportionately matched with an upstreaming of branches focusing large cities by large and medium-sized banks, and insufficient derivatives service provision by local banks such as urban commercial banks, rural commercial banks and rural credit cooperatives.

IV. Key Links have been Leveraged to Better Facilitate Improvement in Enterprises' Exchange Rate Risk Management

Policy supply has been increased. First, the SAFE issued the *Notice on Measure to Further Promote the Foreign Exchange Market to Serve the Real Economy* to diversify foreign exchange market products, expand the scope of foreign exchange derivatives business cooperation, support the China Foreign Exchange Trade System (CFETS) to improve the bank-enterprise service platform, improve the foreign exchange market infrastructures, and support banks to manage their own exchange rate risk. Second, the PBC and the SAFE jointly released the *Notice on Strengthening Financial Services for COVID-19 Containment and Socio-Economic Development* to improve the enterprise exchange rate risk management system. Third, the Ministry of Commerce, the PBC and the SAFE jointly issued the *Notice on Supporting Foreign Trade Enterprises to Improve Capability of Exchange Rate Risk Managemen*t, which specified measures including making good use of the foreign trade development special funds, providing public service for exchange rate risk avoidance, encouraging banks and guarantee institutions to waive profits in greater support to the real economy, and reducing hedging costs for enterprises especially MSMEs. In addition, the Notice specified that local agencieswith qualified conditions can explore ways to increase availability of credit lines and funding resources of enterprises, where possible, through dedicated credit provision program, data-backed credit enhancement and public margin deposit account.

The overall FX hedging costs for MSMEs have been reduced. In order to reduce the liquidity pressure on MSMEs, relevant authorities and local governments have jointly introduced a series of measures to reduce fees in favor of enterprises, and explored ways to improve the cost sharing mechanism for exchange rate hedging. In terms of transaction fee cuts, the CFETS canceled the interbank foreign exchange market transaction fees related to foreign exchange derivatives from 2022 to 2023 for MSMEs, which is expected to save over RMB 11 million yuan from about RMB 2.3 trillion yuan worth of foreign exchange hedging activities by MSMEs in 2022. In terms of a margin deposit pool, a public margin pool has been set up with the bank by relevant authorities to help enterprises fulfill margin requirements for foreign exchange derivatives. After completion of transactions, the bank will unfreeze the margin deposit amount and release the funds. In terms of a guarantee scheme, financing guarantee companies are encouraged to provide full or partial contract delivery guarantee for MSMEs, who will be exempted from the margin and guarantee fees. In terms of risk-sharing by insurers, they are encouraged to provide credit guarantee insurance for MSMEs against default risk by enterprises within the compensation amount, so as to reduce burdens on MSMEs.

The online FX hedging system has been improved. First, the CFETS continues to improve the bank-enterprise FX service platform, diversify trading products, introduce currency swaps, options and combined option, and launch online review of documentations. Second, commercial banks, by leveraging the large customer base and big data-enabled review system of the FX comprehensive service platform, are able to provide wholesale services to MSMEs at a favorable rate and with reduced or no margin requirements, which has helped to lower hedging costs, extend banking services to under-served areas and improve the efficiency of financial resource allocation. Third, some local FX self-disciplinary bodies have set up their bank-enterprise public service platforms for foreign exchange derivatives, using diversified bank-enterprise channels to serve hedging needs of enterprises in a targeted manner.

To strengthen publicity and guidance on the concept of exchange rate risk neutrality. The SAFE issued the *Guideline on Enterprise Exchange Rate Risk Management*, which elaborated on the concept of exchange rate risk neutrality, the essence of exchange rate risk management, the RMB foreign exchange derivatives, the enterprise exchange rate risk avoidance services and the hedging accounting system, thus providing useful reference for foreign-related enterprises to establish an effective exchange rate risk management mechanism. In the meantime, a campaign was launched via various channels, such as press conferences, print media, radio broadcasting, bank outlets and the we-media, to promote exchange rate risk neutrality. These include publishing brochures on exchange rate hedging cases, foreign exchange derivatives knowledge, etc. Efforts were also made to intensify enterprise reach-outs, carry out on-site survey and publicity programs featuring "one enterprise one policy", launch special training sessions for enterprises, and continue to guide enterprises to adhere to exchange rate risk neutrality in properly managing exchange rate risks.

With the joint efforts of all parties, the awareness of China's market entities towards exchange rate risk prevention has been greatly enhanced, and the capability of enterprise exchange rate risk management steadily improved. In 2021, the size of foreign exchange derivatives, such as forward and options, as a tool for enterprises to manage exchange rate risk increased by 59% y-o-y, and the hedging ratio of enterprises went up by 4.6 percentage points y-o-y to 21.7%. Looking ahead, China's foreign exchange market, with great growth potential, strong resilience, and concerted policy measures, which will provide better support for enterprises to manage exchange rate risks, and serve the growth needs of the real economy in a more effective manner.

Special Topic 3 Improving the Macroprudential Policy Framework

In order to implement the important arrangements of the CPC Central Committee and the State Council on strengthening macroprudential management, in December 2021, the PBC issued the *Guidelines on Macroprudential Policies (Trial)* (hereinafter referred to as the *Guidelines*). The *Guidelines* preliminarily clarify the overall principles and main ideas of the macroprudential policy framework in China. In the next step, the PBC will continue to improve the macroprudential policy framework based on the *Guidelines*, gradually incorporate major financial activities, financial markets, financial institutions and financial infrastructures into the scope of macroprudential management, and effectively improve the ability to prevent systemic financial risks.

I. The Background and Main Ideas for the Development of the *Guidelines*

The development and promulgation of the *Guidelines* is an important measure to implement the arrangements of the CPC Central Committee and the State Council. Macroprudential policies have a macro, countercyclical and anti-contagion perspective, and play an important role in forstalling and mitigating systemic financial risks. In 2017, the Fifth National Financial Work Conference put forward and emphasised the concept of macroprudential management, strengthened the PBC's mandates of macroprudential management and systemic risk prevention, and required the PBC to take the lead in establishing the macroprudential management framework. The report of the 19th CPC National Congress clearly states that it is necessary to "improve the dual-pillar adjustment framework of the monetary policy and macroprudential policy". This is an important assignment made by the CPC Central Committee and the State Council based on our national conditions and a profound summary of lessons from the 2008 Global Financial Crisis. To this end, the PBC has developed the *Guidelines* based on China's actual conditions and international experiences, in order to improve the macroprudential policy framework and prevent and mitigate systemic financial risks. In recent years, international organizations and other countries have also carried out extensive practice on establishing and improving macroprudential policy frameworks.

The *Guidelines* focus on clarifying the PBC's thinking and principles for improving the macroprudential policy framework and refining the macroprudential governance arrangements. The concept and practice of macroprudential policies are new, and the understanding of macroprudential policies has yet to deepen, in terms of what and how macroprudential policies should do, and their interaction with other macro adjustment policies. The practice of macroprudential policies in major economies is also evolving. In order to give full play to the important role of macroprudential policies in preventing systemic financial risks, it is necessary to make great efforts in the top-level design and basic framework establishment, as well as enhancing transparency. These efforts could lay a solid foundation for carrying out specific macroprudential management measures and promote the understandability, feasibility and operationability of macroprudential policies. The *Guidelines* clarify the elements for establishing and improving China's macroprudential policy framework, and elaborate the main ideas, principles and framework for macroprudential management in China, which will help to enhance market participants' acknowledge and understanding of macroprudential policies, form a consensus and promote coordination on systemic risk prevention, and further consolidate the foundation for forstalling and mitigating systemic financial risks.

II. Main Contents of the *Guidelines*

The *Guidelines* systematically elaborate the main contents of the macroprudential policy framework, namely policy objectives, systemic financial risk assessment, policy tools, transmission mechanism and governance, and give the connotation and scope of relevant concepts.

1.Clarifying Concepts Related to Macroprudential Policies

First, the *Guidelines* **elaborate the definition of macroprudential policy framework and systemic financial risk.** The macroprudential policy framework refers to the general term for a set of elements including macroprudential policy objectives, risk assessment, policy tools, transmission mechanisms and governance arrangements, and is an important safeguard for the effective implementation of macroprudential policies. Systemic financial risks refer to financial risks that may have a significant impact on the normal provision of financial services, and thereby bring a serious negative impact on the real economy.

Second, it clarifies the governance arrangements of macroprudential management. The PBC is the lead authority for macroprudential management. Under the overall guidance by the FSDC, the PBC performs macroprudential management in collaboration with other relevant authorities, by facilitating the improvement of governance arrangements, and establishing the framework and basic rules.

Third, it stipulates who shall be subject to macroprudential policies. Macroprudential policies are applicable to duly-established institutions that have been approved by the financial management authorities under the State Council to engage in financial business or provide financial services, as well as financial activities, financial markets and financial infrastructures that may accumulate or transmit systemic financial risks.

2.Elaborating Contents of the Macroprudential Policy Framework

First, the *Guidelines* **clarify the macroprudential policy objectives.** The objectives are to forestall systemic financial risks, especially to prevent their procyclical accumulation and contagion across institutions, sectors, markets and borders, improve the resilience and stability of the financial system, and reduce the possibility and destructiveness of potential financial crises, so as to promote the overall health and stability of the financial system.

Second, it outlines the categories of systemic financial risks that macroprudential policies respond to and relevant risk monitoring and assessment mechanisms. According to their main sources, systemic financial risks can be categorized by two dimensions, namely time dimension and structural dimension. The former is generally caused by the congruent financial activities and accumulates over time. The main manifestation of the former is the excessive expansion or contraction of financial leverage, which leads to procyclical self-reinforcement and self-amplification of risks. The latter is generally caused by instability of specific institutions or markets, which transmits through the interconnectedness of financial institutions, financial markets and financial infrastructures. The main manifestation of the latter is the cross-institution, cross-sector, cross-market and cross-border risk contagion. Timely and accurate identification of systemic financial risks is the prerequisite for implementing macroprudential policies. The lead authority of macroprudential management will establish and improve a systemic financial risk monitoring and assessment framework based on the characteristics of systemic financial risks. Risk monitoring will focus on the macro leverage ratio, debt levels and solvency of government, corporate and household sectors, as well as financial institutions, financial markets, financial products and financial infrastructures with systemic importance and strong risk spillover effects.

Third, it stipulates macroprudential policy tools and the process of their activation, calibration and adjustment. Macroprudential policies share certain tools with microprudential regulation, such as requirements on capital, liquidity, leverage ratio, etc., but the two types of tools are differ in perspective, the issues targeted and the adjustment methods. The two types of tools can complement rather than replace each other. Macroprudential policy tools are used to prevent systemic financial risks and have the basic attributes of being macro, countercyclical, and anti-contagion. They mainly put forward requirements in addition to those under microprudential regulation to improve the financial system's ability to cope with procyclical fluctuations and risk contagion. For different types of systemic financial risks, macroprudential policy tools can be categorized by two dimensions, namely time dimension and structural dimension, and some belong to both categories. The application of macroprudential policy tools generally involves three phases of activation, calibration and adjustment. According to the degree of systemic financial risk accumulation, macroprudential policy tools shall be activated and adjusted at the appropriate moment. Dynamic evaluation shall be carried out after the activation and macroprudential policy tools shall be calibrated accordingly.

Fourth, it clarifies the governance arrangements of macroprudential policies. Good governance arrangements can provide institutional guarantee for improving the macroprudential policy framework and implementing macroprudential policies. The lead authority of macroprudential management shall work with other relevant authorities to promote the formation of macroprudential policy governance arrangements suitable for China, and continue to improve them based on practices. Governance arrangements will involve discussing and developing the activation decision of macroprudential policy tools based on what fields systemic financial risks are related to and the division of relevant authorities' mandates; organizing and implementing macroprudential management within the scope of their respective mandates and overseeing and managing the implementation of macroprudential policies; monitoring and assessing the effectiveness of macroprudential policy tools and releasing the assessment results to the public by appropriate approaches.

3.Proposing the Supportive and Safeguarding Measures Needed in Implementation of Macroprudential Policies, and Explaining about Coordination and Cooperation Between Macroprudential Policies and Other Policies

First, the lead authority of macroprudential management shall put forward the supportive and safeguarding measures needed in implementation of macroprudential policies, including data collection and sharing, establishment and maintenance of information systems, development and improvement of rules and regulations, establishment of inter-agency coordination and emergency response mechanisms, etc. Second, the lead authority shall work with other relevant authorities to establish coordination mechanisms for macroprudential purposes, strengthen the coordination and cooperation of macroprudential policies with the monetary policy, microprudential regulation and other policies, and promote the formation of policy synergy.

III. Considerations for the Next Step in Promoting Macroprudential Management

In accordance with the arrangements of the CPC Central Committee and the State Council and the overall framework established by the *Guidelines*, and based on the implementation experience of macroprudential policies in China and the evolution of situations, The PBC will earnestly perform its leading role in macroprudential management, coordinate with all relevant authorities to achieve a good balance between development and security, and constantly improve the macroprudential policy framework. Efforts will be made to strengthen the monitoring, assessment and early warning of systemic financial risks, enrich and optimize macroprudential policy tools, explore to improve macroprudential policy governance arrangements, strengthen the regulation on systemically important financial institutions and financial holding companies, coordinate macroprudential policies well with other policies, and promote the effective implementation of macroprudential policies, so as to effectively improve the ability to prevent and mitigate systemic financial risks.

Special Topic 4 Asset Management Sector Rectification Wraps up Successfully as the Transition Period Ends

In April 2018, the PBC, CBIRC, CSRC and SAFE jointly released the *Guidelines on Regulating Asset Management Businesses of Financial Institutions* (hereinafter referred to as the new rule). In addition to this framework, supplementary rules were also introduced to support the standardization and transition of the asset management sector in a steady manner. As the transition period of the new rule ends at end-2021, the rectification has achieved significant results. Financial irregularities arising from the sector, such as the multiple-layer re-investment structure and futile circulation of funds within the financial system, have been curtailed; the sector is increasingly registering a sound growth, with improved efficiency in financing the real economy. Going forward, the PBC will, in coordination with relevant authorities, continue to remain focused and build on existing work progress to ensure the full implementation of the new rule across sub-sectors. As a result, the asset management sector is expected to be better positioned to play its role of direct financing and supporting the high quality growth of the real economy.

I. Building and Improving Regulatory Coordination Around the Rectification of the Asset Management Sector

Rectification coordination among regulators is enhanced to form synergy. On basis of the new rule, the PBC, together with CBIRC, CSRC and SAFE, developed the statistical system and reporting template for AMPs of financial institutions. Full coverage of AMPs offered by the banking, insurance and securities institutions was made possible with mandated reporting starting from January 2019. In the meanwhile, the PBC, CBIRC, CSRC and SAFE jointly introduced a liaison and coordinating mechanism for the asset management rectification, mandated with the responsibility to coordinate regulatory efforts in areas including supplementary rule drafting, rectification progress monitoring, risk analysis and response, and sector-wide information sharing.

Impact of the new rule is promptly assessed to ensure a prudent implementation pace. In July 2018, the PBC, CBIRC and CSRC issued the *Notice on Further Clarifying Issues Concerning the Guidelines on Regulating Asset Management Businesses of Financial Institutions* after deliberations, which elaborated on regulatory requirements including the valuation method during the transition period to ensure a smooth transition and make for a healthy monetary and financial environment for the real economy. In July 2020, based on an assessment regarding the implementation progress and effective ness of the new rule and the rectification difficulties resulted from the COVID-19 pandemic, the PBC, CBIRC and CSRC extended, with the consent of the State Council, the transition period of the new rule until the end of 2021. In addition, assets unable to comply with the new rule within the transition period were allowed to phase in on a case-by-case basis. Accordingly, financial institutions were required to re-submit their adjusted rectification plans to take into account of the extension. The plans should focus on their arrangements to scale down those non-compliant products and non-standard assets as of end December, 2019 through hold-to-maturity, takeover by new products or existing compliant schemes, market transfer, and transition back to balance sheets, etc.

Supporting rules have been developed and improved to provide more clarified regulatory guidance. The PBC, together with the CBIRC, CSRC and SAFE, released the *Rules for Recognition of Standard Debt-based Assets* to clarify the difference between, designation criteria of and regulation on standard and non-standard debt-based assets (hereinafter referred to as non-standard assets). The CBIRC issued the *Rules on Regulating Wealth Management Businesses of Commercial Banks*, the *Rules on Managing Commercial Banks' Wealth Management Subsidiaries* and the *Interim Rules on Insurance Asset Management Products*, etc., in addition to the *Notice on Matters Related to Regulating Wealth Management Products for the Purpose of Cash Management* jointly released with the PBC. The CSRC issued the *Rules on Managing Private Asset Management Business of Securities and Futures Operating Institutions*, the *Rules on Operation and Management of Private Asset Management Plans of Securities and Futures Operating Institutions*, and the *Operational Guidelines for Applying the Guidelines on Regulating Asset Management Businesses of Financial Institutions to Large Collective Asset Management Business Offered by Securities Companies*. The SAFE, by supporting banks' wealth management subsidiaries to inherit their parent banks' QDII quota, and allowing the subsidiaries to invest in oversea WMPs on behalf of their clients, encourages banks' wealth management subsidiaries to develop clear product management models and facilitate the transition of bank wealth management business. The NDRC, together with PBC, MOF, CBIRC, CSRC and SAFE, issued the *Notice on Further Clarifying the Issues Concerning Regulating Asset Management Products of Financial Institutions to Invest in Venture Capital Funds and Government-sponsored Industrial Investment Funds*. The *Notice* lifts the restrictions on investment layers for AMPs to invest in the two types of funds, in an effort to encourage more social capital to flow to the scientific and technological innovation areas. The MOF issued the *Accounting Treatment for Asset Management Products*, which further elaborates on rules in the following areas: applicable standards for AMPs holding investments, classification of financial assets, the calculation of impairment and fair value, and the remuneration of asset managers. The rule unifies accounting standards and provides the basis for the generation of net value of AMPs.

II. Standardizing the Asset Management Business in a Steady, Orderly and Regulated Fashion

The disposal of stock assets proceeded smoothly as planned. During the transition period, the size of stock assets funded by non-compliant AMPs, including bank WMPs, pecuniary trusts, private equity assset management products issued by securities companies, fund managers and futures companies, as well as insurance AMPs, that have been disposed registered about RMB 53 trillion.

The asset management sector is less characterized as a shadow banking sector and more as a direct financing channel. Re-investments and channel business have been significantly downsized. As of end December 2021, the size of channel business backed by interbank WMPs, intra-financial system trust projects and private AMPs offered by securities companies, fund managers and futures companies have decreased by 98 percent, 90 percent and 96 percent respectively since the release of the new rule. AMPs are increasingly net value-based and asset-standardized. As of end December 2021, the outstanding balance of net value-based AMPs accounted for 84.4 percent of the total balance of AMPs, an increase of 37.9 percentage points compared with that by end December 2018, among which the proportion of net value-based bank WMPs increased by 65.3 percentage points. The size of AMPs investing in non-standard assets such as bank loans, beneficiary rights and bills accounted for 13.3 percent of the AMPs' net assets, down by 11.6 percentage points from end December 2018. In the meantime, the setting up of wealth management subsidiaries of banks quickened to isolate risks from their parent banks. As of end December 2021, 25 wealth management subsidiaries of banks have been granted approval for setup, of which 20 subsidiaries have opened for business; and 4 foreign-controlled wealth management subsidiaries have obtained approval, of which 2 are in operation.

The asset management sector has remained stable overall, with the leverage ratio and other risk indicators improving. As of end December 2021, the assets backed by AMPs of financial institutions totaled RMB 97.5 trillion by simple aggregation, or RMB 80.9 trillion after excluding transactions between products, an increase of RMB 14.6 trillion compared with that at end December 2018. In the perspective of key risk indicators, the average liability leverage ratio① of AMPs and tranched leverage ratio② as of end December 2021 registered 106.9 percent and 100.7 percent, down by 1.3 percentage points and 2.3 percentage points respectively from that at end December 2018. The ratio of short-term liabilities to short-term assets of AMPs calculated by their remaining tenor was 153.7 percent, down by 14.3 percentage points from that at end December 2018, pointing to contracted mismatch risks.

The perception of implicit guarantees for the sector has been weakened, and the awareness that "investors could bear their own investment risks as long as issuers have performed due diligence" reinforced. With the appearance of more and more net value-based AMPs on the market, the perception of implicit guarantees of AMPs has been increasingly weakened. Meanwhile, the legal basis for eliminating implicit guarantees is improving. In November 2019, the Supreme People's Court issued the *Minutes of the National Courts'*

① Average liability leverage ratio=Total assets / Aggregate Equity.
② Tranched leverage ratio= Total paid-in principal / Paid-in principal of junior tranche.

Civil and Commercial Trial Work Conference. Based on the principle of "properly handling the relationship between civil/commercial trials and administrative regulation", the Supreme People's Court ruled invalid provisions on minimum guarantees and rigid payment clauses of AMPs in Article 92, which provides an important legal basis for determining the invalidity of rigid payment promises of AMPs in practice.

The asset management sector, with contracted risk levels, has increased its support for the real economy. As of end December 2021, AMPs have directly allocated a total of RMB 38.6 trillion to the real economy through investment in non-financial corporate bonds and stocks, an increase of RMB 1.4 trillion from end December 2018. In addition, AMPs continue to increase its investment in financial bonds, interbank deposits and certificates of deposit, which will eventually flow to the real economy through on-balance sheet loans and bond investments.

III. Constantly Ensuring the Effectiveness of Shadow Banking Sector Rectification

Regulatory coordination in the asset management sector will be continuously strengthened. Regulatory synergy will be formed to ensure the rectification of stock assets backed by specific projects and non-compliant AMPs for the purpose of cash management, to strengthen information sharing on sector development and risk profiles, and to enhance statistics to support the look-through regulation. For remaining regulatory inconsistency, authorities shall follow the activity-based regulatory approach, and promote the consistency of regulatory standards and codes of conduct for similar products on basis of enhanced market research and risk assessment, while respecting inherent differences.

Intensive regulation on high-risk shadow banking activities will continue. Heavy penalties for violations will be imposed on non-compliant AMPs with a multi-layer re-investment structure or implicit guarantees, or engaging in fund idling or regulatory arbitrage. Off-site monitoring and on-site inspection will be employed to urge financial institutions to strictly comply with prudential regulatory requirements such as licensing, liquidity management, investment layers, leverage ratio and concentration ratio, etc. Monitoring and analysis of AMP innovation will be strengthened and the market impact will be immediately assessed; risk alerts will be issued if necessary to prevent shadow banking risks from resurfacing in a different form.

Regulatory framework of the asset management sector will be constantly improved. While strengthening microprudential requirements, authorities will improve the macroprudential policy toolkit to strengthen cross-cycle and cross-market monitoring, assessment and calibration. Institution-based regulation and activity-based regulation will be combined and the consensus of similar regulatory rules for similar products will be reinforced to curb regulatory arbitrage and promote fair competition. Efforts will be made to enhance the conduct regulation of AMPs, improve the code of conduct for the issuance, distribution and disclosure of AMPs with fiduciary duty at core, carry out persistent investor education, raise penalty costs for violations, and effectively protect the legitimate rights and interests of investors.

Chapter II

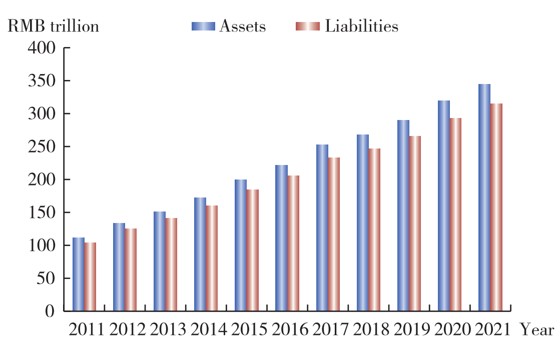
Soundness Assessment of the Financial Sector

Despite the complicated economic and financial environment both at home and abroad, China's financial sector maintained sound performance in 2021. Financial institutions expanded steadily in assets and liabilities while their capital adequacy stabilized with moderate increase and their profitability remained generally stable. The financial market was stable overall.

I. Soundness Assessment of the Banking Sector

Assets and liabilities grew steadily. At end-2021, total assets of banking institutions registered RMB 344.76 trillion, up 7.82 percent year on year, a deceleration of 2.26 percentage points from the previous year; and total liabilities registered RMB 315.28 trillion, up 7.56 percent year on year, a deceleration of 2.66 percentage points from the previous year (Figure 2.1).

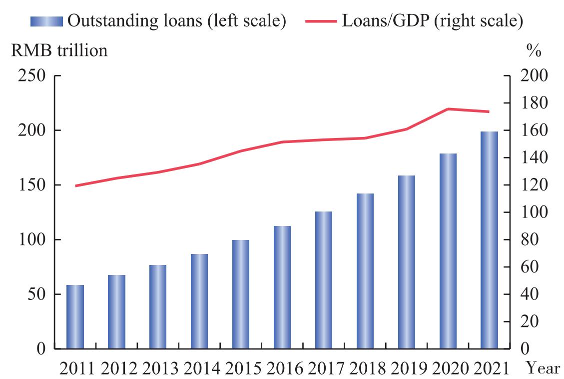
Figure 2.1 Assets and Liabilities of Banking Institutions



Source: The CBIRC.

Deposits and loans maintained steady growth. At end-2021, total deposits denominated in both domestic and foreign currencies in financial institutions stood at RMB 238.61 trillion, an increase of 9.3 percent year on year and a deceleration of 0.93 percentage point from the previous year; and outstanding loans denominated in both domestic and foreign currencies by financial institutions stood at RMB 198.51 trillion, an increase of 11.3 percent year on year and a deceleration of 1.21 percentage points from the previous year (Figure 2.2).

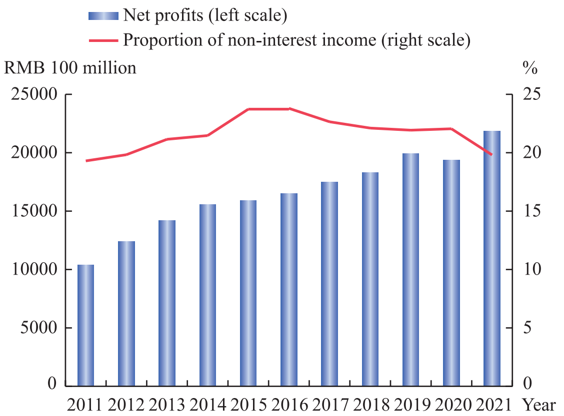
Figure 2.2 RMB Loans by Banking Institutions



Source: The PBC and NBS.

Profitability was generally stable. In 2021, banking institutions gained net profits of RMB 2.51 trillion, an increase of 10.21 percent year on year. The net interest margin of banking institutions reached 1.95 percent, a decrease of 0.03 percentage point from the previous year. Non-interest income accounted for 22.19 percent of total income, a decrease of 0.5 percentage point year on year. At end-2021, the ROA of banking institutions reached 0.76 percent, up 0.01 percentage point year on year; and the ROE registered 8.94 percent, which was the same as the previous year. The overall profitability of banking institutions remained stable.

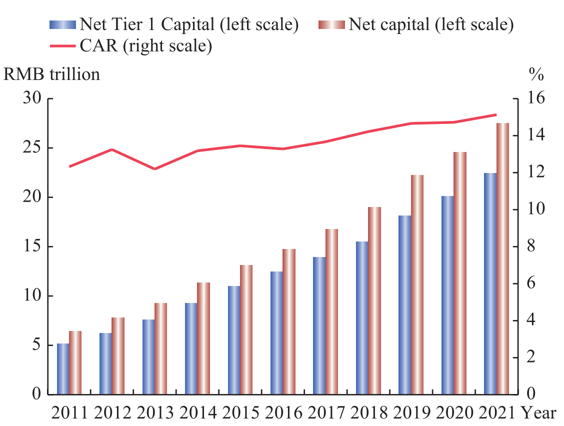
Figure 2.3 Net Profits and Proportion of Non-interest Income of Banking Institutions



Source: The CBIRC.

Capital adequacy level stabilized with moderate increase. At end-2021, the CET1 ratio of commercial banks reached 10.78 percent, up 0.06 percentage point year on year; the Tier 1 capital ratio registered 12.35 percent, up 0.32 percentage point year on year; and the CAR increased by 0.43 percentage point to 15.13 percent, indicating that the overall banking sector was well capitalized (Figure 2.4).

Figure 2.4 CAR and Capital Structure of Commercial Banks[①]



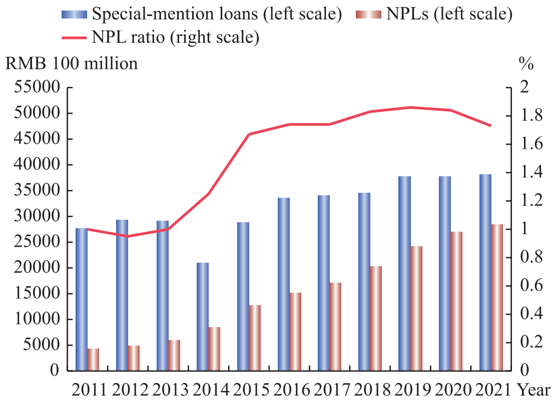
Source: The CBIRC.

The overall liquidity remained in a reasonable and sufficient range. At end-2021, the liquidity ratio of commercial banks registered 60.32 percent, up 1.90 percentage points year on year; and the ratio of liquidity gap was 6.82 percent, up 0.71 percentage point year on year. The LCR of commercial banks with assets over RMB 200 billion registered 145.30 percent, down 1.17 percentage points year on year; and the NSFR stood at 122.50 percent, up 0.61 percentage point year on year.

NPLs increased and asset quality faced large downward pressure. At end-2021, the NPLs of banking institutions totaled RMB 3.63 trillion, an increase of RMB 153.4 billion year on year; and the NPL ratio reached 1.80 percent, down 0.12 percentage point year on year. In particular, NPLs of commercial banks increased by RMB 145.5 billion year on year to RMB 2.85 trillion; and the NPL ratio of commercial banks decreased by 0.11 percentage point year on year to 1.73 percent. Special-mention loans of banking institutions stood at RMB 5.54 trillion, down RMB 74.8 billion or 1.33 percent year on year, and asset quality faced large downward pressure (Figure 2.5). In addition, loans overdue for over 90 days increased by RMB 194.5 billion or 7.36 percent year on year to RMB 2.84 trillion, which accounted for 78.18 percent of the total NPLs, up 2.15 percentage points year on year.

① As of 2013, CAR was calculated according to the *Capital Rules for Commercial Banks (Provisional)*.

Figure 2.5 Special-mention Loans and NPLs of Banking Institutions



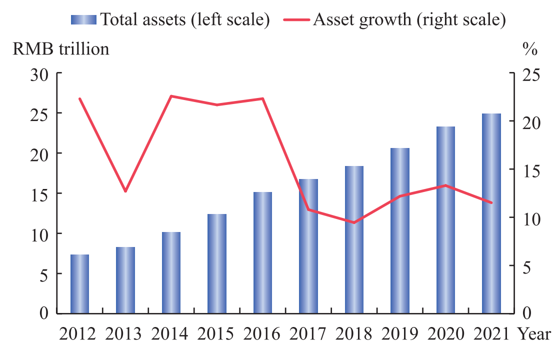
Source: The CBIRC.

Risk coverage of the banking sector was strong. At end-2021, loan loss provisions of banking institutions stood at RMB 7.13 trillion, up by RMB 799.7 billion or 12.63 percent year on year; the provision coverage ratio reached 196.57 percent, up 14.34 percentage points year on year; and the provision to loan ratio registered 3.54 percent, up 0.05 percentage point year on year.

II. Soundness Assessment of the Insurance Sector

Assets grew steadily, insurance density improved while insurance penetration declined. At end-2021, total assets in the insurance sector reached RMB 24.89 trillion, an increase of 11.51 percent[①] year on year and a deceleration of 1.78 percentage points from end-2020 (Figure 2.6). Among these, the assets of personal insurance companies registered RMB 21.39 trillion, up 12.41 percent year on year; the assets of property insurance companies registered RMB 2.45 trillion, up 5.99 percent year on year; and the assets of reinsurance companies registered RMB 605.7 billion, up 22.22 percent year on year. The insurance density increased by RMB 122 year on year to RMB 3179, which was much lower than the world average of USD 874. The insurance penetration declined by 0.3 percentage point year on year to 3.93 percent, lagging far behind the world average of 7.0 percent.

Figure 2.6 Total Assets and Asset Growth of the Insurance Sector



Source: The CBIRC.

Market concentration increased slightly. In 2021, the market share of the top five personal insurance companies[②] in terms of premium was 51.40 percent, up 0.75 percentage point year on year. The Herfindahl-Hirschman Index (HHI)[③] for the personal insurance sector was 0.079, a slight

① The aggregate data do not include those for institutions that are undergoing resolution. The y-o-y change is calculated on a comparable basis. The same below.

② The top five personal insurance companies included China Life, Ping An Life Insurance, China Pacific Life Insurance, New China Life Insurance and Taikang Life Insurance.

③ HHI is the sum of squares of every institution's market share in the sector. The higher the HHI goes, the more concentrated the market is.

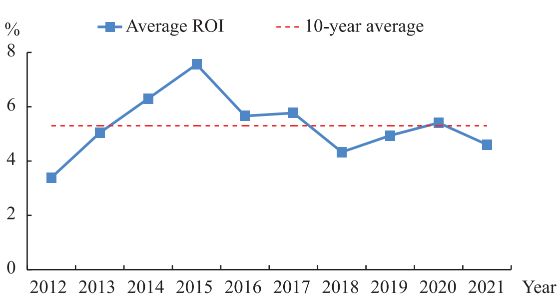
increase from the previous year. In the property insurance sector, the market share of the top five companies① in terms of premium was 74.36 percent, up slightly 0.47 percentage point year on year; the HHI registered 0.168, which was slightly higher than the previous year.

Asset allocation was generally stable and investment returns declined. At end-2021, funds utilized by the insurance sector stood at RMB 23.23 trillion, an increase of 12.15 percent from end-2020, a growth deceleration of 4.87 percentage points year on year. In particular, the share of bank deposits, stocks and securities investment funds in the total investments declined whereas the share of bonds and other investments went up (Table 2.1). The investment returns of the insurance sector declined by 10.40 percent year on year to RMB 1.0125 trillion. The average ROI of insurance funds declined by 1.2 percentage points year on year to 4.61 percent, which was lower than the 10-year average of 5.30 percent (Figure 2.7).

Table 2.1 Utilization of Insurance Funds (as of end-2021)

Investment Structure	Bank Deposits	Bonds	Stocks and Securities Investment Funds	Other Investments
Size (RMB trillion)	2.6179	9.0683	2.9505	8.5913
Proportion (%)	11.27	39.04	12.70	36.99
Y-o-y Change (Percentage Point)	−1.00	1.55	−0.75	0.20

Figure 2.7 Average ROI of Insurance Funds



Source: The CBIRC.

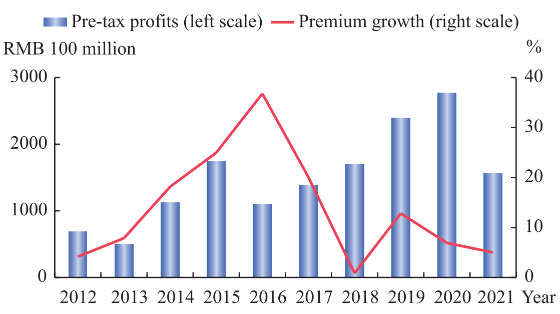
Premium of personal insurance companies grew and insurance demand increased further. In 2021, the premium income of personal insurance companies reached RMB 3.1224 trillion, up 5.01 percent year on year, a deceleration of 1.89 percentage points from the previous year (Figure 2.8). Throughout 2021, the surrender rate of personal insurance companies registered 2.32 percent, down slightly 0.07 percentage point year on year. In 2021, the original premium income of health insurance grew by 4.64 percent year on year to RMB 706.9 billion.

The pre-tax profits and net profits of personal insurance companies declined significantly. Due to a decline in investment returns and a large increase in claims and payments, the pre-tax profits of personal insurance companies declined significantly by 47.36 percent year on year to RMB 156.988 billion (Figure 2.8), and the net profits declined notably by 41.04 percent year

① The top five property insurance companies included PICC Property & Casualty, Ping An Property & Casualty Insurance, China Pacific Property Insurance, China Life Property & Casualty Insurance, and China United Property Insurance.

on year to RMB 160.805 billion. 27 personal insurance companies incurred losses.

Figure 2.8　Pre-tax Profits and Premium Growth of Personal Insurance Companies

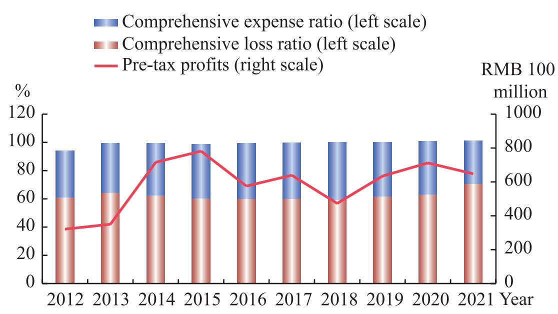


Source: The CBIRC.

The premium of property insurance companies grew moderately and the share of non-auto insurance rose further. In 2021, the premium income of property insurance companies reached RMB 1.37 trillion, an increase of 1.92 percent year on year, a deceleration of 2.44 percentage points from the previous year. As the comprehensive reform in auto insurance sank in, the average premium paid for autos declined remarkably. Throughout the year, the premium of auto insurance declined by 4.31 percent, and its share in total property insurance premium declined by 3.70 percentage points year on year to 56.83 percent. As the demand for non-auto insurance increased gradually and the insurance sector strengthened the cultivation of new growth pillars, the share of non-auto insurance① in the property insurance sector had increased for six consecutive years.

The underwriting business of property insurance companies suffered losses in general and profits declined year on year. In 2021, the comprehensive cost ratio of property insurance companies increased by 0.25 percentage point year on year to 101.07 percent. 65 property insurance companies registered underwriting losses. The annual pre-tax profits of property insurance companies in 2021 declined by 11.56 percent year on year to RMB 64.779 billion (Figure 2.9).

Figure 2.9　Underwriting Performance and Pre-tax Profits of Property Insurance Companies



Source: The CBIRC.

The overall solvency of the insurance sector was adequate whereas there were some high-risk institutions. At end-2021, the comprehensive solvency adequacy ratio and the core solvency adequacy ratio of insurance companies registered 232.1 percent and 219.7 percent respectively, which were far above the minimum regulatory level of 100 percent and 50 percent. In terms of comprehensive risk rating, there were 91 companies rated A and 75 rated B in the fourth quarter of 2021, which were of low risk; and there were eight companies rated C and four rated D, which either failed to meet the standard for the solvency adequacy ratio or met the standard but carried high risk. Tian'an

① Non-auto insurance includes corporate property insurance, household property insurance, engineering insurance, liability insurance, guarantee insurance, agricultural insurance, health insurance, accident insurance, etc.

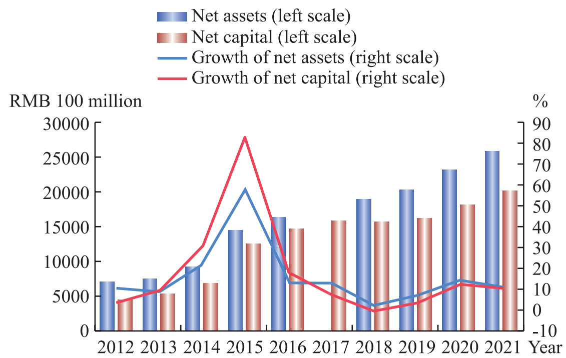
Property Insurance Co., Ltd., Huaxia Life Insurance Co., Ltd., Tian'an Life Insurance Co., Ltd. and Yi An Property & Casualty Insurance Co., Ltd. triggered the takeover threshold as prescribed in Article 144 of the *Insurance Law of the People's Republic of China*, and were taken over by the CBIRC as of July 17, 2020. On July 17, 2021, the takeover period was extended for another year until July 16, 2022.

III. Soundness Assessment of the Securities Sector

1. Profits of Securities Companies Increased Year on Year, Risk Associated with Stock Pledging Decreased, and Margin Trading and Securities Lending Grew Steadily

At end-2021, there were 140 securities companies across China, an increase of 2 from the end of the previous year. Among them, 40 securities companies (excluding listed groups and parent companies) were listed, up by 1 year on year. Securities companies had total assets of RMB 10.59 trillion, an increase of 18.99 percent year on year. Net assets registered RMB 2.57 trillion, an increase of 11.26 percent year on year. Net capital increased by 9.89 percent year on year to RMB 2 trillion, which had achieved growth for three consecutive years (Figure 2.10).

Figure 2.10 Net Assets and Net Capital of Securities Companies, 2012–2021

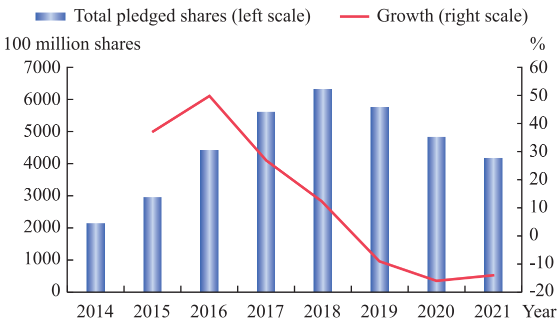


Source: The CSRC.

The performance of securities companies continued to improve. In 2021, the operating revenue of the entire securities sector grew by 12.03 percent year on year to RMB 502.410 billion. In particular, securities investment returns (including fair value variation) registered RMB 165.555 billion, up 10.70 percent year on year; net income from securities brokerage business (including leasing of trading seats) registered RMB 133.840 billion, up 15.27 percent year on year; net income from investment banking business registered RMB 69.983 billion, up 4.12 percent year on year; net income from agency sales of financial products registered RMB 20.690 billion, up 53.97 percent year on year; net income from investment consultancy registered RMB 5.457 billion, up 13.62 percent year on year; and net income from asset management registered RMB 31.786 billion, up 6.09 percent year on year. The entire securities sector realized net profits of RMB 191.119 billion, up 21.32 percent year on year.

Risks associated with stock pledging decreased significantly. At end-2021, the size of pledged A-shares declined by 13.71 percent year on year to 419.827 billion shares, showing a downward trend for three consecutive years (Figure 2.11). In 2021, the A-share market went up, and risks associated with stock pledging decreased further.

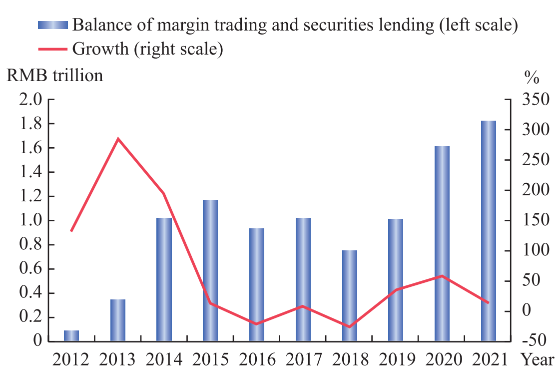
Figure 2.11 Size and y-o-y Growth of Stock Pledging by Shareholders of Listed Companies



Source: The CSDC.

The balances of margin trading and securities lending grew steadily. At end-2021, the balance of margin trading and securities lending registered RMB 1.832191 trillion, up 13.17 percent year on year. Among this, the balance of margin trading accounted for 93.44 percent, and the balance of securities lending accounted for 6.56 percent (Figure 2.12). The proportion of margin trading balance to the market value of negotiable A shares declined by 0.05 percentage point year on year to 2.29 percent.

Figure 2.12 Size and y-o-y Growth of Margin Trading and Securities Lending in Shanghai Stock Exchange and Shenzhen Stock Exchange



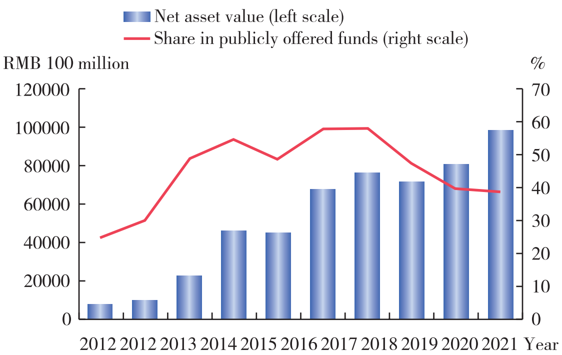
Source: The CSDC.

2. Assets under Management of Fund Management Companies Continued to Grow While the Share of Money Market Funds Kept Declining

At end-2021, there were 151 fund management companies across the country, up by 4 from the end of the previous year. Among these, 45 companies were foreign-owned fund management companies, 92 were domestic fund management companies, and 14 were asset management institutions that had obtained the qualification for publicly offering funds. Together, these companies managed RMB 25.56 trillion of publicly offered funds, an increase of 28.51 percent year on year. In terms of types, equity funds accounted for 10.20 percent of the publicly offered funds, hybrid funds accounted for 25.17 percent, bond funds 26.62 percent, and money market funds 37.05 percent. The share of money market funds had declined for three consecutive years. By end-2021, 24610 private equity fund managers had registered, managing 124117 private equity funds. The paid-in size of these funds reached RMB 19.76 trillion, up 23.73 percent year on year.

The share of money market funds continued to decline. At end-2021, the net asset value of money market funds reached RMB 9.8593 trillion. As the stock market went up, the share of money market funds in the total publicly offered funds decreased by 1 percentage point year on year to 39 percent (Figure 2.13).

Figure 2.13 Net Asset Value of Money Market Funds and Its Share in Publicly Offered Funds, 2012–2021



Source: The CSRC.

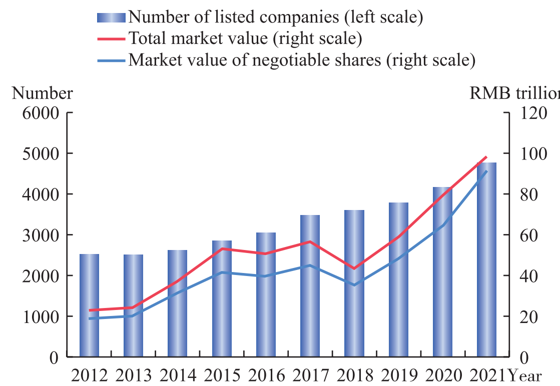
3. Futures Companies Grew Solidly while Product Innovation Advanced Steadily

At end-2021, there were 150 futures companies in China, under which there were 97 risk management subsidiaries. Total assets of the futures industry, including those of clients, amounted to about RMB 1.3812 trillion. Altogether, 94 futures and options were listed. Among these, there were 64 commodity futures, 6 financial futures, 20 commodity options and 4 financial options. In 2021, China's futures market launched 4 new products, including 2 commodity futures – live pig and peanut, and 2 commodity options – palm oil and crude oil.

4. Market Value of Listed Companies Grew Significantly with Performance Improving Continuously

At end-2021, there were 4615 companies in total listed on the Shanghai Stock Exchange and Shenzhen Stock Exchange, which, excluding 28 delisted, was a net increase of 461 from end-2020. Total market value and that of negotiable shares reached RMB 91.61 trillion and 75.05 trillion respectively, up 14.93 percent and 16.70 percent year on year (Figure 2.14). The market value of negotiable shares accounted for 81.93 percent of total market value, up 1.24 percentage points year on year.

Figure 2.14 Number and Market Value of Listed Companies, 2012–2021



Source: The CSRC.

Performance of listed companies continued to improve in 2021. As of April 30, 2022, 4715 listed companies on Shanghai Stock Exchange and Shenzhen Stock Exchange had disclosed their 2021 annual reports. Total operating revenue of listed companies registered RMB 66.32 trillion in 2021, accounting for 57.99 percent of GDP. This represented a y-o-y growth of 19.32 percent, which was far above the GDP growth rate. In particular, around 80 percent (81.63 percent) of these companies reported revenue growth and around 40% (42.17 percent) had realized revenue growth for three consecutive years. In addition, the overseas revenue of listed companies grew by 24.65 percent year on year. In 2021, net profits of listed companies reached RMB 5.06 trillion, up 19.78 percent year on year; and net profits excluding non-recurring gains and losses registered RMB 4.63 trillion, up 25.09 percent year on year. The profitability of listed companies improved further. Nearly 80 percent of companies reported net cash inflow from operating activities, indicating high quality of profitability.

5. The Construction of the Capital Market was Strengthened Continuously and Its Opening up Advanced Further

The reform of the NEEQ was deepened with the establishment of the Beijing Stock Exchange. On November 15, 2021, the Beijing Stock Exchange (hereafter referred to as BSE) started trading officially. By end-2021, 82 companies had been listed on the BSE. Established from the Select Tier of the NEEQ, the BSE was China's first corporate-based stock exchange. The BSE was mandated to serve innovative small- and medium-sized enterprises, especially smaller new SMEs at an early stage of development. By building a progressive market structure of NEEQ Base Tier, NEEQ Innovation Tier and the BSE, the market was able to provide inclusive and targeted services. The BSE, the Shanghai Stock Exchange and the Shenzhen Stock Exchange developed in a coordinated and complementary manner. They launched the pilot of registration-based IPO system simultaneously, and a transition system from the BSE to the Shanghai Stock Exchange and the Shenzhen Stock Exchange is built, which enhanced the interconnectivity within the multi-layered capital market.

The registration-based IPO system reform continued to advance, and the conditions for the full implementation of registration-based IPO system were fulfilled gradually. In 2021, the pilot of the registration-based IPO system went smoothly at the STAR market, the ChiNext and the BSE. The concept of registration-based IPO system with information disclosure at its core gradually gained ground. The main board and SME board at the Shenzhen Stock Exchange were merged officially, which further streamlined the structure of the stock exchange. Multiple institutional and regulatory reforms have achieved positive results, including new share issuance pricing, verification of shareholders, urging intermediaries to perform their duties, on-site inspection, tutoring and acceptance, and improving the quality of prospectus disclosure, etc. The conditions for the main boards of the Shanghai Stock Exchange and the Shenzhen Stock Exchange to implement the registration-based IPO system were gradually fulfilled.

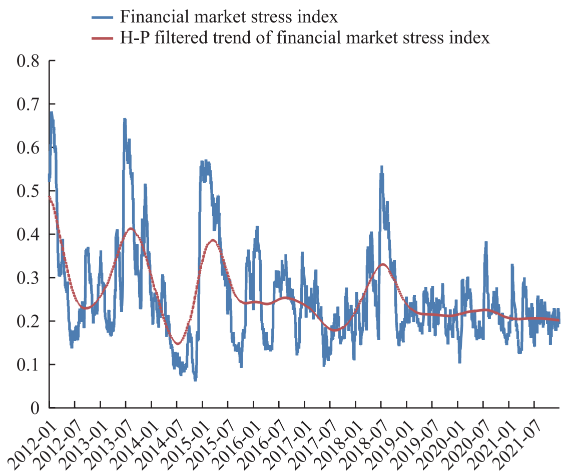
The capital market was increasingly open and regulation continued to improve. First, rules for the Shanghai-London Stock Connect were improved. The scope of the scheme was expanded. Domestically, the scheme was extended to cover eligible companies listed on the Shenzhen Stock Exchange. On the overseas side, the scheme was expanded to include main European markets such as Switzerland and Germany. Rules were laid out for the CDRs with financing function, which allowed overseas issuers to raise capital by offering CDRs in domestic market and determine the offering price through a market-driven book-building mechanism. Ongoing supervision was improved by introducing more favorable and flexible institutional arrangements for the contents of information disclosure in annual reports and the disclosure obligations on shareholding changes. Second, the Shanghai-Hong Kong and Shenzhen-Hong Kong Stock Connect Scheme was further improved. The CSRC revised the *Certain Provisions on the Stock Connect Scheme between the Mainland and Hong Kong Stock Markets*, which aimed to regulate the round-trip trading behaviors of domestic investors and crack down hard on fake foreign capital. Third, the regulation of overseas offering by domestic companies was improved. The CSRC solicited public opinions on the *Provisions of the State Council on the Administration of Overseas Securities Offering and Listing by Domestic Companies,* and the *Administrative Measures for the Filing of Overseas Securities Offering and Listing by Domestic Companies* as supporting rules, and would adopt filing-based regulation over both direct and indirect overseas listing by domestic companies.

Efforts were made to safeguard the sound operation of the bond market. In 2021, the PBC, together with relevant ministries, took timely measures to maintain the stable and healthy operation of the bond market and to continuously improve the capacity, quality and efficiency of the bond market to serve the real economy. The PBC worked together with the SASAC and the CSRC to build a working mechanism of risk monitoring and early warning for bonds issued by state-owned enterprises at both the central government and local government level. Measures were also taken to introduce a notification system for major violations of laws and regulations such as evasion of debt repayment obiligations in the bond market, and ensure local governments to take full territorial responsibilities. The CSRC completed the administrative inspection of and imposed punishment on Brilliance Auto Group, Yongcheng Coal and Electricity Holding Group, Shandong SNTON Group and related intermediaries, and insisted on zero tolerance towards violations of laws and regulations such as evasion of debt repayment. The integrated law enforcement mechanism gradually became the norm in the bond market.

IV. Soundness Assessment of the Financial Market

China's financial market was generally stable. In 2021, stress in the stock market and bond market eased, stress in the money market first rose then decreased, and stress in the foreign exchange market was stable and lower. The overall financial market stress index stayed at a moderately low level (Figure 2.15).

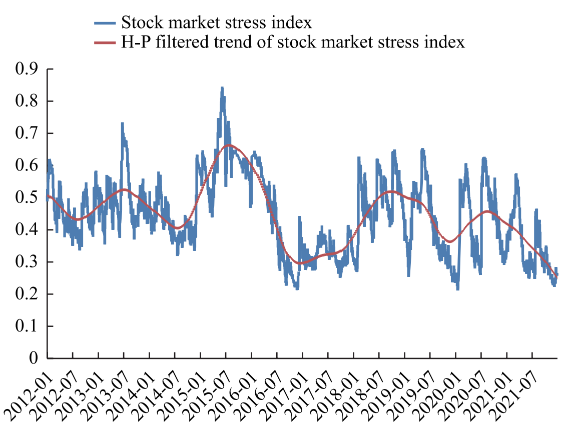
Figure 2.15 Financial Market Stress Index, 2012–2021



Source: The PBC.

Stock market rose slightly amid low stress. Throughout 2021, the A-share market rose slightly with larger turnover. The Shanghai Stock Exchange Composite Index rose by 4.80 percent and the Shenzhen Stock Exchange Component Index rose by 2.67 percent. Both stock exchanges registered a daily average turnover of over RMB 1 trillion. In general, stress in the A-share market was low in 2021 (Figure 2.16). In particular, return volatility risk narrowed slightly, risk associated with stock pledging was stable, and market valuation risk decreased to a low level at the end of the year. At end-2021, the rolling P/E ratios of the Shanghai Composite Index, the Shenzhen Component Index, the ChiNext Index and the STAR 50 Index registered 13.9, 28.94, 63.26 and 55.5 times respectively.

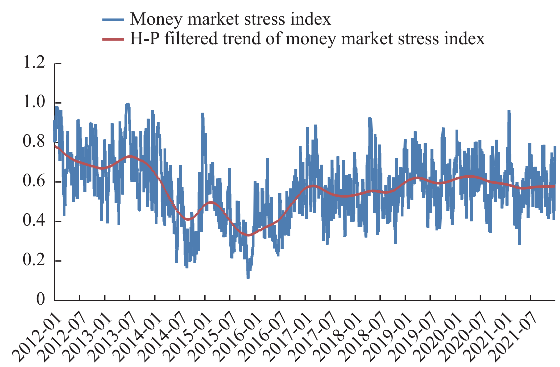
Figure 2.16 Stock Market Stress Index, 2012–2021



Source: The PBC.

Money market rates fluctuated in a narrow range and the overall market stress moderated. In 2021, liquidity in the money market was reasonable and sufficient. Except for a temporary increase at the beginning of the year amid increased pressure, money market rates fluctuated in a narrow range throughout 2021 in general and the stress level came down (Figure 2.17). On December 31, 2021, the weighted average of overnight pledged repo rate by depository institutions rose by 93 basis points from the end of the previous year to 2.03 percent; and the weighted average of 7-day pledged repo rate declined by 17 basis points year on year to 2.29 percent. The Shanghai Interbank Offered Rates (Shibors) diverged. In particular, the overnight Shibor rose by 104 basis points year on year to 2.13 percent, the 7-day Shibor fell by 11 basis points year on year to 2.27 percent, and the 3-month Shibor decreased by 26 basis points year on year to 2.5 percent.

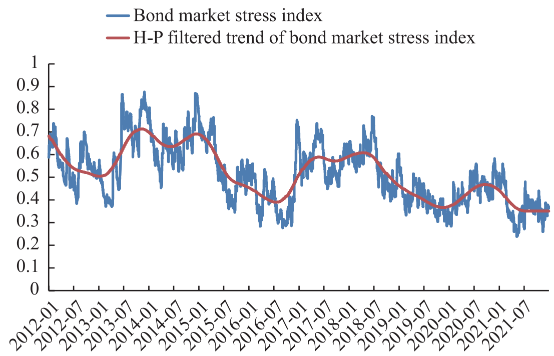
Figure 2.17 Money Market Stress Index, 2012–2021



Source: The PBC.

Bond yields fluctuated down and market stress decreased. In 2021, bond yields fluctuated down in general and stress in the bond market moderated (Figure 2.18). In particular, the 1-year and 10-year government bond yields declined by 21 basis points and 39 basis points year on year respectively, and the yields of the 5-year AAA-rated and AA-rated medium-term notes declined by 52 basis points and 54 basis points year on year respectively. The daily average term spread between 1-year and 10-year government bonds declined by 13.08 basis points year on year to 63.21 basis points. The daily average spread between 1-year AA-rated medium-term notes and 1-year government bonds declined by 13 basis points year on year to 90 basis points. The daily average spread between 5-year AA-rated medium-term notes and 5-year government bonds declined by 3 basis points year on year to 158 basis points.

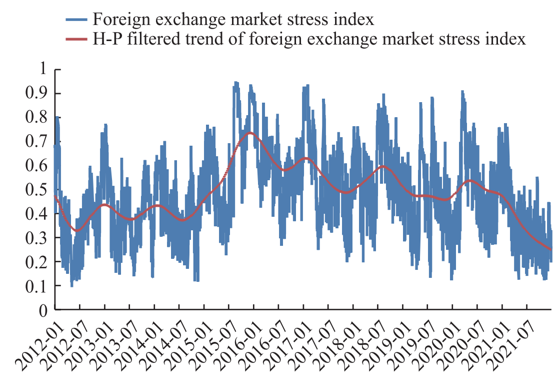
Figure 2.18 Bond Market Stress Index, 2012–2021



Source: The PBC.

The RMB appreciated slightly against the USD and stress in the foreign exchange market was stable and lower. In 2021, the RMB appreciated slightly against the USD and the RMB exchange rate against a basket of currencies was generally stable. The two-side fluctuation of RMB became the norm. In general, the foreign exchange market stress was stable (Figure 2.19). At end-2021, the exchange rate of the RMB against the USD closed at 6.3730 yuan per dollar in the onshore market, appreciating by 1 668 basis points or 2.62 percent year on year.

Figure 2.19 Foreign Exchange Market Stress Index, 2012–2021



Source: The PBC.

Special Topic 5 The Banking Sector Stress Test

In order to further play the important role of stress testing in risk monitoring and assessment, the PBC stress tested 4008 banking institutions across the country in 2022 to comprehensively assess resilience of the banking system against various "extreme but plausible" adverse shocks.

I. General Description of the Stress Test

Participation of banks. The stress test covers 4008 banks, consisting of 6 large state-owned commercial banks, 12 joint-stock commercial banks, 128 city commercial banks, 1592 rural commercial banks, 546 rural credit cooperatives, 23 rural cooperative banks, 1639 village and township banks, 19 private banks, 42 foreign banks and 1 direct bank.

Methodology. The stress test includes the solvency test based on macroeconomic scenarios, solvency test based on sensitivity analysis, liquidity stress test and risk contagion stress test. The solvency test based on macroeconomic scenarios only targeted 19 D-SIBs, whose capital adequacy levels at the end of 2022, 2023 and 2024 were tested under adverse macroeconomic shocks from the perspective of both credit and market risks under stress scenarios. Based on the data of the 19 tested banks, the PBC developed a transmission model on the linkages between the macro economy and bank credit asset quality, and measured banks' credit impairment losses, and gains or losses from net interest income, from bond valuation and from foreign exchange exposures under stress scenarios. Then the impact on banks' capital adequacy was assessed. The solvency test based on sensitivity analysis assessed the instantaneous adverse impact of the deterioration in the overall and key sector risk profiles on banks' capital adequacy. The liquidity stress test assessed the impact of various liquidity stresses, including policy changes, macroeconomic dynamics and emergent shocks, on banks' cash flow gaps for each maturity period. Risk contagion stress test targeted only 60 banks with an asset scale above RMB 300 billion, and assessed risk contagion among banks and between banks and non-bank financial institutions.

Stress scenarios[①]**.** Three scenarios were designed for the solvency stress test based on macroeconomic scenarios—a mildly adverse scenario, an adverse scenario and a severely adverse scenario. The scenarios were calibrated with macroeconomic factors including y-o-y GDP growth rate (Table 2.2), CPI growth rate, short-term and long-term market interest rates, y-o-y growth rate of total retail sales of consumer

① The stress scenarios were based on projections of macroeconometric models, and should not be interpreted as the PBC's judgments on the macro economy.

goods, y-o-y growth rate of industrial value added, y-o-y growth rate of investment in fixed assets and RMB/USD exchange rate, etc. The solvency stress test based on sensitivity analysis tested the impact of a set of indicators, including NPL ratio of the whole credit portfolio, NPL ratio of specific industries, NPA ratio, loss given default, changes in the bond yield curve, etc. (Table 2.3). Liquidity stress test used a mildly adverse scenario and a severely adverse scenario to set different roll-on rates of in-balance-sheet assets and run-off rates of in-balance-sheet liabilities or contingent liabilities with different maturities of the banks. Under each scenario, a maturity ladder analysis was adopted to calculate the net funding gaps for each single bank. Risk contagion stress test used a mildly adverse scenario, adverse scenario and a severely adverse scenario to assess a bank's risk spillover to other tested banks when it defaults and withdraws its interbank lending (Table 2.4).

Underlying assumptions. The solvency stress test assumes that a bank's asset-liability structure remains unchanged, its provision coverage ratio meets 100 percent, the income tax rate stays at 25 percent, and that its dividend rate is 30 percent as long as its net profit remains positive and its capital adequacy ratios meet regulatory requirements after dividend. During the time horizon of the test, macro policy support, resolution of NPLs and external capital replenishment were not taken into consideration. The liquidity stress test assumes that a bank remains as a going-concern, i.e. its relationship with important clients would be undamaged and no major business disruptions would occur. Risk contagion stress test assumes that a bank defaults on its interbank counterparties and withdraws interbank lending. If other tested banks fail the stress test due to the losses on interbank funding during this process, the failing banks will continue to default and withdraw funds until no bank continues to default, and this round of contagion process ends. The above process will be repeated for the remaining banks.

Pass-fail criteria. For the solvency test based on macroeconomic scenarios, a bank would fail the test if its post-stress CET1 ratio, Tier 1 ratio or total CAR fall below regulatory requirements (the 2.5 percent capital conservation buffer and additional capital requirement for D-SIBs[①] included). For the solvency test based on sensitivity analysis, a bank would fail the test if its CAR falls below regulatory requirements after the shock. For the liquidity test, banks should counterbalance their negative funding gaps (where cash outflows exceed cash inflows) by liquidating eligible high-quality liquid assets or by using the eligible high-quality liquid assets as collaterals to obtain liquidity assistance from the PBC. A bank would fail the test if funding gaps remain after it has exhausted all of its eligible high-quality liquid assets. For the risk contagion stress test, a bank would fail the test if its CET1 ratio falls below 5 percent after the shock.

① Capital requirements for D-SIBs include additional capital requirement which need to be met with CET1. For banks which are identified as both G-SIBs and D-SIBs, the amount of additional capital they have to hold should be the higher of either the G-SIB or D-SIB requirments. The additional capital requiremnt is 1.5 percent for ICBC, BOC, CCB and 1 percent for ABC.

Table 2.2 GDP Growth Rates in the Solvency Stress Test Based on Macroeconomic Scenarios

Year	Mildly Adverse Scenario	Adverse Scenario	Severely Adverse Scenario
2022	3.90%	2.90%	1.80%
2023	4.20%	3.20%	2.86%
2024	4.50%	3.50%	3.17%

Note: Other macro indicators were calibrated by the macro econometric model.

Table 2.3 Scenarios for the Solvency Stress Test Based on Sensitivity Analysis

Risk Exposure	Stress Scenarios
Overall Credit Assets	• Shock 1: NPL ratio up by 100 percent[①] • Shock 2: NPL ratio up by 200 percent • Shock 3: NPL ratio up by 400 percent • Shock 4: 50 percent of special-mention loans converted to NPLs • Shock 5: 100 percent of special-mention loans converted to NPLs
Real Estate Financing	• Shock 1: NPL ratio of real estate development loans[②] up by 5 percentage points, and NPL ratio of housing purchase and other loans[③] up by 3 percentage points[④]. NPL ratio of real estate non-standard assets up by 5 percentage points and NPL ratio of real estate standard assets up by 3 percentage points • Shock 2: NPL ratio of real estate development loans up by 10 percentage points, and NPL ratio of housing purchase and other loans up by 6 percentage points. NPL ratio of real estate non-standard assets up by 10 percentage points, and NPL ratio of real estate standard assets up by 6 percentage points • Shock 3: NPL ratio of real estate development loans up by 15 percentage points, and NPL ratio of housing purchase and other loans up by 9 percentage points. NPL ratio of real estate non-standard assets up by 15 percentage points, and NPL ratio of real estate standard assets up by 9 percentage points
Loans to Micro businesses, SMEs and individual Businesses[⑤]	• Shock 1: NPL ratio of loans to micro, small- and medium-sized enterprises and individual businesses up by 200 percent • Shock 2: NPL ratio of loans to micro, small- and medium-sized enterprises and individual businesses up by 400 percent • Shock 3: NPL ratio of loans to micro, small- and medium-sized enterprises and individual businesses up by 600 percent
Local Government Financing Platforms[⑥]	• Shock 1: NPA ratio up by 5 percentage points • Shock 2: NPA ratio up by 10 percentage points • Shock 3: NPA ratio up by 15 percentage points
Concentration Risk	• Shock 1: The largest non-financial group client defaults, with a loss given default rate of 60 percent • Shock 2: The largest three non-financial group clients default, with a loss given default rate of 60 percent • Shock 3: The largest five non-financial group clients default, with a loss given default rate of 60 percent

(Cont)

Risk Exposure	Stress Scenarios
Default of Financial Counterparties	• Shock 1: The largest financial counterparty defaults, with a loss given default rate of 60 percent • Shock 2: The largest three financial counterparties default, with a loss given default rate of 60 percent • Shock 3: The largest five financial counterparties default, with a loss given default rate of 60 percent
Investment Losses	• Shock 1: 250 bps parallel upward shift in the yield curves of Treasury bonds and policy financial bonds (including bonds issued by the China Development Bank) • Shock 2: 400 bps parallel upward shift in the yield curves of non-policy financial bonds and interbank negotiable certificates • Shock 3: 400 bps parallel upward shift in the non-financial corporate bond yield curve • Shock 4: 10 percent losses on the notional amount of investment in SPVs • Shock 5: The above four shocks occur simultaneously
Bond Default	• Shock 1: The bond with the largest book value defaults • Shock 2: Top 3 bonds with the largest book value default • Shock 3: Top 5 bonds with the largest book value default • Shock 4: Top 10 bonds with the largest book value default
Credit Risk of Off-Balance Sheet Activities⑦	• Shock 1: sponsored off-balance sheet exposures accounting for 30 percent, with an expected loss given default rate of 90 percent • Shock 2: sponsored off-balance sheet exposures accounting for 40 percent, with an expected loss given default rate of 90 percent • Shock 3: sponsored off-balance sheet exposures accounting for 50 percent, with an expected loss given default rate of 90 percent

Note: ① Assuming that the initial NPL ratio is X%, up by n% means that the NPL ratio becomes X%(1+n%).

② Real estate development loans include land development loans and housing development loans.

③ Housing purchase and other loans include commercial housing phurchase loans, individual housing purhcase loans for residential purposes, operating loans for property management, operating loans for real estate leasing, real estate M&A loans, loans for real estate intermediate services, etc.

④ Assuming that the initial NPL ratio is X%, up by n percentage points means that NPL ratio becomes (X+n）%.

⑤ The standards for the classification of SMEs and micro businesses refer to the provisions in the *Notice on Issuing the Provisions on the Classification Standards for Small and Medium-sized Enterprises* published by the Ministry of Industry and Information Technology in 2011.

⑥ Risk exposures to local government financing platforms include loans to local government financing platforms, investment in fixed-income financing instruments issued by local government financing platforms and other financing support from on-balance sheet credit funds to local government financing platforms.

⑦ Off-balance sheet credit risk exposures include loan facilities equivalent to loans and transaction-related contingent exposures, such as bankers acceptance, financing guarantee and non-financing guarantee.

Table 2.4 Scenarios for the Risk Contagion Stress Test

Scenario 1	Potential spillovers are assessed under the assumption that tested banks default separately.
Scenario 2	It is assumed that non-bank banking financial institutions first default, then a tested bank withdraws part of its investment and relevant losses are directly deducted from its CET1 capital. Then potential spillovers are assessed when other tested banks default separately.
Scenario 3	It is assumed that securities and insurance firms first default, then a tested bank withdraws part of its investment and relevant losses are directly deducted from its CET1 capital. Then potential spillovers are assessed when other tested banks default separately.

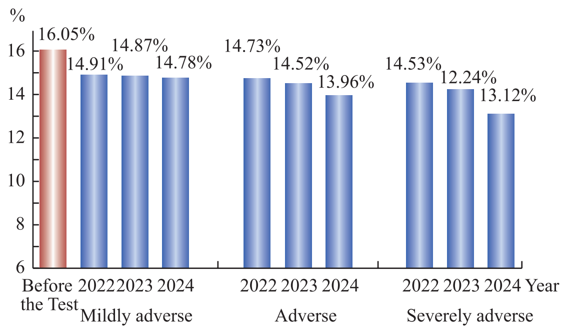
II. Results of the Solvency Stress Test

As of end-2021, the aggregate outstanding loans of 4008 tested banks registered RMB 168.71 trillion, aggregate NPL ratio registered 1.82 percent, and aggregate CAR registered 15.03 percent. Among them, the total outstanding loans of the 19 D-SIBs and 3989 non-D-SIBs registered RMB 120.22 trillion and RMB 48.49 trillion respectively, their aggregate NPL ratios registered 1.36 percent and 2.98 percent respectively, and their aggregate CAR registered 16.05 percent and 12.78 percent respectively.

1. Solvency Stress Test Based on Macroeconomic Scenarios

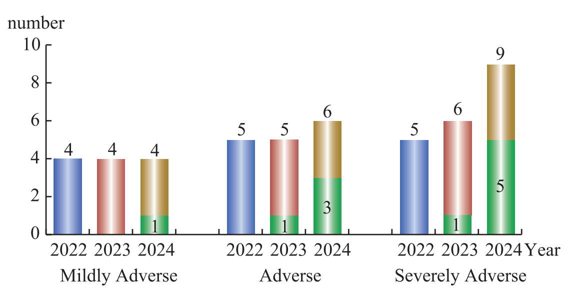
The 19 D-SIBs remain resilient to shocks as a whole. According to the results of solvency stress test based on macroeconomic scenarios, the 19 D-SIBs are of relatively strong capital adequacy and sound performance. As of end-2021, the aggregate CAR of the 19 D-SIBs was 16.05 percent. Under the mildly adverse scenario, their aggregate CAR would fall to 14.78 percent at the end of 2024; under the adverse scenario, their aggregate CAR would fall to 13.96 percent at the end of 2024; and under the severely adverse scenario, their aggregate CAR would fall to 13.12 percent at the end of 2024, which indicates that the 19 D-SIBs are resilient to macroeconomic shocks as a whole (Figure 2.20).

Figure 2.20 Overall CAR Results of the Solvency Stress Test Based on Macroeconomic Scenarios



There is a difference in the resilience among the 19 D-SIBs. Under the mildly adverse, adverse and severely adverse scenarios, 4 banks, 6 banks and 9 banks have failed the test respectively at end-2024. The number of banks that would fail the test at end-2024 will fall to 1, 3 and 5 under the mildly adverse, adverse and severely adverse scenarios respectively without considering the 2.5 percent capital conservation buffer requirement and the additional capital requirement for D-SIBs (Figure 2.21).

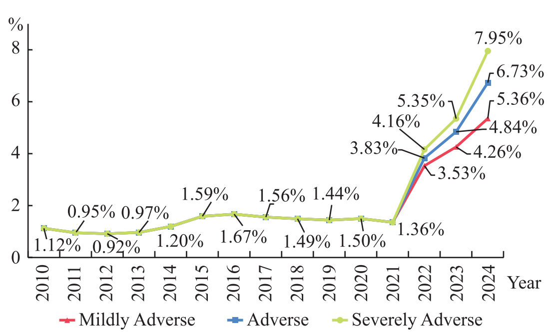
Figure 2.21 Number of Banks that Failed the Solvency Stress Test Based on Macroeconomic Scenarios



Note: The green column refers to the number of banks that failed the test without considering the capital conservation buffer requirement and additional capital requirement for D-SIBs.

Credit risk is the main factor affecting the capital adequacy level of the 19 D-SIBs. Under the mildly adverse, adverse and severely adverse scenarios, the tested banks would be faced with a deterioration of loan quality and a significant increase of the NPL ratio. As of the end of 2021, the aggregate NPL ratio of the tested banks registered 1.36 percent. Without considering the disposal of NPLs, the NPL ratio would increase to 3.53 percent, 4.26 percent and 5.36 percent at the end of 2022, 2023 and 2024 respectively under the mildly adverse scenario; to 3.83 percent, 4.84 percent and 6.73 percent respectively in the upcoming three consecutive years under the adverse scenario; and to 4.16 percent, 5.35 percent and 7.95 percent respectively under the severely adverse scenario (Figure 2.22). Banks will need to increase loan loss provisioning, which will significantly affect their capital adequacy level. The accumulated decrease of CAR in the upcoming three years would be 3.95 percentage points, 5.38 percentage points and 6.68 percentage points under the mildly adverse, adverse and severely adverse scenarios respectively.

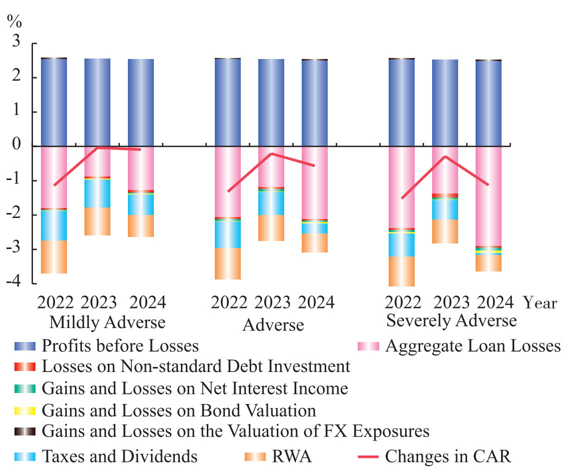
Figure 2.22 NPL Ratio Results of the Solvency Stress Test Based on Macroeconomic Scenarios



The impact of market risk on capital adequacy of the 19 D-SIBs is limited. Under the severely adverse scenario, as a result of the decline of short-term market interest rates, in the upcoming three years the deposit interest rate would decline by 17 bps cumulatively, interest rates on other interest-bearing liabilities and interest-earning assets would fall by 56 bps cumulatively, and the aggregate CAR would fall by 0.21 percentage point cumulatively due to the decreasing net interest margin of the tested banks. Fair value of bonds held by tested banks would decline due to changes of interest rates and widening of the credit spread, and their aggregate CAR would fall by 0.16 percentage point. Changes in foreign exchange rates have little influence on the CAR of tested banks (Figure 2.23).

Adequate provisioning and stable profitability could effectively alleviate the downside pressure on capital adequacy. The aggregate provision coverage ratio of the 19 D-SIBs was 233 percent at the end of 2021, far above the minimum regulatory requirement. Their average ROA stood at 0.88 percent, higher than the average level of the banking sector. Under the severely adverse scenario, 1.22 percentage points in the decrease of CAR in the upcoming three years would be presented as depletion of excess provisions, and profits before losses could promote CAR by 7.57 percentage points cumulatively.

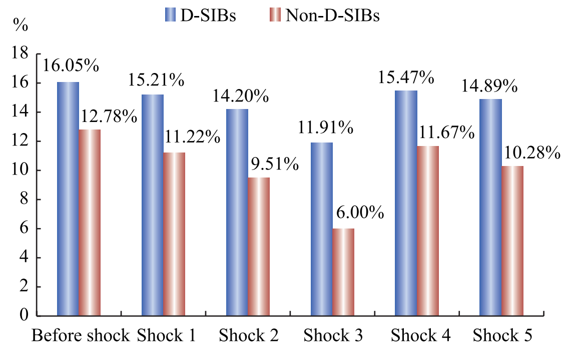
Figure 2.23 Contribution to Changes in the CAR



2. Solvency Stress Test Based on Sensitivity Analysis

The 19 D-SIBs are more resilient to credit quality deterioration, and other banks remain resilient to two shocks under this test. In the stress test on the risk of overall credit assets, the aggregate CAR of the 19 D-SIBs remains above 11.91 percent under all scenarios, showing strong resilience to credit risk. For the 3989 non-D-SIBs, if their NPL ratio rises by 100 percent, 200 percent and 400 percent, their aggregate CAR would drop to 11.22 percent, 9.51 percent and 6 percent respectively, and 1293, 1942 and 2571 banks would fail the test, accounting for 21.77 percent, 44.37 percent and 64.90 percent of the total assets of the 3989 non-D-SIBs respectively. If 50 percent and 100 percent of the special-mention loans deteriorate to NPLs, their NPL ratio would rise to 4.98 percent and 6.97 percent respectively, and CAR drop to 11.67 percent and 10.28 percent respectively, and in which case 1081 and 1549 banks would fail the test, accounting for 19.25 percent and 34.62 percent of the total assets of the tested banks (Figure 2.24, 2.25, 2.26). The test shows that given the current provision and capital adequacy levels, the 3989 non-D-SIBs could stay resilient to NPL increasing by 3.96 percentage points to 6.94 percent, keeping a 100 percent provision coverage ratio and 10.5 percent CAR.

Figure 2.24 Solvency Stress Test on the Risk of Overall Credit Assets Based on Sensitivity Analysis



NPL ratio up by 100 percent, 200 percent and 400 percent. 50 percent and 100 percent of special-mention loans deteriorate to NPLs

Figure 2.25 Number of Failing Banks among the 19 D-SIBs

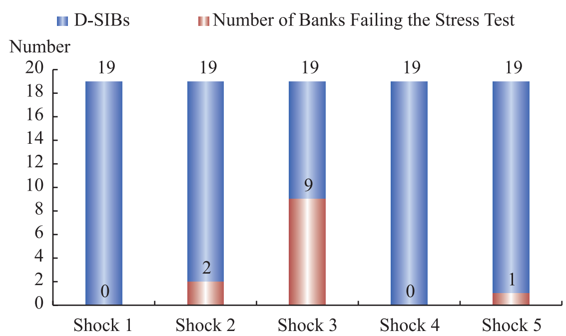
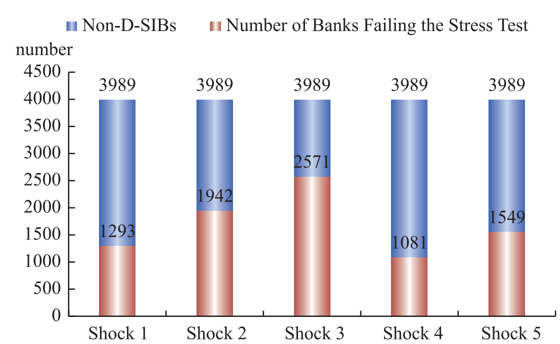


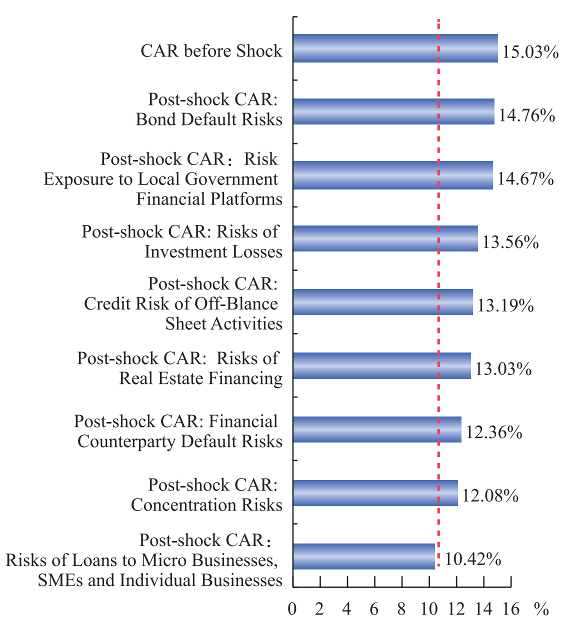
Figure 2.26 Number of Failing Banks among the 3989 Non-D-SIBs



Attention should be paid to risks of loans to micro businesses, SMEs and individual businesses, client concentration, financial counterparties and real estate financing, etc. If the NPL ratio of loans to micro businesses, SMEs and individual businesses rises by 600 percent, the aggregate CAR of all the tested banks would fall by 4.61 percentage points to 10.42 percent. If the largest five non-financial group clients or the largest five financial counterparties default with a loss given default rate of 60 percent, the aggregate CAR would fall by 2.95 percentage points to 12.08 percent, or by 2.67 percentage points to 12.36 percent, respectively. If the NPL ratios of real estate development loans and housing purchase and other loans rise by 15 percentage points and 9 percentage points respectively, the NPL ratios of real estate non-standard assets and standard assets rise by 15 percentage points and 9 percentage points respectively, the aggregate CAR of tested banks would fall by 2 percentage points to 13.03 percent (Figure 2.27).

There's limited impact of bond default risk and exposure to local government financing platforms on tested banks. If the top 10 bonds with the largest book value default, the aggregate CAR of all tested banks would fall by 0.27 percentage point to 14.76 percent. If the NPA ratio of funds providing to local government financing platforms rises by 15 percentage points, the aggregate CAR would fall by 0.36 percentage point to 14.67 percent.

Figure 2.27 Results of the Solvency Stress Test Based on Sensitivity Analysis in Key Areas (the most severe shocks)



III. Results of the Liquidity Stress Test

Tested banks are relatively resilient against liquidity shocks. The liquidity stress test was undertaken to assess impacts of stress factors to banks' cash flow gaps on both the asset and liability sides within a 7-day, 30-day and 90-day period respectively. The test results show that the overall liquidity of the tested banks was adequate. 96.73 percent and 93.09 percent of the 4008 tested banks passed the test under the mildly adverse and severely adverse scenarios, up by 0.22 percentage points and 0.34 percentage point from 2021 respectively. Among them, all the 19 D-SIBs passed the test under the mildly adverse scenario, and 4 failed the test under the severely adverse scenario.

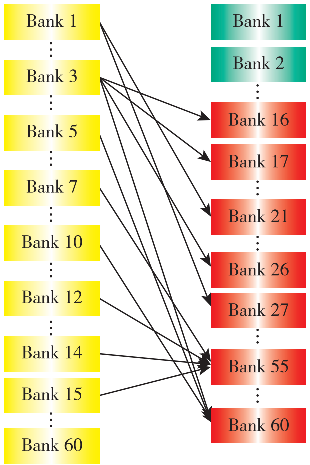
Banks with a heavy reliance on interbank funding are less resilient to liquidity shocks. The test applied a more prudent run-off rate of interbank funds than that of general deposits. According to the test results, banks that failed the test were highly dependent on interbank funding and faced greater liquidity pressures. Great attention should be paid to their asset-liability structures and liquidity risk management.

IV. Results of the Risk Contagion Stress Test

The vast majority of banks have the ability to withstand the default of a single bank, and the default of non-bank banking financial institutions has not significantly increased the interbank risk contagion. When only considering credit defaults among tested banks, 4 of the 60 tested banks would fail the test. If non-bank banking financial institutions default first, resulting in tested banks' losses on interbank investments, and then defaults occur among tested banks, the number of rounds of contagion would not increase, and the number of banks that would fail the test remains unchanged. Compared to the case where investment losses of non-bank banking financial institutions are not considered, the intensity of interbank risk contagion would not increase significantly.

The default of securities and insurance financial institutions has increased the interbank risk contagion to a certain extent. If securities and insurance financial institutions default first, resulting in tested banks' losses on interbank investments, and then defaults occur among tested banks, 7 tested banks would fail the test. Compared to the case where the default of securities and insurance financial institutions are not considered, there are only 3 more failing banks and the number of rounds of contagion remains unchanged.

Figure 2.28 Results of Risk Contagion under Scenario 3



Notes:
1. The institution serial number is randomly generated, irrelevant to factors such as size of the tested banks.
2. Institutions marked yellow represent default tested banks.
3. Institutions marked green represent tested banks that pass the test.
4. Institutions marked red represent tested banks that fail the test.

Special Topic 6 The Result Analysis of Central Bank Rating of Financial Institutions

In the second quarter of 2022, the PBC conducted the Central Bank Rating of Financial Institutions (hereinafter referred to as the Central Bank Rating) on 4392 banking institutions. The rating results are overall stable with controllable risk in the banking industry.

I. Results of the Second Quarter Central Bank Rating in 2022

The second quarter rating of 2022 covered 4392 banking institutions, including 24 large banks, 3992 small- and medium-sized banks and 376 non-bank institutions. The rating results span 11 levels, including level 1 to 10 and level D. The higher the level, the riskier the institution is. Level D refers to institutions that go bankrupt, are taken over or revoked. Level 1−5 is the "green zone" and level 6−7 is the "yellow zone". Institutions rated "green" and "yellow" are identified as safe institutions. Level 8-D is the "red zone", referring to the high-risk institutions. The rating results are shown in Table 2.5.

Table 2.5 Results of the Second Quarter Rating in 2022

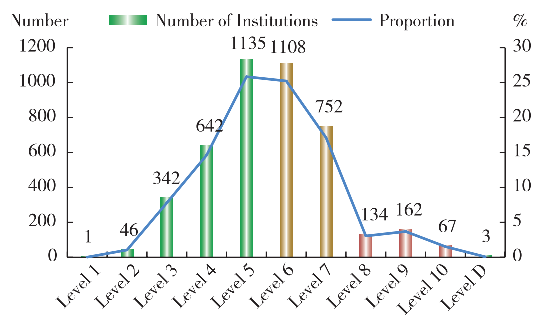
Category	Institution Type	Institution Number	Result
Banks	Development and policy banks	3	Level 1−7
	State-owned commercial banks	6	
	Joint-stock commercial banks	12	
	City commercial banks	125	Level 2−10
	Rural commercial banks	1599	Level 2−10
	Rural cooperative banks	23	Level 5−10
	Rural credit cooperatives	536	Level 2−10
	Village and township banks	1649	Level 3−10
	Private banks and others	21	Level 3−7
	Foreign banks	42	Level 2−6
	Subtotal	4016	−
Non-bank Institutions	Finance companies of corporate groups	254	Level 3−D
	Auto financing companies	25	Level 3−10
	Financial leasing companies	68	Level 3−10
	Consumer finance companies	29	Level 3−7

(Cont)

Category	Institution Type	Institution Number	Result
Non-bank Institutions	Subtotal	376	–
Total		4392	–

A total of 4026 institutions were rated level 1-7, accounting for 98.45 percent of the total assets. 2166 institutions were rated “green”, with an asset size of RMB 323.99 trillion, accounting for 89.49 percent of the total assets; 1860 institutions were rated “yellow”, with an asset size of RMB 32.43 trillion, accounting for 8.96 percent of the total; 366 institutions were rated “red”, with an asset size of RMB 5.61 trillion, accounting for 1.55 percent of the total (Figure 2.29). In general, the operation of China’s banking institutions is sound and risks are overall controllable.

Figure 2.29 Distribution of the Second Quarter Rating Results of 2022



Source: The PBC.

By institution type, large banks were rated with better results, while some rural small- and medium-sized institutions were relatively riskier. Among the large banks, 1 was rated level 1, 13 were rated level 2, 6 were rated level 3, 2 were rated level 4, 1 was rated level 6 and 1 was rated level 7. Among small- and medium-sized banks, foreign banks and private banks were rated with better results, with 90 percent and 52 percent rated “green” respectively, and no high-risk institutions. City commercial banks followed, with 66 percent rated “green” and 13 percent as high-risk institutions. Rural cooperative institutions (including rural commercial banks, rural cooperative banks, and rural credit cooperatives) and village and township banks were rated worst, with 217 and 118 institutions identified as high-risk institutions respectively, accounting for 92 percent of total high-risk institutions.

Broken down by region, existing risks in most provinces have been dissolved and regional financial ecology has been optimized. There’s no high-risk institution in regions such as Fujian, Guizhou, Hunan, Jiangsu, Jiangxi, Shanghai, Zhejiang and Chongqing. In Guangdong, Anhui and Beijing, over 60 percent of institutions were rated “green”. High-risk institutions in 15 provinces and cities remain in single digits.

II. Application of Results of Central Bank Rating

A classified management framework is established on the basis of rating results to make risk prevention and mitigation actions more targeted. For institutions rated level 1-7, the PBC has been carrying out early warning exercises to find out abnormal indicators and budding risks in a timely manner, and take measures to promote those indicators to return to normal, so as to prevent the risks from materializing at an early stage. For high-risk institutions rated level 8-D, the PBC has been adopting various early corrective measures such as “one-on-one” notifications, inquiries with senior executives, issuing risk reminders and rating opinions, so as to raise the consciousness and initiative of risk prevention of these institutions. Some regions have been chosen as the pilot ones to strengthen the hard constraint of early corrective actions for new high risk institutions within a given time limit, and conduct risk resolution once the goals of the actions have not been achieved.

The rating results are fully applied when the PBC is performing its duties, so as to make policies more targeted. Currently, the rating results are fully utilized in determination of the differentiated deposit insurance premium, the issuance of unsecured inclusive loans to micro-and small-sized enterprises, the approval of bond issuance by financial institutions, the Macroprudential Assessment program, the approval of central bank credit lines, the bidding for cash management of the state treasury, etc., so that the rating results could provide a scientific and reasonable evaluation of the operating and management capabilities and risk profiles of financial institutions, and play a role in effectively strengthening the macroprudential management and promoting financial institutions to operate prudentially.

Rating results are shared with regulatory authorities and local governments to enrich the application scenarios. The PBC informs local governments and financial regulatory authorities of the central bank rating results and specific conditions of financial institutions, so as to enhance the application of rating results in the regulatory area, promote the integration and sharing of risk information, and further improve the effectiveness of financial regulation and supervision. For example, the rating results could provide reference to the securities regulatory authority on major issues such as bank IPO and listing, private placement, etc. At the same time, the rating results also provide reference to the bidding for management of local fiscal funds.

Special Topic 7 Establishing the Risk Early Warning System for the Banking Sector and Mitigating Risks in Precautions

Since end-2020, the PBC has been developing an indicator system for risk monitoring and early warning, which targets banks in the safe zone, i.e., banks rated from category 1 to 7 by the central bank rating① on a quarterly basis. The system complements the backward-looking central bank rating program, which identifies high risk banks in an ex-post manner, and aims to prevent "disease" from materializing by detecting vulnerabilities in an ex ante manner.

I. Overview of the Early Warning Indicator System

Risk accumulation of high-risk institutions could be traced back. From the experience of recent resolution cases, high-risk financial institutions reveal themselves through worsening indicators. If these potential risks could be identified and mitigated from the outset, asset losses and resolution costs will be effectively decreased. The authorities, therefore, should remain on high alert to indicator worsening.

The system applies to banks with good rating performance. The PBC selects banks rated from category 1-7, the so-called safe zone, for the early-warning program. Upon identifying any worsening indicators or trends, the PBC will take prompt measures to intervene until such indicators improve to the accepted industry level, in order to prevent potential risks from materializing.

The monitoring and early warning system covers a set of indicators. The design of the system takes multiple factors into consideration, including features of domestic financial institutions, sources of potential risks, supervisory practice, comprehensiveness of the applicable indicators, data availability, and major risk events in recent years, etc. The risk indicators being monitored are classified into five categories: expansion risk, interbank risk, liquidity risk, credit risk and overall risk. The selection of indicators takes into consideration both the stock risks and the incremental risks, both the whole picture and the structural problems. Furthermore, the selected indicators give strong focus on the recent risky areas, such as negotiable instruments, interbank business, non-local business expansion, deposit taking via third party online platform or bank acceptance, etc.

Risk profiles of banks on the early warning list. From the fourth quarter of 2020 to the

① Covered banks fall into categories from 1-10 and category D based on their central bank rating results. Banks rated from 8-D are flagged as high risk.

fourth quarter of 2021, the PBC has completed five early warning exercises, and 274 warning-triggers were detected cumulatively. By indicator category, interbank risks and expansion risks were triggered by 224 times, accounting for 82 percent of all risk categories. By bank type, village banks and rural commercial banks were flagged 209 times, accounting for 76 percent of all bank types.

Figure 2.30 Distribution of Early Warnings by Risk Category

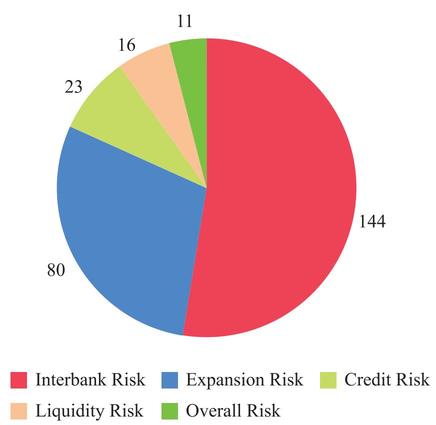
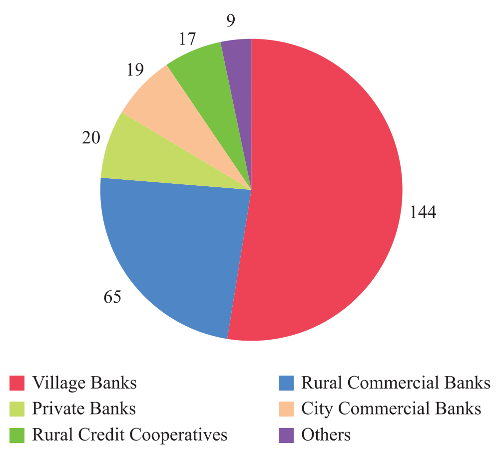


Figure 2.31 Distribution of Early Warnings by Bank Type



II. Prompt Corrective Measures Against Banks on the Early Warning List

Timely correction will be adopted for banks with worsening conditions. The PBC will take effective measures to address unsound practices or activities exposed in the early warning exercises at an early stage. For example, the PBC may raise concerns with the bank via a written document or direct conversation with the bank's management team. The PBC may request the bank to take targeted actions to remedy its activities leading to the worsening indicators. The PBC will enhance its risk monitoring for banks on the watchlist, and regularly monitor changes in their major business indicators. Additionally, the PBC will leverage results of the early warning exercises when rating the banking institutions, and downgrade the ratings of relevant banks as needed to reflect their real risk profiles.

Most banks have been delisted after rectification. A total of 187 banks had been identified from 274 warning-trigger cases since end-2020. Among them, 140 banks, or 75 percent of all banks on the list, have been removed from the watchlist as of the fourth quarter of 2021. The remaining 47 banks will continue their rectification in 2022. Central bank ratings for most banks on the list fall into categories 4-7, with a few in category 3. Timely corrective actions will be more effective when banks are relatively sound and have not fallen into distress, as over 70 percent of the banks that triggered warnings were removed from the watchlist in two quarters.

III. Next Steps

One important part of the financial stability mandate is to monitor risks in the banking sector and to take early actions when risks are still in infancy. By doing so, the economic and social costs of risk resolution could be minimized. Though it should be acknowledged that abnormal indicators do not necessarily lead to risk events, it is beneficial to leverage available database to identify emerging risks in a timely manner.

The monitoring and early warning system will be further improved. The indicators will be enriched and adjusted to improve its forward-looking and scientific nature as well as accuracy. In addition, the results of the central bank rating, stress testing, and on-site examination will be leveraged to more accurately picture risk profiles of listed banks, and to inform bank rectifications.

The results of the early warning exercises will be shared with other relevant authorities. The PBC will share the results with bank supervisor and local governments to inform their prompt corrective actions, in an effort to prevent potential risks from materializing with early identification and resolution measures.

Special Topic 8 Development and Regulation of Commercial Banks' Interbank Business in China

As an important tool of enhancing liquidity management, balancing surpluses and shortages of funds, and meeting payment and settlement needs, interbank business of financial institutions plays a significant role in optimizing the allocation of financial resources and maintaining efficient operation of the financial system. China's interbank business went through two "innovation-regulation" cycles. Interbank business was originally introduced to enable banks to manage their short-term liquidity positions. Over time, commercial banks started to provide quasi-credit financing via interbank business, and on-balance sheet interbank exposure grew rapidly. Since 2014, financial management authorities have launched a series of normative documents to regulate interbank activities. With these regulations in place, interbank business was guided back to its original purpose and achieved sound and regulated development.

I. Definition of Interbank Business

Interbank business refers to all types of transactions between commercial banks and other domestic and foreign financial institutions. Interbank business includes financing, investment, agent services and settlement businesses. In recent years, the financial authorities focused on the regulation of interbank financing businesses such as interbank funding, deposit, borrowing, payment, reverse repo agreements and repo agreements; as well as interbank investment businesses such as investment in interbank certificates of deposits, financial bonds and SPVs.

Interbank funding refers to uncollateralized borrowing and lending between financial institutions in the national interbank funding market. Financial institutions usually engage in interbank funding to balance surpluses and shortages of funds and meet short-term liquidity needs. Most interbank funding are for maturities of overnight or a week, with the longest being one year. No rollover is allowed.

Interbank deposit refers to a financial institution depositing money into and withdrawing money from another financial institution. Only qualified deposit-takers could take interbank deposits. Such deposits are conducted offline for either settlement or non-settlement purposes. Most interbank deposits are for maturities of 3 months to 1 year, with the longest being 1 year. No rollover is allowed.

Interbank borrowing refers to lending and borrowing of money between financial institutions. Under the current regulatory framework, only financial asset management companies, consumer finance companies, automobile finance companies, financial leasing companies and financial asset investment companies (unless otherwise provided in laws and regulations or by financial management authorities) can engage in interbank borrowing business. The maturities of such borrowing arrangements could be up to 3 years, and the interest rates are negotiated by borrowers and lenders through contracts.

Interbank payment refers to a financing activity that a commercial bank (custodian) acts on behalf of another financial institution (client) to make payments to designated enterprise, where the client institution commits to paying back the corresponding principal and interest to the commercial bank at a prearranged date. In principle, interbank payment should only be used for facilitating cross-border trade settlement by banking financial institutions. The business should be backed by authentic trade background and fiduciary payment.

Reverse repo (repo) refers to the financing activity that one financial institution buy (sell) certain financial assets from (to) another financial institution and agrees to sell back (buy back) these assets at a predetermined price later according to financial contracts. There are two types of such transactions: collateralized transactions and outright transactions. Collateralized transaction means that the borrower will provide securities to the lender as collateral and the borrower will get back the collateral when the borrowing is due with no change of the ownership of the collateral. Outright transaction means that the borrower sells the securities to the lender, and buys back these securities when the borrowing is due. The ownership of the securities involved will change between borrowers and lenders.

Interbank investment refers to financial institutions' purchase of financial assets (including financial bonds, subordinated bonds, interbank certificates of deposits, etc.) or SPVs (including banks' WMPs, trust investment schemes, securities investment funds, asset management schemes of securities firms, asset management schemes of fund managers and their subsidiaries, asset management products of insurance asset management institutions, etc.) from their peers for the purpose of investment.

Interbank certificate of deposit is a book-entry fixed-term certificate of deposit issued by deposit-taking financial institutions in the interbank market. Members of the interbank market, as well as fund management companies and products are allowed to trade and invest in such certificates. Deposit-taking financial institutions could set the amount and maturity of each issuance at discretion within their annual quota registered. The maturities should be no more than 1 year. The certificate could pay either a fixed or floating rate in reference to Shibor rate of the same maturity.

II. Development of Interbank Business

Based on its scale, structure, business model and functions, the development of interbank business in China has gone through two "innovation-regulation" cycles. Interbank business was originally introduced to enable banks to manage their short-term liquidity positions. Over time, commercial banks started to provide quasi-credit financing via interbank business, and on-balance sheet interbank exposure grew rapidly. After that, interbank business has entered a stage of sound development.

Introduced for short-term liquidity management. At the beginning of 1990s, irregular and illicit financing went rampant in funding market, and the PBC launched two dedicated campaigns to restore market order. In 1996, the interbank funding market was established, and interbank borrowing became a regulated online business to facilitate commercial banks to adjust short-term funding positions and improve liqudity management. At the beginning of its development, interbank business mainly took the form of interbank deposits and funding. With the major function of position adjustment between banks, interbank assets and liabilities remained limited in their size and accounted for only a small share of banking sector's assets and liabilities.

Rapid expansion of the quasi-credit business. After the outburst of the global financial crisis in 2008, credit of the banking sector expanded significantly. In 2009, the outstanding value of commercial bank loans grew by 33 percent. To better regulate the credit market, financial regulators took tougher regulations concerning credit lines, bank capital and loan-deposit ratio. As a result, traditional credit business of commercial banks was significantly influenced and it was difficult to deal with the huge amount of written loans. Against such background, commercial banks resorted to interbank business to move some loans out of their balance sheets by transferring them to other accounting items. Interbank business had turned into an asset-liability management instrument instead of a liquidity management tool through rapid innovation. In the beginning, some banks conducted "dual buyouts" of credit assets, which hid credit risks and cut down credit size. In December 2009, the CBRC banned such activity, and commercial banks turned to interbank payment as a new way of providing indirect financing to firms. In August 2012, the CBRC put interbank payment under regulation, requiring banks to comply with the *Accounting Law* and other regulations on corporate accounting standards. Moreover, reverse repo of non-standard assets such as bills, trust beneficial interests and loans were also common ways for commercial banks to save capital and circumvent regulations.

Rapid expasion of on-balance sheet interbank business. In terms of assets, investment in SPV grew at a compounded rate of over 60 percent from 2012 to 2016, reaching RMB 23.05 trillion by end-2016. For some joint stock banks, the outstanding value of such investment was more than two times the size of their loans. The underlying assets of these SPVs were mostly non-standard debt assets. In terms of liabilities, the PBC issued *Interim Measures for Management of Interbank Certificates of Deposits* in 2013 to promote market-based interest rate reform and help banks better manage their liquidity. Afterwards, the interbank certificate market developed rapidly. Outstanding value of interbank certificates increased from RMB 600 billion in 2014 to near RMB 14 trillion by end-2021.

Sound development. In 2017, the CBRC enhanced regulation over misconducts concerning interbank business such as illegal and unauthorized activities, regulatory arbitrage and circulation of funds within the financial sector without financing the real economy. In 2018, financial regulators issued *Guidelines on Regulating Asset Management Businesses of Financial Institutions* (hereinafter referred to as the new rule), as well as detailed implementation rules on the regulation of wealth management business. As a result, the size of interbank business went on a decline in an orderly manner, mitigating existing risks and preventing new ones. And channel business involving multi-tier embedded financial products notably decreased, alleviating the problem of funds distraction away from the real economy. By end-2021, outstanding value of interbank SPV investment plunged by 40 percent from its peak in 2016 to RMB 13 trillion.

III. Major Risks and Relevant Regulation in the Development of Interbank Business

In order to mitigate and prevent risks arising from rapid expansion of interbank business, the financial management authorities have launched a series of regulations to guide financial institutions to engage in interbank business in a rule-based way.

1. Improve the Structure of Interbank Business

Commercial banks' interbank business used to expand at a much faster pace than loans and deposits as interbank business was used widely to circumvent credit adjustment policy, which contributed to the elevated leverage ratio of banking sector. By end-2013, interbank assets and liabilities of banking financial institutions registered over RMB 21 trillion and near RMB 18 trillion respectively, increasing by 246 percent and 236 percent compared with 2009, which were growing 1.7 times and 1.9 times as fast as loans and deposits of the same period. In order to better regulate financial institutions' interbank business, the PBC launched the *Notice on Regulating Interbank Business of Financial Institutions* with other four authorities, providing that interbank liabilities should not exceed a third of a bank's total liabilities, and a financial institution's provision of financing to its peers should not exceed 50 percent of its tier 1 capital. The *Rules on Large Exposure of Commercial Banks* launched in 2018 further required that a commercial bank's exposure of financing to another financial institution should not exceed 25 percent of its tier 1 capital, and the scope of interbank financing was also expanded to include interbank credit extension such as interbank investment. Since 2019, interbank certificates of deposits have been regarded as part of interbank liabilities under the MPA of the PBC.

2. Ban on Illicit Guarantee in the Interbank Business

Banks used to invest in risky assets in restricted sectors via third-party guarantee in order to save capital. To solve this problem, the *Notice on Regulating Interbank Business of Financial Institutions* and other relevant regulations made it clear that interbank reverse repo or repo business should not involve a third party or even more counterparties, and provided that, when engaging in reverse repo as well as interbank investment, financial institution should not accept or provide direct or indirect, explicit or implicit credit guarantees from third-party financial institutions. Specifically, such guarantees may take the form of commitments to pay for the difference of expected returns, to repurchase defaulted assets, to provide liquidity support, and to sign agreements on buying certain assets now and selling them at a future date. Credit funds and interbank funds should not be used as guarantee, backstop or substitute for each other. Misconducts such as signing secret agreements and dual contracts are also prohibited.

3. Prohibiting Multi-tier Embedding of Interbank Investment

Before the launch of new rule, it was common for financial institutions to invest in other types of financial investment products, resulting in complex investment structures with multiple tiers and long transaction chains. Some business involved multiple sectors such as banking, securities, funds and insurance, making the financial system more vulnerable to cross-sector and cross-market risk contagion. The new rules launched in 2018 provided that financial institutions' SPV investment could invest in other financial products for only once. The "look-through" principle was adopted for SPV investment by implementing strict risk reviews and compliance checks on investment direction, and making sure the ultimate debtor is subject to unified regulatory requirements on credit limit and risk concentration. Meanwhile, the "substance-over-form" principle was followed in measuring RWA based on the nature of underlying assets to ensure accuracy.

4. Establishing Dedicated Operation Framework of Interbank Business

To enhance banks' internal control and risk management concerning interbank business, the CBRC issued the *Notice on Regulating Commercial Banks' Governance of Interbank Business* in 2014. The Notice provided that the headquarters (legal entity) of commercial banks should set up or designate a dedicated department to run interbank business. This department should be responsible for business authorization, credit extension, counterparty verification, business approval, contract signing and financial accounting. Meanwhile, other departments and branch offices should only be responsible for operational issues such as marketing, price enquiry, project initiation and maintenance of customer relations. Interbank investment in non-standard assets should be managed strictly according to the same standard as proprietary lending, which requires strict risk review, pre-investment investigation and post-investment management. Commercial bank headquarters should also establish a counterparty verification mechanism by putting all eligible counterparties on a white list, reviewing the credit risks of these counterparties on a regular basis, and making dynamic adjustments accordingly.

5. Enhancing Liquidity Risk Management of Interbank Business

Some banks used to support the growth of medium and long-term assets by taking short-term interbank liabilities or issuing and rolling over short-term interbank WMPs and certificates of deposit. To enhance liquidity risk management of interbank business, the CBRC issued *Guiding Opinions on Risk Prevention and Control of the Banking Sector*, requiring financial institutions to put interbank, investment, trust and wealth management businesses under the radar of liquidity risk monitor. Banks should set up liquidity threshold and liquidity management plan to reduce the reliance on interbank financing such as certificates of deposit. Regulators paid close attention to those institutions with severe maturity mismatches and high reliance on wholesale financing. Banks with rapid growth of certificates of deposit and certificates of deposit accounting for a large share of interbank liabilities were urged to cut the size of interbank financing to a reasonable level. In 2018, the CBIRC revised the *Administrative Measures on Liquidity Risk Management of Commercial banks*, implementing stricter standards on liquidity indicators such as liquidity matching ratio and adequacy ratio of high-quality liquid assets, with the purpose of preventing maturity mismatch.

Special Topic 9 Impact of Financial Digitalization on Small- and Medium-sized Banks in China

With growing integration of technology and finance in recent years, financial digitalization develops rapidly. Small- and medium-sized banks, with the help of Fintech, have built up digital management systems and improved digital management capability, which has greatly enhanced the availability and operational efficiency of financial services. However, at the same time, due to a lack of comparative advantages in technology and capital, small- and medium-sized banks, amid fierce competition in the banking sector, are faced with challenges in terms of operational and management models. To build a better structured banking system, it is necessary to strengthen the support and supervision of the digital development of small- and medium-sized banks while adhering to the differentiated development strategies of banks.

I.Exploration and Practice of Small- and Medium-sized Banks for Financial Digitalization

1. Focusing on Online Lending to Enhance Credit Availability

Small- and medium-sized banks rely on Fintech to conduct online business, simplify financing procedures, improve financing efficiency and reach out to more long-tail customers. The online lending business grew faster than other digital financial businesses. For example, a rural commercial bank launched a business model under which once a client signs the loan contract offline, he will be able to withdraw or repay the money via online self-service channels such as mobile banking within a period of three years. One online bank focused on long-tail customers whom traditional banking services barely covered. By the end of 2020, this online bank had provided services for more than 51 million people, issued online loans totaling RMB 300 billion and provided RMB 600 million of loans for over 70000 registered impoverished households with an average amount of such inclusive loans less than RMB 10000.

2. Establishing Digital Management System to Improve Risk Control Capability

Some small- and medium-sized banks use big data technology, combined with business advantages, to build data systems with their own characteristics to improve efficiency of business management. For example, one urban commercial bank built up an intelligent risk control scenario based on big data, knowledge graph and artificial intelligence technology, which was applied in the anti-fraud area to improve the scope and accuracy of personal credit investigation and reduce the cost of risk control. Another example is that one urban commercial bank established a risk rating data model and strategy, and a risk identification and control system featuring two lines of defense by both technology and people, so as to assist decision-making through big data and make up for deficiencies of traditional lending technologies.

3. Offline Financial Services Develop Intelligently to Improve Service Efficiency

With the advancement of financial digitalization, financial services are becoming more intelligent and self service-oriented. Small- and medium-sized banks further streamlined business process by relying on smart ATMs, paperless platforms, intelligent queuing and filling system, etc., thus significantly improving offline financial service efficiency. For example, smart ATMs of a rural commercial bank helped save 65 percent of the time spent on transactions on average, and the intelligent queuing and filling system reduced the average waiting and trading time of a client by 3.3 minutes and 2.7 minutes respectively. For another example, one urban commercial bank developed a robot to optimize process used in scenarios such as loan extension and client management, which saved more than 20000 hours of manpower every year while business operation accuracy was more than 95 percent and the business processing efficiency increased by more than 30 percent.

II. Challenges of Financial Digitalization to Small- and Medium-sized Banks

1. Intensified Competition from Other Banks: Traditional Business of Small- and Medium-sized Banks being Squeezed

As large banks expand their businesses to the sinking market via technological advantages, the traditional business of small- and medium-sized banks has been squeezed. Large banks, with advantages of scale and large amount of research and development input, have accelerated digital transformation and quickly built up advanced information systems and sound technological support. By the end of 2021, among 24 major financial institutions, 11 of them have set up Fintech subsidiaries. Large banks' capacities in risk prevention and client profiling have been continuously improved, attracting more clients. As a result, some customers of small- and medium-sized banks have switched to large banks and competition from other banks has been intensified.

2. Lack of Comparative Advantages: Unable to Invest in Financial Digitalization Sufficiently

Fintech such as artificial intelligence, blockchain, cloud computing and big data need support of infrastructures and high-quality professionals. Compared with large banks, small- and medium-sized banks do not enjoy scale effect, and do not have advantages in terms of capital, technology and talents. They are faced with high costs of inputs and huge pressures from operation and maintenance. Some banks have insufficient capital investment in Fintech, with less than 1 percent of revenues invested in Fintech, and some rural banks even cannot build the most basic online business system.

3. More Difficulties in Risk Management: Transformation of Traditional Risk Management Framework Needed

As a result of financial digitalization, risk management has moved from offline review, such as reviewing credit records, proof of income assets, to standardized online review based on big data risk control systems, and the risk control model has also changed from manual review to a combination of manual and algorithmic models. In some cases decisions are entirely made by the systems, which puts forward higher requirement for risk control models. Compared with large banks, small- and medium-sized banks lack advantages in technology and do not have a large database, and system loopholes exist in the review process of some online products, making it difficult to accurately identify risks.

4. More Reliance on Fintech Platforms: Insufficient Capacity to Operatie Independently

Constrained by technological weakness and lack of consumption scenarios, small- and medium-sized banks are less capable to attract clients online on their own. More than often they choose to cooperate with Fintech platforms to conduct online business. Some Fintech platforms make use of their technological advantages to control marketing channels and client outreach, and therefore the key procedures of risk control for credit products are depend on the platforms, weakening the ability of small- and medium-sized banks to attract clients and perform risk control on their own.

III. Next Steps

1. Adhere to Differentiated Development Strategy to Build a Beneficial and Complementary Banking System

Large-, medium-and small-sized banks will be guided to give full play to their own advantages and compete in different areas, and to formulate digital transformation strategies compatible with their business development strategies. Large state-owned banks, as financial pillar to the national economy, should take the lead in implementing national strategy and following macro adjustment policies. Joint-stock banks with flexible systems, sufficient incentives and fewer historical burdens, should focus on developing businesses in line with their own characteristics and expertise. Urban commercial banks can target local economy, small- and micro-sized enterprises and urban and rural residents, and pay more attention to financial demands of urban grassroots clients. Rural small- and medium-sized financial institutions should follow their market positions of supporting agriculture, rural areas and farmers as well as micro-and small-sized enterprises, enhance their ability to provide financial services and contribute to rural revitalization.

2. Reasonably Promote Digital Transformation with External Resources

The cooperation models between small- and medium-sized banks and technology companies should be improved, including clarifying the boundary of rights and responsibilities of both parties, strengthening the independent operation ability of small- and medium-sized banks, establishing and improving the comprehensive risk management system, and adhering to the principle that core business such as credit review and risk control should not be outsourced. In digitalizing small- and medium-sized rural financial institutions, provincial rural credit unions should provide better services, formulate digital transformation plans for the small- and medium-sized rural financial institutions within the province, enhance the sharing, promotion and application of technological achievements, and assist small- and medium-sized rural financial institutions to train and introduce Fintech professionals.

3. Use Technological Tools to Improve Regulation and Supervision on Financial Digitalization

Suptech should be applied comprehensively. Supervision should become more intelligent, remote-based and real-time, and the monitoring and management of small- and medium-sized banks should be enhanced. Penetrating supervision will be implemented on Fintech innovation, and risk monitoring and management will be "understandable, penetrating, controllable and well-managed". Regulations on Fintech companies will be rolled out to build a firewall between financial risks and technological risks.

Special Topic 10 The Stress Test on Liquidity Risk of Publicly Offered Funds

In January 2022, the PBC conducted its liquidity stress test on publicly offered funds to assess their liquidity risk management capacity under extreme redemption shocks.

I. Stress Test Profile

Sample. 8629 existing publicly offered funds as of end-2021 were selected for the test.

Model. The test was designed to assess the capacity of sample publicly offered funds for meeting redemption needs by observing their liquidity gaps in times of redemption under different liquidity stress scenarios. Net redemption rate was selected as a proxy for liquidity shocks to publicly offered funds and a simulation was made on potential redemption needs under different stress scenarios by using historical subscription and redemption data of different publicly offered funds. Assets held by publicly offered funds were classified into 14 types, each given a weight based on how liquid it is. The net liquidity-weighted assets were calculated for each fund by using their balance sheet data of total liquidity-weighted assets at end-2021 with deduction of liabilities occurring from pledged financing and fees charged for investment activities and daily operation. A fund will be considered to have passed the test if its net liquidity-weighted assets meet redemption needs under stress scenarios.

Stress scenarios. Depending on their different investment assets and strategies, publicly offered funds are categorized into 23 types such as stock funds, passive index funds and medium- to long-term bond funds, etc., with varying historical net redemption rates for each fund. Calibrated to its specific subscription and redemption data, each type of funds is tested under two scenarios, i.e. mild and severe redemption shocks, to find out its net redemption rates of a 10 percent and 5 percent confidence level respectively (Table 2.6).

Table 2.6 Redemption Shocks under Different Stress Scenarios

Type of Funds	Mild Stress Scenario	Severe Stress Scenario
	Net Redemption Rate (%)	Net Redemption Rate (%)
	VaR (0.1)	VaR (0.05)
Stock funds	30.49	42.31
Passive index funds	31.25	45.67
Enhanced index funds	28.39	43.55

(Cont)

Type of Funds	Mild Stress Scenario	Severe Stress Scenario
	Net Redemption Rate (%)	Net Redemption Rate (%)
	VaR (0.1)	VaR (0.05)
Stock hybrid funds	28.32	40.35
Balanced hybrid funds	21.65	29.44
Bond hybrid funds	37.61	52.81
Flexible asset allocation funds	32.35	49.97
Medium-to long-term bond funds	31.12	51.74
Short-term bond funds	53.8	71.78
Primary bond hybrid funds	38.45	52.57
Secondary bond hybrid funds	36.49	52.1
Passive index bond funds	50.42	67.41
Enhanced index bond funds	14.41	25.29
Money market funds	37.2	53.49
Stock long/short funds	43.27	56.16
Commodity funds	38.6	51.59
International (QDII) stock funds	24.93	39.61
International (QDII) hybrid funds	20.16	27.49
International (QDII) bond funds	28.62	39.93
International (QDII) alternative investment funds	24.54	35.25
Stock FOFs	36.65	37.02
Hybrid FOFs	22.66	35.43
Bond FOFs①	-	-

Note：① Bond FOFs are not included due to the inadequacy of their subscription and redemption data.
Source: Wind.

II. Results

Stress test results indicate overall strong resilience to liquidity risk in publicly offered funds in China. Only one short-term bond fund failed the test under the mild stress scenario, accounting for 0.01 percent of the total, almost the same as the previous year. 83 funds failed the test under the severe stress scenario, accounting for 0.96 percent of the total, up by 12 funds and down by 0.24 percentage point year on year (Table 2.7).

Table 2.7 Number and Percentage of Failed Funds

Types of Funds	Number of Sample Funds	Number of Failed Funds		Failed Funds as a Percentage of Its Type (%)	
		Mild	Severe	Mild	Severe
Stock funds	483	0	0	0.00	0.00
Passive index funds	1017	0	2	0.00	0.20
Enhanced index funds	149	0	0	0.00	0.00
Stock hybrid funds	1575	0	0	0.00	0.00
Balanced hybrid funds	20	0	0	0.00	0.00
Bond hybrid funds	604	0	1	0.00	0.17
Flexible asset allocation funds	1497	0	2	0.00	0.13
Medium-to long-term bond funds	1677	0	0	0.00	0.00
Short-term bond funds	203	1	57	0.49	28.08
Primary bond hybrid funds	89	0	1	0.00	1.12
Secondary bond hybrid funds	409	0	8	0.00	1.96
Passive index bond funds	157	0	11	0.00	7.01
Enhanced index bond funds	1	0	0	0.00	0.00
Money market funds	333	0	0	0.00	0.00
Stock long/short funds	25	0	1	0.00	4.00
Commodity funds	30	0	0	0.00	0.00
International (QDII) stock funds	99	0	0	0.00	0.00
International (QDII) hybrid funds	38	0	0	0.00	0.00
International (QDII) bond funds	0	0	0	0	0
International (QDII) alternative investment funds	17	0	0	0.00	0.00
Stock FOFs	1	0	0	0.00	0.00
Hybrid FOFs	204	0	0	0.00	0.00
Bond FOFs	1	0	0	0.00	0.00
Total	8629	1	83	0.01	0.96

Chapter III

Building the Systemic Financial Risk Prevention and Mitigation System

In 2021, the international community continuously improved the macroprudential policy framework, pushed forward the implementation of international financial regulatory reforms, proactively addressed the shock from Covid-19 pandemic, achieved a good balance between responding to Covid-19 pandemic and maintaining mid-and long-term financial stability, and made efforts to address vulnerabilities of NBFI and other sectors exposed during the pandemic. Based on international experiences, China continued to improve the systemic financial risk prevention and mitigation system, strengthened the monitoring and assessment of systemic risks, and enhanced the macro-policy coordination.

I. Progress on the Implementation of International Financial Regulatory Reforms

1. Ending "Too Big to Fail"

Updating the list of G-SIBs. In November 2021, the FSB updated the list of G-SIBs based on the end-2020 data. 30 banks were designated as G-SIBs (Table 3.1) and the list was the same as that in 2020, while the buckets of specific banks were changed. JP Morgan Chase moved from bucket 3 to bucket 4. BNP Paribas moved from bucket 2 to bucket 3. Goldman Sachs moved from bucket 1 to bucket 2. The designated G-SIBs in the annual updated list in every November will be subject to higher capital buffer requirements 14 months later.

Table 3.1 The Updated List of G-SIBs

Bucket (Higher Capital Buffer Requirements)	G-SIBs in Alphabetical Order Within Each Bucket
5 (3.5%)	(Empty)
4 (2.5%)	JP Morgan Chase
3 (2.0%)	BNP Paribas
	Citigroup
	HSBC
2 (1.5%)	Bank of America
	Bank of China
	Barclays
	China Construction Bank
	Deutsche Bank
	Goldman Sachs
	Industrial and Commercial Bank of China
	Mitsubishi UFJ FG

(Cont)

Bucket (Higher Capital Buffer Requirements)	G-SIBs in Alphabetical Order Within Each Bucket
1 (1.0%)	**Agricultural Bank of China**
	Bank of New York Mellon
	Credit Suisse
	Groupe BPCE
	Groupe Crédit Agricole
	ING Bank
	Mizuho FG
	Morgan Stanley
	Royal Bank of Canada
	Santander
	Société Générale
	Standard Chartered
	State Street
	Sumitomo Mitsui FG
	Toronto Dominion
	UBS
	UniCredit
	Wells Fargo

Source: *2021 List of Global Systemically Important Banks* by the FSB, Nov.2021.

2. Promoting Effective Resolution Regime

Pushing forward the implementation of TLAC requirements steadily. All G-SIBs not headquartered at EMEs have already met the 2022 requirements of 18 percent of the RWA and 6.75 percent of the leverage ratio denominator in advance. The implementation of TLAC requirements of G-SIBs headquartered at EMEs made great progress, namely China's release of the external TLAC requirements. The TLAC issuance has decreased due to the impacts of Covid-19 pandemic. About USD 155 billion of TLAC eligible instruments were issued in the second half of 2020, while about USD 290 billion of TLAC eligible instruments were issued in the first half of 2021, both of which were less than the USD 205 billion issued in the second half of 2019 and USD 305 billion issued in the first half of 2020. The implementation of internal TLAC requirements was less advanced and approaches to the distribution of TLAC resources in a group differed across jurisdictions. Many G-SIBs began to disclose their TLAC levels while less information about internal TLAC and the hierarchy of loss absorption at subsidiaries was disclosed.

Promoting the implementation of the *Key Attributes of Effective Resolution Regimes*

for Financial Institutions. According to FSB's evaluation, the implementation progress of the *Key Attributes of Effective Resolution Regimes for Financial Institutions* is uneven across sectors. Implementation in the banking sector is most advanced, and all G-SIBs have completed their 2021 RAP. Efforts are still needed to improve the arrangements for banks' operational continuity and access to financial infrastructures in resolution. As for the insurance sector, there're resolution power gaps about asset transfer and bail-in in some jurisdictions, and the development of resolution regimes in the insurance sector are mainly targeted to the previously designated G-SIIs. Considering the potential formal cessation of G-SIIs designation in 2022, the FSB will explore the applicable scope of the resolution regime in the insurance sector together with IAIS. As for CCPs, all CCPs identified as systemically important in more than one jurisdiction have established their CMGs and developed resolution plans. Since the EU *Bank Recovery and Resolution Directive* came into effect in February 2021, home jurisdictions of 13 CCPs have all established the legal framework for CCP resolution.

3. Addressing Vulnerabilities of NBFI

Keeping on monitoring the NBFI system. In December 2021, the FSB published the *Global Monitoring Report on Non-bank Financial Intermediation 2021* based on the end-2020 data covering 29 jurisdictions. Based on the broad measure, global NBFI grew by 7.9 percent to USD 226.5 trillion by the end of 2020, accounting for about 48.3 percent of total financial assets in participating jurisdictions. Based on the narrow measure, global NBFI grew by 7.2 percent to USD 63 trillion, accounting for 13.6 percent of total financial assets in corresponding jurisdictions. China had the third largest narrow measure of USD 9.3 trillion, following the U.S. with the largest narrow measure of USD 18.9 trillion and the EU with the second largest narrow measure of USD 15.4 trillion.

Enhancing the resilience of NBFI. First, enhancing the resilience of MMFs. MMFs are susceptible to large scale redemptions and may cause asset fire sales. To address this vulnerability, the FSB published the *Policy Proposals to Enhance Money Market Fund Resilience* in October 2021, which proposed policy recommendations such as imposing on redeeming investors the cost of their redemptions, putting forward requirement for capital buffer and minimum balance at risk, increasing liquidity requirements, etc. Second, addressing the potential problem of margin mechanism. Against the backdrop of Covid-19 pandemic, global financial market fluctuated dramatically, and large margin calls tested the liquidity management capacities of market participants. The CPMI, IOSCO and BCBS jointly carried out a survey on margin practices, whose results show that there's great difference in the capacities of market participants to meet margin calls, and this could amplify the market stress. In order to address this, relevant SSBs proposed to enhance the transparency of margin variation rules, and to introduce a countercyclical adjustment mechanism into the rules.

4. Addressing Climate-related Financial Risks

The international community has made great efforts on climate-related risk management.

In July 2021, the FSB released the *Roadmap for Addressing Climate-related Financial Risks*, which required to improve the firm-level information disclosure of climate-related risk management, consolidate related data foundations, strengthen climate-related risk monitoring, and develope the regulatory and supervisory toolkit for climate-related vulnerabilities. In November, the BCBS released the *Principles for the Effective Management and Supervision of Climate-related Financial Risks* (consultative), which guided banks to manage climate-related risks from the perspectives of corporate governance, internal control framework, capital and liquidity adequacy, risk management process, management monitoring and reporting, and provided recommendations on principles for the supervision of climate-related financial risks. NGFS, combining climate and macroeconomic models, developed a set of comprehensive climate scenarios based on the heating goals and intensity of policy transition, which could provide a foundation for jurisdictions to carry out climate scenario analysis and stress tests. In November, the IFRS announced the establishment of the ISSB to explore the development of a globally accepted climate-related regulatory reporting standards.

5. Exploring the Regulation on Crypto-assets

In recent years, the international community has continued to pay attention to the potential risks that crypto-assets may pose to financial stability. Crypto-assets could impact the traditional financial system through transmission channels such as direct exposures, wealth effects, confidence effects, and payment and settlement mechanism. Potential risks and regulatory gaps of Global Stablecoin[①] (GFC) have been a particular concern. In October 2020, the FSB released 10 high-level recommendations on the regulation and supervision of GFC, which suggested regulators to be equipped with sufficient tools and power to implement functional supervision, and required GFC to establish a sufficient governance framework and risk management mechanism, and develop appropriate recovery and resolution plans. In June 2021, the BCBS issued a consultative document about prudential treatment of crypto-asset exposures, which classified crypto-assets into two groups by their form, underlying assets and contract protocols, etc. As for crypto-assets with lower risks, related RWA for credit risks shall be calculated generally according to the existing Basel III framework. As for crypto-assets with higher risks, a more simple and conservative approach of 1250 percent risk weight shall be applied. In October 2021, CPMI and IOSCO publicly asked for opinions from market participants to explore to apply the *Principles for Financial Market Infrastructures* to stablecoins with similar transfer and payment functions as financial market infrastructures.

6. Monitoring the Implementation of International Regulatory Reforms

First, most jurisdictions have implemented

① Stablecoin is a crypto-asset that aims to maintain a stable value relative to a specified asset, or a pool or basket of assets. GSC is a stablecoin with a potential reach and adoption across multiple jurisdictions and the potential to achieve substantial volume.

the leverage ratio, NSFR and large exposure requirements of Basel III, but implementation of some finalised reforms published in 2017 is still at a very early stage. Second, implementation of the *FSB Principles and Standards for Sound Compensation Practices* is more advanced for banks than for the insurance and asset management sectors. Third, implementation progress of the OTC derivatives market reforms in recent years has been limited. Fourth, the adoption of LEI is further expanded. By the end of 2021, 33 jurisdictions had been authorized to issue LEIs and over 2.04 million entities had received their LEIs.

7. Continuing to Enhance the Policy Coordination in Response to the Covid-19 Pandemic

The FSB reviewed and evaluated policy response to the pandemic in member jurisdictions. The result shows that most policies have taken fully use of the flexibility within the international standards, such as the release of CCyB and applying the sovereign risk weight to loans guaranteed by the governments. However, some policies exceed the extent of flexibility and may impact the effectiveness of international standards. Meanwhile, the FSB analysed the exit of policies. The result shows that too early exit will weaken the economic recovery momentum and cause shock on financial stability, but too late exit will lead to the accumulation of financial vulnerabilities such as asset mispricing, improper allocation of financial resources, elevated debt level and rising moral hazard, etc. In order to coordinate the orderly policy exit in different jurisdictions, the FSB released the *COVID-19 Support Measures: Extending, Amending and Ending* in 2021, which proposes to reduce the scope of support to improve policy accuracy, adjust the support application approaches, and make the terms on which support is provided progressively less generous, so as to gradually withdraw from support measures.

II. Major Economies' Practices

1.United States

Monitoring and assessing systemic risks. The Federal Reserve published its *Financial Stability Report* in November 2021 to assess the status of financial stability and vulnerabilities in the U.S. since 2021. The report indicates that prices of risky assets in the U.S. generally rise and most valuations are high by historical standards. Vulnerabilities from business and household debt have largely returned to the pre-pandemic level. Leverage remains low in banks and broker-deals while high in life insurance companies and hedge funds. Funding risks at domestic banks remain low but structural vulnerabilities persist at some types of MMFs, bond and bank loan mutual funds and the stablecoin sector. The near-term risks to financial system in the U.S. include: a potential worsening of the public health situation may result in a sharp reduction in business and household confidence; a sharp rise in interest rates could slow the pace of economic recovery and lead to sharp declines in asset valuation; adverse developments in emerging market economies spurred by a sudden and sharp tightening in financial conditions could also spill over to the U.S.; a slower-than-expected recovery in Europe could trigger financial stresses and pose risks to the U.S. because of strong transmission channels.

Conducting stress tests. The Federal Reserve published the result of Dodd-Frank Act Stress Tests (DFAST) participated by 23 large banks in June 2021. The test result indicates that all banks pass the tests with adequate capital to absorb losses. In the severely adverse scenario, a severe global recession occurs with exacerbated risk aversion and increasing fluctuation of financial asset prices. The U.S. real GDP falls 4 percent to its trough in the third quarter of 2022, and unemployment rate climbs to a peak of 10.75 percent in the third quarter of 2022. Under this scenario, the aggregate CET1 ratio of participating banks declines from 13.0 percent at the end of the 2020 to a minimum of 10.6 percent, still higher than twice of the required minimum level (4.5 percent), and the aggregate losses are projected to be USD 474 billion. According to the test results, all temporary dividend and share repurchase restrictions for participating banks expired on June 30, 2021, and they were subject to the stress capital buffer (SCB) requirements beginning from October 2021.

Improving the macroprudential policy framework. Alongside with the economic recovery, some temporary regulations in response to the Covid-19 pandemic return to normal, such as ending the emergency lending facilities, the expiration of exemption measures to supplementary leverage ratio (SLR) requirements as scheduled, capital regulation on large banks back to normal, and the expiration of temporary dividend and share repurchase restrictions for large banks according to stress test results. Besides, regulators also take other policy actions: expanding the scope of financial institutions that should implement net settlement to reduce financial risks and improve efficiency; developing the guidance on increasing cooperation between banks and third parties like fintech companies to help banks to evaluate risks related to the businesses of fintech companies; an interagency statement on standardizing crypto-asset regulation and a relevant roadmap; strengthening information sharing of cyber security incidents, and issuing regulations to require banks to promptly report to regulators after major cyber incidents occur.

2.EU

Monitoring and assessing systemic risks. The ECB published its *Financial Stability Review* in November 2021. It indicates that improved economic conditions have reduced near-term risks to financial stability, but vulnerabilities ahead in the mid-term build up. First, due to economic recovery and favourable financing conditions, near-term sustainability concerns of sovereign and corporate debt have been alleviated, but high debt level increases vulnerabilities in the mid-term. Second, Euro area banks' profitability has improved but is still lower than that in other jurisdictions. With the withdrawal of government support measures, the quality of banks' assets is worthy of attention, and there still remain several structural problems such as low cost-efficiency, limited revenue diversification and compressed margins in a low interest rate environment. Third, continued exuberance leaves parts of real estate and financial markets increasingly susceptible to corrections. Fourth, a rapid deepening of green financial markets continues, but greenwashing risks warrant monitoring. As near-term risks fall and mid-term risks rise, policies are also shifting from providing short-term support towards addressing mid-term vulnerabilities, and strengthening the regulatory framework in both the bank and non-bank financial sector is crucial for the stability of the financial system.

Conducting stress test. The EBA published the results of EU-wide bank stress test in July 2021. 50 banks from 15 jurisdictions participated in the test, covering 70 percent of total banking assets. The adverse scenario envisages that real GDP in the EU will further decline (by a total of 3.6 percent in a three-year horizon), unemployment rate will jump to 12.1 percent, prices of residential and commercial real estate will drop dramatically, and interest rates will keep decreasing. Under this scenario, sample banks remain resilient with the weighted average CET1 ratio falling to 10.2 percent from 15.0 percent at the end of 2020, mainly due to credit losses and shrinking revenues.

Improving the macroprudential policy framework. ECB confirmed the Pillar 2 guidance for capital requirements based on the latest stress test results. Some jurisdictions adjusted their requirements on CCyB, SyRB and capital surcharge for systemically important institutions. In order to address the rising vulnerabilities in the real estate market, some jurisdictions increased the risk weights for real estate loans, while others strengthened the limits on LTV and DSTI. Moreover, the ECB also improved relevant regulations to safeguard the long-term resilience of the financial system, including legislative proposals for the EU-wide implementation of the final set of Basel III reforms, adoption of the "Solvency II review package" proposing to amend the Solvency II Directive and introduce a new Insurance Recovery and Resolution Directive, and enhancing the regulation on non-bank financial institutions.

Monitoring the non-bank financial intermediation. The ESRB published its *EU Non-bank Financial Intermediation Risk Monitor* in August 2021. By the end of 2020, the EU non-bank financial intermediation measure totalled about EUR 39.4 trillion[①], an increase of 1.5 percent compared with end-2019. The non-bank financial intermediation is faced with both cyclical and structural risks. Cyclical risks include uncertainty of economic recovery pace in Europe and the whole world, rising indebtedness and relevant credit risks in corporate and public sector, potential disorderly market correction due to decoupling between a strong increase in asset prices and an uneven economic recovery, and high liquidity risks in some markets. Structural risks include rising liquidity risks and maturity transformation risks in some non-bank financial intermediation (including investment funds) and rising leverage ratios in some investment funds (including hedge funds), risk contagion due to high interconnectedness within non-bank financial intermediation, across sectors and across regions, and the increasing vulnerabilities in non-bank financial intermediation due to the long last low interest rates.

3. United Kingdom

Monitoring and assessing systemic risks. The Financial Policy Committee of Bank of England published its *Financial Stability Report* in December 2021. The report claims that the UK

① Data of United Kingdom is not included.

and global economies have continued to recover from the impacts of the pandemic, but uncertainty over risks to public health and the economic outlook remains. To be specific, UK banks' capital and liquidity positions remain strong and have sufficient resources to continue to support lending to the economy. UK households' finances have remained resilient although the furlough scheme and payment deferral on loans ended. Although house prices have grown fast, aggregate mortgage debt relative to income has remained stable and significantly below levels seen just prior to the global financial crisis. As the economy has recovered and government support has been withdrawn, business insolvencies have increased somewhat but remain below pre-Covid levels, thus the increase in indebtedness has been moderate in aggregate. Global debt vulnerabilities remain material and may affect UK. Risk-taking in certain financial markets remains high, and risks in leveraged loan markets globally continue to increase.

Conducting stress tests. The Bank of England published the result of the solvency stress test participated by 8 large banks (including building societies) in December 2021. A severe macroeconomic scenario is assumed, where a deep recession of global economy continues, interest rates remain low, asset prices fall dramatically and unemployment rate rises sharply. Under this scenario, all banks pass the test with aggregate CET1 ratio falling from 15.9 percent at end-2020 to its lowest 10.5 percent, and leverage ratio falling from 5.7 percent to 4.8 percent, higher than their reference rates of 7.6 percent and 3.7 percent, respectively. One of the key drivers of the capital drawdown for the banking system is credit impairments, which decrease CET1 ratio by 4.9 percentage points.

Improving the macroprudential policy framework. Vulnerabilities in UK financial system have gone back to a level before the pandemic, but there continues to be uncertainty about the evolution of the pandemic and the economic outlook. Should downside risks crystallise, the economy could require more support from the financial system. The FPC is therefore increasing the UK CCyB rate from 0 to 1 percent. This rate will come into effect from 13 December 2022. If the UK economic recovery continues and no material change in the outlook for UK financial stability occurs, the FPC would expect to increase the rate further to 2 percent in the second quarter of 2022. That subsequent increase would be expected to take effect in the second quarter of 2023.

III. China's Practices

In 2021, China continued to enhance the policy cooperation for financial reform and development, strengthen the macroprudential management regimes and policy framework, improve risk monitoring and identification, and proactively adopt a number of macroprudential policies.

Further enhancing financial stability policy cooperation. The FSDC Office has been further improving the institutional arrangements. First, a financial risk accountability mechanism was established. If there's any misconduct in the formation and resolution of significant financial risks, entities and persons liable shall be hold accountable by the FSDC in accordance with procedures. Second, a reporting mechanism to crack down on evasion of repayment obligations was established. Local governments, competent authorities and financial management authorities shall report illegal acts such as evasion of repayment obligations in bond market, conduct self-discipline punishment to issuers and intermediaries, and disclose relevant information to the public in accordance with laws and regulations. The FSDC Office local cooperation mechanism should urge the branches of financial management authorities, local state-owned enterprises and governments to make their best efforts to implement these requirements. Third, risk information sharing was enhanced. Local offices of FSDC member authorities or financial management authorities shall, in accordance with their regulatory mandates, report information of financial performance and risks to local governments and urge relevant parties to take their respective responsibilities to safeguard regional financial stability. Fourth, self-discipline of different sectors was regulated by encouraging self-discipline organizations to proactively perform their mandates and strengthening the coordination between self-discipline organizations and financial management authorities. Under the guidance of the FSDC Office, the local coordination mechanism promoted the implementation of assignments of the CPC Central Committee and the State Council, strengthened coordination with local financial work authorities, promoted the improvement of local financial ecology, maintained regional financial stability, and achieved effective outcomes of important tasks such as improving financial services to the real economy, mitigating financial risks and deepening regional financial reforms.

Strengthening the monitoring and assessment of systemic risks. The PBC continued to monitor risks in the banking, securities and insurance sectors as well as financial markets so as to ensure early warning and proper response. Central bank rating of financial institutions was steadily carried out on a quarterly basis, covering more than 4000 financial institutions, so as to identify risks in the banking sector. Stress tests on all the over 4000 banking financial institutions were conducted so as to make timely risk warnings to financial institutions and to guide them to operate prudently. A banking risk early warning index system and a mechanism for regular tracking and analyzing banks with potential risks were explored, so as to identify symptoms of risks in a timely manner. Stress tests on liquidity risks of publicly offered funds were continued, and the financial market stress index was used to monitor the risks in the stock, bond, money and foreign exchange markets. Off-site examination and on-site inspection were actively conducted on insurers to closely monitor risk profiles of less solvent insurers. Risk monitoring on large problem firms was continued and analysis of macroeconomic situation, regional financial risks and trends in specific sectors such as the real estate sector was enhanced. Stress tests on climate-related risks in some key provinces were explored to analysis potential impacts of rising costs in carbon intensive industries to financial risks.

Issuing the *Guidance on Macroprudential Policies (Trial)*. In December 2021, the PBC issued the *Guidance on Macroprudential Policies (Trial)* to clarify key elements for establishing and improving the macroprudential policy framework in China. First, relevant concepts of macroprudential policies are clarified, including the macroprudential policy framework, systemic financial risks, and mechanism of macroprudential management. Second, it elaborates the main contents of the macroprudential policy framework, including policy objectives, assessment of systemic financial risks, policy tools, transimission channels and governance arrangements, etc. Third, it asks for supportive measures and policy coordination to ensure the better implementation of macroprudential policies. The issuance of the *Guidance* is a key measure in the establishment and improvement of the macroprudential policy framework in China, which is conducive to the establishment of a smooth functioning governance mechanism for macroprudential policies, pushes forward the formation of a coordinated mechanism for systemic financial risk prevention and mitigation, and facilitates healthy development of the financial system.

Strengthening the regulation on financial holding companies. In order to continuously improve the regulatory framework of financial holding companies, the *Interim Regulations on Filing-based Management of Financial Holding Companies' Appointment of Directors, Supervisors and Senior Executives* was published in March 2021. It clarifies that directors, supervisors and senior executives of financial holding companies shall be equipped with competent knowledge, experience and capacity to form a professional management team, so as to prevent risks associated with key office holders and regulate the operation of companies. The PBC, in accordance with relevant laws and regulations, has been carrying out market entry management and daily supervision of financial holding companies, and prudently facilitating eligible non-financial enterprises to set up financial holding companies in an orderly way, so as to effectively separate their financial and non-financial business lines, prevent risk contagion and achieve centralized management of financial shareholding. In March 2022, the PBC approved the establishment of China CITIC Financial Holdings (in preparation) and Beijing Financial Holdings Group. In September 2022, the PBC approved the establishment of China Merchants Financial Holdings.

Improving the regulation on SIFIs. The PBC and CBIRC jointly published the first D-SIB list in October 2021. 19 banks are designated as D-SIBs consisting of 6 state-owned commercial banks, 9 joint-stock commercial banks and 4 city commercial banks. The *Supplementary Regulatory Rules for Systemically Important Banks (Trial)* was published simultaneously to put forward regulatory requirements of additional capital and leverage ratio, recovery and resolution planning, information reporting and disclosure, etc.

Keeping on enhancing the regulation of online financial platforms. In accordance with the decisions and arrangements of the CPC Central Committee and the State Council on anti-monopoly, prevention of disorderly capital expansion and strengthening regulation on platform economy, the financial management authorities continue to introduce measures to promote the healthy development of Internet finance. In terms of prudential regulation, it is required that eligible platform enterprises shall apply for establishing financial holding companies in accordance with relevant laws to bring all institutions within the group engaging in banking, securities, insurance and other financial activities into the supervisory scope of financial holding companies. The financial holding companies shall improve corporate governance, strengthen their firewalls, and carry out financial businesses in accordance with relevant laws and regulations. In terms of payment business, the PBC published the *Measures for the Custody of Clients' Reserves of Non-banking Payment Institutions*, and drafted the *Regulations on Non-banking Payment Institutions (draft for approval)* to enhance regulation on payment institutions. The rectification of platform enterprises' payment activities has been pushing forward to promote the disconnection of improper links between payment instruments and other financial products and facilitate the payment business to gradually return to its original function. Large platforms are encouraged and guided to open the previously closed payment scenarios to give consumers more choices. In terms of credit reporting business, the *Measures for the Administration of Credit Reporting Services* was issued to bring the personal credit information services carried out by platforms, which mainly include alternative data, into credit reporting supervision according to relevant laws, and to standardize the protection of personal information in the field of credit reporting and the legitimate rights and interests of owners of information. Platforms are required to fully divest personal credit related services and provide credit information services to financial institutions through licensed personal credit reporting institutions. In terms of regulation on financial marketing and publicity, the *Measures for the Administration of Financial Product Online Marketing* was drafted to unify the management requirements for financial product online marketing and make up regulatory gaps for platforms conducting financial activities in cooperation with financial institutions. In terms of the protection of financial consumers' rights and interests, platforms were urged to earnestly assume the responsibility for protecting financial consumers' rights and interests, establish and improve the internal mechanism for protection of financial consumers' rights and interests, standardize the collection and use of consumer financial information, financial marketing and publicity behaviours and the use of contracts in fixed forms, and effectively protect the long-term and essential interests of financial consumers.

Facilitating the rectification of asset management activities and effectively mitigating shadow banking risks. Since 2018, the PBC, together with other relevant authorities, has developed new regulations on asset management activities and several complementary operationalised rules, established a comprehensive product statistic system, enhanced regulatory cooperation and coordination, prudently pushed forward the rectification in a proper pace, made institutions to take their major responsibilities, and facilitated the orderly rectification of asset management activities as scheduled. The transition period of the new regulations on asset management activities has expired at the end of 2021. The rectification has achieved outstanding effects, with stock assets planned to be disposed in the transition period being cleared, and some particular assets planned to be disposed after the transition period being locked. The scale of conduit business has dropped significantly, the proportion of net value-based products has significantly increased, legal environment to break away from implicit ganrantees has gradually improved, regulatory arbitrage has been effectively curbed, and shadow banking risks continue to converge.

Enhancing the macroprudential policies on cross-border capital flows. First, the macroprudential management of overall cross-border financing is improved. The PBC and SAFE adjusted the macroprudential adjustment parameter for cross-border financing of financial institutions and enterprises based on the situation of macro economy and balance of payments, and enlarged the applicable scope of macroprudential management of cross-border financing. These efforts helped to promote the effectiveness of macroprudential management of cross-border financing. Different measures were applied to various financial institutions according to their size, to ensure old policies transit reasonably and orderly to the new ones, and guide financial institutions to adjust their structures of foreign exchange assets and liabilities in a market-oriented approach. Second, macroprudential management of banks' overseas lending is further improved. The PBC and SAFE jointly published the *Notice on Overseas Lending by Banking Institutions* in January 2022. The *Notice* incorporates cross-border capital flows related to banks' overseas lending into the scope of macroprudential policy framework, develops a integrated policy framework for banks' overseas loans dominated both in domestic and foreign currencies, and clarifies the ceiling of domestic banks' overseas lending balance. Meanwhile, the leverage ratio, macroprudential adjustment parameter and foreign exchange risk conversion factor of overseas lending were dynamically adjusted as appropriate. At present, the macroprudential adjustment parameter is 1 and the foreign exchange risk conversion factor is 0.5.

Achieving outstanding effects on further pushing forward the work on comprehensive financial statistics. Statistic systems of asset management products of financial institutions, financial holding companies and systemically important banks have been established and fully implemented, which provide information support for the prevention and mitigation of systemic risks. Statistic systems of online consumer loans issued together with other entities and of local financial organizations have been established to effectively characterize new financial businesses. Statistic systems of basic financial data and bonds have been established to provide multi-dimensional and granular data support for macro adjustment. Statistic systems of assets and liabilities in the insurance and securities sectors have been established to promote the preparing efficiency of the statement of cash flow and the balance sheet of China's financial sector. Statistics of money, credit funds and aggregate financing to the real economy are continuously promoted, and statistics of special loan programs such as targeted poverty alleviation, green finance, credit to micro and small businesses and financial inclusion are constantly improved, so as to better illustrate the effectiveness and intensity of credit policies in supporting key areas and weak linkages of national economy by the financial sector.

Special Topic 11 International Experience with Financial Stability Legislation

The 2008 Global Financial Crisis highlighted the damage caused by systemic financial risks and exposed the shortcomings of traditional financial regulatory system in identifying and addressing systemic financial risks. After the crisis, major economies, aiming at preventing and mitigating systemic financial risks, have established a unified, efficient, and well-coordinated institutional framework for maintaining financial stability by enhancing financial regulation and building a risk resolution mechanism with the help of special legislation.

I. International Practices on Financial Stability Legislation

Based on lessons from the 2008 Global Financial Crisis, advanced economies have completely reformed their financial regulatory system by legislation. The U.S. issued the *Dodd-Frank Wall Street Reform and Consumer Protection Act*. The EU approved legislation to comprehensively reform its framework for financial services, and Germany issued the *Financial Stability Act*. In general, the direction of financial stability legislation in advanced economies is basically the same, and the main contents include:

1.Improving the Institutional Arrangements

Major economies have set up special committees to take the overall responsibility for financial stability, with the focus on rapid decision-making, clear division of labor and strengthened inter-agency cooperation. These committees, equipped with broad powers to monitor, identify, assess and coordinate the resolution of systemic financial risks, consist of officials from central banks, financial regulators and ministries of finance. For example, the U.S. has established the Financial Stability Oversight Committee (FSOC) whose members include the heads of ten federal financial regulators (such as the Department of the Treasury and Federal Reserve). The FSOC is mandated to monitor, identify and coordinate resolution of systemic financial risks, and has the power to break up financial institutions which have posed significant threats to financial stability. The EU established the European Systemic Risk Board (ESRB), which is composed of the European Central Bank, central banks of member jurisdictions, and the heads of the EU financial regulators. It is responsible for establishing an early warning mechanism for financial risks, developing policies and measures to deal with systemic financial risks, and coordinating the division of labor and information sharing among members.

2.Strengthening Macroprudential Regulation

Improving the macroprudential policy framework. Major economies have focused on strengthening macro, countercyclical and cross-market adjustment to mitigate the impact of procyclical behaviour of market participants and cross-sector risk contagion on macroeconomic and financial stability.

Strengthening the regulation on systemically important financial institutions. International organizations such as the FSB and BCBS have evaluated and released the list of G-SIFIs. G-SIFIs shall be subject to a series of higher regulatory standards and requirements, including capital, leverage ratio, liquidity, risk management, etc., and shall develop recovery and resolution plans to achieve orderly market exit. Major economies such as the U.S., EU, U.K., Australia and Singapore have all developed relevant regulatory guidelines for systemically important financial institutions.

3.Improving the Financial Risk Monitoring, Early Warning and Prompt Correction System

Establishing an integrated and comprehensive financial risk monitoring and early warning system. Major economies have put forward more institutional requirements for risk monitoring responsibilities, methods and approaches in their legislation. For example, the Federal Reserve has established a comprehensive index system of systemic financial risks to assess the level of soundness and development trends of the financial system. The ESRB has established a set of indicators to measure systemic financial risks, covering more than 100 indicators in eight categories such as systemic comprehensive risk and macroeconomic risk.

Giving full play to the prompt correction function of deposit insurance. When an insured bank falls into trouble, the FDIC can quickly initiate prompt correction actions either by itself or in conjunction with other regulators. According to the bank's capital adequacy ratio, leverage ratio and other indicators, the FDIC can take a series of measures ranging from putting restrictions on dividends, expenditures and asset growth, to requiring capital restructuring, divesting subsidiaries and mandatory takeovers. Because the FDIC's prompt correction measures have enforcement power and supported by law, these measures are legally binding for troubled banks, forcing them to take actions to deal with risks within a given time limit.

4.Improving the Financial Risk Resolution Mechanism

Major economies have generally established market-based risk resolution mechanisms for troubled financial institutions to reduce the reliance on public funding assistance. The U.S. has established an orderly liquidation mechanism. With the approval of the Secretary of Treasury, the FDIC can take over non-bank financial institutions that may cause systemic financial risks, and may take measures such as purchase and assumption, transfer of assets and liabilities, and establishment of bridge institutions to resolve risks. The European Single Resolution Mechanism (SRM) is responsible for the risk resolution of systemically important financial institutions in EU and instructs member resolution authorities to resolve all other troubled banks by means including takeovers, sales of businesses, bridge banks, asset stripping, bail-in, etc. The U.K. has established a special resolution mechanism consisting of three parts, namely stabilization measures, bankruptcy procedures and management procedures. Among them, stabilization measures are administrative disposals before judicial procedures, including private sector acquisitions, bridge banks and temporary nationalization; bankruptcy procedures are similar to general corporate bankruptcy and liquidation procedures, but financial regulators will be the ones to apply for bankruptcy; management procedures are a supporting system for acquisitions and takeovers. In this procedure, after part of the troubled bank's business is sold, the remaining business will be managed temporarily and the bank will exit the market after a smooth transition.

5.Setting up a Special Risk Resolution Fund

In order to meet the needs of resolving systemic financial risks, some advanced economies have established guarantee funds to maintain financial stability after the crisis, and have prevented moral hazard by improving the loss sharing mechanism. The U.S. has established an orderly liquidation fund which collects fees ex post. After the FDIC takes over the troubled institution, it can borrow from the Treasury to form an orderly liquidation fund, but the borrowing has an upper limit and a detailed repayment plan must be formulated and repayment must be made within a limited period of time. The EU has established the Single Resolution Fund (SRF) and adopted an ex-ante fund raising system. All credit institutions and some investment companies in the 21 member states of the European Banking Union shall pay in advance, and if the loss is too big, they can be charged further afterwards. Singapore has set up a resolution fund within the Monetary Authority of Singapore, and adopted an ex-post fund raising system. The Monetary Authority of Singapore first provides loans to the fund for resolution. Shareholders and unsecured creditors of the troubled bank should be accountable for the loss in the first place. Then if the bank still cannot repay the loan from the resolution fund, the fund could require other financial institutions to make up the gap. The resolution fund has the right to distribute any residual gains from the resolution to financial institutions that make financing contributions.

II. Considerations on Financial Stability Legislation in China

In general, major countries have built a unified, efficient and well-coordinated institutional framework for maintaining financial stability with the focus on prevention and resolution of systemic financial risks. In contrast, China's legal system underpinning financial stability still has room to improve. Legal provisions concerning financial stability are scattered around different laws and regulations, lacking coordination. Some rules are too general. The working mechanism for maintaining financial stability is not mature with the division of labor sometimes unclear. For resolution, no clear rules have been set up for where the resolution funds come from and in what order the funds will be used. There is also a lack of market-based and rule-based resolution tools. Therefore, it is necessary to speed up the development of the *Financial Stability Law* based on our practice of financial risk prevention and resolution, drawing on experience from international practices and standards, following problem-oriented, target-oriented, market-oriented principles and rule of law. Efforts should be made to establish a comprehensive financial stability working mechanism, to improve the institutional arrangements for ex ante risk prevention, mitigation during the risk events and ex post resolution, and to develop and improve a market-oriented mechanism for risk resolution, loss sharing and accountability.

First, the financial stability working mechanism should be improved by giving full play to the coordination role of the FSDC under the leadership of the CPC Central Committee and the State Council. The timing, pace and efforts of risk resolution will be measured from a more authoritative and efficient way. Second, it is necessary to clarify the division of labor in resolution and make sure all stakeholders are held accountable. The coordination and cooperation between the central and local governments and among relevant authorities should be further enhanced and the efficiency of resolution further improved. Third, a risk prevention mechanism should be established to strengthen the monitoring, early warning and prompt correction of financial risks. Fourth, the toolkit of risk resolution should be enriched and the legal basis for loss sharing and market clearing further improved in order to reduce resolution costs. Fifth, a pool of resolution funds should be established with a clearly defined funding arrangement and rules on the use of funds to ensure orderly resolution.

Special Topic 12 The Issuance of *Administrative Measures on the Total Loss-absorbing Capacity of Global Systemically Important Banks*

In October 2021, the PBC, CBIRC and MOF collectively issued the *Administrative Measures on the Total Loss-absorbing Capacity of Global Systemically Important Banks* (hereinafter referred to as the "*Measures*"). Building upon the experiences of both the latest international financial regulatory reforms and domestic practices in the banking sector, the document set out TLAC regulatory requirements for G-SIBs incorporated in China and formally set up a comprehensive regulatory framework of TLAC. The publication of the document would fill in gaps in the supervision and resolution regime of local G-SIBs, motivate them to improve their business models by keep their development more proportional to their resilience, and consequently ensure the stability and soundness of the domestic financial system.

I.Background

To address the "too big to fail" problem that arose in the 2008 global financial crisis, the international regulatory reforms have focused on enhancing the regulation of large financial institutions. Since 2011, the FSB has annually published the list of G-SIBs. To prevent systemic risks and reduce potential moral hazard from government bail-outs, in November 2015, the FSB issued an international standard - the *Total Loss-absorbing Capacity Principles and Term Sheet* for G-SIBs. This unified TLAC international standard requests that G-SIBs shall have sufficient loss-absorbing capacity available for bail-in in resolution when falling into distress, so as to ensure the continuity of critical functions and services, and avoid exposing public funds to loss through bail-out. Per the FSB's requirement, most jurisdictions have established their own TLAC regulatory framework based on their domestic situations.

Since 2011, Bank of China, Industrial and Commercial Bank of China, Agricultural Bank of China and China Construction Bank have been sequentially designated as G-SIBs. While being selected as G-SIBs demonstrates their growing influence in both the domestic and international financial market, the four big banks are requested to meet higher regulatory requirements. In accordance with the FSB's requirement, G-SIBs that are headquartered in an EME will comply with the TLAC requirement by the beginning of 2025. As one of the member jurisdictions of G20, FSB and BCBS, China's introduction of the *Measures* is a necessary approach to implement the international TLAC standard and will help to enhance the domestic financial stability.

II.Key Attributes of the *Measures*

The *Measures* were developed to achieve the general principles of being moderately forward-looking, reflecting national conditions and in line with international standards. The *Measures* would be applied to G-SIBs headquartered in China, and it set out rules on TLAC definition, eligible instruments, minimum requirement, supervision and information disclosure, etc.

Clarifying minimum TLAC regulatory requirement. TLAC instruments comprise capital and debt instruments that could be subject to write-down and/or conversion to equity at the point of non-viability so as to absorb losses. Minimum TLAC requirements comprise two indicators that relate to banks' RWA and leverage ratio respectively. Minimum TLAC must be at least 16 percent of the resolution group's RWA and 6 percent of the leverage ratio denominator as from 1 January 2025, and at least 18 percent and 6.75 percent respectively as from 1 January 2028. In addition to the TLAC requirement, G-SIBs should also be subject to any applicable regulatory capital buffers, such as capital conservation buffer, countercyclical buffer, SIB capital buffer etc. The PBC and CBIRC can put in place any additional capital requirement on a specific bank if necessary.

Instruments eligible for TLAC and relevant critera. In addition to regulatory capital instruments with a minimum remaining contractual maturity of at least one year, debt liabilities that meet certain eligibility criteria could also be used to meet TLAC requirement according to the *Measures*. The debt liabilities that are eligible TLAC instruments must contain contractual provisions for the recognition of write-down or conversion actions and rank senior to capital instruments when absorbing losses. When a G-SIB enters into its resolution, the PBC and CBIRC may write these debt liabilities down or convert them to equity if necessary after the G-SIB exhausts its Tier 2 capital to absorb losses. In light of other jurisdictions' experiences, the *Measures* allow domestic G-SIBs to count deposit insurance towards their TLAC, with the maximum amount equivalent to 2.5 percent of each G-SIB's RWAs when the TLAC minimum requirement is set at 16 percent, and 3.5 percent of each G-SIB's RWAs when the requirement is set at 18 percent.

Clarifying the treatment of TLAC holdings and correpsonding deduction. In order to reduce the risk of contagion among banks, the *Measures* request that domestic G-SIBs must proportionately deduct holdings of other G-SIBs' TLAC debt insturments from their own Tier 2 capital. Non-G-SIBs are exempted from this proportionate deduction approach, instead they should calculate RWAs according to relevant regulatory standards. In consideration of the characteristics of investors in the domestic financial bond market, the *Measures* set up a transition period for the deduction rules and requested a full implementation by 2030.

Enhancing supervision. To ensure that domestic G-SIBs have sufficient loss-absorbing capacity available in resolution and meet the minimum TLAC requirements in a timely manner, the PBC, in coordination with the CBIRC and MOF will oversee and regularly evaluate the G-SIBs' implementation of the *Measures*. The review will cover banks' TLAC management framework, eligibility of TLAC instruments, calculation of TLAC ratios, etc. In addition, the *Measures* link TLAC supervision with resolution, and further clarify that the PBC together with other authorities will regularly organize cross-border crisis management working group meetings, review G-SIBs' recovery and resolution plans, and evaluate the enforceability of TLAC instruments.

Improving disclosure. To enhance the market discipline, the *Measures* request the local G-SIBs disclose TLAC-related information starting from 1 January 2025, including TLAC amount, composition, maturity, etc. Following the upcoming full implementation of Basel III in China, the G-SIBs should disclose more TLAC-related information as requested.

III.Steadily Implementing the *Measures*, and Assisting Domestic G-SIBs to Meet TLAC Regulatory Requirements by All Means

The *Measures* would be implemented since 1 December 2021, which demonstrated the formal implementation of TLAC regulation in China. So far, the implementation of 2025 minimum TLAC requirement by four Chinese G-SIBs is still at the early stage. The PBC, together with the CBIRC and the MOF, will make strategic planning, continuously improve supporting policies and promote the smooth and orderly implementation of the *Measures*.

Enhancing accountability in banks to ensure timely implementation of the TLAC rules. Domestic G-SIBs should continue to build up their capital strength, expand internal sources for capital accumulation and take multiple measures to increase profit retention. G-SIBs' external TLAC issuance should continue across a wide range of different instruments, including capital instruments and debt instruments, and follow a reasonable issuance timeframe. G-SIBs are expected to accelerate their business transformation and upgrading, optimize their asset structure, expand the scale of asset securitization, reasonably lower the marginal capital consumption rate, and refine the management of RWAs. The PBC, together with the CBIRC and the MOF, will provide guidance to domestic G-SIBs in establishing a sound internal TLAC management mechanism and formulating medium-and long-term plans so as to gradually reach the TLAC regulatory targets.

Deepening local market and fostering TLAC issuance. From the experiences in other jurisdictions, eligible TLAC debt instruments have become G-SIBs' major medium- and long-term liability instruments, and are accepted in the financial market as good quality fixed-income products. Compared to treasury bonds and CDB financial bonds, eligible TLAC debt instruments have higher yields; being subordinated to capital instruments, TLAC debt instruments bear lower risk and have more flexible maturity. By introducing TLAC debt instruments, we could broaden the channels for bank capital replenishment, optimize banks' balance sheet structure, and enhance their abilities to mitigate financial risks and provide credit to real economy. In the meantime, the new issuance could enrich the selection of the financial products in the bond market and provide investors with more options. For the next step, besides deepening local market to stimulate TLAC issuance, fostering a sound credit culture and broadening the investor base, G-SIBs would be encouraged to issue TLAC debt instruments in overseas market.

Improving the institutional framework and legal foundation. Based on the *Measures*, relevant authorities will continue to design frameworks related to TLAC disclosure, internal TLAC, etc., improve the regulatory framework, and promote G-SIBs' resolvability in both domestic and overseas markets. Furthermore, unambiguity in the loss-absorbing hierarchy in banks' resolution should be further removed. A clear description of where the TLAC debt instruments sit in the loss-absorbing hierarchy is conducive to additional clarity in the national insolvency law, so that the legitimate rights and interests of various creditors are sufficiently protected against the banks' insolvency and the G-SIBs' resolution procedures could be carried out in an orderly manner.

Special Topic 13 Improving the Regulatory Framework of Systemically Important Banks

SIFIs are characterized with large scale, high complexity and close interconnectedness with other financial institutions. Once falling into distress, they may have a greater impact on the functioning of the financial system and macro economy. The CPC Central Committee and the State Council attach great importance to the regulation of SIFIs. In 2015, the Fifth Plenary Session of the 18th CPC Central Committee clearly required to coordinate the regulation of domestic SIFIs. In 2017, the Fifth National Financial Work Conference made it clear that the PBC should take the lead in developing the basic rules for the designation and regulation of domestic SIFIs. In November 2018, the PBC, CBIRC and CSRC jointly issued the *Guidelines on Improving Regulation of Systemically Important Financial Institutions*, clarifying the overall policy framework of the assessment, designation and additional regulatory requirements of systemically important institutions in the banking, insurance and securities sectors. Considering that China's financial system is dominated by the banking sector, and the stable operation of SIBs is essential to the overall financial stability, the PBC, together with CBIRC, first developed rules about the assessment, designation and additional regulatory requirements of D-SIBs.

I. Assessment and Designation of Domestic Systemically Important Banks

In December 2020, the PBC and the CBIRC issued the *Assessment Methodology for Systemically Important Banks* based on China's specific conditions and international standards. The *Methodology* clarifies the scope, methodology, procedures and designation threshold of the assessment of D-SIBs. According to the *Methodology*, in May 2021, the PBC and CBIRC started the first round of assessment of D-SIBs. The largest 30 banks, according to their on- and off-balance sheet assets at the end of 2020, participated in the assessment. The participating banks were assessed by four dimensions, namely size, interconnectedness, substitutability and complexity. The 2021 D-SIB list was published in October 2021 (Table 3.2). On the one hand, the D-SIB list shall have a certain coverage and D-SIBs' proportion in the banking sector in terms of number and assets shall not be too small; on the other hand, in line with international practice, SIFIs should be assessed based on objective indicators to ensure transparency and predictability and to minimize the use of supervisory judgement. There are 19 D-SIBs in China, including 6 state-owned commercial banks, 9 joint-stock banks and 4 city commercial banks, whose total assets account for 60 percent of that of the banking sector.

Table 3.2 2021 List of Domestic Systemically Important Banks

Bucket	D-SIBs	Capital Surcharge	Leverage Ratio Requirement
5	Empty	1.5%	0.75%
4	Industrial and Commercial Bank of China	1%	0.5%
	Bank of China		
	China Construction Bank		
	Agricultural Bank of China		
3	Bank of Communications	0.75%	0.375%
	China Merchants Bank		
	Industrial Bank		
2	Shanghai Pudong Development Bank	0.5%	0.25%
	China CITIC Bank		
	China Minsheng Bank		
	Postal Savings Bank of China		
1	Ping An Bank	0.25%	0.125%
	China Everbright Bank		
	Hua Xia Bank		
	China Guangfa Bank		
	Bank of Ningbo		
	Bank of Shanghai		
	Bank of Jiangsu		
	Bank of Beijing		

In addition, according to the assessment methodology issued by the BCBS, the FSB has annually published the list of G-SIBs since 2011. Bank of China, Industrial and Commercial Bank of China, Agricultural Bank of China and China Construction Bank have been successively designated since 2011, 2013, 2014 and 2015. From the scores of assessment indicators, China's G-SIBs are mainly large in size instead of complexity and cross-border activity.

II. Clarifying Additional Regulatory Requirements for D-SIBs

In October 2021, the PBC and CBIRC issued the *Additional Regulatory Requirements for Systemically Important Banks (Provisional)* at the same time when releasing the D-SIB list, and the additional regulation entered the phase of implementation. Drawing on international experiences, the regulation requires D-SIBs to improve their loss absorbing capacity, enhance resolvability and meet higher regulatory expectations. Meanwhile, in light of China's specific conditions and from the perspective of macroprudential management, it is emphasized that D-SIBs should be given early risk warnings and reminders. The regulation consists of five aspects. First, additional capital requirements are clarified. On the basis of meeting the existing capital requirements, D-SIBs shall be subject to additional capital requirements of 0.25-1.5 percent, which shall be met with CET1 capital. Second, additional leverage ratio requirements are clarified. The magnitude of additional leverage requirements is half of the additional capital requirements, which shall be met with Tier 1 capital. These two additional requirements are generally moderate, and will not only help promote banks to improve their resilience, but also will not create too much pressure on capital replenishment. Third, requirements of developing recovery plans and resolution plans are clarified to ensure that banks can resume normal operations, carry out bail-in and accomplish timely and orderly resolution in case of significant risk events. D-SIBs shall develop recovery plans and proposed resolution plans at the group level and submit them to the crisis management groups led by the PBC for review. Fourth, early risk warning and reminder is enhanced. The PBC and the CBIRC shall evaluate indicators such as credit concentration, business complexity, and business expansion speed of D-SIBs, and promptly remind D-SIBs of their risks. Fifth, the division of regulatory mandates is clarified. From the perspective of macroprudential management and systemic risk prevention, the PBC, together with the CBIRC, shall put forward additional regulatory requirements and review the recovery and resolution plans of D-SIBs. The CBIRC is responsible for microprudential supervision over D-SIBs including on-site inspections and daily supervision. The coordination of macroprudential management and microprudential supervision will be strengthened to form a synergy. Since the four big banks, namely ICBC, ABC, BOC and CCB have been designated as G-SIBs, they shall be subject to the capital surcharge of 1.5 percent, 1 percent, 1.5 percent and 1.5 percent respectively, according to international standards. In practice, they shall be subject to the higher capital surcharge requirement for G-SIBs and D-SIBs.

III. Normalizing the Implementation of Additional Regulation for D-SIBs

Strengthening the regulation on D-SIBs is essential for systemic risk prevention and mitigation, implementation of financial regulatory reforms and macroprudential policy framework improvement. The D-SIB list is dynamically adjusted. The PBC and CBIRC will annually update the list according to changes in the evaluation indicators of sample banks. If a bank is designated as a D-SIB, it will not only be regarded as one with market position and influence to some extent, but also be subject to higher regulatory standards and requirements. D-SIBs should assume greater responsibility in serving the real economy and preventing financial risks, and keep improving risk management and internal control. In the next step, the PBC and CBIRC will make joint efforts in the additional regulation on D-SIBs, and facilitate D-SIBs to continuously meet the additional requirements for capital and leverage ratio, strengthen the inherent capital restraint mechanism, develop and update recovery and resolution plans, and improve operational stability and risk resolvability.

Special Topic 14 Exploring to Establish A Prompt Correction Framework with Mandatory Actions

Prompt Corrective Action, or PCA, was first introduced by the U.S. authorities. It emphasizes the early identification of high risk institutions and the employment of proper intervention measures based on their specific risk severity to reduce the possibility of bank failures and risk spillovers, in addition to minimizing the cost of risk resolution. PCA can be an important tool for the prevention and resolution of financial risks in a preemptive manner.

I.International Best Practices Show that Mandatory Corrective Actions Against Problem Banks are Key to Resolve Risks

PCA in the U.S. is triggered by capital adequacy categories and follows the "correction or takeover" approach. In response to the savings and loan crisis, the U.S. authorities introduced the prompt corrective action framework first in 1991. According to the Federal Deposit Insurance Act, when an institution has been determined to be in a problematic and distressed condition, federal regulators and the FDIC must play their respective roles and waste no time in initiating PCAs, while closely monitoring and assessing the implementation impacts, and getting prepared to place the institution into receivership in case of further deterioration. FDIC takes PCAs against Institutions based on five capital categories, with clearly-defined triggers in the *Risk Management Manual* (Table 3.3). In particular, if an institution becomes critically undercapitalized, written approval from FDIC prior to entering into any material transactions will be required to avoid further asset losses. If its problems cannot be substantially resolved within the required 90-day time frame, the FDIC must place the institution into receivership or conservatorship.

Table 3.3 Overview of PCAs by the FDIC

Capital Category	Criteria				Mandatory supervisory actions	Discretionary supervisory actions
	Total risk-based capital ratio	Tier 1 capital ratio	CET 1 capital ratio	Leverage ratio		
Well capitalized	≥10%	and≥8%	and≥6.5%	and≥5%	-	-
Adequately capitalized	≥8%	and≥6%	and≥4.5%	and≥4%	Restrictions on certain brokered deposit activities unless approved by the FDIC	-

(Cont)

Capital Category	Criteria				Mandatory supervisory actions	Discretionary supervisory actions
	Total risk-based capital ratio	Tier 1 capital ratio	CET 1 capital ratio	Leverage ratio		
Underca-pitalized	<8%	or<6%	or<4.5%	or<4%	1. Prohibitions on brokered deposit activities ; 2. Stop on capital distributions or management fee payment; 3. Submission of a capital restoration plan; 4. Restrictions on asset growth; 5. Restrictions on engaging in acquisitions, branching, or new lines of business unless approved	1. Requirement on capital restoration; 2. Restrictions on transactions with affiliates; 3. Restrictions on interest rates paid to deposits; 4. Restrictions on other business activities; 5.Other actions deemed conducive to prompt correction purposes
Significantly undercapitalized	<6%	or<4%	or<3%	or<3%	1. Other restrictions applicable to less-than-adequately capitalized institutions; 2. Requirement of recapitalization; 3. Restrictions on transactions with affiliates; 4. Restrictions on interest rates paid to deposits; 5. Restrictions on excessive bonus or compensation payment	1.Other restrictions applicable to less-than-adequately capitalized institutions; 2.Mandatory receivership within a 90-day period in the absence of a capital restoration plan; 3.Other actions deemed conducive to prompt correction purposes
Critically undercapitalized	Ratio of tangible equity to total assets				1. Other restrictions applicable to significantly undercapitalized institutions; 2. Mandatory receivership within a 90-day period; 3. Alternative actions aside from receivership by the main regulator with FDIC's consent;Mandatory receivership if being critically undercapitalized for 270 days 4. Restrictions on making any payment of principal or interests on its subordinated debt; 5. Restrictions on other business activities	-

In the aftermath of the Global Financial Crisis, relevant international bodies developed policy guidance for early correction of troubled banks. The BCBS and IADI jointly issued the *Core Principles for Effective Deposit Insurance Systems* in June 2009, stating that the key of prompt corrective actions lies in taking prompt actions against distressed institutions based on a set of clearly-defined triggering criteria, in an effort to reduce the likelihood of bank failures and minimize losses. In 2013, IADI issued the *General Guidance on Early Detection and Timely Intervention for Deposit Insurance Systems*, which outlines core principles and take-aways based on a stocktake of deposit insurers' role in early correction in 33 jurisdictions worldwide, and suggests guidance to enhance the early detection and timely intervention framework of problem banks. In 2015, BCBS issued the revised version of *Guidelines for Identifying and Dealing with Weak Banks*, which defines weak banks and sets out the range of prompt corrective actions that bank supervisors and deposit insurers could take to impact the business operations, cash availability, governance and shareholders' rights of weak banks.

II. China is Putting in Place a Legal Framework that Enables the Early Correction Function

In China, early correction function is gradually enabled by the update of relevant laws and regulations governing banking supervision. According to the *Law on Banking Regulation and Supervision* issued in 2004, the regulatory authorities should ask banks that break prudential rules to make corrections within a certain time frame and resolve their risks properly through early corrective measures not limited to imposing suspension on certain activities, restricting dividend distribution, ordering equity transfer by controlling shareholders and dismissing board members or senior management. The *Capital Rules for Commercial Banks (Provisional)* issued in 2012 further elaborated on the range of corrective measures that the regulatory authorities can take against banks based on their levels of capital adequacy (Table 3.4). Article 16 of the *Deposit Insurance Regulations* issued in 2015 empowers the deposit insurance fund management authority, the PBC and the regulatory authority to take against problem institutions in an expeditious manner the following measures: requirement of capital restoration, restrictions on asset growth, restrictions on major transactions and requirement of lowering leverage levels.

Table 3.4 Classification of supervisory actions in the *Capital Rules for Commercial Banks (Provisional)*

Category	Criteria	Supervisory actions
Category A commercial banks	CAR, T1 capital ratio and CET1 capital ratio meet all regulatory requirements.	1. Banks should analyze any reductions in their CARs and provide CAR forecasts; 2. Banks should develop feasible CAR management plans; 3. Banks should improve their risk control capacities

(Cont)

Category	Criteria	Supervisory actions
Category B commercial banks	CAR, T1 ratio and CET1 ratio fall below Pillar II capital requirements, but remain above all other capital requirements	1. Banks' board and senior management should have prudential discussions with the authority; 2. A supervisory note, containing problems identified in banks' capital management, corrective actions planned to impose on them, and expectation to remedy within the required time frame, will be issued; 3. Banks should develop feasible capital restoration plans and a time plan enabling its compliance on time; 4. Examinations and inspections of their capital adequacy level will be conducted on a more frequent basis; 5. Banks should take risk mitigation measures against specific high risk activities
Category C commercial banks	CAR, T1 ratio and CET1 ratio remain above minimum capital requirements, but fall below all other capital requirements	1. Restrictions on payment of dividends and other revenues; 2. Restrictions on incentives of any form to the board and senior management; 3. Restrictions on equity investment or repurchase of capital instruments; 4. Restrictions on any material capital disbursements; 5. Restrictions on risk asset growth
Category D commercial banks	Either CAR or T1 ratio, or CET1 ratio fall below minimum capital requirements	1. Banks should significantly scale down their risk assets; 2. Banks are prohibited from engaging in high risk activities; 3. Prohibitions or restrictions on new branching or new business lines; 4. Mandatory write-down of subordinate capital instruments or conversion into common equity; 5. Banks are required to adjust board members and senior management or restrict their rights; 6. Banks are placed into receivership or restructured, or further revoked of business licenses, according to law

III. The General Approach and Work Principles

In the past few years, the early correction mechanism has increasingly played a positive role in dealing with financial risks. Authorities including the PBC, the regulators and local governments have been developing their roles in early correction; meanwhile, the deposit insurance has increasingly played an early correction role and positively contributed to risk mitigation.

1.General Approach

The early correction will be more forward-looking, supported by improved early warning system with a focus on the monitoring and risk alerts of abnormalities in regulatory indicators. In most cases, the outbreak of major risks can be traced back to the worsening of certain indicators. Efforts should be made, therefore, in developing a framework to monitor and give alerts on banking sector outliers, and in improving robustness of risk identification indicators. Based on this, authorities will be able to identify risk sources and issue alerts accordingly, which will eventually lead to rectification and mitigation measures on the part of problem banks as a going concern to prevent deterioration of their problems.

A mandatory PCA framework will be applied to newly-added high-risk banks including problem banks. The results of central bank rating and regulatory rating will be properly used to inform PCAs against those newly-added high-risk banks within a certain required time limit. During this process, in order to ensure the strict implementation of risk mitigation measures, financial institutions and their shareholders should be held liable and take the primary responsibility for finding remedies; supervisory authorities should strictly perform their supervisory roles; local governments should fully perform their responsibilities of resolving local risks and of maintaining social stability and responding to public emergencies; and efforts should also be made to carry out the central government's decision to establish a fiscal and financial risk resolution mechanism led by local party and government leadership. Mandatory and law-based risk resolution will be imposed on high-risk banks if they fail to remedy the situation to regulatory satisfaction within the PCA time limit, so as to ensure the constraint of PCAs.

2. Work Principles

Improving the top-level design to ensure full compliance with laws and regulations. The authorities should adopt a holistic approach, while ensuring that the early correction function is law-based, with clearly-defined work procedures, and carried out in an orderly fashion. In the meantime, any lowering of the criteria for the central bank rating of financial institutions should be avoided to honestly capture banks' risk profiles and ensure that our work procedures withstand reviews of any form.

Imposing the "correct within a required time limit" order for incremental high-risk banks and putting them into resolution if failing to correct. For banks newly added to the high risk list, responsible authorities will take early corrective measures against such banks, and further place them into resolution if they fail to remedy their problems. This will help avoid risk escalation and spillovers.

Improving the incentive-and-constraint mechanism to form cross-agency synergy. A proper incentive and constraint mechanism, based on each party's division of labor, should be put in place to ensure a smooth work flow, a clear mandate and coordination of regulatory actions, which will ultimately contribute to the resolution of problem banks in the least cost possible.

Special Topic 15 The Establishment of a Financial Stability Guarantee Fund to Build a Long-Acting Regime for Preventing and Mitigating Major Financial Risks

The financial sector is a business to deal with and manage risks. Risk prevention and mitigation is, therefore, one of its perennial themes. "Enough sources should be made available for resolving risks", quotes the Central Economic Work Conference in December 2021. "A fund for ensuring financial stability should be introduced, and the role of existing deposit insurance system and sector-specific guarantee funds should be leveraged to defuse potential risks in a market- and law-based manner and to stay resilient to external shocks. The bottom line of no outbreaks of systemic risks must be firmly upheld." reads the Report on the Work of the Government for 2022. Introducing a financial stability guarantee fund that ensures the effective response to major financial disruptions of system-wide impacts is the requirement for establishing a long-acting regime for financial risk prevention and mitigation, and a key move to coordinating the triple goals of coordinating development and security, preserving financial stability and improving the ability of financial sector to serve the real economy. It is also of vital significance for our national economic and financial security.

I. The Necessity for Introducing a Financial Stability Guarantee Fund

It fits the perennial theme of the financial work. The Fifth National Financial Work Conference in 2017 pointed out that it is one of the perennial themes of our financial work to prevent systemic financial risks. The 19th National Congress of the CPC designated the prevention and mitigation of major risks as one of the three critical battles and a key move to building a well-off society. In the past few years, major progress has been made in carrying out these decisions and work agenda set by the CPC Central Committee and the State Council towards guarding against and mitigating major financial risks, which include orderly resolution of risks in key areas. As a result, the level of financial risk has contracted and is overall under control, and the financial sector is on a steady and healthy growth path. In the meantime, it should be noted that the financial sector could be vulnerable to risk sources from all relevant sectors as it is a business that deals with and manages risks. It is, therefore, of urgent need to introduce a financial stability guarantee fund as a preemptive action against systemic risks and a key countermeasure for addressing various forms of risks and challenges.

It reflects the need to balance growth and security goals. The CPC Central Committee has made the strategic arrangements to balance growth and security, which requires to take the dual goals into consideration throughout the nation's development drive, and to guard against and mitigate various kinds of risks in the course of modernization. Financial security is an important component of national security and preserving financial security, therefore, is an integral part of upholding national security in a holistic manner. A key link of the financial safety net could be the creation of a financial stability guarantee fund by pooling together resources for resolving major financial risks of systemic implications available to the central government. The creation of such a fund is also part of the efforts to implement requirements set out by the Central Economic Work Conference which requires to "put risk prevention and mitigation in perspective", and that "enough resources should be made available for resolving risks".

It will facilitate the financial system to better serve the real economy. Preventing and resolving major risks serves as a fundamental guarantee for the financial system to function steadily and to satisfy needs of the real economy. Episodes of the GFC reveal that financing to the real economy will be disrupted in case of major financial risks, in addition to a heavy cost for taxpayers if state support is provided in emergency assistance using public funds. The introduction of a financial stability guarantee fund could help the situation by increasing the ability of the financial sector to continuously support economic growth in the long run, putting a stop to spill-overs by the failure of individual institutions, ensuring continuity of financial services and bolstering public confidence. It plays a significance role in keeping economic growth on a healthy trajectory.

It aligns with international standards and good practices. In the aftermath of the GFC, a set of international standards were developed by the FSB and relevant international organizations, such as the *Key Attributes of Effective Resolution Regimes for Financial Institutions* (hereinafter referred to as "*Key Attributes*"), and *Core Principles for Effective Deposit Insurance Systems*. These documents point to the primary responsibility of financial institutions to absorb losses through bail-ins while calling for the establishment of an authoritative, efficient, orderly and fair resolution regime to avoid over reliance on public funds. This requires a fund raised by the financial sector, for use of assisting specific financial institutions as well as resolution of or response to massive financial disruptions. In acknowledging this common need, major advanced economies have set up financial stability funds or satisfied this need through existing deposit insurance schemes.

II. International Practices in Establishing a Financial Stability Fund

In response to the GFC, major advanced economies including the U.S. and EU have carried out measures to reform their resolution regimes, including the creation of a financial stability fund, in an effort to enhance risk resolution and crisis response, and address moral hazards through loss sharing arrangements. Main contents include:

A speedy and clear-cut systemic risk response and decision-making mechanism. In 2010, the U.S. promulgated the *Dodd-Frank Wall Street Reform and Consumer Protection Act* to strengthen its financial stability institutional arrangements. Among other things, FSOC was established with the mandate of systemic risk identification and prevention through measures such as designating SIFIs subject to heightened supervision by the Federal Reserve. In the same year, the EU approved legislation to comprehensively reform its financial supervisory framework. Important reform measures include establishing the ESRB under the ECB for macroprudential regulation and identification of potential risks; ESRB can further give warnings or recommendations to the three microprudential supervisors, i.e. the European Banking Authority, European Securities and Markets Authority and European Insurance and Occupational Pensions Authority, as well as member states and national supervisors, and can set up a dedicated work stream to review adoption of those recommendations.

A financial stability fund to support resolution of massive financial risks. The U.S. in 2010 introduced an Orderly Liquidation Fund （OLF） to resolve risks of financial institutions of systemic importance and provide funding for the orderly resolution of such institutions by the FDIC. The Single Resolution Fund adopted by the EU in 2016 can be used for the resolution of covered institutions in the Banking Union including over 100 large banks. In addition to financial institutions, Key Attributes made it clear that appropriate funding arrangements should be made available to financial market infrastructures.

Resolution costs should be recovered from the wider financial system. The OLF charges fees on an ex post basis. The FDIC, after being appointed as the receiver, can use the OLF for resolution of a failing bank by issuing obligations to the Treasury under maximum amount limitations and specific repayment plan; it can further charge bank holding companies with total consolidated assets above a certain threshold and large non-bank financial companies if income from the liquidated assets and revenues of investment are insufficient to amortize the balance. European Single Resolution Fund collects a fee, or contributions, from all credit institutions and investment firms across 21 Banking Union member jurisdictions on an ex ante basis. It can raise contributions through ex-post bank levy if losses are not recovered in full. The European Stability Mechanism serves as the backstop funding source to the fund with a cap of EUR 68 billion.

An emphasis on market discipline to minimize moral hazards. Major advanced economies invariably adopt provisions regarding use of such fund prescribing that bail-in measures must be taken to absorb losses before considering any bail-out. In a typical resolution, losses should be recovered first from shareholders of a failing institution subject to the “no creditor worse off than in liquidation” principle and market funds that participate in restructuring or purchasing of the failing institution, and then from deposit insurance or sector-specific guarantee funds in accordance with laws. The financial stability fund can only be used to provide backstop funding on conditions that the crisis is of wider systemic implications and jeopardizes financial stability, and that all other privately-financed resources and tools have been exhausted.

III. Framework of the Financial Stability Guarantee Fund in China

The availability of sector-specific guarantee funds for securities, insurance and trusts since 2000 and of the deposit insurance fund established under the *Deposit Insurance Regulations* in 2015 has played a positive role in funding financial risk mitigation and resolution efforts. In 2017, the FSDC under the State Council was created, and the PBC's role in macroprudential management and systemic risk mitigation was strengthened. The authorities also draw upon international experiences and practices in introducing such a financial stability fund, in order to ensure adequate funding sources for risk resolution, and enhance resilience and accountability of the financial sector.

Role of the Fund. It will serve as a backstop funding source for dealing with massive financial risks and constitute an important pillar of the nation's financial safety net. The fund, parallel to and in coordination with the deposit insurance and sector-specific funds, will be managed by the coordinating body for financial stability and development and contribute to financial stability and safety. The existing management authorities for the deposit insurance and other sector-specific fund schemes will be designated the role of fee collecting and management in supporting the daily functioning of the fund.

Funding Sources. The fund will be primarily raised from market entities including financial institutions and financial market infrastructures, a design aimed to reduce reliance on public funds in risk resolution, while strengthening market discipline and minimizing moral hazards without undermining the goal of maintaining financial stability. A fee will be collected on basis of covered institutions' size of assets, business complexity, management performance and risk profiles, and adjusted in proportional to risks of each institution.

Use of Fund. Funding for the resolution of massive financial risks should be provided by the failing institution, its shareholders and actual controllers, local government, deposit insurance fund or other sector-specific funds within their legally determined shares. If a gap remains, the financial stability guarantee fund may be mobilized upon approval.

Special Topic 16 Financial Stability Board Released the Financial Stability Surveillance Framework

In September 2021, the FSB released its Financial Stability Surveillance Framework (hereinafter referred to as the Framework). The Framework builds on the advantages of the FSB's global perspective on financial stability issues, identify global financial vulnerabilities in a systemic and forward-looking manner, increase the effectiveness of the FSB's vulnerabilities assessment, and improve the timeliness of policy responses. The Framework captures current vulnerabilities as well as emerging vulnerabilities.

I. Conceptual Framework

Analysis Principle. According to the Framework, vulnerability assessment follows four guiding principles. First, focusing on vulnerabilities that may have implications for global financial stability, namely vulnerabilities that are common to a number of jurisdictions or have the potential to engender material cross-border spillovers. Second, scanning vulnerabilities with a forward-looking perspective. Interactions and correlations among vulnerabilities are taken into account in the surveillance framework. The Framework clarifies the time horizons of the vulnerabilities, including (1) currently material; (2) medium-term vulnerabilities that could become material in the next 2-3 years; and (3) emerging vulnerabilities that could become material in 3-5 years' time.

Third, recognizing differences among jurisdictions. The Framework should take into consideration differences in each jurisdiction's financial system development and macroeconomic policy frameworks, and compare vulnerabilities among emerging market economies and developed economies.

Fourth, leveraging the comparative advantages of the FSB. The vulnerability analysis report builds on member jurisdictions' vulnerability monitoring work, including their regularly published financial stability reports, and reflects the collective views of international organizations and expertise.

Main Concept. The Framework identifies main concepts in financial stability surveillance to ensure consistency. First, basic terminology. The global financial system consists of financial intermediaries, markets, and instruments as well as infrastructure that supports their activities. Financial stability is the capacity of the global financial system to withstand shocks, containing the risk of disruptions in the financial intermediation process and other financial system functions that are severe enough to adversely impact the real economy. Second, vulnerability and shock. The financial stability surveillance distinguishes vulnerability from shock. A vulnerability refers to the accumulation of imbalances in the financial system that can be measured using appropriate indicators or mitigated through targeted policy actions.

A shock is an abrupt event that may lead to disruption or failure in part of the financial system. Shocks are hard to predict and typically cannot be targeted by policy actions, such as a global pandemic, a significant deterioration in the economy, a sharp fall in asset prices, and other developments outside the financial sector. Vulnerabilities may increase the likelihood that a shock leads to systemic disruption in the financial system. Therefore, it may be possible to more accurately estimate the impact of a shock on the financial system, conditional on it happening, through an understanding of the financial system vulnerabilities and their transmission channels. Third, vulnerability and resilience. Gross vulnerabilities include all identified vulnerabilities. Resilience is the capacity of a financial system to absorb shocks and prevent them from leading to an unravelling of the accumulated imbalances. Resilience does not only depend on risk response policy measures, but also on factors such as market practices and the interplay between different parts of the financial system under stress. Net vulnerabilities are the gaps existing between gross vulnerabilities and resilience, which warrant intensive monitoring and research of targeted policy response.

Core Surveillance Indicators. The vulnerability assessment is divided into two parts– the financial sector and the non-financial sector. The financial sector has three main sub-sectors, including financial markets, banks and other financial institutions (non-bank financial intermediaries①, financial market infrastructures②, etc.). Its vulnerability assessment indicators include asset prices, asset quality, funding or liquidity, leverage, domestic inter-connections and complexity, cross-border inter-connections, operational vulnerabilities and other vulnerabilities (Table 3.5). The non-financial sector also has three main sub-sectors, including households, non-financial corporations and sovereigns. Its vulnerability assessment indicators include borrowing, assets and other vulnerabilities (Table 3.6).

Table 3.5 Vulnerabilities Matrix - Financial Sector Vulnerabilities

Surveillance Indicators	Financial markets	Banks	Other financial institutions
Asset prices (financial and real)	• Mispricing (low risk-free rates, low credit spreads, high equity market valuations)	• Exposure to marked-to-market losses and volatility • Incomplete hedging • Inability to levy capital • Collateral values (incl. potential over-valuation)	• Exposure to marked-to-market losses and volatility • Incomplete hedging • Inability to levy capital • Collateral values (incl. potential over-valuation)

① Such as money market funds, open-ended funds, insurance companies, pension funds, etc.
② Such as central counterparties, payment systems and securities settlement systems.

(Cont)

Surveillance Indicators	Financial markets	Banks	Other financial institutions
Asset quality	• Issuance of riskier securities • Securitisation • Defaults and ratings downgrades	• Exposures to riskier segments [e.g. Non-financial corporates (NFCs) with foreign exchange (FX) debt; real estate; commodities] • Concentration • Lending standards • Forbearance	• Exposures to riskier segments (e.g. NFCs with FX debt; real estate; commodities) • Concentration • Lending standards • Financial health of FMI participants
Funding/ liquidity	• Amplification mechanisms • Disruptions in liquidity allotment • Volatility	• Duration mismatch • Liquidity mismatch • Reliance on wholesale market funding	• Liquidity mismatch (e.g. open-end bond funds) • Duration mismatch • Reliance on wholesale market funding • Higher than expected insurance payouts (e.g. repeated catastrophic events)
Leverage	• Amplification mechanisms	• Low bank capital • Off-balance sheet assets, leverage • Synthetic leverage • Low capacity to generate capital organically	• Low capital • Off-balance sheet assets, leverage • Synthetic leverage • Inadequate default fund at central counterparties (CCPs)
Domestic inter-connections and complexity	• Amplification mechanisms	• Critical functions / too big to fail (TBTF) • Inter-bank funding • Uncleared over the counter (OTC) derivative exposures • Complex products • Common exposures / business models	• Critical functions / TBTF (e.g. CCPs) • Inter-financial claims • Uncleared OTC derivative exposures • Complex products • Common exposures/ business models

(Cont)

Surveillance Indicators	Financial markets	Banks	Other financial institutions
Cross-border inter-connections	• Exposure to Foreign counterparties • Foreign investor activity in domestic equity, bond and derivative markets	• Cross-border activity • Currency mismatches • Use of offshore wholesale funding • Deposit dollarization • Foreign counterparties (e.g. hedging)	• Cross-border activity • Currency mismatches • Use of offshore wholesale funding • Foreign counterparties (e.g. hedging) • Use of foreign-domiciled, or foreign-owned, FMIs
Operational vulnerabilities (including cyber/IT)	• Poor governance / risk culture • Reliance on third-party service providers • Amplification mechanisms • Widespread use of inappropriate benchmarks e.g. Libor	-Poor governance / risk culture • Reliance on third-party service providers • Exposure to products hedging these risks • Widespread use of inappropriate benchmarks e.g. Libor	• Poor governance / risk culture • Reliance on third-party service providers • Widespread use of Inappropriate benchmarks e.g. Libor
Other vulnerabilities	- Other financial sector vulnerabilities that do not fit neatly into other categories, including emerging vulnerabilities		

Table 3.6 Vulnerabilities Matrix - Non-Financial Sector Vulnerabilities

Surveillance Indicators	Households	Non-financial corporates	Sovereigns
Borrowing	• High level of debt • High debt service ratio • Currency mismatches	• High level of debt • High debt service ratio • High level of debt to rollover in the short-term • Currency mismatches • Use of offshore funding	• High level of debt • High debt service • High level of debt to rollover in the short-term • Currency mismatches • Significant foreign investor base in debt
Assets	• Overvaluation • Exposure to foreign assets	• Overvaluation • Exposure to foreign assets	
Other Vulnerabilities	• Other non-financial sector vulnerabilities that do not fit neatly into other categories, including emerging vulnerabilities		

II. FSB's Vulnerabilities Assessment Work

FSB's vulnerabilities assessment collects and analyzes information from four main channels. First, quantitative surveillance indicators. FSB selects representative indicators to form the above Vulnerabilities Matrices and conducts consistent monitoring and assessment on vulnerabilities in different sectors. Second, the vulnerabilities survey. FSB conducts regular surveys of member jurisdictions and gathers major vulnerabilities that, in members' view, could threaten global or domestic financial stability, based on their financial stability analysis. The survey responses can be subjective, but its aim is to gather information on all of the relevant views as an input into the overall assessment. The respondents' views are collected in three categories, comprising vulnerabilities that are currently material, medium-term vulnerabilities that could become material over the next 3 years, and emerging vulnerabilities that could become material over the next 3-5 years. Third, full leverage of FSB's analytical work. The vulnerabilities assessment incorporates the full range of assessment work that is being carried-out within the FSB, such as on non-bank financial intermediation and financial innovation. Fourth, cooperation with the private sector. FSB holds regular workshops with market entities and seek their views on the main vulnerabilities in the global financial system as an effective input of its vulnerabilities assessment.

The FSB's financial stability assessment is used in two main ways. First, to decide on follow-up actions. FSB will engage in more intensive monitoring and analysis on the identified material global net vulnerabilities and discuss possible policy actions. Second, to communicate views on vulnerabilities externally. The vulnerabilities assessment results will be included in FSB Annual Reports or notes to the G20 to enable the attention among policy makers and market participants on relevant vulnerabilities and their early policy discussions.

Appendix

Statistics

Table 1 Selected Economic Indicators

Items	2017	2018	2019	2020	2021
Gross Domestic Product (RMB 100 million)	832036	919281	986515	1013567	1149237
Value-added of Industry (RMB 100 million)	275119	301089	311859	312902.9	374546
Total Investment in Fixed Assets in the Whole Country (RMB 100 million)	461284	488499	513608	527270	552884
Retail Sales of Consumer Goods (RMB 100 million)	347326.7	377783.1	408017.2	391980.6	440823
Exports & Imports (RMB 100 million)	278099.24	305008.13	315627.32	322215.24	391009
Exports	153309.43	164127.81	172373.63	179278.83	217348
Imports	124789.81	140880.32	143253.69	142936.4	173661
Balance	28519.62	23247.49	29119.94	36342.43	43687
Value of Foreign Direct Investment Actually Utilized (USD 100 million)	1310.35	1349.66	1381.3462	1443.6926	1734.8000
Foreign Exchange Reserves (USD 100 million)	31399	30727	31079	32165.22	32502
Consumer Price Index (previous year=100)	101.6	102.1	102.9	102.5	100.9
Fiscal Revenue (RMB 100 million)	172592.77	183359.84	190390.08	182913.88	202539
Fiscal Expenditure (RMB 100 million)	203085.49	220904.13	238858.37	245679.03	246322
Per Capita Urban Household Disposable Income (RMB)	36396	39251	42359	43834	47412
Per Capita Rural Household Disposable Income (RMB)	13432	14617	16021	17131	18931
Urban Employed Persons (million)	432.08	442.92	452.49	462.71	467.73
Registered Unemployment Rate in Urban Areas (%)	3.9	3.8	3.6	4.2	4.0
Total Population (million)	1400.1	1405.4	1410.1	1412.1	1412.6

Notes: ① GDP is verified and final.

② In accordance with China's regulations on GDP data revision and international practices, systematic revisions are made on the GDP figures for 2018 and previous years with data from the fourth national economic census.

Source: The NBS.

Table 2 Selected Financial Indicators (1)

(Year-end Balance)

(RMB 100 million)

Items	2017	2018	2019	2020	2021
Money & Quasi-money (M_2)	1690235.3	1826744.2	1986488.8	2186795.9	2382899.6
Money (M_1)	543790.1	551685.9	576009.2	625581.0	647443.4
Currency in Circulation (M_0)	70645.6	73208.4	77189.5	84314.5	90825.2
Total Deposits with Financial Institutions	1641044.2	1775225.7	1928785.3	2125720.9	2322500.4
Household Deposits	595972.6	631202.4	697395.4	809051.1	903315.0
Non-financial Enterprise Deposits	542404.6	562976.2	595365.0	660180.2	696695.0
Total Lending by Financial Institutions	1201321.0	1362966.7	1531123.2	1727452.1	1926902.8

Source: The PBC.

Table 3 Selected Financial Indicators (2)

(Growth Rates)

(percent)

Items	2017	2018	2019	2020	2021
Money & Quasi-money (M_2)	8.1	8.1	8.7	10.1	9.0
Money (M_1)	11.8	1.5	4.4	8.6	3.5
Currency in Circulation (M_0)	3.4	3.6	5.4	9.2	7.7
Total Deposits with Financial Institutions	9.0	8.2	8.7	10.2	9.3
Household Deposits	4.7	5.9	10.5	16.0	11.7
Non-financial Enterprise Deposits	8.0	3.8	5.8	10.9	5.5
Total Lending by Financial Institutions	12.7	13.5	12.3	12.8	11.6

Note: Growth rates have been adjusted to reflect recent changes in statistical coverage.
Source: The PBC.

Table 4 International Liquidity

(USD million)

Items	2017	2018	2019	2020	2021
Total Reserves (minus gold)	3158877	3091881	3127493	3238782	3313920
Special Drawing Rights (SDRs)	10981	10690	11126	11495	53065
IMF Reserve Position	7947	8479	8444	10765	10689
Foreign Exchange	3139949	3072712	3107924	3216522	3250166
Gold (1 million ounces)	59.24	59.56	62.64	62.64	62.64
Gold (national valuation)	76473	76331	95406	118246	113125
Foreign Liabilities of Other Depository Corporations	313413	304431	241046	255007	235197

Source: The PBC.

Table 5 Gold and Foreign Exchange Reserves

Year	Gold Reserves (10 thousand ounces)	Foreign Exchange Reserves (USD 100 million)	Change in Foreign Exchange Reserves (percent)
2001	1608	2121.7	28.1
2002	1929	2864.1	35.0
2003	1929	4032.5	40.8
2004	1929	6099.3	51.3
2005	1929	8188.7	34.3
2006	1929	10663.4	30.2
2007	1929	15282.5	43.3
2008	1929	19460.3	27.3
2009	3389	23991.5	23.3
2010	3389	28473.4	18.7
2011	3389	31811.5	10.7
2012	3389	33115.9	4.1
2013	3389	38213.2	15.4
2014	3389	38430.2	0.6
2015	5666	33303.6	−13.3
2016	5924	30105.2	−9.6
2017	5924	31399.5	4.3
2018	5956	30727.1	−2.1
2019	6264	31079.2	1.1
2020	6264	32165.2	3.5
2021	6264	32501.7	1.0

Source: The PBC.

Table 6 Assets of China's Financial Sector

(December 31, 2021)

(RMB trillion)

Type of Financial Institutions	Assets
Financial Sector	421.52
Central Bank	39.57
Banking Financial Institutions	344.76
Securities Financial Institutions	12.30
Insurance Financial Institutions	24.89

Note: ① Banking institutions refer to legal entities (also covering overseas branches), excluding the central bank. Securities institutions include securities companies, futures companies and fund companies. The total assets of securities companies and futures companies include both their own assets and clients' assets. Insurance institutions include property insurance companies, personal insurance companies, reinsurance companies, insurance group companies and insurance asset management companies.

② Because some insurance companies are in the process of risk resolution, the sector asset does not include assets of these institutions.

Source: The PBC, CBIRC and CSRC.

Table 7 Depository Corporations Survey in 2021

(Quarter-end Balance)

(RMB 100 million)

Items	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Net Foreign Assets	275771.61	279923.24	284819.64	282994.70
Domestic Credits	2531452.71	2576104.87	2619074.92	2673428.34
Claims on Government(net)	347671.64	350477.77	364323.42	385172.02
Claims on Non-financial Sectors	1932316.53	1973570.17	2009068.62	2037222.86
Claims on Other Financial Sectors	251464.54	252056.93	245682.88	251033.45
Money & Quasi-Money	2276488.45	2317788.36	2342829.70	2382899.56
Money	616113.17	637479.36	624645.68	647443.35
Currency in Circulation	86543.64	84346.97	86867.09	90825.15
Corporate Demand Deposits	529569.53	553132.39	537778.58	556618.20
Quasi-Money	1660375.27	1680309.00	1718184.02	1735456.21
Corporate Time Deposits	401306.69	403886.44	419569.72	412951.55
Personal Deposits	1000038.64	1007902.81	1018365.56	1032441.18
Other Deposits	259029.94	268519.76	280248.73	290063.47
Deposits Excluded from Broad Money	58157.34	61083.82	59708.93	59378.57
Bonds	320735.76	326374.00	338569.01	350551.73
Paid-in Capital	73825.93	76806.36	78477.73	81427.97
Other Items (net)	78016.85	73975.57	84309.19	82165.20

Source: The PBC.

Table 8 Balance Sheet of Monetary Authority in 2021

(Quarter-end Balance)

(RMB 100 million)

Items	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Foreign Assets	219213.98	220505.68	223230.38	225102.82
Foreign Exchange	211553.27	212130.20	212145.89	212867.20
Monetary Gold	2855.63	2855.63	2855.63	2855.63
Other Foreign Asstes	4805.08	5519.85	8228.87	9380.00
Claims on Government	15250.24	15250.24	15250.24	15240.68
Of Which: Central Government	15250.24	15250.24	15250.24	15240.68
Claims on Other Depository Corporations	124657.22	130900.47	132450.49	128645.47
Claims on Other Financial Corporations	4427.26	4354.48	4148.68	4125.22
Claims on Non-financial Sector	0.00	0.00	0.00	0.00
Other Assets	19224.06	18886.49	16893.85	22588.05
Total Assets	**382772.77**	**389897.36**	**391973.65**	**395702.25**
Reserve Money	326956.16	324494.14	324341.24	329487.34
Currency Issue	92459.49	89614.10	92426.82	96164.80
Deposits of Financial Corporations	216682.77	216320.68	212046.96	212392.89
Deposits of Other Depository Corporations	216682.77	216320.68	212046.96	212392.89
Deposits of Other Financial Corporations	0.00	0.00	0.00	0.00
Deposits of Non-financial Corporations	17813.90	18559.36	19867.45	20929.64
Deposits of Financial Corporations Excluded from Reserve Money	4947.74	5719.08	5192.75	6053.40
Bond Issue	900.00	900.00	950.00	950.00
Foreign Liabilities	1038.80	942.49	1357.80	998.21
Deposits of Government	36719.33	45666.43	46143.39	42931.68
Own Capital	219.75	219.75	219.75	219.75
Other Liabilities	11990.98	11955.47	13768.72	15061.88
Total Liabilities	**382772.77**	**389897.36**	**391973.65**	**395702.25**

Source: The PBC.

Table 9 Balance Sheet of Other Depository Corporations in 2021

(Quarter-end Balance)

(RMB 100 million)

Items	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Foreign Assets	73276.57	75390.48	77155.05	73885.86
Reserve Assets	226613.78	226402.66	221622.54	222500.40
Deposits with Central Bank	220697.93	221135.53	216062.82	217160.75
Cash in Vault	5915.85	5267.13	5559.72	5339.65
Claims on Government	369140.73	380893.96	395216.56	412863.01
Of Which: Central Government	369140.73	380893.96	395216.56	412863.01
Claims on Central Bank	6.17	6.17	32.61	21.17
Claims on Other Depository Corporations	312619.19	313684.83	309123.26	311829.89
Claims on Other Financial Corporations	247037.28	247702.44	241534.20	246908.23
Claims on Non-financial Corporations	1282427.35	1303662.91	1321353.60	1333788.51
Claims on Other Resident Sectors	649889.18	669907.26	687715.02	703434.35
Other Assets	124429.82	128369.57	126717.07	125163.69
Total Assets	**3285440.07**	**3346020.28**	**3380469.91**	**3430395.13**
Liabilities to Non-financial Institutions and Households	2057725.26	2088782.59	2092409.88	2116898.59
Deposits Included in Broad Money	1930914.87	1964921.63	1975713.87	2002010.94
Corporate Demand Deposits	529569.53	553132.39	537778.58	556618.20
Corporate Time Deposits	401306.69	403886.44	419569.72	412951.55
Personal Deposits	1000038.64	1007902.81	1018365.56	1032441.18
Deposits Excluded from Broad Money	58157.34	61083.82	59708.93	59378.57
Transferable Deposits	22772.77	25076.31	24572.91	26309.16
Other Deposits	35384.57	36007.51	35136.03	33069.41
Other Liabilities	68653.06	62777.14	56987.08	55509.08
Liabilities to Central Bank	121881.83	121963.08	122910.99	118576.17
Liabilities to Other Depository Corporations	115871.86	114713.44	110801.77	112651.88
Liabilities to Other Financial Corporations	223191.41	233336.98	244093.18	253973.53
Of Which: Deposits Included in Broad Money	218830.29	228851.47	239133.93	249744.13
Foreign Liabilities	15680.14	15030.43	14207.99	14995.78
Bond Issue	320735.76	326374.00	338569.01	350551.73
Paid-in Capital	73606.17	76586.61	78257.98	81208.22
Other Liabilities	356747.64	369233.15	379219.11	381539.24
Total Liabilities	**3285440.07**	**3346020.28**	**3380469.91**	**3430395.13**

Source: The PBC.

Table 10 Balance Sheet of Chinese-funded Large Banks in 2021

(Quarter-end Balance)

(RMB 100 million)

Items	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Foreign Assets	38552.29	39671.40	39999.02	38780.35
Reserve Assets	116027.96	112432.28	112900.93	106488.48
Deposits with Central Bank	113195.45	109932.70	110227.79	103874.89
Cash in Vault	2832.52	2499.57	2673.14	2613.59
Claims on Government	221000.79	225516.53	233130.40	241696.84
Of Which: Central Government	221000.79	225516.53	233130.40	241696.84
Claims on Central Bank	0.00	0.00	3.60	2.10
Claims on Other Depository Corporations	109861.13	109094.04	105570.44	102091.22
Claims on Other Financial Corporations	65429.99	64031.73	57687.85	57670.02
Claims on Non-financial Corporations	616787.61	625546.24	631828.68	636357.96
Claims on Other Resident Sectors	317210.59	326165.25	334406.31	343246.95
Other Assets	56690.74	58969.37	55828.95	54414.98
Total Assets	**1541561.10**	**1561426.84**	**1571356.19**	**1580748.89**
Liabilities to Non-financial Institutions and Households	1033145.57	1037326.86	1035407.76	1031362.68
Deposits Included in Broad Money	941783.93	950121.78	954616.81	953759.37
Corporate Demand Deposits	252271.00	262289.21	253917.26	255375.97
Corporate Time Deposits	146381.11	144222.04	152550.93	147689.96
Personal Deposits	543131.82	543610.52	548148.62	550693.43
Deposits Excluded from Broad Money	30582.58	31659.46	30223.14	29464.65
Transferable Deposits	10448.44	11719.64	11566.71	12180.28
Other Deposits	20134.14	19939.82	18656.44	17284.38
Other Liabilities	60779.06	55545.62	50567.81	48138.66
Liabilities to Central Bank	55854.43	54747.87	52333.83	51413.06
Liabilities to Other Depository Corporations	24840.72	27549.75	22643.14	27985.05
Liabilities to Other Financial Corporations	84490.90	88931.79	96493.41	95472.89
Of Which: Deposits Included in Broad Money	82877.39	87313.23	94813.67	94019.75
Foreign Liabilities	6037.41	5494.40	5504.65	5612.93
Bond Issue	136685.36	140779.95	147609.91	152936.03
Paid-in Capital	29673.97	31245.66	31652.87	32464.86
Other Liabilities	170832.74	175350.57	179710.61	183501.40
Total Liabilities	**1541561.10**	**1561426.84**	**1571356.19**	**1580748.89**

Source: The PBC.

Table 11 Balance Sheet of Chinese-funded Medium-Sized Banks in 2021

(Quarter-end Balance)

(RMB 100 million)

Items	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Foreign Assets	28277.31	28521.37	29796.27	27449.10
Reserve Assets	38733.42	38539.20	35811.47	38120.61
Deposits with Central Bank	38254.77	38078.31	35358.40	37635.58
Cash in Vault	478.65	460.89	453.07	485.03
Claims on Government	74883.67	76311.89	78783.19	81749.06
Of Which: Central Government	74883.67	76311.89	78783.19	81749.06
Claims on Central Bank	0.00	0.00	11.05	6.20
Claims on Other Depository Corporations	41622.49	43695.58	41814.57	43728.30
Claims on Other Financial Corporations	92317.42	94208.88	92871.78	95177.11
Claims on Non-financial Corporations	312817.42	315474.52	321369.78	322516.50
Claims on Other Resident Sectors	155156.48	159040.02	163025.39	167095.03
Other Assets	22683.12	23554.43	23350.79	23078.48
Total Assets	**766491.32**	**779345.88**	**786834.29**	**798920.37**
Liabilities to Non-financial Institutions and Households	353831.91	362807.44	362205.10	367988.10
Deposits Included in Broad Money	332616.92	341103.92	341127.99	347312.49
Corporate Demand Deposits	124697.29	129797.18	126833.29	130244.87
Corporate Time Deposits	122134.57	123678.16	127280.00	126466.94
Personal Deposits	85785.05	87628.58	87014.71	90600.68
Deposits Excluded from Broad Money	17343.08	18099.59	17942.54	17197.52
Transferable Deposits	7668.38	8058.54	7903.53	7675.11
Other Deposits	9674.70	10041.05	10039.01	9522.41
Other Liabilities	3871.91	3603.93	3134.57	3478.09
Liabilities to Central Bank	39102.13	39190.36	39242.90	34085.61
Liabilities to Other Depository Corporations	37403.72	33172.35	33748.95	31862.82
Liabilities to Other Financial Corporations	92934.64	95675.40	97674.91	103314.39
Of Which: Deposits Included in Broad Money	92133.13	94851.44	96285.37	102559.91
Foreign Liabilities	4699.76	4638.23	4211.30	4553.84
Bond Issue	146745.53	147301.24	151975.13	158809.49
Paid-in Capital	12244.93	12943.86	13542.97	14472.74
Other Liabilities	79528.70	83616.99	84233.05	83833.39
Total Liabilities	**766491.32**	**779345.88**	**786834.29**	**798920.37**

Source: The PBC.

Table 12 Balance Sheet of Chinese-funded Small Banks in 2021

(Quarter-end Balance)

(RMB 100 million)

Items	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Foreign Assets	3165.07	3815.11	3727.98	3635.80
Reserve Assets	58624.76	61153.39	59154.51	63528.33
Deposits with Central Bank	56355.96	59140.66	57029.88	61538.18
Cash in Vault	2268.79	2012.73	2124.63	1990.16
Claims on Government	66027.50	71777.38	76098.91	81562.24
Of Which: Central Government	66027.50	71777.38	76098.91	81562.24
Claims on Central Bank	6.17	6.17	9.54	6.87
Claims on Other Depository Corporations	114983.28	111611.65	113927.83	110435.70
Claims on Other Financial Corporations	79278.14	78581.63	78821.44	81744.05
Claims on Non-financial Corporations	290159.09	299811.99	305336.54	311017.65
Claims on Other Resident Sectors	160023.82	167082.15	172890.34	176055.32
Other Assets	28260.71	28749.27	30461.55	30714.95
Total Assets	**800528.54**	**822588.74**	**840428.63**	**858700.91**
Liabilities to Non-financial Institutions and Households	553745.98	566393.73	574762.45	585933.19
Deposits Included in Broad Money	546420.61	558517.35	566466.35	576925.28
Corporate Demand Deposits	116491.82	119843.39	118523.16	121117.39
Corporate Time Deposits	95380.18	98476.03	100270.08	99939.10
Personal Deposits	334548.62	340197.94	347673.12	355868.80
Deposits Excluded from Broad Money	5291.86	5903.71	6327.41	6600.00
Transferable Deposits	1650.28	1782.93	1830.25	2224.37
Other Deposits	3641.58	4120.78	4497.17	4375.62
Other Liabilities	2033.51	1972.67	1968.69	2407.91
Liabilities to Central Bank	25489.14	26392.74	29405.54	31356.21
Liabilities to Other Depository Corporations	41168.90	42107.84	41888.12	41366.42
Liabilities to Other Financial Corporations	43570.53	46568.57	47258.94	52587.98
Of Which: Deposits Included in Broad Money	42175.89	44942.66	45941.26	51046.76
Foreign Liabilities	795.07	758.65	789.25	762.72
Bond Issue	36404.21	37331.01	38062.12	37918.18
Paid-in Capital	21660.47	22289.53	23020.72	23952.32
Other Liabilities	77694.23	80746.68	85241.48	84823.89
Total Liabilities	**800528.54**	**822588.74**	**840428.63**	**858700.91**

Source: The PBC.

Table 13 Balance Sheet of Foreign-funded Banks in 2021

(Quarter-end Balance)

(RMB 100 million)

Items	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Foreign Assets	3091.92	3214.88	3412.14	3766.71
Reserve Assets	2723.61	2759.85	2583.28	2577.56
Deposits with Central Bank	2720.59	2756.86	2580.65	2574.80
Cash in Vault	3.02	2.98	2.63	2.76
Claims on Government	4282.95	4284.92	4161.61	4421.24
Of Which: Central Government	4282.95	4284.92	4161.61	4421.24
Claims on Central Bank	0.00	0.00	8.42	6.00
Claims on Other Depository Corporations	4271.66	4175.35	4145.26	4539.91
Claims on Other Financial Corporations	4430.54	4717.27	4661.34	4781.01
Claims on Non-financial Corporations	13722.85	13493.15	13342.46	13267.24
Claims on Other Resident Sectors	1945.49	2040.69	2109.85	2212.26
Other Assets	12618.10	12687.18	12709.49	12519.20
Total Assets	**47087.12**	**47373.28**	**47133.84**	**48091.13**
Liabilities to Non-financial Institutions and Households	20532.72	20463.32	19964.41	21225.35
Deposits Included in Broad Money	14913.88	14844.55	14758.46	15680.75
Corporate Demand Deposits	4871.78	4995.43	4394.77	5515.80
Corporate Time Deposits	8637.84	8445.34	8984.44	8781.49
Personal Deposits	1404.25	1403.78	1379.26	1383.46
Deposits Excluded from Broad Money	3743.24	4051.18	3978.02	4192.49
Transferable Deposits	2256.30	2497.07	2401.12	2648.80
Other Deposits	1486.94	1554.11	1576.90	1543.68
Other Liabilities	1875.60	1567.58	1227.93	1352.11
Liabilities to Central Bank	146.95	302.60	578.92	330.99
Liabilities to Other Depository Corporations	2891.22	2737.16	2961.52	2734.53
Liabilities to Other Financial Corporations	1591.96	1667.53	2087.40	2066.79
Of Which: Deposits Included in Broad Money	1407.92	1489.30	1882.01	1858.53
Foreign Liabilities	4146.75	4138.45	3702.09	4065.76
Bond Issue	851.22	923.90	915.80	884.02
Paid-in Capital	2008.45	2011.06	2000.38	2019.08
Other Liabilities	14917.84	15129.27	14923.32	14764.62
Total Liabilities	**47087.12**	**47373.28**	**47133.84**	**48091.13**

Source: The PBC.

Table 14 Balance Sheet of Rural Credit Cooperatives in 2021

(Quarter-end Balance)

(RMB 100 million)

Items	Quarter 1	Quarter 2	Quarter 3	Quarter 4
Foreign Assets	5.60	4.59	0.69	0.72
Reserve Assets	7241.60	7132.09	7714.29	8173.91
Deposits with Central Bank	6908.75	6841.35	7409.05	7925.80
Cash in Vault	332.86	290.75	305.24	248.12
Claims on Government	2675.76	2759.70	2751.37	3143.04
Of Which: Central Government	2675.76	2759.70	2751.37	3143.04
Claims on Central Bank	0.00	0.00	0.00	0.00
Claims on Other Depository Corporations	18218.57	18177.71	17793.81	16185.33
Claims on Other Financial Corporations	1017.25	1049.20	1660.67	1321.38
Claims on Non-financial Corporations	13132.36	13190.00	12627.23	12267.44
Claims on Other Resident Sectors	14142.88	14177.39	13898.80	13388.25
Other Assets	3530.93	3741.12	3649.63	3791.63
Total Assets	**59964.96**	**60231.80**	**60096.50**	**58271.71**
Liabilities to Non-financial Institutions and Households	42099.28	41874.22	40693.48	39857.24
Deposits Included in Broad Money	42018.97	41804.36	40624.45	39744.04
Corporate Demand Deposits	5635.14	5483.19	5187.87	4614.78
Corporate Time Deposits	1221.76	1265.18	1291.91	1239.15
Personal Deposits	35162.08	35055.99	34144.66	33890.11
Deposits Excluded from Broad Money	0.23	0.25	0.23	0.31
Transferable Deposits	0.22	0.23	0.22	0.29
Other Deposits	0.01	0.02	0.02	0.01
Other Liabilities	80.09	69.61	68.80	112.90
Liabilities to Central Bank	875.58	883.77	885.49	944.37
Liabilities to Other Depository Corporations	8107.03	8194.17	8826.12	8091.47
Liabilities to Other Financial Corporations	286.41	154.65	173.33	193.81
Of Which: Deposits Included in Broad Money	68.47	75.61	65.17	64.65
Foreign Liabilities	1.16	0.70	0.70	0.53
Bond Issue	19.40	18.28	5.06	4.02
Paid-in Capital	1243.61	1292.65	1202.62	1373.35
Other Liabilities	7332.49	7813.35	8309.70	7806.93
Total Liabilities	**59964.96**	**60231.80**	**60096.50**	**58271.71**

Source: The PBC.

Table 15 Statistics of Securities Market

Year	2016	2017	2018	2019	2020	2021
Number of Listed Companies in Shanghai Stock Exchange and Shenzhen Stock Exchange (A shares, B shares)	3052	3485	3584	3777	4154	4615
Number of Listed Foreign Investment Shares in Shanghai Stock Exchange and Shenzhen Stock Exchange (B shares)	100	100	99	97	93	90
Number of Listed Companies in Beijing Stock Exchange	-	-	-	-	-	82
Number of Overseas Listed Companies (H shares)	241	252	267	294	291	323
Total Issued Shares in Shanghai Stock Exchange and Shenzhen Stock Exchange (100 million shares)	48750	53747	57581	61740	65526	70694
Of Which: Negotiable Shares (100 million shares)	41136	45045	49048	52488	56375	60755
Total Issued Shares in Beijing Stock Exchange (100 million shares)	-	-	-	-	-	123
Of Which: Negotiable Shares (100 million shares)	-	-	-	-	-	57
Total Market Capitalization of Shares in Shanghai Stock Exchange and Shenzhen Stock Exchange (RMB 100 million)	507686	567086	434924	593075	796487	916088
Of Which: Negotiable Shares (RMB 100 million)	393402	449298	353794	483327	643096	751556
Total Market Capitalization of Shares in Beijing Stock Exchange (RMB 100 million)	-	-	-	-	-	2723
Of Which: Negotiable Shares (RMB 100 million)	-	-	-	-	-	1074
Trading Volume of Shares in Shanghai Stock Exchange and Shenzhen Stock Exchange (100 million shares)	95525	87781	82037	126624	167452	187426
Trading Volume of Shares in Beijing Stock Exchange (100 million shares)	-	-	-	-	-	37
Turnover of Shares in Shanghai Stock Exchange and Shenzhen Stock Exchange (RMB 100 million)	1277680	1124625	901739	1274159	2068253	2579734
Turnover of Shares in Beijing Stock Exchange (RMB 100 million)	-	-	-	-	-	667
Shanghai Composite Index (close)	3103.64	3307.17	2493.90	3050.12	3473.07	3639.78
Shenzhen Composite Index (close)	1969.11	1899.34	1267.87	1722.95	2329.37	2530.14
Number of Investor Accounts (10 thousand)	11811.04	13398.29	14650.44	15975.24	17777.49	19740.85
Average P/E Ratio						
Shanghai	15.9	16.3	12.5	15.6	16.1	20.9

(Cont)

Year	2016	2017	2018	2019	2020	2021
Shenzhen	41.2	36.2	20.0	35.6	33.5	33.0
Beijing	-	-	-	-	-	46.7
Average Turnover Rate (%)						
Shanghai	158.4	180.5	150.9	193.9	258.8	223.0
Shenzhen	541.8	412.9	356.9	454.9	555.8	523.4
Beijing	-	-	-	-	-	206.5
Government Bond Issuance (RMB 100 million)	91086	83513	78278	85187	135293	142662
Corporate Credit Bond Issuance (RMB 100 million)	82377	56352	77905	107058	142012	146804
Turnover of Outright Government Bond Purchase in the Interbank Market (RMB 100 million)	126130	131269	190695	347883	467069	406092
Turnover of Government Bond Repo in the Interbank Market (RMB 100 million)	1757356	1913543	2144206	2694737	3031178	3339338
Number of Securities Investment Funds	3873	4848	5580	6111	7258	9152
Total Net Asset Value of Securities Investment Funds (RMB 100 million)	91595	115989	130339	147673	198519	255625
Turnover of Securities Investment Funds Listed on Exchanges (RMB 100 million)	111444	98052	102705	91679	136239	183100
Trading Volume of Futures (10 thousand lots)	413782	307106	301070	392157	602735	726924
Turnover of Futures (RMB 100 million)	1956344	1878951	2108057	2905856	4373005	5807071

Source: The PBC, the CSRC, Asset Management Association of China, China Central Depository & Clearing Co., Ltd.

Table 16 Ratio of Stock Market Capitalization to GDP

(RMB 100 million, %)

Year	GDP	Market Capitalization	Ratio of Market Captialization to GDP (percent)	GDP	Negotiable Market Capitalization	Ratio of Negotiable Market Captialization to GDP (percent)
2002	120333	38339	31.85	120333	12487	10.38
2003	135823	42478	31.26	135823	13185	9.70
2004	159878	37081	23.18	159878	11701	7.31
2005	183868	32446	17.64	183868	10638	5.78
2006	211923	89441	42.19	211923	25021	11.80
2007	249530	327291	131.10	249530	93141	37.30
2008	300670	121541	40.36	300670	45303	15.04
2009	335353	244104	72.74	335353	151342	45.10
2010	397983	265423	66.69	397983	193110	48.52
2011	471564	214758	45.54	471564	164921	34.97
2012	519322	230358	44.36	519322	181658	34.98
2013	568845	239077	42.03	568845	199580	35.09
2014	636463	372547	58.53	636463	315624	49.59
2015	676708	531463	78.51	676708	417881	61.76
2016	744127	507686	68.30	744127	393402	52.85
2017	827122	567086	68.56	827122	449298	54.32
2018	900309	434924	48.31	900309	353794	39.30
2019	990865	593075	59.85	990865	483327	48.78
2020	1015986	796487	78.47	1015986	643096	63.35
2021	1143670	918811	80.10	1143670	752630	65.71

Note: Market capitalization and negotiable market capitalization include that of Shanghai Stock Exchange, Shenzhen Stock Exchange and Beijing Stock Exchange.
Source: The NBS, the CSRC.

Table 17 Ratio of Domestic Stock Financing to Total Lending Increment

(RMB 100 million, %)

Year	Domestic Stock Financing	Total Lending Increment	Ratio (percent)
2002	720.05	18475.01	3.90
2003	665.51	27651.67	2.41
2004	650.53	22648.06	2.87
2005	339.03	23543.82	1.44
2006	2374.5	31809.19	7.46
2007	7814.74	36322.51	21.51
2008	3312.39	49041.23	6.75
2009	4834.34	95941.63	5.04
2010	9799.8	79450.29	12.33
2011	7154.43	74715.39	9.58
2012	4542.4	82037.63	5.54
2013	4131.46	88916.22	4.65
2014	8498.26	97815.77	8.69
2015	16361.62	117238.6	13.96
2016	20297.39	126496.23	16.05
2017	15534.98	135277.81	11.48
2018	11377.88	161704.9	7.04
2019	12538.82	168144.09	7.46
2020	14221.58	196340.43	7.24
2021	15422.00	199489.96	7.73

Notes: ① Since 2015, the item "Total Lending" includes loans offered by banking financial institutions to non-bank financial institutions.
② The amount of domestic stock financing does not include the amount of convertible bonds that have been converted into stocks.
③ Domestic stock financing for 2021 includes that of Shanghai Stock Exchange, Shenzhen Stock Exchange and Beijing Stock Exchange:

Source: Calculated on the basis of data from the CSRC and the PBC.

Table 18 Statistics of Stock Market

Year	2016	2017	2018	2019	2020	2021
Number of Listed Companies in Shanghai Stock Exchange and Shenzhen Stock Exchange (A shares, B shares)	3052	3485	3584	3777	4154	4615
Of Which: ST Companies	62	64	57	137	218	179
SME Board	822	903	922	943	994	-
ChiNext	570	710	739	791	892	1090
STAR	-	-	-	70	215	377
Number of Listed Foreign Investment Shares in Shanghai Stock Exchange and Shenzhen Stock Exchange (B shares)	100	100	99	97	20	90
Of Which: ST Companies	4	4	1	4	4	4
Number of Listed Companies in Beijing Stock Exchange	-	-	-	-	-	82
Total Issued Shares in Shanghai Stock Exchange and Shenzhen Stock Exchange (100 million shares)	48750	53747	57581	61740	65526	70694
Of Which: SME Board	6424	7612	8360	9322	9924	-
ChiNext	2631	3258	3728	4097	4510	5165
STAR	-	-	-	-	-	1212
Total Issued Shares in Beijing Stock Exchange (100 million shares)	-	-	-	-	-	123
Total Market Capitalization of Shares in Shanghai Stock Exchange and Shenzhen Stock Exchange (RMB 100 million)	507686	567086	434924	593075	796487	916088
Of Which: SME Board	98114	103992	70122	98681	135378	-
ChiNext	52255	51289	40460	61348	109339	140240
STAR	-	-	-	8638	33491	56306
Total Market Capitalization of Shares in Beijing Stock Exchange (RMB 100 million)	-	-	-	-	-	2723
Market Capitalization of Negotiable Shares in Shanghai Stock Exchange and Shenzhen Stock Exchange (RMB 100 million)	393402	449298	353794	483327	643096	751556
Of Which: SME Board	64089	71155	50479	73661	106105	-
ChiNext	30537	30495	24543	40232	69630	140240
STAR	-	-	-	1288	10002	22591

(Cont)

Year		2016	2017	2018	2019	2020	2021
Market Capitalization of Negotiable Shares in Beijing Stock Exchange (RMB 100 million)		-	-	-	-	-	1074
Volume in Shanghai Stock Exchange and Shenzhen Stock Exchange (100 million shares)	Total	95525	87781	82037	126624	167452	187426
	Daily Average	388	360	338	519	689	38
	SME Board	20578	17409	18286	31971	42244	-
	ChiNext	9510	8830	11642	19009	30219	29060
	STAR	-	-	-	305	1203	1951
Turnover in Shanghai Stock Exchange and Shenzhen Stock Exchange (RMB 100 million)	Total	1277680	1124625	901739	1274159	2068253	2579734
	Daily Average	5221	4609	3711	5222	8511	478
	SME Board	344165	259880	203626	310657	501796	-
	ChiNext	216832	165522	158862	231604	466723	543303
	STAR	-	-	-	13314	66230	105422
Average Turnover Rate (%)	Shanghai	158.4	180.5	150.9	193.4	258.8	223.0
	Shenzhen	541.8	412.9	356.9	454.9	555.8	523.4
	Beijing	-	-	-	-	-	206.5
Average P/E Ratio	Shanghai	15.9	16.3	12.5	15.6	16.1	20.9
	Shenzhen	41.2	36.2	20.0	35.6	33.5	33.0
	Beijing	-	-	-	-	-	46.7
	SME Board	50.4	45.6	21.0	28.5	35.8	-
	ChiNext	73.2	51.4	32.8	47.0	64.9	60.0
	STAR	-	-	-	77.1	91.1	75.6
Shanghai Composite Index	Open	3536.59	3105.31	3314.03	2497.88	3066.34	3474.68
	Highest	3538.69	3450.5	3587.03	3288.45	3474.92	3731.69
	Date	2016/1/4	2017/11/14	2018/1/29	2019/4/8	2020/12/31	2021/2/18
	Lowest	2638.30	3016.53	2449.20	2440.91	2646.80	3312.72
	Date	2016/1/27	2017/5/11	2018/10/19	2019/1/4	2020/3/19	2021/7/28
	Close	3103.64	3307.17	2493.90	3050.12	3473.07	3639.78
Shenzhen Composite Index	Open	2304.48	1972.55	1903.49	1270.5	1734.63	2335.16
	Highest	2304.49	2054.02	1966.15	1799.1	2340.89	2571.27
	Date	2016/1/4	2017/3/17	2018/1/25	2019/4/8	2020/11/9	2021/12/13
	Lowest	1618.12	1753.53	1212.23	1231.83	1552.96	2130.09
	Date	2016/1/27	2017/6/2	2018/10/19	2019/1/4	2020/2/4	2021/3/9
	Close	1969.11	1899.34	1267.87	1722.95	2329.37	2530.14

Source: The CSRC, Shanghai Stock Exchange, Shenzhen Stock Exchange and Beijing Stock Exchange.

Table 19 Summary of China's Bond Issuance

(RMB 100 million)

Year	Government Bonds			Financial Bonds			Corporate Credit Bonds		
	Issuance	Redemption	Outstanding	Issuance	Redemption	Outstanding	Issuance	Redemption	Outstanding
2001	4884	2286	15618	-		-	147		
2002	5934	2216	19336	-		-	325		
2003	6280	2756	22604	-		-	358		
2004	6924	3750	25778	-		-	327		
2005	7042	4046	28774	-		-	2047	37	
2006	8883	6209	31449	-		-	3938	1672	
2007	23139	5847	48741	-		-	5181	2881	7683
2008	8558	7531	49768	-		-	8723	3278	13251
2009	17927	9745	57950	-		-	16599	4309	25541
2010	19778	10043	67685	-		-	16094	5099	36318
2011	17100	10959	75832	23491	7683	75748	23548	10326	49095
2012	16154	9464	82522	26202	8588	93362	37365	8750	77710
2013	20230	8996	95471	26310	13306	105772	36784	18673	93242
2014	21747	10365	107275	36552	19345	125489	51516	27388	116214
2015	59408	12803	154524	102095	53852	184596	67205	39757	144329
2016	91086	19709	225734	182152	125677	236499	82242	61139	175180
2017	83513	27567	281538	258056	216410	278301	56352	52378	183252
2018	78278	29875	330069	274056	229047	322585	77905	51561	205603
2019	85187	37175	377273	259360	217335	364622	107058	74064	246176
2020	135293	51408	460911	291539	239860	415080	142012	95558	289472
2021	142662	71258	532744	323516	257093	482241	146804	115152	314477

Notes: ① "Financial Bonds" are bonds issued by financial insitutions, including financial bonds issued by CDB; policy financial bonds; common bonds, subordinated bonds and hybrid bonds issued by commercial banks; asset-backed securities; bonds and short-term financing bills issued by securities companies; financial bonds issued by asset management companies; and interbank negotiable certificates of deposit.

② Due to statistical method adjustment, since 2012, the item "Enterprise bonds" is replaced by "Corporate credit bonds", including debt financing instruments of non-financial enterprises, enterprise bonds, corporate bonds, convertible bonds, bonds with detachable warrants, and SME private-funded bonds.

Source:The PBC.

Table 20 Statistics of China's Insurance Sector

(RMB 100 million, %)

Items	2015	Growth (y-o-y) (percent)	2016	Growth (y-o-y) (percent)	2017	Growth (y-o-y) (percent)	2018	Growth (y-o-y) (percent)	2019	Growth (y-o-y) (percent)	2020	Growth (y-o-y) (percent)	2021	Growth (y-o-y) (percent)
Premium Income	24282.52	20.00	30959.10	27.50	36581.01	18.16	38016.62	3.92	42644.75	12.17	45257.33	6.13	44900.17	−0.79
1.Property Insurance	7994.97	10.99	8724.50	9.12	9834.66	12.72	10770.08	9.51	11649.47	8.17	11928.58	2.40	11671.11	−2.16
2.Personal Accident Insurance	635.56	17.14	749.89	17.99	901.32	20.19	1075.55	19.33	1175.16	9.26	1174.11	−0.09	1210.19	3.07
3.Health Insurance	2410.47	51.87	4042.50	67.71	4389.46	8.58	5448.13	24.12	7065.98	29.70	8172.71	15.66	8447.02	3.36
4.Life Insurance	13241.52	21.46	17442.22	31.72	21455.57	23.01	20722.86	−3.41	22754.14	9.80	23981.92	5.40	23571.85	−1.71
Claims and Payments	8674.14	20.20	10512.89	21.20	11180.79	6.35	12297.87	9.99	12893.97	4.85	13907.10	7.86	15608.64	12.24
1.Property Insurance	4194.17	10.72	4726.18	12.68	5087.45	7.64	5897.32	15.92	6501.62	10.25	6954.79	6.97	7687.50	10.54
2.Personal Accident Insurance	151.84	18.24	183.01	20.53	223.69	22.23	267.70	19.68	297.66	11.19	316.04	6.17	352.39	11.50
3.Health Insurance	762.97	33.58	1000.75	31.17	1294.77	29.38	1744.34	34.72	2351.48	34.81	2921.16	24.23	4028.50	37.91
4.Life Insurance	3565.17	30.67	4602.95	29.11	4574.89	−0.61	4388.52	−4.07	3743.21	−14.70	3715.11	−0.75	3540.25	−4.71
Operating Expenses	3336.72	19.35	3895.52	16.75	4288.06	10.08	4717.73	10.02	5490.57	16.38	5728.05	4.33	5224.93	−8.78
Bank Deposits	24349.67	−3.50	24844.21	2.03	19274.07	−22.42	24363.50	26.41	25227.42	3.55	25973.45	2.96	26178.59	0.79
Investment	87445.81	30.52	109066.46	24.72	129932.14	19.13	139724.88	7.54	120618.47	−13.67	190827.68	58.21	206101.46	8.00
Of Which: Government Bonds	5831.12	16.39	7796.24	33.70	10167.99	30.42	14027.62	37.96	20672.01	47.37	32069.60	55.14	43054.84	34.25
Securities Investment Funds	8856.50	87.87	8554.46	−3.41	7524.77	−12.04	8650.55	14.96	9423.29	8.93	11040.41	17.16	12248.02	10.94
Total Assets	123597.76	21.66	151169.16	22.31	167489.37	10.80	183308.92	9.45	205644.92	12.18	232984.30	13.29	248874.05	6.82

Notes: ① Data of premium income, claims and payments and operating expenses are data for the year.
② Data of bank deposits, investment and total assets are data of the year-end balance.
③ Because some institusions are in the process of risk resolution, data for 2021 do not include those of these institutions.

Source: The CBIRC and the former CIRC.

Table 21 The Structure of Non-life Insurance Premium Income, 2017–2021

(RMB 100 million, %)

Insurance Lines	2017	Proportion (percent)	2018	Proportion (percent)	2019	Proportion (percent)	2020	Proportion (percent)	2021	Proportion (percent)
Automobile Insurance	7521.07	63.98	7834.02	66.64	8188.32	62.91	8244.75	60.70	7772.68	56.83
Enterprise Property Insurance	392.10	3.34	423.11	3.60	464.10	3.57	490.26	3.61	519.76	3.80
Cargo Transportation Insurance	100.19	0.85	121.11	1.03	130.12	1.00	135.96	1.00	167.72	1.23
Accident Insurance	312.66	2.66	416.60	3.54	526.57	4.05	540.90	3.98	627.30	4.59
Liability Insurance	451.27	3.84	590.79	5.03	753.30	5.79	901.13	6.63	1018.44	7.45
Others	1764.09	15.01	2370.06	20.16	2953.92	22.69	3270.69	24.08	3570.59	26.11
Total	10541.38	89.67	11755.69	100.00	13016.33	100.00	13583.69	100.00	13676.48	100.00

Note: Because some institusions are in the process of risk resolution, data for 2021 do not include those of these institutions.
Source: The CBIRC, the former CIRC.

Table 22 The Structure of Life Insurance Premium Income, 2017–2021

(RMB 100 million, %)

Insurance Lines	2017	Proportion (percent)	2018	Proportion (percent)	2019	Proportion (percent)	2020	Proportion (percent)	2021	Proportion (percent)
Life Insurance	21455.49	82.40	20722.80	78.91	22754.14	76.80	23981.92	75.97	23571.84	75.49
Of Which: Common Life Insurance	12936.48	49.68	9120.97	34.73	10473.62	35.35	12545.94	39.74	13520.14	43.30
Participating Insurance	8403.20	32.27	11489.15	43.75	12166.97	41.07	11327.18	35.88	9952.80	31.88
Unit-linked Insurance	3.91	0.02	4.12	0.02	4.40	0.01	4.33	0.01	3.72	0.01
Accident Insurance	588.66	2.26	658.95	2.51	648.60	2.19	633.21	2.01	582.89	1.87
Health Insurance	3995.40	15.34	4879.12	18.58	6225.68	21.01	7058.50	22.36	7068.94	22.64
Total	26039.55	100.00	26260.87	100.00	29628.42	100.00	31569.16	100.00	31223.67	100.00

Note:① Data of 2021 do not include the insurance premium income of life insurance business of China United Insurance Holding Company.

② Because some institusions are in the process of risk resolution, data for 2021 do not include those of these institutions.

Source: The CBIRC, the former CIRC.

Table 23 Insurance Premium Income of China's Different Regions in 2021

(RMB 100 million)

Regions	Insurance Premium Income	Property Insurance	Life Insurance	Accident Insurance	Health Insurance
Total	44900	11671	23572	1210	8447
Guangdong	4153	1019	2283	139	712
Jiangsu	4051	1002	2345	94	610
Shandong	2816	668	1473	69	607
Beijing	2527	443	1499	62	522
Zhejiang	2485	745	1288	63	389
Henan	2360	550	1264	52	494
Sichuan	2205	557	1173	61	414
Hebei	1995	545	1045	44	361
Shanghai	1971	524	1048	75	324
Hubei	1878	380	1087	43	369
Hunan	1509	391	749	41	328
Shenzhen	1427	377	638	45	367
Anhui	1380	437	657	37	249
Shaanxi	1052	255	598	24	176
Fujian	1052	257	541	30	224
Shanxi	998	231	579	22	167
Heilongjiang	995	199	549	17	231
Liaoning	980	289	495	21	175
Chongqing	966	214	519	26	206
Jiangxi	910	265	444	25	176
Guangxi	781	241	346	29	165
Jilin	691	171	349	16	156
Yunnan	690	262	252	28	148
Xinjiang	686	229	304	18	135
Tianjin	660	154	372	18	116
Inner Mongolia	646	205	302	16	123
Guizhou	496	215	181	21	80
Gansu	490	131	258	14	87
Qingdao	462	144	210	11	96
Dalian	378	83	230	8	57
Ningbo	375	176	145	11	43
Xiamen	243	71	122	7	43
Ningxia	211	65	101	7	38
Hainan	198	74	80	6	38
Qinghai	107	45	42	3	17
Tibet	40	27	5	3	4
Group and Head Office Level	37	31	0	4	3

Note: ① Data of "Group and Head Office Level" refer to the premium income earned by the group and head office, which are not reflected in any region's data.

② Because some institusions are in the process of risk resolution, data summarized by region do not include those of these institutions.

Source: The CBIRC.

Table 24 Transactions of Payment Systems

(100 million transactions, RMB trillion)

Items \ Year	2017		2018		2019		2020		2021	
	Number	Value	Number	Value	Number	Value	Number	Value	Number	Value
HVPS	9.32	3731.86	10.73	4353.48	10.94	4950.72	5.12	5647.73	4.82	6171.42
BEPS	25.28	33.14	21.83	35.53	26.27	60.58	34.58	146.87	38.81	162.55
IBPS	84.64	61.72	120.98	89.05	140.11	110.77	156.24	203.49	174.91	273.76
CFXPS	0.0202	6.75	0.0214	8.33	0.0220	8.54	0.0266	10.27	0.0416	14.46
CIPS	0.0126	14.55	0.0144	26.45	0.0188	33.93	0.0220	45.27	0.0334	79.60
Intra-bank Payment Systems of Commercial Banks	323.13	1333.69	366.95	1332.09	164.69	1218.69	169.19	1588.32	184.51	2055.34
Inter-bank Bankcard Payment System	293.48	93.85	355.14	120.29	1351.75	173.60	1505.60	192.18	2080.04	226.95
NetsUnion Clearing Platform	-	-	1284.77	57.91	3975.42	259.84	5431.68	348.86	6827.60	461.46
Urban Commercial Banks Draft Processing System and Payment & Clearing System	-	-	0.63	0.59	0.05	0.73	0.08	1.10	0.16	1.87
Rural Credit Banks Payment & Clearing Systerm	-	-	5.98	3.03	13.02	2.93	17.38	2.64	25.30	3.27

Notes:① According to the PBC's requirement of "breaking the direct connection between third-party payment institutions and commercial banks", all third-party payment institutions join the system of Union Pay or Nets Union, and the business between payment institutions and commercial banks, as well as business between the Urban Commercial Bank Clearing Co., Ltd. or members of Rural Credit Banks Funds Clearing Center and third-party payment institutions will not be included in calculating the transaction volume of the intra-bank systems of banks, urban commercial banks payment and clearing system, or rural credit bank payment and clearing system.

② From Q2 2018, the transaction volume of the inter-bank bankcard payment system only covers the clearing business and excludes inquiry, account verification and other transactions that are not related to the clearing business. From Q1 2019, the transaction volume of the inter-bank bankcard payment system incorporates the bank account-related Internet payment transactions that are made by payment institutions and via the system.

③ The transactions via the former Intra-City Clearing System (ICCS) have been migrated to the HVPS and BEPS since December 2020. Therefore, the transaction volume of the ICCS will not be disclosed separately since 2021.

④ The Urban Commercial Banks Draft Processing System and Payment & Clearing System includes the former City Commercial Banks Draft Processing System and Payment & Clearing System.

Source: The PBC.

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