CHINA FINANCIAL MARKET DEVELOPMENT REPORT

2020

PBC Shanghai Head Office
China Financial Market Development Report Committee

中国金融出版社

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图书在版编目（CIP）数据

中国金融市场发展报告：2020 = China Financial Market Development Report 2020：英文/中国人民银行上海总部《中国金融市场发展报告》编写组编. —北京：中国金融出版社，2022. 3

ISBN 978 – 7 – 5220 – 1521 – 7

Ⅰ. ①中…　Ⅱ. ①中…　Ⅲ. ①金融市场—研究报告—中国—2020—英文　Ⅳ. ①F832. 5

中国版本图书馆CIP数据核字（2022）第024806号

中国金融市场发展报告. 2020
ZHONGGUO JINRONG SHICHANG FAZHAN BAOGAO. 2020

出版 发行　中国金融出版社

社址　北京市丰台区益泽路2号
市场开发部　（010）66024766，63805472，63439533（传真）
网上书店　www.cfph.cn
（010）66024766，63372837（传真）
读者服务部　（010）66070833，62568380
邮编　100071
经销　新华书店
印刷　河北松源印刷有限公司
尺寸　210毫米×285毫米
印张　14.5
字数　325千
版次　2022年3月第1版
印次　2022年3月第1次印刷
定价　110.00元
ISBN 978 – 7 – 5220 – 1521 – 7

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Chapter I Overview

In 2020, due to the worldwide spread of the COVID-19 pandemic, the global economy plunged into recession, the international financial environment further loosened, and fluctuations in international financial markets intensified. Nevertheless, as China successfully overcame the impact of the pandemic and other unfavorable factors, it became the only major economy registering positive economic growth and was one of the few economies that practiced conventional monetary policies. The financial market of China was overall stable. Specifically, financial infrastructure maintained stable operation; financial services extended much stronger support for the real economy; market reforms continued to deepen; product innovations kept springing up; the opening-up expanded; and the efforts to resolve financial risks through market-based and law-based approaches secured remarkable results.

1.1 The macro environment for China's financial market development in 2020

1.1.1 International economic and financial situations

According to the estimate released by the International Monetary Fund (IMF) in January 2021, the global economic growth contraction for 2020 is estimated at -3.5 percent, much lower than the global economic growth rate of 2.8 percent in 2019, and the scope and magnitude of the impact of the pandemic on the global economy may be as severe as the Great Depression started in 1929[①]. As a cushion against the pandemic, the global financial environment further loosened in 2020, resulting in greater fluctuations in financial markets.

1.1.1.1 The global economy plunged into recession

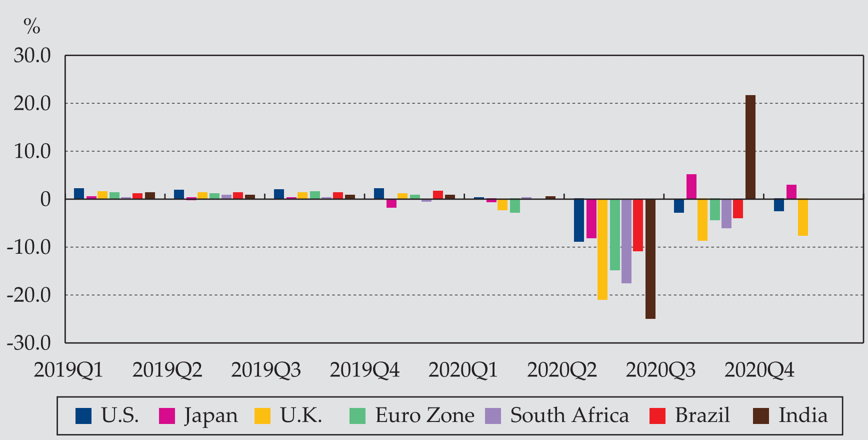
(1) Global economic growth slowed down dramatically

In 2020, the global economy plunged into recession, with both developed and developing economies experiencing evident declines of economic growth. The annual real GDP of the United States (the U.S.) grew at a rate of -3.5 percent, lower than the 2.3 percent of 2019, and the GDP growth rates for each quarter came in at 0.3 percent, -9.0 percent, -2.9 percent, and -2.5 percent respectively. The annual real GDP growth rate in the Eurozone was -7.2 percent,

① Source: *World Economic Outlook Update* by the IMF (January 2021).

lower than the 1.2 percent of 2019, and the GDP growth rates for each quarter were -3.2 percent, -14.7 percent, -4.3 percent, and -5.1 percent respectively. Japan's real GDP growth rate came in at -5.1 percent, lower than the 0.7 percent of 2019, and by quarter, its GDP declined by 2.0 percent, 10.3 percent, 5.8 percent and 1.2 percent respectively. The United Kingdom (the U.K.) reported a real GDP growth rate of -9.9 percent, lower than the 0.7 percent of 2019, and by quarter, its GDP growth rates fell by 2.2 percent, 20.9 percent, 8.6 percent and 7.8 percent respectively. Among emerging markets and developing economies, member states of the Association of Southeast Asian Nations (ASEAN), South African countries, Brazil, Russia and India saw their GDP growth rates fall by 3.7 percent, 8.2 percent, 4.6 percent, 3.1 percent and 7 percent respectively.

Figure 1.1 Economic growth rates of major economies from 2019 to 2020 (by quarter)



(Source: Wind and the *World Economic Outlook Update* by the IMF)

(2) Global trade shrank remarkably

According to predictions of the World Trade Organization (WTO), in 2020, the global volume of trade in goods would fall by 5.3 percent year on year. By economy, in the U.S., on a quarterly basis, the seasonally adjusted year-on-year growth rates of exports registered -3.7 percent, -29.5 percent, -12.9 percent and -5.5 percent respectively, and imports grew by -6.0 percent, -19.6 percent, -4.3 percent and 4.5 percent year on year respectively; total imports and exports for the whole year stood at USD 240.5 billion and USD 143 billion respectively. In the U.K., on a quarterly basis, exports fell by 13.0 percent, 30.0 percent, 12.4 percent and 3.3 percent respectively, and the growth rates of imports reached -17.8 percent, -31.3 percent, -9.6 percent and 6.5 percent respectively; total imports and exports for the whole year stood at USD 63.1 billion and USD 39.9 billion respectively. In the 27 European Union (EU) member states, on a quarterly basis, exports grew by -5.4

percent, -24.3 percent, -2.1 percent and 4.8 percent respectively, and imports rose by -6.8 percent, -23.4 percent, -3.8 percent and 3.1 percent respectively; total imports and exports reached approximately USD 177.6 billion and USD 209.7 billion respectively. In Japan, on a quarterly basis, exports grew by -5.7 percent, -23.0 percent, -12.3 percent and 2.5 percent respectively, and imports fell by 8.4 percent, 14.3 percent, 18.7 percent and 8.8 percent respectively; total imports and exports for the whole year valued at USD 63.4 billion and USD 64 billion① respectively. In the first three quarters of 2020, the seasonally adjusted growth rates of exports denominated in USD among G20 countries registered -7.1 percent, -21.7 percent and -4.3 percent respectively. Among emerging markets and developing economies, the exports of the ASEAN, South Africa, Brazil, Russia and India fell by 2.8 percent, 4.7 percent, 6.9 percent, 21.0 percent and 14.8 percent respectively, and imports declined by 8.9 percent, 21.8 percent, 9.8 percent, 5.8 percent and 23.5 percent respectively.

(3) Global direct investment plummeted

According to the *Trade and Development Report* of the United Nations Conference on Trade and Development (UNCTAD), foreign direct investment (FDI) in the world plummeted from USD 1.5 trillion in 2019 to USD 859 billion in 2020, a decrease of 42 percent. To be more specific, the FDI inflow to developed economies was USD 229 billion, down 69 percent, which was the main reason for the decline of FDI globally. In 2020, the FDI inflow to the U.S. dropped by 49 percent from 2019 to USD 134 billion, and the FDI inflow to the EU decreased to USD 110 billion, equivalent to only one third of that of 2019. FDI channeled to developing countries and emerging markets totaled approximately USD 616 billion, down 12 percent year on year, accounting for 72 percent of the total FDI globally, which marked a historical high. Among developing countries, FDI fell unevenly by 37 percent in Latin America and the Caribbean, 18 percent in Africa and 4 percent in Asia②. The report also noted that in 2021, the world's FDI would remain weak and face significant downward pressure.

1.1.1.2 International financial environment further loosened

(1) Major developed economies practiced loose monetary policies

In response to the impact of the COVID-19 pandemic, the U.S. and major economies in Europe adopted loose monetary policies in an attempt to stimulate economic recovery. In 2020, the U.S. Federal Reserve (Fed) kept the federal funds rate within the target range between 0 and 0.25 percent. Meanwhile, it cut the interest rate on reserve balances three times, from 1.60 percent at the beginning of the year to 1.10 percent, and then to 0.10 percent, drastically, after mid-March, injecting abundant liquidity into the market. The base rate of the U.K. was lowered from 0.75 percent

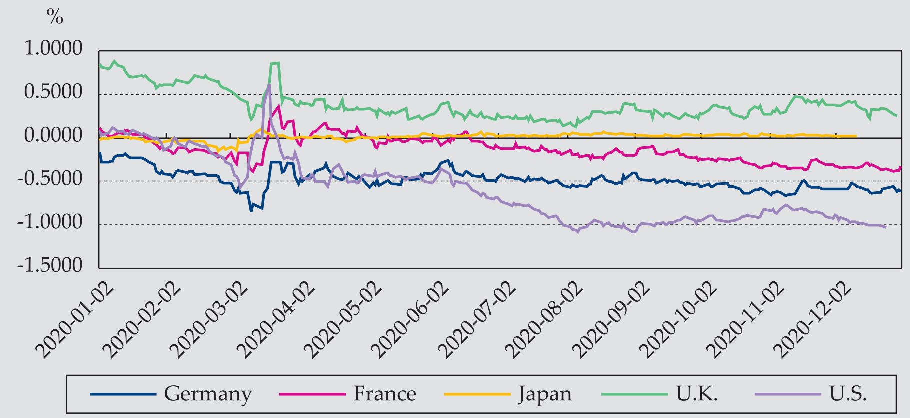
① Source: Calculation based on the statistics of the OECD.
② Source: Global Investment Trends Monitor, No. 38.

at the beginning of the year to 0.10 percent. The Eurozone reduced its 1-year interbank offered rate from -0.25 percent at the beginning of the year to -0.50 percent. The Fed, the Bank of Canada and the Bank of Japan(BOJ) increased the size and maturity of repo agreements. The European Central Bank (ECB) increased the offering of targeted longer-term refinancing operations (TLTROs) and reduced their interest rates. The Fed and the BOJ pledged to purchase unlimited amounts of treasury bonds. The ECB increased asset purchases and initiated the Pandemic Emergency Purchase Programme (PEPP). The central banks of Australia, Canada, India and South Korea also launched bond purchase programs.

(2) The yields on treasury bonds of the U.S. and major economies in Europe continued to go down

In 2020, the yields on the treasury bonds of the U.S. and major economies in Europe fell by varied degrees. The yield on the U.S. 10-year treasury bond dropped from 1.88 percent at the beginning of the year to 0.93 percent at year-end; the yield on the U.K. 10-year treasury bond fell from 0.85 percent at the beginning of the year to 0.25 percent; the yield on the French 10-year treasury bond tumbled down from 0.11 percent at the beginning of the year to -0.34 percent at year-end; and Germany's 10-year treasury bond yield dipped from -0.16 percent to -0.57 percent for the same period. Among those countries, only Japan reported an increase in its 10-year treasury bond yield, from -0.025 percent at the beginning of the year to 0.035 percent at year-end. At end-2020, the 1-year USD LIBOR (London Interbank Offered Rate) came in at 0.34 percent, down 166 basis points(bps) from end-2019, and the 1-year Euro Interbank Offered Rate (Euribor) in the Eurozone stood at -0.50 percent, down 25 bps from end-2019.

Figure 1.2 10-year treasury bond yields in major economies



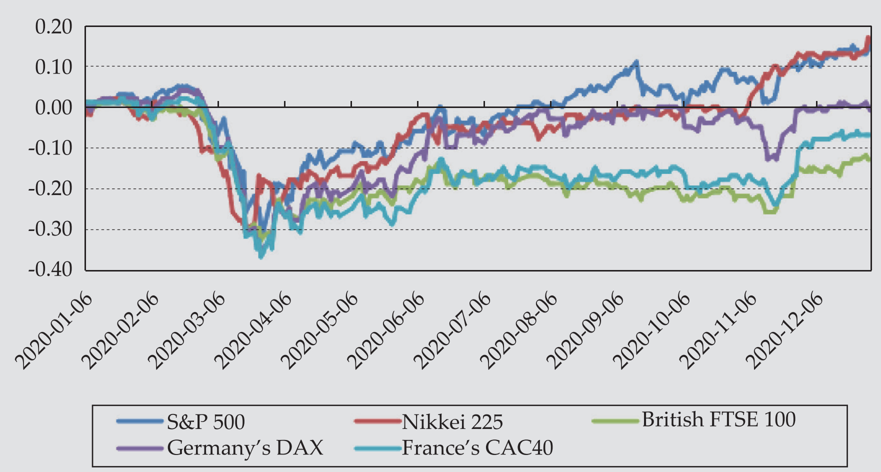
(Source: Wind)

1.1.1.3 Financial markets fluctuated violently

(1) Global stock markets underwent V-shaped movements

In Q1 2020, financial markets of major developed economies were gripped by panic, and many of their stock markets triggered the circuit breakers. In the following quarter, market sentiments were pacified and financial markets picked up significantly. Starting at 566.39 points at the beginning of 2020, the MSCI World Index fluctuated slightly till mid-February; from late February on, it started to plummet and hit a low at 434.40 points in late March; then it rose amidst fluctuations and closed at 623.69 points at end-2020, up 10.1 percent from the beginning of the year. In developed countries, the S&P 500 Index of the U.S. opened at 3,257.85 points, fell in H1, and then rose to 3,756.07 points at year-end, up 15.3 percent from the beginning of the year; the stock markets of Japan, the U.K., Germany and France rose by 18.3 percent, -15.0 percent, 2.5 percent and -8.1 percent from the beginning of 2020 respectively. Among emerging economies, Argentina's stock market plunged from 41,106.96 points at the beginning of the year to 22,087.13 points in mid-March, but then climbed up to 51,226.49 points at end-2020, 24.6 percent higher from the beginning of 2020; the stock markets of Brazil, Russia and Israel grew by 0.4 percent, -11.3 percent and -0.3 percent respectively.

Figure 1.3 Movements of stock indexes in major economies in 2020

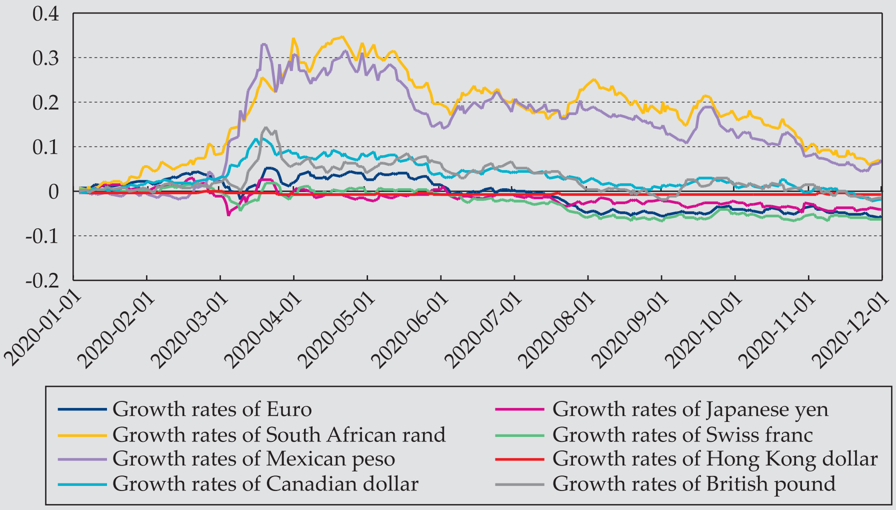


(Source: Wind)

(2) Movements of major currencies diverged

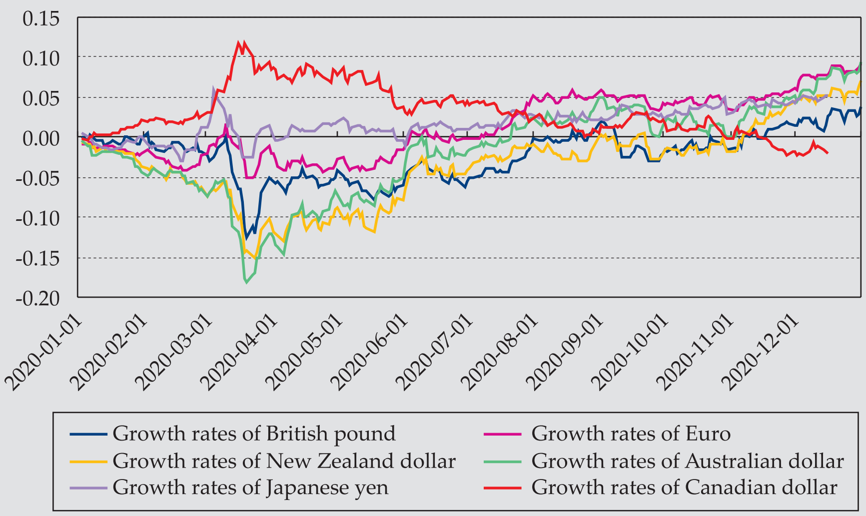
At end-2020, the USD index closed at 89.96 points, down from 96.52 points at the beginning of the year by 6.8 percent. Major currencies either appreciated or depreciated against USD. Specifically, Japanese yen, Swiss franc, Canadian dollar, Hong Kong dollar, Euro, British pound and Australian dollar strengthened against US dollar by 5.0 percent, 8.5 percent, 2.0 percent, 1.0 percent, 8.5 percent and 4.0 percent respectively compared with the beginning of the year, whereas South African rand and Mexican peso weakened against US dollar by 4 percent and 5 percent respectively.

Figure 1.4 Movements of major currencies (in direct quotations)



(Note: The beginning of 2020 as the base.)
(Source: Wind)

Figure 1.5 Movements of major currencies (in indirect quotations)



(Note: The beginning of 2020 as the base)
(Source: Wind)

(3) International commodity prices experienced drastic fluctuations

In the crude oil market, lockdowns to curb the COVID-19 pandemic dampened economic activities, Russia failed to reach agreement with the Organization of the Petroleum Exporting Countries (OPEC), and Saudi Arabia waged an oil price war. These factors combined led to greater fluctuations of oil prices. International oil prices fell in H1 2020. On April 21, the U.S. West Texas Intermediate (WTI) Crude Oil futures to expire in May hit negative USD 40.3 per barrel and closed at negative USD 37.6. In H2 2020, international oil prices surged. At end-December, prices of Brent Crude Oil, WTI Crude Oil and International Petroleum Exchange (IPE) Light Crude Oil closed at USD 50.7 per barrel, USD 48.5 per barrel and USD 48.5 per barrel respectively. In the precious metal market, gold and silver futures rose amid fluctuations in 2020. London spot gold rose amid fluctuations from USD 1,527.1 per ounce at the beginning of 2020, reached up to USD 2,067.15 per ounce in August 2020 and then closed at USD 1,887.6 per ounce at end-2020, registering a 23.9 percent increase from 2019. Based on closing prices of spot gold quoted by the Shanghai Gold Exchange (SGE), China's gold price stood at RMB 341.57 per gram at the beginning of the year, soared to RMB 432 per gram in August, and settled at RMB 392.4 per gram at end-2020. In the nonferrous metal market, at end-2020, the 3-month futures of zinc, lead, copper and aluminum quoted by the London Metal Exchange (LME) stood at USD 2,745 per ton, USD 1,982.5 per ton, USD 7,757 per ton and USD 1,980.5 per ton[①] respectively.

1.1.2 Domestic economic and financial situations

In 2020, under the strong leadership of the Central Committee of the Communist Party of China (CPC) and the State Council, the whole country worked hard as a united front. China secured significant strategic achievements in balancing pandemic containment with economic and social development, successfully concluded the 13th Five-Year Plan and achieved stable economic recovery, becoming the only major economy reporting positive economic growth globally in 2020. GDP grew by 2.3 percent year on year, employment remained stable overall, imports and exports grew against the general downward trend, and the Consumer Price Index (CPI) registered a year-on-year increase of 2.5 percent. Meanwhile, China was one of the few major economies that implemented conventional monetary policies. Under the sound monetary policy that was flexible and appropriate, China rendered flexibility in managing the intensity, pace and focus of economic regulation through monetary policy, which fostered a favorable financial environment for the building of a moderately prosperous society in all respects.

① Source: Wind.

1.1.2.1 The domestic economy overcame downward pressure and achieved positive growth

(1) The domestic economy picked up steadily

According to preliminary estimation, China's GDP in 2020 exceeded the RMB 100 trillion threshold and reached RMB 101.6 trillion[①], an increase of approximately RMB 2.5 trillion from 2019. By quarter, GDP reported a year-on-year decline of 6.8 percent in Q1 but increased by 3.2 percent, 4.9 percent and 6.5 percent in Q2, Q3 and Q4 respectively year on year, indicating a stable economic recovery. Employment remained stable overall. In 2020, a total of 11.86 million urban jobs were created, outperforming the annual target of 9 million by 31.8 percent. The surveyed urban unemployment rate in 2020 came in at 5.6 percent, lower than the estimation of 6 percent. In 2020, per capita disposable personal income stood at RMB 32,189, registering a nominal increase of 4.7 percent over last year and a real (i.e. inflation-adjusted) increase of 2.1 percent, which was basically in tandem with economic growth. To be more specific, the per capita disposable income of urban households amounted to RMB 43,834, increasing by 3.5 percent in nominal terms and 1.2 percent in real terms; the per capita disposable personal income of rural households amounted to RMB 17,131, raising by 6.9 percent in nominal terms and 3.8 percent in real terms[②]. The CPI edged up 2.5 percent over last year, lower than the 2.9 percent reported in 2019, which indicated the target of price control in 2020 was met. Specifically, food prices increased by 10.6 percent, up 1.4 percentage points from last year; non-food prices rose by 0.4 percent, down 1 percentage point from last year. According to the statistics[③] posted by the General Administration of Customs (GACC), in 2020, the total volume of China's imports and exports of trade in goods amounted to RMB 32.2 trillion, up 1.9 percent from last year, making China the only country delivering positive growth in trade in goods. Specifically, exports increased by 4 percent to RMB 17.9 trillion, but imports declined by 0.7 percent to RMB 14.2 trillion, resulting in a trade surplus of RMB 3.7 trillion, up 27.4 percent. In 2020, China's actual use of foreign capital hit a record high of RMB 1 trillion, up 6.2 percent year on year. To be more specific, the actual use of foreign capital in the service industry rose by 13.9 percent year on year to RMB 776.77 billion, accounting for 77.7 percent of the total amount. Meanwhile, the inflow of foreign capital to high-tech industries and high-tech service industries rose by 11.4 percent and 28.5 percent respectively.

① Source: Statistical Communiqué of the People's Republic of China on the 2020 National Economic and Social Development released by the National Bureau of Statistics (NBS) on February 28, 2021.

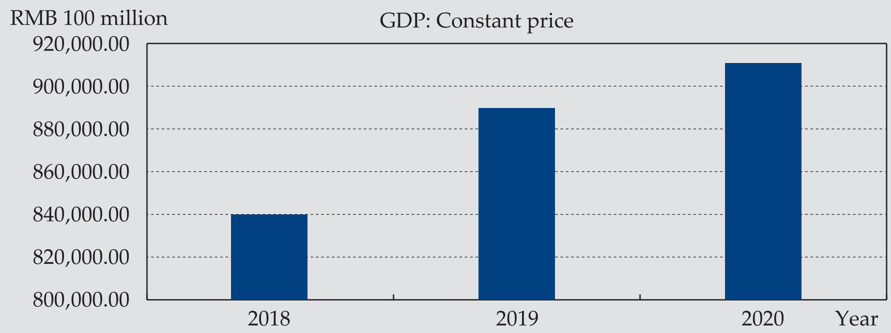
② Source: NBS, Wind, *2020 Report on the Work of the Government* and gov.cn.

③ Released on January 14, 2021.

Figure 1.6 Year-on-year GDP growth rates by quarter from 2018 to 2020

(Source: Wind)

Figure 1.7 Total volumes of GDP from 2018 to 2020

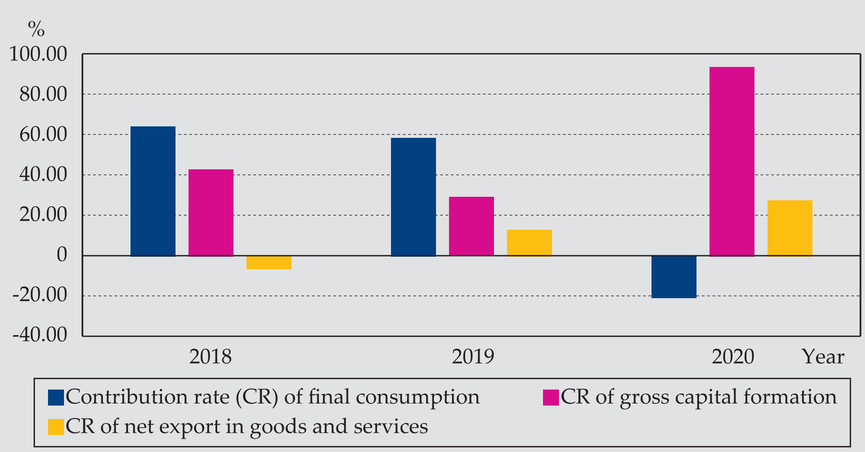


(Source: Wind)

(2) The economic structure was optimized quarter by quarter

In 2020, the total retail sales of consumer goods stood at RMB 39.2 trillion, down 3.9 percent year on year. Specifically, the year-on-year growth rate reached 4.6 percent in Q4, 3.7 percentage points higher than the previous quarter and close to the normal level. Online retail sales maintained sound growth, with the total amount rising by 10.9 percent year on year to RMB 11.8 trillion. Final consumption in the year exceeded RMB 55 trillion, accounting for 54.3 percent of GDP. Therefore, consumption remained the main driving force of economic growth. The fixed-asset investment (excluding rural households) totaled RMB 51.9 trillion, up 2.9 percent year on year. By sector and on a year-on-year basis, investment in infrastructure rose by 0.9 percent and real estate development 7.0 percent, whereas investment in manufacturing fell by 2.2 percent. The total investment in high-tech industries grew by 10.6 percent, 7.7 percentage points higher than the growth of total investment. Specifically, investment in high-tech manufacturing and high-tech service sectors increased by 11.5 percent and 9.1 percent respectively from that in 2019. By industry, investment in all the three industries resumed positive growth, as the primary industry, the secondary industry and the tertiary industry grew by 19.5 percent, 0.1 percent and 3.6 percent respectively. Industrial production picked up steadily quarter by quarter, and business profitability improved continuously. The added value of statistically large enterprises grew by 2.8 percent from last year, and the growth reached 7.1 percent in Q4 year on year. The added values of the high-tech manufacturing sector and the equipment manufacturing sector rose by 7.1 percent and 6.6 percent over last year respectively, making great contributions to economic growth. The outputs of more than 220 types of industrial products were the largest in the world, and the added value of the manufacturing industry was expected to rank the first in the world for the 11th consecutive year. The added value of the tertiary industry amounted to RMB 55.4 trillion, up 2.1 percent. The primary industry contributed 9.5 percent to GDP growth, much higher than the 3.9 percent in last year, and the secondary industry contributed 43.3 percent to GDP growth. Dampened by the pandemic, the contribution of the tertiary industry to GDP growth fell to 47.3 percent, significantly lower than the 63.5 percent in last year.

Figure 1.8 Contribution of three major demands to economic growth from 2018 to 2020



(Source: Wind)

1.1.2.2 The financial environment was improved overall

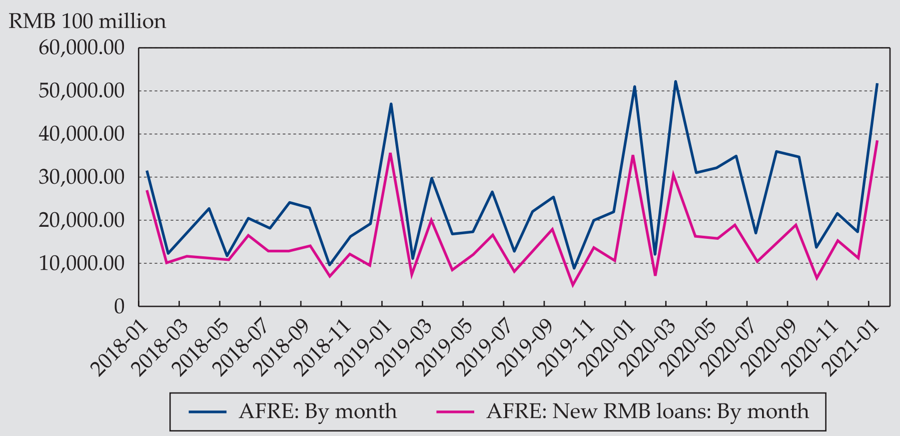
(1) Macro financial policy was sound and flexible

In 2020, China was one of the few major economies practicing conventional monetary policies. The People's Bank of China (PBC) resolutely implemented the decisions and arrangements of the CPC Central Committee and the State Council, took proactive actions, and strengthened the role of macro policy in regulating the economy. It practiced the sound monetary policy that was flexible, appropriate and targeted, and rendered flexibility in managing the intensity, pace and focus of economic regulation through monetary policy, thereby fostering a favorable monetary and financial environment. First, the PBC adhered to scientific decision-making and responded to market demands with effective monetary policies in a timely manner. In aggregate terms, the PBC rendered over RMB 9 trillion of support backed by monetary policy, the measures of which included the required reserve ratio (RRR) cuts, medium-term lending facilities (MLFs), central bank lending and central bank discounts. Second, the PBC took innovative and targeted measures to stabilize businesses and secure employment. By carrying out central bank lending and discounts with a total volume of RMB 1.8 trillion phase by phase and progressively, it innovated the two monetary policy tools that lend direct support to the real economy. Third, the PBC capitalized on reform and opening-up to advance the market-based reforms of interest rates and exchange rates. It initiated and completed the conversion of the pricing benchmark for outstanding floating-rate loans, actively promoted the application of loan prime rates (LPRs) and improved the formation mechanism of RMB exchange rates. Fourth, the PBC took proactive actions to stabilize market expectations. Fifth, while upholding market-based and law-based approaches, the PBC effectively forestalled financial risks and firmly defended the bottom line that no systemic financial risks should occur. Regarding the macroprudential policy framework, the PBC gave full play to the role of macroprudential assessment (MPA) in optimizing the credit structure and facilitating the supply-side structural reform of the financial sector, adjusted the macroprudential adjustment parameter for cross-border financing, and adjusted the foreign exchange risk reserve ratio. In general, the financial macro regulation policy delivered positive outcomes. At end-2020, broad money supply (M2) stood at RMB 218.68 trillion, recording a year-on-year increase of 10.1 percent. Aggregate financing to the real economy (AFRE) reached RMB 284.83 trillion, up 13.3 percent year on year[①]. In 2020, AFRE (flow) totaled RMB 34.86 trillion, up RMB 9.19 trillion over last year. Specifically, RMB loans to the real economy grew by RMB 20.03 trillion, RMB 3.15 trillion more than the increase of the same period of 2019; foreign currency-denominated loans to the real economy (RMB

① Source: Wind.

equivalent) recorded an increase of RMB 145 billion, RMB 272.5 billion more than the increase of the same period of 2019.

Figure 1.9 AFRE (flow) from 2018 to 2020



(Source: Wind)

(2) Financial regulation gave top priority to financial security

Adhering to the underlying principle of pursuing progress while ensuring stability, the Financial Stability and Development Committee (FSDC) under the State Council worked hard to see that financial activities are well-regulated according to laws on all fronts, and effectively guarded against risks, which enabled it to properly deal with the relationship between promoting development and preventing risks. It adopted a mix of measures to support small and medium-sized banks in capital replenishment, in a way to boost their ability to withstand risks and pursue integrated business development. Further, it worked relentlessly to evaluate the worldwide spread of the pandemic and the economic and financial situations to prevent the transmission of risks from overseas to China. Moreover, it pushed for the amendment of the *Securities Law* to improve institutional arrangements for the capital market. The PBC has secured significant progress at the current stage in addressing small- and medium-sized financial institutions of high risks. Specifically, it successfully completed the restructuring of key financial institutions including Hengfeng Bank and Bank of Jinzhou; it pushed ahead the risk resolution of Baoshang Bank in an orderly manner and filed for bankruptcy on behalf of the bank. Further, the PBC improved the regulatory framework for systemically important financial institutions (SIFIs); it released the *Measures for the Assessment of Systemically Important Banks*, which specified the assessment indexes for systematically important banks (SIBs) in China. Meanwhile, the PBC established the real estate loan concentration management system for banking institutions, which specified the caps on the shares of real estate loans and personal housing loans in the total loans issued by banking institutions. Furthermore, the PBC extended comprehensive control over Internet finance and cracked down on illegal fund-raising, among other illegal activities, in a bid to establish institutional arrangements for the prevention and resolution of financial risks[①]. Specifically, it formulated a preliminary regulatory framework for financial holding companies (FHCs) to prevent the cross-market, cross-industry and cross-institution transmission of financial risks. The securities regulatory system strengthened regulation of the securities sector by implementing the revised *Securities Law*. In 2020, a total of 255 penalty decisions were made, up 59.4 percent year on year, including 233 letters of administrative regulatory measures and 22 written decisions on administrative punishment; 8 securities companies were suspended of one or more businesses; punishment on individual sponsors in violation of the Law was reinforced, with a total of 38 individuals in charge of investment banking business from 10 securities companies being punished[②]. The banking and insurance regulatory system unveiled the *Measures for the Regulatory Assessment of Commercial Banks' Financial Services for Micro and Small Businesses (For Trail Implementation)*, by which it established a refined, systematic and long-standing regulatory mechanism for financial services targeting micro and small businesses (MSBs); it released the *Interim Measures for the Administration of Internet Loans of Commercial Banks (Exposure Draft)* to make up for deficiencies of existing institutional arrangements and enable the regulated development of loans issued through the Internet; it also formulated the *Interim Measures for the Administration of Insurance Asset Management Products* to strengthen business regulation and promote the sustained and sound business development of insurance asset management products. Under these rules and regulations, in 2020, 2,607 punishment decisions were made on various institutions and individuals in the banking sector with a total of RMB 1.309 billion being confiscated and fined, both of the two numbers hitting a new high.

(3) The financial sector extended targeted and effective support to pandemic containment

Following the outbreak of the pandemic, the PBC immediately led the efforts to develop 30 policy measures to render financial support for pandemic control and introduced subsequent measures according to the latest development of the pandemic. The PBC arranged RMB 300 billion worth of special central bank lending, RMB 500 billion quota for central bank lending and central bank discounts, and another RMB 1 trillion quota, rendering a total of RMB 1.8

① Source: C*hina Financial Stability Report 2020.*

② Source: Think Tank of Southern Finance Omnimedia Corp-21st Century Asset Management Research Institute, on February 28, 2021.

trillion to support the real economy, especially focusing on fighting the pandemic, securing supplies, advancing the resumption of work and production, and supporting micro, small and medium-sized enterprises (MSMEs). When the financial markets reopened after the Spring Festival holiday, the PBC released RMB 1.7 trillion worth of short-term liquidity to the financial market, which effectively stabilized market expectations. Meanwhile, it released RMB 1.75 trillion worth of long-term liquidity through three RRR cuts. With these measures, the PBC successfully induced the financial sector to waive RMB 1.5 trillion of profits in favor of the real economy, generating a stronger sense of gain in the real economy. Furthermore, the PBC released the *Guiding Opinions on Further Strengthening Financial Services for Micro, Small and Medium-sized Enterprises* to expand the coverage of MSME financing at increased amounts and reduced rates. It innovatively rolled out two monetary policy instruments that directly support the real economy, namely the support instrument for deferring the repayments on inclusive loans to MSBs and the support plan for inclusive MSB credit loans, in an attempt to guide banks to defer, wherever possible, repayments on inclusive loans to MSBs and increase the issuance of unsecured loans. In terms of infrastructure construction in the financial market, a "green channel" for bond registration and issuance was established to simplify and improve registration and issuance procedures, and further cuts on membership fees were carried out in areas heavily hit by the pandemic; policy measures intended to regulate the development of supply chain finance were introduced to support the stable circulation, optimization and upgrading of supply chains and industry chains, and the supply chain bill platform was established to boost the availability of financing for small and medium-sized enterprises (SMEs) involved in supply chains and cut their financing costs.

(4) The total asset of the financial sector continued to grow

At end-2020, the total assets denominated in RMB and foreign currencies owned by China's banking institutions totaled RMB 319.7 trillion, recording a year-on-year increase of 10.1 percent. Specifically, assets of large-scale commercial banks amounted to RMB 128.4 trillion, up 10 percent year on year and accounting for 40.2 percent of the total; assets of joint-stock commercial banks amounted to RMB 57.8 trillion, up 11.7 percent year on year and accounting for 18.1 percent of the total. In 2020, commercial banks recorded cumulative net profits of RMB 1.9 trillion, down 2.7 percent year on year. At end-2020, assets of insurance companies amounted to RMB 23.3 trillion, up RMB 2.7 trillion or 13.3 percent from the beginning of 2020. Specifically, assets of property insurance companies, life insurance companies, reinsurance companies, and insurance asset management companies amounted to RMB 2.3 trillion (up 2.1 percent from the beginning of the year), RMB 20 trillion (up 17.8 percent from the beginning of the year), RMB 495.6 billion (up 16.3 percent from the beginning of the year), and RMB 76.1 billion (up 18.7 percent from the beginning of the year) respectively. At end-2020, assets of the securities industry totaled RMB 8.9 trillion, up 22.5 percent year on year, and net assets came in at RMB 2.31 trillion, up 14.1 percent year on year; the balance of funds from settlement of customer transactions (including credit-backed transactions) stood at RMB 1.7 trillion, and the principal of assets entrusted for management totaled RMB 10.5 trillion. In 2020, the securities industry generated revenues of RMB 448.48 billion, up 24.4 percent year on year, and net profits stood at RMB 157.53 billion, up 28.0 percent year on year[①].

1.2 Main features of China's financial market performance in 2020

In 2020, the performance of China's financial market was overall stable. The financial market scaled up steadily, and interest rates in the market went down overall. The financial sector extended targeted and effective support to pandemic containment. Reforms and innovations in the financial market deepened, and the opening-up of the market was expanded in an orderly manner. Financial infrastructure maintained stable operation, and satisfactory achievements were made in forestalling and defusing major financial risks via market-based and law-based approaches.

1.2.1 The financial market operated stably

In 2020, major stock indexes from Shanghai Stock Exchange (SSE) and Shenzhen Stock Exchange (SZSE) went up across the board. Among them, the SSE Composite Index remained stable and registered a small increase, staying on a rise for two consecutive years. The SZSE Component Index, the SZSE SME Indexes and the ChiNext Price Index went up amid fluctuations by 38.73 percent, 43.91 percent and 64.96 percent respectively. The volatility of the exchange rate of RMB against the US dollar rose to 5.46 percent, up 0.51 percentage points over last year. RMB showed two-way fluctuations against a basket of currencies; amid fluctuations, it went up from January to March and hit a high on March 20, fell from April to July, and then picked up again from August to December. On November 20, the CFETS RMB Index, and the RMB indexes based on BIS and SDR currency baskets rose to the highest levels within the year. Yields on government bonds underwent V-shaped movements within the year. In Q1, due to the impact of the pandemic, the yields on government bonds of all maturities declined; in Q2, as the pandemic was gradually brought under control at home, economic fundamentals rebounded steadily and yields on government bonds climbed up progressively; the yields kept rising in Q3 and Q4 but declined slightly at year-end. The interest rates of certificates of deposit (CDs) at issuance also showed V-shaped movements with greater fluctuations. The weighted average interest rate of 3-month negotiable certificates of deposits (NCDs) fell from 2.60 percent at the beginning of 2020 to 1.40 percent in April, but then picked up to 2.60 percent at end-2020.

① Source: Statistics on the performance of securities companies in 2020 released by the Securities Association of China on February 23, 2020.

The annual weighted average interest rate of NCDs stood at 2.60 percent, down 37 bps from last year and registering a historical low. The Au99.99 contract offered by the SGE opened at RMB 341.95 per gram at the beginning of 2020, and closed at RMB 390.00 per gram at year-end, up 14.4 percent from end-2019. The gold futures contract offered by Shanghai Futures Exchange (SHFE) opened at RMB 346.00 per gram at the beginning of 2020, and closed at RMB 397.60 per gram at year-end, up RMB 50.12 per gram or 14.4 percent from the RMB 347.48 per gram at end-2019.

1.2.2 The market scaled up steadily

At end-2020, the outstanding bonds held in custody in China's bond market totaled RMB 117 trillion, up 18.1 percent year on year and ranking the second in the world, of which RMB 100.7 trillion was derived from the interbank bond market (up 16.5 percent year on year). A total of 4,154 companies were listed on the SSE and the SZSE, up 10.0 percent year on year, and these companies registered a total market value of RMB 79.7 trillion, up 34.5 percent year on year, making China's stock market the second largest in the world. Specifically, 1,800 companies were listed on the SSE with a total market value of RMB 45.5 trillion, and 2,354 on the SZSE with a total market value of RMB 34.2 trillion. In 2020, the volume of bill businesses totaled RMB 148.2 trillion, reporting a year-on-year increase of 12.8 percent. In bond markets, cash bond transactions rose by 16.5 percent year on year to RMB 253 trillion. Specifically, cash bond transactions in the interbank bond market and in the exchange bond market amounted RMB 232.8 (up 12 percent year on year) and RMB 20.2 trillion (up 142.6 percent year on year) respectively. The total turnover of the interbank market credit-based lending and bond repos rose by 14 percent year on year to RMB 1,106.9 trillion. The total turnover of the interbank RMB interest rate derivatives market rose by 6.8 percent year on year to RMB 19.9 trillion. Capital raised in the A-share market totaled RMB 470.7 billion, up 86 percent year on year and hitting a historical high since 2010. The cumulative turnover in the foreign exchange market totaled RMB 250.9 trillion, up 2.0 percent year on year. The commodity futures and options markets realized a cumulative turnover of 6.15 billion lots and RMB 437.5 trillion, up 55.3 percent and 50.6 percent year on year respectively. The turnover at the SGE amounted to RMB 43.3 trillion, up 50.7 percent year on year, of which the trading volume of gold rose by 4.9 percent year on year to RMB 22.6 trillion. The SGE's spot trading volume of gold has been ranking the first in the world since 2007. The SHFE's cumulative turnover of all types of gold reached RMB 41.47 trillion, up 38.26 percent year on year. The number of domestic gold ETFs increased from 4 to 11, and these ETFs held approximated 60.9 tons of gold at year-end, up 16.1 tons or 36 percent from end-2019. The trading volume and turnover of China's futures market based on unilateral calculation reached 6.15 billion lots and RMB 437.5 trillion, up 55.3 percent and 50.6 percent year on year respectively. The trading volume of China's futures market accounted for 13.2 percent of the total futures trading volume globally, up 1.7 percentage points from 2019. The insurance industry realized an income from premiums of RMB 4.5 trillion, up 6.1 percent year on year.

1.2.3 Interest rates went down overall

In 2020, the annual weighted average interest rate of interbank lending was 1.64 percent, down 63 bps over last year. At end-2020, the weighted average rates of O/N and 7-day interbank lending closed at 1.34 percent and 2.55 percent respectively, down 16 bps and 66 bps respectively from the beginning of 2020. The weighted average rate of interbank pledged repos was 1.72 percent, down 58 bps year on year. The weighted average rate of outright repos was 1.78 percent, down 57 bps year on year. For the SSE, the average 1-day fixing repo rate and the average 7-day fixing repo rate stood at 2.35 percent and 2.42 percent respectively, down 34 bps and 35 bps respectively from the previous year; and for the SZSE, the weighted average rates of 1-day repos and 7-day repos were 2.32 percent and 2.46 percent respectively, down 32 bps and 34 bps respectively from a year earlier. In the bond market, yields on government bonds plummeted in Q1 due to the COVID-19 pandemic but then climbed up progressively. Specifically, the yields on 3-month, 1-year, 3-year, 5-year and 7-year government bonds recorded 2.28 percent, 2.47 percent, 2.82 percent, 2.95 percent and 3.17 percent respectively, up 27.3 bps, 5.8 bps, 7.2 bps, 3.6 bps and 10.4 bps from the beginning of 2020 respectively. The yield on the 10-year government bond came in at 3.14 percent, down 0.6 bps from the beginning of 2020. The annual weighted average interest rate of NCDs declined by 37 bps from last year to 2.60 percent. The annual weighted average interest rates of interbank discounts and interbank pledged repos in the bill market stood at 2.71 percent and 1.87 percent respectively, down 60 bps and 64 bps year on year respectively.

1.2.4 Reforms and innovations continued to deepen

In 2020, the FSDC rolled out 11 financial reform measures to drive forward the reform of the financial market. The capital market continued to push for the implementation of the registration-based system, moving the reform a step ahead from the STAR market to the ChiNext board and other market segments, which indicated the target of the reform has shifted from emerging areas to existing ones. On June 12th, 2020, the China Securities Regulatory Commission (CSRC) issued the *Administrative Measures for Registration-based Initial Public Offerings on ChiNext (for Trial Implementation)*, the *Administrative Measures on Securities Issuance and Registration for Companies Listed on ChiNext (for Trial Implementation)* and the *Measures for Continuous Regulation of Companies Listed on ChiNext (for Trial Implementation)*. On August 24th, 2020, the ChiNext board officially began its reform and became another test field for the pilot of the registration-based system. As of end-February 2021, the SZSE had processed the initial public offerings (IPOs) of 546 companies, refinancing of 288 companies and major assets restructuring of 16 companies. Up to now, a total of 86 enterprises have been registered and listed on the ChiNext board with their market value totaling RMB 1.2 trillion. The system for companies listed on the National Equities Exchange and Quotations (NEEQ) to switch to other boards for listing was successfully put in place to diversify listing channels for these companies and reinforce the ties among different tiers of the capital market. To step up innovation of financial products, the PBC rolled out two policy instruments aiming at providing direct support for the real economy, i.e. the support instrument for deferring the repayments on inclusive MSB loans and the support plan for inclusive MSB credit loans, allowing MSMEs to temporarily defer repayments on principals and interests and supporting the resumption of normal life and production orders as soon as possible. In the bond market, special government bonds, financial bonds and corporate bonds for pandemic containment and special bonds for poverty alleviation were issued, and the registration-based system was implemented for the issuance of enterprise bonds and corporate bonds. In addition, financial institutions proactively issued green bonds and made consistent efforts to develop new green debt financing vehicles. The PBC released the *Administrative Measures for Standardized Bills,* making proper institutional arrangements for the development of the standardized bill business. As of end-2020, a total of 57 issues of standardized bills were created with a total value of RMB 6.12 billion. In the interbank foreign exchange market, foreign exchange derivatives based on the secured overnight financing rate (SOFR) and other new benchmark rates were launched. The pilot program on publicly offered real estate investment trusts (REITs) in the infrastructure field was officially kicked off, which effectively revitalized existing assets and provided new options for investment. A comprehensive reform of auto insurance was implemented to regulate the insurance asset management business, advance the reform of the insurance intermediary market and facilitate the high-quality development of Internet-based insurance business. On September 28, China's first agricultural reinsurance company, China Agricultural Reinsurance Corporation, was put together, which would promote the establishment and coordinated management of the national agricultural insurance funds for major disasters.

1.2.5 Financial market opening-up was advanced in orderly

In 2020, the FSDC introduced 26 measures on financial reform and opening-up, in a bid to open up the financial sector still wider to the outside world. The PBC published the white paper, *Participating in International Benchmark Interest Rate Reform and Improving China's Benchmark Interest Rate System,* signed the commitment statement to abide by the *FX Global Code*, and entered into agreements with central banks of New Zealand and other nine countries on the roll-over and revision of local currency swaps. The Q&A on policies on the market entry of overseas central bank institutions was updated, allowing settlement agents or account-opening banks to provide overseas central bank institutions with daytime overdraft, overnight overdraft or other liquidity management services. Countercyclical factors in quotes of central parity rates were played down, and the risk reserve ratio for forward FX sales was reduced from 20 percent to zero. Limits on the ratios of foreign ownership of securities, fund management and futures companies were removed, restrictions on the investment quotas of qualified foreign institutional investors and on the repatriation of investment income were lifted, and systems and supporting rules governing Qualified Foreign Institutional Investors (QFIIs) and RMB Qualified Foreign Institutional Investors (RQFIIs) were integrated. Transaction and settlement mechanisms in the bond market and support services for investment in the interbank bond market were improved, creating a friendlier and more convenient investment environment for overseas investors to allocate RMB-denominated bond assets. At end-2020, a total of 905 overseas institutions participated in the interbank bond market (up 17.7 percent from end-2019) and opened a total of 3,417 accounts (up 30.9 percent from end-2019); a total of 209 overseas institutions held shares in domestic companies; the numbers of overseas entities trading in the SGE, the interbank foreign exchange market and the Shanghai International Energy Exchange (INE) stood at 117, 158 and 398, up 14.7 percent, 10.3 percent and 65.8 percent respectively from end-2019. Bonds held by overseas institutions amounted to RMB 3.3 trillion, up 47.9 percent year on year, and A-shares held by overseas institutions via the Northbound Trading totaled RMB 2.3 trillion, up 46.4 percent year on year. In 2020, the volumes of stocks, bonds, gold, foreign exchanges and crude oil futures traded by overseas institutions amounted to RMB 21.1 trillion, RMB 9.3 trillion, RMB 1.7 trillion, USD 4.7 trillion and 7.901 million lots, up 116.1 percent, 74.4 percent, 119.3 percent, 91.2 percent and 52.0 percent year on year respectively.

1.2.6 Financial infrastructures maintained sound operation

In March 2020, the PBC and other five authorities jointly released the *Work Plan for Coordinated Regulation of Financial Infrastructures*, in an attempt to facilitate the sound operation of financial infrastructures and bolster the ability to serve the real economy and forestall and defuse risks. Interconnectivity of financial infrastructures was strengthened; the regulation and coordination of the interbank bond market and the exchange bond market were stepped up; the free and smooth flow of factors in the bond market was promoted. In terms of the infrastructure construction in the bond market, a “green channel” for bond issuance was instituted, which simplified and optimized registration and issuance procedures, the trading hours for cash bond transactions were extended, and services of special settlement cycle and recycling settlement were offered. In terms of the infrastructure of the gold market, procedures to handle defaults during the clearing process were optimized, the categorized management of margin accounts was strengthened, and the function of real-time pre-clearing was put in place. Meanwhile, the management of custody banks was strengthened by creating a new model monitoring the flow directions of the funds of institutions on the white list, thereby well regulating the inflows and outflows of funds. In terms of the infrastructure of the stock market, authorities made good use of the opportunity arising out of the implementation of the new *Securities Law* to step up scientific, categorized, professional and continuous supervision. Regulatory rules were improved continuously to provide supervision services for listed companies, further improve trading and membership regulations, and continuously boost high-tech-enabled regulatory capacity. In terms of the infrastructure of the insurance market, insurance institutions established the Insurance Blockchain Innovation Center (IBIC), aiming at exploring the digital transformation of the insurance industry in light of technology research and development (R&D), scenario application and standard formulation.

1.2.7 Remarkable achievements were captured in risk control

China steadily proceeded with the building of the deposit insurance system. In 2020, the number of institutions insured rose to 4,024, providing over 99 percent of depositors with full protection. Meanwhile, a unified deposit insurance logo was initiated, significantly improving public awareness of the deposit insurance system. The PBC used the deposit insurance fund in accordance with laws and addressed the risks of Baoshang Bank with a takeover, thereby satisfactorily achieving the policy goals of protecting the interests of depositors and maintaining stability. With the takeover of nine core financial institutions affiliated with Tomorrow Holding Co. Ltd., default risks in the bond market were properly resolved. The risk resolution and restructuring plan for Bank of Jinzhou was implemented, bringing the bank back to its normal operation. The *Rules for Recognition of Standard Debt-based Assets*, and the *Interim Measures for the Administration of Insurance Asset Management Products* and supporting implementation details were introduced, so as to push for the building of supporting systems for the new regulations on asset management. Efforts were made to enable the reform and transformation of the asset management business in an orderly fashion, and the transitional period of the new regulations was extended to end-2021. The structure of the asset management business was optimized with consistent decrease of the proportion of non-standard debt-based assets and increase of the proportion of net worth-based products. The market-based and law-based bond default disposal mechanism and notices on corporate credit bond default disposal mechanisms were improved, and more market-based bond default disposal mechanisms were offered, boosting the efficiency of bond default disposal. With the advancement of the special rectification of the Internet financial risks, all Internet lending institutions suspended their businesses. Regulations on Internet finance were improved, long-standing regulation mechanisms established and infrastructures such as credit investigation, risk monitoring and statistical analysis continuously improved. With concentrated endeavors in place, the PBC effectively curbed the rise of systematic financial risks and fundamentally reversed the diversion of financial resources out of the real economy as well as their reckless expansion.

1.3 Outlook of China's financial market development in 2021

The year 2021 marks the 100th anniversary of the founding of the CPC and the beginning of the 14th Five-Year Plan. Looking into 2021, the development of China's financial market will follow the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, and thoroughly implement the guidelines of the 19th CPC National Congress, the Fifth Plenary Session of the 19th CPC Central Committee and the Central Economic Work Conference in strict adherence to the general principle of pursuing progress while ensuring stability. By acting on the decision and arrangement of peaking carbon emissions and achieving carbon neutrality, advancing the reform of financial systems and mechanisms, and encouraging the innovation and opening-up of the financial market, the financial market will better serve high-quality social and economic development.

First, China will continuously deepen the financial market reform, improve the financial factor market, and give full play to the role of finance in supporting green development from three aspects. Meanwhile, we will boost the interconnectivity of financial infrastructures, continuously step up the establishment of rules on bond issuance, steadily advance registration-based reform throughout the market, and tap into the decisive role of the market in resource allocation.

Second, the financial sector will better serve the real economy by extending stronger support to key fields and weak links in the national economy, including scientific and technological innovation, green development and environmental protection, advanced manufacturing, agriculture, rural areas and rural people, as well as MSBs and private enterprises. FinTech systems and mechanisms will be improved and data capability building in the financial sector be strengthened to enhance the quality and efficiency of financial services.

Third, efforts will be made to continuously improve the capability to regulate the financial market, improve risk resolution systems and mechanisms, and enhance long-standing risk prevention and disposal mechanisms. We will persistently implement the new *Securities Law* and the *Amendment to the Criminal Law*, severely punish illegal activities in securities, and more harshly crack down on malicious illegal acts like fraudulent offering, financial fraud and market manipulation. In addition, we will improve basic rules and industry standards on regulations of FinTech to balance FinTech innovation and financial risk prevention.

Fourth, China will continue to build a high-level open financial market to facilitate the building of the new systems for a higher-standard open economy. We will develop a headquarters economy of enhanced capacity and balance the development of onshore and offshore businesses. Steps will be taken to increase the categories and number of overseas investors, encourage the innovation of Panda Bonds, and improve the Southbound Bond Connect. The issuance of NCDs denominated in foreign currencies will be advanced to expand the channels of foreign-currency financing for banks. The opening-up of the foreign exchange market will go deeper, so that a mix of measures including innovation of transaction mechanisms, comprehensive information integration services and interconnectivity-based business cooperation will be adopted to provide more well-rounded services for domestic and foreign participants regarding fund remittance and exchange as well as foreign exchange risk management. What's more, the cooperation between the SGE and international gold infrastructures will be expanded and the connotations of the project "Path of Gold" will be enriched, so as to bring the building of an integrated international gold market to the next level. The capital market will continue to advance the two-way opening-up, ramp up the connection with the rest of the world, and expand the scope of the Shanghai-Hong Kong Stock Connect and the Shenzhen-Hong Kong Stock Connect.

Chapter 2 Money Market

In 2020, the PBC continued to practice the sound monetary policy. The liquidity in the banking system remained adequate at a reasonable level, and the money market performance was generally stable. The trading volume of the money market grew steadily, and the issuance volume of interbank Negotiable Certificate Deposits (NCDs) increased year on year. The market interest rates moved down overall, the maturity structure of financing was further optimized, the participants in the market were increasingly diversified, and the transmission of monetary policy through the money market was enhanced. All these effectively underpinned the financial support for pandemic containment and the real economy.

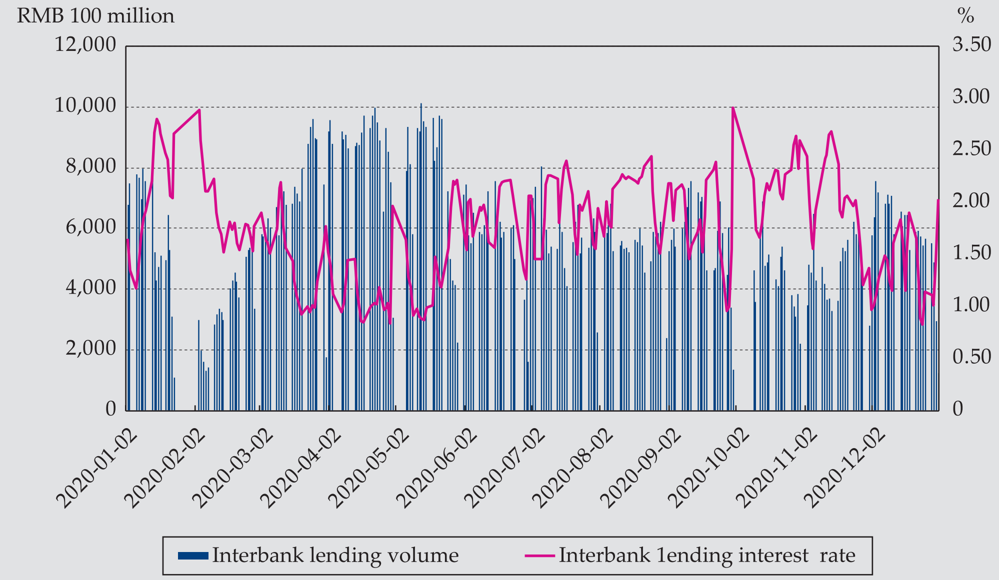
2.1 Interbank lending market

In 2020, the overall performance of the interbank lending market was stable. The number of market participants continued to grow, and the trading volume remained stable and witnessed a slight decline. The terminal interest rate went down, and the maturity structure was still dominated by short-term maturities.

2.1.1 Performance of the interbank lending market

In 2020, the trading volume of the interbank lending market totaled RMB 147.14 trillion, down 2.96 percent year on year and registering an average daily trading volume of RMB 590.934 billion. The annual weighted average interest rate was 1.64 percent, down 63 bps year on year. As of end-2020, the number of market participants totaled 2,278, up 88 from the previous year, including 1,432 banks, 102 securities companies, 53 insurance companies, 66 trust companies, 238 finance companies, 66 leasing companies, 266 rural credit cooperatives, 9 asset management companies, 24 auto finance companies, 20 consumer finance companies, and 2 other institutions.

Figure 2.1 Interbank lending volume and interest rate movement in 2020



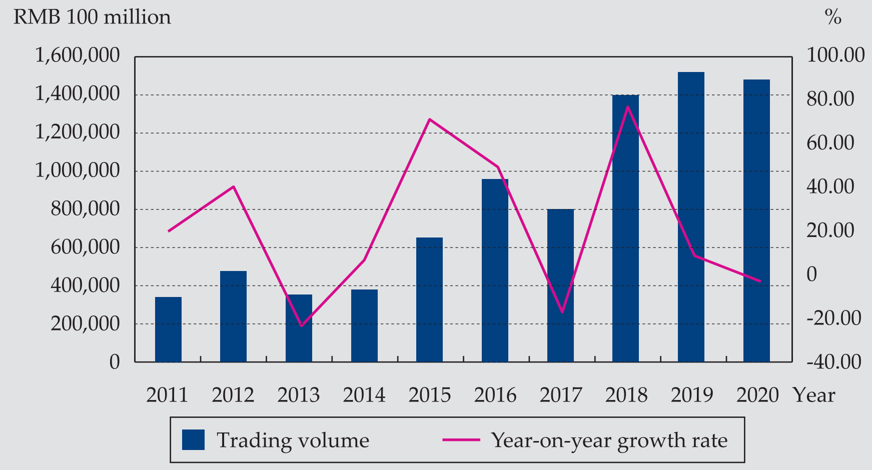
(Source: China Foreign Exchange Trade System (CFETS))

2.1.2 Main features of the interbank lending market

2.1.2.1 Trading volume maintained stable with a slight decline

In 2020, the turnover of interbank lending market registered a slight decline, with its year-on-year growth declining from 8.86 percent in the previous year to -2.96 percent. The monthly turnovers in March, April, September and December ended higher over a year earlier, with the largest year-on-year growth, 26.11 percent, recorded in April. The monthly turnovers in other months fell compared with the same period a year ago, with the largest year-on-year decline, 38.57 percent, reported in February. In 2020, due to the COVID-19 pandemic and the extended Spring Festival holiday, the trading volume in the interbank lending market from January to February significantly declined. However, as the PBC implemented the targeted RRR cuts for inclusive finance and consistently undertook open market operations, the trading volume in the interbank lending market rebounded substantially from March to April and then maintained stable. From October to November, due to the tightening liquidity and the National Day holiday, financial institutions tended to be more prudent in interbank lending, bringing the trading volume down. At end-2020, the demand for financing and liquidity rose among financial institutions, leading to a marked growth of the trading volume in the interbank lending market in December, which registered at 37.42 percent month on month.

Figure 2.2 Trading volumes and growth rates of the interbank lending market from 2011 to 2020



(Source: CFETS)

Figure 2.3 Monthly trading volumes and year-on-year growth rates of the interbank lending market in 2020

(Source: CFETS)

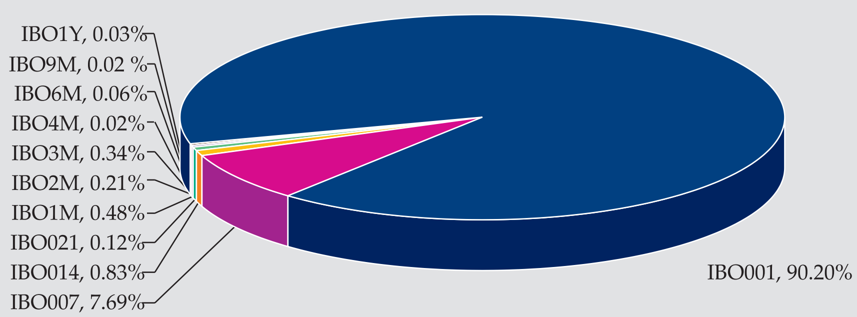
2.1.2.2 Market interest rates moved down overall

In 2020, in response to the COVID-19 pandemic, the PBC carried out three RRR cuts for financial institutions, lowered the interest rate on excess reserves (IOER) from 0.72 percent to 0.35 percent, and brought down the interest rates of reverse repos and MLF by 30 bps in aggregate, which enabled a downtrend of overall interest rates in the interbank lending market. The annual weighted average interest rate of the interbank lending market decreased by 63 bps year on year. At end-2020, the daily weighted rates of the O/N and 7-day interbank lending stood at 1.34 percent and 2.55 percent respectively, decreasing by 16 bps and 66 bps respectively compared with the beginning of the year. The range difference between the highest and lowest of the daily weighted rates was 207 bps in 2020, down 3 bps from the previous year.

2.1.2.3 The share of O/N interbank lending registered a slight decrease

In 2020, the maturity structure in the interbank lending market was still dominated by short-term maturities, but the share of O/N interbank lending registered a slight decrease. The trading volume of O/N interbank lending accounted for 90.20 percent of the total, down 1.21 percentage points from 2019 and up 0.08 percentage points from 2018. The trading volume of 7-day interbank lending accounted for 7.69 percent of the total, up 1.05 percentage points from the previous year. The share of interbank lending with maturities between 14 days and 3 months was 1.98 percent, up 0.15 percentage points from the previous year. The share of interbank lending with a maturity of more than 3 months was 0.13 percent, up 0.01 percentage points from a year earlier.

Figure 2.4 Maturity structure of interbank lending in 2020



(Source: CFETS)

2.1.2.4 Trading volume decreased in joint-stock commercial banks but increased in large-scale commercial banks

In 2020, the participants in the interbank lending market were mainly banking institutions, the trading volume of which accounted for 85.92 percent of the total. Specifically, joint-stock commercial banks, large-scale commercial banks and city commercial banks recorded a trading volume of RMB 96.98 trillion (down RMB 31.47 trillion from 2019), RMB 59.49 trillion (up RMB 20.96 trillion from 2019) and RMB 44.12 trillion (down RMB 3.36 trillion from 2019) respectively, accounting for 32.95 percent, 20.21 percent and 14.99 percent respectively. Joint-stock commercial banks played the role of intermediaries for financial connectivity in the market through active borrowing and lending transactions.

Throughout the year, the major net lenders in the interbank lending market were large-scale commercial banks, policy banks and joint-stock commercial banks, with a net lending volume of RMB 37.94 trillion, RMB 10.55 trillion and RMB 8.08 trillion respectively, accounting for 62.45 percent, 17.36 percent and 13.29 percent respectively; the major net borrowers were securities companies, city commercial banks and finance companies, with a net borrowing volume of RMB 26.17 trillion, RMB 20.32 trillion and RMB 9.24 trillion respectively, accounting for 43.08 percent, 33.44 percent and 15.21 percent respectively.

2.1.3 Outlook of the interbank lending market

In 2021, the liquidity in the banking system will remain adequate at a reasonable level, the interbank lending market is expected to achieve steady and sound development, and market interest rates will fluctuate within a reasonable range. With continued optimization of the market participant structure, diversification of trading mechanisms and improvement of the market administration mechanism, the PBC will press ahead with the efficient, stable, orderly and healthy development of the interbank lending market and continuously enhance the role of the market in monetary policy transmission and liquidity management.

2.2 Bond repo market

In 2020, the liquidity in the banking system remained adequate at a reasonable level, and the performance of the bond repo market was overall stable; the trading volume of bond repo kept expanding, and the terminal interest rate in the bond repo market remained stable but registered a slight decline and bigger fluctuations; the maturity structure remained stable with short-term products playing a dominant role; transactions with interest rate bonds represented a constant share of the total, and non-banking institutions and their products remained the major borrowers in the bond repo market.

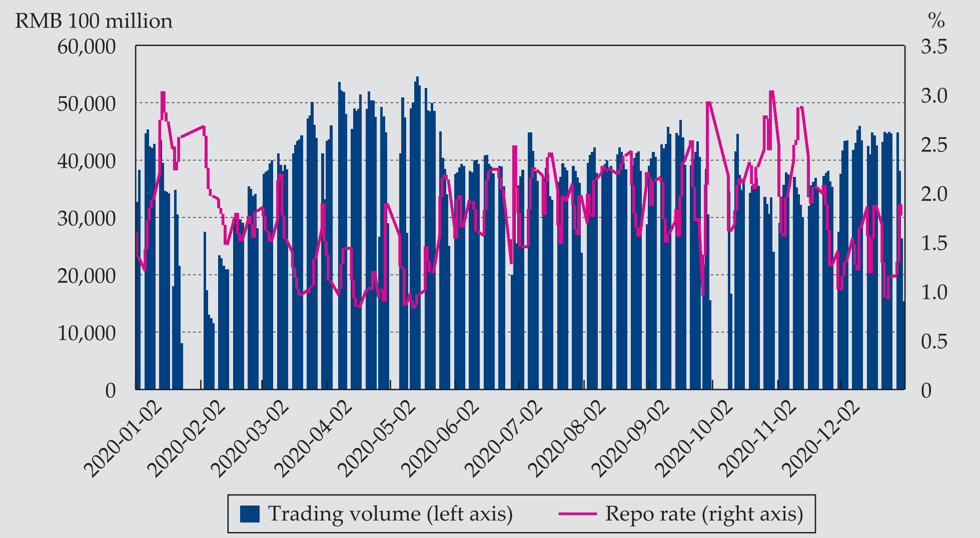
2.2.1 Performance of the bond repo market

In 2020, the cumulative turnover of the bond repo market was RMB 1,247.17 trillion, up 17.81 percent year on year. Specifically, the cumulative turnover of interbank bond repo accounted for 76.95 percent of the total, down 0.47 percentage points from 2019; the cumulative turnover of exchange-traded bond repo represented 23.05 percent of the total, up 0.47 percentage points from 2019.

2.2.1.1 Performance of the interbank bond repo market

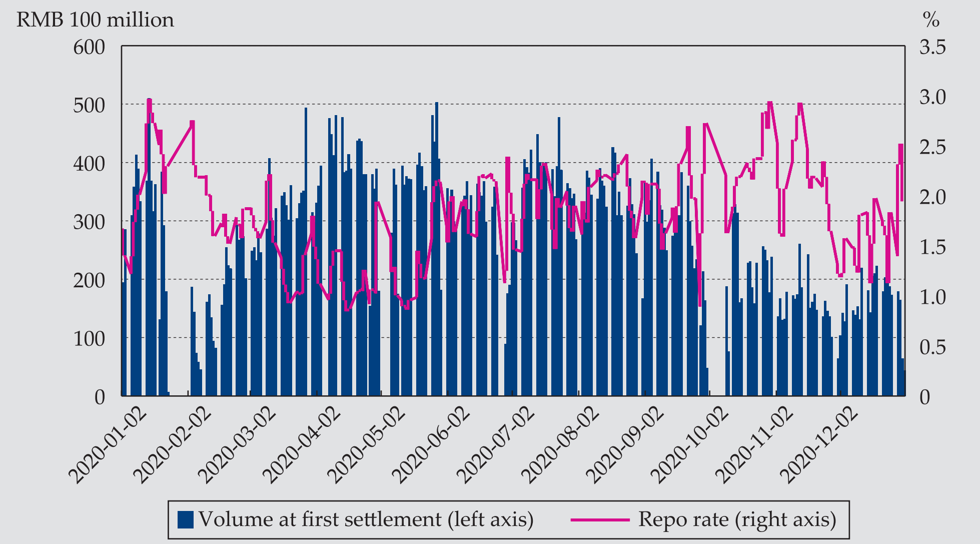
In 2020, the cumulative turnover of interbank bond repo was RMB 959.75 trillion, up 17.1 percent year on year, an acceleration of 3.7 percentage points compared with the previous year. In particular, the cumulative turnover of pledged repo stood at RMB 952.72 trillion, up 17.6 percent year on year; the cumulative turnover of outright repo was RMB 7.04 trillion, down 26.2 percent year on year; and the share of the trading volume of pledged repo in the bond repo market further increased to 99.3 percent.

Figure 2.5 Volume and price of interbank pledged repo market in 2020



(Source: CFETS)

Figure 2.6 Volume and price of interbank outright repo market in 2020



(Source: CFETS)

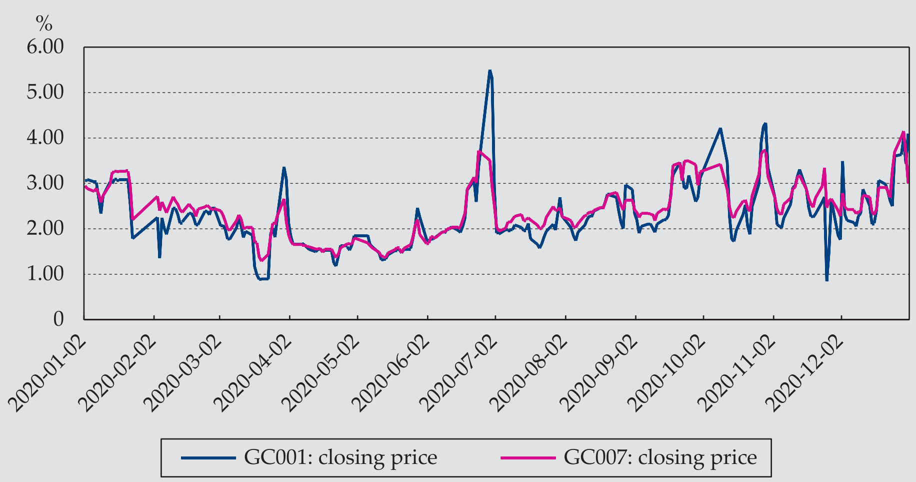
In 2020, the terminal interest rate in the interbank bond repo market fluctuated within a reasonable range, with slightly greater fluctuations compared with the previous year. The weighted average pledged repo rate was 1.72 percent, down 58 bps year on year, and the range difference between the highest and lowest of the rate was 222 bps, up 22 bps from the previous year. The weighted average outright repo rate was 1.78 percent, down 57 bps year on year, and the range difference between the highest and lowest of the rate was 212 bps, up 1 bp from the previous year. The interest rate spread between pledged repo and outright repo was 6 bps, up 1 bp from 2019.

2.2.1.2 Performance of the exchange-traded bond repo market

In 2020, the cumulative turnover of exchange-traded bond repo was RMB 287.42 trillion, up 20.25 percent year on year. By trading venues, the cumulative turnover of bond repo in Shanghai Stock Exchange (SSE) was RMB 259.60 trillion, up 20.5 percent year on year; and the cumulative turnover of bond repo in Shenzhen Stock Exchange (SZSE) was RMB 27.82 trillion, up 17.68 percent year on year. By product types, the cumulative turnover of pledged repo was RMB 280.56 trillion, up 20.27 percent from the previous year; and the cumulative turnover of pledged agreement-based repo was RMB 2.19 trillion, down 9.97 percent year on year.

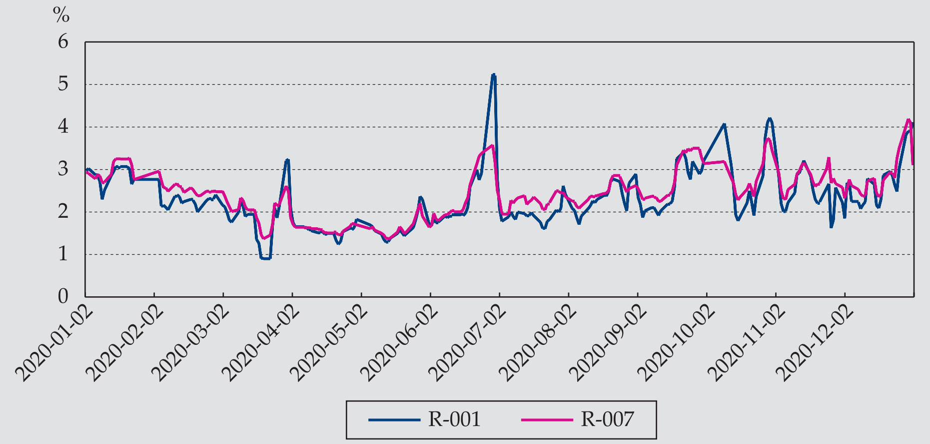
The interest rate of exchange-traded pledged bond repo was overall on a decline. For SSE, the average 1-day fixing repo rate and the average 7-day fixing repo rate were 2.35 percent and 2.42 percent respectively, down 34 bps and 35 bps respectively from the previous year; and for SZSE, the weighted average rates of 1-day repo and 7-day repo were 2.32 percent and 2.46 percent respectively, down 32 bps and 34 bps respectively from a year earlier.

Figure 2.7 Movements of pledged fixing repo rates of SSE in 2020



(Source: SSE)

Figure 2.8 Movements of pledged repo rates of SZSE in 2020



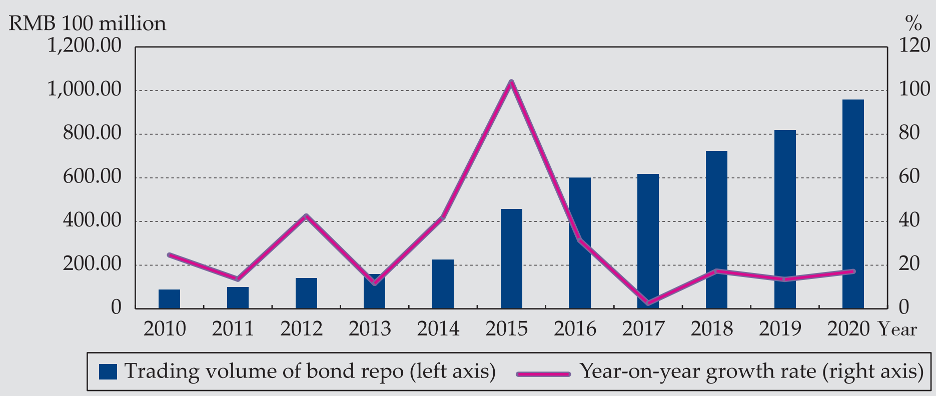
(Source: SZSE)

2.2.2 Main features of the bond repo market

2.2.2.1 The trading volume of bond repo rose steadily

In the past three years, the trading volume of the interbank bond repo market had a year-on-year increase of 17 percent, 13 percent and 17.1 percent respectively, representing a steady growth rate. In terms of trading structure, in 2020, the trading volume of interbank pledged repo increased markedly by 17.6 percent year on year; and the trading volume of outright repo decreased by 26.2 percent year on year. As outright repo accounts for a small share of China's interbank bond repo market, in 2020, the trading volume of the interbank bond repo maintained a stable growth overall. Over the year, the trading volume of exchange-traded bond repo increased by 20.25 percent year on year, a growth slightly higher than that of the interbank market.

Figure 2.9 Trading volume and growth rate of interbank market bond repo from 2010 to 2020

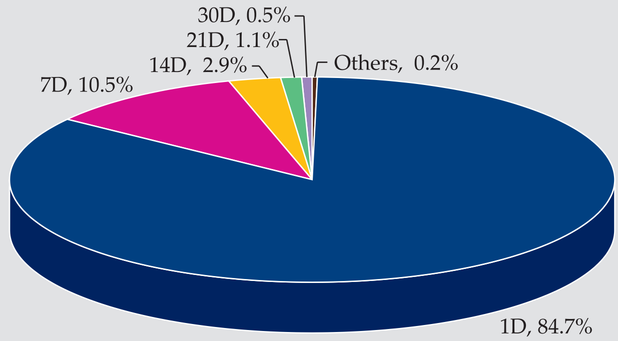


(Source: CFETS)

2.2.2.2 Maturity structure was overall stable, with short-term products playing a dominant role

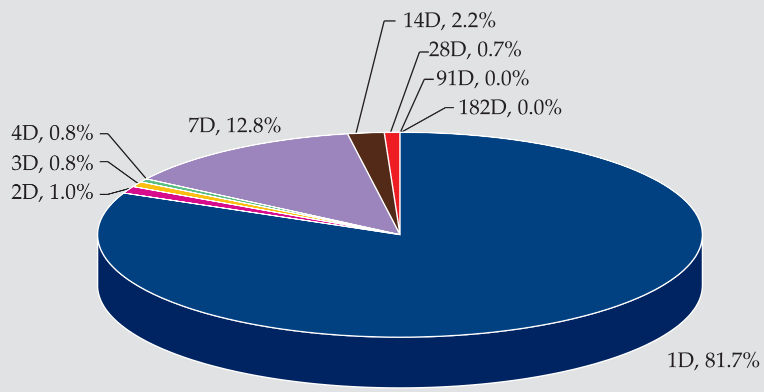
In the interbank market, the maturity structure was overall stable, with short-term products playing a dominant role and making up an increased proportion of the total. The annual weighted average maturity of pledged repo was 2.4 days, 0.1 days fewer than that of the previous year; the share of pledged repo transactions with a term of up to 7 days was 95.25 percent, up 0.37 percentage points from 2019. In the exchange-traded repo market, pledged repo transactions with a term of up to 7 days in the SSE and the SZSE markets accounted for 97.1 percent and 99.0 percent of the total respectively, up 1.1 percentage points and 0.1 percentage points from a year earlier respectively.

Figure 2.10 Maturity structure of pledged repo transactions in the interbank market in 2020



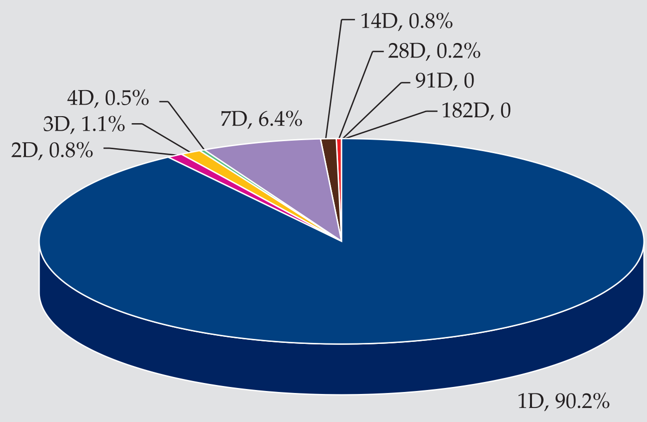
(Source: CFETS)

Figure 2.11 Maturity structure of pledged repo transactions in the SSE market in 2020



(Source: SSE)

Figure 2.12 Maturity structure of pledged repo transactions in the SZSE market in 2020



(Source: SZSE)

2.2.2.3 Interest rate volatility rose

In the interbank bond repo market, in 2020, the standard deviation of the weighted average rates of 1-day pledged repo among depository institutions was 0.51, up 0.02 year on year; and the standard deviation of the weighted average rates of 7-day pledged repo among depository institutions was 0.34, up 0.14 year on year.

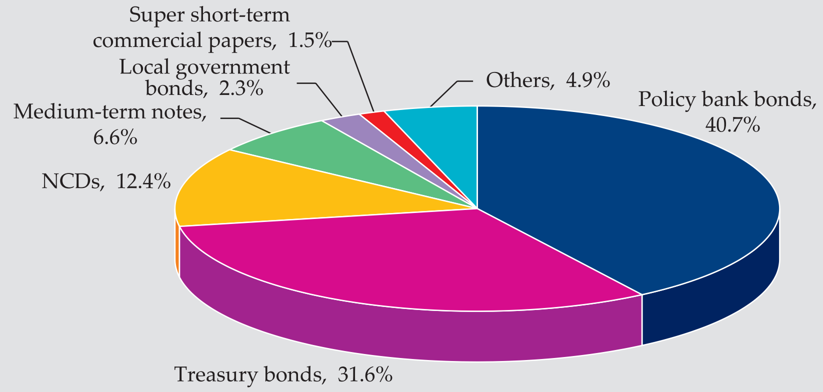
In the exchange-traded repo market, for SSE, the standard deviation of 1-day pledged fixing repo rates was 0.69, up 0.22 year on year; the standard deviation of 7-day pledged fixing repo rates was 0.58, up 0.23 year on year. For SZSE, the standard deviation of the daily weighted average rates of pledged repo was 0.57, up 0.23 year on year.

2.2.2.4 Transactions with high credit rating bonds remained stable

In the interbank repo market, the share of transactions with high credit rating bonds as pledges remained generally stable. In the pledged repo market, transactions with interest rate bonds represented around 72 percent of the total, down 1 percentage point year on year; among transactions with interest rate bonds, those with AAA-grade bonds accounted for around 70 percent of the total, down 2 percentage points over the previous year. The outright repo market had a similar performance.

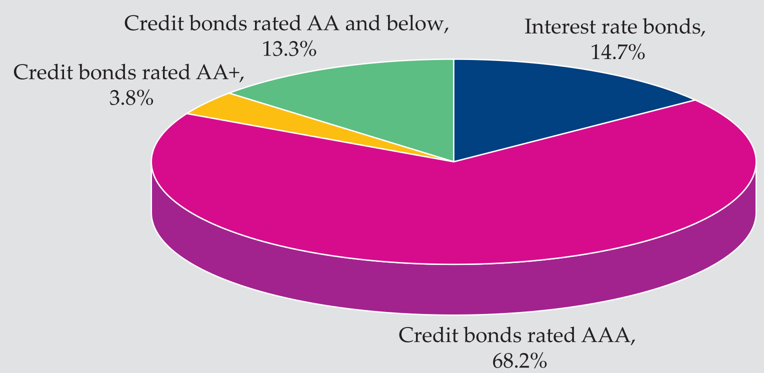
The structure of pledged bonds in the exchange-traded repo market continued to improve. Among the pledged bonds traded in SSE, interest rate bonds accounted for 14.7 percent of the total, down 1.8 percentage points year on year; AAA-grade credit bonds accounted for 68.2 percent, up 0.4 percentage points year on year; and interest rate bonds and AAA-grade credit bonds in aggregate accounted for 82.9 percent of the total, down 1.4 percentage points over the previous year. Among the pledged bonds traded in SZSE, interest rate bonds accounted for 11.9 percent of the total, down

Figure 2.13 Structure of pledged bonds for pledged repo transactions in the interbank market in 2020



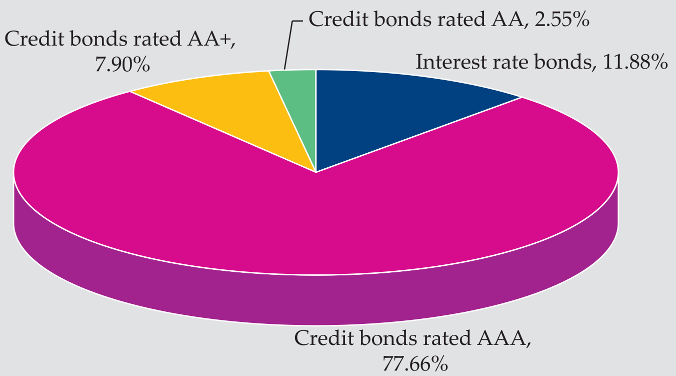
(Source: CFETS)

Figure 2.14 Structure of pledged bonds for pledged repo transactions in the SSE market in 2020



(Source: SSE)

Figure 2.15 Structure of pledged bonds for pledged repo transactions in the SZSE market in 2020



(Source: SZSE)

3.5 percentage points year on year; AAA-grade credit bonds accounted for 77.7 percent, up 2.6 percentage points year on year; and interest rate bonds and AAA-grade credit bonds in aggregate accounted for 89.5 percent of the total, down 0.9 percentage points over the previous year.

2.2.2.5 Non-banking institutions were major borrowers

In 2020, from the perspective of capital inflow, the largest net borrowers in the interbank pledged repo market were fund companies and their asset management products, securities companies and wealth management products, with a net borrowing of RMB 155.17 trillion, RMB 107.42 trillion and RMB 20.90 trillion respectively. As of end-2020, in the SSE repo market, proprietary accounts of securities companies, asset management products and publicly offered funds ranked top three in terms of outstanding net capital inflow, accounting for 23.7 percent, 18.0 percent and 16.4 percent respectively. In the SZSE repo market, proprietary accounts of securities companies, funds and enterprise annuities were the top three items in terms of outstanding capital inflow, representing a share of 31.48 percent, 21.48 percent and 13.05 percent respectively.

In 2020, from the perspective of capital outflow, the largest net lenders in the interbank pledged repo market were large-scale commercial banks, policy banks and joint-stock commercial banks, with a net lending of RMB 203.89 trillion, RMB 104.25 trillion and RMB 70.21 trillion respectively. In addition, small and medium-sized banks further boosted the capacity for connecting capital supplies and demands in the pledged repo market, reporting a cumulative turnover of RMB 602 trillion, with a year-on-year growth of 10.7 percent. As of end-2020, in the SSE repo market, publicly offered funds, individuals and general legal persons ranked top three in terms of outstanding net capital outflow, accounting for 34.0 percent, 20.2 percent and 18.6 percent respectively. In the SZSE repo market, funds, general institutions and other professional institutions ranked top three in terms of capital outflow, accounting for 25.42 percent, 19.73 percent and 18.30 percent respectively.

2.2.3 Outlook of the bond repo market

In 2021, under a sound monetary policy that will be flexible, targeted, reasonable and appropriate, the liquidity of the banking system in China will continue to remain adequate at a reasonable level, and the bond repo market is expected to enjoy continuous stable and sound development. First, market interest rates will fluctuate within a reasonable range. Second, the maturity structure will still be dominated by short-term maturities. Third, market participants will increase in numbers and improve in structure in an orderly manner. Fourth, the market pricing mechanism and system will be improved, and financial institutions will further uplift their efficiency in liquidity management.

2.3 NCD market

In 2020, the NCD market experienced an

increase of issuance, with interest rates undergoing V-shaped movements but on an overall downtrend. As for the maturity structure, short-term maturities gradually outnumbered long-term maturities. Trading in the secondary market was on a rise, and market participants further diversified.

2.3.1 Performance of the NCD market

In 2020, a total of 364 institutions issued NCDs, down 54 over the previous year; 28,700 NCDs were issued, up 900 over the previous year; the issuance amount stood at RMB 18.99 trillion, up 5.93 percent year on year; the number of subscription entities was 3,862, up 479 over the previous year and involving a total of 40 types of institutions; the year-end outstanding volume was RMB 11.18 trillion, up 4.10 percent from the previous year.

In 2020, a total of 673,600 NCD transactions were concluded in the secondary market and the turnover increased by 15.34 percent year on year to RMB 167.33 trillion. Specifically, the turnover of pledged repo transactions stood at RMB 118.18 trillion, up 25.20 percent year on year and accounting for 70.63 percent of the total; the transactions concluded via cash bond deals amounted to RMB 48.96 trillion, down 2.87 percent year on year and accounting for 29.26 percent of the total; the outright repo traded RMB 0.18 trillion, down 32.65 percent year on year and accounting for 0.11 percent of the total; and the bond lending transactions amounted to RMB 6.29 billion.

COLUMN Roadshows facilitate sustainable development of the NCD market

On March 9th, 2020, CFETS launched an NCD roadshow platform in its new local-currency trading system. The platform provides market participants with a suite of integrated services for the period prior to NCD issuance, covering the key steps such as the release of issuance intent, investor solicitation, interactive price enquiry, and confirmation of subscription intent. By pooling and disclosing pre-issuance price inquiries, the platform improves pricing transparency. Leveraging the advantages of iDeal in FinTech and compliance regulation, the roadshows fully record the price inquiry process and enhance the transparency and efficiency of NCD issuance, which has improved the closed-loop services throughout the full cycle of NCD issuance (i.e. pre-issuance, at-issuance and post-issuance) and will facilitate the sustainable development of the NCD market.

After consistent survey and promotion, major NCD issuers quickly mastered the skills of using the roadshow platform and began to release roadshow quotations regularly. Such information has become a key indicator of the level of medium and long-term money supplies in the money market, which serves as an important reference for banks to manage their assets and liabilities and for the financial market to carry out businesses and is conducive to the *transmission of monetary policy. As of end-2020, 81 NCD issuers had released quotations on the roadshow platform, with quotations on 110 to 150 NCDs released daily; 486 institutions have made pre-subscriptions, with a daily average pre-subscription volume of nearly RMB 6 billion and the maximum daily volume reaching RMB 61.1 billion.*

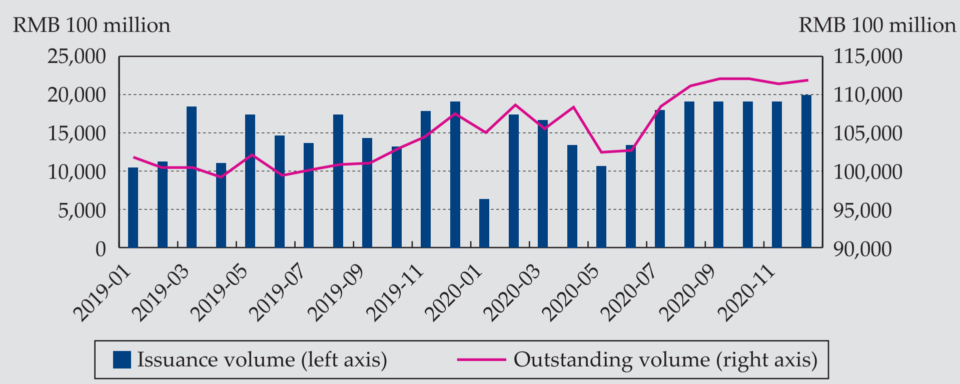
2.3.2 Main features of the NCD market

2.3.2.1 The issuance volume increased, with joint-stock commercial banks and large-scale commercial banks accounting for bigger shares

In 2020, the issuance volume of NCDs increased, reporting a year-on-year growth of 5.93 percent and an average quarterly issuance volume of RMB 4.83 trillion. The issuance volume went slightly down from Q1 to Q2 and boosted significantly in Q3. It registered RMB 4.07 trillion, RMB 3.78 trillion, RMB 5.44 trillion and RMB 5.70 trillion respectively for the four quarters of 2020.

In 2020, the outstanding volume of NCDs kept at around RMB 11 trillion, with significant negative growths reported only in May and June. At end-2020, the outstanding volume of NCDs amounted to RMB 11.18 trillion, up RMB 0.44 trillion from end-2019. In terms of issuers, the outstanding volume of NCDs issued by large-scale state-owned banks and joint-stock commercial banks remained stable and secured a moderate increase, the outstanding volume of NCDs issued by city commercial banks declined slightly, the outstanding volume of NCDs issued by rural commercial banks remained basically stable, and a marked decline was seen in the outstanding volume of low-rated NCDs.

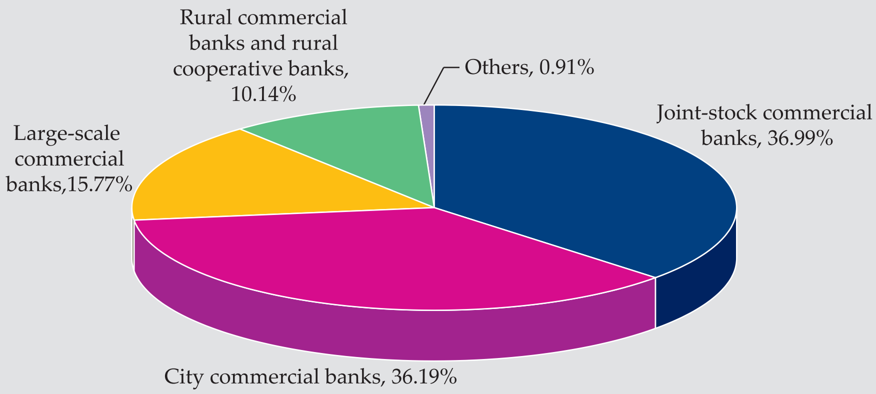
Figure 2.16 Monthly issuance of NCDs from 2019 to 2020



(Source: CFETS)

In 2020, joint-stock commercial banks, city commercial banks and large-scale commercial banks were the top three NCD issuers, accounting for 36.99 percent, 36.19 percent and 15.77 percent of the total respectively, up 2.76 percentage points, down 4.48 percentage points, and up 2.86 percentage points respectively from the previous year. Rural commercial banks and rural cooperative banks represented 10.14 percent of the total, down 1.07 percentage points from 2019.

Figure 2.17 Structure of NCD issuers in 2020

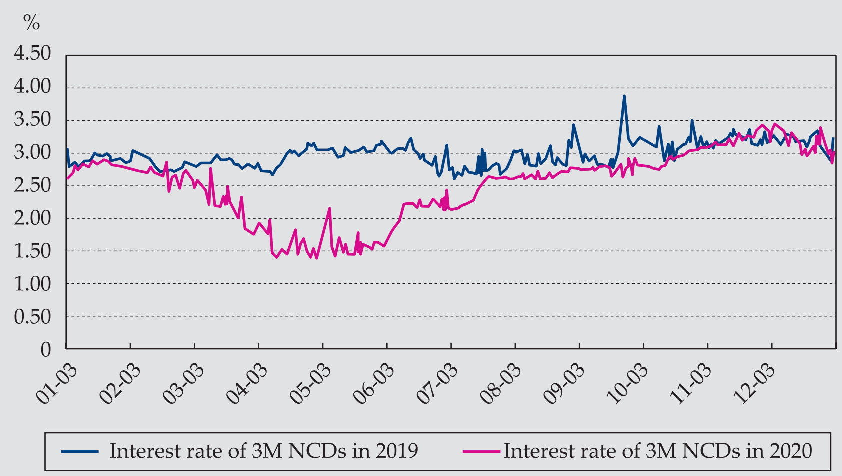


(Source: CFETS)

2.3.2.2 The issuing rates of NCDs underwent V-shaped movements, fluctuating within a wider range

In 2020, the weighted average financing cost of NCDs decreased from 3.20 percent at the beginning of the year to 2.87 percent. The weighted average interest rate of 3-month NCDs decreased from 2.60 percent at the beginning of the year to a low level of 1.40 percent at end-April, and then picked up to 2.60 percent at end-2020. The annual weighted average interest rate of 3-month NCDs reached a historical low at 2.60 percent, down 37 bps from the previous year. The issuing rate of 3-month NCDs of joint-stock commercial banks ranged between 1.21 percent and 3.29 percent, moving upwards compared with the previous year's range of between 2.45 percent and 3.20 percent and 133 bps wider than the previous year.

Figure 2.18 Movement of interest rate of 3-month NCDs in 2019 and 2020

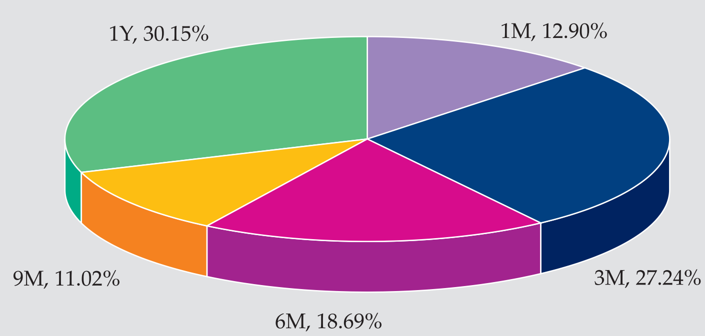


(Source: CFETS)

2.3.2.3 The share of NCDs with a 1-year maturity decreased, and the shares of NCDs with 6-month and 9-month maturities increased

In 2020, NCDs with 1-year, 3-month and 6-month maturities accounted for the largest shares of the total, contributing 29.65 percent, 26.79 percent and 18.38 percent respectively. The shares of NCDs with 1-month, 3-month and 1-year maturities decreased by 1.77 percentage points, 2.17 percentage points and 9.47 percentage points respectively compared with the previous year. The shares of NCDs with 6-month or 9-month maturity increased by 7.05 percentage points and 4.70 percentage points respectively from those in 2019.

Figure 2.19 Maturity structure of NCDs in 2020



(Source: CFETS)

2.3.2.4 Rural commercial banks, rural cooperative banks and policy banks were the largest net buyers of NCDs in the secondary market

In 2020, the quarterly turnover in the NCD secondary market stood at RMB 41.83 trillion on average, accounting for 21.54 percent of transactions in the cash bond market and ranking the second amongst all transactions. From the perspective of institution type, the top net buyers of NCDs were rural commercial banks and rural cooperative banks, with a combined net purchase of RMB 1.37 trillion, representing 27.95 percent of the total. They were followed by policy banks and wealth management products, which accounted for 21.24 percent and 13.04 percent respectively of the total. The top net seller of NCDs was joint-stock commercial banks, with a net sale of RMB 1.81 trillion, making up 36.96 percent of the total. They were followed by securities companies and city commercial banks which accounted for 29.80 percent and 29.63 percent of the total respectively.

2.3.3 Outlook of the NCD market

In 2021, the liquidity of the banking system in China will continue to remain adequate at a reasonable level, and the NCD market is expected to achieve orderly and sound development. The issuing rates of NCDs will pick up, the maturity structure will be optimized, and market participants will be further diversified. The issuance and trading of NCDs through online and electronic channels will enhance market transparency, thereby facilitating the transmission of monetary policy and improving the capacity of financial institutions to manage liabilities. The roadshows of NCDs will further enhance price discovery and improve the compliance and effectiveness in pricing issuing rates of NCDs.

Chapter 3 Bill Market

In 2020, despite the impacts of the COVID-19 pandemic, the performance of the bill market was overall stable. The bill acceptance business and the bill discount business grew steadily; transactions thrived in the market; the volume of central bank discounts continu ed to increase, and market interest rates went down as a whole. The bill market fully leveraged its role in transmitting monetary policy and supporting the real economy, made great contributions to the stable operation and recovery of the macro economy, and extended strong support to the development of private businesses and MSMEs.

3.1 Performance of the bill market

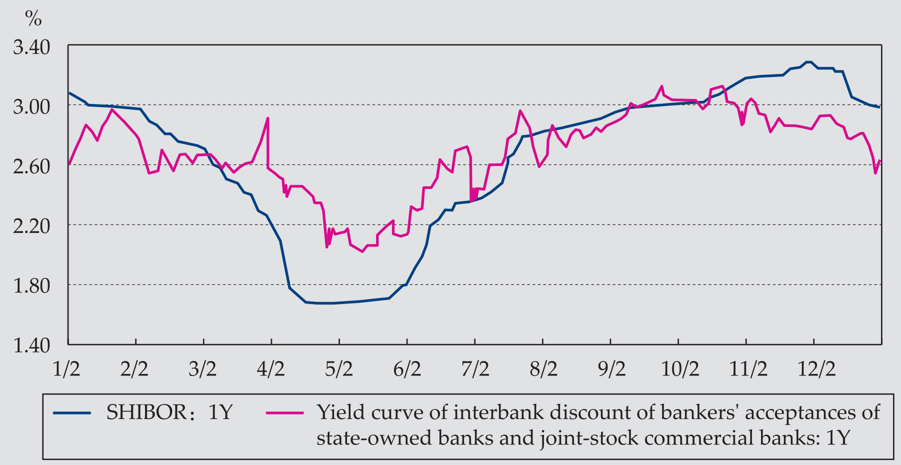
3.1.1 The total volume of bill businesses grew steadily

In 2020, the total volume of bill businesses stood at RMB 148.24 trillion, up 12.77 percent year on year. Specifically, bill acceptances amounted to RMB 22.09 trillion, up 8.41 percent year on year; endorsements amounted to RMB 47.19 trillion, up 1.55 percent year on year; discounts amounted to RMB 13.41 trillion, up 7.67 percent year on year. The trading volume of trade acceptances amounted to RMB 64.09 trillion, up 25.81 percent year on year. Specifically, interbank discounts added up to RMB 44.11 trillion, up 13.61 percent year on year; pledged repos added up to RMB 19.54 trillion, up 64.26 percent year on year; and outright repos added up to RMB 444.47 billion, up 462.91 percent year on year. At end-2020, outstanding bill acceptances registered RMB 14.09 trillion, up 10.69 percent from the beginning of the year; outstanding bill discounts registered RMB 8.78 trillion, up 7.29 percent from the beginning of the year; and outstanding central bank discounts registered RMB 578.37 billion, up 22.7 percent from the beginning of the year.

3.1.2 Major interest rates in the bill market went down overall

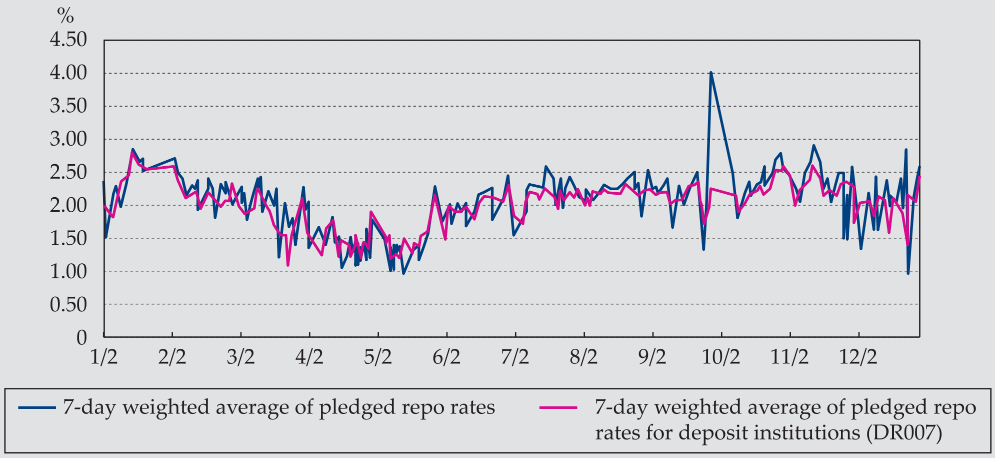
In the bill market, the interest rates of interbank discounts and repos showed V-shaped movements, in tandem with the movements of major interest rates in the money market. In 2020, the weighted average interest rates of interbank discounts and pledged repos were 2.71 percent and 1.87 percent respectively, down 60 bps and 64 bps respectively year on year. After hitting a historic low at 2.29 percent in May, the weighted average interest rate of interbank discounts moved in tandem with interest rates in the money market, consistently rising to 2.91 percent in October, and then declined at year-end. The correlation coefficients between 3M, 6M and 12M interbank discount rates and SHIBOR of the same maturities were 0.68, 0.80 and 0.89 respectively; the correlation coefficient between the 1-day repo rate for bills and the 1-day weighted average of pledged repo rates for deposit institutions (DR001) was 0.98, and the correlation coefficient between the 7-day repo rate for bills and DR007 was 0.80. In 2020, the weighted average interest rate of bill discounts was 2.98 percent, 47 bps lower from the previous year and 92 bps lower than the average of 1Y LPR, which fully reflected the advantages of the bill market in supporting the real economy and reducing the financing costs of enterprises.

Figure 3.1 Comparison between movements of daily interest rates of interbank discounts of bills and SHIBOR in 2020



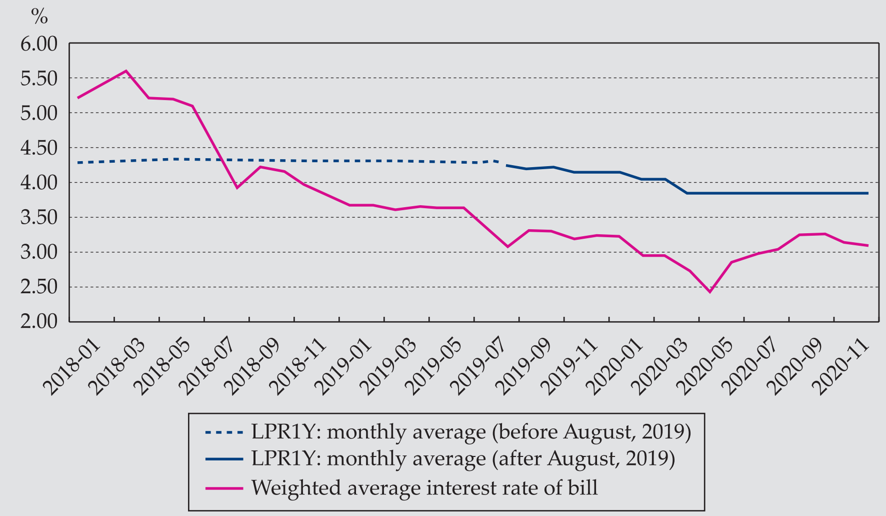
[(Source: Shanghai Commercial Paper Exchange (SHCPE)]

Figure 3.2 Comparison between movements of daily interest rates of pledged repos of bills and pledged repos by deposit institutions in 2020



(Source: CHCPE)

Figure 3.3 Comparison between movements of bill discount rates and the LPR from 2018 to 2020



(Source: CHCPE)

3.2 Main features of the bill market

3.2.1 The bill market quickly recovered from the pandemic and extended vigorous support to work and production resumption

In the wake of the COVID-19 outbreak at the beginning of the year, following the overall arrangements of the PBC, the SHCPE promptly issued the *Notice on Further Strengthening Support from Bill Businesses for the Containment of COVID-19 Pandemic* (Piaojiaosuofa No. 14 [2020]), in which it proposed to vigorously support the fight against the pandemic and facilitate the work and production resumption of enterprises by providing special services, launching emergency response mechanisms, and reducing and waiving fees and charges. Among all financing channels for enterprises, bill financing quickly restored to its normal level. In March, the transaction volumes of bill acceptances and bill discounts stood at RMB 2.47 trillion and RMB 1.81 trillion respectively, up 91.26 percent and 71.14 percent respectively from February when the pandemic was the most rampant, marking a quick recovery to the level during the same periods of previous years. In Q1, the amounts of bill acceptances and bill discounts throughout the market increased by 12.12 percent and 22.26 percent respectively from the previous year; at end-March, outstanding bill acceptances and outstanding bill discounts increased by 10.58 percent and 13.19 percent respectively.

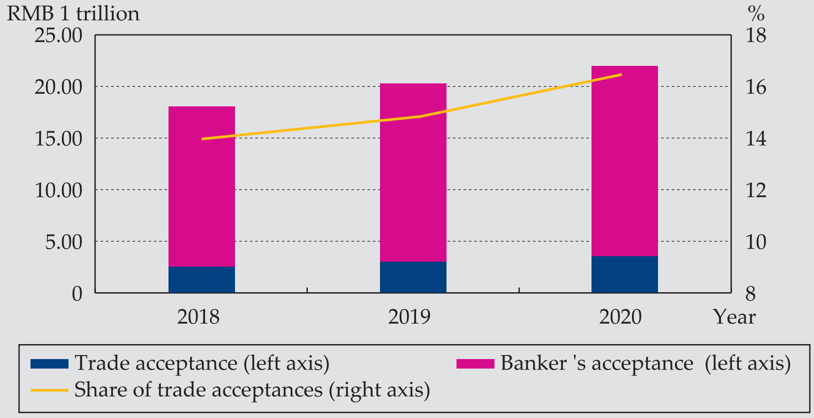
3.2.2 Innovations in bill businesses advanced, effectively supporting the development of the real economy and MSMEs

In 2020, the SHCPE launched a series of innovative products, such as establishing the supply chain bill platform and consistently promoting standardized bills, the "Discount Connect" and the "Bill Payment Connect", and advanced the information disclosure of trade bills. By collaborating with its member organizations in more intensive marketing campaigns and business development, it further expanded the service scope of the bill market and opened the market to more enterprises, which stepped up support for the efforts to develop the economy, stabilize businesses and secure employment. Throughout the year, the cumulative turnover of bill acceptances, endorsements and discounts for enterprises totaled RMB 82.7 trillion, up 4.27 percent year on year; the number of enterprise users of bills① totaled 2,705,800, up 11.22 percent year on year. The amount of bills used by MSBs reached RMB 44.03 trillion, accounting for 53.24 percent of the total; the number of MSB users of bills reached 2,053,100, accounting for 92.5 percent of the total.

3.2.3 The share of trade acceptances increased significantly, and the credit environment for business improved

In 2020, trade acceptances amounted to RMB 3.62 trillion, up 19.77 percent year on year, making up 16.39 percent of the total, up 1.55 percentage points from the previous year; the average face value of trade acceptances was RMB 1.247 million, down 11.08 percent year on year. As financial policies lent more favor to MSBs, commercial banks issued trade acceptances to core enterprises and provided trade acceptance discounts for enterprises in the industry chains, thereby extending financing to more MSBs and accelerating the development of the trade acceptance business. Meanwhile, the increasing electronization and transparency of the bill market created favorable conditions for the vitalization of trade acceptance transactions and the reduction in the face values of trade acceptances.

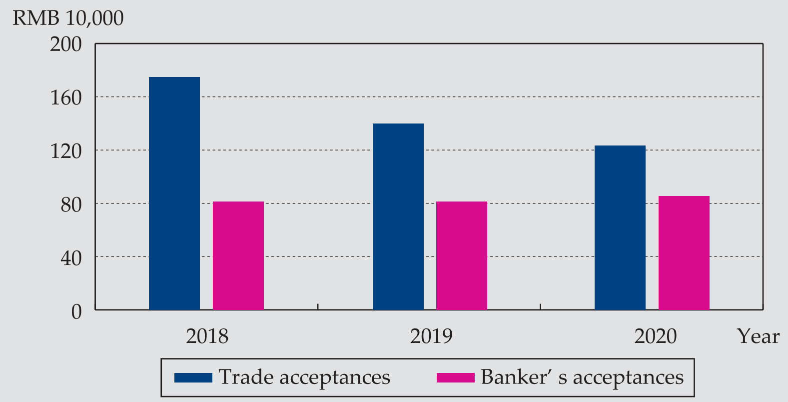
Figure 3.4 Changes in volumes and market structure of bill acceptances from 2018 to 2020



(Source: SHCPE)

① The number of enterprise users of bills refers to the total number of enterprises in light of the amounts of bill acceptances, endorsements and discounts.

Figure 3.5 Changes in average face value of bills from 2018 to 2020

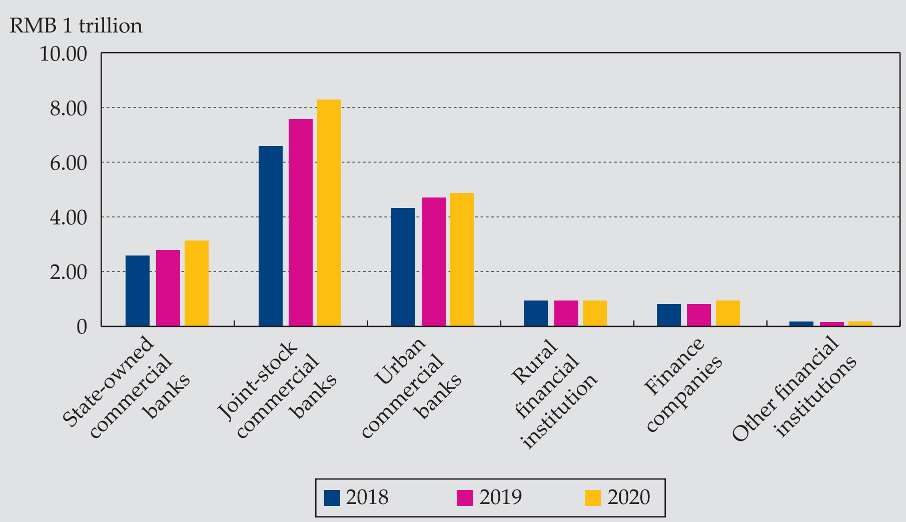


(Source: SHCPE)

3.2.4 The bill businesses of commercial banks grew steadily, and the market shares became more balanced

First, the volume of banker's acceptances remained stable, and secured a moderate increase, and the market shares of different types of banks diverged. In 2020, banker's acceptances throughout the market amounted to RMB 18.47 trillion, up 6.43 percent year on year. Among them, state-owned commercial banks and joint-stock commercial banks

Figure 3.6 Changes in volumes of banker's acceptances by types of institutions from 2018 to 2020[①]



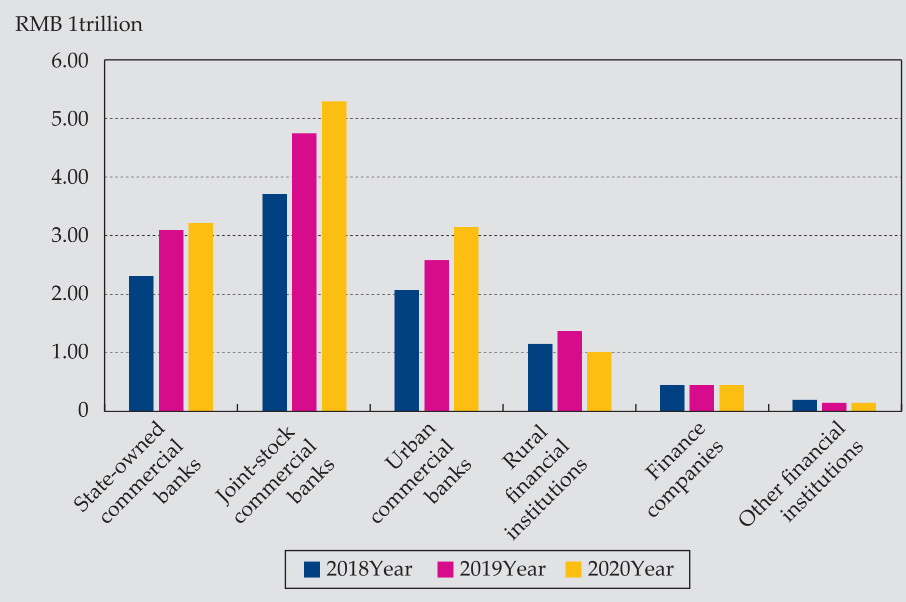
(Source: SHCPE)

① Other financial institutions include foreign banks and others, the same hereinafter.

accounted for 17.17 percent and 44.87 percent of the market, respectively, both having secured increased market shares; urban commercial banks and rural financial institutions accounted for 26.63 percent and 5.08 percent of the market, respectively, down 1.19 and 0.78 percentage points year on year respectively.

Second, the volume of bill discounts increased from the previous year, and online financing activities thrived. The "Discount Connect" business removed the information barrier in the discount market and accurately matched bills to be discounted with funds to be invested nationwide. As of end-2020, a total of 7,819 enterprises had been rendered bill agency services through the "Discount Connect", and 28,165 bills have entered into discount agreements with a total amount of RMB 46.98 billion. A number of commercial banks vigorously promoted a new bill discount business featuring high-speed transactions. Under the new business model, it takes less than a minute for a customer to receive funds from the moment a discount request is filed, which has effectively tackled the problems existing in traditional bill businesses, such as the lengthy process of price inquiry, the complex procedures of transaction, the time-consuming process of fund transfer and high financial costs. Moreover, the new business enabled online transaction of bill discounts with zero physical contact, striking a balance between pandemic containment and business development. Driven by a series of innovative businesses, in 2020, bill discounts totaled RMB 13.41 trillion, up 7.67 percent year on year, of which trade bill discounts amounted to RMB 1.03 trillion, up 9.85 percent year on year.

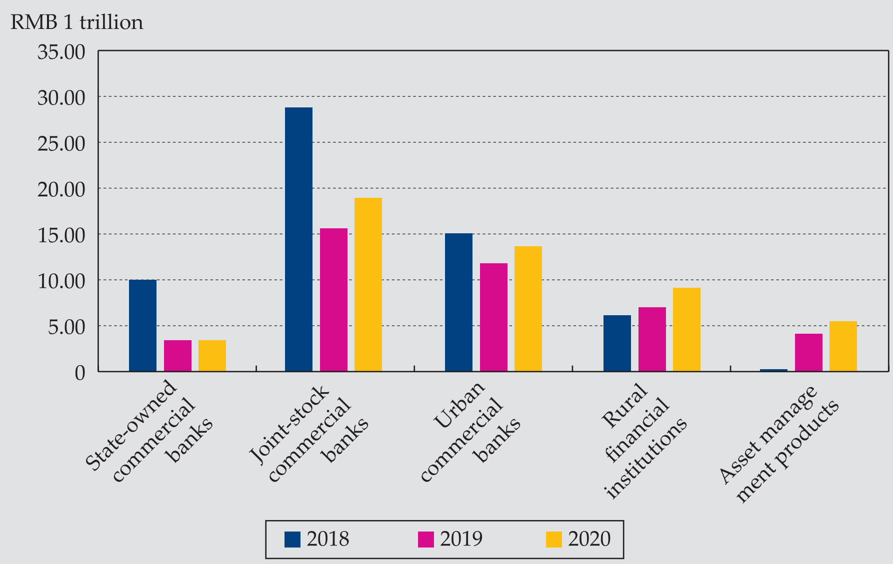
Figure 3.7 Changes in volumes of bill discounts by types of institutions from 2018 to 2020



(Source: SHCPE)

Third, the trading volume of interbank discounts grew rapidly, and transactions of small- and medium-sized financial institutions thrived. In 2020, interbank discounts across the market totaled RMB 44.11 trillion, up 13.61 percent year on year, basically flat with that of 2019. Joint-stock commercial banks, urban commercial banks and rural financial institutions boasted the largest volumes of interbank discounts, registering RMB 19.13 trillion, RMB 13.62 trillion and RMB 9.25 trillion respectively[①], up 20.65 percent, 13.79 percent and 34.22 percent respectively from the levels of 2019.

Figure 3.8 Changes in trading volumes of interbank discounts by types of institutions from 2018 to 2020



(Source: SHCPE)

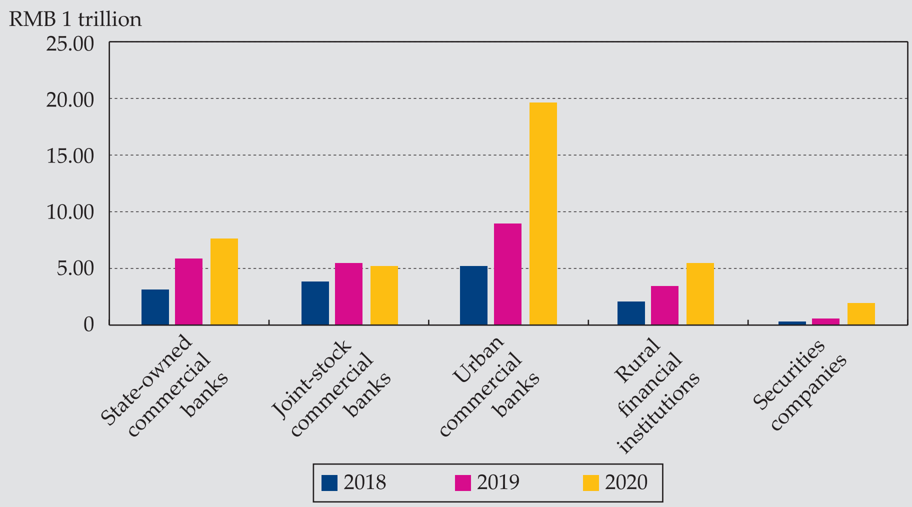
Fourth, overall repo transactions were brisk in the bill market, and the role of repos as a pledge-based financing instrument was enhanced. In 2020, repo transactions throughout the market totaled RMB 19.98 trillion, up 64.87 percent year on year, registering a growth rate slightly lower than the previous year. By types of institutions, repo transactions of state-owned (commercial) banks, urban commercial banks, rural financial institutions, securities companies and joint-stock commercial banks amounted to RMB 7.61 trillion[②] (up 31.35 percent), RMB 19.66 trillion (up 118.94 percent), RMB 5.46 trillion (up 57.81 percent), RMB 1.89 trillion (up

① The trading volume of interbank discounts for each type of institutions is calculated by adding up the volume bought and the volume sold, the same hereinafter.

② The volume of repo transactions of each type of institutions is calculated by adding up the volume of repos and the volume of reverse repos, the same hereinafter.

458.36 percent) and RMB 5.01 trillion (down 8.47 percent) respectively.

Figure 3.9 Changes in volumes of repos by types of institutions from 2018 to 2020



(Source: SHCPE)

3.2.5 Central bank discounts continued to grow in transaction volume as a targeted and effective policy

In 2020, the PBC earnestly implemented the arrangements made by the CPC Central Committee and the State Council on stabilizing businesses and securing employment. Specifically, it timely rolled out a series of financial policy measures, including 30 financial support measures for pandemic prevention and control, consecutively launched financial support policies of central bank lending and central bank discounts, while increasing the supply of central bank discounts and lowering discount rates. These measures supported the fight against the pandemic, the efforts to secure supplies, the resumption of work and production, and the development of the real economy, especially MSMEs. At end-2020, the outstanding volume of central bank discounts stood at RMB 578.37 billion, up 22.7 percent from the beginning of the year. With the targeted implementation of the central bank discount policy, the PBC effectively guided financial institutions to reduce the financing costs of enterprises, made policies more inclusive, provided quick and targeted financial support for the real economy, especially MSBs and private enterprises, set guidance on rendering financial support for the efforts to stabilize businesses and secure employment, and provided vigorous financial guarantees for MSBs and private enterprises in their orderly resumption of work and production and their efforts to stabilize businesses and secure employment.

3.3 Product innovation, institutional arrangements and infrastructure construction

3.3.1 Business innovations in the bill market were sped up

3.3.1.1 The Administrative Measures on Standardized Bills officially came into effect

To regulate the financing mechanism through standardized bills and better serve SME financing and the development of supply chain finance, the PBC released the *Administrative Measures on Standardized Bills* on June 28th, 2020, which clarified the definition, major participating institutions and underlying assets of standardized bills, prescribed rules on information disclosure and investor protection, and set up an administrative framework. On July 28th, the *Administrative Measures on Standardized Bills* officially came into effect. On the same day, the SHCPE released the *Rules on Custody and Settlement of Underlying Assets of Standardized Bills*, which specified the essential preparations of depository institutions before they become eligible to run depository businesses, set out requirements for account opening and management, and established rules for the custody registration of assets underlying standardized bills, their disposal at maturity, and clearing and settlement. The SHCPE, the National Interbank Funding Center (NIFC) and the Shanghai Clearing House jointly released the *Rules on Information Disclosure of Standardized Bills*, which specified the obliged parties of disclosing information of standardized bills as well as the platforms and methods of information disclosure, and set out requirements for information disclosure before creation, after creation and throughout the duration of standardized bills. On January 26th, 2021, the NIFC, SHCPE and Shanghai Clearing House jointly released the *Depository Agreement for Standardized Bills (2020 Version)*, and recommended it to market participants for use upon signature. As of end-2020, 57 issues of standardized bills had been created, totaling RMB 6.118 billion; repayments have been made on 31 issues with an amount of RMB 3.226 billion without repayment failures.

Standardized bills, with bills as their underlying assets, and connecting the bill market with the bond market, enable the bond market to fully leverage its professional investment and pricing capacity in a way that enhances the financing function of bills and improves the standardization of bill transactions, and provide an alternative channel of bill financing for SMEs. They better cater to the transaction characteristics of financial institutions and support the liquidity management of small- and medium-sized financial institutions.

3.3.1.2 The supply chain bill platform was put into service

To implement national decisions and arrangements on regulating the development of supply chain finance and accelerate the construction of the new development paradigm of mutually-reinforcing domestic and international circulations, following the guidance of the PBC, the SHCPE built a supply chain bill platform based on the Electronic Commercial Draft System (ECDS), and put it into service on April 24th, 2020. Connecting with eligible supply chain platforms, the supply chain bill platform provides enterprises with electronic services throughout the life cycle of commercial drafts, and supports financial institutions to provide financing for enterprises through discounts and standardized bills.

Since the supply chain bill platform was put into service, the National Internet Finance Association of China and three supply chain platforms, namely China Enterprise Cloud Chain (Beijing) Financial Information Service Co., Ltd., JDH Information Tech (Guangzhou) Co., Ltd. and Shanghai Ouyeel Financial Information Service Co., Ltd., have been connected to it. Its services reach enterprises in manufacturing, wholesale and retail, software information, chemistry, agriculture, pharmaceuticals and many other industries. Tens of financial institutions have participated in supply chain bill businesses. Their services include account opening for enterprises engaged in supply chain bill businesses, corporate financing through discounts, and creation of standardized bills for depositories. In July 2020, the supply chain bill platform was selected into the "Tenth Batch of Financial Innovation Cases in China (Shanghai) Pilot Free Trade Zone".

Electronic trade bills issued through the supply chain bill platform, namely supply chain bills, are innovative and useful in four aspects. First, supply chain bills are embedded into the supply chain scenario, so that enterprises can directly complete their transactions through supply chain platforms, thus facilitating the use of bills in the supply chain scenario. Second, empowered by technological innovations, supply chain bills are issued at equally-divided amounts, providing bill users with more flexibility and resolving the mismatch between the amount of bills held by an enterprise and the amount of its payment. Third, supply chain bills improve the availability of financing for enterprises. Under the supply chain scenario, it is easier to identify transaction relationships between enterprises, and supply chain bills provide easier access to financing at preferential prices. Fourth, supply chain bills are conducive to the development of the trade acceptance market. The connection with a supply chain platform lies in the center of the unique transaction mechanism and business model of supply chain bills. It enables the examination and monitoring of transaction authenticity by the integration of the flows of capital, information and materials, which not only enhances information synergy, but also improves the acceptability of trade acceptances that are based on commercial credit.

3.3.2 The information disclosure mechanism for trade bills was officially established

To prevent the risks associated with bill businesses, promote the building of a credit system in the bill market and protect the legitimate rights and interests of bill holders, on December 23rd, 2020, China's central bank released Announcement No. 19 [2020] of the PBC to regulate the information disclosure of trade acceptances. On December 30th, the

SHCPE released the *Implementation Rules for the Information Disclosure of Trade Acceptances*. The release and implementation of these rules and regulations marks the establishment of the information disclosure mechanism for trade bills.

3.3.2.1 Obliged parties of bill disclosing information disclosure of bills and requirements for information disclosure were specified

Under the aforementioned rules and regulations, enterprises that are the acceptors of trade bills are the obliged parties of information disclosure, and finance companies that are the acceptors of trade bills shall refer to those rules and regulations in their information disclosure. It is stipulated that, starting from August 1st, 2021, such enterprises and finance companies shall disclose information of their acceptance activities and credit history in accordance with relevant requirements, and that the obliged parties of information disclosure shall be held responsible for the authenticity, accuracy, timeliness and completeness of the information disclosed.

3.3.2.2 The ability of market participants to prevent and control credit risks was enhanced

The information disclosure mechanism for trade bills helps market participants to assess the performance of acceptors and thus enhances their ability of preventing and controlling credit risks. Before signing for a trade bill, the enterprise can find out the information of the acceptor's acceptance activities and credit history through the bill information disclosure platform, so as to identify risks associated with the bill in advance, optimize investment decisions, and protect its rights and interests.

First, the "cumulative volume of acceptances" and the "outstanding acceptances" must be disclosed, so as to help market participants keep track of the acceptance activities of the acceptors in advance and judge whether there is any credit risk brought about by excessive acceptance of the acceptors, and to prevent the acceptors from engaging in acceptance activities in excess of their payment capacity.

Second, the "cumulative amount of acceptances overdue" and the "balance of acceptances overdue" over the most recent five years must be disclosed, so as to help market participants evaluate the credit standing of the acceptors on bills over medium and long terms, and to form a long-term mechanism for improving the acceptors' awareness of commercial credit and deterring acts of bad faith such as the malicious refusal of payment.

3.3.2.3 Incentive and disciplinary mechanisms for information disclosure of trade bills were established

First, it is clearly required that circumstances identified as abnormal information disclosure must be made public as a reminder to the entire market. Such circumstances include: (1) where an entity engages in trade acceptance businesses but fails to register with the bill information disclosure platform; (2) where an electronic commercial draft account is identified by relevant authorities as forged or false, per reporting by the account-opening institution; (3) where an acceptor fails to disclose its credit history for three consecutive months; (4) where payments overdue occur three times and more often within six months; (5) and other information disclosure circumstances identified in monitoring procedures as abnormal.

Second, it is explicitly provided that, prior to handling discount, pledge, guarantee or other businesses associated with trade acceptances, the financial institution shall make inquiries on the acceptance activities of the corresponding acceptor through the bill information disclosure platform. Provided that such information does not exist or that there are discrepancies between what's recorded on the bill and what's disclosed by its acceptor, the financial institution shall not proceed with the intended discount, pledge, guarantee or other businesses.

Third, it is clearly stipulated that where an acceptor has delayed its information disclosure, disclosed false information, or consistently made payments past due, the financial institution shall prudently proceed with banker's acceptance businesses, discount, pledge, guarantee or other businesses associated with the bills accepted by the acceptor.

Fourth, it is specified that where an acceptor has disclosed information timely and accurately and has made no payment past due, the financial institution may prioritize the acceptance and discount businesses associated with the acceptor.

The incentive mechanism embedded in the information disclosure system encouraged acceptors to disclose information, which is conducive to guiding more capital to flow into high-credit enterprises, forming a virtuous cycle between the information disclosure of high-credit enterprises and the less costly and more convenient financing through trade acceptances. It may also enhance credit awareness of enterprises, regulate bill transactions, and motivate enterprises to actively and timely disclose information. The disciplinary mechanism increased the costs of defaults by acceptors, which may encourage acceptors to fulfill the obligation of timely information disclosure, enhance their awareness of commercial credit, and improve the credit environment of the bill market.

3.3.3 Rules on recognition of automatic default of payment on electronic banker's acceptances were formulated as needed

Since some financial institutions, as the acceptors of electronic banker's acceptances, were slack to respond to the requests of payments that they received in the electronic banker's acceptance system, holders of those bills cannot exercise the right of recourse through the system as they were entitled to, and the risk of losing the rights associated with those bills would arise over time, which seriously impaired the rights and interests of relevant holders and adversely affected the credit status of those bills. In light of the situation, under the guidance of the PBC, on October 23rd, 2020, the SHCPE released the

Notice of the Shanghai Commercial Paper Exchange on Regulating Responses to Requests of Payments on Electronic Banker's Acceptances (Piaojiaosuofa No. 131 [2020]), setting out rules to deal with failures to respond to the requests of payments on electronic banker's acceptances.

First, it is made clear that being slack to respond to the requests of payments shall be regarded as default of payment. According to the rules on recognition of automatic default of payment on electronic banker's acceptances, if the acceptor of an electronic banker's acceptance, upon receiving the payment request submitted by the holder through the ECDS after the bill matures, fails to respond to the request within the specified period of time, the acceptor shall be regarded as in default of payment. The rules come in line with the principle of the provision of the Supreme People's Court (SPC) which stipulates that "a payer that is objectively unable to honor the obligations to pay and therefore fails to make a payment shall be regarded, in essence, as in default of payment". These rules facilitate the development of the bill market, and therefore are widely recognized by the market.

Second, acceptors are granted a reasonable response period. Given the needs of acceptors to properly allocate capital and manage liquidity, the rules set a reasonable time frame for acceptors to respond to payment requests. Specifically, acceptors who fail to respond the next day (in the case of statutory holidays, non-business days of the High-Value Payment System or non-business days of the ECDS, the time shall be postponed accordingly) upon receiving payment requests shall be regarded as in default of payment, which objectively grants acceptors a reasonable response period.

The rules on recognition of automatic default of payment on electronic banker's acceptances contribute to the protection of the legitimate rights and interests of the parties involved in bill transactions and serve to maintain the essential credit environment of the bill market. Meanwhile, the formulation of the rules is a groundbreaking move, as they break through the limitation of the ECDS which merely enabled passive response in the past. With these rules in place, the adaptability of system functions to different business scenarios was improved. It takes into account the actual demands of the market, improves and revamps existing institutional arrangements and the system, and gives full play to the role of the SHCPE, a financial market infrastructure, in advancing the construction of institutional arrangements and risk prevention for the financial market, which is conducive to the stable and healthy development of the bill market in the long term.

3.4 Risk prevention and resolution

3.4.1 A big data-based intelligent bill monitoring and early-warning platform was built

To prevent risks in the bill market, the SHCPE actively built a sound monitoring mechanism for the bill market and a big data-based intelligent bill monitoring and early-warning platform (hereinafter referred to as the monitoring platform). The first phase of the monitoring platform was put into operation in November 2018, and its functions gradually matured through continuous improvements and optimization. In 2020, several new monitoring indicators were created to further improve the indicator system. At present, the monitoring platform has realized a series of technological innovations. Specifically, the search engine optimized through statistical analysis and developed in house is capable of improving analysis efficiency via the automatic intelligent optimization of analytic statements based on users' selection; the modelling and high-level business abstraction are capable of reducing resource consumption in complex analysis scenarios and improving operational efficiency; the integration of multi-level caching technology at both the front and the back end and the paging technique at the background database enables improvement of the efficiency of complex, just-in-time analysis, thus enhancing user experience; the intelligent report data visualization technology developed in house serves to improve the efficiency of business monitoring and analysis.

The construction and improvement of the monitoring platform addressed the low efficiency of manual monitoring, transformed the monitoring of the bill market towards comprehensive, automatic and intelligent means, enabled the early identification and early warning of risks in the bill market, and effectively improved the timeliness, accuracy and efficiency of risk monitoring in the market.

3.4.2 Active management services for bill accounts was launched

To prevent the risk of forged or false bills, the SHCPE released the *Notice of the Shanghai Commercial Paper Exchange on Launching Active Management Services for Bill Accounts* (Piaojiaosuofa No. 143 [2020]) on October 30th, 2020 and launched the service on November 2nd, 2020. The active management services for bill accounts are provided by the SHCPE. With these services, a client (a legal person or an organization, other than a financial institution) can authorize an account-opening institution (a bank with which the client has opened an account or a finance company affiliated with its corporation), which has an account eligible for the settlement of electronic bills, to register the information of all the settlement accounts owned by the client for electronic bills with relevant systems of the SHCPE (hereinafter referred to as the SHCPE systems). The services allow a client to confirm the settlement accounts at its own discretion. In this way, it is guaranteed that all the registered settlement accounts are recognized by the client. Even if an account is opened under the client's name by an outlaw, it cannot be used in electronic bill transactions bearing the name of the client, putting an end to the risk of forged or false bills processed through fake accounts.

The active management services have two features. First, the participation in the service is totally at the clients' discretion. A client may opt in the service based on the situation of its bill businesses and internal risk control. Second, the clients may confirm their accounts for the settlement of electronic bills at their own discretion. A client may authorize its account-opening institution to register the confirmed accounts for electronic bill settlement with the SHCPE systems; any unregistered settlement accounts are ineligible for bill business processing, and therefore cannot handle electronic bill businesses.

The launching of the active management services has brought three benefits. First, it helps prevent the risk of forged or false bills. By developing a white list of client accounts, the service has effectively helped customers prevent the risk of forged or false bills. Since the service was launched, clients who have opted in have not experienced the circumstance where some accounts are opened under their names to process businesses associated with forged or false bills, thus effectively maintaining the normal settlement order of the bill market. Second, it has increased the acceptability of bills and the credibility of customers. Since the SHCPE launched the service, while preventing the risk of forged or false bills, it has regularly published the list of customers who have opted in the service to reassure market participants that they may use the bills associated with such clients, which has not only increased the market acceptability of bills accepted or held by those clients, but also enhanced their credibility. Third, it has enabled financial institutions to improve client services and enhance cooperation with enterprises. Financial institutions that provide active management services may guard their clients against forged or false bills and strengthen settlement account management. With enhanced cooperation with enterprises, banks are more tightly connected with their clients, which may allow them to provide clients with all-round services of a higher quality.

3.5 Outlook of the bill market

In 2021, with its high-quality development and continuous innovation, the bill market will better serve SMEs, contribute to the regulated development and innovation of supply chain finance, and support stable circulation, optimization and upgrading of the supply chain and industry chain. The establishment of the information disclosure mechanism for trade bills and the accelerated advancement of project of issuing bills at equally-divided amounts have reinforced the foundation for the development of the bill market, especially the trade acceptance market. Entities of the bill market will continue to implement the requirements for innovative, balanced and sustainable development of the bill market, and extend stronger financial support for the transformation and development of the real economy and MSMEs.

BOX 1 Enhance functions of the supply chain bill platform and advance the regulated development of supply chain financial services

1. Bills are a financial instrument consistent with the development characteristics of supply chain finance

As a new model of finance, supply chain finance has innovatively introduced supply chain theories into enterprises' financial activities. While offering financial services to enterprises, from the perspective of supply chains, we are able to integrate capital, information, material and product flows along the supply chain, so as to respond to their capital demands and measure and evaluate the actual conditions of all types of enterprises, regardless of their sizes. In this way, it provides enterprises with access to trade financing and working capital that may not be available through traditional financing channels, which effectively addresses the financing difficulties of MSMEs and energizes their innovation capacity.

Bills naturally meet the demand of supply-chain enterprises. They play an important role in facilitating the payment, settlement and financing of enterprises, as a financial instrument in line with the development characteristics of supply chain finance. Meanwhile, a bill is a statutory certificate for the recognition of rights on accounts receivable, featuring such advantages as well-defined legal relationships, a complete system of circulation and financing, and a sound regulatory system. Since its establishment, the SHCPE has reconstructed the ecological environment of the bill market through institutional arrangements and system construction. In so doing, it has helped the bill market transform from a regionally segmented and non-transparent traditional market dominated by paper bills and offline transactions to a nationally unified modern market that is secure and efficient and dominated by electronic transactions, which lays a solid foundation for the application of bills in supply chain finance at a deeper level.

2. An innovative platform was built to promote a virtuous cycle within the industry chain

To implement the national decision and arrangement on regulating the development of supply chain finance, advance the construction of supporting infrastructure for supply chain finance, better leverage the role of bills in the supply chain, and improve the efficiency of bills in serving the real economy, following the guidance of the PBC, the SHCPE proactively explored the possibility of embedding traditional bill business processes into the supply chain, and launched the supply chain bill platform. The supply chain bill platform was put into trial operation on April 24th, 2020. Based on the Electronic Commercial Draft System (ECDS) and connected to eligible supply chain platforms, it provides enterprises with the issuance, acceptance, endorsement, guarantee, discount, *deposit, interbank discount and at-maturity disposal of electronic commercial drafts. Bills issued through the supply chain bill platform are called supply chain bills.*

Connected with supply chain platforms, core enterprises and financial institutions and empowered by science and technology, the supply chain bill platform effectively integrates the flows of capital, information, materials and products. It not only provides enterprises with a new channel to process bill businesses with enhanced convenience and efficiency, but also fully meets the differentiated and idiosyncratic demands of enterprises, helping them effectively reduce accounts receivable and accelerate capital turnover. It has improved the ecosystem of supply chains and thereby facilitated the formation of a virtuous cycle within the industry chain.

3. Initially demonstrating its feature of innovation and usefulness, supply chain bills serve the high-quality development of the industry chain

The supply chain bill platform constitutes an important measure to promote the bill-based processing of accounts receivable. As an upgraded version of traditional bills, supply chain bills support the high-quality development of the supply chain and industry chain primarily through the following three aspects.

First, bills are embedded into the supply chain scenario to enhance the convenience of bill-related services for enterprises. Harnessing technological innovations, the supply chain platform has integrated the flows of materials, products, information and capital between core enterprises and upstream and downstream enterprises along the industry chain, and made it easier to accurately identify the transaction relationships among enterprises. The supply chain platform provides enterprises with a new channel to process bill businesses, enabling them to, directly through the platform, issue and circulate supply chain bills and engage in supply chain bill financing, thus promoting the use of bills in the supply chain scenario, enhancing the convenience of bill businesses and the willingness of enterprises to use bills, and fundamentally advancing the bill-based processing of accounts receivable.

Second, FinTech makes it possible to innovatively issue supply chain bills at equally-divided amounts. Leveraging technological advances, the supply chain bill platform has realized the issuance of bills at equally-divided amounts. At present, the minimum amount of a supply chain bill is RMB 0.01. Specifically, assume that Enterprise A issues a supply chain bill worth RMB 10,000 to Enterprise B, which is equivalent to a package of 1 million supply chain bills, each bearing an amount of RMB 0.01. Upon receiving the bill worth RMB 10,000, Enterprise B may transfer by endorsement any amount of the supply chain bills according to actual payment demands. For example, half of them may be transferred to upstream suppliers, and the other half may be held to maturity, used for discount transactions, or put to financing through standardized bills. This tackles the mismatch *between the amount of bills held by an enterprise and the amount of payment, provides bill users with more flexibility, and vitalizes the assets of an enterprise to the greatest extent.*

Third, good credit of core enterprises is transmitted to the market, which increases the availability of financing for enterprises. Under the supply chain scenario, it is easier to accurately identify the transaction relationships among enterprises. In addition, with effective transmission of credit by supply chain bills, MSMEs along the industry chain can share the resources brought about by the good credit of core enterprises. Therefore, supply chain bills can reach out to enterprises on the far ends of the industry chain and, more importantly, provide them with easier access to financing at preferential prices from financial institutions. Meanwhile, supply chain bills may be used for financing based on standardized bills, which connects the bill market with the bond market and makes market capital available for business financing, effectively diversifying their financing channels. In addition, based on the experience of the "Discount Connect" launched by the SHCPE, it is possible to develop the match-making function for the discount transactions of supply chain bills, which helps enterprises secure the most preferential discount rate. In the existing practices of financing through supply chain bills, the discount rates are usually lower than the interest rates on loans of similar maturities by 100~150 bps, thus effectively reducing the costs for enterprises.

4. Institutional arrangements were consolidated to safeguard regulated business development

To implement the Opinions on Regulating the Development of Supply Chain Finance and Supporting the Stable Circulation, Optimization and Upgrading of Supply and Industry chains (Yinfa No. 226 [2020]) jointly released by the PBC and other seven authorities, the SHCPE formulated the Rules on Accessing the Supply Chain Bill Platform (for Trial Implementation). Upon filing a record with the PBC and obtaining its approval, on January 28th, 2021, the SHCPE released these rules for implementation.

These rules specify the conditions required for supply chain platforms to access the supply chain bill platform, involving the operation of supply chain platforms as going concerns, system functions, security, business fundamentals, and risk management. Meanwhile, to implement the requirements provided in Yinfa No. 226 [2020] on better matching the information of supply chains with bills, and on establishing a mechanism for the verification of transaction authenticity, monitoring and early warning, these rules set out requirements for the monitoring and evaluation of supply chain platforms and provided for measures to handle abnormal situations, which is conducive to the regulated development of business among supply chain platforms and the platforms' stable operation. The formulation of standards, process and rules on accessing the supply chain bill platform is of great significance to the sound development of supply chain bill businesses.

Chapter 4 Bond Market

In 2020, China's bond market was generally stable, where bond issuance expanded significantly, cash bond transactions became more active, and bond price indexes dropped before a rise while the yield followed an opposite pattern. The market witnessed an increased number of investors, deepened and widened opening-up, enhanced coordinated infrastructure management and interconnectivity, and strengthened market regulation, with quality and efficiency improved in serving the real economy.

4.1 Performance of the bond market

4.1.1 Primary market

4.1.1.1 Bond issuance grew substantially

In 2020, a total of RMB 57.3 trillion of bonds were issued, up 26.5 percent year on year, an acceleration of 23.4 percentage points compared with the growth in the previous year. Specifically, the interbank bond market saw an issuance volume of RMB 48.7 trillion, up 27.9 percent year on year, an acceleration of 27.3 percentage points compared with the growth in the previous year, and accounting for 85.0 percent of the total; the exchange market reported an issuance volume of RMB 8.6 trillion, up 18.2 percent year on year, a deceleration of 7.4 percentage points compared with the growth in the previous year, and accounting for 15.0 percent of the total.

The three types of bonds with the largest volume of issuance were NCDs, corporate credit bonds and financial bonds, raising RMB

Table 4.1 Issuance of major bonds in 2020

Types of bonds	Issuance (RMB 100 million)	YoY growth (%)	Types of bonds	Issuance (RMB 100 million)	YoY growth (%)
Treasury bonds	70,173.3	75.0	NCDs	189,719.8	5.6
Local government bonds	64,438.1	47.7	Corporate credit bonds	129,449.9	33.1
Financial bonds	92,558.2	196.8	Others	667.7	-98.2
Government-sponsored agency bonds	3,580.0	-3.8	Total	573,113.1	26.5
Asset-backed securities (ABS)	22,526.1	14.5			

Notes: 1. Financial bonds include China Development Bank (CDB) and policy bank bonds, short-term financing bonds of securities companies, and interbank and exchange-traded financial bonds. In particular, interbank financial bonds refer to financial bonds issued by incorporated financial institutions established in China, including general financial bonds, subordinated debts, hybrid capital bonds, tier-2 capital instruments and perpetual bonds issued by commercial banks, supplementary capital bonds issued by insurance companies, and bonds issued by non-banking institutions such as auto-finance companies.

2. Corporate credit bonds include debt financing instruments of non-financial enterprises, enterprise bonds and corporate bonds.

3. Others include international institution bonds, standard commercial papers and central bank notes.

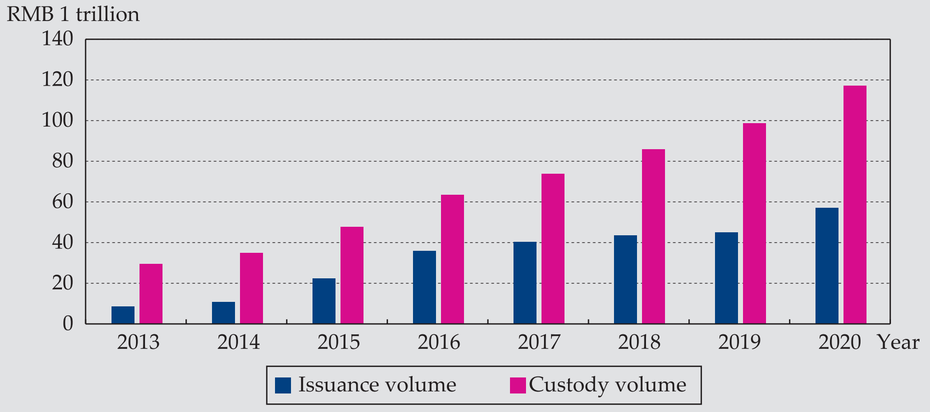
Source: China Securities Regulatory Commission (CSRC), China Central Depository & Clearing Co., Ltd. (CCDC) and Shanghai Clearing House (SHCH).

19.0 trillion, RMB 12.9 trillion and RMB 9.3 trillion, up 5.6 percent, 33.1 percent and 196.8 percent year on year respectively.

4.1.1.2 Custody volume maintained steady growth

As of end-2020, the outstanding bond custody volume reached RMB 117 trillion, up 18.1 percent year on year, of which RMB 100.7 trillion was in the interbank bond market (up 16.5 percent year on year and accounting for 86.1 percent of total bond custody volume) and RMB 16.3 trillion was in the exchange market (up 28.9 percent year on year and accounting for 13.9 percent of the total).

Figure 4.1 Bond issuance and custody volumes in the bond market from 2013 to 2020



(Source: CSRC, CCDC and SHCH)

4.1.2 Secondary market

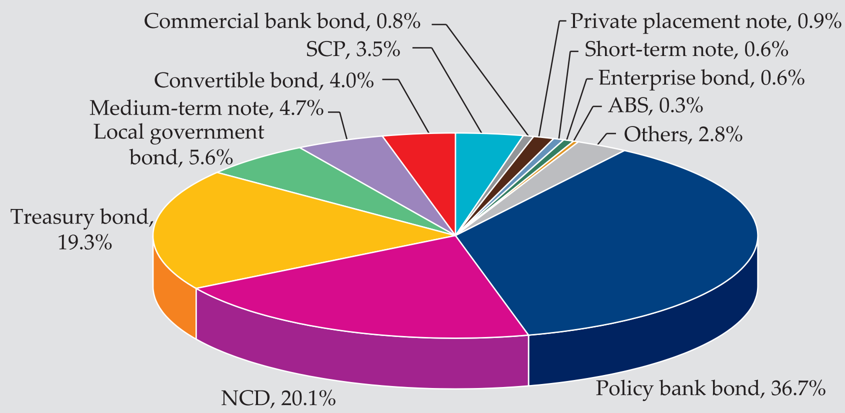
4.1.2.1 Trading volume witnessed growth

In 2020, cash bond transactions totaled RMB 253 trillion (up 16.5 percent year on year, and a deceleration of 22.1 percentage points compared with the growth in the previous year), of which RMB 232.8 trillion was cash bond transactions in the interbank bond market (up 11.5 percent year on year, a deceleration of 27 percentage points compared with the growth in the previous year and accounting for 92.0 percent of the total) and RMB 20.2 trillion was traded at the exchanges (up 141.6 percent year on year, a substantial acceleration of 100.8 percentage points compared with the growth in the previous year and accounting for 8.0 percent of the total).

In terms of bond types in cash bond transactions in the interbank bond market, the most traded four categories were policy bank bonds, NCDs, treasury bonds and local government bonds, which accounted for 36.7 percent (5.5 percentage points lower than the previous year), 20.1 percent (3.2 percentage points lower than the previous year), 19.3

percent (3.1 percentage points higher than the previous year) and 5.6 percent (1 percentage point higher than the previous year) of the transaction volume respectively.

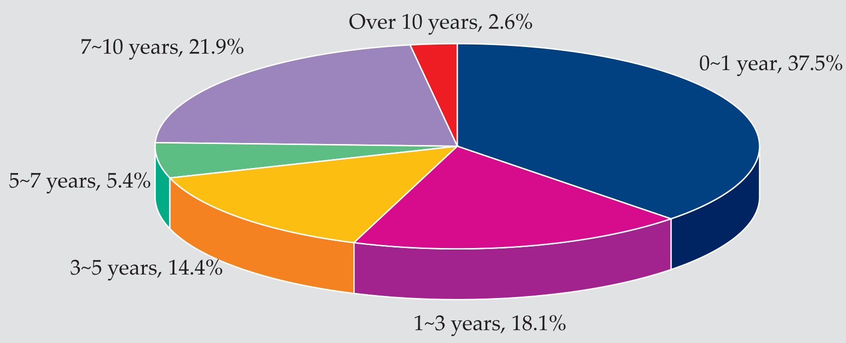
Figure 4.2 Trading structure of cash bond transactions in the interbank bond market in 2020



(Source: SHCH and CCDC)

In terms of maturities of cash bond transactions in the interbank bond market, bonds with a maturity of 0~1 year, 1~3 years[①], 3~5 years, 5~7 years, 7-10 years and more than 10 years recorded trading volume of RMB 86.29 trillion, RMB 41.53 trillion, RMB 33.20 trillion, RMB 12.49 trillion, RMB 50.42 trillion and RMB 6.06 trillion respectively, accounting for 37.5 percent, 18.1 percent, 14.4 percent, 5.4 percent, 21.9 percent and 2.6 percent of the total.

Figure 4.3 Maturity structure of cash bond transactions in the interbank market in 2020



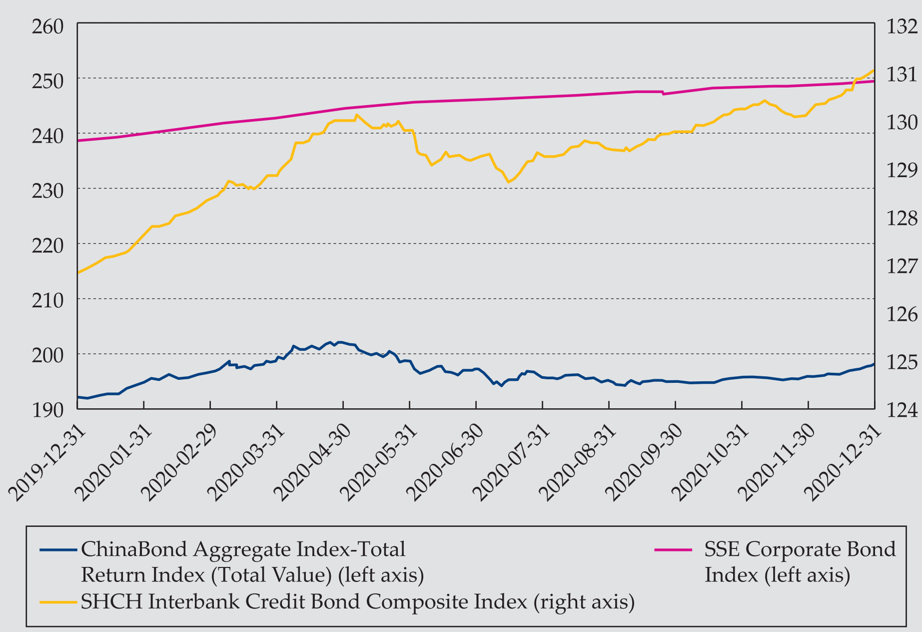
(Source: CFETS)

① Here, 1~3 years bonds include 1-year bonds but not 3-year ones. The same applies to the following categories.

4.1.2.2 Bond price indexes first rose and then fell

Bond price indexes generally rose and then fell. The ChinaBond Aggregate Index Total Return Index (Total Value) went up significantly at the beginning of the year to peak at the yearly high of 202.1 at end-April, before gradually falling back and stabilizing in the latter half of the year, registering a slight increase of 3.1 percent over the year (from 192.1 at end-2019 to 198.0 at end-2020). The Interbank Credit Bond Composite Index (Total Return) of SHCH experienced rise, fall and rebound over the year, rising from 126.8 at end-2019 to 131.0 at end-2020, an increase of 3.3 percent over the year. The SSE Corporate Bond Index maintained an uptick trend over the year, rising from 238.80 at the beginning of the year to 249.44 at the end of the year, an increase of 4.5 percent over the year.

Figure 4.4 Trend of interbank bond indexes in 2020

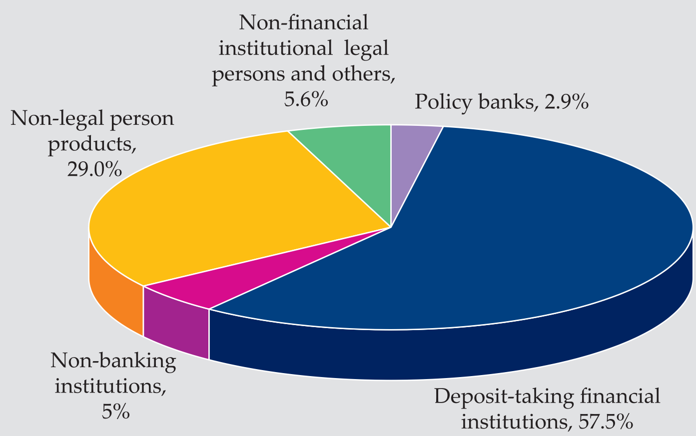


(Source: CCDC, SHCH and SSE)

4.1.2.3 Investor structure remained basically stable

The overall investor structure of the interbank bond market only changed slightly. As of end-2020, deposit-taking financial institutions and non-legal-person products held the largest amount of bonds, posting RMB 56.7 trillion and RMB 28.5 trillion respectively, accounting for 57.5 percent and 29.0 percent of the total outstanding bonds, roughly flat with the previous year. NCDs took up the largest share among the bonds held by these two types of investors, accounting for 57.9 percent and 38.3 percent respectively.

Figure 4.5 Investor structure in the interbank bond market



(Source: SHCH and CCDC)

The overall investor structure of the exchange market was generally unchanged from the previous year. As of end-2020, special asset management accounts and banks held the largest amount of bonds at SSE, posting RMB 2.6 trillion and RMB 2.0 trillion respectively, accounting for 19.5 percent and 14.8 percent of the total respectively. Corporate bonds and corporate asset-backed securities (ABS) dominated the bonds held by investors in the SSE market, registering RMB 8.8 trillion and RMB 1.5 trillion respectively and accounting for 66.7 percent and 11.4 percent of the total respectively. As of end-2020, general institutions and fund companies held the largest amount of bonds at SZSE, posting RMB 1.2 trillion and 0.3 trillion respectively, accounting for 48.0 percent and 10.3 percent of the total respectively. Corporate bonds and corporate ABS also dominated bond holding in the SZSE market, amounting to RMB 1.5 trillion and RMB 0.5 trillion respectively and accounting for 60.6 percent and 19.1 percent of the total respectively.

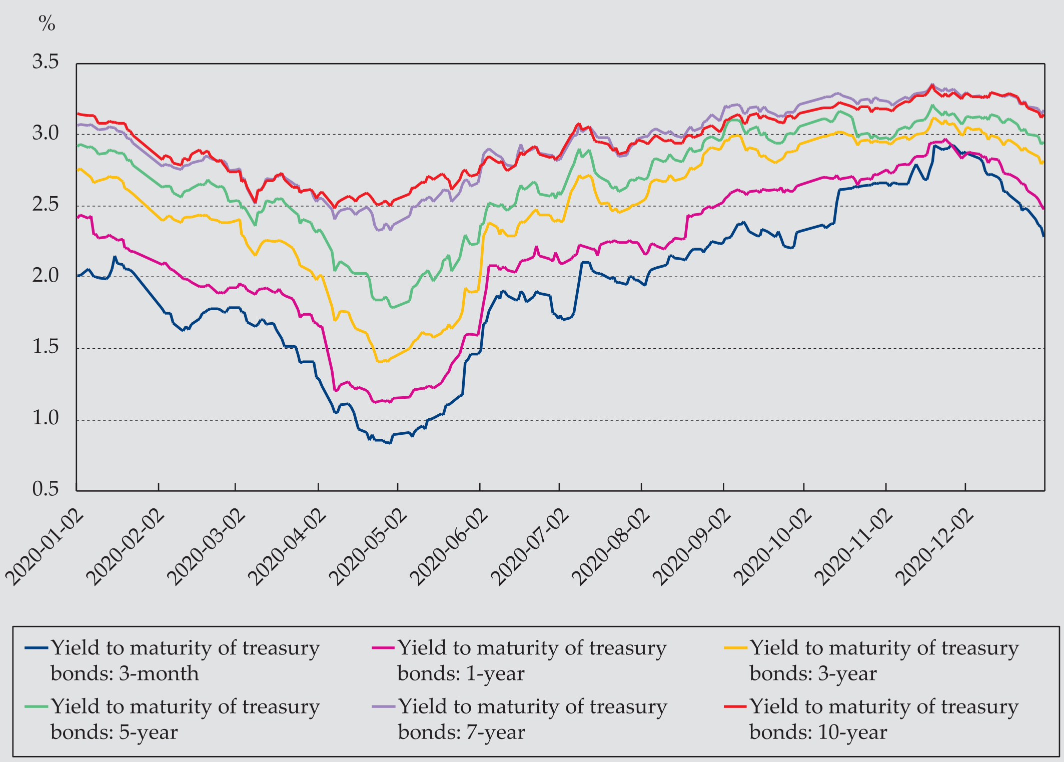
4.2 Main features of the bond market

4.2.1 Bond yield first fell and then rose

In 2020, yields on treasury bonds first moved downwards and then upwards. Affected by the pandemic, yields on treasury bonds with all maturities fell sharply in Q1. As the pandemic was gradually brought under control in China, economic fundamentals recovered steadily, and treasury bond yields rebounded gradually in Q2. The uptick trend continued in Q3 and Q4, despite a slight decline at the year end. As of end-2020, yields on 3-month, 1-year, 3-year, 5-year and 7-year treasury bonds were 2.28 percent, 2.47 percent, 2.82 percent, 2.95 percent and 3.17 percent respectively, rising by 27.32, 5.79, 7.16, 3.56 and 10.42 bps from the beginning of the year; the yield on 10-year treasury bonds was 3.14 percent, falling by 0.56 bps from the beginning of the year.

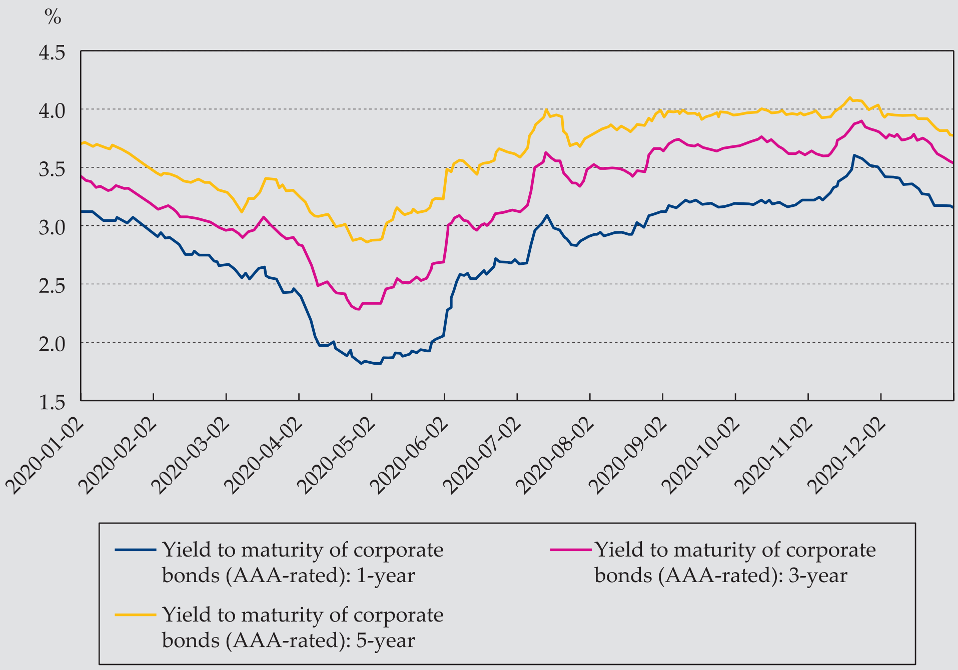
Yields at the exchange market showed a similar trend in 2020. Yields on corporate bonds dropped significantly in Q1 2020, moderately picked up at the end of Q2, and continued to rebound in Q3 and Q4 before a decline. As of end-2020, yields on 1-year, 3-year and 5-year corporate bonds (AAA-rated) were 3.18 percent, 3.56 percent and 3.80 percent respectively, up 3.37bps, 13.18bps and 7.45 bps from the beginning of 2020.

Figure 4.6 Changes in yields on treasury bonds with key maturities in 2020



(Source: CCDC)

Figure 4.7 Changes in yields on exchange-traded corporate bonds (AAA-rated) in 2020



(Source: SSE)

4.2.2 The issuance of credit bonds increased significantly

In 2020, the issuance of corporate credit bonds increased substantially and raised RMB 12.9 trillion, an increase of 33.1 percent year on year. Debt financing instruments of non-financial enterprises and corporate bonds hit RMB 9.1 trillion and RMB 3.4 trillion, accounting for 70.5 percent and 26.4 percent of total issuance of corporate credit bonds, up 34.0 percent and 34.1 percent year on year respectively.

4.2.3 Bond trading was active

In 2020, the turnover rate in the interbank bond market was at a high level of 231.2 percent, a decrease of 10.3 percentage points year on year. The three most frequently traded categories were policy bank bonds, NCDs and book-entry treasury bonds, with their turnover rates reaching 475.5 percent, 435.3 percent, and 236.3 percent respectively. Book-entry treasury bonds, local government bonds, commercial bank bonds, debt financing instruments of non-financial enterprises and enterprise bonds were traded more briskly, with a year-on-year increase of turnover rate of 14.0 percentage points, 6.4 percentage points, 18.7 percentage points, 6.1 percentage points, 16.5 percentage points and 0.8 percentage points respectively.

Table 4.2 Annual turnover rates of major bond types in the interbank bond market in 2020

Types of bonds	Cash bond turnover rate (%)	YoY growth (percentage point)	Types of bonds	Cash bond turnover rate (%)	YoY growth (percentage point)
Book-entry treasury bonds	236.3	14.0	Debt financing instruments of non-financial enterprises	188.1	16.5
Local government bonds	52.1	6.4	NCDs	435.3	-29.7
Policy bank bonds	475.5	-89.3	Enterprise bonds	56.0	0.8
Government-backed agency bonds	52.2	-46.8	ABS	21.8	-2.2
Commercial bank bonds	81.0	18.7	International institutional bonds	11.0	-0.7
Non-banking institutional bonds	59.2	6.1			

Source: CCDC and SHCH.

Note: cash bond turnover rate = (cash bond trading amount in a period/custody amount at end of period) × 100 (percent).

4.2.4 The number and investment of overseas investors grew rapidly

As of end-2020, there were 905 overseas institutional participants in the interbank bond market, an increase of 136 year on year. Bond custody of overseas institutions in the interbank market totaled RMB 3.25 trillion, up 47.9 percent year on year. Overseas institutions became more active traders, achieving an annual cash bond trading of RMB 9.16 trillion, up 72.5 percent year on year.

4.3 Product innovation in the bond market

4.3.1 Anti-pandemic bonds were launched for pandemic containment

4.3.1.1 Special treasury bonds for pandemic containment were issued

In 2020, China issued RMB 1 trillion of special treasury bonds for pandemic containment. The funds raised were mainly used for: (1) local infrastructure construction in 12 categories, including projects of public health systems, major pandemic prevention and treatment systems, as well as industry chain transformation and upgrading; (2) subsidies for local government expenditures for pandemic prevention and control, including rent reduction subsidies, interest subsidies for loans issued to key enterprises, interest subsidies for startup guarantee loans, subsidies for helping enterprises and securing employment, basic living allowances for those in need, and other expenditures for pandemic containment. Their issuance effectively enhanced fiscal security at the grassroots level, and provided strong financial guarantee for supporting pandemic containment, boosting economic development, ensuring stability on six fronts, namely employment, the financial sector, foreign trade, foreign investment, domestic investment, and expectations, and maintaining security in six areas, namely, employment, people’s basic livelihood, operations of market entities, food and energy, stable industrial and supply chains, and the normal functioning of primary-level governments.

4.3.1.2 Anti-pandemic financial bonds and corporate credit bonds and ABS for pandemic containment were issued

In 2020, anti-pandemic financial bonds and corporate credit bonds were fully devoted to the fight against the pandemic. Three policy banks, namely the China Development Bank (CDB), Export-Import Bank of China (China Eximbank) and Agricultural Development Bank of China (ADBC), issued RMB 64.5 billion of anti-pandemic financial bonds, with the funds raised mainly used for credit supply in areas relating to pandemic prevention and control. Through establishing the "green channel", the National Association of Financial Market Institutional Investors (NAFMII) simplified and optimized the process of bond registration and issuance, and encouraged enterprises to issue bonds in support of pandemic control. Under such support, a total of 293 bonds for pandemic control were issued by key regions and industries, totaling RMB 215.1 billion. In terms of the exchange market, 110 anti-pandemic corporate bonds were issued at SSE, totaling RMB 107.8 billion, and 81 anti-pandemic fixed-income products were issued at SZSE, totaling RMB 83.84 billion.

In February 2020, the Second Harbor Engineering Company of China Communications Construction Company (CCCC) issued the first ABS for pandemic prevention and control in the market through book entry. The funds raised in this special plan were mainly used to help upstream SMEs along the supply chain to resume production, and to support the construction of projects for pandemic prevention and control by front-line enterprises, hospitals and scientific research laboratories in pandemic-affected areas. As of end-2020, 44 ABS products for pandemic prevention and control had been issued, totaling RMB 75 billion, playing a positive role in supporting pandemic prevention and control and securing smooth production and operation.

4.3.2 Special bonds were issued in support of poverty alleviation

In 2020, a total of RMB 273.974 billion of local government bonds were issued for the projects on poverty alleviation and relocation of poverty-stricken populations, which provided an important financial guarantee for winning the tough battle against poverty. In February 2020, ADBC issued RMB 5.0 billion of financial bonds with the dual purposes of fighting the pandemic and underpinning poverty alleviation at SHCH. In April, the CDB issued RMB 11.0 billion of poverty alleviation bonds in the interbank bond market and commercial banks' OTC market. In addition, in 2020, 8 poverty alleviation notes were issued at the NAFMII, totaling RMB 9.2 billion; 33 corporate bonds for poverty alleviation were issued at SSE and 10 were issued at SZSE, totaling RMB 19.6 billion and RMB 6.0 billion respectively. Through issuance of these special bonds, enterprises in poverty-stricken areas expanded their financing channels.

4.3.3 Convertible capital bonds and development bonds were issued by small and medium-sized banks

To implement the requirement of the FSDC under the State Council for supporting capital replenishment by small and medium-sized banks and to promote the innovative development of capital instruments, the PBC worked together with the CBIRC to study and formulate the core items for convertible capital bonds, with an aim to push forward their development and enable small- and medium-sized banks to better serve the real economy. In December 2020, the PBC approved Ningbo Commerce Bank and Zhejiang Chouzhou Commercial Bank to first issue convertible capital bonds without a fixed maturity, which added to the diversity of capital instruments of commercial banks. Also in December 2020, special bonds were issued in multiple provinces to help small and medium-sized banks enhance their abilities to resist risks and serve the real economy.

4.3.4 Innovation of green bonds was advanced on a continuous basis

In 2020, General Secretary Xi Jinping made a solemn commitment to the international community that "China will strive to peak carbon dioxide emissions before 2030 and achieve carbon neutrality before 2060". Green finance has attracted unprecedented attention from all sectors. As of end-2020, China had issued about RMB 1.2 trillion of green bonds, of which the volume of labeled green bonds was RMB 258.0 billion, including RMB 216.6 billion onshore and RMB 41.4 billion offshore.

4.3.4.1 Innovative green bonds were successively issued

In April 2020, echoing General Secretary Xi Jinping's remark that lucid waters and lush mountains are invaluable assets, the ADBC issued the "Two Mountains" financial bonds themed on ecological and environmental protection, which marked the first regular issue of such bonds. In July, the CDB issued its first "Bond Connect" green financial bonds for coping with climate change through multiple markets. The funds raised would be used for low-carbon transportation and other green projects. In August, China Construction Bank became the first Chinese bank to issue green bonds listed on the NASDAQ Dubai. The bonds received pre-issue certification from the Climate Bonds Initiative. In September, Bank of China successfully priced and issued the first dual-currency blue bonds among Chinese and global commercial institutions in the overseas market, raising funds to support marine sewage treatment and offshore wind power projects.

4.3.4.2 Green debt financing tools continued to innovate and develop

In 2020, 47 enterprises registered RMB 94.37 billion of green bonds with the NAFMII and issued RMB 54.37 billion, up 19 percent year on year. Meanwhile, the NAFMII launched portfolio products such as blue bonds and green ABCP. In November, the "2020 Green Medium-term Notes (Blue Bonds) of Qingdao

Water (Phase I)" became the first domestic blue bonds in China, as well as the world's first blue bonds issued by non-financial enterprises. The funds raised would be used to bolster seawater desalination projects. In the same month, the "2020 Green Asset-backed Commercial Papers of China Power Investment Ronghe Financial Leasing (Phase I)" became the first green ABCP, raising funds mainly for pollution prevention and new energy projects.

4.3.5 Securitization products of intellectual property rights were introduced

Securitization products of intellectual property rights (IPRs) were introduced to help implement the national strategy of innovation-driven development. Since the issue of the *Outline Development Plan for the Guangdong-Hong Kong-Macao Greater Bay Area* and documents relating to Shenzhen Pilot Demonstration Area of Socialism with Chinese Characteristics, in 2020, the SZSE worked with local governments, intellectual property regulators and market institutions to issue China's first intellectual property securitization product that fully serves "pandemic-fighting" enterprises, first securitization product of IPRs in the next-generation information technology industry, first securitization product of IPRs in the biomedical industry and first securitization product of IPRs for the 5G sector. As of end-2020, the SZSE had approved 16 projects on securitization products of IPRs, with planned financing of RMB 13.356 billion, of which RMB 4.148 billion has been issued, accounting for nearly 80 percent of total market share. In March 2020, the SSE issued the "Intellectual Property Asset-backed Special Plan of Pudong Scientific and Technological Innovation (Phase I)", the first intellectual property asset-backed securities. In October 2020, the "2020 Shangyin International Investment Jincheng Jianquan Shenzhen Nanshan District Intellectual Property Asset-backed Notes (Phase I)" was issued at NAFMII, which was the first of its kind for private technological SMEs at NAFMII. At present, China's securitization products of IPRs have covered all patents, trademarks and copyrights.

4.3.6 Special enterprise bonds were issued for new-type urbanization in county areas

In August 2020, the General Office of the National Development and Reform Commission (NDRC) issued the *Guideline for Issuance of Special Enterprise Bonds for New-type Urbanization in County Areas* (Caijingui [2020] No. 613 of NDRC General Office) and launched the special enterprise bonds for new-type urbanization in county areas, in order to shore up weak links in county-area urbanization and give full play to the role of enterprise bond financing in new-type urbanization in county areas. According to the *Guidelines*, special enterprise bonds for new-type urbanization in county areas should be issued by market-oriented corporate entities. The funds raised should be used for individual or comprehensive projects that are in line with the *Notice of the National Development and Reform Commission on Accelerating the Work of Shoring up Weak Links of Urbanization in County Areas* (Fagai Guihua [2020] No. 831), under market-oriented and independent operation and with stable and sustainable operating cash flows. On the premise of taking sound debt repayment guarantee measures, as many as 50 percent of the funds raised can be used to supplement working capital. The funds raised for project construction may repay bank loans directly used for a project itself at the earlier stage. In addition, enterprises with sound credit ratings in county areas, especially demonstration areas for new-type urbanization, are encouraged to issue such special enterprise bonds with their own credit.

4.3.7 Asset securitization products stepped up innovation

In 2020, a number of innovative asset securitization products were launched. In the interbank market, the "2020 (Suiying) Asset-backed Note of Anji Leasing (Phase I)" issued in June was the first ABCP, which shortened the product duration through rollover issuance and further improved the efficiency of asset securitization products in revitalizing stock assets. The "2020 Jianyuan Personal Residential Mortgage Asset-backed Securities (Phase XII)" issued in November was the first double-AAA internationally-rated RMBS product. In the exchange market, the "Special Asset-backed Plan of Huatai-Zheshang Assets (Phase I)" issued in April was the first single asset securitization product with special opportunity creditor's rights as the underlying asset, playing a practical role in revitalizing assets and broadening financing channels for local asset management companies. The "Special Asset-backed Plan of CITIC Securities-Power China Final Payment (Phase I)" issued in May was the first domestic securitization product with quality guarantee deposit as the underlying asset, which proved significant for large construction enterprises to further revitalize stock assets and reduce the inventory and receivables. The "Special Asset-backed Plan of Sinolink -XCMG Leasing (Phase VIII)" issued in December was the first enterprise ABS product with a short maturity and rollover issuance.

COLUMN Accelerate the introduction of innovation and entrepreneurship bonds for the high-quality integrated development of the Yangtze River Delta region

In February 2020, to implement the decisions and arrangements of the CPC Central Committee and the State Council, upon the approval of the State Council, the PBC, CBIRC, CSRC, SAFE and Shanghai Municipal Government jointly issued Opinions on Further Accelerating the Development of Shanghai as an International Financial Center and Providing Financial Support for the Integrated Development of the Yangtze River Delta (hereinafter referred to as the Opinions). According to Article 22 of the Opinions, institutions related to the G60 Science and Technology Innovation Corridor are encouraged to issue in the interbank bond market and exchange bond market venture capital investment bonds as well as debt financing instruments, financial bonds and corporate bonds for innovation and entrepreneurship (hereinafter *referred to as innovation and entrepreneurship bonds). With long-term maturities, low thresholds and low issuance rates, such bonds would be conducive to expanding direct financing channels, reducing financing costs and solving financing problems for technological enterprises.*

Promoting the issuance of innovation and entrepreneurship bonds by institutions relating to G60 Science and Technology Innovation Corridor is a concrete measure to implement the instructions in the important speeches of General Secretary Xi Jinping, and to implement the national strategies for the integrated development of the Yangtze River Delta and innovation-driven development. The PBC Shanghai Head Office, and its branches in Jiangsu, Zhejiang and Anhui provinces cooperated with local financial regulators, the Joint Office of G60 Science and Technology Innovation Corridor of the Yangtze River Delta, as well as relevant financial institutions in terms of policy improvement, project referral and risk control. Through policy introduction, business guidance, explanations and Q&A sessions, the relevant parties continuously deepened enterprises' understandings of the significance of issuing innovation and entrepreneurship bonds and of the bonds themselves. With these continuous efforts, the bonds were launched at a faster pace, extending full support to the high-quality integrated development of the Yangtze River Delta region. In 2020, the 9 cities of the G60 Science and Technology Innovation Corridor issued a total of 14 innovation and entrepreneurship bonds, involving 15 enterprises and a total of RMB 7.28 billion. In addition, RMB 3.0 billion of bonds were registered for issuance. Among them were a number of innovative cases. For example, Shanghai Pudong Development Bank underwrote the first collective short-term commercial paper of scientific and innovative enterprises of the Yangtze River Delta by credit enhancement with transactions under support instruments for bond financing of private enterprises; the Bank of Suzhou issued the country's first anti-pandemic financial innovation and entrepreneurship bond among banking institutions nationwide; and Suzhou Jinqiang New Materials issued the first innovation and entrepreneurship bonds with intellectual property as pledge.

4.4 Institutional construction of bond market

4.4.1 Regulation of bond issuance market was further enhanced

4.4.1.1 Bonds were more widely used by small and medium-sized banks for capital replenishment

In 2020, due to the impact of COVID-19 pandemic and other factors, small and medium-sized banks faced certain challenges in their development. Against this backdrop, a series of policy measures were unveiled to extend continuous support for small- and medium-sized banks to expand capital replenishment channels. In May, the FSDC under the State Council issued 11 financial reform measures, including the issuance of the *Work Plan for*

Deepening the Reform and Replenishing the Capital of Small and Medium-sized Banks that aimed to strengthen the bond market's support for capital replenishment of small and medium-sized banks. In July, the State Council Executive Meeting decided to allocate a certain additional quota of local government special bonds to allow local governments to replenish the capital of small and medium-sized banks in various ways in a lawful and compliant manner. In November, the Ministry of Finance (MOF) issued an additional RMB 200 billion quota of special bonds to help defuse risks of local small and medium-sized banks. In addition, in 2020, small and medium-sized banks were added to the issuing entity list of perpetual bonds, with more than 30 small and medium-sized banks approved to issue such bonds. Private banks were also approved to issue perpetual bonds.

COLUMN Local government special bonds reasonably support capital replenishment of small and medium-sized banks

As an important component of China's financial system, small and medium-sized banks are the main force supporting local economic development and serving MSMEs and agriculture, rural areas and rural people. In recent years, the capital adequacy ratio of some small and medium-sized banks drops below the minimum regulatory standard of 10.5 percent due to expanded asset sizes, deteriorated asset quality and enhanced regulatory requirements. Hence, it has become increasingly urgent for small and medium-sized banks to replenish capital.

Replenishing the capital of small and medium-sized banks with special bonds is a win-win innovation. This first lies in the interaction between fiscal and financial policies, which both improves the usage efficiency of special bonds and the credit capacity of small and medium-sized banks to jointly promote economic recovery and development. Second, such innovation lies in the use of special bonds by expanding their scope of investment, which helps alleviate the mismatch between sufficient special bond quota and lack of qualified projects. Third, such innovation also lies in the cooperation between local governments and small and medium-sized banks, which relieves the pressure of credit risk release and credit expansion on their capital and highlights the responsibility of local governments in risk control of small and medium-sized banks. In practice, special bonds replenish the capital of small and medium-sized banks by means of capital and equity expansion or deposit with equity swap agreement. The former can be used to replenish Common Equity Tier 1 capital (CET1), and the latter can be used to replenish Additional Tier 1 capital (AT1).

In November 2020, an additional quota of RMB 200 billion for resolving risks of local *small and medium-sized banks was allocated to 18 provinces, municipalities and autonomous regions, including Tianjin, Hebei, Zhejiang, Shandong, Guangdong, Inner Mongolia, Liaoning, Jilin, Heilongjiang, Shanxi, Jiangxi, Henan, Hubei, Guangxi, Sichuan, Yunnan, Shaanxi and Gansu. In December, Guangdong Province became the first local government to issue the plan for replenishing capital of small and medium-sized banks, i.e. Information Disclosure Document of 2020 Special Bonds of Guangdong Province for the Development of Small and Medium-sized Banks. According to the plan, the special bonds have a maturity of 10 years, and once issued, they can be listed for circulation in the national interbank bond market and exchange bond market in line with relevant regulations. As of end-2020, Guangdong Province (RMB 10.0 billion), Zhejiang Province (RMB 5.0 billion), Shanxi Province (RMB 15.3 billion), Guangxi Zhuang Autonomous Region (RMB 11.8 billion) and Inner Mongolia Autonomous Region (RMB 8.5 billion) had issued a total of RMB 50.6 billion of special bonds.*

4.4.1.2 "Green channels" became available for bonds in support of pandemic control

On January 31st, 2020, the PBC, MOF, CBIRC, CSRC and SAFE jointly issued the *Notice on Further Strengthening Financial Support for Containing Novel Coronavirus Outbreak*, stressing the need to boost the efficiency of bond issuance among other services, and specifying that "green channels" should be established for the registration and issuance of financial bonds, ABS and corporate credit bonds issued by financial institutions and enterprises in the heavily-affected regions for pandemic containment. On February 3rd, the SHCH set up a "green channel" for three issuers, namely Zhuhai Huafa Group, Sichuan Kelun Pharmaceutical and China Nanshan Development (Group) Incorporation, in support of their registration for issuing the first batch of pandemic containment bonds nationwide. Also on February 3rd, the NAFMII issued the *Notice on Further Improving Services of the Debt Financing Instruments Market for Pandemic Prevention and Control*, establishing a green channel that actively supported the registration and issuance of debt financing instruments of relevant enterprises, and ensuring the smooth operation of the interbank bond market. In response to the COVID-19 pandemic, the CCDC developed a new function of online book building and remote issuance, as well as online data transmission at the subsequent stages of registration and custody, which effectively enhanced the electronization of the whole process and further improved the efficiency of book building and issuance of asset securitization projects.

4.4.1.3 The registration-based system was fully applied to enterprise bond and corporate bond issuance

On March 1st, 2020, the new *Securities Law* formally came into effect. On the same day, the NDRC issued the *Notice on Matters Concerning the Implementation of the Registration-based System for Enterprise Bond Issuance*, turning the verification-based enterprise bond issuance system into a registration-based system; the CSRC issued the *Notice on Matters Concerning the Implementation of the Registration-based System for Public Issuance of Corporate Bonds*, making it clear that the registration-based system applies to public issuance of corporate bonds. With the two ministries making requirements on conditions and information disclosure of bond issuance, credit bond issuance formally entered the era of a registration-based system in China. In July, the CCDC issued the *Rules and Procedures for Handling Enterprise Bonds (for Trial Implementation)*, which formally launched the handling and verification system for enterprise bonds, and worked with the NAFMII to issue the *Rules and Procedures for Enterprise Bond Verification (for Trial Implementation)* and *Q&A on Registration and Issuance of Enterprise Bonds*, which further improved the registration-based system for credit bonds. In November, the SSE formulated the *Guidelines of Shanghai Stock Exchange for Application of Issuance and Listing Review Rules for Corporate Bonds No. 1 - Application Documents and Compilation* and the *Guidelines of Shanghai Stock Exchange for Application of Issuance and Listing Review Rules for Corporate Bonds No. 2 – Specific Corporate Bond Types*, in order to regulate the issuance and listing review of corporate bonds and the application for the issuance and listing of certain types of corporate bonds. In the same month, the SZSE issued the *Business Guidelines of Shenzhen Stock Exchange for Innovative Corporate Bond Types No. 1-5*, which initially formed the rule system for innovative bond product series under the registration-based system.

4.4.1.4 The administrative system for local government bond issuance was continuously improved

In December 2020, the MOF issued the *Notice on Issuing the Administrative Measures for Issuance of Local Government Bonds* (Caiku [2020] No. 43). In light of new situation and requirements of local government bond issuance in recent years, the *Measures* revised the original interim ones by comprehensively regulating the issuance quota, maturity, credit rating, information disclosure, bond issuance and custody of local government bonds. The *Measures* specified that local fiscal authorities should issue local government bonds within the regional quota approved by the State Council, and reasonably determine the structure of bond maturities based on factors such as project duration, financing cost, distribution of maturing debt, investor demand and bond market conditions. The *Measures* also reiterated previous rules and requirements on information disclosure of local government bonds, and stipulated that the master register and custodian of local government bonds should be the CCDC.

4.4.1.5 The rule system for registration and issuance of debt financing instruments for non-financial enterprises was perfected

In 2020, the NAFMII revised and issued a number of regulations relating to the registration and issuance of debt financing instruments, further upgrading the rule system for registration-based issuance and consolidating the foundation for market development. In terms of the registration system and mechanism, it revised and issued the *Rules and Procedures for the Registration of Public Issuance of Debt Financing Instruments of Non-financial Enterprises* and the *Rules and Procedures for the Registration of Private Placement*, which improved hierarchical and category-based institutional arrangements, facilitated shelf issuance by enterprises, and integrated the registration process. In terms of product management, it revised and issued three product guidelines including that for medium-term notes and issued the *Information Disclosure Form for Equity-funded Notes* to help market members to raise funds flexibly based on their own needs and expand financing channels for enterprises' equity investment. In terms of issuance business regulation, the *Guidelines on Issuance of Debt Financing Instruments of Non-financial Enterprises, Rules and Procedures for the Book Building and Issuance of Debt Financing Instruments of Non-financial Enterprises* and *Notice on Relevant Matters on Further Strengthening Regulation of Issuance of Debt Financing Instruments* were revised and issued. These regulations further stressed such regulatory requirements as market-oriented pricing at issuance, optimized the supervision and recording mechanism for book building, and enhanced market disciplines such as prohibiting issuers from self-financing, strengthening the disclosure requirements of subscriptions by related parties, and standardizing bookkeeping operations. In addition, the NAFMII also revised and issued the *Detailed Rules for the Selection of Special Institutional Investors of Private Placement Debt Financing Instruments* to facilitate investment and trading of such tools.

4.4.1.6 Relevant fees were reduced or waived for issuers as a result of tax and fee cut policies

In 2020, the SHCH introduced a number of fee reduction measures to benefit market players, lowering profits by around RMB 500 million in favor of the market. The CCDC also cut fees in the interbank bond market, waiving over RMB 520 million of fees in 2020, of which nearly RMB 40 million was to fully waiver the fees borne by local government and enterprise bond issuers in Hubei Province.

4.4.1.7 The regulatory requirements on fulfillment of due roles by intermediaries were improved

In June 2020, the NAFMII led market members to revise and issue the *Rules for Intermediary Services for Debt Financing Instruments of Non-financial Enterprises in the Interbank Bond Market*, further improving the lead underwriter syndicate mechanism and strengthening the requirements for intermediary institutions to fulfill their due roles. In December, the NAFMII revised and issued the *Guidance for Due Diligence by Lead Underwriters of Debt Financing Instruments of Non-financial Enterprises*. By further specifying the duties of lead underwriters in due diligence, improving the content of due diligence, refining working requirements, and increasing penalties for non-compliance, it urged lead underwriters to adhere to professional ethics, fully perform their duties, and act in a trustworthy manner.

4.4.2 Bond market supervision was continuously improved

4.4.2.1 The system of cash bond market-making operations in the interbank bond market was improved

To implement the *Decision of the State Council on Canceling and Delegating a Batch of Administrative Licensing Items* (Guo Fa [2020] No. 13), and offer effective institutional linkup after canceling administrative licensing permits for bilateral market makers in the interbank bond market, the PBC issued the *Announcement on Improving the Administration of Cash Bond Market Makers in Interbank Bond Market* (PBC Announcement [2020] No. 21). According to the *Announcement*, to strengthen the interim and ex-post management of market makers, the NAFMII made overall revisions over the *Self-regulatory Guidelines for Cash Bond Market Making Operations in the Interbank Bond Market* and *Assessment Indicators for Market Making Operations in the Interbank Bond Market*, specifying the requirements on the due diligence of market makers and the whole process of market-making operations, clarifying operating procedures, and refining the forms of violations in market-making operations to punish improper conducts. It also practiced multi-dimensional, layered and categorized evaluation to present the characteristics of market makers in an objective way, guide them to improve the quality of quotation, elevate the transparency of information, and apply evaluation results in the dynamic access management for market-making operations, further improving the incentive and restraint mechanisms of market-making. Moreover, the CFETS released the *Operating Guidelines of National Interbank Funding Center for Cash Bond Market Making in the Interbank Bond Market*, to establish market-oriented incentive and restraint mechanisms through market-making agreements with market makers, while reinforcing the monitoring and management of the market-making behaviors to make such behaviors more market-based and regulated.

4.4.2.2 Management of interbank bond market trading was strengthened

Since 2020, the NAFMII strengthened the institutional and disciplinary building of the interbank secondary market, completely modified the self-regulatory rules on bond trading, money brokerage, bond market-making among others, markedly refined the requirements for institutions on their internal control and code of conduct, and improved the self-regulatory management framework for trading. Meanwhile, intensified investigation and punishment were posed on illegal conducts in bond trading, where on-site inspections were carried out in over 10 institutions including banks, securities companies, fund companies, trust companies and futures companies, and self-regulatory punishments were given to 5 institutions for their misconducts in trading, so as to foster their awareness of compliance in the market and raise the cost of violation by institutions.

4.4.2.3 Commercial banks were encouraged to participate in the exchange bond market

In January 2020, to implement the requirements of the *Notice of the China Securities Regulatory Commission, the People's Bank of China and the China Banking and Insurance Regulatory Commission on Issues Concerning the Banks' Participation in Bond Transactions on Stock Exchanges* (Zhengjianfa [2019] No. 81), the SSE and SZSE respectively released notices with the China Securities Depository and Clearing Corporation (CSDC) to expand the scope of banks eligible for cash bond transactions from listed commercial banks to policy banks, the China Development Bank, large state-owned commercial banks, joint-stock commercial banks, urban commercial banks, overseas banks operating in China's domestic market, and other banks listed domestically. The *Notice* also made it clear that eligible banks can apply for the qualifications as bond trading participant and settlement participant, and set up proprietary participant business units, entering the market directly "via a direct link and for direct settlement" or "via an indirect link and for settlement by brokers."

4.4.3 Duration management in the bond market was further enhanced

4.4.3.1 Institutional arrangement for the duration management of debt financing instruments was further improved

In December 2020, the NAFMII released the *Rules and Procedures for Debt Financing Instruments of Non-financial Enterprises in the Interbank Bond Market*, to continuously improve the quality of the work in concern. The *Rules and Procedures* integrated relevant documents on duration management and further clarified the accountability boundaries of duration management organizations. It provided more autonomy to relevant organizations on the basis of identifying bottom lines for monitoring and screening works. Moreover, it formulated more detailed provisions of punishment on violations committed prior to the maturity of debt financing instruments.

4.4.3.2 The regular service of push notifications on holders' register was launched

In 2019, the SHCH launched the inquiry service of bond holders, expanded the scope of subjects and scenes of inquiry, and specified the process for inquiring holders' register on specific dates, which effectively supported duration management, meeting of bond holders, and default resolution. On June 30th, 2020, the SHCH launched the service of push notifications on the holders' register, which helped further raise the efficiency of register inquiry, improved its service system and capacity of financial IT-backed services.

4.4.3.3 The system of self-regulatory penalty rules was comprehensively modified

In August 2020, to promote regulated, healthy development of the interbank bond market, link the reforms of registration and issuance management, and implement the requirements of the FSDC under the State Council on "zero-tolerance" of crimes in the capital market, the NAFMII modified and released four regulations including the *Self-regulatory Rules in the Interbank Bond Market*, *Rules and Procedures for the Self-regulatory Meetings Relating to the Interbank Bond Market*, the *Rules and Procedures* *for Self-regulatory Investigation and Self-regulatory Inquiry on Violations in the Interbank Bond Market* and the *Administrative Measures of the Experts of Self-regulatory Meetings Relating to the Interbank Bond Market*. The revisions encompassed further optimization of self-regulatory penalty procedures, the introduction of self-regulatory administrative measures, overall elevation of penalty standards, establishment of an orderly mechanism linking self-regulatory penalty and administrative punishment, so as to promote the development of self-regulatory institutional arrangements that are more fair in procedures, more transparent in rules, and stricter in enforcement.

4.4.4 The construction of information disclosure and credit rating management systems was regulated

4.4.4.1 Information disclosure standards of corporate credit bonds were unified

In December 2020, the PBC worked with the NDRC and CSRC to release the *Administrative Measures for Information Disclosure of Corporate credit bonds* and two supporting documents, namely the *Requirement on Drafting the Prospectus*, and the *Requirement on Drafting Regular Report*, so as to regulate the information disclosure of corporate credit bonds, unify relevant disclosure standards, and identify the fundamental requirements and principles for the information disclosure of corporate credit bonds. It unified the requirements for key elements, contents, timing and frequency of information disclosure of corporate credit bonds to improve the quality of information disclosed and preliminarily establish a unified and multi-layer regulatory system. The *Measures* came into force as of May 1st, 2021.

4.4.4.2 Management on the information disclosure of local government bonds was strengthened

At the end of 2019, the MOF released the *Notice on Adopting Information Disclosure Template for Additional Local Government Special Bonds* (Caibanku [2019] No. 364), which stipulated that since April 1st, 2020, when issuing additional local government special bonds, the local governments must also disclose the template to present the key information of the projects in charts and disclose relevant information in the format of the template within the duration of the bonds. This requirement effectively strengthened the management of information disclosure of local government bonds, improved the quality of information disclosure, stroke a better balance between yields and raised funds and effectively prevented special bond risks. The CCDC, following the requirements of the MOF, has been building a corresponding information system to improve the efficiency of information disclosure for local government bonds.

4.4.4.3 Information disclosure for the registration and issuance of debt financing instruments was improved

The NAFMII revised and published the *System of Registration Documents and Forms for Public Offering of Debt Financing Instruments of Non-financial Enterprises* and the *System of Registration Documents and Forms for Private Placement*, to make information disclosure more targeted and differentiated by continuously standardizing information disclosure with the modification in the system of forms, so as to help investors better identify risks and judge values and further give play to its role of risk revelation. The new *System of Registration Documents and Forms* added a chapter of "Important Notice" to supplement the requirements on information disclosure for different situations and products. It also added relevant disclosure arrangements in entrust management mechanism, risk and default disposal, with the rights and obligations of entrusted managers clarified and restraints of holder's meeting strengthened, thus enabling the "strong protection and enhanced efficiency" of the prospectus under the *Contract Law*. In addition, the NAFMII released the *Model Text for Investor Protection Mechanism in the Prospectus*, to provide template statements for the contents closely related to the protection of investors in the prospectus, which would help improve the quality of information disclosure and earnestly protect the rights and interests of investors.

4.4.4.4 Self-regulatory management of credit rating industry was continuously enhanced

To further implement the spirit of the ministerial coordination mechanism for corporate credit bonds, the NAFMII and the Securities Association of China (SAC) continued to work more closely to drive the unification of evaluation standards for credit rating agencies, improve the evaluation system with quality as the core, strengthen monitoring and investigation over credit rating businesses, and tighten the self-regulatory punishment on misconducts.

4.4.5 Risk prevention and disposal mechanism was improved

4.4.5.1 Efforts were made to maintain sound credit environment in the bond market

At the end of 2019, the PBC published the *Notice on Implementing Transference Services for Defaulted Bond upon Maturity* (PBC Notice [2019] No. 24), to further improve the mechanism of bond default disposal. In 2020, the building of defaulted credit bond disposal mechanism in the bond market was further advanced. In June, the PBC, NDRC and CSRC jointly released a notice to build up a unified institutional framework for the disposal of defaulted corporate credit bond and drive the default disposal in the bond market towards more market-oriented and law-based. In July, the SPC published the *Minutes of the National Courts Symposium on the Trial of Bond Disputes*, which further smoothed the law-based remedy channel for bond disputes, improved the efficiency of judicial remedy and fully safeguarded the rights of investors. In November, at the 43rd meeting of the FSDC under the State Council, participants studied how to regulate the development of the bond market and safeguard its stability, and required to hold a "zero-tolerance" attitude to maintain fairness and order of the market. In December, the Central Economic Work Conference proposed to improve the legal system of the bond market, and crack down on irregularities such as debt evasion.

4.4.5.2 Filing of entrust management businesses of debt financing instruments offered by non-financial enterprises was promoted

To improve the risk prevention and mitigation mechanism in the bond market, the NAFMII advanced preparations for entrust management businesses in the market, on the basis of the *Guidelines on the Trustee Business of Debt Financing Instruments of Non-financial Enterprises in the Interbank Bond Market (for Trial Implementation)* released at end-2019. As of end-2020, a total of 77 institutions completed the filing of their entrust management business, covering varied types of institutions such as securities companies, trust companies, financial asset management companies and law firms, and several projects with trustees were registered and issued.

4.4.5.3 Bond default disposal mechanism was improved

To further improve the disposal mechanism for defaulted bonds, the CCDC and SHCH jointly released the *Rules for Transference and Settlement Services for Defaulted Bond upon Maturity of Custody and Settlement Institutions in the Interbank Bond Market* (Zhongzhaizi [2020] No. 107) and officially set up relevant regulations and mechanisms. Its release marked the establishment of transference and settlement services for defaulted bonds upon maturity in the interbank bond market, and served as an important measure to implement the requirements of the central government on forestalling and defusing financial risks and protecting the legitimate rights and interests of investors.

4.4.5.4 Debt risk management instruments were innovated and improved

In January 2020, the SZSE released the *Notice on Matters Relating to Bond Repurchase Business*, to launch the mechanism for bond repurchase cancellation and resales, providing a new channel for repo funds to flow back, which effectively eased the pressure for issuers to repurchase funds. In July, the SZSE released the *Notice on Implementing Corporate Bond Replacement Business*, to pilot bond replacement where issuers with insufficient liquidity can replace existing corporate bonds with newly issued corporate bonds, enriching the toolkit of risk defusing. In 2020, the CCDC, Bank of China and Bank of Communications Financial Leasing Co., Ltd. jointly implemented the first foreign currency financing collateral management business in the Free Trade Zone (FTZ), and introduced the collateral management mechanism for the first time into the FTZ financial businesses. The CCDC launched an innovative interbank credit-granting product to offer risk management and liquidity management tools for market players, and smooth financing channels for small and medium-sized financial institutions.

4.4.6 Coordinated management and interconnectivity of financial infrastructure were advanced

In July 2020, the PBC and the CSRC released the Announcement [2020] No. 7 of PBC and CSRC to facilitate the interconnectivity of the interbank bond market and the exchange bond market, where front office connects front office and back office connects back office with each other, and the electronic trading platforms of the two would jointly offer bond trading and other services for investors, and the registration, custody and settlement institutions in both markets would jointly provide bond issuance, registration, custody, clearing, settlement, interest payment and redemption services to issuers and investors. Nominal holder's accounts should be opened among bond registration, custody and settlement institutions in the interbank bond market, as well as among bond registration, custody and settlement institutions in the interbank and exchange bond markets, so as to record the balance of all bonds held by the nominal holder. The interconnectivity of bond markets is conducive to further facilitating bond investors, improving the efficiency of market operations and promoting the high-quality development of China's bond market.

4.5 Opening-up of the bond market

4.5.1 Opening-up policies were continuously improved

4.5.1.1 Further facilitation was given to overseas institutional investors to allocate RMB-denominated assets

On September 2nd, 2020, the PBC, CSRC and SAFE issued the *Announcement on Matters Concerning Overseas Institutional Investors Investing in China's Bond Market (Exposure Draft)* in a bid to specify the overall institutional arrangements for the opening-up of China's bond market, and in adherence to law-based principle, to unify access management and funds management, better align with the international practices and deepen the cross-department regulatory cooperation. On September 21st, the PBC and the SAFE released the *Rules on Fund Management for Overseas Institutional Investors to Invest in China's Bond Market (Exposure Draft)*, to unify the fund management rules of the bond market.

4.5.1.2 Foreign banks were facilitated to participate in the underwriting of local government bonds

In January 2020, the MOF announced that, to implement the decisions and arrangements of the CPC Central Committee and the State Council on further promoting the opening-up of the financial sector, it actively guided local fiscal authorities to modify the organization methods of underwriting syndicates for local government bonds, relax restrictions on wholly-owned foreign banks, joint ventures, sub-branches of foreign banks (hereinafter collectively referred to as foreign banks) to join the local government bond underwriting syndicates according to formalities. After the release of this announcement, the Taiwan-funded Fubon Bank joined the underwriting syndicate for the government bonds issued by Ningbo and Chongqing; the Hong Kong-funded Bank of East Asia (China) joined the underwriting syndicate for the government bonds issued by Tianjin and Guangdong; and the Germany-funded Deutsche Bank (China) joined that for the government bonds issued by Qingdao. The inclusion of foreign banks helped expand the issuance channel for local government bonds and promoted the diversity of investors.

4.5.1.3 Supporting mechanism for bond issuance by overseas institutions was improved

In September 2020, the NAFMII released the *Provisions for Layered and Categorized Management of Debt Financing Instruments for Overseas Non-financial Enterprises* and the *System of Registration Documents and Forms for Public Offering of Debt Financing Instruments of Non-financial Enterprises*, to build a layered and categorized management mechanism for Panda Bonds, and foster sound requirements for information disclosure of Panda Bonds. In December, the NAFMII released the *Guidelines on the Panda Bond Business for Foreign Government Institutions and International Development Institutions*, which optimized the procedures of Panda Bond registration and issuance targeting the special features of foreign government institutions and international development institutions based on existing ones, with institutional arrangements specified on the registration and issuance procedures, information disclosure and intermediaries. Meanwhile, the concurrently released *Guidelines on Debt Financing Instruments Business of Overseas Non-financial Enterprises (2020 Edition)* mainly improved the requirements on filing, registration document submission and information disclosure among others to provide better institutional safeguard for Panda Bond businesses.

COLUMN Establish a layered management mechanism of Panda Bonds

Drawing on both international and domestic experience, the Provisions for Layered and Categorized Management of Debt Financing Instruments for Overseas Non-Financial Enterprises adapted to the diversified needs from overseas enterprises and established a layered management framework of Panda Bonds for overseas enterprises. First, in such a layered management mechanism, overseas enterprises were categorized into mature and basic layers, which offered convenience for premium multinational corporations to issue bonds. Second, a unified registration mechanism was introduced, which allowed the mature-layer overseas enterprises to apply unified registration for multiple varieties. Third, the registration efficiency was raised by reducing the pre-evaluation time layer by layer, and differentiating the first project and follow-up projects as well as first feedback and follow-up feedback. Fourth, the restrictions on the number of principal underwriters were steadily relaxed, with the applicable principal underwriter system unified, and the number setup optimized based on the size of a single bond during the issuance.

The System of Registration Documents and Forms for Public Offering of Debt Financing

Instruments of Non-financial Enterprises specified information disclosure requirement for Panda Bonds, with those on the public and private placement of different layers of overseas enterprises identified. First, special fundraising form for mature-layer enterprises was established, which utilized domestic experience and international rules to realize disclosure consistency across the world and guide quality multinational corporations to do public offering on the basis of protecting investors. Second, the list of registration documents as well as the requirements on the registration report for public and private placement of Panda Bonds were specified. Third, considering the special features of disclosure time and document translation of Panda Bonds, the requirements on prospectus update, disclosure language and time, and second review by the CSRC adaptive to Panda Bonds were formulated with reference to domestic and international practices. Fourth, emphases were given to the requirements on disclosure concerning special risks, applicable laws, cross-border taxation and others.

When facilitating registration and issuance, this round of optimization also strengthened restraints on issuers and intermediaries, and enhanced targeted protection of investors. At the same time, the connection between domestic and overseas rules were fully reinforced, under the principle of "adapting to the enterprise's features, following domestic practices and aligning with international rules."

4.5.2 Overseas investor trading mechanism was further facilitated

4.5.2.1 Direct trading service was launched under the direct investment mode

On September 1st, 2020, the National Interbank Funding Center (NIFC) piloted the direct trading service under the direct investment mode, namely the "CIBM Direct trading service", through which overseas investors could submit quotation requests to domestic market makers for cash bond transactions, and utilize such facilitation functions as trade allocation and package deal, further improving the efficiency of investing and dealing in Chinese bonds. With reference to the experience of the Bond Connect, this service, by connecting CFTES and overseas trading platforms, supports overseas institutional investors to quote and trade through their accustomed trading platforms with domestic market makers, while adopting the mode of "Dealer Pay", a trading approach much familiar for oversea investors.

4.5.2.2 Cash bond trading hours in the interbank bond market was extended

On September 15th, 2020, the NFIC, SHCH, and CCDC jointly announced to extend the trading hours for cash bonds with a settlement cycle of T+1 or above to 20:00 as of September 21st, 2020, with a view to further advancing the opening-up and development of the interbank bond market and facilitating the trading of interbank bonds by domestic and overseas investors.

4.5.2.3 Recycling settlement services and special settlement cycle (T+N) arrangement were launched for overseas institutional investors

In March 2020, as a supplement to the settlement arrangements for overseas institutions to invest in interbank markets, the SHCH and CCDC launched the recycling settlement services and special settlement cycle (T+N) services for overseas institutional investors, well satisfying the diversified settlement demands of overseas investors. In September, the CFTES upgraded functions of the system, through which trading parties could reach T+N transactions autonomously online without submitting applications, thus further raising trading and settlement efficiency for overseas investors.

4.5.3 Opening-up was continuously deepened

4.5.3.1 Credit rating industry opened up wider

In May 2020, to promote high-level, international development of the rating industry, the NAFMII approved the registration of practicing B-grade credit rating business in the interbank bond market by Fitch Bohua Credit Rating Co., Ltd., making it the second foreign-funded rating agency to perform such businesses after S&P Ratings (China) Co., Ltd. who completed its filing for securities rating businesses as required by the CSRC in October 2020, which expanded its business scope from interbank bond market to the exchange market.

4.5.3.2 Panda bond yielded remarkable achievements in issuance

As of end-2020, the Panda Bond yielded remarkable achievement in issuance, with altogether 201 Panda Bonds issued in China's bond market, totaling RMB 339.72 billion[①]. The Panda Bond market actively served development of the Belt and Road Initiative (BRI) as well as pandemic prevention and control. The issuers included the Asian Infrastructure Investment Bank (AIIB), New Development Bank (NDB), Asian Development Bank (ADB), Eurasian Development Bank (EDB) and other international development institutions and BRI countries, including the Republic of Poland. Banks such as the AIIB and NDB issued special bonds for pandemic containment to support the fight against COVID-19.

COLUMN SHCH and Euroclear Bank cooperate to launch "Yulan Bond" business

On December 8th, 2020, the SHCH and Euroclear Bank jointly launched the "Yulan Bond" business, drawing intense attention from domestic and international markets. It was

① Source: Wind.

selected as Top 10 Key Events in China's Bond Market in 2020 by Xinhua Finance.

On February 4th, 2021, the SHCH registered the first Yulan Bond issuance, marking the official start of international market bond issuance business served by cross-border cooperation of financial infrastructure. The first Yulan Bond issued by the Bank of China registered a size of USD 500 million, with a maturity of 3 years and interest rate upon issuance at 0.86 percent, recording the lowest level among fixed-interest USD bonds of the same maturity by Chinese commercial banks over years. This issuance attracted much attention and subscription from various international investors, including around 50 investors receiving allotment, ranging from sovereign institutions, banks, asset management companies and funds in the continents of Asia, Europe and South America.

Yulan Bond represents a good exploration of financial infrastructure home and abroad to strengthen cooperation and serve the high-level opening-up of China's bond market under the guidance of the PBC. It offers new options for domestic participants to issue bonds for financing to international markets, which is conducive to facilitating services for domestic issuers and international investors, as well as aligning regulatory policies, standards and rules, and intermediary services of the domestic bond market with those of the international bond market. It can be said that, Yulan Bond embodies the significance of building the new development pattern with "domestic circulation as the mainstay while domestic and international circulations reinforce each other" in this era.

4.5.4 China's bond market was included in major international indexes

After the Chinese treasury bonds and policy bank bonds were included in the Bloomberg Barclay Global Aggregate Index, the J.P. Morgan included nine Chinese government bonds into its Government Bond Index-Emerging Markets (GBI-EM) since February 28th, 2020, which, upon full inclusion, would reach the upper limit of weight of 10 percent of the index. On September 25th, the FTSE Russell announced its plan to add Chinese treasury bonds in its World Government Bond Index (WGBI). So far, the three major bond indexes have all included or plan to include Chinese bonds in them. The inclusion of Chinese bond market in major international indexes demonstrates not only the rising status of China in the global financial market, but also the confidence of international investors in the Chinese market.

4.6 Outlook of the bond market

In 2021, the institutional building and product innovation of the bond market will be further strengthened, to better support the real economy and drive the bond market to be more market-oriented, law-based and internationalized. The first task for the new year is to thoroughly implement the new development philosophy, and further advance the high-quality development of the bond market. Second, the financing function as well as the effect and efficiency of the bond market in serving the real economy will be continuously improved. Third, the product and instrument innovation in the bond market will continue to advance. Fourth, the interconnectivity of bond markets will be continuously enhanced to provide convenience for domestic and international investors. Fifth, the development of the bond market will be further regulated to safeguard its stability. Sixth, the management system of the market will be continuously optimized to promote the high-level opening-up of the bond market.

BOX 2 Improve the effect and efficiency of the bond market in serving the real economy, and help stabilize enterprises and secure employment

In recent years, China's bond market witnessed rapid development with increasingly abundant products, remarkably increased resilience and continuously expanded size. The growing market provided solid safeguard to defend the shocks from internal and external risks, lower the financing costs and serve the real economy.

1. Social financing was stabilized to promote the construction of projects in key areas

Bond issuance has become one of the major funding sources of enterprises, financial institutions and governments at all levels. It played a key role in safeguarding the development of key projects. First and foremost, it encouraged the construction of infrastructure projects. In 2020, a total of RMB 6.44 trillion worth of local bonds was issued, including new special bonds of RMB 3.6 trillion, mainly applied in infrastructure projects concerning people's livelihood, such as healthcare, transportation, civil administration, industry parks, agriculture, forestry, water conservancy, energy, and cold-chain logistics. Such bonds effectively leveraged private investment and stabilized the society and economy. Secondly, it served the implementation of major national strategies. In 2020, a total of RMB 552.6 billion worth of corporate bonds and RMB 4.76 trillion worth of debt financing instruments of non-financial enterprises were issued. They were mainly used to support national major strategic projects such as the BRI, coordinated development of the Beijing-Tianjin-Hebei region, development of Yangtze River Economic Belt, and development of the Guangdong-Hong Kong-Macao Greater Bay Area, guide private funds into key areas under national planning, and drive the development of the real economy.

2. Funds were injected to strengthen support for MSBs and companies concerning agriculture, rural areas and rural people

First of all, financing channels for MSBs were further expanded. To practically solve difficulties *of MSBs, it was raised at the State Council Executive Meeting that financial institutions would be supported to issue additional special financial bonds for MSBs (hereinafter referred to as MSB financial bonds) of RMB 300 billion in 2020. In June 2020, the PBC and the CBIRC released policy guidelines together with other authorities, to guide commercial banks to enhance support to MSBs in terms of credit, capital market financing and others. Throughout 2020, a total of 40 commercial banks issued MSB financial bonds totaling RMB 373.28 billion, which outperformed the goal and registered an increase of RMB 168.48 billion from 2019. The weighted average interest rate stood at 2.86 percent, 0.66 percentage points lower than that of 2019. Among them, 30 locally incorporated banks issued a total of RMB 118.28 billion worth of MSB financial bonds, including RMB 115.492 billion worth of loans already granted, accounting for around 97.64 percent, mainly invested into the manufacturing, wholesale and retail industry, agriculture, forestry, animal husbandry and fishery. The issuers achieved regulated internal management, effective use of the funds raised, as well as improved inclusive financial services for MSBs, which carried great importance for the debt repayment, fund turnover, and financing expansion of MSBs. Second, tax and fee cuts were practiced to lower the financing costs of MSBs. Since 2020, the registration service fees for the issuance of MSB financial bonds were fully exempted for commercial banks, lowering the comprehensive financing costs for MSBs and practically waiving profits in favor of enterprises. Third, financing supports extended to agriculture, rural areas and rural people were strengthened. In 2020, 3 commercial banks issued 3 financial bonds worth of RMB 5.0 billion for agriculture, rural areas and rural people, pushing the total issuance of such bonds to reach RMB 44.4 billion. Small and medium-sized banks including local urban commercial banks and rural commercial banks were encouraged to expand their funding sources for loans concerning rural affairs through bond market financing, enrich credit products and services, and increase supply of these loans. The advantages of locally incorporated banks in in-depth local business and close relations with agriculture, rural areas and rural people were fully leveraged, which served to strengthen credit policy transmission and support the implementation of major strategies such as targeted poverty alleviation and rural revitalization.*

3. Innovative products and services were provided to satisfy development needs of the real economy

First, the bond categories were continuously diversified and optimized. Guidelines on special bonds of new urbanization building for counties were released to advance the tasks of counties to shore up their weaknesses in new urbanization and fully leverage the role of corporate bond financing in driving the new urbanization of counties. Innovative bond categories, such as special bonds for building urban parking lots and integrated bonds for MSB credit enhancement, were optimized. Second, "green channels" were open for the declaration of corporate *credit bonds. At end-January, 2020, the CSRC released the Notice on Prevention and Control of COVID-19 Pandemic (CSRC [2020] No. 9), and in February, the NDRC published the Notice on Works on Corporate Bonds in the Fight Against the COVID-19 Pandemic (NDRC Caijin [2020] No. 111), following which relevant infrastructure institutions such as the NAFMII, SHSE and SZSE simplified the formalities for processing corporate credit bond business during the pandemic to the maximum extent, so as to satisfy the bond financing needs from epidemic-stricken areas and enterprises engaged in COVID-19 prevention and control. Third, multiple measures were taken to support commercial banks to replenish their capital. In 2020, the FSDC under the State Council made important arrangements on the capital instrument innovation of commercial banks. Commercial banks issued RMB 648.4 billion worth of convertible capital bonds without fixed maturity and the local fiscal authorities issued additional RMB 50.6 billion worth of special bonds to replenish the capital of small and medium-sized banks. With such replenishment from multiple channels, the capital structure of banks was effectively optimized, the room for credit supply expanded, and capability of banks serving the real economy strengthened.*

BOX 3 Explore building an ESG evaluation system and developing relevant indexes in China's bond market

In line with green finance, ESG fully integrates the company's responsibilities for environment, society and corporate governance, delivers a development philosophy of pursuing both economic values and social values, and meets the demands of high-quality, sustainable development.

1. The concept of ESG was gradually recognized in domestic and international fixed income sectors

Internationally, ESG investment grew more and more popular. In one aspect, the ESG concept was further recognized. As shown by the sampled statistics of Invesco on 108 large investment institutions worldwide, nearly 80 percent sovereignty funds took ESG factors into consideration in constructing fixed income investment portfolios, so did over 40 percent of other types of institutions, including insurance and pension funds. In another aspect, ESG-related investment and relevant strategies grew into a new trend, with investment products expanding from equity to fixed income and mainly covering ESG bonds, ESG bond index, and the inclusion of ESG in bond credit analysis.

Domestically, ESG investment went through a similar development path, starting from being fully applied in equity market and then expanding into the investment in bonds and other fixed income products. As of end-2020, over 30 domestic institutions joined the UN Principles for Responsible Investment (UN PRI) *and the volume of ESG-themed products surged. Meanwhile, China's ESG fixed income wealth management products and index products started to grow.*

2. Efforts were made to development an ESG evaluation system and relevant indexes in China's bond market

In 2020, ChinaBond Pricing Center Co., Ltd. (ChinaBond) released the first ESG evaluation system covering all domestic corporate credit bond issuers. In specific, from the perspective of environmental performance (E), the system focuses on the impacts of environmental risks faced by enterprises and their risk management capabilities on sustainable business operation; from the social responsibility (S) side, the system sheds more light on the impacts of protecting employees, supply chains and clients, investors, communities and other interest ecosystems on sustainable business operation; in the aspect of corporate governance (G), the system highlights the impacts of the protection of shareholder's rights and interests, governance capability of directors, supervisors and senior management, incentive mechanisms, and information disclosure practices on sustainable business operation. The system has five prominent features. First, it is aligned with the international mainstream evaluation framework, for which it fully takes in international mainstream approaches and practices while referring to important rules and international academic research outcomes. Second, it considers both the policy environment and bond market characteristics of China. During index design, domestic policy environment, the development situation of all industries and bond market, as well as the actual realities of information disclosure were fully considered. Third, given industry differences, it places a dual emphasis on general index and specific index for different industries. Fourth, it enables scientific setting of key parameters determined one by one based on the national policies on development planning of all industries and domestic practices. Fifth, it avails FinTech to accumulate massive non-structural data and alternative data. With over 300 ESG factors, the system covers all publicly offered credit bond issuers in China's bond market.

The evaluation results showed that the bond issuers basically scored in normal distribution in ESG for recent three years. The average scores of corporate governance were markedly higher than those of environment and social responsibility. Among different industries, environmentally friendly industries which are also sort of public (such as water conservancy) scored relatively high. Among enterprises of different business natures, central state-owned enterprises (SOEs) registered higher average ESG scores, because a larger number of them are environmentally friendly, provide better protection for employees, suppliers and clients, and boast higher governance capabilities of directors, supervisors and senior management and better information disclosure. It also found the correlation between ESG scores and the ChinaBond's implied rating, where enterprises of higher rating and better credit qualification score higher averagely in

ESG.

Based on the ChinaBond ESG evaluation system, the ChinaBond Pricing Center released the first ESG indexes in China's bond market including the ChinaBond ESG Select Credit Bond Index, and explored to offer performance benchmark of ESG investment for China's bond market and guide the bond market to practice the new development philosophy.

Chapter 5 Stock Market

In 2020, the Chinese stock market saw sound operation in general. Both the total number of enterprises raised funds and their total financing volume on the SSE and SZSE increased. The secondary market continued to pick up vitality, and major indexes of the SSE and SZSE went up in general. The registration-based IPO system on the STAR Market was further improved, and a set of major reforms, including the ChiNext reform and the pilot registration-based IPO system, were launched and implemented, which continuously promoted the capital market reform and steady development of innovations. Interconnectivity mechanisms were further enriched to steadily promote opening-up at a higher level. Multiple measures to enhance the quality of listed companies and support their fight against COVID-19 achieved notable results, and risk prevention in key areas of the capital market was effectively enhanced. The capability of the capital market to support the real economy was constantly improved to promote the high-quality development of China's economy.

5.1 Performance of the stock market

5.1.1 Share issuance

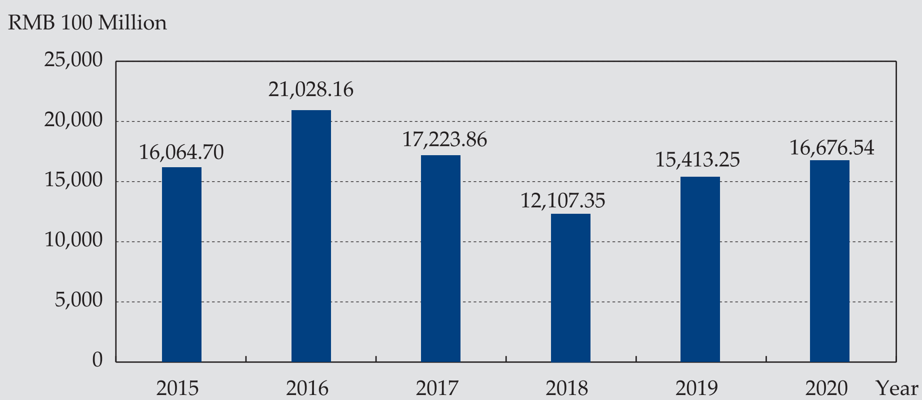
In 2020, both the total number of enterprises raised funds and their total financing volume on the SSE and SZSE increased[①]. A total of 1,031 enterprises raised funds on the SSE and SZSE through IPO, additional shares issuance, share allotment, preferred stocks issuance, convertible bonds issuance and exchangeable bond issuance, up 61.85 percent from 637 in 2019, with a total financing volume of RMB 1,667.654 billion, up 8.20 percent from RMB 1,541.325 billion in 2019. The volume of funds raised through IPO on the SSE and SZSE saw a big rise. Among these enterprises, 396 raised funds through IPO, up 95.07 percent year on year and the total financing volume of IPO stood at RMB 469.963 billion, up 85.57 percent year on year. A total of 362 enterprises issued additional shares, up 44.22 percent year on year, and the volume was RMB 834.137 billion, up 21.11 percent year on year.

Issuance of preferred stocks, convertible bonds

① The SSE and SZSE markets in Chapter 5 refer to China's A-share markets. The data comes from Wind, the SSE and the SZSE central database, unless otherwise specified.

and exchangeable bonds decreased, while share allotment increased. In 2020, a total of 8 listed companies issued preferred stocks, 2 more than the previous year, with an issuance volume of RMB 18.735 billion, a sharp drop of 92.65 percent year on year. A total of 206 listed companies issued convertible bonds, up 94.34 percent year on year, with a volume of RMB 247.525 billion, a slight decline from RMB 247.782 billion in 2019. A total of 41 listed companies issued exchangeable bonds, down 33.87 percent year on year, with a volume of RMB 45.997 billion, down 44.67 percent. In addition, a total of 18 listed companies completed share allotment, doubling the figure of a year earlier, involving a volume of RMB 51.297 billion, a substantial increase of 283.17 percent from the previous year.

Figure 5.1 Total financing volume in the stock market from 2015 to 2020



5.1.2 Stock trading and holding

Throughout the year, turnover of A-shares on the SSE and SZSE totaled RMB 206.84 trillion, up 62.29 percent year on year, including RMB 77.41 trillion from SSE Main Board, up 45.76 percent year on year, RMB 6.59 trillion from SSE STAR Market, with an average daily turnover of RMB 27.3 billion, RMB 25.99 trillion from SZSE Main Board, up 38.19 percent year on year, RMB 50.18 trillion from SZSE SME Board, up 61.53 percent year on year, and RMB 46.67 trillion from SZSE ChiNext Board, up 101.52 percent year on year. In 2020, trading volumes by institutional investors accounted for 28.51 percent and 26.55 percent of the total in the SSE and SZSE markets respectively, while those of individual investors accounted for 71.49 percent and 73.45 percent respectively. Individual investors dominated stock trading in both SSE and SZSE markets.

As of end-2020, the negotiable market value of A-shares owned by institutional investors in the SSE market stood at RMB 29.25 trillion, accounting for 77.07 percent, while the market value held by individual investors in the SSE market was RMB 8.70 trillion, accounting for 22.93 percent; the negotiable market value of

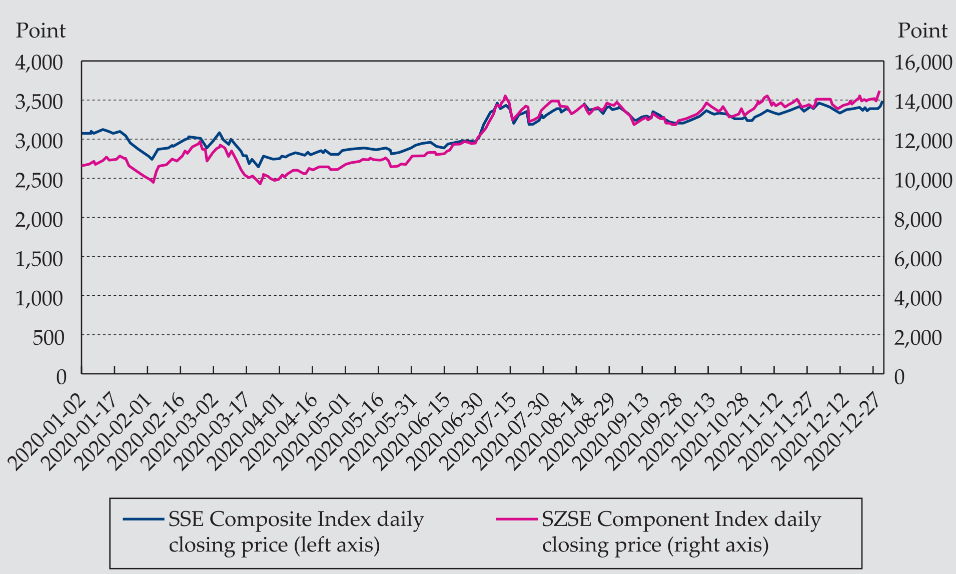
A-shares owned by institutional investors in the SZSE market stood at RMB 17.10 trillion, accounting for 59.19 percent, whereas the market value held by individual investors in the SZSE market was RMB 11.81 trillion, accounting for 40.81 percent.

5.1.3 Stock indexes and market fluctuations

In 2020, major SSE and SZSE indexes went up across the board. In particular, the SSE Composite Index saw a steady rise in 2020 and has gone up for two consecutive years. The SZSE Component Index, the SZSE SME Board Index and the ChiNext Board Index all went up amid fluctuations, rising by 38.73 percent, 43.91 percent and 64.96 percent respectively in the year. Thus, China led the world in terms of the gain in index values.

In 2020, the SSE indexes were still less volatile in general, with a slight increase in their intraday volatility, whereas volatility of the SZSE indexes rose slightly. In particular, the yearly change of the SSE Composite Index reached 31.29 percent, down 3 percentage points from the previous year. The SSE Composite Index experienced a change of above 1 percent for as many as 78 days, 12 days more than 2019. The yearly change of the SZSE Component Index reached 51.13 percent, up 0.78 percentage points from the previous year. The SZSE Component Index experienced a change of above 1 percent for as many as 111 days, 12 days more than the previous year.

Figure 5.2 Movements of SSE and SZSE Main Boards indexes in 2020



(Source: Wind)

5.2 Main features of the stock market operation

5.2.1 Financing structure was further optimized with greater support to sci-tech enterprises

In 2020, a total of 233 enterprises made IPOs on the SSE, 110 more than the previous year and raised RMB 347.7 billion, up 89 percent. Among these enterprises, 145 were listed on the SSE STAR Market and raised RMB 222.6 billion, accounting for 64 percent, rising from 45 percent in 2019.

In 2020, a total of 161 enterprises made IPOs on the SZSE, 83 more than the previous year and raised RMB 126.5 billion, up 96 percent. Among these enterprises, 107 were listed on the SZSE ChiNext Board and raised RMB 89.3 billion, accounting for 71 percent, moving up from 47 percent in 2019.

5.2.2 The stock market went up amid fluctuations throughout the year, and tech growth stocks outperformed large-cap, blue-chip stocks

The SSE Composite Index shifted upward after bottoming out in the first quarter of the year, with a yearly high of 3,474.92 points and a low of 2,646.81 points, as well as the biggest increase of 13.93 percent and the biggest decline of 13.22 percent. The SSE Composite Index gained 13.87 percent in 2020, closing the year at 3,473.07 points. The SSE 50 Index, SSE 100 Index and SSE 150 Index, which represent large-, mid- and small-cap stocks, increased by 18.85 percent, 26.88 percent and 14.59 percent respectively. Major SZSE indexes were much more resilient, with the largest increases among world's major indexes. The SZSE Component Index gained 38.73 percent in 2020, closing the year at 14,476.55 points, with a yearly high of 14,476.55 points and a low of 9578.87 points, as well as the largest increase of 38.79 percent and the largest decline of 8.17 percent. The SZSE SME Index rose by 43.91 percent in 2020, and the ChiNext Index rose by 64.96 percent in 2020 to lead all the gainers in the world for the second consecutive year.

Tech growth stocks outperformed large-cap, blue-chip stocks. Among major indexes, Wind All China Index, SSE Composite Index and SZSE Component Index rose by 25.62 percent, 13.87 percent and 38.73 percent respectively, while SSE STAR Market 50 Index (STAR 50) and ChiNext Board Index added 39.30 percent and 64.96 percent respectively. The ChiNext Board Index led all the gainers, and the tech stocks performed well in 2020. Among sectors, electrical equipment, national defense and military, and electronics rose by 95 percent, 58 percent, and 36 percent respectively, whereas the real estate and banking sectors fell by 11 percent and 3 percent respectively.

5.2.3 Institutional investors and foreign investors saw continued increase in their proportion of trading volumes and total free float market cap, had greater impact on the markets

First, institutional investors saw continued increase in their proportion of trading volumes and total free float market cap, with investors' trading structure constantly improved. In 2020, trading volumes by institutional investors accounted for 28.51 percent of the total in the SSE market, up 4.52 percentage points from the previous year, and the negotiable market value of A-shares owned by institutional investors in the SSE market accounted for 77.07 percent of the total, continuing to maintain a high level. In 2020, trading volumes by institutional investors accounted for 26.55 percent of the total in the SZSE market, up 6.17 percentage points from the previous year, and the negotiable market value of A-shares owned by institutional investors in the SZSE market accounted for an all-time high of 59.19 percent of the total, up 2.74 percentage points from 2019.

Second, as China advances the two-way opening-up of the capital market and its interconnectivity, overseas investors witnessed a rise in their proportions of both trading volume and the total free float market cap. As of end-2020, trading volumes by foreign investors accounted for 7 percent of the total in the SSE market, with a year-on-year increase of 25.45 percent, and the negotiable market value of A-shares owned by foreign investors in the SSE market accounted for 4.69 percent of the total, with a year-on-year increase of 16.38 percent. As of end-2020, trading volumes by foreign investors accounted for 6.31 percent of the total in the SZSE market, with a year-on-year increase of 59.75 percent, and the negotiable market value of A-shares owned by foreign investors in the SZSE market accounted for 5.41 percent of the total, with a year-on-year increase of 21.03 percent.

5.2.4 Market situation changed rapidly due to COVID-19 pandemic

In 2020, the Chinese stock market bottomed and then picked up, with the performance of stock indexes undergoing three phases. The first phase was from January 2nd to January 20th, 2020, where internal liquidity easing was sustained, the economy displayed sound development, and stock indexes continued their rise from 2019. In the first phase, the SZSE Component Index, the SSE STAR Market 50 Index, the SZSE Component Index and the ChiNext Board Index climbed up 1.50 percent, 24.05 percent, 6.57 percent and 10.24 percent, respectively; and the average daily turnover of A-share on the SSE and SZSE stood at RMB 688.1 billion, representing an increase of 33 percent from 2019. The second phase lasted from January 21st to July 13th, 2020, where stock indexes fell sharply and then rebounded twice, due to the COVID-19 outbreak in China and the rest of the world. As China's stock market stabilized and rallied in the second phase, the SZSE Component Index, the SSE STAR Market 50 Index, the SZSE Component Index and the ChiNext Board Index increased by 11.22 percent, 38.81 percent, 27.29 percent and 45.77 percent, respectively; and the average daily turnover of A-share on the SSE and SZSE amounted to RMB 815.8 billion, up 19 percent from the previous phase. The third phase spanned from July 14th to December 31st, 2020, where the stock market saw modest gains amid fluctuations. In the third phase, the SZSE Component Index, the SZSE Component Index and the ChiNext Board Index closed at 3,473.07, 14,470.68 and 2,966.26 respectively, their highest for the year.

COLUMN Fully support listed companies and other market entities to combat the COVID-19 pandemic

In the principle of advancing works to facilitate pandemic containment and ensure stable operation of the market, the SZSE released the Notice on Supporting Listed Companies and Other Market Entities to Combat COVID-19 Pandemic (hereinafter referred to as the Notice) in February 2020 to step up business support and service assurance. The Notice covers the following contents.

First, the SZSE will improve information disclosure of listed companies by setting up a special service channel for the information disclosure of listed companies, supporting listed companies in respect of periodic report disclosure, properly extending the time limits on merger and acquisition (M&A) business, supporting listed companies to hold online explanation meetings for investors, encouraging investors to attend general meetings of shareholders through online voting, and encouraging listed companies to actively perform social responsibilities.

Second, the SZSE will improve share underwriting businesses and listing cultivation services. The steps include conducting share issuance and listing business off-site, canceling on-site procedures of the listing ceremony during the pandemic, reducing fees for listed companies registered in Hubei Province, and continuing to cultivate and serve the market.

Third, the SZSE will optimize its fixed-income businesses. In this regard, efforts will be made to set up special service channels for business consultations, provide financing services related to pandemic containment, appropriately extend the time limits on issuing bonds and ABS, conduct relevant business off site, assist issuers and managers in both regular and temporary report disclosure, and encourage off-site meetings for bond and asset-backed securities holders.

Fourth, the SZSE will improve membership services by fully implementing the requirements of supporting policies, setting up special service channels for business consultations, providing off-site business training, encouraging members to guide investors to trade off site, supporting members to educate investors and manage the clients' trading behaviors, and supporting members to take measures to ensure the smooth operations of businesses.

Fifth, the SZSE will improve fund business by conducting business training and exchanges off site, and supporting the fund liquidity service providers to carry out business in an orderly manner.

Sixth, the SZSE will improve options business, which encompasses setting up special service channels for business consultations, supporting *option operators to properly manage option risks, manage market makers, and arrange for filings, and encouraging option operators to provide off-site account opening services.*

Seventh, the SZSE will improve agreement transfer, assistance in law enforcement, hearing and review business. In this regard, the SZSE will handle share agreement transfer businesses through off-site methods, assist in law enforcement through off-site means, and reschedule the hearings and review meetings.

Eighth, the SZSE will improve investor service businesses as it provides smooth complaint channels for investors, offers them sound education services, and advocates rational investment.

5.3 Reform and innovation of the stock market

5.3.1 The registration-based IPO system was further improved

First, the SSE rules on refinancing and shareholding reduction on the SSE STAR Market were continuously improved. In terms of rules on refinancing on the SSE STAR Market, based on relevant rules formulated by the CSRC, the SSE issued a set of rules to stipulate review standards, review procedures and business requirements for issuance and underwriting on the SSE STAR Market, and kept improving the existing systems as well, which facilitated the refinancing on the SSE STAR Market. Regarding rules on the shareholding reduction on the SSE STAR Market, the SSE formulated and released the *Detailed Implementation Rules for Shareholders of Companies Listed on SSE STAR Market to Reduce Shareholding Through Inquiry Transfer and Placement to Specific Institutional Investors* in July 2020, to explore and roll out a more reasonable system for shareholding reduction, relieve the pressure of shareholding reduction, and increase the efficiency of capital recycling. Second, the SSE released rules for red-chip companies to apply for offering and listing on the SSE STAR Market. It built an institutional path for the domestic offering and listing of red-chip companies, further removed barriers for red-chip companies listed overseas to seek domestic offering and listing, and specified review standards of red-chip companies that apply for offering and listing on the SSE STAR Market. Third, the reform of the SZSE ChiNext Board and the pilot of the registration-based IPO system were successfully launched. Since its reform, the market witnessed a year of safe and stable operation, major institutional rules and technology systems ran smoothly, and the reform produced initial results.

5.3.2 Multiple measures were adopted to enhance the quality of listed companies

5.3.2.1 Rules and systems of continuous regulation were adjusted and optimized

In 2020, the SSE STAR Market fulfilled the requirements of “strengthening institutional development” by constantly adjusting and optimizing the rules and systems of continuous regulation based in the principle of the registration-based IPO system, formulated and issued the *Guidelines of Shanghai Stock Exchange for the Application of Self-regulatory Rules for the Listed Companies on the SSE STAR Market No. 1 – Regulated Operation of Listed Companies* (hereinafter referred to as the *Guidelines for SSE STAR Market No. 1*. First, it streamlined the rules. The SSE, by classifying different matters into categories, merged and integrated 22 sets of business rules on the regulated operation on the SSE STAR Market. There are a total of 282 articles in the integrated guidelines, nearly half the number of the articles in the 22 sets of rules before the integration. Second, it tailored the rules to companies on the SSE STAR Market. The SSE adjusted and deleted part of the rules and requirements incompatible with the reform of the registration-based IPO system, to refrain from excessive interference in the internal governance of companies on the SSE STAR Market, allow room for these companies and ease their burden. Third, it highlighted the key points. The SSE set a special chapter in the *Guidelines for SSE STAR Market No. 1* to regulate the everyday behaviors of companies, especially the critical few, on the SSE STAR Market through targeted rules on corporate governance, internal control and responsibilities of the critical few, so as to prevent major risks such as financial fraud, capital appropriation, illegal guarantees and high-proportion equity pledges from recurring on the SSE STAR Market.

The SZSE actively advanced the establishment, revision, abolishment and interpretation of rules in recent years. In 2020, based on the latest regulatory situations and market demand, it continuously improved regulatory rules and systems with an equal focus on two aspects. The first was to “do subtraction”. The SZSE further reduced the levels of rules, cut the number of rules, and deleted content unsuitable for the development of situations or placing extra burden on listed companies, so as to improve the effectiveness of regulation. At the same time, based on the characteristics of SZSE boards and listed companies, the SZSE integrated self-disciplinary regulatory rules, and incorporated the improvement of such rules for the ChiNext Board as one of the overall reform tasks of the ChiNext Board. The SZSE made further adaptive, differentiated arrangements based on the characteristics of companies that follow the general trend of innovation, creation and creativity and those in the traditional industries that are deeply integrated with new technologies, new industries, new forms of business and new models. The second is to “shore up weak spots”. According to the new requirements stipulated in relevant laws and regulations including the new *Securities Law*, the new situations of the capital market and the new philosophies on self-regulation, the SZSE supplemented rules to improve the effectiveness of the system of rules. Moreover, centering on special businesses, the SZSE enriched its business guidelines and had them easier to use. Through phase-by-phase implementation, the SZSE rebuilt a structured, streamlined, and clearly positioned system of continuous regulatory rules, with the *Rules Governing the Listing of Shares and Rules Governing the Listing* *of shares on the ChiNext Board* serves as its core, the *Guidelines for the Standard Operation of Listed Companies on the ChiNext Board* and guidelines for information disclosure as its mainstay, supplemented with business guidelines.

5.3.2.2 Categorized regulation was enforced for information disclosure

In 2020, the SSE fully implemented the *Opinions on Further Improving the Quality of Listed Companies* issued by the State Council, and released the *Guidelines No. 3 for the Application of Self-regulatory Rules for Listed Companies – Categorized Regulation of Information Disclosure* (hereinafter referred to as the *Guidelines No. 3*), which mainly touched on two aspects. First, the *Guidelines No. 3* focuses on the "two distinctions" in companies and items, highlights the priorities for regulation, and makes differentiated regulatory arrangements. Second, the *Guidelines No. 3* adheres to placing equal emphasis on both regulation and service, according to which the SSE would stick to its main task of regulation and guard against risks while earnestly intensifying services, enriching service measures, and improving service quality. The *Guidelines No. 3* clearly defines categorized regulation for information disclosure, attaches importance to both regulation and service, follows the market-oriented and law-based principles, and takes actions along two main lines, namely "what to regulate" and "how to regulate". In terms of "what to regulate", the *Guidelines No. 3* specifies four types of key companies for regulation, including those with risk warnings imposed on their stocks, those with annual evaluation of information disclosure rated as D, those with disclaimer of opinion or adverse opinion issued to their annual reports, and those with disclaimer of opinion or adverse opinion issued to their annual internal control. It also identifies seven key items for regulation, such as false records, misleading statements or major omissions in the disclosure of financial information or major events, so as to specify the items to be streamlined. Regarding "how to regulate", the *Guidelines No. 3* integrates regulation into service, incorporates service philosophy, content and mechanism into the regulatory code of conduct, stresses on providing services to listed companies, so as to improve the effectiveness of information disclosure, lower the cost of information disclosure, stimulate market vitality with facilitated financing, continuously optimize the market ecosystem by preventing and defusing major risks, and thus promote the regulated development of listed companies with improved quality and efficiency.

In 2020, the SZSE issued the *Administration Measures for Risk Classification of Listed Companies* (hereinafter referred to as the *Measures*), which summarized its experience of using artificial intelligence(AI), big data and other cutting-edge technologies to develop an intelligent risk monitoring platform, and promoting deep integration of regulatory experience and intelligent technologies, further refined its risk classification regulation system, and actively explored the new regulatory model of "human plus technology" to advance category-based, targeted and technology-based regulation, refine the risk control and prevention system, and improve the efficiency of front-line regulation. First, the *Measures* specifies that the SZSE would take a "zero tolerance" attitude towards violations of laws and regulations such as financial fraud, occupation of funds and illegal guarantee, channel major regulatory resources into listed companies categorized as high risk or secondarily high risk, and pay close attention to their information disclosure, M&As, and refinancing, etc. As regulated in the *Measures,* high-risk companies cannot be rated A in the information disclosure evaluation. Also, the SZSE would disqualify them for the exemption of information disclosure review, exercise double review on their annual reports, and order them to publicize inquiry letters on their annual reports and relevant replies, etc. so as to guide listed companies to focus on their main businesses and operate in an honest and compliant manner. The *Measures* further defines the responsibilities of intermediaries and urged them to be diligent and responsible. It makes differentiated regulatory arrangements for different types of companies and optimizes the allocation of regulatory resources to exercise a more precise regulation. Second, a working mechanism featuring effective use of categorized regulation information is specified Under such mechanism, the SZSE would improve its communication and collaboration mechanisms on categorized regulation with the CSRC and its local offices to share regulatory resources, promote regulatory coordination, jointly defuse risks of listed company, and facilitate improvement in the quality of listed companies. The SZSE would report relevant information to local governments, and cooperate with local governments on forestalling and defusing risks related to listed companies. The SZSE would notify high-risk companies of their risk ratings, stress the urging and warning roles of classification and rating results on listed companies, with a view to motivating listed companies to operate in a standard way more willingly.

5.3.2.3 Favorable market environment and public opinions were fostered to improve the quality of listed companies

The SSE and the SZSE actively improved their special services for listed companies, advanced the establishment of a coordination mechanism, ensured implementation of targeted measures for different companies, supported the SOE reform, and addressed the difficulties and risks of private enterprises. The SSE and the SZSE provided special services to central SOEs, examined and summarized the current situations of state-controlled business groups, communicated with them through various channels, and thus helped them to achieve a higher rate of asset securitization. They proactively built platforms for communication and resource sharing with private enterprises, so as to help address difficulties and defuse risks. The two exchanges continued to provide better services of M&As and refinancing, actively supported companies listed on the Main Board of their equity carve-out and stock-based incentive, and guided product innovations such as "converting B Shares into A Shares" and "converting B Shares into H Shares". They also encouraged listed companies to strengthen their exchanges with the market, host annual and quarterly earnings conference calls, and present their quality and image.

COLUMN SSE releases Three-Year Action Plan for Advancing Quality Improvement of SSE-listed Companies

To fully implement the Opinions on Further Improving the Quality of Listed Companies of the State Council and the arrangements made by the CSRC, the SSE formulated the Three-year Action Plan for Advancing the Quality Improvement of the Companies Listed on the Shanghai Stock Exchange (hereinafter referred to as the Plan) on November 3rd, 2020, to clarify the specific timetable and roadmap for SSE's tasks. The Plan details the arrangements for 39 specific tasks in the five aspects of corporate governance, information disclosure, system development, regulation improvement and service enhancement, including 16 major tasks for advancement and 23 tasks for normal implementation. Among these tasks, the priority is placed on the key project of establishing the SSE STAR Market and piloting the registration-based IPO system, where the quality of the listed companies should be controlled from its "entrance" to avoid introduction of risks and to provide constant driving force for market growth. Meanwhile, active support and more services should be extended to listed companies, so that they may grow better and stronger by leveraging resources in the capital market. In addition, efforts should be intensified to develop the channel for "exit", continuously pushing forward the reform of the delisting system.

First, the Plan specifies tasks to regulate corporate governance. According to the Plan, the SSE should focus on the behaviors of the "critical few", and strengthen the sense of integrity and responsibility among the actual controllers, directors, supervisors and senior executives of the listed companies. It should effectively implement the special campaign of the CSRC on corporate governance, regulate the operation of the shareholders' meeting, board of directors and board of supervisors of the listed companies, and consolidate the internal control mechanisms of the companies. The SSE should advance the improvement of equity incentives and employee stock ownership schemes, cultivate and form the market-oriented incentive and restraint mechanisms, and stimulate the internal motivation of the listed companies to concentrate on operations and enhance performance.

Second, the Plan arranges for improving the quality of information disclosure. The SSE is tasked to revise and optimize the system of self-regulatory rules on information disclosure centered around the Rules Governing the Listing of Stocks on Shanghai Stock Exchange, improve the guidelines on information disclosure for the industries and the format guidelines for temporary announcements, stress the effectiveness of information disclosure, and *reduce the costs of information disclosure. It should guide listed companies to actively releases information useful for investors' decision-making, and cut down redundant information. The SSE is also required to support the listed companies to fully communicate with investors, especially the small and medium-sized investors, through multiple channels, so as to impart the company's intrinsic value.*

Third, the Plan aims to effectively develop the systems. The SSE should strengthen the building of channels for "entrance" and "exit". The growth of the STAR Market and the reform of the registration-based IPO system should be promoted in depth to achieve effective quality control of the listed companies from the source. It is stated that the SSE should tighten the supervision on delisting, continuously push forward the reform of the delisting system, and optimize the risk alert board. It should provide support for the companies to fully capitalize on such market tools as M&As, refinancing, corporate bonds, convertible bonds, preferred stocks, real estate investment trusts (REITs), and exchange traded funds (ETFs). What's more, The SSE is tasked to vigorously explore institutional innovation on the STAR Market, so as to provide impetus for technologically innovative enterprises and turn good practice into replicable, promotable experience.

Fourth, the Plan focuses on the regulation of main responsibility and main business of the listed companies. The SSE should implement the requirement of "enhancing regulatory effectiveness by streamlining and refining administration", carry out categorized regulation and formulate business rules for categorized regulation. Special attention should be attached to risky companies and priorities, and strict punishment should be placed on major violations such as financial fraud, capital occupation and illegal guarantees. The SSE should adhere to categorized handling, continuously advance the resolution of the pledge risks of the listed companies, and effectively defend the bottom line of avoiding systemic risks. It should identify problems at an early stage and nib them in the bud through preemptive analysis and judgment, and strictly prevent irregularities from reoccurring on the STAR Market. Steps are also needed in advancing RegTech, in a way to secure strong support for risk identification and regular supervision.

Fifth, the Plan deepens services for listed companies. The SSE is tasked to work with all parties and vigorously support qualified companies to go public on the SSE STAR Market and the SSE Main Board. It should continuously carry out the special campaign on improving the quality of listed companies in key regions, and actively drive the SOE reform while helping private companies overcome difficulties. Emphasizing synergy among different parties and ecological construction, it need to take the initiative to enhance information sharing with local Party committees and local governments, with closer communication and collaboration with relevant authorities. Steps should be taken to vigorously encourage briefings on performance, *regularly organize symposiums for companies in the same industries, guide market institutions to play their roles, optimize market ecology, and coordinate all parties to create synergy.*

COLUMN The SZSE and the CSRC Shenzhen Branch signed the Action Plan to Jointly Advance Quality Improvement of the Companies Listed on the Shenzhen Stock Exchange

In June 2020, the SZSE and the CSRC Shenzhen Branch signed the Action Plan to Jointly Advance Quality Improvement of the Companies Listed on the Shenzhen Stock Exchange. Based on the regular collaboration mechanisms including the exchange of regulatory information, joint regulation on major issues and joint on-site inspections, the SZSE and the CSRC Shenzhen Branch aimed to enhance the regulatory coordination on improving the quality of listed companies, consolidate and expand the results of their cooperation, and tackle risks of key companies, thus fully implementing the CSRC's overall arrangements on improving the quality of listed companies, enhancing the effectiveness of regulatory collaboration on listed companies, promoting high-quality development of the capital market, and better serving the development of the Guangdong-Hong Kong-Macao Greater Bay Area and the Shenzhen Pilot Demonstration Area of Socialism with Chinese Characteristics.

First, the SZSE and the CSRC Shenzhen Branch will work together to enhance regulation for greater synergy. Both parties will establish a liaison mechanism for regular exchanges, jointly study the prominent risks and problems that restrict the high-quality development of listed companies through joint research projects, symposiums or forums, and other means, and give policy recommendations for solutions. They will strive for the support of the Shenzhen CPC Municipal Committee and Shenzhen Municipal People's Government to optimize the external environment.

Second, supervision will be conducted in a category-based way with key breakthroughs. They will have more interactions and exchanges over information and opinion sharing on the SZSE's profile system, timely update the categorized regulation ratings of listed companies, identify risky companies for key breakthroughs and risk points, and develop approaches and effective paths for improving the quality of listed companies.

Third, regular assessments will be made and summarized for scaling up the best practices. The authorities will strengthen research and investigation, enhance investor education, summarize typical cases of risk defusing and promotable experience in a timely manner, and better monitor and respond to public opinions, so as to create a positive and favorable environment of public opinions.

5.3.3 Reform of the delisting system was deepened

5.3.3.1 New delisting rules were implemented

In December 2020, the SSE and the SZSE respectively released and implemented the *Rules of Shanghai Stock Exchange for Listing of Stocks*, the *Rules of Shenzhen Stock Exchange Governing Share Listing*, the *Implementation Measures of Shanghai Stock Exchange for the Re-listing of Delisted Companies*, the *Implementation Measures of Shenzhen Stock Exchange for the Relisting of Delisted Companies*, the *Rules of Shanghai Stock Exchange for Stock Listing on the STAR Market*, the *Rules Governing the Listing of Shares on the ChiNext of Shenzhen Stock Exchange*, the *Measures of the Shanghai Stock Exchange for the Administration of Stock Trading on the Risk Alert Board*, and the *Trading Rules of SZSE*, to further improve delisting indicators, delisting procedures, risk warning scenarios and delisting-related trading arrangements in the following four aspects. First, the trading, financial and normative delisting indicators were comprehensively improved, and new delisting indicators on major violations of laws and restraints for shareholding lessening were added, which made the delisting indicators more targeted. Second, the delisting procedures were simplified, the two stages of listing suspension and resumption were canceled, the start point for the continuous listing suspension in the delisting category of major violations was deferred, and the deliberation procedures of the Listing Committee were simplified. Meanwhile, in accordance with practices on the SSE STAR Market, the review period for delisting indicators in the category of financial affairs was adjusted, so as to enhance the efficiency of delisting. Third, two additional scenarios of risk warnings were introduced. Fourth, relevant supporting arrangements were appropriately adjusted at the same time, which optimized the mechanism of delisting transitional period, and shortened the delisting transitional period from 30 trading days to 15 trading days. No price limits would be set on the first day of the delisting transitional period, and the delisting transitional period for trading-related delisting was removed.

5.3.3.2 First-day trading mechanism for the re-listing of delisted stocks was improved

First, the specific circumstances of intraday temporary trading suspension were clarified for relisted stocks on their first day of listing. According to the adjustments, the intraday temporary trading suspension should be implemented when the rise or fall in the intraday trading prices reaches or exceeds 30 percent and 60 percent of the opening price for the first time on the first trading day. In the case of “intraday turnover rate reaching or exceeding 30 percent” as provided in the original rule, the intraday temporary trading suspension will not be enforced. Second, it was stipulated that the intraday temporary trading suspension should last for 10 minutes during which period orders can be placed or canceled. Upon resumption of trading, the orders accepted will be matched through call auction. Third, matters concerning the announcements on temporary trading suspension were specified. Fourth, the price limits to the limit orders of relisted stocks during continuous auction on their first day of listing were defined, with the quoted prices of buy orders not exceeding 102 percent of the benchmark bid price and those of sell orders not running below 98 percent of the benchmark ask price. Yet, there would be no price limit to the orders placed during call auction and intraday trading suspension. Fifth, the price limits for the stocks trading on and after the second day of the delisting transitional period were clarified, with those for stocks during their delisting transitional period on the Main Board and the SZSE SME Board standing at 10 percent, and those for stocks during their delisting transitional period on the SZSE ChiNext Board not exceeding 20 percent.

5.3.4 Institutional building for the transfer listing of NEEQ-listed companies to the SSE STAR Market and the SZSE ChiNext Board was advanced

On June 3rd, 2020, the CSRC issued the *Guiding Opinions on the Transfer of Companies Listed on the National Equities and Exchange Quotations for Listing on Other Boards*, to set fundamental requirements on the basic principles, major institutional arrangements and regulatory arrangements for transfer listing. According to the overall arrangements of the CSRC, the SSE and the SZSE formulated and released the *Measures for Transfer Listing of Companies from the National Equities Exchange and Quotations to the SSE STAR Market (for Trial Implementation)* and the *Measures of Shenzhen Stock Exchange for Transferring the Listing of Companies on National Equities Exchange and Quotations to the ChiNext Board (Provisional)* on February 26th, 2021, to specify institutional arrangements for transfer listing. First, the conditions for companies to transfer to the SSE STAR Market and the SZSE ChiNext Board were clarified. Such conditions are generally consistent with those for IPOs on the SSE STAR Market and the SZSE ChiNext Board. The companies planning to transfer are required to meet the positioning and IPO conditions of the SSE STAR Market and the SZSE ChiNext Board and the listing criteria stipulated in the *Rules Governing the Listing of Shares on the ChiNext Board*, etc. The transfer companies should be those that have been quoted continuously on the NEEQ "select tier" for more than one year, and should meet certain requirements in terms of the number of shareholders, cumulative trading volume, among others. Second, the review procedures for transfer listing were improved. Registration of NEEQ-listed companies would not be required in the review procedures. The issuance and listing review institution of the SZSE is responsible for reviewing transfer applications, issuing review reports and submitting the applications to the ChiNext Board Listing Committee for deliberation. Compared with IPO, the time for transfer listing review was reduced to 2 months and the effective period of decision on approving the transfer listing was reduced to 6 months. The review focused on whether the companies to transfer meet relevant conditions and their information disclosure satisfies relevant requirements. Third, transitional arrangements for lock-up periods were made. The lock-up period applicable to the controlling shareholders and de facto controllers of companies to transfer to another board was reduced to 12 months after the transfer listing. The share lessening within 6 months after lifting the restrictions shall not lead to control change. The restricted period was 12 months for the shares held by directors, supervisors and senior management members. The shares that are restricted at the time of applying for transfer, if their restricted periods have not expired at the time of transfer listing, will remain restricted within the remaining restricted period after the transfer listing. Fourth, trading mechanisms were coordinated. For shares of companies after transfer, their trading, margin trading and short selling, stock pledged repurchase, agreed repurchase transaction and investor suitability management would be kept in line with the IPO of shares under the registration-based IPO system of the ChiNext Board. The opening prices for reference on the first trading day of transfer listing are the closing prices on the last trading day when the companies traded on the NEEQ "select tier".

5.3.5 A simple and efficient system of self-regulatory was built

In accordance with relevant requirements of the CSRC on clearing the system of rules, the SSE clarified the system of rules and rearranged over 100 business rules. Aiming at building a system of rules that is "clear in structure and format and easy to understand and use", it works to advance the "formulation, revision, abolition and merging" of the information disclosure rules of the listed companies, continue to make the regulatory standards more transparent and practical, promote the building of a regulatory system for listed companies in an orderly manner, and help improve the institutional fundamentals of the capital market. Following such thinking, the SSE first of all released the *Guidelines No. 1* to *Guidelines No. 8 for the Application of Self-regulatory Rules for Listed Companies*, specified relevant regulatory business rules for listed companies and improved regulatory transparency in terms of major asset restructuring, standards of the implementation of disciplinary actions, categorized regulation of information disclosure, issuance of targeted convertible bonds to specific targets. Second, the SSE issued the *Guidelines of Shanghai Stock Exchange for the Application of Self-regulatory Rules for the Listed Companies on the SSE STAR Market No. 1* and *No. 2*, to regulate the standard operations and voluntary information disclosure of companies listed on the SSE STAR Market, and advance quality improvement of these companies on a continuous basis. Third, the SSE released the *Guide to Regular Reports of Listed Companies*, formulated the *Business Guides for Information Disclosure of Companies Listed on the SSE STAR Market No. 1* to *No. 8* to improve the quality of information disclosure. Fourth, the SSE issued the transitional rules for the new *Securities Law*. Regarding new regulations in the law that can be directly implemented, the SSE released relevant notices on aligning applicable business, formulated the SSE guidelines for listed companies declaring insiders with inside information, and issued the guidelines for listed companies on announcing renewal or change of appointment of accounting firms, etc.

The SZSE, taking studying and implementing the new *Securities Law* as an opportunity, earnestly implemented relevant arrangements and requirements made by the CSRC, and vigorously cleared and optimized self-regulatory rules in a systematic way. In 2020, it formulated or revised 72 business rules and abolished 78. The SZSE has initially built a system of rules with basic business rules such as issuance, listing, trading and member management rules at its core, business guidelines as its mainstay, and business guidelines as its supplement. It categorized and numbered the rules according to their applicable business domains, so as to make self-regulatory rules more concise, transparent and user-friendly. First, the SZSE streamlined the hierarchy of rules in the vertical direction, comprehensively standardized and cleared low-level documents such as regulatory Q&A and memorandums across the board, and further clarified the positioning of rules. It upgraded the rules that contain substantive regulatory requirements into business rules, downgraded operating content into operating guides, and resolutely put an end to "pocket policies". Second, the SZSE broke the whole into parts horizontally. The SZSE continuously integrated fragmented documents such as notices, combined scattered rules for the same matter, and further reduced the number of rules, which served to form an organic, unified system of rules with clear classification. Third, the SZSE planned an overall serial number-based management. On the basis of piloting the guidelines for information disclosure of listed companies, the SZSE gradually incorporated product rules and business rules into a serial number-based management, so as to unify the form and make rules easy to find. Fourth, the SZSE continuously cleared the rules in a dynamic way. It sorted out and released the 11th directory of abolished rules, and abolished 44 rules that no longer applied, which earnestly maintained the simple and efficient system of rules.

5.4 Risk prevention and disposal

5.4.1 A unified risk monitoring platform was built

The SZSE continuously advanced the building of a unified risk monitoring platform. Taking promoting regulatory transformation and upgrading the quality of services as its general objectives, and closely following the demand for regulation on trading and information services of risk monitoring, the SZSE put in place a unified risk monitoring platform. The platform includes a self-developed risk monitoring system for market operations, a risk monitoring system for three key businesses, namely stock pledge, margin trading and short selling, and fixed income, as well as a risk management information system that coordinates SZSE's risk management business. Together, they enable SZSE to exercise risk prevention and control in a comprehensive manner, enhance the application of big data and other advanced technologies in regulation, and continuously advance the optimization of systems.

5.4.2 Risk prevention and response in key areas were enhanced

In 2020, the SSE and the SZSE earnestly implemented the instructions of the CPC Central Committee and the State Council on the capital market, focused on the key tasks proposed by CSRC special meetings, and continuously attached great importance to preventing and defusing major risks in the market, while closely monitoring multi-dimensional risk indicators, including macro indicators, meso indicators, liquidity indicators, and those with related markets. On the whole, there were no major risk events in the Shanghai Stock Exchange in 2020. Despite speculations on some stocks that occurred shortly, they did not affect the operation of stock indexes.

5.5 Opening-up of the stock market

5.5.1 Interconnectivity mechanisms were further expanded

5.5.1.1 Interconnectivity between the stock markets of the Chinese mainland and Hong Kong SAR was optimized and improved

In 2020, the scope of stocks eligible for trading under the Shenzhen-Hong Kong Stock Connect and the Shanghai-Hong Kong Stock Connect (collectively referred to as Stock Connects) were further expanded, and eligible A-shares listed on the SSE STAR Market were included in the Stock Connects. On November 27th, 2020, the SSE, SZSE and Hong Kong Exchanges and Clearing Limited (HKEX) announced to the market that they have reached a consensus on the arrangements for expanding the scope of stocks eligible for trading under the Stock Connects, which involves the inclusion of eligible A-shares listed on the SSE STAR Market into the scope of stocks for trading under the Shenzhen-Hong Kong Stock Connects, as well as the inclusion of shares of pre-revenue biotech companies listed in Hong Kong SAR into the Southbound Trading of Stock Connect. According to the arrangements, SSE STAR Market-listed shares that are constituent stocks of the SSE 180 Index and SSE 380 Index, or have H-share counterparts listed in Hong Kong, will be eligible for Northbound Trading under the existing Shanghai-Hong Kong Stock Connect arrangements. Accordingly, their corresponding H-shares will be included in Southbound Trading of Stock Connect pursuant to the existing Stock Connect arrangements. The shares of pre-revenue biotech companies listed under Chapter 18A of Hong Kong's *Main Board Listing Rules* that are eligible constituent stocks of the Hang Seng Composite Index, or have corresponding A-shares listed on SSE or SZSE, will be included in Southbound Trading of Stock Connect under the existing Stock Connect arrangements. Shares of biotech companies that are H-shares in STAR Market-listed A+H companies will be included in Southbound Trading of Stock Connect pursuant to the inclusion arrangements for STAR Market-listed shares mentioned above. On December 28th, 2020, the shares of the aforementioned biotech companies were included in the Hong Kong Stock Connect. On February 1st, 2021, the aforementioned shares listed on the SSE STAR

Market were included in Shanghai-Hong Kong Stock Connect.

The SZSE continuously explored and optimized interconnectivity mechanisms, enhanced cross-border regulatory cooperation, and increased its capabilities to provide services for cross-border capital flow, thus well playing its role in ensuring continuous and smooth operation of Shenzhen-Hong Kong Stock Connect. It continued to improve the institutional arrangements and expand the scope of stocks eligible for trading in the Southbound Trading of Stock Connect. The SZSE included the shares of eligible biotech companies listed in Hong Kong SAR and shares of biotech companies that are H-shares in STAR Market-listed A+H companies in the Southbound Trading of Stock Connect. It adjusted the disclosure indicator for foreign shareholding ratio from 26 percent to 24 percent, to facilitate the participation of foreign investors. The SZSE advanced the establishment of an investor identification regime for Southbound trading to improve the effectiveness of cross-border regulation. Furthermore, it revised the rules and agreements in accordance with the implementation of the new *Securities Law* and the adjustments to the scope of stocks eligible for trading, and facilitated transitions for relevant rules.

5.5.1.2 Cooperation on depository receipts was deepened

In 2020, three listed companies on the SSE, namely China Pacific Insurance (Group) Co., Ltd. (CPIC), China Yangtze Power Co., Ltd. and SDIC Power Holdings Co., Ltd., successfully completed the issuance of Global Depositary Receipts (GDRs) which were officially listed on the London Stock Exchange (LSE) under the Shanghai-London Stock Connect scheme. The Shanghai-London Stock Connect scheme expanded new channels of direct financing for listed companies. Since its launch in 2019, four SSE listed companies have raised a total of USD 5.83 billion through the issuance of GDR. Meanwhile, innovation in the Shanghai-London Stock Connect scheme allowed eligible companies listed on the Chinese market to price their offering overseas around their A shares prices, and resolved the dilemma that companies have to issue overseas at a discount, which not only increased financing efficiency but also protected the rights and interests of investors on China's A-share market. The Shanghai-London Stock Connect scheme also played an important role in facilitating listed companies to become more international and pursue high-quality development, increasing financial support for the real economy, opening up the capital markets at a higher level, and advancing the building of a new development pattern of dual circulations with domestic and foreign markets reinforcing each other. CPIC introduced Swiss Re Principal Investments Company Asia Pte. Ltd. as its keystone investor to enhance in-depth reform of the international GEM board and pilot the cooperation on an overall scheme of registration-based system through long-term equity investment. China Yangtze Power raised capital through a global offering of GDRs listed on the LSE under the Shanghai-London Stock Connect scheme, representing a significant milestone for the company to integrate with international capital markets.

5.5.1.3 The scope of ETF Connectivity Scheme was expanded

On June 25th, 2019, the first SSE-JPX ETF Connectivity products were successfully listed on the SSE under the China-Japan ETF Connectivity Scheme. Since then, the ETFs under the scheme have run smoothly and performed well. The average rate of return of the 4 Tokyo-listed China ETFs was about 25 percent, and the average rate of return of the 4 Shanghai-listed Japan ETFs was about 30 percent. To fully tap the potential of ETF Connectivity cooperation, the SSE and the Japan Exchange Group (JPX) jointly carried out campaigns to promote the first products. In 2020, they held briefings on the China-Japan ETF Connectivity Scheme in Shanghai and Tokyo respectively via video link, to help investors from both countries learn more about each other's markets. Preparing for the development of the second batch of products, the SSE worked to incorporate more products into the China-Japan ETF Connectivity Scheme, explore ways to increase the types of products and scope of ETF connectivity, and advance the exchanges of experience from the Chinese and Japanese markets in the industries of science and technology innovation, REITs and sustainable finance. What's more, on June 12th, 2020, HuaAn Fund launched CAC40 ETF on the Shanghai bourse, which was the first domestic ETF investing in the French stock market. Constituting an important channel for domestic investors to invest in the French market, it represented a major achievement in the two-way cooperation between the SSE and Euronext on cross-border ETFs.

On October 23rd, 2020, the Shenzhen-Hong Kong ETF Connect scheme was officially launched, marking an important milestone in the long-term, in-depth cooperation between the exchanges and asset management institutions in the two cities. The program stands to further enrich trading varieties in the two exchanges, provide more diversified cross-border investment and wealth management choices for investors from the Chinese mainland and Hong Kong, and therefore enhance the integration of financial markets in the Guangdong-Hong Kong-Macao Greater Bay Area. Among the first batch of Shenzhen-Hong Kong ETF Connect products, Harvest Hang Seng China Corporate ETF and Yinhua ICBC CSOP S&P China New Economic Industry ETF were listed on the SZSE, and Hang Seng Harvest CSI 300 ETF and CSOP Yinhua CS 5G Communications Theme ETF were listed on the HKEX.

5.5.2 Opening-up of the stock market was actively advanced

5.5.2.1 New QFII and RQFII regulations were released

On May 7th, 2020, the PBC and the SAFE issued the *Regulations on Funds of Securities and Futures Investment by Foreign Institutional Investors* to remove restrictions on the investment quota of QFIIs and RQFIIs in China's market, and at the same time, standardize and simplify the administrative requirements for domestic investment by QFIIs. On September 25th, 2020, the CSRC, the PBC, and the SAFE released the *Measures for the Administration of Domestic Securities and Futures Investment by Qualified Foreign Institutional Investors and RMB Qualified Foreign Institutional Investors* (hereinafter referred to as the *New QFII Rules*), to make important revisions to previous QFII and RQFII rules as follows: integrating previously separate regimes for QFII and RQFII qualifications and rules; relaxing qualification requirements; facilitating investment and operations of QFIIs and RQFIIs; and expanding investment scope among others. The *New QFII Rules* officially went into effect on November 1st, 2020. As of end-2020, QFII licenses were granted to 558 overseas institutions from 34 countries and regions.

5.5.2.2 International cooperation on green finance in the securities sector was proactively carried out

First, the SSE and the SZSE actively joined green finance groups of international organizations to participate in setting green standards and rules. Currently, the SSE and the SZSE are both members of the World Federation of Exchanges (WFE) Sustainability Working Group (SWG), UN Sustainable Stock Exchanges (UN SSE) Initiative and other international organizations and their working groups related to green finance, participating in the discussions about and exchanges on relevant standards and practices. In July and August 2020, the SSE and the SZSE joined the UN SSE Climate Disclosure Advisory Group to provide guidance to global issuers on climate disclosure. In September, the SSE representative was elected as the vice chairman of the WFE SWG. In November, the SSE, as the vice chair exchange of WFE SWG, led the working group to provide feedback to the International Financial Reporting Standards Foundation (IFRS Foundation) on *Consultation Paper on Sustainability Reporting*. Since 2011, the WFE appointed SZSE representatives to work at the Consultative Advisory Group (CAG) of the International Auditing and Assurance Standards Board (IAASB), and participate in the standard-setting for sustainability information disclosure in audit reports. Second, the SSE and the SZSE enhanced international exchanges and cooperation on green finance to share the green concept and practices of Shanghai and Shenzhen. In September 2020, the SSE held the ESG Webinar “Dialogue with International Investors: ESG Capacity Building for Listed Companies”, with a view to enhancing ESG capacity building for companies listed on the SSE and providing a platform for promoting the companies that excel at ESG. In October, the SSE hosted the Shanghai Stock Exchange Global Investors Conference 2020, and held a roundtable session dedicated to green finance, where representatives of the PBC, the United Nations Conference on Trade and Development (UNCTAD), WFE and other institutions brainstormed for green economic recovery in the post-pandemic world. In May 2020, representative of the SZSE participated in the BofA Securities ESG Forum as a guest speaker to introduce SZSE’s ESG development and characteristics and publicize the ideas and practices of ESG of Shenzhen’s capital market.

In June, representative of the SZSE made a keynote speech on SZSE's achievements in supporting green finance development at the webinar of the UN PRI. Moreover, the SZSE cooperated with the MSCI on ESG, holding the MSCI ESG Training for A-share Companies, and studying and exploring cooperation on green index. The SZSE also attended the Seminar on the Sustainable Blue Economy Finance Principles of the World Bank led by the Ministry of Natural Resources (MNR) to introduce SZSE's practices in the development of blue economy. Third, supports were given to overseas exchanges that were jointly built or invested by the Chinese stock exchange to develop green finance. In August 2020, Damu Entrepreneurship Development Fund JSC (Damu Fund) of Kazakhstan listed the country's first-ever green bond on the Astana International Exchange (AIX) in which the SSE holds a stake. In September, China Europe International Exchange (CEINEX), a joint venture established by SSE, China Financial Futures Exchange and Deutsche Börse Group, signed a Memorandum of Cooperation with the Investment Association of China (IAC) to strengthen cooperation on green finance. In November, the CEINEX and the IAC jointly held the 2020 Seminar on China-EU Green Building and Green Finance at SSE's northern base.

5.5.2.3 Service system for global investors was improved

In 2020, when face to face communication was limited, the SSE and the SZSE fully leveraged online tools and resources to run online promotion and research activities of varied contents and forms. The Shanghai Stock Exchange Global Investors Conference 2020 was held in a blended way (online plus physical), with nearly 1,000 participants from more than 300 institutions across over 20 countries and regions, and was well received by all parties. To encourage overseas investors' participation in the SSE, the SSE organized online activities throughout the year to introduce the companies listed on the SSE Main Board and SSE STAR Market to global investors, and hosted workshops on themes including the first anniversary of the SSE STAR Market, the implementation of the new *Securities Law*, the release of *New QFII Rules*, and ESG investment. The SSE made great efforts in well telling stories of China's capital market and boosting the confidence of international investors. Meanwhile, the SSE significantly increased the frequency and coverage of English information pushes, set up a dynamic English information push mechanism that delivers real-time analysis of topics and trends, market weekly and monthly reports on a regular basis, and thus enriched the forms of services provided for international investors and offered a greater breadth and depth of service to international investors. The SZSE cooperated with global securities dealers and companies offering indexes to hold 16 virtual roadshows to introduce the reform of the SZSE ChiNext Board, improvement and updates of Shenzhen-Hong Kong Stock Connect, the *New QFII Rules* and other important information, covering more than 300 overseas institutions, and thus developed a successful model of independent roadshow introducing SZSE products. The

SZSE also published 33 SZSE Weekly Bulletins for over 1,000 global investors, having the voice of China's capital market heard, and new market policies and regulations interpreted, exerting positive impacts on maintaining the stable operations of the market.

5.5.2.4 Multifaceted services were delivered for the development of the BRI

Considering international situations and actively leveraging current platforms to connect domestic and foreign capital markets, the SSE pragmatically provided multifaceted services to support the high-quality development of the BRI. First, the SSE promoted the cooperation of capital markets. The SSE maintained close contacts with exchanges in BRI countries via the Shanghai International Center for Communication and Cooperation between Exchanges, passing on its experience of China's capital market development to those countries, helping their capital markets train talents in finance, and providing support to the development of listed companies' BRI related businesses. In particular, it held the 2020 Stock Exchange Virtual Conference, which brought together more than 50 participants from 14 overseas exchanges in Asia, Europe and Africa. The SSE organized the Seminar on China's Bond Market hosted by the CSRC and Lao Securities Commission. It gave lectures on the topic of BRI Investment and Financing to 253 trainees from 177 listed companies at the SSE Training Course for Company Secretary. Second, the SSE steadily advanced overseas equity cooperation. In 2020, the CEINEX established bases of market services in Qingdao and Chengdu to further support Chinese-funded enterprises to go global. The first RMB-denominated bond in Kazakhstan and along the BRI countries in Central Asia was listed on Kazakhstan's AIX, and the funds raised would be used to support local infrastructure and BRI projects in Kazakhstan. Pakistan Stock Exchange launched the first two ETFs and the Pakistan Energy Sukuk (PES), the first ever debt issuance by the government of Pakistan through book building, which further increased market depth and improved liquidity. Third, the SSE enhanced cooperation on information and data based on the information and data sharing services of China Investment Information Platform. As of end-December 2020, a number of exchanges in the BRI countries joined the China Investment Information Platform, including Kazakhstan Stock Exchange (KASE), Moscow Exchange, B3 S.A. (BRASIL, BOLSA, BALCÃO), Johannesburg Stock Exchange (JSE) and Singapore Exchange (SGX). On the platform, 9 clients obtained authorization of index from Moscow Exchange and 11 clients obtained authorization of index from B3 S.A..

The SZSE took the initiative to serve national strategies, such as the BRI, high-level opening-up, and the development of the Greater Bay Area by engaging in pragmatic, multi-layered international exchanges and cooperation. First, the SZSE gave full play to its role as a strategic investor to support the development of technology infrastructures in the capital markets of BRI countries. As the shareholder of both Pakistan Stock Exchange (PSX) and Dhaka Stock Exchange (DSE) of Bangladesh, the SZSE supported the digital transformation of local capital markets. In 2020, the SZSE helped the PSX develop and deploy its trading system and surveillance system with the Phase-I project running smoothly. The SZSE also delivered the information disclosure system and the Financial Data Exchange Platform (FDEP) system to DSE. Second, the SZSE set up an investment and financing service network to promote cross-border interactions between capital and the real economy. The SZSE leveraged its advantages as a platform to establish V-Next, a platform that covers 45 countries and regions and provides one-stop cross-border investment and financing matchmaking services for nearly 300 innovative projects in 26 BRI countries. In 2020, the SZSE cooperated with exchanges, commercial banks, and venture capital institutions in ASEAN, Central and Eastern Europe and other regions along the BRI to organize ten innovative enterprise roadshows both online and offline, and thus facilitated interactions between the capital of China and high-quality industries of BRI countries. Third, the SZSE expanded cooperation on the data of products. The SZSE worked with Bursa Malaysia to develop the CNI-Bursa Malaysia 50 Index, and collaborated with the exchanges of Singapore, the Philippines, and Malaysia to achieve mutual display of core indexes.

5.6 Outlook of the stock market

In 2021, China's A-share market is expected to continue to improve. The continuous inflow of incremental capital by public offerings, insurance, foreign investment and private placements, as well as the recovery in the growth of listed companies' revenues and their margin expansion will serve as the two major pillars for liquidity and fundamentals. The A-share market will evolve towards a mature market that is more complete, dynamic, standardized and open in the process of deepening reform and accelerating opening-up. First, deepening the comprehensive reform of the capital market will be continuously implemented and the market will be more complete, which will create favorable conditions for steadily promoting the registration-based IPO system across the market, and thus ensure effective implementation of the opinions on further improving the quality of listed companies and the plan on the delisting reform. Second, the endogenous stability mechanism of the market will be constantly improved, and the market will become more dynamic. Reform on the investment end will be vigorously advanced, with more supply and more innovative service of equity fund products, and the environment for medium and long-term funds entering into the market continuously improved. Third, the legal and supervisory system will be continuously improved, and the market will become more standardized. The new *Securities Law* and the *Amendment (XI) to the Criminal Law of the People's Republic of China* will be fully implemented, to severely cracked down illegal securities activities in accordance with the law, and to strengthen the crackdown on fraudulent issuance, financial fraud, market manipulation and other violations. Fourth, the two-way opening-up of capital market will be continuously bolstered and the door to the market will open wider. The institutional opening-up will be steadily advanced, the connectivity of the market with the outside world will continue to increase, and the scope of stocks eligible for trading under the Shenzhen-Hong Kong Stock Connect and the Shanghai-Hong Kong Stock Connect will be further expanded.

BOX 4 Further improve the registration-based IPO system in the SSE STAR market

1. Relevant rules on refinancing and shareholding reduction on the SSE STAR Market were constantly improved

(1) Rules on refinancing on the SSE STAR Market

Since the first batch of companies were listed on the SSE STAR Market in July 2019, according to the requirements of the Implementation Opinions on Establishing the Science and Technology Innovation Board and Piloting the Registration-based IPO System on the Shanghai Stock Exchange to "enhance the refinancing system and make refinancing on the SSE STAR Market more convenient", the CSRC and the SSE vigorously advanced the research and development of the refinancing system for the SSE STAR Market. By July 2020, relevant rules and systems for refinancing on the SSE STAR Market have been basically completed. Regarding rules at higher levels, the CSRC promulgated the Measures for Administration of Issuance Registration of the Securities of the Companies Listed on the SSE STAR Market (for Trial Implementation) as the fundamental rules on the refinancing by listed companies on the SSE STAR Market. The CSRC also released the Content and Format Standards for Information Disclosure of the Companies Listed on the SSE STAR Market on Public Offering of Securities according to different types of financing, to make clear the specific requirements on refinancing application documents. On this basis, the SSE issued the Rules of Shanghai Stock Exchange for the Issuance and Listing Review of the Securities of the Companies Listed on the SSE STAR Market and the Detailed Implementation Rules of Shanghai Stock Exchange for Issuance and Underwriting of the Securities of the Companies Listed on the SSE STAR Market, to stipulate the review standards, review procedures and business requirements of issuance underwriting for the refinancing on the SSE STAR Market. The SSE also released the Q&A on the Issuance and Listing Review of the Securities of the Companies Listed on the SSE STAR Market in view of the Answers to Several Questions on the Refinancing Business recently revised and implemented by the CSRC. The regulations and regulatory documents issued by the CSRC and the business rules released by the SSE together constitute a complete system of rules for refinancing of the companies listed on the SSE STAR Market. In addition, the SSE adjusted and improved the simplified refinancing procedures *for the companies listed on the SSE STAR Market, to further smooth financing channels for these companies and give play to the institutional function of simplified refinancing procedures.*

As of January 31st, 2021, the SSE had accepted the refinancing plans of 8 STAR companies, with a total of RMB 22.215 billion raised and an average of RMB 2.777 billion for each company, the highest financing amount reaching RMB 10 billion. In terms of financing types, 6 of them offered shares to specific targets, raising a total of RMB 20.365 billion and accounting for 91.67 percent of the total. This represents the mainstream refinancing approach for listed companies on the SSE STAR Market. The other 2 STAR companies issued convertible bonds to non-specific targets, raising a total of RMB 1.85 billion. According to public information, in addition to the aforementioned STAR companies whose refinancing plans have been accepted, a number of companies have announced their refinancing plans. The implementation of the refinancing rules on the SSE STAR Market fully enhanced the convenience of financing for companies listed on the SSE STAR Market and played an important role in improving the quality of listed companies.

(2) Rules for shareholders of companies listed on the SSE STAR Market to reduce shareholding

To regulate shareholding reduction by shareholders of companies listed on the SSE STAR Market, at the beginning of the establishment of the STAR Market, aside from adopting the current applicable shareholding reduction system, the SSE made targeted arrangements for the shareholding reduction system based on the characteristics of companies listed on the SSE STAR Market, which is mainly manifested in two "proper extensions". First, the SSE properly extended the holding period of major shareholders of unprofitable companies, to urge the critical few of the companies to focus on long-term production and operation. Second, the SSE properly extended the lockup period for the shares held by core technical personnel, to appropriately strengthen the binding of interest.

To guide the orderly exit of shares after the lock-up expires, make shareholding reduction more market-oriented, and avoid any shocks to the market as a result of substantial reductions, the SSE released the Detailed Implementation Rules for Shareholders of Companies Listed on SSE STAR Market to Reduce Shareholding through Inquiry Transfer and Placement to Specific Institutional Investors in July 2020. The inquiry transfer system was improved to implement the requirements in the Implementation Opinions on Establishing Science and Technology Innovation Board and Piloting Registration-based IPO System on Shanghai Stock Exchange for exploring a more reasonable shareholding reduction system for the SSE STAR Market. Thus, the SSE built a platform for the game between dominant shareholders and professional institutional investors. It did not cap the amount of inquiry transfer and opened up space for transfer prices. As of end-2020, 6 companies completed the inquiry transfer. According to preliminary observations, the inquiry transfer system can help deepen the game of shareholding *reduction and enhance its marketization, relieving pressure of shareholding reduction. It can also meet the demand for withdrawal of innovation capital and improve the efficiency of the recycling of innovation capital. Moreover, the system is also conducive to introducing incremental funds for shareholding lessening and improving the shareholder structure of science and technology companies.*

2. Rules for red-chip companies to apply for offering and listing on the SSE STAR Market were issued

Attracting high-quality red-chip sci-tech companies to go public on the SSE STAR Market is an important basis for enhancing the inclusiveness of the SSE STAR Market for listed companies and enriching the diversity of STAR companies, which can further boost brand recognition and agglomeration effect of the SSE STAR Market. The key to this problem is to advance the implementation of relevant supporting policies and key regimes for red-chip companies to get listed on the SSE STAR Market, and make the SSE STAR Market more competitive and attractive to red-chip companies. Since 2020, the SSE advanced the offering and listing of red-chip companies on the SSE STAR Market, supported the "last kilometer" for red-chip companies to go public on the SSE STAR Market, further specified the listing expectations of red-chip companies, and secured sound outcomes.

(1) Institutional path was laid for red-chip companies to apply for offering and listing on the SSE STAR Market, and to further address the problem of high threshold for overseas-listed red-chip companies to go public on domestic exchanges.

The Notice of the General Office of the State Council on Forwarding the Opinions of the CSRC on Launching the Pilot Program of Offering Stocks or Depositary Receipts in China by Innovative Enterprises (Guo Ban Fa [2018] No. 21) issued in March 2018 and supporting policies for pilot innovative enterprises provided basic institutional arrangements for red-chip companies to get listed on the domestic SSE STAR Market. On this basis, the CSRC and the SSE stipulated offering and listing conditions, requirements for information disclosure, registration and review procedures, issuance and underwriting business, continuous supervision after the listing, and trading in the secondary market for red-chip companies to make an offering of its stocks or depository receipts and list them on the SSE STAR Market, and thus specified the specific path for red-chip companies to go public on the SSE STAR Market.

To further address the high threshold for red-chip companies listed overseas to go public on the domestic market, the CSRC, with the SSE's support, issued the Notice on Relevant Arrangements for the Listing of Innovative Pilot Red-chip Companies in China on April 30th, 2020, to lower the capitalization requirement for red-chip companies already listed overseas to apply for offering and listing on the domestic market. The new requirement allowed overseas-listed innovative red chips with "a capitalization of RMB 20 billion or above and in possession *of self-developed, world-leading technologies, innovative strengths and a strong position in their industries" to list in the Chinese mainland or issue DRs. Meanwhile, it specified the operating path for red-chip companies with a variable interest entity (VIE) structure, and the reporting path for innovative companies yet to be listed overseas on the arrangement of matters involving the use of foreign exchanges.*

(2) Review standards were refined for red-chip companies to apply for offering and listing on the SSE STAR Market, linking up the "last kilometer" for the domestic issuance and listing of red-chip companies

On June 5th, 2020, the SSE issued the Notice on Matters Concerning the Red-chip Companies Applying for Offering and Listing on the SSE STAR Market. It targeted at the commonly-seen special issues in the review of red-chip companies applying for offering and listing, drew on overseas market practices in the offering and listing of red-chip companies, addressed matters concerning the handling of valuation adjustment mechanism, calculation of total share capital, recognition of rapid growth in operating income and application of delisting indicators, and other issues on review standards, and linked up the "last kilometer" for the domestic issuance and listing of red-chip companies on the SSE STAR Market.

Under the leadership of the CSRC, the SSE will adhere to the positioning of the STAR Market, actively promote high-quality red-chip companies to offer and list on the SSE STAR Market. So far, 6 red-chip companies, including China Resources Mircoelectronics (CR Micro), SMIC, GalaxyCore, Segway-Ninebot, Geely Auto and Yitu, have completed applications for their entry into the SSE STAR Market, among which China Resources Mircoelectronics (CR Micro), SMIC and Segway-Ninebot have been already listed. Among them, Semiconductor Manufacturing International Corporation (SMIC) is one of the world's leading integrated-circuit (IC) wafer foundries, and also the specialized wafer foundry in the Chinese mainland with the most advanced technologies, the largest scale, the most complete supporting services and multinational operations. Thus, it can be said that, the institutional attractiveness and the demonstration effect of the SSE STAR Market to quality red-chip companies initially emerged.

BOX 5 Launch the ChiNext Board reform and successfully pilot the registration-based IPO system

1. Business rules and supporting arrangements were released for the reform of the ChiNext Board and the pilot of the registration-based IPO system

On April 27th, 2020, the Masterplan for the Implementation of the Reform of the ChiNext Board and the Pilot Program of the Registration-based IPO System (hereinafter referred to as the Masterplan) was approved at the 13th meeting of the Central Committee for Deepening Overall

Reform. To fully implement the Masterplan, the SZSE upheld the working philosophy of "openness, transparency, integrity and impartiality", and focused on achieving the goals with obvious effect in a smooth way. The SZSE coordinated long-term objectives of the reform of the ChiNext Board with the phased features of the pilot registration-based IPO system, and considered the characteristics of the existing market and the conditions of new enterprises entering the market. It promoted the reform on fundamental policies for issuance, listing, information disclosure, transaction and delisting as a whole and drafted, formulated, revised and improved relevant business rules and supporting arrangements at the exchange level, which involved five aspects, namely, IPO review, refinancing and M&A and restructuring review, continuous regulation, issuance and underwriting, and trading, all efforts to build a sound system of rules with a clear structure and complete content.

According to the Masterplan and unified arrangement of the CSRC, on June 12th, 2020, the SZSE, after soliciting opinions from the market, officially released relevant business rules and supporting arrangements for the reform of the ChiNext Board and the pilot of the registration-based IPO system, including 8 major business rules and 18 supporting detailed rules, guidelines and notices.

The major 8 business rules released by the SZSE included the Rules on the Review of Share Issuance and Listing on the ChiNext Board, the Rules on the Review of Securities Issuance and Listing of Listed Companies on the ChiNext Board, the Rules on the Review of Major Assets Restructuring of Listed Companies on the ChiNext Board, the Administration Measures for the Listing Committee of the ChiNext Board, the Working Rules of the Industry Expert Consultant Team, the Rules Governing the Listing of Shares on the ChiNext of Shenzhen Stock Exchange (Revised in 2020), the Special Provisions for Trading on the ChiNext Board, and the Special Provisions for Refinancing Securities Lending and Securities Refinancing Business on the ChiNext Board.

In addition, the SZSE released 18 supporting detailed rules, guidelines and notices at the same time to further refine relevant institutional arrangements in higher-level laws and major business rules. They included the Interim Provisions for Declaration and Recommendation of Issuance and Listing on the ChiNext Board, the Implementation Rules on the IPO and Underwriting Business on the ChiNext Board, the Implementation Rules on Securities Issuance and Underwriting Business of Listed Companies on the ChiNext Board, the Detailed Rules on Real-time Monitoring of Abnormal Stock Transactions on the ChiNext Board (for Trial Implementation), the Guidelines for the Standard Operation of Listed Companies on the ChiNext Board (Revised in 2020), the Notice on Coordination and Arrangements of Review of the Pilot Program of the Registration-based IPO System on the ChiNext Board, the Q&As on Review of IPO on the ChiNext Board, the

Q&As on Review of Securities Issuance of Listed Companies on the ChiNext Board, etc.

2. Positioning of the ChiNext Board was clarified with highlights in its unique advantages

To clarify the positioning of the ChiNext Board, highlight its unique advantages, further improve the application quality of enterprises planning to get listed, and promote the sustainable, sound development of the ChiNext Board market, the SZSE formulated the Interim Provisions for the Application and Recommendation of Issuance and Listing on the ChiNext Board to guide and regulate the application by issuers on the ChiNext Board and the recommendation by sponsors in four aspects:

First, the SZSE made it clear that it would support and encourage innovation-oriented enterprises and startups qualifying the positioning of the ChiNext Board to get listed, support traditional industries in deeply integrating with new technologies, new industries, new forms of business and new models, implement the innovation-driven development strategy, and serve the real economy in pursuit of high-quality development.

Second, adhering to the positioning of the ChiNext Board, and based on the characteristics of the ChiNext Board featuring enterprises in high-tech industries and strategic emerging industries, the SZSE set up a negative list, and in principle it would not support traditional industry enterprises such as real estate enterprises to go public on the ChiNext Board.

Third, to better support, guide and facilitate the transformation and upgrading of traditional industries, the SZSE made it clear that traditional enterprises in the negative list that deeply integrate with new technologies, new industries, new forms of business and new models can still list on the ChiNext Board.

Fourth, according to the principle of "separation of the new from the old", the SZSE stipulated that the provisions on the negative list do not apply to enterprises under review, so as to properly transit from old to new regulations and stabilize market expectations.

3. Listing rules of red-chip companies were published to improve the market's inclusiveness

To further improve the inclusiveness of the ChiNext Board market, support quality red-chip companies to get listed on the ChiNext Board and promote sustainable, sound development of the ChiNext Board market, the SZSE made targeted arrangements in the Rules Governing the Listing of Shares on the ChiNext of Shenzhen Stock Exchange (Revised in 2020), the Special Provisions for Trading on the ChiNext Board and the Q&As on Review of IPO on the ChiNext Board regarding application of red-chip companies for issuance and listing on the ChiNext Board and their trading thereon. The arrangements covered the valuation adjustment mechanism, calculation of share capital, recognition of rapid growth of operating income, *tags of securities, adjustment of information disclosure adaptability, application of delisting indicators and protection of investors' rights and interests, specifically:*

First, arrangements on preferential rights in the valuation adjustment mechanism were laid down. The SZSE made it clear that when a red-chip company issues preferred shares with preferential rights such as agreed redemption rights to investors before getting listed, if the issuer and investors promise that they will not exercise the preferential rights during application and issuance, such preferred shares may be converted into common shares before listing, and the shares after such conversion will not be treated as "surprise shares purchase".

Second, the calculation caliber of share capital was adjusted. Considering that red-chip companies are much different from domestic enterprises in terms of organizational form, face value of shares and share capital requirements and relevant arrangements fall within the scope of corporate governance, the SZSE adjusted the special listing conditions for red-chip companies. Regarding relevant provisions on "share capital" in the ChiNext Board listing conditions for red-chip companies, the number of "share capital" was adjusted to the sum of shares or depository receipts after issuance.

Third, the criterion of "rapid growth in operating income" was defined. The SZSE defined the specific criteria of "rapid growth in operating income" in the issuance and listing conditions from the dimensions of operating income, compound growth rate and peer comparison, and stipulated that the regulations on "rapid growth in operation income" do not apply to red-chip companies in the R&D stage and those that are of great significance to the implementation of national innovation-driven development strategies.

Fourth, tags for securities were set. To warn investors of stock and depository receipt transaction risks on the ChiNext Board and protect investors' legitimate rights and interests, the SZSE set tags appropriately on the stocks or depository receipts of red-chip companies with VIEs or similar special arrangements. If these red-chip companies no longer have relevant arrangements after listing, such tags will be removed.

Fifth, adaptive adjustments were made on information disclosure. For any red-chip company subject to relevant information disclosure requirements and continuous regulatory requirements of the ChiNext Board, if it may lead to noncompliance with local provisions in the registration place or standards commonly recognized by the market, the red-chip company may apply for adaptive adjustment but should state its reasons and provide an alternative plan along with legal opinions.

Sixth, indicators of trading-related mandatory delisting were adjusted. Given that the face value of the shares of red-chip companies is denominated in USD, HKD, etc. at probably a *low level, and there is a big difference between depository receipts and stocks in terms of transaction price and quantity of holders, the SZSE adjusted relevant delisting conditions for red-chip companies. When a red-chip company issues shares, where the "face value delisting" indicator is applicable, it should adopt the standard that "the daily closing price is lower than RMB 1 in average for 20 trading days straight"; when it issues depository receipts, the standard would be changed to that "the daily closing market capitalization is less than RMB 300 million for 20 trading days straight" and the "number of shareholders" delisting indicator is not applicable as specified hereof.*

Seventh, it emphasized on protecting investors' rights and interests. When red-chip companies are subject to local laws and regulations in terms of corporate governance and operation codes, as SZSE emphasized, the protection of investors' rights and interests should not be weaker than the requirements specified in domestic laws and regulations and that holders of depository receipts should enjoy equal rights and interests to holders of overseas underlying securities.

4. Monitoring system of stock trading was improved to ensure the smooth operation of the registration-based IPO system

To maintain the order of stock trading on the ChiNext Board, protect the legitimate rights and interests of investors, boost market activity, and guard against business risks, the SZSE formulated the Detailed Rules for Real-time Monitoring of Abnormal Stock Transactions on the ChiNext Board (for Trial Implementation), which took effect on the first day of the first IPO in accordance with the Measures for the Administration of the Registration of Initial Public Offerings of Stocks on the ChiNext Board (for Trial Implementation) after its release. This Detailed Rules was formulated based on the ChiNext Board's features to foster an actionable, executable system for abnormal trading activities monitoring with the goal of categorized, targeted and scientific regulation. It laid down clear qualitative and quantitative recognition criteria of abnormal trading activities, specified regulatory measures over investors' abnormal trading activities, and regulated how members should perform their duty in client management. Specifically, the rules included the following four aspects:

First, main types of abnormal trading activities were defined. There are five types of typical abnormal trading activities, namely, fictitious application, price pumping and dumping, maintaining limits on trading price, wash trading, and abnormal order placement rate for stocks with highly abnormal fluctuations.

Second, thresholds of abnormal transaction behavior indicators were quantified. It defined different types of abnormal trading activities and their key components, with thresholds of specific indicators clarified, including those of order quantity and frequency, stock trading scale, market proportion, and stock price fluctuation. Monitoring standards may be adjusted flexibly based on market development situations.

Third, identification criteria of abnormal trading activities were stipulated. Abnormal trading activities need to be substantially identified based on a combination of quantitative criteria (size and frequency of orders, trading volume of the stocks involved, their market share, price fluctuation,etc) and qualitative analysis (stock fundamentals, important information of the listed companies, overall market trends,etc).

Fourth, it emphasized on the members' responsibility of client management. Members should know well of their clients beforehand, monitor their transactions on an ongoing basis, and timely identifying, managing and reporting any abnormal trading activities, to cooperate with the SZSE on supervisory works and safeguard the trading order on the ChiNext Board.

5. Reform of the ChiNext Board and pilot of the registration-based IPO system were successfully implemented

On August 24th, 2020, the reform of the ChiNext Board and the pilot of the registration-based IPO system were officially launched. To advance the ChiNext Board reform and pilot the registration-based IPO system is a major initiative for the capital market reform which was studied and arranged by General Secretary Xi Jinping. As a major decision and arrangement of the CPC Central Committee and the State Council, it was devised to drive existing reform through incremental ones and improve the fundamental institutions of the capital market. It was also an important transitional link in the overall in-depth reform of capital market, which would accumulate experience and lay a foundation for the registration-based IPO system reform across the market. The reform of the ChiNext Board reform and the pilot of the registration-based IPO system are of great significance for improving China's capital market system, facilitating the development of the Guangdong-Hong Kong-Macao Greater Bay Area and the pilot demonstration area of socialism with Chinese characteristics, and further boosting the positive growth cycle and high-quality economic development.

During the reform and pilot, the SZSE adhered to the market-oriented and law-based philosophy, took the reform of registration-based IPO system as the primary task, coordinated and advanced the reform of fundamental institutions involving issuance, listing, information disclosure, trading, and delisting. Since the implementation of the reform, the market was stable overall with major institutional rules and technical systems running smoothly, producing initial results out of the reform.

As of end-February 2021, the SZSE had officially accepted IPO applications from 546 companies, refinancing applications from 288 companies, and applications for major assets restructuring from 16 companies. With information disclosure at the core, the SZSE continued to normalize the review work, and publicize review standards, process, results and regulatory measures to the market. The review progress and results were basically stable and predictable. At end-February 2021, 86 companies were listed on the ChiNext

Board under the registration-based IPO system, with a total market value of RMB 1.2 trillion, accounting for 11 percent of the total market value of the ChiNext Board. Among them, 65 companies made preliminary announcements of their operating results, with estimated average net profits of RMB 265 million to RMB 279 million, an increase of 45.7 percent to 53.5 percent year on year. Generally speaking, their operating results were satisfactory.

Since the reform, the ChiNext Index rose by 10.7 percent (as of the end of February 2021). During the same period, the SZSE Component Index, the SZSE SME Board Index and Shanghai Stock Index increased by 7.6 percent, 7.2 percent and 3.8 percent, respectively, while SSE STAR Market 50 Index (STAR 50) fell by 8.4 percent. The average daily turnover of A-share on the ChiNext Board stood at RMB 214.2 billion, an increase of 22 percent from RMB 175.3 billion before the reform. The average daily turnover rate was 3.7 percent, up 0.3 percentage points compared with the 3.4 percent before the reform. The post-reform trading system relaxed price limits and improved pricing efficiency. The listed companies on the ChiNext Board closed higher in average on their first day of trading, with stock prices soaring by 238 percent in average. The daily change of the stocks gradually stabilized on the third day of trading, and stood at about 16 percent on the fourth and fifth day of trading. The formation period of the equilibrium price was greatly shortened. The average PE ratio of the new shares was 55, lower than the level of 68 of the ChiNext Board. In average, 23 outstanding stocks rose or fell by over 10 percent per day, accounting for 2.8 percent of the total, lower than that before the reform, where 34 outstanding stocks rose or fell by over 10 percent per day, accounting for 4.2 percent of the total.

Chapter 6 Foreign Exchange Market

In 2020, the trading volume in China's foreign exchange market grew slightly, and RMB exchange rate experienced two-way fluctuations. The market further improved its infrastructure and institutional construction, steadily promoted opening-up, and achieved higher development quality.

6.1 Performance of the foreign exchange market

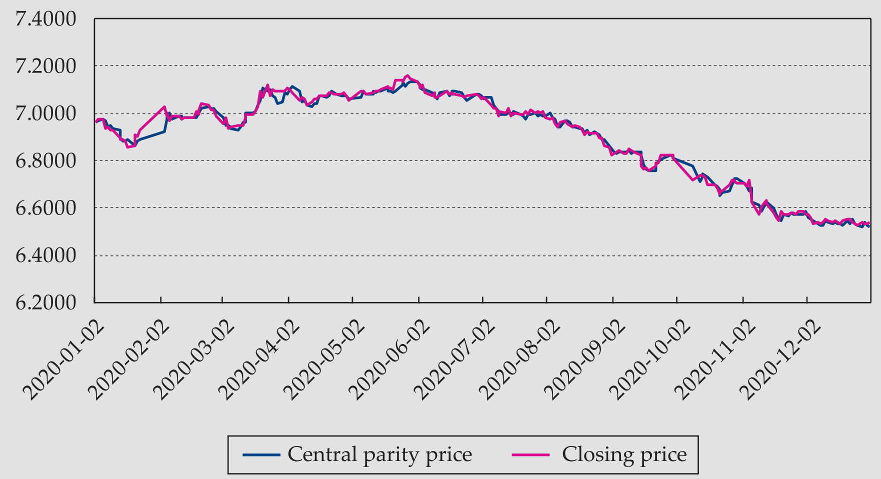
6.1.1 RMB exchange rates first depreciated and then appreciated

At the beginning of 2020, the central parity rate and closing rate of RMB against USD were 6.9614 and 6.9631. This was followed by a downward trend with fluctuations until May 28th, when the former reporting 7.1277 and the latter 7.1600, a depreciation of 1,515 bps (2.17 percent) and 1,938 bps (2.78 percent) respectively. Then, the RMB started to appreciate, with the central parity rate and closing rate against USD registering 6.5249 and 6.5398, an appreciation of 4,513 bps (6.47 percent) and 4,264 bps (6.12 percent) respectively from end-2019. Within the year, the central parity rate and closing rate were the strongest on December 25th at 6.5333 and 6.5241 respectively.

RMB exchange rate witnessed both appreciation and depreciation against major currencies other than USD. At end-2020, the central parity rate of RMB against EUR, 100 JPY, GBP, AUD and CAD was 8.0250, 6.3236, 8.8903, 5.0163 and 5.1161 respectively, a change of -2.6, 1.3, 2.9, -2.6 and 4.4 percent year on year.

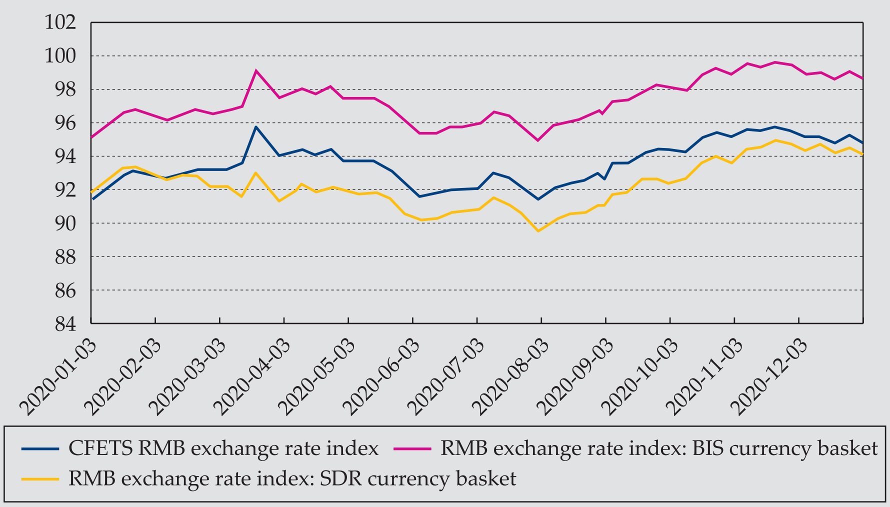
RMB recorded appreciation against a basket of currencies. At end-2020, the CFETS RMB exchange rate index, the RMB exchange rate index against the BIS and SDR currency basket were 94.84, 98.68, and 94.23 respectively, representing an appreciation of 3.78, 3.78, and 2.64 percent compared with the end of the previous year.

Figure 6.1 RMB spot rates against USD in 2020



(Source: CFETS)

Figure 6.2 Three major RMB exchange rate indexes in 2020



(Source: CFETS)

6.1.2 Trading volume grew slightly in the foreign exchange market

In 2020, due to the pandemic, the trading volume of interbank foreign exchange market grew at a slower pace than that in the previous year, achieving a cumulative turnover of USD 36.42 trillion, up 1.79 percent year on year, 3.51 percentage points lower than the previous year. In specific, the spot trading volume of RMB exchange and currency pairs stood at USD 8.38 trillion and USD 220 billion, up 5.55 percent and 30.99 percent respectively; trading volume of foreign exchange derivatives market stood at USD 17.61 trillion, up 1.32 percent; trading volume of foreign exchange interest rate market stood at USD 10.21 trillion, down 0.80 percent.

6.2 Main features of the foreign exchange market

6.2.1 RMB exchange rates showed two-way fluctuations

From January to March 2020, RMB exchange rate went upwards amid fluctuations to peak on March 20th, when the CFETS RMB exchange rate index, the RMB exchange rate index against the BIS and SDR currency basket were 95.73, 99.03, and 92.96, up 4.61, 4.03 and 1.08 percent respectively from the beginning of the year. Then, it moved downwards with volatility to close at 91.42, 95.03 and 89.56 on July 31st, down 4.50, 4.04 and 3.66 percent from the levels on March 20th respectively. From August to December, RMB exchange rate started to rebound and touched the yearly high on November 20th, when the above indexes closed at 95.83, 99.64 and 94.93, up 4.82, 4.85 and 6.00 percent from the levels on July 31st respectively.

6.2.2 The RMB foreign exchange market developed at a higher quality

In 2020, the interbank RMB foreign exchange market reached a turnover of USD 25.4 trillion, growing by 1.6 percent year on year, an increase of 0.9 percentage points from the previous year; daily average turnover was USD 104.51 billion, growing by 2.0 percent year on year, marking steady market growth. In recent years, with the improved trading mechanism and gradually strengthened market-making appraisal measures, market liquidity was further improved. First, transactions between market makers and ordinary members continued to grow, and the share of trading volume in the spot market grew by more than 5 percentage points. Market makers became significantly more willing to serve ordinary members, and market liquidity further favored ordinary members. Second, transaction models developed in a coordinated manner, of which the Matching model dominated the liquidity exchange between market makers, while the model of Negotiate dominated liquidity provision by market makers to ordinary members.

6.2.3 Foreign currency pairs market experienced rapid development

In 2020, the turnover reached USD 810.95 billion in the interbank currency pairs market (up 70.51 percent year on year), with daily average standing at USD 3.34 billion (up 71.2 percent year on year). As a major trading product, foreign currency pair swap reported a significant increase of 95.3 percent in its turnover, the fastest growth in the interbank foreign exchange market. The rapid development of foreign currency pairs market further satisfied the increasing demand of domestic entities for foreign currency risk management in recent years.

6.2.4 Overseas institutions became increasingly active in transactions

In 2020, trading by overseas institutions in the interbank RMB foreign exchange market amounted to USD 838.704 billion (up 98.35 percent year on year), with daily average standing at USD 3.451 billion (up 99.2 percent year on year) and market share growing from 0.8 percent in the previous year to 1.7 percent. The hedging demand arising from bond investments was the major motive for overseas institutions to engage in foreign exchange transactions, which accounted for as high as 92.2 percent of RMB purchases and sales. By institution types, overseas central banks, RMB clearing banks and RMB participating banks recorded a trading volume of USD 332.834 billion, 90.265 billion and 415.605 billion, up 59, 81 and 154 percent respectively.

6.3 Innovation and institutional construction

6.3.1 Bank-enterprise online trading platform was launched to serve the real economy

In October 2020, the bank-enterprise trading service platform was launched, which for the first time expanded the foreign exchange business of CFETS to cover the banks' to-customer foreign exchange sales and purchases, and further satisfied the demand of foreign exchange trading and risk management of the real economy. As of end-2020, three enterprises and nine banks registered with the bank-enterprise platform, and reached transactions in both the spot RMB foreign exchange market and swap market within the year, covering RMB against the three currencies of GBP, HKD and CHF.

6.3.2 CFETS launched prime brokerage businesses and promoted market opening-up

The prime brokerage business refers to the model where participating institutions reach transactions with counterparties in the name and/or credit of other institutions (main brokers). Under the prime brokerage business model, market participants can use the market credit of the main broker by signing agreements and paying the margin. On January 21st, 2020, the prime brokerage business was first launched in the interbank foreign currency pairs market. Later, the CFETS launched such business in the RMB foreign exchange market, which only applied to the foreign exchange risk management under CIBM Direct at the initial stage. On July 13th, the Bank of China and the Bank of Communications became the first batch of main brokers and reached their first transaction.

The launch of the prime brokerage business in the interbank foreign exchange market provided more diversified channels for overseas investors to hedge their foreign exchange risks, expanded the scope of counterparties, effectively solved the problem of credit restriction, and significantly improved transaction efficiency.

6.3.3 SAFE improved funds transfer procedures for overseas investors in the bond market

On January 13th, the SAFE issued the *Notice on Improving Foreign Exchange Risk Management of Foreign Institutional Investors in the Interbank Bond Market* to specify that, when directly entering the market, foreign investors can transact with no more than three domestic financial institutions, which expanded transaction channels and reduced transaction costs. On September 24th, the CFETS issued the *Notice on Implementing the Arrangements Concerning the Currency Conversion and Foreign Exchange Risk Management under the Bond Connect Scheme*, specifying that each Bond Connect investor can select no more than three Hong Kong settlement banks to access currency conversion and foreign exchange hedging services. By expanding the number of settlement banks from one to three, the *Notice* further facilitated foreign exchange risk management by overseas investors.

6.3.4 Interface services were improved for greater transaction efficiency

In 2020, the foreign currency pairs market launched its transaction interface service (LC API), an automated uplink and downlink interface service that enables the upload of trading orders and download of transaction data. In the Request [including Request for Quotation (RFQ) and Executive Streaming Price (ESP)]and C-Trade transaction models, the transaction sponsor may initiate an order through the interface or send "One-Click-Order" in spot, forward and swap foreign currency transactions. Data downlink services supported the release of more detailed information, providing more comprehensive data support for market participants' quotations and trading strategies.

In addition, the quotation interface service was introduced in the interbank RMB foreign exchange option market and currency pairs option market to improve the efficiency of option quotation. Such interface enabled institutions to continuously post bilateral quotations on currency pairs with standard maturity and standard volatility.

6.3.5 Foreign currency interest rate market was further developed

In 2020, the foreign currency interest rate market was continuously developed, with new benchmark interest rates such as USD Secured Overnight Financing Rate (SOFR), Sterling Overnight Index Average (SONIA), Euro Short-term Rate (ESTR) and Tokyo Overnight Average Rate (TONAR) added to foreign currency interest rate derivatives. In the foreign currency repo market, the settlement model of Delivery Versus Payment (DVP) was introduced for the foreign currency repo of domestic bonds. By handling bond transfer and fund payment simultaneously and holding them mutually conditional, the parties can complete foreign currency payment and RMB bonds transfer at the same time, which effectively improved settlement efficiency, enhanced settlement security, and further facilitated the market entities' participation in the domestic foreign currency market.

6.3.6 CFETS innovated transaction supporting services

The CFETS developed the instant messenger (iDeal) into a transaction supporting tool. First, it offered quotations and one-stop direct services for foreign exchange brokerage in iDeal, bringing together quotation from five currency brokers and supporting the whole process of forward and swap foreign exchange trading. Second, it provided more market information for market participants, enabling them to track prices in real time, review historic trends, and observe the market data of multiple trading products and models.

6.4 Outlook of the foreign exchange market

In 2021, the foreign exchange market will continue to improve intelligent monitoring indicators and gradually put them into practice to improve the level of intelligence. It will upgrade functions of the bank-enterprise platform system and develop financial infrastructure to lay a solid technological foundation for exploring program-based transactions in the interbank market. Efforts will also be made to deepen the opening-up of the foreign exchange market, and provide more comprehensive and sound services for the fund transfer and foreign exchange risk management of domestic and overseas participants through trading mechanism innovation, comprehensive information integration services and interconnectivity business cooperation. More application scenarios will be available for foreign currency repo businesses through enhanced cooperation with custody institutions at home and abroad. In terms of products of currency pairs and foreign currency interest rate swap, the market will attempt to establish liquidity interconnection with international platforms.

Chapter 7 Gold Market

In 2020, gold price climbed up before falling amid higher volatility in the market, with spot gold price and gold futures increasing by 14.44 percent and 14.42 percent respectively. China's gold market witnessed brisk trade, deepened product innovation, optimized market trading mechanism, and improved infrastructure on a continuous basis, and accelerated opening-up in a steady manner.

7.1 Performance of the gold markets

7.1.1 Gold trading in SGE

7.1.1.1 Spot gold price increased by over 14 percent, with turnover growing year on year

The Au99.99 contract of the SGE opened at RMB 341.95 per gram at the beginning of 2020, registering a yearly high of RMB 449.00 per gram and a yearly low of RMB 327.60 per gram, and closed at RMB 390.00 per gram at year-end, representing an increase of 14.44 percent year on year. Throughout the year, the cumulative turnover in SGE posted RMB 43.32 trillion, surging 50.66 percent year on year. Specifically, the gold trading volume reached 58,700 metric tons, down 14.44 percent year on year, and the turnover was RMB 22.55 trillion, up 4.91 percent year on year.

Figure 7.1 Gold price movements in domestic and overseas markets in 2020

(Source: SGE)

7.1.1.2 Gold price matching market, inquiry market and pricing market all shrank

In 2020, the trading volume of gold price matching market was 26,700 metric tons, down 1.47 percent year on year, with a turnover of RMB 10.24 trillion, up 20.63 percent year on year. Specifically, trading volume of gold spot contracts was 3,480.84 metric tons, down 33.24 percent year on year, and that of deferred delivery contracts was 23,200 metric tons, up 6.12 percent year on year. The trading volume of gold inquiry market was 31,000 metric tons, down 23.11 percent year on year, with a turnover of RMB 11.93 trillion, down 5.67 percent year on year. The number of participants in the interbank inquiry market increased to 79. In the gold pricing market, there were 486 trading sections (1,002 rounds) throughout the year, averaging 2.06 rounds per section; trading volume reached 986.65 metric tons, down 15.60 percent year on year, with a turnover of RMB 385.429 billion, up 6.35 year on year. Daily average trading volume and turnover was 4.06 metric tons and RMB 1.586 billion respectively, and a total of 29 member institutions and 36 institutional clients participated in the trading of "Shanghai Gold".

7.1.1.3 Cleared funds increased steadily, while gold deposit and withdrawal declined

In 2020, SGE cleared RMB 4.53 trillion of funds, reporting a daily average of RMB 18.652 billion and an increase of 21.58 percent compared with 2019. Physical gold withdrawal on the main board of SGE amounted to 1,205.33 metric tons and deposit reached 1,280.64 metric tons, down 26.59 percent and 28.00 percent from the previous year respectively. Physical gold withdrawal on the SGE international board was 30.15 metric tons and deposit was 8.15 metric tons, down 79.26 percent and 92.36 percent from the previous year respectively.

7.1.2 Gold futures and gold options trading in SGE

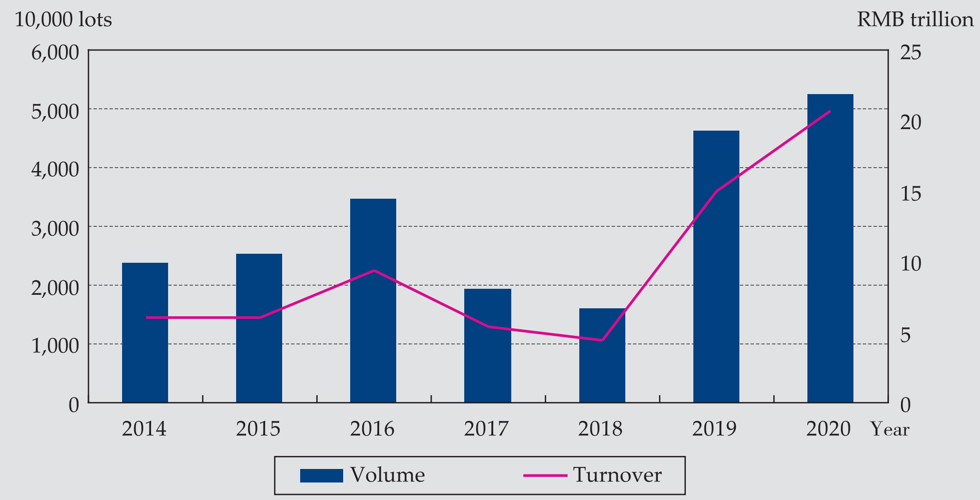
7.1.2.1 Gold futures prices first rose and then dropped

In 2020, the gold futures contract in SHFE opened at RMB 346.00 per gram, reaching RMB 454.08 per gram at its highest and RMB 330.12 per gram at its lowest, with the largest spread registering RMB 123.96 per gram. The contract closed at RMB 397.60 per gram at end-2020, an increase of RMB 50.12 per gram (14.42 percent) from the level of RMB 347.48 per gram at end-2019.

7.1.2.2 Gold futures turnover and positions continued to grow, with deliveries surging

In 2020, the amount and value of gold futures trading in SHFE registered 52.4055 million lots (52,400 metric tons) and RMB 20.72 trillion respectively, up 13.41 percent and 38.16 percent year on year, with a daily turnover of 215,700 lots and RMB 85.261 billion. Daily average position and delivery stood at 264,700 lots and 2,958 lots (2.96 metric tons) respectively, up 0.53 percent and 36.75 percent year on year. As of end-2020, there were six designated gold delivery warehouses, including the Industrial and Commercial Bank of China, Agricultural Bank of China, Bank of China, China Construction Bank, Bank of Communications and Shanghai Pudong Development Bank, with 39 depository locations in total.

Figure 7.2 Gold futures trading in SHFE from 2014 to 2020



(Source: SHFE)

7.1.2.3 Gold futures options trading was smooth

The daily average trading volume, turnover and position of gold options registered 9,700 lots, RMB 64.3045 million and 31,500 lots respectively. In terms of the market size of underlying assets, the ratio of the daily average trading volume of gold options to that of underlying gold futures was 4.48 percent, and the ratio of daily position of gold options to that of underlying gold futures reached 11.91 percent. With regard to option exercise, gold options experienced 10 maturity dates, during which period 620 contracts exercised the option and were delisted successfully, totaling 12,794 lots, basically in the money.

7.1.3 OTC gold business of commercial banks

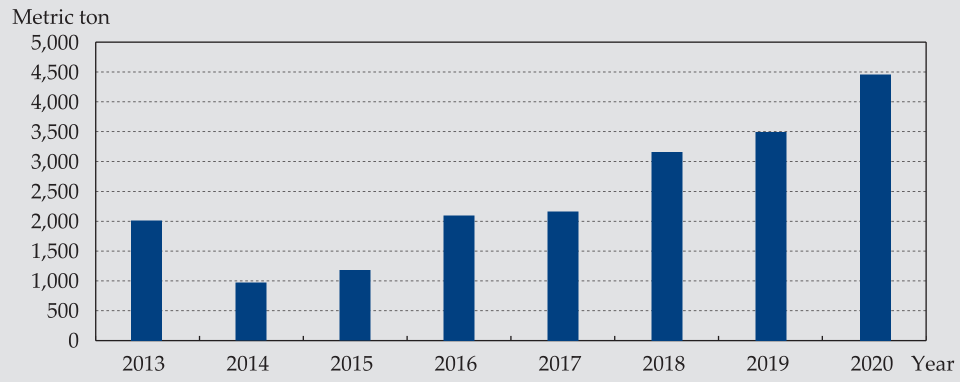
In 2020, commercial banks traded 11,400 metric tons of gold in the domestic OTC market, up 10.26 percent year on year. In particular, an increase was seen in account gold, physical gold and gold-based wealth management product sales, and a decline was posted in gold leasing and gold derivatives trading.

7.1.3.1 Account gold trading volume rose significantly

In 2020, bilateral trading volume of account gold was 4,480.16 metric tons and the turnover was RMB 1,709.367 billion, up 27.51 percent and 53.53 percent year on year respectively. In particular, the trading volume and turnover of USD-denominated account gold added up to 294.44 metric tons and RMB 114.091 billion respectively, up 24.86 percent and 53.63 percent year on year respectively; those of RMB-denominated account gold were 4,185.73 metric tons and RMB 1,595.276 billion respectively, up

27.71 percent and 53.52 percent year on year respectively. As of end-2020, clients of account gold businesses held a net long position of 77.86 metric tons, up 3.52 percent year on year.

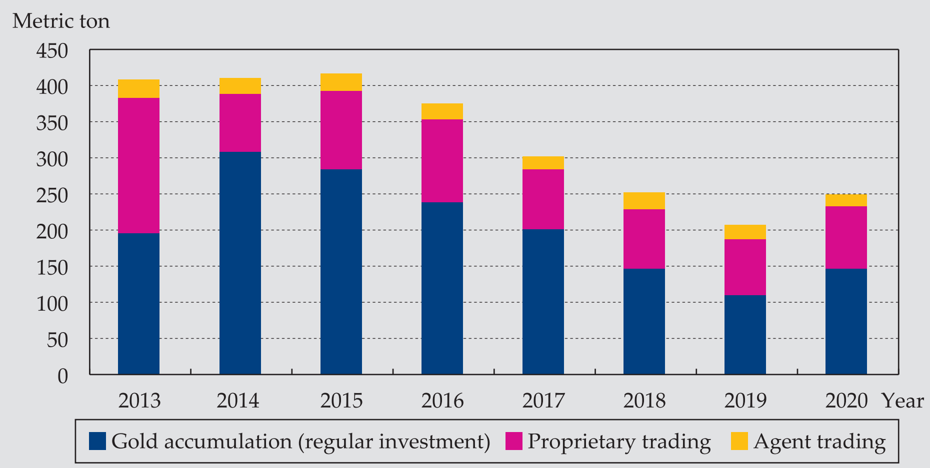
Figure 7.3 Account gold trading volume of commercial banks from 2013 to 2020



7.1.3.2 Physical gold sales of commercial banks saw the first growth in five years

Physical gold sales of commercial banks include sales and repos of proprietary physical gold, agent physical gold and gold accumulation (regular investment). In 2020, commercial banks sold 252.42 metric tons of physical gold, reaching RMB 101.699 billion in turnover, up 21.27 percent and 46.79 percent year on year respectively. Specifically, proprietary trading, agent trading and gold accumulation (regular investment) posted 86.85 metric tons, 16.24 metric tons and 149.33 metric tons, representing a change of 14.19 percent, -12.19 percent and 33.77 percent from a year earlier respectively.

Figure 7.4 Sales of physical gold by commercial banks from 2013 to 2020



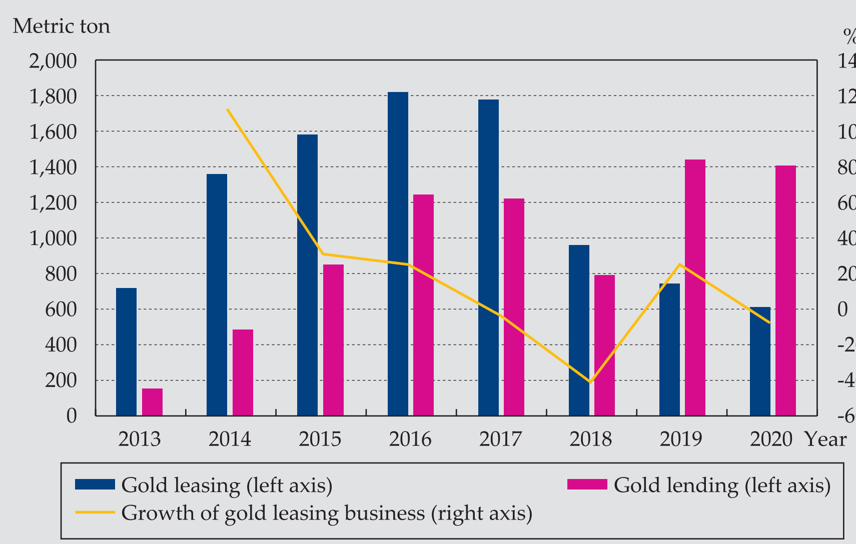
7.1.3.3 Sales of gold-based wealth management products grew rapidly

In 2020, the notional principal amount of gold-based wealth management products sold by commercial banks totaled RMB 3,839.489 billion, and RMB 3,883.954 billion of such products were redeemed, up 52.07 percent and 87.20 percent year on year respectively. As of end-2020, the outstanding balance of gold-based wealth management products reported RMB 475.259 billion, down 38.24 percent year on year.

7.1.3.4 Gold leasing business shrank slightly

Gold leasing business consists of interbank gold lending/borrowing, and gold leasing from commercial banks to corporate clients. In 2020, commercial banks leased 2,013.01 metric tons of gold on a cumulative basis, down 8.01 percent year on year. In particular, commercial banks leased 1,410.12 metric tons of gold to interbank clients, a year-on-year decline of 2.62 percent, and leased 602.89 metric tons of gold to clients, down 18.55 percent year on year. As of end-2020, the outstanding leasing balance of gold business stood at 1,193.52 metric tons, a year-on-year decline of 15.07 percent.

Figure 7.5 Gold leasing business of commercial banks from 2013 to 2020



7.1.3.5 Domestic gold derivatives trading reported a significantly lower volume

In 2020, the trading volume of domestic OTC gold derivatives by commercial banks was 3,154.62 metric tons, down 10.80 percent year on year. In terms of product structure, gold forward trading reached 510.33 metric tons, down 7.51 percent year on year, gold swaps trading reached 2,553.70 metric tons, down 13.52 percent year on year, and gold options trading reached 90.59 metric tons, up 185.56 percent year on year. In terms of currencies, the trading volume of RMB-denominated OTC gold derivatives amounted to 686.18 metric tons, up 27.65 percent year on year, and that of USD-denominated ones reached 2,468.44 metric tons, down 17.69 percent year on year.

7.2 Main features of the gold market

7.2.1 Gold prices rose and then dropped amid notable fluctuations

In 2020, due to the impact of the COVID-19 pandemic, against the backdrop of a complicated and ever-changing financial environment at home and abroad, the gold price first rose and then dropped amid notable fluctuations. In early 2020, spot gold prices in the international market fell to as low as USD 1,451.13 per ounce. In March, the U.S. Fed consecutively introduced open-ended quantitative easing policies. As a result, the low real interest rates and inflation expectations fueled the huge rebound of the spot gold price. In early August, the international spot gold and domestic spot gold hit USD 2,075.14 per ounce and RMB 449.00 per gram respectively, both of which registered the historic high. In Q4 2020, due to progress made in the R&D of COVID-19 vaccines, uncertainties in the market subdued, and the gold price fell back from the yearly high and fluctuated. The SGE Au99.99 contract reported a yearly change of 35.62 percent, closing at RMB 390.00 per gram, up 14.44 percent from the end of 2019. In 2020, the average price of Au99.99 contracts was RMB 387.44 per gram, 23.91 percent higher than the average price in 2019.

7.2.2 Domestic gold prices fell from a premium to discount to the international gold prices

In 2020, since the outbreak of the COVID-19 pandemic, domestic physical gold sales were affected, resulting in insufficient spot gold demand and relatively excess supply. In the international market, due to hedging demand and poor circulation, among other reasons, there was a relatively strong demand for gold, which led to a significantly narrower spread between domestic and overseas markets, and a significant discount to domestic prices. Before the outbreak of the pandemic, domestic gold prices were generally higher than international ones, and the spread ranged between RMB 1~2 per gram for a long time. After the outbreak, the spread turned from positive to negative in February, and dropped to the annual low of RMB -22.88 per gram on August 12th. In Q4, the spread gradually recovered, and basically stabilized at RMB -5 per gram at end-2020. For the whole year, the average spread between domestic and overseas markets was RMB -5.77 per gram, a decrease of RMB 8.23 per gram from the level of RMB 2.46 per gram in 2019.

7.2.3 Gold investment demand grew steadily

The trading volume of spot physical gold dropped significantly, with 3480.84 metric tons of gold spot contracts traded in the year, down 33.24 percent year on year. However, thanks to the growth in investment demand driven by market conditions and the introduction of preferential policies for service costs reduction, the trading volume of deferred delivery contracts increased steadily, pushing the annual trading volume to reach 23,200 metric tons, up 6.12 percent year on year. Gold futures trading on the SHFE continued the 2019 rally, with the total volume and daily average reaching 52.4055 million lots (52,400 metric tons) and 264,700 lots (264.7 metric tons), up 13.41 percent and 0.53 percent year on year respectively.

7.2.4 Types of market participants was further optimized

In 2020, in terms of primary bid traders in SGE's gold price matching market, proprietary trading registered 11,100 metric tons, down 21.10 percent year on year; agent trading amounted to 15,600 tons, up 19.63 percent year on year, of which agent trading for institutions accounted for 7,016.84 metric tons, up 13.60 percent year on year, and that for individuals accounted for 8,593.00 metric tons, up 25.05 percent year on year. Incorporated clients became increasingly involved in the SHFE's gold futures market, representing nearly 50 percent of total transactions and holding more than 80 percent of positions. There were more than 12,000 special clients such as securities companies and fund management companies, and domestic institutions like gold production and consumption enterprises and commercial banks have become key participants in the market. The investor structure of gold options was optimized, where incorporated clients accounted for more than 70 percent in the daily average trading volume and more than 60 percent in the daily average positions.

7.3 Product innovation, institutional development and infrastructure construction

7.3.1 Products were further innovated in the gold market

Product innovation continued to deepen in the floor trading market, as the SGE promoted the R&D of spot gold option products, launching 3 traditional gold ETFs and the first 4 "Shanghai Gold" ETFs in the market, and facilitating the participation of insurance funds in the gold market through gold ETF investment. Such innovation also continued in the OTC market, as performance guarantee-based inquiry products became technically available online and derivative inquiry products of "Shanghai Silver" were researched into, which enriched the innovation reserve of multilateral inquiry products.

7.3.2 SGE and SHFE earnestly optimized gold market trading mechanism

The SGE improved the efficiency of market operation by extending night trading hours of the inquiry market and setting long untraded contracts as inactive. It also reduced the investors' transaction fee and position holding cost by structurally lowering the commission rates of deferred and spot contracts and slashing deferred charges in the deferred trading market. As a special care for members in pandemic-inflicted areas, the SGE exempted part of the 2020 expenses for members based in Hubei in 2020. In addition, the SGE strengthened membership management by improving full-cycle membership qualification management, establishing work mechanisms for strict pre-admission review, interim real-time risk monitoring, ex-post rectification within a limited time and the following punishment, and issued the *Guidance for SGE Membership Identification*. The SHFE continued to optimize trading rules and operation mechanisms, including delivery procedures, collateral management, as well as the market maker system.

7.3.3 Vigorous efforts were made in infrastructure construction in the gold market

The PBC Shanghai Head Office and SGE jointly completed construction of the China's Gold Market Trade Report Database (Phase I), which effectively enhanced data interconnectivity among gold markets, further improved monitoring and management approaches of the market, and increased the level of market risk warning and prevention. The SGE promoted trading system and clearing infrastructure construction in an orderly manner to ensure sound, effective system operation. The Yijintong App worked well, with the turnover of floor trading exceeding RMB 4.3 trillion, up 196.1 percent year on year. The registration and custody system of gold asset management business completed the registration and custody of 533 asset management products throughout the year. OTC businesses such as accumulation gold exchange and agent sales were promoted, and the construction of basic service platform for the OTC gold market was pushed forward. Progress was secured in the overseas connection of FT accounts on the SGE international board, with the domestic replication and promotion of FT businesses well implemented.

7.4 Opening-up of the gold market

7.4.1 SGE international board witnessed steady business development

In 2020, the international business section of SGE (hereinafter referred to as the SGE international board) reached a gold trading volume of 8,028.83 metric tons, down 2.07 percent year on year, and posted a turnover of RMB 3.05 trillion, up 16.54 percent year on year, accounting for 36.92 percent of the total business turnover on the SGE international board.

7.4.1.1 The number of international members continued to grow, and membership structure continued to be optimized

As of end-2020, the SGE international board had attracted 89 international members and 87 international clients, with 13 new international members added in 2020. International members include commercial banks, refining enterprises, trading companies, securities companies and investment institutions, among others, demonstrating a future optimized structure of market participants as well as steadily improved transaction scale and market participation.

7.4.1.2 Fund clearing routes remained smooth and cross-border capital flow in order

The routes for fund clearance on the SGE international board were smooth, where the size of inter-regional fund transfer was measurable, and the penetration risk was under control. In 2020, the net volume of funds cleared on the international board registered RMB 154.644 billion, averaging RMB 636 million per day, a decrease of 18.05 percent year on year. International members transferred a total of RMB 112.091 billion of funds, including RMB 57.743 billion inwards and RMB 54.348 outwards. Cross-border capital outflow totaled RMB 13.395 billion, whereas inflow totaled RMB 12.234 billion, resulting in a deficit of RMB 1.161 billion. As of end-2020, the international board opened 8 FT accounts and 1 special account for overseas settlement in 9 margin depository banks, including the Bank of China. International members have opened 200 FT accounts, including 100 FTE accounts and 100 FTN accounts; 36 were overseas.

7.4.1.3 SGE improved logistic efficiency and initiated re-export trade business on the international board

The SGE worked with the customs and other relevant departments to steadily optimize procedures, reduce logistic costs, and improve customs clearance efficiency, thus matching SGE's efficiency in handling similar gold businesses with that of major international gold markets. The launch of re-export trade on the international board marked its full integration into the global market and showcased its capability of market functions in global gold resource allocation. At end-2020, the size of re-export trade on the international board reported 23.26 metric tons.

7.4.2 Cooperation between domestic and overseas markets was further expanded

7.4.2.1 SGE promoted international cooperation and expanded market opening-up

The SGE actively looked outward and advanced the partnership projects initiated with key countries and regional markets. It signed an MOU with the National Finance Association of Russia, agreeing to carry out cooperation in a wide range of areas and promoting the interconnectivity and win-win development of precious metal markets in China and Russia; it maintained sound communication with the Chicago Mercantile Exchange (CME) on market order maintenance, product information and follow-up cooperation; it also pushed forward cooperation negotiations with relevant exchanges in India.

7.4.2.2 SGE continuously enriched the "Gold Road" project, and introduced the business model of processing and re-exporting gold ingots

Based on the actual need of domestic banks and the refining industry, the SGE piloted the processing and re-export business of standard gold ingot in the post-pandemic period through innovations in its business model and recreation of its business process. With such efforts, the SGE aimed to effectively serve the internal demand of work and production resumption of the domestic gold industry, speed up the interconnectivity of domestic and overseas physical gold markets, and lay a foundation for the high-quality capacity of China's gold industry to go global and effectively connect with the strong physical gold demand along the Belt and Road.

7.4.2.3 SGE overcame impacts of the pandemic and strengthened online promotion overseas

In 2020, the SGE, by holding multiple online promotion events and seminars on innovative businesses such as the "Gold Road" and "Shanghai-Macao Gold Road", publicized new business models to countries and regions such as Thailand, Singapore, Hong Kong and Macao, and explored new opportunities for cross-border and cross-market cooperation in the post-pandemic era. By organizing online training sessions for international members, it helped international members to further understand China's gold market and facilitated international members to participate in international board businesses in an active and compliant manner.

7.5 Outlook of the gold market

In 2021, China's gold market will adhere to the goal of steady development, promote market reform and innovation step by step, gradually improve the product system, optimize the investor structure, and promote the construction of a multi-layered and fully functional gold market. Meanwhile, infrastructure of the gold market will continue to be improved, system construction will be advanced, and services will be improved to maintain its stable and orderly operation.

BOX 6 Develop the gold ETF market into a new stage, with the first batch of innovative "Shanghai Gold" ETF products launched

In 2013, the SGE jointly launched gold ETF products with the SSE and SZSE. With SGE physical gold as the underlying asset, they track gold prices closely and the fund shares are listed and traded on stock exchanges. In recent years, as the value of gold investment gained greater recognition, gold ETF developed rapidly with its flexible trading mode, low investment threshold and low cost. In 2020, certain progress was secured in the gold ETF market in boosting product system construction and innovation.

1. New funds were listed in succession to meet the demand of rapid market development

In 2020, the trading volume of gold ETF was 2,214.88 metric tons, up 56.52 percent year on year, and turnover was RMB 847.913 billion, up 95.07 percent year on year. At the end of the year, positions of funds registered 60.43 metric tons, up 35.16 percent year on year.

To better meet investors' growing demand for *gold ETF investment, 7 gold ETFs products were listed on the SGE throughout the year, breaking the annual record of the number of products launched. Among these, 3 were traditional gold ETFs based on the SGE Au99.99 contracts, and the other 4 were the first batch of "Shanghai Gold" ETF products, bringing the number of products in the whole market to 11. In addition, the second batch of 5 "Shanghai Gold" ETFs was approved in November 2020 and is expected to be listed in 2021.*

2. Innovative "Shanghai Gold" ETF products were launched to further promote integration of the securities market and the gold market

"Shanghai Gold" ETF is gold ETF with "Shanghai Gold" contracts as the investment target and performance benchmark. The SGE started to list "Shanghai Gold" contracts in 2016 and formed the "Shanghai Gold" Benchmark Price, which provided the gold market with authoritative, fair and tradable RMB-denominated gold prices, and served as an ideal investment target for gold derivatives. To enrich the investment varieties in the gold market, from 2018, the SGE initiated R&D into "Shanghai Gold" ETFs with the SSE first and then SZSE. The first 4 products received regulatory approval in 2019, and were successively issued in Q3 2020.

Compared with traditional gold ETFs, the "Shanghai Gold" ETFs make full use of the unique trading mechanism of underlying contracts and has the following features. First, its price is more representative. "Shanghai Gold" Benchmark Price is formed by all trading parties on a quantity-price equilibrium basis at a point in time, which fully reflects the relationship between market supply and demand and represents the "China price" of gold. Second, it has better liquidity. In the trading process of "Shanghai Gold", all the purchases and sales of fund companies can be completed at the same time and at the same price, and the liquidity of underlying assets remains abundant, which further contributes to product development. Third, its investment costs are more open and transparent. Fund companies finish complementary securities transactions through the "Shanghai Gold" contract, and the transaction price is the benchmark price, which is announced on a daily basis by the SGE.

The launch of "Shanghai Gold" ETFs has far-reaching significance for price discovery and serving investors' investment demand in the gold market. First, the successful initial application of "Shanghai Gold" prices in the securities market for the first time provided a model and reference for the future development of other gold derivatives. Second, it provided a channel for individual investors to indirectly participate in "Shanghai Gold" transactions, which can better satisfy the demand for gold investment of investors in the securities market. Third, it further deepened cooperation among financial infrastructures such as the SGE, SSE and SZSE, and strengthened the cross-market interaction between the securities market and the gold market.

Chapter 8 Insurance Market

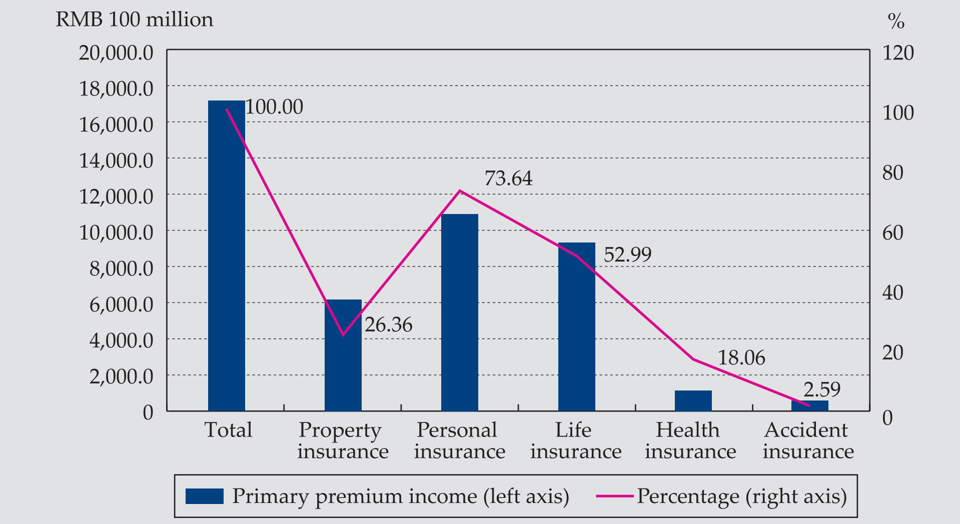
In 2020, the insurance industry worked to overcome the impact of the COVID-19 pandemic, prudently responded to challenges from various risks, and kept a sound momentum of stable operation. The volume of assets, liabilities and businesses steadily increased, and the quality and the efficiency of financial services for the real economy gradually improved. The liquidity of insurance institutions was generally stable, with major business and risk indicators kept within reasonable ranges. The institutional reform of the insurance industry was fully advanced, and the governance of insurance institutions continued to improve. Meanwhile, the insurance industry further opened up to the world economy, becoming more market-based and internationalized.

8.1 Performance of the insurance market

8.1.1 Primary premium income

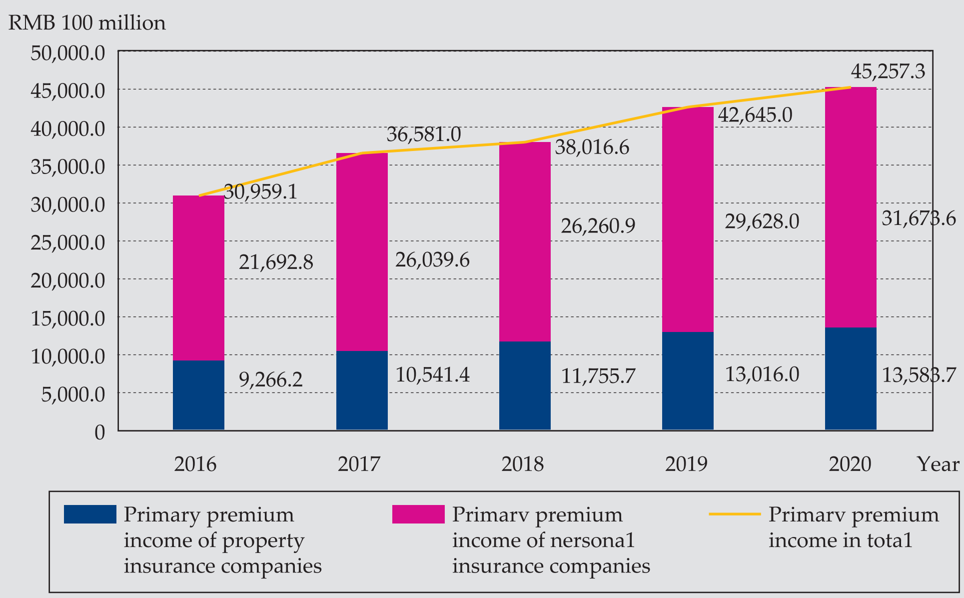
In 2020, China's insurance industry achieved primary premium income of RMB 4.53 trillion, up 6.13 percent year on year, registering a slightly lower growth rate than the previous year. In specific, property insurance, life insurance, health insurance, and accident insurance (hereinafter referred to as accident insurance) accounted for 26.36 percent, 52.99 percent, 18.06 percent, and 2.59 percent respectively, up 2.40 percent, 5.40 percent, 15.66 percent and -0.08 percent year on year respectively. From 2016 to 2019, primary premium income of insurance companies recorded RMB 3.10 trillion (up 27.50 percent year on year), RMB 3.66 trillion (up 18.16 percent year on year), RMB 3.80 trillion (up 3.92 percent year on year), and RMB 4.26 trillion (up 12.17 percent year on year) respectively. In particular, on a year-on-year basis, primary premium income of property insurance companies increased by 10.01 percent, 13.76 percent, 11.52 percent, and 10.72 percent respectively, and that of life insurance companies rose by 36.78 percent, 20.04 percent, 0.85 percent, and 12.82 percent respectively.

Figure 8.1 Primary premium income and insurance structure in 2020



(Source: Official website of the CBIRC)

Figure 8.2 Primary premium income from 2016 to 2020

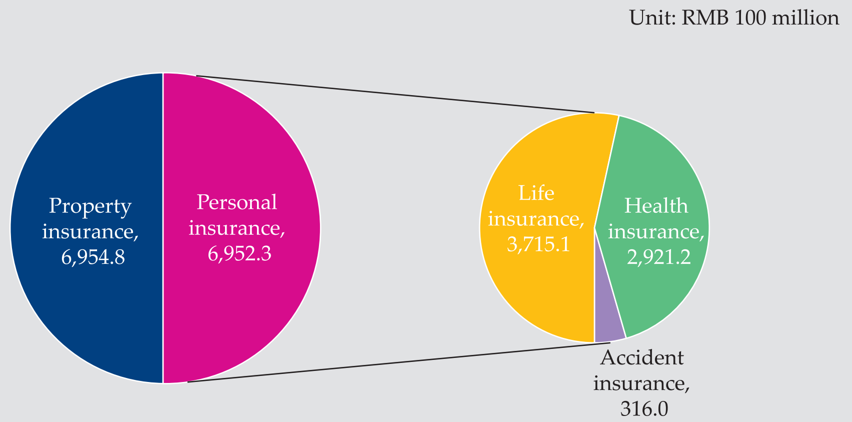


(Source: Official website of the CBIRC)

8.1.2 Claims and payments of primary insurance

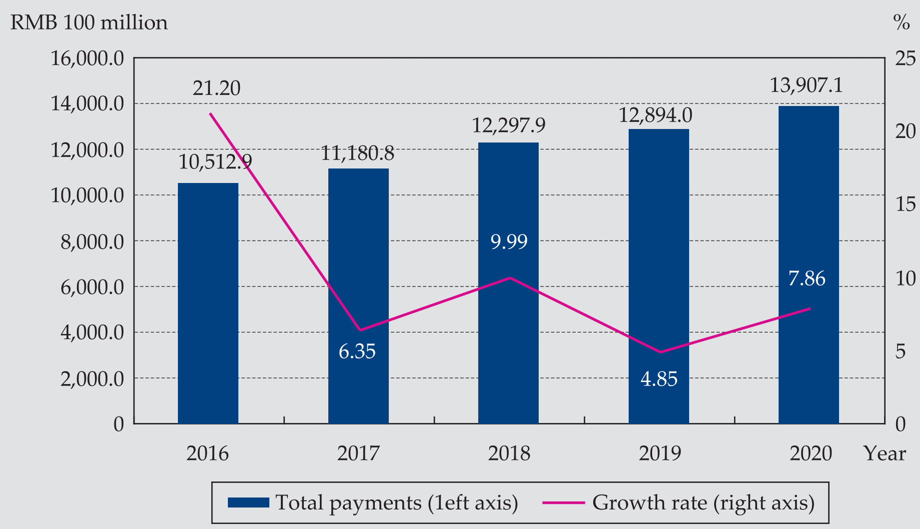
In 2020, insurance companies paid RMB 1.39 trillion in claims and payments of primary insurance, up 7.86 percent year on year, registering a slightly higher growth rate than the previous year. In particular, the claims and payments of property accounted for 50.01 percent, life 26.71 percent, health 21.00 percent, and accident 2.27 percent, registering a growth rate of 6.96 percent, -0.75 percent, 24.25 percent, and 6.05 percent respectively. From 2016 to 2019, claims and payments of the insurance industry recorded RMB 1.05 trillion (up 21.20 percent year on year), RMB 1.12 trillion (up 6.35 percent year on year), RMB 1.23 trillion (up 9.99 percent year on year), and RMB 1.29 trillion (up 4.85 percent year on year), respectively.

Figure 8.3 Structure of claims and payments in 2020



(Source: Official website of the CBIRC)

Figure 8.4 Claims and payments of primary insurance from 2016 to 2020

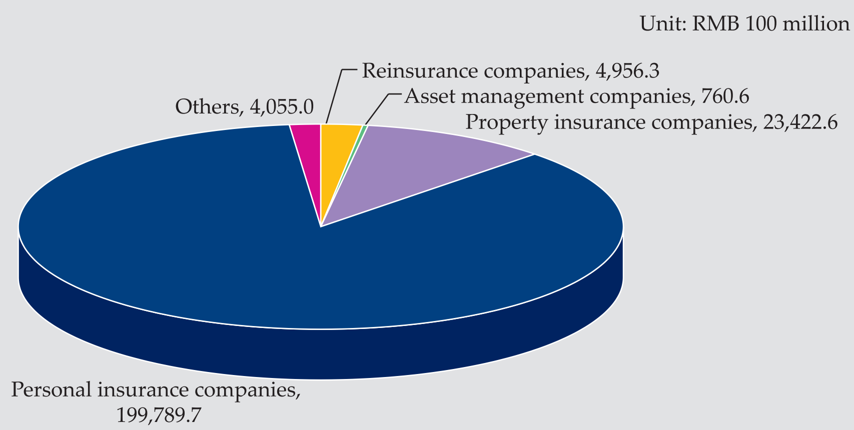


(Source: Official website of the CBIRC)

8.1.3 Insurance assets

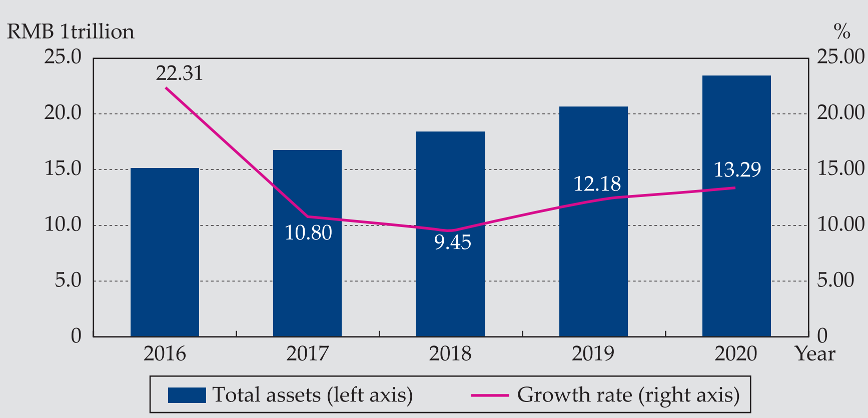
As of end-2020, total assets of insurance companies amounted to RMB 23.20 trillion, an increase of RMB 2.73 trillion, or 13.29 percent, from the beginning of the year. Total assets of property insurance companies, personal insurance companies, reinsurance companies, and insurance asset management companies stood at RMB 2.34 trillion (up 2.10 percent from the beginning of the year), RMB 19.98 trillion (up 17.82 percent from the beginning of the year), RMB 0.50 trillion (up 16.32 percent from the beginning of the year), and RMB 76.063 billion (up 18.66 percent from the beginning of the year) respectively. From 2016 to 2019, total assets of the insurance industry registered RMB 15.12 trillion (up 22.31 percent year on year), RMB 16.75 trillion (up 10.80 percent year on year), RMB 18.33 trillion (up 9.45 percent year on year), and RMB 20.56 trillion (up 12.18 percent year on year) respectively.

Figure 8.5 Structure of total assets in the insurance industry in 2020



(Source: Official website of the CBIRC)

Figure 8.6 Total assets in the insurance industry from 2016 to 2020



(Source: Official website of the CBIRC)

8.2 Main features of the insurance market

8.2.1 The industry extended vigorous support for pandemic containment and the resumption of work and production

In January 2020, the CBIRC released the *Notice on Strengthening Financial Services in the Banking and Insurance Industry and Cooperating for Effective Prevention and Control of Pneumonia Caused by Novel Coronavirus*, stressing that the insurance industry and other industries should work together to fully leverage their strengths on various fronts, such as insurance guarantee, to step up financial support for the key areas of social well-being. Under the guidance of the CBIRC, the insurance industry expanded online financial services, and optimized and diversified the channels and scenarios of "contactless services". By insurance products and services, the insurance industry introduced innovative types of insurance that targeting such weak links as pandemic containment, disaster relief, agriculture, and rural areas, as well as such key areas as personal health and work and production resumption, thereby providing insurance guarantee for free for those who fought on the front line during the pandemic and their families. Insurance companies established "Green Channels" to speed up claim settlement, prepay for special cases and expand insurance coverage, which simplified the requirements, relaxed the conditions and enhanced the efficiency of claim settlement. For instance, they gave priority to policy holders who were infected with COVID-19 or incurred losses due to the pandemic in claim settlement, and deferred auto insurance premium payments for the vehicles of logistics enterprises engaged in pandemic prevention and control. Furthermore, they provided SMEs with credit enhancement through credit insurance and guarantee insurance, which facilitated the resumption of work and production. By the use of insurance funds, the insurance industry stepped up support for the investment in key industries and areas; offered fast tracks for the issuance of insurance asset management products and waived issuance fees; supported the allocation of funds through insurance asset management products to Hubei, Xinjiang, Heilongjiang and other heavily-hit areas, bolstering business development and infrastructure construction there; launched the shelf registration mechanism for capital assistance programs, allowing "one-off registration and phase-by-phase issuance", thus offering timely support for SMEs to resume work and production in an orderly manner during the pandemic; and supported insurance asset management institutions in introducing special products to mitigate the liquidity risks from stock pledges by listed companies. In addition, more jobs were created to absorb the supply of labor force, which was demonstrated by then increase in the number of insurance agents.

8.2.2 The level of insurance guarantee was steadily enhanced

In January 2020, the CBIRC, in conjunction with other 12 authorities, released the *Opinions on Promoting the Development of Commercial*

Insurance in the Field of Social Services, in a bid to leverage the positive role of commercial insurance in social services and enhance the level of guarantee against risks in relevant areas. In 2020, the insurance industry registered RMB 8,709.91 trillion in the total amount insured, up 34.62 percent from a year earlier. In particular, the amount insured by property insurance companies and personal insurance companies was RMB 7,511.89 trillion (up 39.92 percent year on year) and RMB 1,198.02 trillion (up 8.79 percent year on year) respectively. By types, the amount insured registered RMB 323.80 trillion (up 28.32 percent year on year) for auto insurance, RMB 2,767.48 trillion (up 77.38 percent year on year) for liability insurance, RMB 4.13 trillion (up 8.57 percent year on year) for agricultural insurance, RMB 1,833.11 trillion (up 50.26 percent year on year) for health insurance, RMB 35.92 trillion (down 7.66 percent year on year) for newly sold life insurance, and RMB 3,125.65 trillion (down 10.66 percent year on year) for accident insurance. The amount insured by all the other types of insurances reached RMB 619.82 trillion. The insurance industry extended proactive guarantee support for the technological innovation of businesses, with the total amount of intellectual property insurance exceeding RMB 20 billion and benefiting 4,295 businesses.[①] What's more, the investment through insurance accounts and the new payments of independent accounts of investment-linked insurance added up to RMB 751.702 billion, down 17.28 percent year on year.

8.2.3 The scope of insurance services continued to expand

In 2020, the number of new insurance sold was 52.634 billion, up 6.25 percent from a year earlier, including 51.728 billion (up 6.13 percent year on year) for property insurance companies and 906 million (up 13.66 percent year on year) for personal insurance companies. By types, the accumulated number of new policies stood at 4.107 billion (down 16.29 percent year on year) for cargo transportation insurance, 11.630 billion (up 24.43 percent year on year) for liability insurance, 5.421 billion (up 93.04 percent year on year) for guarantee insurance, 540 million (up 8.56 percent year on year) for auto insurance, 14.580 billion (up 29.25 percent year on year) for health insurance, and 7.748 billion (down 42.76 percent year on year) for accident insurance. New life insurance sold stood at 85 million, down 15.61 percent year on year, among which 66 million (down 6.28 percent year on year) were attributed to general life insurance. The accumulated number of new policies sold for all the other types of insurances amounted to 8.532 billion.

8.2.4 The operation of insurance institutions remained sound and steady

In 2020, despite the relatively grave pressure, the insurance industry maintained major

① Source: http://finance.people.com.cn/n1/2021/0222/c1004-32033275.html, accessed on February 22nd, 2021.

business and risk indicators within a reasonable range. In terms of business indicators, as of end-2020, the total net assets of insurance companies stood at RMB 2.75 trillion, up 10.95 percent year on year, and the cash flow from operating activities increased by 106.5 percent year on year, suggesting abundant cash flow.[①] In terms of solvency, the solvency ratio of the insurance industry was kept generally stable. At end-2020, the average comprehensive solvency ratio and average core solvency ratio of 178 insurance companies, which were reviewed by the CBIRC's Solvency Supervision Committee, standing at 246.3 percent and 234.3 percent respectively. In particular, the average comprehensive solvency ratios of personal insurance companies, property insurance companies, and reinsurance companies were 239.6 percent, 277.9 percent, and 319.3 percent respectively. In terms of risk indicators, 100 insurance companies were rated A in the composite rating of risks, 71 rated B, 3 rated C, and 3 rated D.[②]

8.2.5 The allocation of insurance funds and assets was diversified

As of end-2020, outstanding insurance funds stood at RMB 21.68 trillion, up 17.02 percent from the beginning of the year, with the growth rate increasing by 4.11 percent compared with the same period last year. Specifically, bank deposits totaled RMB 2.60 trillion and accounted for 11.98 percent of the total, a year-on-year increase of 2.96 percent; investment in bonds amounted to RMB 7.93 trillion and made up a share of 36.59 percent in the total, a year-on-year increase of 23.89 percent; investment in stocks and securities investment funds amounted to RMB 2.98 trillion and accounted for 13.76 percent of the total, a year-on-year increase of 22.39 percent; other investment registered RMB 8.17 trillion and represented 37.67 percent of the total, a year-on-year increase of 14.00 percent.

8.3 Reform and innovation in the insurance market

8.3.1 Comprehensive reform of auto insurance was launched

With a view to deepening the financial supply-side structural reform, better safeguarding the rights and interests of consumers, and realizing the high-quality development of auto insurance, the CBIRC released the *Notice of the CBIRC on Issuing the Guiding Opinions on Implementing the Comprehensive Reform of Auto Insurance* (hereinafter referred to as the *Guiding Opinions*) in September 2020. Taking "safeguarding the rights and interests of consumers" as the primary goal and "lowering prices, enhancing guarantee and improving quality" as the short-term goal, the *Guiding*

① Source: http://www.cbirc.gov.cn/cn/view/pages/ItemDetail.html?docId=961829&itemId=915&generaltype=0, accessed on February 20th, 2021.

② Source: http://www.cbirc.gov.cn/cn/view/pages/ItemDetail.html?docId=969124&itemId=915&generaltype=0, accessed on March 9th, 2021.

Opinions mainly covers the following aspects. The first is to enhance the guarantee level of compulsory insurance, increase its indemnity limits, and optimize the floating coefficients of premium rates for road traffic accidents. The second is to expand and optimize the guarantee service of commercial auto insurance, straighten out the liabilities insured by the basic policy and the rider of commercial auto insurance, increase indemnity limits, and diversify the products of commercial auto insurance. The third is to improve the market-based formation mechanism of auto insurance clauses and rates, perfect the calculation mechanism of pure risk insurance premiums, reasonably bring down the rates of additional charges, gradually lift restrictions on the floating range of the coefficients of independent pricing, optimize the No Claim Discount (NCD), and properly set an upper limit of the ratio of service charges. The forth is to reform the methods of market access and follow-up management of auto insurance products, and unveil new products of compulsory insurance and demonstration products of commercial auto insurance. In this regard, the method of market access of demonstration products of commercial auto insurance was changed from an approval-based to a registration-based one, and small and medium-sized property insurance companies were supported to prioritize the development of differentiated innovative products. The fifth is to advance the reform of supporting infrastructure construction, fully implement the real-name payment system for auto insurance, actively promote the system of electronic insurance policy, and intensify the research and application of new technologies. The sixth is to fully strengthen and improve the supervision of auto insurance, perfect the mechanism for retracing premium rates and correcting product deviations, enhance the effectiveness of supervision over reserves, tighten up the rigid supervisory constraints on solvency, intensify the supervision over insurance intermediaries, and guard against monopolistic behaviors and unfair competition.① After the implementation of the *Guiding Opinions*, the indemnity limits on compulsory insurance markedly increased, the insured liabilities of commercial auto insurance became more comprehensive, the products of commercial auto insurance more diversified, the prices of commercial auto insurance more scientific and reasonable, the products of auto insurance more market-based, and the NCD further optimized.②

8.3.2 The development of insurance asset management industry was standardized

In March 2020, the CBIRC formulated the *Interim Measures for the Administration of*

① The CBIRC released the *Notice of the CBIRC on Issuing the Guiding Opinions on Implementing the Comprehensive Reform of Auto Insurance*, http://www.cbirc.gov.cn/cn/view/pages/ItemDetail.html?docId=926438&itemId=915, accessed on February 20th, 2020.

② Officials of the CBIRC answered press questions on the *Notice of the CBIRC on Issuing the Guiding Opinions on Implementing the Comprehensive Reform of Auto Insurance*, http://www.cbirc.gov.cn/cn/view/pages/ItemDetail.html?docId=926440&itemId=915&generaltype=0, accessed on February 20th, 2020.

Insurance Asset Management Products, making institutional arrangements for the parties to insurance products, issuance, continuation and termination of products, product investment and management, information disclosure and reporting, risk management, regulatory management and others, and specifying that insurance asset management institutions dealing in insurance asset management products should handle issuance, registration, custody, transaction, settlement, and information disclosure, among others, on the asset registration and trading platforms recognized by the CBIRC, such as Shanghai Insurance Exchange Co., Ltd. and PICC Insurance Asset Registration and Trading System Co., Ltd. In September 2020, three supporting rules, namely the *Detailed Rules on the Implementation of Portfolio Insurance Asset Management Products*, *Detailed Rules on the Implementation of Debt Investment Plans*, and the *Detailed Rules on the Implementation of Equity Investment Plans*, were promulgated, which further refined regulatory standards based on the characteristics of transaction structures and investment orientations of different products. As such, the CBIRC provided institutional support for the steady development of insurance asset management products and helped smooth the channel linking long-term funds with the real economy.①

8.3.3 High-quality development was emphasized for the Internet insurance business

For the purpose of regulating the Internet insurance business, effectively forestalling risks, protecting the legitimate rights and interests of consumers, and improve the insurance industry's capacity for serving the real economy and people's livelihood, in December 2020, the CBIRC unveiled the *Measures for the Regulation of Internet Insurance Business*. The *Measures* helped straighten out the nature of the business, specify requirements for licensed operation, and effectively regulate business operation behaviors. Also, it enforced regulation on marketing and publicity to prevent from misleading sales and help consumers choose suitable insurance products. Furthermore, it detailed service standards to effectively protect the rights and interests of consumers, proposed targeted requirements for Internet enterprises engaging in insurance businesses as agents, and set up negative lists to eliminate gray zones and crack down on illegal operation.②

In June 2020, in response to some prominent problems revealed by complaints about Internet insurance, the CBIRC issued the *Notice on Regulating the Retrospective Management of Internet Insurance Sales*, by which it established the retrospective system for Internet insurance

① Officials of the CBIRC answered press questions on the *Interim Measures for the Administration of Insurance Asset Management Products*, http://www.cbirc.gov.cn/cn/view/pages/ItemDetail.html?docId=928234&itemId=915&generaltype=0, accessed on February 20th, 2020.

② Officials of the CBIRC answered press questions on issues of concern at the current stage, http://www.cbirc.gov.cn/cn/view/pages/ItemDetail.html?docId=955490&itemId=915&generaltype=0, accessed on February 20th, 2020.

sales, and enforced stringent management and control of sales pages. On this basis, the sales behaviors can be reproduced to effectively curb misleading sales and thus fully safeguard the consumers' right to know, right to make independent choices, and right to fair dealing.①

8.3.4 The reform of the insurance intermediary market was deepened

In order to fully strengthen the management of the salesperson of insurance companies and the employees of professional insurance intermediaries, in May 2020, the CBIRC introduced the *Notice on Implementing the Primary Responsibility of Insurance Companies and Strengthening the Management of Insurance Salespersons*, and the *Notice on Earnestly Strengthening the Management of Employees of Professional Insurance Intermediaries* (hereinafter collectively referred to as the two *Notices*). Within the framework of the *Insurance Law* and other provisions on the regulation of insurance agents, brokers, and assessors, and on the basis of systematically sorting out the regulatory policies on intermediary employees, the two *Notices* defined the primary responsibility of insurance institutions, and specified requirements and standards for the whole-process employee management from on-board to off-board by insurance institutions, while focusing on the core issue of having insurance institutions implementing their management responsibilities, highlighting major links in the management of employees, and stressing on issues identified in the review of their registration for practice.②

With a view to further advancing the coordination and unification of legal systems for the regulation of insurance intermediaries, consolidating the achievements secured in sprucing up the insurance intermediary market, and deepening the reform of the insurance intermediary market, in November 2020, the CBIRC released the *Provisions on the Supervision of Insurance Agents*, by which the following requirements were proposed for professional insurance agencies. First, the management of market access was intensified by stepping up the review of the shareholders of professional insurance agencies and specifying requirements for shareholders on their contribution capability. Second, the management and control of branches was strengthened, as requirements were specified for professional insurance agencies wishing to establish branches and efforts were ramped up to ensure that incorporated professional insurance agencies fulfill their management and control responsibilities. Third, the process of post-registration approval was sorted out. According

① Officials of the CBIRC answered press questions on the *Notice on Regulating the Retrospective Management of Internet Insurance Sales*, http://www.cbirc.gov.cn/cn/view/pages/ItemDetail.html?docId=912723&itemId=915&generaltype=0, accessed on February 20th, 2020.

② Officials of the CBIRC answered press questions, http://www.cbirc.gov.cn/cn/view/pages/ItemDetail.html?docId=904811&itemId=915&generaltype=0, accessed on February 20th, 2020.

to the process, professional insurance agencies should timely register relevant information in the supervisory information system after obtaining their licenses; where any agency has not obtained a license or has the license revoked, it should timely report such changes by submitting a record in the system and ensure that there are no such words as "insurance agent" in its name. Fourth, the minimum registered capital was increased, including an adjustment of the minimum registered capital of regional professional insurance agencies to RMB 20 million. In addition, penalty provisions were provided for illegal sales of non-insurance financial products and illegal involvement in the Internet insurance business.[①]

8.4 Opening-up of the insurance industry

8.4.1 High-level opening-up was proactively advanced, and foreign-funded reinsurance companies were supported to increase investment in China

Since 2018, the CBIRC has successively released a total of 19 opening-up measures in two rounds, which laid a solid institutional and market foundation for China's financial sector to enhance its capacity for serving the real economy and competing on the international arena. Entering into 2020, the CBIRC continued to promote the high-level opening-up of the insurance industry, supporting foreign-funded reinsurance institutions to participate in the construction of China's reinsurance market and pursue sound development in China. The insurance industry of China has thus become more market-based and internationalized at a higher level of opening-up. In April 2020, the CBIRC approved the Beijing Branch of Swiss Reinsurance Company to increase its registered capital from RMB 300 million to RMB 1.355 billion, and the following month, it approved the Shanghai Branch of Germany's Hannover Reinsurance Company to increase its registered capital by RMB 1.56 billion to RMB 4.105 billion. Foreign-funded reinsurance companies saw not only a steady rise in their number, but also marked improvement of their capital strength and sustainable development capacity in China.

8.4.2 Financial services for foreign trade were well delivered to restore and smooth the global supply chain

In March 2020, the General Office of the CBIRC issued the *Notice on Strengthening Financial Services for the Collaborative Resumption of Work and Production Along the Industry Chain*. The *Notice* aimed at encouraging insurance institutions to further expand the coverage of short-term export credit insurance and properly reduce premium rates under the premise of controllable risks; encouraging insurance institutions and policy guarantee institutions to, where risks are controllable, provide credit enhancement services for upstream and downstream MSMEs along the industry chain

① Officials of the CBIRC answered press questions, http://www.cbirc.gov.cn/cn/view/pages/ItemDetail.html?docId=944050&itemId=915&generaltype=0, accessed on February 20th, 2020.

which were in need of financing; encouraging insurance institutions to, based on the risks that the core enterprises may face in the upstream and downstream of the industry chain, offer them guarantee insurance backed by pledges, collateral, pure credit, or others, to increase the coverage of trade credit insurance and expand the channels of credit enhancement for enterprises in need of financing; encouraging personal insurance companies to, where risks are controllable, properly extend the maturity of loans pledged by insurance policies and increase credit limit, with a view to alleviating clients from financial stress in the short term and helping MSBs to resume work and production. With respect to the persisting logistics blockage since the pandemic broke out, insurance institutions were stimulated to properly extend the insurance policy periods for vehicles, vessels and airplanes that have halted their operation during the pandemic.

8.4.3 Qualified reinsurance institutions in Hong Kong continued to enjoy facilitating regulatory policies to grow Hong Kong's insurance market

In 2020, the CBIRC revised the *Regulatory Rules on the Solvency of Insurance Institutions — Q&A No. 1: Counterparty Default Risk Factors for Hong Kong Reinsurers During the Transitional Period of the Equivalence Assessment Framework Agreement on Solvency Regulatory Regime*, which specified that, for qualified reinsurers in Hong Kong, the term of reinsurance credit risk factors applicable when ceded from direct insurers in the mainland during the transitional period shall be extended to June 30th, 2021. The equivalence recognition of Hong Kong's solvency regulatory systems and the rendering of corresponding facilitating regulatory policies represented an important measure of the CBIRC in thoroughly implementing the arrangements and requirements of the CPC Central Committee on further opening up the financial sector and bolstering the development of the Guangdong-Hong Kong-Macao Greater Bay Area. This is not only conducive to enhancing mutual trust between the insurance regulators on both sides, improving market efficiency and regulatory efficacy, but also beneficial for the mainland insurance market to diversify its risks across the globe and promote mutual development of two insurance markets.①

8.5 Outlook of the insurance market

In 2021, based its work on the new development stage, the insurance industry will apply the new development philosophy, build the new development paradigm, and extend full support to foster the pattern of mutually-reinforcing domestic and international circulations. Measures will be taken to develop green insurance proactively, explore various

① The CBIRC extends the applicable period of reinsurance credit risk factors during the transitional period of the equivalence assessment framework agreement on solvency regulatory regime, http://www.cbirc.gov.cn/cn/view/pages/ItemDetail.html?docId=911599&itemId=915&generaltype=0, assessed on February 20th, 2020.

financial services that can boost scientific and technological innovation, strengthen integrated financial services for foreign trade, and propel opening-up at a higher level. The industry will work to continuously deepen the supply-side structural reform, develop private pensions as the third pillar in a well-regulated way, consolidate the reform of auto insurance, advance the reform of accident insurance and health insurance, promote the market-based reform of the use of insurance funds, and propel the transformation of insurance marketing systems. Efforts will also be made to enhance the overall efficacy of financial services, boost financial support for areas concerning people's livelihood, and develop pension, health, liability and catastrophe insurance. Moreover, works will be done to forestall and defuse financial risks, in a bid to guard against external risks proactively. There will be collaborations between the industry and Internet platforms to organize financial activities in compliance with laws and regulations, with a view to curbing practices of monopoly and unfair competition.

BOX 7 Establish a mechanism enabling regular international exchanges to promote development of the reinsurance market

Reinsurance, known as "insurance for insurers", is an important channel for the insurance industry to diversify risks on an international basis, and also a bridge linking domestic and foreign insurance markets together. In recent years, the reinsurance industry of China acted as not only a stabilizer in lowering business risks of direct insurers and forestalling and defusing systematic risks in the insurance industry, but also a booster in accelerating digital transformation of the industry and enhancing its professionalism. Under the guidance of the CBIRC and the Shanghai Municipal Government, the Second Lujiazui International Reinsurance Conference (LIRC) was organized by Shanghai Insurance Exchange (SHIE) jointly with Lujiazui Financial City Council, Lujiazui Administration Bureau and China Reinsurance (Group) Corporation from October 26th to 28th, 2020. As the world's only annual conference of reinsurance dealers held in 2020, the LIRC well demonstrated the institutional advantage of China.

The LIRC, organized both online and offline, was composed of several sessions, including an advisory panel bringing together global insurance experts, one main forum, five special sub-forums, a general meeting of reinsurance dealers, an exhibition on the history of policy culture, and a visit to the SHIE. According to statistics, a total of 1,364 representatives from nearly 300 institutions worldwide attended the conference, concluding reinsurance contracts of intention worth of RMB 37.6 billion for 2021. Among the attendees, nearly 100 were senior management of insurance institutions, and the world's top eight reinsurance companies all dispatched representatives to the occasion.

First, the LIRC formed the Expert Advisory Committee and established the mechanism for regular international exchanges. During the panel of expert advisory themed "facing challenges and pursuing development together", experts from 20 domestic and foreign insurance and reinsurance institutions voiced their advice and suggestions, either face-to-face or via the video link, offering advice and suggestions for the high-quality development of China's insurance and reinsurance industry and the optimization of Shanghai's internationalized business environment for reinsurance. On the basis of fully considering the suggestions from market entities, the LIRC formed an Expert Advisory Committee within the framework of the conference.

Second, the LIRC convened both the main forum and special sub-forums to step up analysis and judgement of the development trend of the industry. The conference was held in the form of "main forum + sub-forums". Under the themes of innovative industry development in the post-pandemic era, digital transformation, joint governance of risks, and others, experts inside and outside the insurance industry exchanged on new opportunities and challenges facing the insurance and reinsurance industry, shared new practices worldwide on industry transformation, and proposed suggestions and references for the decision-making of market entities on the transfer and renewal of annual reinsurance contracts and the gauging of market prices.

Third, the LIRC gave prominence to its function of order matching, and thus further enhanced the pricing power and right of speech. Insurance institutions, reinsurance institutions and insurance intermediaries experienced the order matching mechanism and facilitating trading conditions during their business negotiation and contract transfer and renewal. Through this platform, cooperation among insurance institutions and their exchanges with outsiders gained strength, the flow of businesses served to guide that of capital and talents, and the channels and space of cooperation on reinsurance businesses were further expanded.

Fourth, the Insurance Blockchain Innovation Center (IBIC) was initiated to shape China as a hub of reinsurance technologies. In collaboration with several insurance institutions, the SHIE founded the IBIC, with a view to empowering the digital transformation of the insurance industry by taking reinsurance as the starting point and working from the three aspects of technological R&D, scenario application and standard making. Ultimately, a platform featuring joint contribution, shared benefits and win-win results would be established. What's more, the SHIE gave full play to the late-mover advantages of empowerment through science and technology. Specifically, with the blockchain platform for registration and clearing of reinsurance businesses, it supported the industry to decrease costs and increase efficiency, assisted regulators in improving the credit risk prevention mechanism for cross-border reinsurance, and promoted the innovation of reinsurance products and the enhancement of insurance capacity.

Chapter 9 Derivatives Market

In 2020, China's derivatives market continued expanding in a steady way, domestic and foreign investors became more involved in the derivatives market, the innovation of varieties accelerated, the opening-up of the market further advanced, the quality of market operations continuously improved, and the function of the market was fully leveraged, thus rendering solid support for the economic and financial sectors to guard against market fluctuation risks and further serve the real economy.

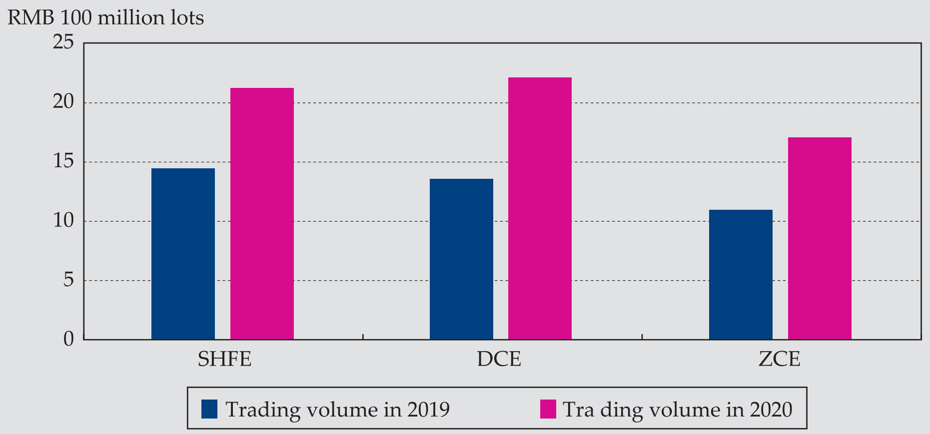
9.1 Commodity futures and options market

9.1.1 Performance of the commodity futures and options market

In 2020, the trading of China's commodity futures and options market expanded significantly, realizing a cumulative trading volume of 6.038 billion lots and a cumulative trading turnover of RMB 322.09 trillion, up 54.98 percent and 45.75 percent year on year respectively. China's trading volume of commodity derivatives accounted for 62.99 percent of the world's total, up 8.01 percentage points from 54.98 percent recorded for the previous year.

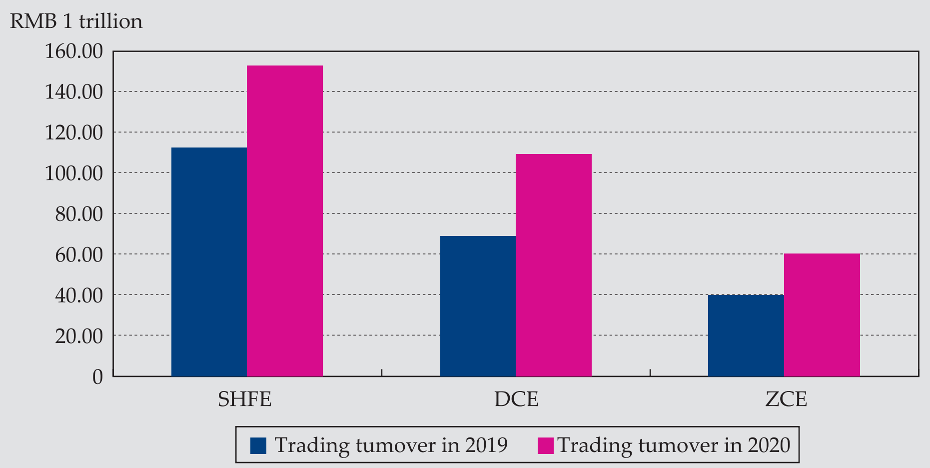
As for exchanges, the SHFE realized a cumulative trading volume of 2.129 billion lots and a cumulative trading turnover of RMB 152.8 trillion, up 47.04 percent and 35.80 percent year on year respectively, accounting for 35.26 percent and 47.44 percent in the market respectively. Dalian Commodity Exchange (DCE) realized a cumulative trading volume of 2.207 billion lots and a cumulative trading turnover of RMB 109.2 trillion, up 62.83 percent and 58.43 percent year on year respectively, accounting for 36.56 percent and 33.90 percent in the market respectively. Zhengzhou Commodity Exchange (ZCE) realized a cumulative trading volume of 1.701 billion lots and a cumulative trading turnover of RMB 60.09 trillion, up 55.74 percent and 51.97 percent year on year respectively, taking up 28.18 percent and 18.66 percent in the market respectively.

Figure 9.1 Cumulative trading volume of SHFE, DCE, and ZCE from 2019 to 2020



(Source: CFA)

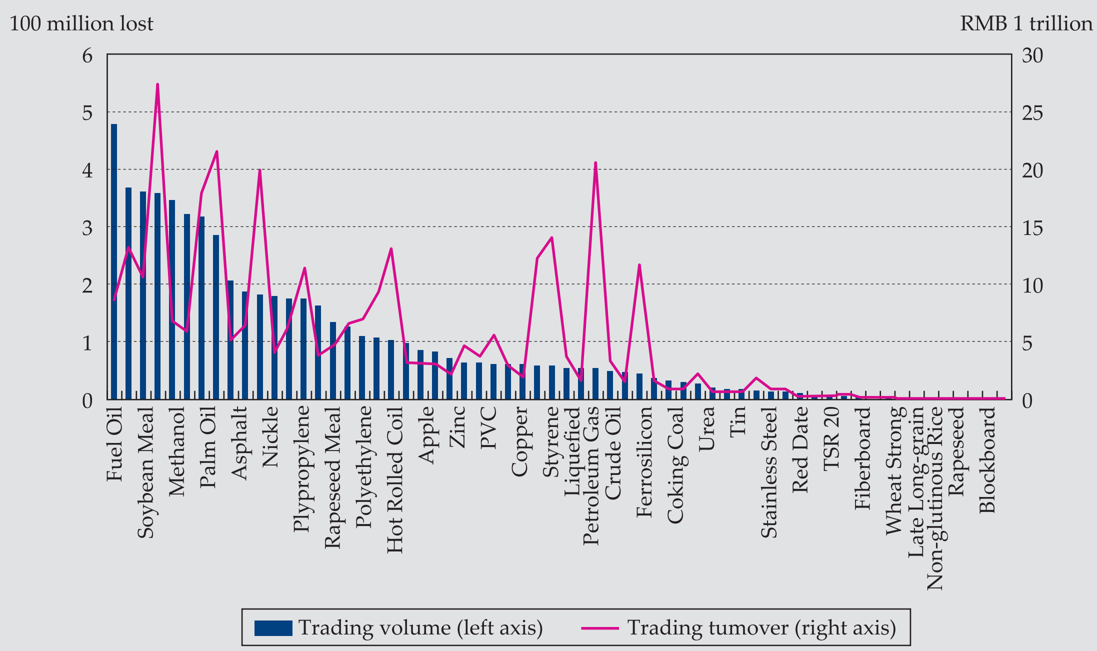
Figure 9.2 Cumulative trading turnover of SHFE, DCE, and ZCE from 2019 to 2020



(Source: CFA)

In 2020, China's commodity futures market registered a cumulative trading volume of 5.928 billion lots and turnover of RMB 321.98 trillion, up 53.78 percent and 45.72 percent year on year respectively. Agricultural products saw a cumulative trading volume of 1.979 billion lots and turnover of RMB 99.93 trillion, accounting for 33.4 percent and 31.0 percent of the total respectively; metal varieties reported a cumulative trading volume of 1.605 billion lots and turnover of RMB 135.94 trillion, accounting for 27.1 percent and 42.2 percent of the total respectively; energy and chemical varieties realized a cumulative trading volume of 2.344 billion lots and turnover of RMB 86.11 trillion, making up 39.5 percent and 26.7 percent of the total respectively.

Figure 9.3 Cumulative trading volume and turnover of various commodity futures in China in 2020

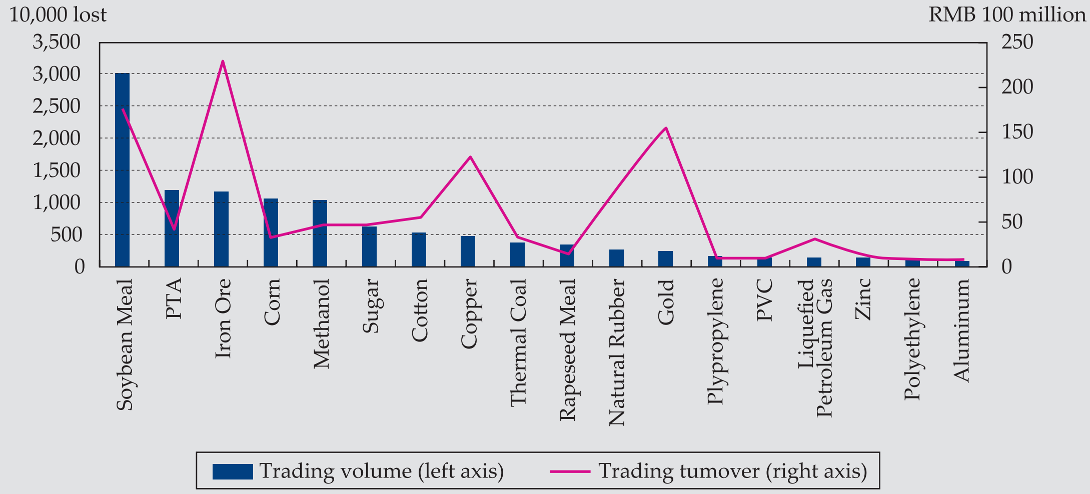


(Source: CFA)

In 2020, China's commodity options market sustained rapid growth, seeing a cumulative trading volume of 109 million lots and a cumulative trading turnover of RMB 110 billion, up 168.44 percent and 236.76 percent year on year respectively. The trading volume exceeded 100 million lots for the first time. As of end-2020, a total of 18 varieties of commodity options were listed on the market.

In 2020, the world's top five exchange-traded commodity derivatives markets were China, the U.S., Russia, the U.K., and India, which combined accounted for 97.12 percent of the total (see Table 9.1). Since 2009, China has been the world's largest exchange-traded commodity derivatives market for 11 consecutive years.

Figure 9.4 Cumulative trading volume and turnover of various commodity options in China in 2020



(Source: CFA)

Table 9.1 Trading statistics of the world's top five exchange-traded commodity derivatives markets in 2020

2020 ranking	2019 ranking	Country/Region	Volume (100 million lots)	YoY growth(%)	Market share(%)
1	1	China	60.38	54.98	62.99
2	2	U.S.	14.48	2.21	15.11
3	4	Russia	8.60	29.53	8.97
4	3	U.K.	7.11	4.55	7.42
5	5	India	2.58	-37.01	2.69

Source: Futures Industry Association.

9.1.2 Main features of the commodity futures and options markets

9.1.2.1 The trading volume of energy and chemical futures recorded the biggest growth, and the trading turnover of agricultural products grew at the fastest pace

Energy and chemical futures saw a cumulative trading volume of 2.344 billion lots and a cumulative trading turnover of RMB 86.11 trillion, up 79.72 percent and 33.10 percent year on year respectively; agricultural products realized a cumulative trading volume of 1.979 billion lots and a cumulative trading turnover of RMB 99.93 trillion, up 65.39 percent and 83.14 percent year on year respectively; metals reported a cumulative trading volume of 1.605 billion lots and a cumulative trading turnover of RMB 135.94 trillion, up 18.55 percent and 33.67 percent year on year respectively.

9.1.2.2 The trading volume of commodity options increased rapidly, and the composition of varieties traded was more even

In 2020, the trading volume and turnover of China's commodity options market increased by 168.44 percent and 236.76 percent from the previous year respectively. Top three varieties in terms of trading volume were Soybean Meal, PTA, and Iron Ore options, with a trading volume of 30.1209 million lots, 11.7883 million lots, and 11.5991 million lots respectively; the cumulative trading volume of the three options accounted for 49.10 percent of the total, down 28.11 percentage points from 77.21 percent recorded for the previous year. Top three varieties in terms of trading turnover were Iron Ore, Soybean Meal, and Gold options, with a trading turnover of RMB 23.124 billion, RMB 17.547 billion, and RMB 15.626 billion; the cumulative trading turnover of the three options accounted for 50.16 percent of the total, down 21.87 percentage points from 72.03 percent recorded for the previous year.

9.1.3 Innovation and institutional construction of the commodity futures and options market

9.1.3.1 The innovation of varieties was advanced steadily

In 2020, China's commodity futures and options markets continued to introduce new varieties, with a total of 12 varieties newly listed on the market, including 4 commodity futures and 8 commodity options. In particular, 4 were listed on SHFE, including Low Sulfur Fuel Oil, Bonded Copper futures and Zinc, and Aluminum options; 5 were listed on DCE, including Liquefied Petroleum Gas futures and Liquefied Petroleum Gas, Polypropylene, PVC, and Linear Low Density Polyethylene options; and 3 were listed on ZCE, including Polyester Staple Fiber futures and Rapeseed Meal, and Thermal Coal options. As of end-2020, there were 80 listed varieties on China's commodity futures and options markets.

9.1.3.2 The market maker system was promoted at a faster pace, covering nearly 70 percent of futures varieties

In 2020, 3 commodity futures exchanges worked vigorously to promote the market maker system, and market makers were introduced into or increased for 30 futures varieties. As of end-2020, the market maker system was adopted for 46 futures varieties, nearly 70 percent of the total in China's futures market. The liquidity and active contract continuity of market-making varieties were improved notably.

9.1.3.3 The OTC market construction delivered initial results, continuously expanding the space of serving the real economy

In 2020, 3 commodity futures exchanges continued to increase OTC derivatives businesses and launched or expanded the platforms for OTC businesses combining futures and spot trading, such as warrant trade, basis trade, and commodity swap, thus effectively expanding the space of serving the real economy. Breakthroughs were also made in the construction of a report repository for OTC derivatives trading.

9.1.3.4 The portfolio margin business was advanced steadily, with the quality of operations continuously improved

In 2020, 3 commodity futures exchanges successively launched the simulated system for portfolio margin. Besides guarding against risks, portfolio margin can reduce investors' costs, satisfy members' demand to exercise differentiated risk management requirements on their clients, and help increase the efficiency of fund usage and improve the quality of market operations.

9.1.3.5 The system of relevant laws and regulations was improved continuously

In January 2020, the CSRC published the *Interim Provisions for the Reporting of Violations of Laws and Regulations on Securities and Futures (Revised)*, with an aim of regulating the reporting of clues to law violations related to securities and futures and intensifying efforts to crack down on violations of laws and regulations on securities and futures.

9.1.4 Opening-up of the commodity futures and options markets

9.1.4.1 The number of varieties open to both domestic and foreign investors was increased steadily, resulting in a continuously increasing influence over prices

In 2020, the number of varieties open to international markets was increased steadily, growing from 4 in 2019 to 7 in 2020. Specifically, two varieties open to both domestic and foreign investors, namely Low Sulfur Fuel Oil and Bonded Copper, were newly listed on the market, and the Palm Oil futures became open to foreign investors. Meanwhile, the clout of the Crude Oil, Iron Ore, PTA, TSR 20, and other futures open to both domestic and foreign investors was further increased. The Crude Oil futures made China the third largest Crude Oil futures market globally in terms of barrels traded; the account number of overseas investors grew steadily and exceeded 330 as of end-2020, covering 23 countries and regions on five continents; in terms of spot trade, the Crude Oil futures price was adopted by many domestic and foreign renowned oil-related companies. Meanwhile, the order type of Trade at Settlement (TAS) was introduced, the Marker Price was published, and Murban Crude Oil was newly added as a deliverable, providing convenience for enterprises in the real economy to realize targeted hedging. The Iron Ore futures became the world's largest traded Iron Ore derivatives and the only one offering physical delivery, and its trading entities involved approximately 270 overseas clients in 21 countries and regions, including large international companies like Anglo American, Glencore, and Trafigura. The PTA futures became a price indicator for the global polyester industry. China became the world's largest TSR 20 futures market, with overseas participants accounting for nearly 20 percent of the total, and the TSR 20 futures price was used at a larger scale and adopted by Thailand's Southland Resources and 5 other domestic and foreign enterprises as a benchmark price in trade.

9.1.4.2 Efforts were made to steadily advance overseas business operations and cross-border regulatory cooperation of futures exchanges, which continuously enhanced international recognition of them

In terms of overseas business operations, the SHFE, Shanghai International Energy Exchange (INE), DCE, and ZCE were all included by the European Securities and Markets Authority (ESMA) in its positive list concerning post-trade transparency assessment of third-country trading venues (TCTVs) in 2020. In October, ZCE was included in the ESMA's positive lists concerning TCTVs' post-trade position limit assessment. In December, ZCE was recognized by the Monetary Authority of Singapore (MAS) as a Recognized Market Operator (RMO); thus, the SHFE, DCE, and ZCE all obtained the RMO qualification. In terms of cross-border regulatory cooperation, ZCE signed a memorandum of understanding (MOU) with the Singapore Exchange, vowing to enhance their communication and cooperation on futures and derivatives.

9.1.5 Outlook of the commodity futures and options markets

9.1.5.1 The financial and commodity derivatives market will be advanced, with the market system enriched

The financial derivatives market will grow in a steady manner. The tools and functions of financial derivatives, including stock index, interest rates, exchange rates, and credit futures and options, will be continuously enriched, so as to satisfy market participants' increasing demand for risk management. The OTC market of commodity derivatives will achieve further growth. Measures will be taken to motivate financial institutions and trade companies to leverage their professional advantages, provide risk management services on OTC derivatives, and engage in businesses such as swaps, forwards, and OTC options, so as to meet the differentiated demands of enterprises in the real economy for risk management.

9.1.5.2 The market will increase efforts to introduce new varieties and tools, and improve the product system

The market will step up efforts to promote the listing of refined oil, natural gas, peanut, and other futures and options varieties and advance the development and listing of commodity index futures and options. It will also support relevant institutions to develop more investment products, such as commodity index funds and commodity index ETF, and study the introduction of carbon emission rights futures.

9.1.5.3 Market participants will be further diversified, and the institutional system will be fostered

With a focus on risk management and asset management businesses, the market will support futures companies to accelerate their transformation and development. The market will continue to support futures companies to increase capital through a mix of approaches, and provide capital underpinnings for the innovation and transformation of futures companies. It will also step up efforts to foster the inter-institutional market of OTC commodity derivatives in China, and support risk management companies to develop into professional dealers and market makers and gradually play a central role in the OTC derivatives market. Measures will be taken to further enhance the expertise in futures investment consulting and asset management business, and train high-level commodity trading advisors (CTAs) and commodity pool operators (CPOs). Market participants will be further diversified, and the institutional barriers for SOEs and financial institutions to participate in futures trading will be further broken down. The market will encourage more enterprises in the real economy, including SOEs and listed companies, and long-term fund sources, such as commercial banks, insurers, pension funds, and corporate annuities, to manage risks by leveraging the futures market, and optimize the investor structure of the futures market.

9.1.5.4 The legal foundation of the futures market will be consolidated, with improvements made in the infrastructure system

The market will spare no efforts to support the legislation of higher-level laws governing futures, make sound top-level design in reform and opening-up arrangements for China's futures market from the legal perspective, specify the legal status of various participants, and clarify the basic legal relations, civil rights and obligations, and legal liabilities involved in the futures market. Explicit regulations will be stipulated with regard to market access, investor protection, opening-up, etc., to provide legal guarantees for the opening-up and cross-border regulation of the futures market.

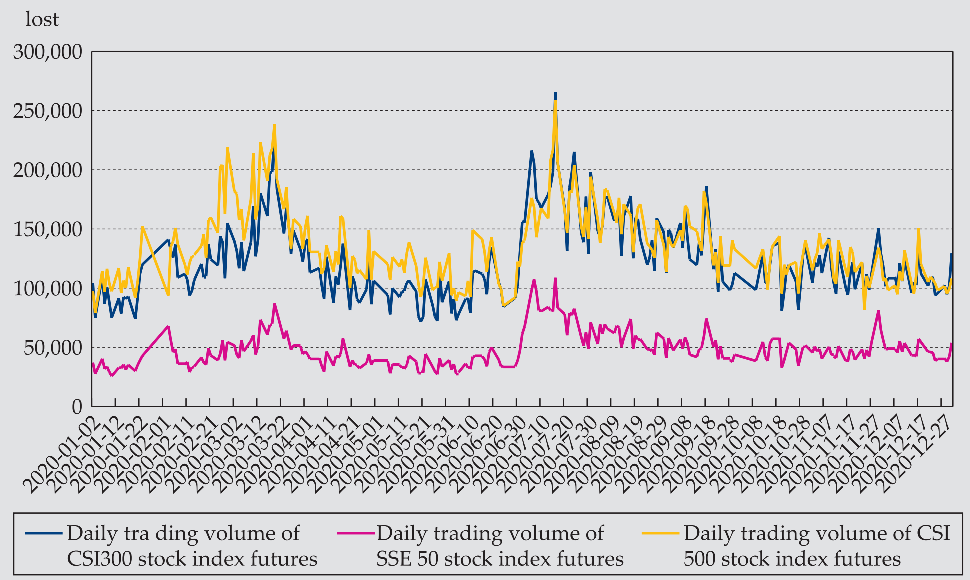
9.2 Financial futures and options markets

9.2.1 Performance of the financial futures and options markets

9.2.1.1 Stock index futures

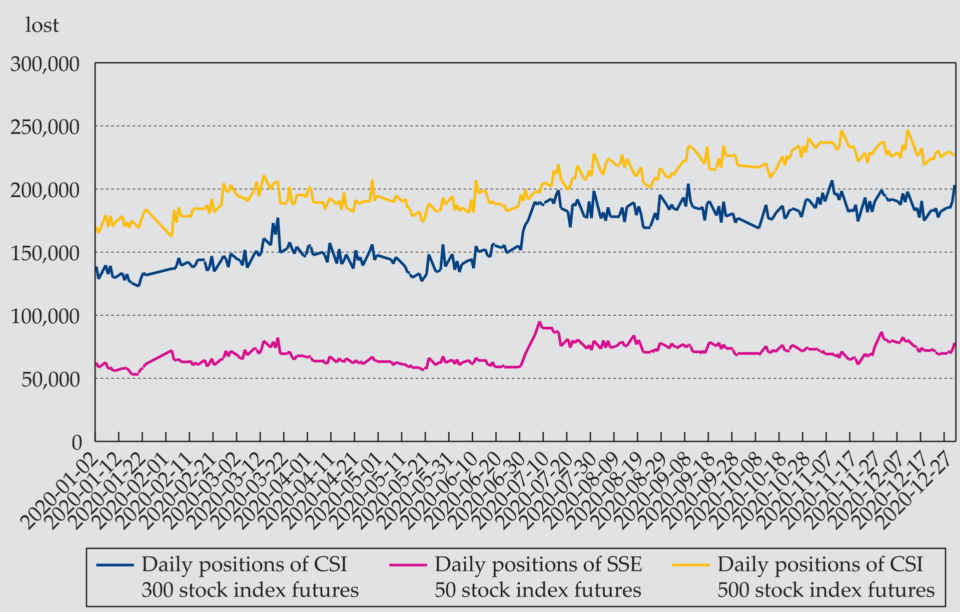
In 2020, the total trading volume of the three stock index futures, namely CSI 300, SSE 50, and CSI 500, was 74.5036 million lots with a total value of RMB 88.93 trillion, up 39.91 percent and 62.27 percent year on year respectively. The average daily trading volume and average daily positions were 306,600 lots and 439,700 contracts, growing by 40.49 percent and 49.85 percent year on year respectively. The average daily volume to open interest ratio was 0.70, which was maintained at a low level. The correlations between the stock index futures prices and spot prices of the three stock index futures were high. The price correlation coefficients between the closing price of the dominant contracts and the closing price of the corresponding underlying index of CSI 300, SSE 50, and CSI 500 futures were 0.9991, 0.9983, and 0.9972 respectively.

Figure 9.5 Daily trading volume of stock index futures in 2020



[(Source: China Financial Futures Exchange (CFFEX)]

Figure 9.6 Daily positions of stock index futures in 2020

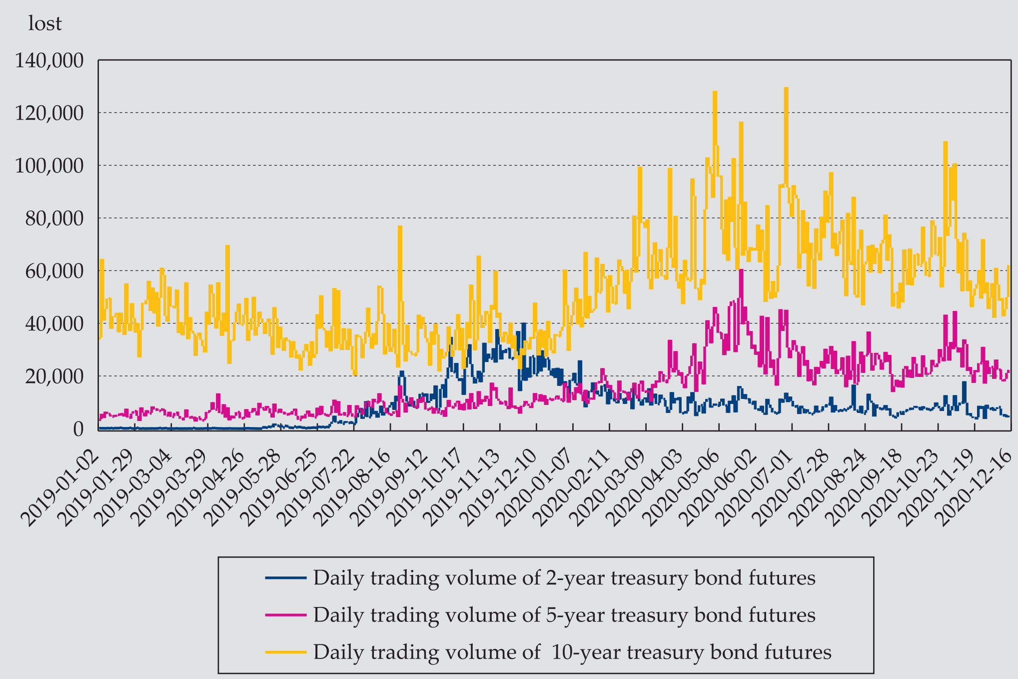


(Source: CFFEX)

9.2.1.2 Treasury bond futures

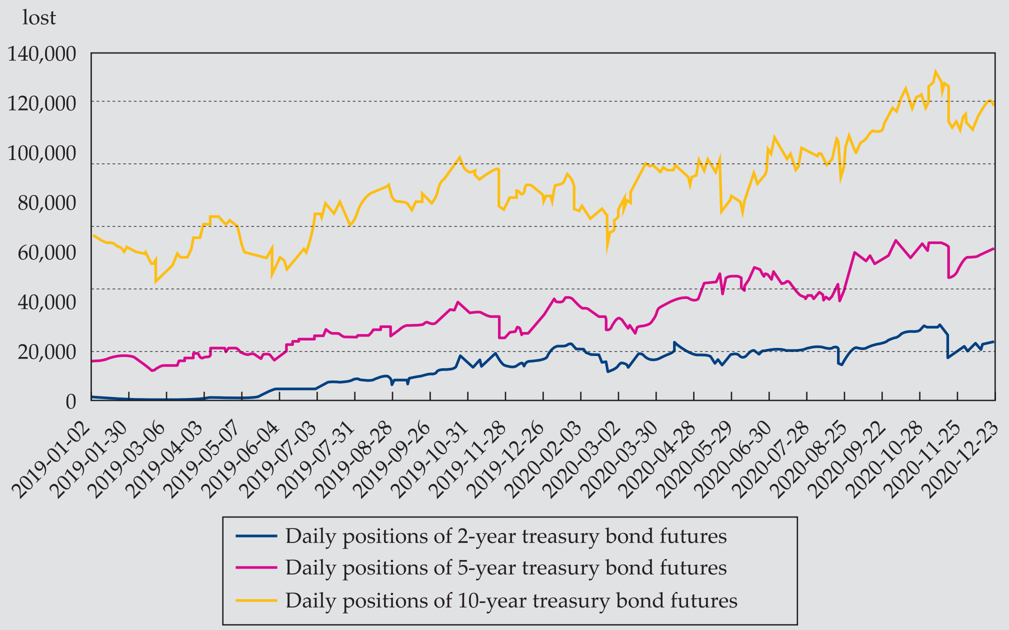
In 2020, the 2-year, 5-year, and 10-year treasury bond futures registered a total trading volume of 24.0351 million lots with a total value of RMB 26.37 trillion, up 84.43 percent and 77.98 percent year on year respectively. The average daily trading volume and average daily positions were 98,900 lots and 164,700 contracts, growing by 85.19 percent and 59.72 percent year on year respectively. The average daily volume to open interest ratio was 0.60, which was maintained at a relatively low level. The treasury bond futures prices and spot prices of the three treasury bond futures were highly correlated. The price correlation coefficients between the price of the dominant contracts of 2-year, 5-year, and 10-year treasury bond futures and the spot price were respectively 0.98, 0.99, and above 0.99. The deliveries of 12 treasury bond futures contracts were completed successfully in 2020, the total number of deliveries was 15,718 lots with an average delivery rate of 3.17 percent, and the deliveries were handled smoothly.

Figure 9.7 Daily trading volume of treasury bond futures from 2019 to 2020



(Source: CFFEX)

Figure 9.8 Daily positions of treasury bond futures from 2019 to 2020

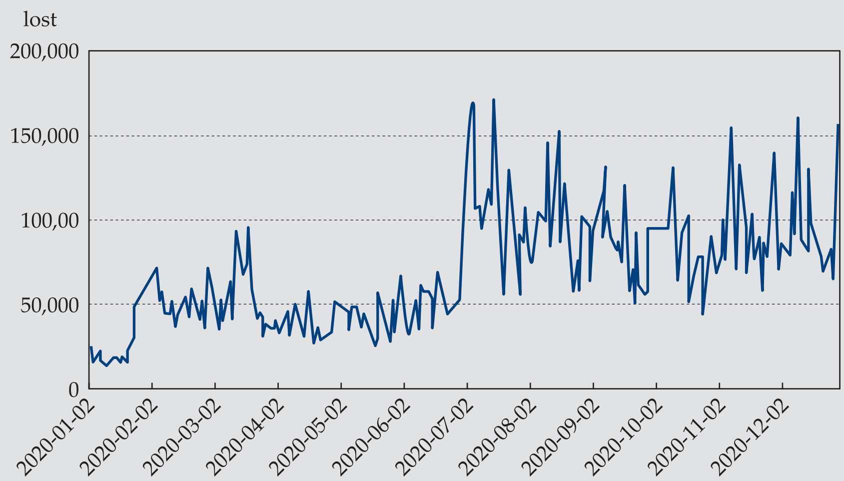


(Source: CFFEX)

9.2.1.3 Stock index options

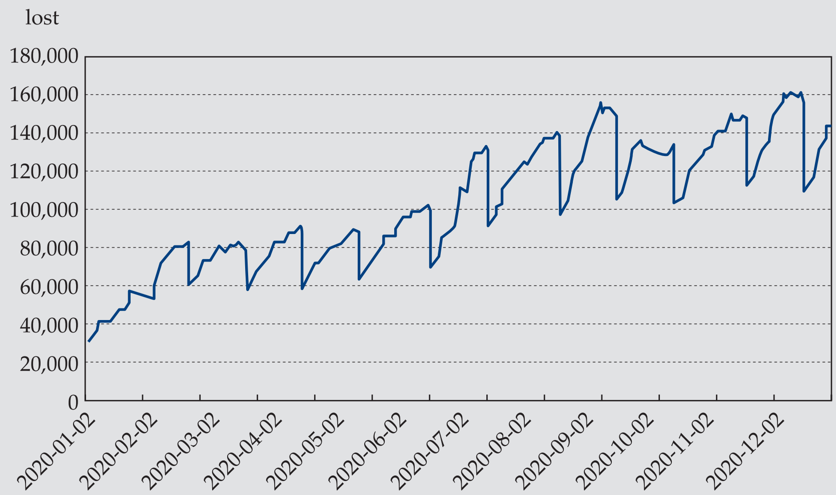
In 2020, the CSI 300 index options saw a total trading volume of 16.7428 million lots with a total notional trading value of RMB 7.58 trillion. The average daily notional trading value was RMB 31.206 billion, and the cumulative premium trading value was RMB 136.553 billion. The average daily trading volume and average daily positions were 68,900 lots and 103,600 lots, and the average daily volume to open interest ratio was 0.65, which was maintained at a relatively low level. The correlations between the stock index options prices and spot prices of the stock index options were high. The price correlation coefficients between the composite futures price of the current month at-the-money (ATM) contracts of CSI 300 index options and the closing price of CSI 300 index and the closing price of the current month contracts of CSI 300 index futures were 0.9993 and 0.9999 respectively. After the special anti-pandemic government bonds were issued, the CFFEX included the bonds into the scope of deliverable bonds of treasury bond futures, thus promoting the smooth issuance of special treasury bonds and rendering vigorous support for the development of the real economy. The position limit standards for treasury bond futures contracts were optimized, and the trading starting time of treasury bond futures was adjusted to be aligned with that of the exchange-traded bond market and stock index futures.

Figure 9.9 Daily trading volume of CSI 300 index options in 2020



(Source: CFFEX)

Figure 9.10 Daily positions of CSI 300 index options in 2020



(Source: CFFEX)

9.2.1.4 Stock options

In 2020, the cumulative trading volume of SSE ETF options was 982 million contracts, including 538 million call options contracts and 444 million put options contracts. The average daily trading volume and average daily positions were 4.0432 million contracts and 4.6523 million contracts. The total notional trading value was RMB 36.83 trillion, with an average daily notional trading value of RMB 151.543 billion. The cumulative premium trading value was RMB 716.708 billion, with an average daily premium trading value of RMB 2.949 billion. In particular, the cumulative trading volume of SSE 50 ETF options was 519 million contracts, including 289 million call options contracts and 229 million put options contracts, with an average daily trading volume of 2.1337 million contracts; the open interest at the end of the year was 2.4542 million contracts, with an average daily position of 2.7881 million contracts; the total notional trading value was RMB 16.30 trillion, with an average daily notional trading value of RMB 67.072 billion; the cumulative premium trading value was RMB 318.749 billion, with an average daily premium trading value of RMB 1.312 billion. The cumulative trading volume of CSI 300 ETF options on the SSE was 464 million contracts, including 249 million call options contracts and 215 million put options contracts, with an average daily trading volume of 1.9094 million contracts; the open interest at the end of the year was 1.6212 million contracts, with an average daily position of 1.8642 million contracts; the total notional trading value was RMB 20.53 trillion, with an average daily notional trading value of RMB 84.471 billion; the cumulative premium trading value was RMB 397.959 billion, with an average daily premium trading value of RMB 1.638 billion.

CSI 300 ETF options on the SZSE realized a cumulative trading volume of 79 million contracts, including 43 million call options contracts and 36 million put options contracts, with an average daily trading volume of 324,200 contracts; the open interest at the end of the year was 308,400 contracts, with an average daily position of 406,300 contracts; the total notional trading value was RMB 3.51 trillion, with an average daily notional trading value of RMB 14.456 billion; the cumulative premium trading value was RMB 67.957 billion, with an average daily premium trading value of RMB 280 million.

9.2.2 Main features of the financial futures and options markets

9.2.2.1 The open interest of stock index futures hit new highs, and the volume to open interest ratio was maintained at a low level

The year 2020 witnessed increases in the average daily trading volume and positions in the stock index futures market. The total open interest in the market peaked on December 11th, 2020, standing at 525,300 lots, and new highs were hit on 22 trading days throughout the year; the open interest of CSI 500 index futures peaked at 246,900 lots also on December 11th, 2020, and record highs were notched on 17 trading days throughout the year. The average daily volume to open interest ratio was 0.70, which was relatively stable and maintained at a low level.

9.2.2.2 The treasury bond futures market became increasingly mature, with its structure continuously optimized

In 2020, the trading volume and open interest of treasury bond futures both raced to record highs. The largest daily trading volume registered 192,600 lots on June 3rd, 2020, and the total open interest peaked at 225,100 lots on November 18th, 2020. In 2020, commercial banks, insurance funds, and other important participants of the spot market were allowed to be engaged in the treasury bond futures market. The engagement of institutional investors was enhanced in a steady way: institutional investors took up 85.63 percent in the average daily positions of treasury bond futures, up 1.59 percentage points from 2019.

9.2.2.3 The stock index options market grew steadily

In order to better meet investors' demand for risk management and ensure that the functions of products can be leveraged effectively, the trading limit of CSI 300 index options was adjusted in a progressive way in March and June 2020 respectively. After the adjustments, key indicators of market operations, including the volume to open interest ratio and the futures trading volume to spot trading volume ratio, were maintained at a relatively low level similar to that prior to the adjustments, and the market grew at a sound pace overall, with moderate intensity of transactions as well as steady and orderly operations. Meanwhile, the open interest of products was on a stable rise throughout the year, and their functions were gradually brought into play at the same time. In particular, put options, as the "insurance" for price falling, accounted for 43 percent of the total trading volume and 47 percent of the total open interest, and the average daily insured market value of stock spot corresponding to stock index options contracts was nearly RMB 20 billion.

9.2.2.4 The stock options market featured generally controllable risks and broad market participation, and the economic function of options was gradually served

In 2020, the risks of the stock options market on the SSE were generally under control. The average daily volume to open interest ratio of the options market was 0.90, and the average daily futures trading volume to spot trading volume ratio was 0.30. Throughout the year, the quality index and risk index of the options market averaged at 127 (values above 100 indicate sound liquidity and high pricing efficiency) and 34 (values below 60 indicate relatively low risks) respectively, and the market risks were relatively small.

As of end-2020, the number of options investor accounts in the SSE market was 489,700. A total of 90 securities companies and 29 futures companies obtained the qualification as trading participants of stock options at the SSE and were granted the access to trading in options brokerage business. In particular, 63 securities companies among them were also granted the access to options proprietary trading. As of end-2020, there were 16 SSE 50 ETF options market makers, including 14 main market makers and two general market makers; there were 15 market makers of CSI 300 ETF options, including 13 main market makers and 2 general market makers.

As the SSE options market was expanded

steadily, an increasing number of investors used options to insure and enhance their yields. The shares of insurance-type and yield-enhancing transactions with the use of options throughout the year reached 9.95 percent and 51.17 percent respectively. In 2020, the average daily insured market value of the market was RMB 30.896 billion, with the largest daily insured market value reaching RMB 39.012 billion.

In 2020, the SZSE stock options achieved the goals of "making a steady and sound start". As of end-2020, the number of CSI 300 ETF options investor accounts in the SZSE market was 147,200. A total of 87 securities companies and 24 futures companies obtained the qualification as trading participants of stock options at the SZSE and were granted the access to trading in options brokerage business. In particular, 43 securities companies among them were also granted the access to options proprietary trading. There were 12 main market makers and three general market makers involved in the market-making business, and the options market achieved sound and orderly operations. The average daily volume to open interest ratio and the average daily futures trading volume to spot trading volume ratio of CSI 300 ETF options in the SZSE market were 0.80 and 0.06 respectively, which indicated rational trading behaviors of investors. The shares of insurance-type and yield-enhancing transactions with the use of CSI 300 ETF options in the SZSE market were 10.56 percent and 42.41 percent respectively, and the average daily insured market value of the market was RMB 2.811 billion, which suggested that the economic function of options was gradually fulfilled.

9.2.3 Innovation and institutional construction of the financial futures and options markets

9.2.3.1 The business rules were optimized, and more mid- and long-term funds, including banking and insurance funds, were guided into the market

In February 2020, the CSRC, MOF, PBC, and CBIRC jointly issued a notice, allowing qualified pilot commercial banks and insurers with proper investment management capacity to participate in the trading of treasury bond futures in the CFFEX in line with the principles of law compliance, manageable risks and business sustainability. In March, the CFFEX published the *Notice on Matters Concerning Commercial Banks' Participation in the Pilot Program for Treasury Bond Futures Business*, and revised business rules including the *Measures of China Financial Futures Exchange on Membership Management* and the *Trading Rules of China Financial Futures Exchange*, so as to actively facilitate commercial banks and insurers to participate in the trading of treasury bond futures. In April, the pilot program of commercial banks participating in treasury bond futures trading was officially launched. In July, the CBIRC issued the *Provisions for the Participation of Insurance Funds in Treasury Bond Futures Trading*, and revised the *Measures on the Participation of Insurance Funds in Financial Derivatives Trading* and the *Provisions for the Participation of Insurance Funds in Stock Index Futures Trading*. In December, the Ministry of Human Resources and Social Security published the *Notice on Adjusting the Investment Scope of Annuity Funds*, incorporating treasury bond futures into the investment scope of annuity funds and occupational annuities.

9.2.3.2 The risk control arrangements devised for holidays of the National Day and Mid-autumn Festival were implemented, and the trading margins was adjusted for a holiday for the first time

Dynamically adjusting margins based on market conditions is a generally accepted practice in domestic and foreign futures markets, as well as a requirement for central counterparty risk management proposed in the *Principles for Financial Market Infrastructures* (PFMI). Around holidays of the National Day and Mid-autumn Festival in 2020, the CFFEX adjusted the trading margins for holiday for the first time since its inception.

9.2.3.3 The trading mechanism of stock options was improved

In 2020, the SSE extended the trading hours for the consolidated declaration of options exercise to cover the whole exercise day, adjusting them from 15:00~15:30 at the exercise date to 9:15~9:25, 9:30~11:30, and 13:00~15:30 at the exercise date. With improvements made in the consolidated declaration of options exercise as well as the reasonably extended trading hours, the participation in consolidated declaration of options exercise was boosted and the fund usage efficiency increased.

While launching the CSI 300 ETF options on its market, the SZSE introduced two innovative trading mechanisms. First, it rolled out the declaration system for the exercise of portfolio options, allowing investors to practice the portfolio exercise of call and put options they hold to expiry, so as to reduce the burden on them to get funds and securities ready and improve the exercise efficiency in the stock options market. Second, it launched the system of strategy margins, so as to, on the basis of keeping risks controllable, allow investors to build options portfolios in which risks offset each other. In this way, fewer options margins were employed, the fund usage efficiency was increased, and the costs of options trading were lowered.

9.2.4 Opening-up of the financial futures and options markets

9.2.4.1 The opening-up systems were further consolidated

In September 2020, upon approval of the State Council, the CSRC, PBC, and SAFE jointly published the *Measures for the Administration of Domestic Securities and Futures Investment by Qualified Foreign Institutional Investors and RMB Qualified Foreign Institutional Investors*. The Measures, along with supporting rules issued by the CSRC, took effect starting from November 1st, 2020, allowing QFIIs and RQFIIs to invest in financial futures, commodity futures, options, etc.

9.2.4.2 The BRI international programs was advanced in-depth

In 2020, based on the overall opening-up arrangements for China's capital market, the

CFFEX assisted the Pakistan Stock Exchange, in which it has stakes, in figuring out its future development plans and overcoming the impact of COVID-19 pandemic to achieve steady business operations. It also actively supported the CEINEX, in which it has a controlling stake together with the SSE, to advance businesses and innovations, and facilitated the implementation of policy results derived from the second China-Germany High Level Financial Dialogue.

9.2.5 Outlook of the financial futures and options markets

In 2021, China's financial futures and options market will continue be enriched with diversified supply of products, improve the market mechanism, attract more mid- and long-term funds into the market, advance opening-up of the financial futures market in a sound manner, continuously improve the quality of the financial futures market and exchanges, and serve the development of national economy.

9.3 RMB interest rate derivatives market

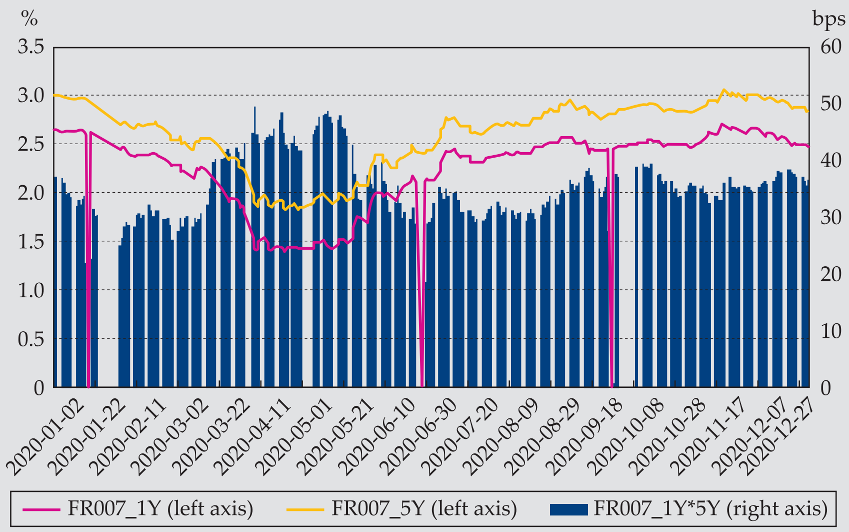
9.3.1 Performance of the RMB interest rate derivatives market

In 2020, the interbank interest rate derivatives market saw a cumulative trading volume of 280,900 lots with a trading turnover of RMB 20.1 trillion. The interest rate swap market registered a cumulative trading volume of 274,000 lots, up 15.3 percent year on year; the notional principal totaled RMB 19.6 trillion, up 7.8 percent year on year; at end-2020, the outstanding amount of legacy contracts of interest rate swaps in the market stood at RMB 26 trillion, a year-on-year increase of 13 percent from end-2019. The bond forward market (including standard bond forwards) reported a cumulative trading volume of 6,369 lots with a trading turnover of RMB 453.26 billion, up 52.1 percent and 3.8 percent year on year respectively. Since their launch in March 2020, interest rate options achieved a cumulative trading volume of 484 lots with a trading turnover of RMB 90.75 billion. Specifically, LPR interest rate swap options saw a cumulative trading volume of 126 lots with a notional principal of RMB 14.35 billion, accounting for 15.8 percent of the total; LPR interest rate cap/floor options reported a cumulative trading volume of 358 lots with a notional principal of RMB 76.4 billion, making up 84.2 percent of the total.

Throughout the year, the price of interest rate swap contracts moved following a V-shaped pattern, first falling and then rising. At end-2020, the prices of FR007_1Y and FR007_5Y dropped by 18bps and 17bps compared with early 2020 respectively, and their movements throughout the year were 131bps and 123bps respectively. The spread between FR007_1Y and FR007_5Y swaps was expanded rapidly in Q2, and maintained around 35bps in the second half of the year. The prices of Shibor3M_1Y and Shibor3M_5Y both declined by 7bps from early 2020, and their movements throughout the year were 177bps and 166bps respectively. The spread between Shibor3M_1Y and

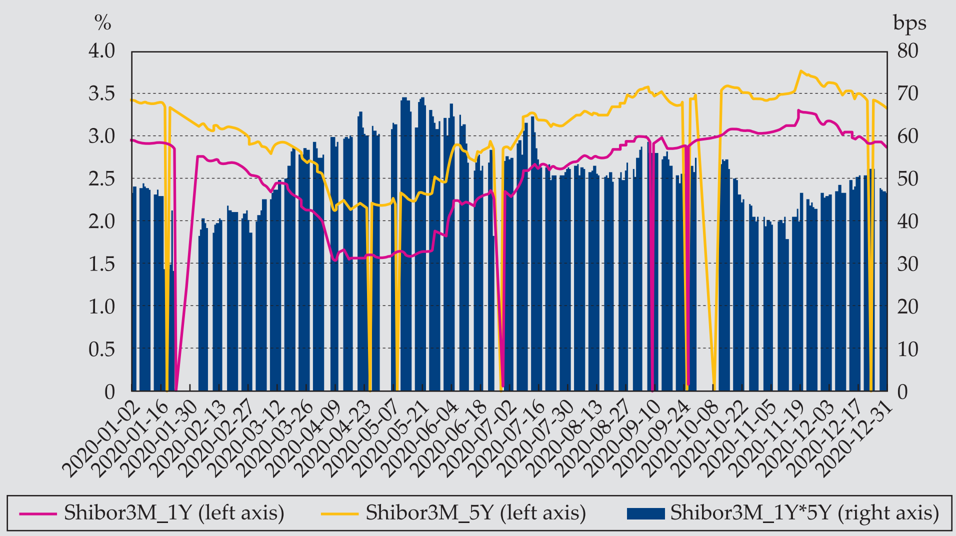
Shibor3M_5Y swaps was also expanded in Q2, reaching around 70bps, and fluctuated wildly around 50bps in the second half of the year.

Figure 9.11 Price movements of FR007 swap contracts in 2020



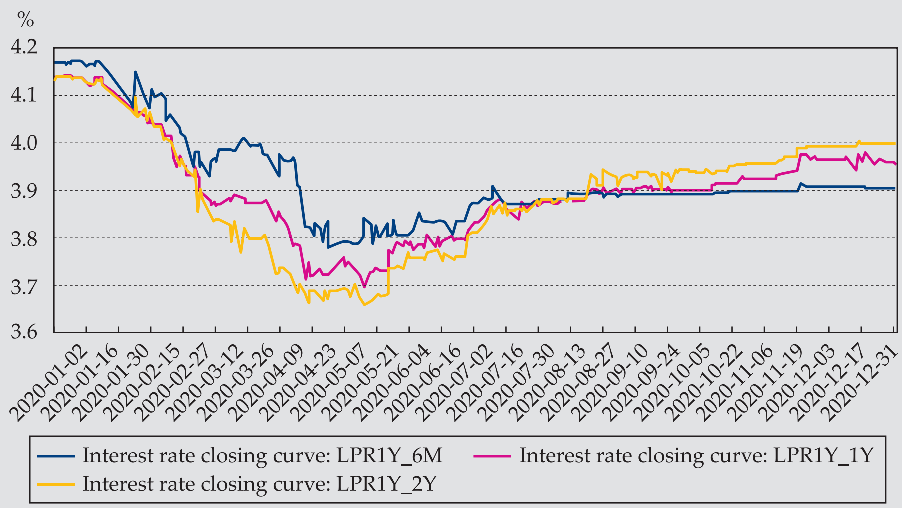
(Source: CFETS)

Figure 9.12 Price movements of Shibor3M swap contracts in 2020



(Source: CFETS)

Figure 9.13 Price movements of LPR1Y interest rate swaps in 2020



(Source: CFETS)

In 2020, the participants in the interest rate derivatives market were further diversified. As of end-2020, a total of 603 institutions entered the interest rate swap market through the CFETS, an increase of 116 compared with end-2019. Specifically, there were 297 product class participants, accounting for 49 percent of the total, and 133 city commercial banks, rural commercial banks, and rural credit cooperatives, which combined accounted for 22 percent of the total. The numbers of institutions participating in the standard bond forward market and the interest rate options market were 78 and 121 respectively, including banks, securities companies, unincorporated products, and other major institutional types. Throughout the year, a total of 121 institutions applied for access to trading in the interest rate options business, including large commercial banks, joint-stock banks, city commercial banks, rural commercial banks, foreign-funded banks, securities companies, privately offered funds, etc.

9.3.2 Main features of the RMB interest rate derivatives market

9.3.2.1 The reference rate was dominated by FR007 and SHIBOR

In 2020, interest rate swap transactions with FR007 and SHIBOR as the reference rate combined accounted for 97.6 percent of the total. In terms of maturity structure, the varieties with a maturity of 1 year or below 1 year were the most frequently traded, achieving a trading turnover of RMB 12.5 trillion and accounting for 63.8 percent of the total; the varieties with mid- and long-term maturities, such as those with a maturity of 1~5 years (including 5-year maturity), contributed a smaller share of the total, seeing a trading turnover of RMB 7.1 trillion and accounting for 36.2 percent of the total. In terms of participants, the major participating institutions were joint-stock commercial banks, securities companies and foreign-funded banks, which combined made up 75 percent of the total.

9.3.2.2 The standard bond forward market saw a more even maturity structure, with its investor base further diversified

In 2020, the 3-year, 5-year, and 10-year contracts reported a trading turnover of RMB 149.7 billion, RMB 177.1 billion, and RMB 126.4 billion respectively, accounting for 33 percent, 39 percent, and 28 percent of the total respectively. The proportions of 3-year and 5-year contracts both edged up, while that of 10-year contracts declined. In 2020, foreign-funded banks participated in the standard bond forward market for the first time, thus further diversifying the investor mix of the market.

9.3.2.3 Transactions in the interest rate options market were concentrated on varieties with short maturities

Regarding the maturity structure of varieties, transactions of interest rate cap/floor options were mainly concentrated on varieties with 6-month and 9-month maturities, which combined reported a trading turnover of RMB 59.594 billion and accounted for 78 percent of the total; transactions of interest rate swap options were mainly concentrated on varieties with 1-month and 3-month maturities, which combined reported a trading turnover of RMB 10.4 billion and accounted for 72.5 percent of the total. In terms of underlying, transactions were mainly concentrated on LPR1Y-based varieties with short maturities. Among transactions of swap options, those of LPR1Y-based interest rate swap options achieved a trading volume of 104 lots with a value of RMB 11.52 billion, accounting for 80.3 percent of the total; among transactions of interest rate cap/floor options, those of LPR1Y-based interest rate cap/floor options registered a trading volume of 343 lots with a value of RMB 74.49 billion, contributing a share of 97.5 percent to the total.

9.3.3 Innovation and institutional construction of the RMB interest rate derivatives market

9.3.3.1 FDR001-based interest rate swap contracts were newly launched

In November 2020, in order to implement the PBC's requirement of "further fostering an interbank benchmark interest rate system with Depository-Institutions Repo Rate (DR) as the representative", the CFETS launched FDR001-based interest rate swaps. FDR001-based interest rate swaps can expand the applicable scope of DR and enhance its market recognition and influence. It can also render support for the issuance of DR-based floating-rate bonds, satisfy the demand of DR-based floating-rate bond issuers and investors for managing interest rate risks, and provide facilitation for market entities to handle interest rate risk management and hedging.

9.3.3.2 ADBC bond-based standard bond forward contracts were newly launched

In 2020, the CFETS launched ADBC bond-based standard bond forward contracts. Based on its ADBC bond custodian business, the SHCH introduced the ADBC bond-based standard bond forward business, so as to expand the scope of underlying bonds of bond forwards from CDB cash bonds to include ADBC bonds and meet diversified demands of the market.

9.3.3.3 LPR Interest rate options business was rolled out to support the market-based interest rate reform

In March 2020, the CFETS launched the LPR-based interest rate options business, further enriching the product structure of the interbank interest rate derivatives market. Based on the management framework for the interbank derivatives market, the CFETS formulated the rules on trading of interest rate options. It independently developed the functions of the interest rate options trading system to provide one-stop services for options trading of institutions, including quotation and deal-closing, model-based pricing, exercise and delivery, risk management, market-to-market, calculation of delivery amount, etc., so as to cover all links throughout the life cycle of options business. It also established the bilateral quotation system for interest rate options, organized capable and willing institutions to quote on standard options contracts through the trading system every day, and formed the first complete volatility surface for LPR interest rate options in the market based on institutions' end-of-day quotations, so as to provide liquidity and pricing benchmark for the market.

COLUMN LPR interest rate options business

The LPR interest rate options business includes LPR1Y-based and LPR5Y-based interest rate swap options and interest rate cap/floor options. Customized and standardized trading services were launched for LPR interest rate options. Dialogue quote can satisfy the need for one-on-one trading services with customized elements, and click and deal quote can meet the centralized trading demand of standardized contracts. Thus, the services can satisfy diversified demands while increasing market liquidity. Meanwhile, the CFETS fully leveraged its advantage as an electronic trading platform, concentrated market forces on the development of LPR interest rate options pricing models and methodologies for constructing volatility surface, and independently developed the functions of the interest rate options trading system. Besides basic trading functions, it added various trade-related functions to the system, including model-based pricing, exercise and delivery, risk management, market-to-market, release of volatility surface, so as to provide convenience for market participants.

The launch of interest rate options delivered sound outcomes. First, it enriched the product structure of interest rate derivatives and provided more risk management tools for market institutions. Second, it helped financial institutions to better cope with the increasingly *complicated market environment, and improve their capacity to manage risks and offer financial services. Third, it effectively helped enterprises to better manage lending costs and enjoy the benefits of lower interest rates, thus serving the commitments to ensuring stability on six fronts, namely employment, the financial sector, foreign trade, foreign investment, domestic investment, and expectations, and maintaining security in six areas, namely, employment, people's basic livelihood, operations of market entities, food and energy, stable industrial and supply chains, and the normal functioning of primary-level governments.*

9.3.3.4 The interest rate derivative trading mechanism was improved, and the trading services covering more aspects were provided

In May 2020, the CFETS launched the derivatives module in the new-generation local-currency trading system, further optimized the functions of the X-Swap anonymous trading system by adding such functions as market update aggregation and implied orders, continued to improve the efficiency and performance of matching, and made trading more efficient. At present, maintaining a market share of above 60 percent, it has become an important tool for market members to manage interest rate risks. In December 2020, the CFETS introduced the RFQ trading mechanism of interest rate swaps, supporting participants to send a request for quotation to multiple institutions and get their replies to close a deal, so as to further lift the efficiency of price discovery. In 2020, the CFETS thoroughly improved interface services, newly added the functions of dialogue quote, conversation, and deal-closing, and ensured that the trading interfaces of X-Swap covered all aspects in credit granting, order, and transaction of all varieties. The interface-enabled transactions significantly improved the automation level of derivatives trading. At present, API-enabled orders on X-Swap accounted for nearly 80 percent of the total.

9.3.4 Opening-up of the RMB interest rate derivatives market

Overseas institutions got the approval to enter the domestic derivatives market by to signing the ISDA Master Agreement. According to the *Opinions on Further Accelerating the Development of Shanghai as an International Financial Center and Providing Financial Support for the Integrated Development of the Yangtze River Delta*, which was published in February 2020, overseas institutions are allowed to sign ISDA Master Agreement, NAFMII Master Agreement, or SAC Master Agreement at their own discretion to enter the domestic derivatives market. Throughout the year, a total of eight overseas institutions signed the ISDA Master Agreement to enter the interbank derivatives market.

9.3.5 Outlook of the RMB interest rate derivatives market

First, the derivatives market mechanism and products will be further optimized, and the role of derivatives market in risk management will be well served. The scope of underlying in the interest rate options market will be expanded, and research will be conducted on incorporating the repo benchmark rate as an underlying for interest rate options. The construction of the LPR derivatives market will be further advanced, and the centralized clearing of LPR derivatives will be introduced. The delivery mechanism of standard bond forwards will be improved. Efforts will be made in an orderly way to encourage overseas institutions to enter the interbank derivatives market and engage in risk management.

Second, investor education will be strengthened, and derivatives will play a bigger part in serving the real economy. Reasonable measures will be adopted to guide small- and medium-sized institutions and asset management institutions into the derivatives business, and their training and education will be strengthened in a targeted manner. Vigorous steps will be taken to support financial institutions to provide derivatives-related services for clients, and facilitate the derivatives market to play a part in serving the real economy and reducing financing costs.

9.4 RMB credit derivatives market

9.4.1 Performance and features of the RMB credit derivatives market

9.4.1.1 Performance and features of CRM instruments in the interbank market

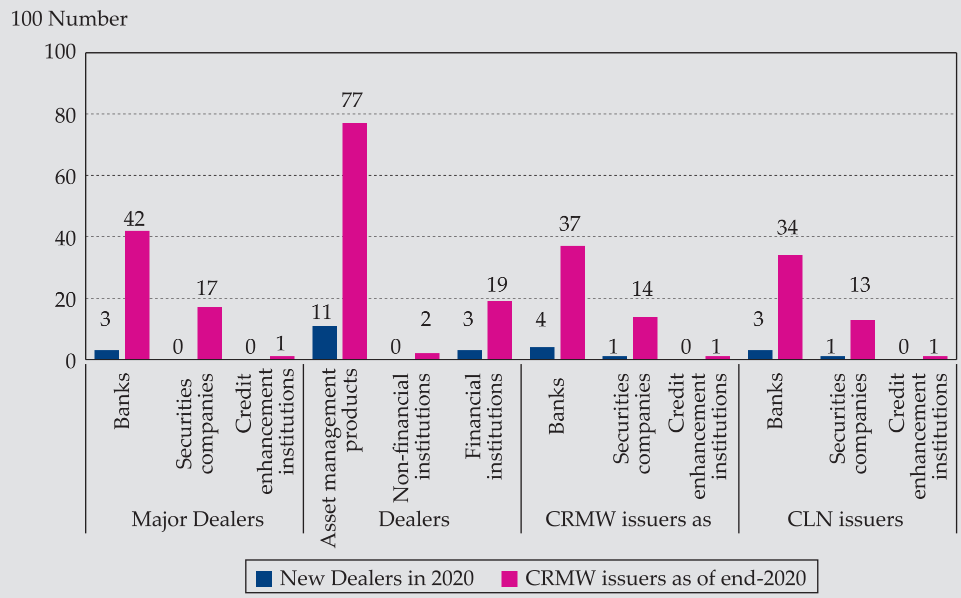
In 2020, the market of Credit Risk Mitigation (CRM) instruments grew steadily. A total of 104 transactions were concluded, and their total notional principal stood at RMB 18.35 billion, up 24.1 percent year on year.

First, warrant-type products performed stably. In 2020, a total of 85 Credit Risk Mitigation Warrants (CRMWs) and Credit-Linked Notes (CLNs) were made available, with a total notional principal of RMB 14.92 billion. First, the average maturity of CRMWs increased slightly compared with the previous year, standing at 1.3 years. In particular, 55 CRMWs had a maturity of below 1 year, with a total notional principal of RMB 8.54 billion, accounting for around 57.6 percent of the total. Second, the reference entities of most CRMWs were rated AA+ or AA in external credit rating, and the number of such CRMWs added up to 68, with a total notional principal of RMB 12.13 billion and a share of around 81.8 percent in the total. Third, among protection sellers, commercial banks performed actively and issued 68 CRMWs, with a total notional principal of RMB 12.08 billion and making up around 81.5 percent of the total. Fourth, among protection buyers, the level-I subscription of asset management products was active, with a total notional principal of RMB 6.77 billion and accounting for around 45.7 percent of the total.

Second, the transactions of contract-type products increased. In 2020, 19 Credit Risk Mitigation Agreement (CRMA) and Credit Default Swap (CDS) transactions were made with a total notional principal of RMB 3.43 billion, up around 270 percent year on year. First, the maturities averaged at around 1.2 years. In particular, 12 transactions had a maturity of below 1 year, with a total notional principal of RMB 1.76 billion, accounting for around 51.3 percent of the total. Second, products with a reference entity rated AAA made up the largest share of the total, adding up to 8. Third, securities companies participated actively in the transactions: they engaged in 13 transactions as protection sellers, realizing a total notional principal of RMB 2.42 billion and accounting for over 70 percent of the total; they were also involved in seven transactions as protection buyers, reporting a total notional principal of RMB 1.78 billion and contributing around 51.9 percent to the total.

Third, the number of participants further grew. In 2020, the new participants included three CRM Major Dealers, 14 CRM Dealers (which included 11 asset management products and 3 financial institutions), 5 CRMW issuers, and 4 CLN issuers. As of end-2020, there were a total of 60 CRM Major Dealers, 98 CRM Dealers, 52 CRMW issuers, and 48 CLN issuers in the interbank market.

Figure 9.14 Market participants of CRM instruments in 2020



(Source: NAFMII)

9.4.1.2 Performance and features of credit protection warrants and credit protection contracts in the exchange-traded market

The SSE launched the pilot program of credit protection contracts and credit protection warrants in November 2018 and December 2019 respectively. In 2020, a total of 59 credit protection contracts and credit protection warrants were issued on the SSE market, registering a total notional principal of RMB 2.13 billion and supporting market entities, including private enterprises, to secure bond financing of RMB 24.23 billion. As of end-2020, a total of 24 institutions became major dealers of credit protection contracts on the SSE market, and 19 became issuers of credit protection warrants on the SSE market.

The SZSE launched the pilot program of credit protection contracts and credit protection warrants in November 2018 and October 2020 respectively. In 2020, a total of 37 credit protection contracts and credit protection warrants were made on the SZSE market, reporting a total notional principal of RMB 2.16 billion and supporting market entities, including private enterprises, to secure bond financing of RMB 15.78 billion. As of end-2020, a total of 19 institutions became major dealers of credit protection contracts on the SZSE market, and seven became issuers of credit protection warrants on the SZSE market.

9.4.2 Innovation and institutional construction of the RMB credit derivatives market

9.4.2.1 The trading and settlement mechanism of CRM products was optimized, with market liquidity improved

In 2020, in order to further increase the liquidity in the credit derivatives market, the NAFMII continued to optimize the trading and settlement mechanism of CRM products in accordance with the principle of controllable risks, allowed protection buyers to separately hold protection in the trading of CRMWs and other CRM products, promoted the separate trading of CRM products and underlying debt, and enhanced the liquidity of physical bonds and the CRM market. Meanwhile, the means of settlement, including cash-based settlement and auction, were further enriched.

9.4.2.2 The underlying debt of CRMWs was further diversified to support pandemic containment and risk resolution

In 2020, the scope of underlying debt of CRMWs was further expanded. Throughout the year, a total of 22 CRMWs were issued to support the issuance of bonds designed to facilitate pandemic containment, non-performing ABS, and asset-backed commercial papers (ABCPs), registering a total notional principal of RMB 3.51 billion and facilitating the issuance of around RMB 12 billion of bonds. The move played an active part in ensuring the implementation of pandemic containment policies, supporting work and production resumption, helping commercial banks to liquidize non-performing assets to dissolve risks, fostering the innovation of new tools which feature both sound liquidity and asset and debt management, bolstering the coordinated development of the derivatives market and the bond market, and facilitating the financial sector to better support the real economy in response to national policies.

9.4.2.3 New CLNs were introduced to support the bond issuance business model and effectively sustain financing by private enterprises

In December 2020, the Agricultural Bank of China and China Bond Insurance Co., Ltd. (CBIC) launched the first linked issuance of

CLNs and bonds under the program of "support instruments for bond financing of private enterprises". To support the issuance of 2020 Commercial Paper Series 3 of Hengli Group Corporation Limited (hereinafter referred to as 20 Hengli CP003), the Agricultural Bank of China issued a CRMW and a CLN linked to it, thus facilitating the issuance of RMB 500 million of bonds. Specifically, the notional principal of the CRMW and the CLN was RMB 200 million and RMB 100 million respectively, and both products were subscribed by the CBIC. Through issuance of the CLN, the Agricultural Bank of China transferred part of the risk exposure of the CRMW it issued to CLN investors, thus realizing the shifting and sharing of risks. This business model can provide risk mitigation for principal underwriters issuing CRMWs and effectively leverage the synergy of parties involved.

9.4.2.4 The trade-for-trade clearing system for CDS indexes was established, and transactions were fulfilled in the CDS index business

In 2020, the SHCH launched the trade-for-trade clearing system for CDS indexes, completed its direct connection with the trading system, and ensured full preparedness for providing trade clearing and settlement, valuation, and other services for various CDX indexes.

In 2020, based on the calculation and screening of reference entities, the SHCH completed the removal or addition of entities from or to the reference entity list of the High-grade CDS Index at its roll date and the publication of two new versions of indexes. The CDS index curve was calculated and published based on the quotes of market institutions each day, providing important data support for market institutions to construct a sound CDS index curve.

9.4.2.5 Exchange-trade credit protection contracts and credit protection warrants increased financing support for private enterprises

Most debtors protected by exchange-trade credit protection contracts and credit protection warrants were private enterprises, so the two instruments played an active part in motivating investors to subscribe, facilitating the issuance of bonds by private enterprises, and lowering the financing costs faced by private enterprises.

9.4.3 Outlook of the RMB credit derivatives market

In 2021, the market will continuously improve the basic operating mechanism of the credit derivatives business, further propel the innovation of products like CDS indexes based on market demands, increase liquidity in the market, promote accurate pricing of credit risks, encourage the application of CRM instruments and products, effectively leverage the products' function of credit risk shifting and sharing, and continue to support bond financing by private enterprises.

COLUMN The interbank market launches cash tender offer business

In the international market, making a cash tender offer is a way for issuers to actively manage their debt and can satisfy enterprises' demand for managing debt, reducing financing costs, and shoring up market confidence. Meanwhile, it can also serve as a tool for enterprises in rough times to restructure their debt and tide over short-term liquidity problems.

On November 2nd, 2020, the NAFMII published the Notice on the Pilot Implementation of Cash Tender Offers to Purchase Debt Financing Instruments of Non-Financial Enterprises. The interbank market completed the first pilot program of making cash tender offers in 2020. Xinzheng Development Investment Co., Ltd., in view of the need of active debt management, made a cash tender offer to buy "16 Xinzheng Development PPN001", and designated the Shanghai Pudong Development Bank to be the dealer manager. The net offer price was higher than the outstanding nominal principal of underlying bonds, and a collective action arrangement was offered to holders in the form of a holders' meeting. All the 17 holders of underlying bonds accepted the offer, and the outstanding bonds, totaling RMB 500 million, were all purchased and written off.

The mechanism of cash tender offer business in the interbank market is an embodiment of the market-based principles as well as an extension of the operating framework of the interbank market. Meanwhile, it prioritizes the prevention of moral hazards and the protection of investor rights and interest. First, in order to enhance transparency, offerors should disclose relevant information at key stages in a transaction to decrease information asymmetry. Offerors should issue a public announcement at three key stages, namely the publication of offer announcement, expiration of offer, and conclusion of offer. In particular, they should, in the offer announcement, specify the single purchase price as well as the means, rationale, and process of determining the price, fully explain the rationality of the pricing mechanism, and indicate risks associated with the business, so as to safeguard investors' right to know. Second, vigorous efforts are made to strengthen investor protection, and the holder collective action mechanism is introduced to prevent issuers from purchasing at an inappropriately low price. A tender offer should be made to all holders of underlying bonds, so as to ensure that those holding the same bonds enjoy equal rights. Investors can choose whether to accept the offer at their discretion rather than in response to a mandate. For tender offers at a low price, which are prone to moral hazards, offerors should purchase debt financing instruments which expire earlier than the underlying bonds simultaneously, so as to prevent issuers from selectively discharging their debt by making use of the tender offer; meanwhile, offerors should make clear the institutional arrangements for the collective action of investors, so as to avoid the situation in which holders are forced to accept the offer as a result of price pressure. In *addition, in order to ensure alignment with the issuance documents, when the offering documents of underlying bonds do not specify the arrangements for a cash tender offer, issuers should also make clear the institutional arrangements for the collective action of holders. Third, the dealer management responsibility of third parties should be clarified. According to international experience, issuers usually designate investment banks, which have rich experience in the debt management business, as dealer managers to help them conclude an offer. During the pilot program, specialized institutions, such as the principal underwriters of debt financing instruments, would serve as dealer managers.*

9.5 Exchange rate derivatives market

9.5.1 Performance of the exchange rate derivatives market

In 2020, the interbank exchange rate derivatives market saw a total turnover of USD 17.6 trillion, up 1.3 percent year on year. Specifically, RMB exchange rate derivatives registered a turnover of USD 17.0 trillion, down 0.3 percent year on year; foreign currency pair derivatives reported a turnover of USD 589.1 billion, up 92.3 percent year on year. Foreign currency pair swaps saw a notable growth in volume, and the other varieties of exchange rate derivatives were mixed.

In 2020, participants in the interbank exchange rate derivatives market continued to increase. As of end-2020, the number of RMB foreign exchange forward members, RMB foreign exchange swap members, RMB foreign exchange currency swap members, and RMB foreign exchange options members reached 266, 259, 213, and 163 respectively, up 21, 20, 16, and 17 from the end of the previous year. Foreign currency pair market members totaled 225, an increase of 17 compared with end-2019.

9.5.2 Main features of the exchange rate derivatives market

9.5.2.1 Trading of RMB exchange rate derivatives was overall stable, and transactions of foreign currency pair derivatives increased rapidly

In 2020, the overall trading volume in the RMB exchange rate derivatives market was basically flat with the previous year. Specifically, the turnover of swap transactions, the dominant category in the market, was USD 16.3 trillion, a year-on-year decrease of 0.2 percent; the trading of foreign currency pair derivatives increased significantly, and the average daily trading volume of foreign currency pair swaps, the dominant category among foreign currency pair derivatives, registered a notable increase of 95.3 percent.

9.5.2.2 RMB foreign exchange swap points fluctuated upward along with the interest rate spread between China and the US

In 2020, the RMB/USD swap price generally fluctuated upward along with the China-U.S.

interest rate spread. In January and February 2020, the China-U.S. interest rate spread expanded, and the 1-year swap point moved up to around 1,000 bps. In March 2020, the China-U.S. interest rate spread narrowed notably, the RMB foreign exchange swap points subsided, while those with a maturity of no longer than 3 months once moved to discount. After April 2020, the China-U.S. interest rate spread increased continuously, and the RMB foreign exchange swap points kept moving up, with the 1-year swap point peaking at 1,820 bps in late November. By the end of the year, the China-U.S. interest rate spread came down, and the foreign exchange swap points contracted as well. At end-2020, RMB/USD T/N and 1-year swap points closed at 4.8 bps and 1,431 bps respectively, up 1.75 bps and 973 bps compared with early 2020 respectively.

9.5.3 Innovation and institutional construction of the exchange rate derivatives market

9.5.3.1 The product structure and business functions were improved, and the swap matching business was introduced in the foreign currency pair market

In June 2020, the CFETS launched the swap matching business in the foreign currency pair market, which supported the transactions of swap contracts with 9 maturities under 3 currency pairs, including EUR/USD, USD/JPY, and USD/HKD, in the initial phase. The matching model enhanced price transparency in the foreign currency pair market and further brought together the liquidity of domestic foreign currency trade.

9.5.3.2 Foreign exchange derivatives based on new benchmark interest rates of foreign currencies, such as SOFR, were launched

In April 2020, the CFETS launched trading services for products based on new floating interest rates of foreign currency. On the foreign currency side of currency swaps and foreign currency interest rate swaps, new floating interest rates of foreign currency, including Secured Overnight Financing Rate (SOFR), Sterling Overnight Index Average (SONIA), Euro Short Term Rate (ESTER), and Tokyo Overnight Average Rate (TONAR), were added. The SOFR-based USD interest rate swap transactions and RMB/USD currency swap transactions, SOFR- and SONIA-based GBP/USD currency swap transactions, and SOFR-based USD basis transactions were successively concluded in the trading system, thus providing strong support for market participants to manage foreign currency interest rate risks.

9.5.3.3 Supporting services for the centralized clearing of exchange rate derivatives were improved

In 2020, the SHCH further expanded the maturities and varieties cleared in the central counterparty clearing business for foreign exchange. Transactions with a settlement period of T+1 and foreign exchange options portfolio transactions were included in the scope of central counterparty clearing, and a set of extensions of the foreign exchange clearing business were introduced, such as the practice of supporting foreign exchange sterilization. The moves managed to make market participation more flexible and diversified the approaches of duration management.

9.6 OTC commodity derivatives market

9.6.1 Performance and features of the OTC commodity derivatives market

In 2020, the OTC commodity derivatives central counterparty clearing business of the SHCH has covered the six industries of freight, ferrous metal, non-ferrous metal, energy, chemical, and carbon emission, including a total of 17 derivatives. As of end-2020, the SHCH cleared a total of 30,700 commodity derivatives central counterparty clearing contracts, up 25.4 percent year on year; the cumulative clearing volume reached RMB 8.433 billion, up 6.0 percent year on year. In terms of industry distribution, the clearing business was majorly concentrated on chemical derivatives, that contributed to 93.9 percent of the total clearing volume, ferrous metal derivatives made up 2.3 percent of the total, and the others combined accounted for 3.8 percent of the total.

As of end-2020, there were 7 general clearing members and 6 direct clearing members in the OTC commodity derivatives central counterparty clearing business of the SHCH.

9.6.2 Innovation and institutional construction of the OTC commodity derivatives market

By constructing the OTC commodity centralized clearing platform, the SHCH managed to provide unified and professional clearing and risk management services for the commodity spot and derivatives market, enabled the strict separation of trading, clearing, and settlement, better leveraged the role of the market in resource allocation, helped prevent and defuse possible regional or systemic risks, and facilitated the continued, well-regulated, and sound development of the market.

In 2020, the SHCH launched the portfolio margin business for the commodity derivatives central counterparty clearing business. Based on the expected shortfall (ES) framework, the business employs methodologies like Copulas to identify the correlation between different contracts, and, in the unit of market participant investment portfolios, construct cross-maturity position portfolios in a certain priority order for positions which are of the same product and quantity but with different trading directions and maturities. The cross-maturity portfolio margins would be charged, and for the remaining positions which are not included in the portfolio, the margins would be charged for buying or selling positions in accordance with the original logic.

9.6.3 Outlook of the OTC commodity derivatives market

In 2021, the OTC commodity derivatives market will continue to introduce new products and improve relevant mechanisms. The central counterparty clearing business denominated, cleared, and settled in RMB will be deepened and improved, and the Commodity Clearing Net (CCNet) will be introduced and applied at a larger scale. The product structure will be continuously enriched, and Benzene swaps and other varieties in the commodity clearing services will be launched, so as to increase market liquidity and promote sustained business growth. Efforts will be made to serve green finance, explore cross-border clearing services for carbon allowances based on the CCNet, promote the central counterparty clearing model for carbon allowances forward in a timely manner, and keep propelling the innovative development of the OTC commodity derivatives market.

BOX 8 Two futures open to both domestic and overseas investors, namely Low Sulfur Fuel Oil and Bonded Copper, get successful listed for trading

1. Listing of Low Sulfur Fuel Oil futures

In 2020, the International Maritime Organization (IMO) implemented the new Low Sulphur Regulation. As China is an important producer of low sulfur fuels, the timely listing of Low Sulfur Fuel Oil futures can help satisfy the urgent demand of domestic and foreign freight and marine fuel industries for a financial risk hedging tool under the new regulation.

On June 22nd, 2020, the Low Sulfur Fuel Oil futures were listed at the Shanghai International Energy Exchange (INE) for trading. It is the only futures contract offering physical delivery in the global marine fuel industry, as well as the INE's third and China's fifth futures open to both domestic and overseas investors. Since their listing, the trading of and investment in Low Sulfur Fuel Oil futures remained active, and the industry players and overseas traders were highly involved. In 2020, the Low Sulfur Fuel Oil futures registered a cumulative trading volume of 9.7623 million lots, with a trading turnover of RMB 237.731 billion and average daily open positions of 144,000 lots. Institutional clients contributed over half to the total trading volume, and the open interest they held made up over 80 percent of the total; overseas traders contributed over 10 percent to the total in terms of both average daily trading volume and average daily positions.

A new business model combining the practices of "delivering domestically and picking up overseas", the first of its kind globally, was introduced for the Low Sulfur Fuel Oil futures. Under this model, the futures market leverages the solid strength of multinational oil-trading firms, with the enterprises' storage, transportation and trading sites at home and abroad designated as delivery factories and storage facilities. After investors obtain the factories' standard warehouse warrants through transaction, they can pick up goods overseas upon the fulfillment of certain procedures. The model further satisfies the demand of enterprises in the real economy for connecting domestic and overseas markets and practicing risk management on a global basis. In December 2020, the INE designated the PetroChina International Co., Ltd. and the PetroChina International (Zhejiang) Co., Ltd. as the first Group Delivery Center *and Group Delivery Factory for the Low Sulfur Fuel Oil futures respectively. Meanwhile, it also designated the PetroChina International (Singapore) Pte. Ltd. and PetroChina International (Middle East) Co., Ltd. as the first Overseas Commodity Storage Facilities for the Low Sulfur Fuel Oil futures.*

2. Listing of Bonded Copper futures

On November 19th, 2020, the Bonded Copper futures were listed at the INE for trading. They are China's first futures available for both domestic and foreign investors under the "dual-contract" model, the INE's fourth futures open to both domestic and overseas investors, and the world's first RMB-denominated hedging tool in the international trade along the copper industry chain.

Since their listing, the Bonded Copper futures performed stably, and their function of price discovery gradually unfolded. From the time of listing to end-2020, the Bonded Copper futures saw a cumulative trading volume of 556,000 lots, with a trading turnover of RMB 142.569 billion. The average daily trading volume and turnover was 17,900 lots and RMB 4.599 billion, the average daily positions were 14,100 lots, and the open interest at year-end was 20,800 lots. The correlation between their price and the spot price of copper in the Shanghai bonded zone, as published on the Shanghai Metals Market (SMM), was 0.98, signaling a sound futures-spot linkage.

After their listing, the Bonded Copper futures can forge synergies with the Shanghai copper futures and, through the "dual-contract" model, effectively increase the depth and scale of services offered by the futures market to the real economy. Meanwhile, they can help enhance the interconnectivity between domestic and foreign futures markets, and advance high-level and two-way opening-up. Underpinned by China's great purchasing power, they can strengthen the influence of copper quotes in RMB in the international market, expand the scale of RMB settlement in the international physical trade and financial market, and facilitate the RMB internationalization strategy.

In addition, in November 2020, the CSRC confirmed the Palm Oil futures, which were listed in ZCE in 2007, as a specified domestic product. Later in December 2020, DCE allowed overseas traders to participate in the trading of Palm Oil futures.

BOX 9 Commercial banks and insurers participate in the trading of treasury bond futures in CFFEX

On February 21st, 2020, the CSRC, MOF, PBC, and CBIRC jointly issued the Notice on the Participation in Treasury Bond Futures Trading in the China Financial Futures Exchange by Commercial Banks and Insurance Institutions, allowing qualified pilot commercial banks and *insurers with proper investment management capacity to participate in the trading of treasury bond futures in the CFFEX in line with the principles of law compliance, manageable risks, and sustainable business development. On July 1st, 2020, the CBIRC issued the Provisions for the Participation of Insurance Funds in Treasury Bond Futures Trading, according to which insurance funds should participate in treasury bond futures trading for the purpose of risk hedging, and must not do so for speculation; insurance funds should participate in the trading in the form of asset portfolios and open trading accounts, and accounts, assets, transactions, and business accounting should be managed separately to ensure strict risk separation. On the same day, the CBIRC revised the Measures on the Participation of Insurance Funds in Financial Derivatives Trading and the Provisions for the Participation of Insurance Funds in Stock Index Futures Trading.*

In order to ensure that commercial banks and insurers participate in the treasury bond futures market in a smooth manner, the CFFEX adjusted its original rules and regulations. On April 10th, 2020, the Industrial and Commercial Bank of China, Bank of China, and Bank of Communications were admitted as CFFEX members, and the pilot program of commercial banks participating in treasury bond futures trading was officially launched. Later, the Agricultural Bank of China and China Construction Bank became CFFEX members on May 6th and July 31st, 2020 respectively, and all the first batch of pilot commercial banks participated in treasury bond futures trading. In December 2020, the first batch of insurers completed the record filing for their treasury bond futures investment management capacity.

The smooth entry of commercial banks and insurers into the market can help improve interest rate risk management of the institutions, and promote the interconnectivity between the OTC and exchange-traded markets. First, the move can help commercial banks and insurers to shore up their interest rate risk management and bolster their capacity for serving the real economy. Second, it can diversify the investor mix of treasury bond futures, increase liquidity in the treasury bond futures market, and realize a more sound yield curve. Third, it can facilitate the cross-market circulation of deliverable bonds, increase the interconnectivity between the interbank and exchange-traded bond markets, and propel the coordinated development of the markets of various financial factors.

BOX 10 Build the business system of Commodity Clearing Net

The deliveries in commodity spot trading have long been plagued by insufficient guarantee, low efficiency, and high cost, and these issues grew particularly notable since the outbreak of COVID-19 pandemic in 2020. In order to implement the requirement for the financial sector *to serve the real economy, the SHCH concentrates its efforts on the R&D of the CCNet to provide targeted, accessible clearing and settlement services for enterprises along the industry chain.*

A business closed loop is built to provide services directly accessible to enterprises in the real economy. The SHCH, by connecting with qualified spot platforms, adopting a unified business model, and employing the standard direct connection between systems, works with spot clearing members (i.e., commercial banks) to handle fund clearing and settlement for commodity spot trading by enterprises in the real economy in a trade-for-trade and full-amount manner. The SHCH and commercial banks are responsible for ensuring well-regulated and efficient fund clearing and payment, and spot platforms and the storage facilities they partner with are responsible for ensuring the authenticity, validity, and ownership of goods. In this way, goods can be delivered in a convenient and reliable way, thus forming a closed loop consisting of transaction, clearing, settlement, and delivery, and ensuring the safe delivery of funds and goods.

New financial services are introduced to effectively tackle difficulties challenging enterprises in the real economy. Under the CCNet model, the SHCH fully leverages its advantages as a clearing agency in specialized and centralized management of capital flows and delivery risks, establish partnerships with compliant spot platforms, build close connections with commercial banks in the payment settlement and trade financing businesses, and integrate the transaction flow, capital flow and goods flow in the commodity spot market into one network in a well-regulated and efficient manner, so as to offer targeted solutions to challenges faced by spot platforms, enterprises in the real economy, and commercial banks. Meanwhile, the CCNet can stack up financial services such as bond financing and derivatives trading in an open manner, thus laying a solid foundation for constructing a sound, multi-layer service system for the OTC commodity market.

The SHCH actively and steadily promotes the launch of the CCNet and expand its functions. In June 2020, the SHCH obtained the approval of the PBC on launching the CCNet, and took sound and solid steps to prepare for its launch. The product is expected to be launched in Q1 2021. Currently, it is basically finalized that the Industrial and Commercial Bank of China, Construction Bank, Bank of Communications, Shanghai Pudong Development Bank, China Everbright Bank, and Huaxia Bank will be the first batch of partner banks, and the chemical delivery platform of Zhangjiagang Freetrade Science & Technology Group, in which state-owned capital has the controlling stake, will be among the first batch of spot platforms. While steadily working on the introduction of CCNet, the SHCH also actively studies into extending its business hours to night time, and explores optimized functions such as online financing, interconnectivity between the domestic and foreign markets, and settlement through agent, so as to further improve the quality and efficiency of services.

Appendix I Chronicle of China's Financial Market Development, 2020

On January 6th, the People's Bank of China (PBC) lowered the required reserve ratio (RRR) for financial institutions (excluding finance companies, financial leasing companies and automobile finance companies) by 0.5 percentage points.

On January 13th, the China Securities Regulatory Commission (CSRC) released 4 supporting rules for the National Equities Exchange and Quotations (NEEQ) reform, including the *Standard No. 3 for the Contents and Formats of Information Disclosure by Unlisted Public Companies–Memorandum and Report on the Private Placement*, *Standard No. 4 for the Contents and Formats of Information Disclosure by Unlisted Public Companies–Application Documents for the Private Placement*, *Standard No. 9 for the Contents and Formats of Information Disclosure by Unlisted Public Companies–Annual Report of Companies Listed on the Innovative Layer of NEEQ*, and *Standard No. 10 for the Contents and Formats of Information Disclosure by Unlisted Public Companies–Annual Report of Companies Listed on the Basic Layer of NEEQ*.

On January 15th, the Shanghai Stock Exchange (SSE) and the China Securities Depository and Clearing Corporation Limited (CSDC) released the *Notice on Issues Concerning Banks' Participation in Bond Transactions on Shanghai Stock Exchange* (SSE [2020] No. 4), specifying the arrangements for policy banks, China Development Bank (CDB), large state-owned commercial banks, joint-stock commercial banks, urban commercial banks, overseas banks operating in China's domestic market, and other banks listed domestically to participate in bid trading and other related businesses of SSE bonds and ABS cash bonds.

On January 16th, the bill information disclosure platform was launched for pilot operation.

On January 17th, the CSRC released 2 supporting rules for the NEEQ reform, namely *Standard No. 11 for the Contents and Formats of Information Disclosure by Unlisted Public Companies–Memorandum on the Public Offering Targeting Unspecified Qualified Investors*, and *Standard No. 12 for the Contents and Formats of Information Disclosure by Unlisted Public Companies–Application Documents for the Public Offering Targeting Unspecified Qualified Investors.*

On January 20th, the PBC approved the Shanghai Gold Exchange (SGE) to operate as a "qualified central counterparty".

On January 22nd, the China Foreign Exchange Trade System (CFETS)/National Interbank Funding Center (NIFC) released the *Notice on Implementing and Improving the Foreign Exchange Risk Management of Foreign Investors in the Interbank Bond Market*, according to the SAFE policy [2020] No. 2 of the State Administration of Foreign Exchange (SAFE), to improve the business arrangements on foreign institutional investors participating in China's foreign exchange market under the direct market entry of China Interbank Bond Market (CIBM Direct) scheme.

On February 7th, the Financial Market Department of the PBC published the *Notice on Matters Concerning Bond Issuance by Financial Institutions during the Period of COVID-19 Prevention and Control*, streamlining part of the procedures to support the financial institutions to issue bonds during the COVID-19 pandemic and issue financial bonds themed on pandemic containment.

On February 13th, the CFETS/NIFC released the *Rules of CFETS for Transfer and Settlement Services for Defaulted Bond upon Maturity in the Interbank Market*, to regulate the transfer of defaulted bonds upon maturity in the interbank market and protect the legitimate rights and interests of investors.

On February 14th, the CSRC, the Ministry of Finance (MOF), the PBC and the China Banking and Insurance Regulatory Commission (CBIRC) jointly released the *Notice on the Participation of Commercial Banks and Insurance Institutions in Treasury Bond Futures Trading in the China Financial Futures Exchange* (CSRC [2020] No. 12), allowing qualified pilot commercial banks and insurers with proper investment management capacity to participate in the trading of treasury bond futures at the China Financial Futures Exchange (CFFEX) in line with the principles of law compliance, manageable risks and sustainable business development.

From February 28th, the Chinese treasury bonds were included in J.P. Morgan Government Bond Index–Emerging Markets (GBI-EM).

On March 1st, the SSE released the *Notice on SSE Business Arrangements for Implementing Registration-based System for Public Issuance of Corporate Bonds* (SSE [2020] No. 13) and the Shenzhen Stock Exchange (SZSE) released the *Notice on Relevant Business Arrangements Concerning the Implementation of the Registration-based System for Public Issuance of Corporate Bonds* (SZSE [2020] No. 129).

On March 3rd, the Pudong Science and Technology Innovation Intellectual Property Asset Support Program, the first asset securitization project of intellectual property rights for micro and small business (MSB) and of pandemic containment was launched on the SSE, with a preferred IPO rate of 3.59 percent.

On March 5th, upon the deliberation and approval of the 10th meeting of the Central Committee for Deepening Overall Reform, the PBC, NDRC, MOF, CBIRC, CSRC and SAFE jointly released the *Work Plan for Coordinated Regulation of Financial Infrastructures*.

On March 16th, the first "registration-based" corporate bond completed its book entry on the SZSE.

On March 17th, the first corporate bond for replacement was launched on the SZSE market.

On March 18th, the first domestic expandable new retail infrastructure REITs product, namely Cainiao China Smart Network Warehousing Asset Backed Project expanded its offering, as the first REITs product to adopt the expansion mechanism in China.

On March 23rd, the interbank market officially launched the business of interest rate options to help financial institutions effectively manage the interest risks, improve the risk pricing mechanism of interest rate, and give greater play to the role of interbank interest rate derivatives market in supporting the real economy.

On March 25th, the CBIRC released the *Interim Measures for the Administration of Insurance Asset Management Products*, identifying that the insurance asset management products can be used for investment in treasury bonds, local government bonds, central bank bills, government-backed institutional bonds, financial bonds, bank deposits, certificates of deposit, negotiable certificates of deposit and corporate credit bond, as well as securitization products approved to be issued on the exchange market by the State Council, mutual funds, other debt-based assets, equity assets and other assets recognized by the CBIRC.

On April 1st, the CSRC announced to remove the foreign ownership caps on securities companies.

On April 1st, the China Development Bank issued the discount bond on the exchange market for the first time through the financial bond issuing system of SZSE.

On April 2nd, the Shenzhen Metro Group Co., Ltd., Shanghai Lujiazui (Group) Co., Ltd., Guangxi Communications Investment Group Co., Ltd., Suzhou Sanjiaoju Ecology Park Development Co., Ltd., Changzhou Binjiang Economic Development Zone Investment and Development Group and Dingxi State-owned Investment Holding Group Co., Ltd. obtained the "Registration Notice of Corporate Bond" from the NDRC, marking the official launch of the first batch of registration-based corporate bonds under the new *Securities Law*.

On April 10th, the business of commercial bank's participation in treasury bond futures was launched. The first pilot banks included the Industrial and Commercial Bank of China, Agricultural Bank of China, Bank of China, China Construction Bank and Bank of Communications.

On April 20th, the interbank foreign exchange market launched transactions of foreign currency derivatives based on the secured overnight financing rate (SOFR) and other new benchmark rates, to help align the foreign currency interest rates of the domestic market with new international benchmark interest rates. On the same day, the currency pairs market launched LC API to support the automated upload of trading orders and download of transaction data.

On April 24th, the supply chain commercial bill platform was piloted on the Shanghai Commercial Paper Exchange (SHCPE).

On April 27th, the Central Committee for Deepening Overall Reform reviewed and approved the *Masterplan for the Implementation of the Reform of the ChiNext Board and the Pilot Program of the Registration-based IPO System* to officially launch the ChiNext Board reform and the pilot program of the registration-based IPO system.

On April 27th, the "ISIN code" segment was added to the China Bond Valuation data, to help overseas investors use domestic valuation products.

On April 30th, the CSRC and the NDRC jointly released the *Notice on Promoting the Pilot Program of the Real Estate Investment Trusts (REITs) in the Infrastructure Field*, signifying the official start of the publicly offered REITs pilot in domestic infrastructure field.

On May 6th, the Shanghai Futures Exchange (SHFE), Dalian Commodity Exchange (DCE), and Zhengzhou Commodity Exchange (ZCE) restored the overnight trading services of commodity futures and options.

On May 7th, the PBC and SAFE issued the *Regulations on Funds of Securities and Futures Investment by Foreign Institutional Investors* (PBC and SAFE Announcement [2020] No. 2), to specify and simplify administrative requirements on the management of funds invested by foreign institutional investors in domestic securities options, aiming to better facilitate foreign investors' participation in China's financial market.

On May 14th, the Operations Office of the PBC announced to have filed a record for Fitch (China) Bohua Credit Ratings Co., Ltd., a wholly owned subsidy of the U.S.-based Fitch Ratings in China. On the same day, the National Association of Financial Market Institutional Investors (NAFMII) released a public notice on its approval of the registration of Fitch Bohua for conducting Category-B bond credit rating business in China's interbank bond market.

On May 22nd, the NAFMII completed the registration of the first 9 trustees including varied types of institutions such as commercial banks, trust companies, law firms and financial asset management companies. It gave play to the professional advantages of trustees to address the bond holder's problems such as difficulties in collective move and disconnection with judicial procedures, and thus further strengthen the protection of investors.

On May 22nd, the Third Session of the 13th National People's Congress was held in Beijing and Premier Li Keqiang, on behalf of the State Council, delivered the *Report on the Work of the Government* to the Congress, and proposed to issue RMB 1 trillion of government bonds for COVID-19 control.

On June 5th, the SSE issued the *Notice on Matters Concerning the Red-chip Companies*

Applying for Offering and Listing on the SSE STAR Market, which made targeted arrangements on issues including the handling of valuation adjustment mechanism (VAM), calculation of total share capital, recognition of rapid growth in operating income and application of delisting indicators, etc.

On June 8th, the CFETS/NIFC launched the currency pair swap match-making business through the interbank foreign exchange market standardized FX product trading module (C-Trade).

On June 11th, the Asian Infrastructure Investment Bank (AIIB) issued the first Panda Bond of RMB 3 billion in the Chinese interbank bond market.

On June 12th, the CSRC released the *Measures for the Administration of the Registration of Initial Public Offerings of Stocks on the ChiNext Board (for Trial Implementation)*, the *Administrative Measures on Securities Issuance and Registration for Companies Listed on ChiNext (for Trial Implementation)*, the *Measures for Continuous Regulation of Companies Listed on ChiNext (for Trial Implementation)* and the *Administrative Measures for Sponsorship Business for Securities Issuance and Listing*.

On June 15th, the *Notice of the PBC, NDRC and CSRC on Matters Concerning Corporate Credit Bond Default Disposal* was released to speed up improving the fundamental policies of the bond market with unified rules, and establishing a market-based, law-based disposal mechanism for defaulted bonds.

On June 18th, the MOF issued the first batch of special treasury bonds for pandemic control, including RMB 50 billion of five-year bonds and RMB 50 billion of seven-year bonds, priced at 2.41 percent and 2.71 percent respectively.

On June 18th, the first batch of supply chain bills discount business was launched, and 9 enterprises raised 10 sums of funds valuing at RMB 5.0681 million through the instrument with bill discount rates ranging from 2.85 percent to 3.8 percent.

On June 19th, the China Financial Futures Exchange (CFFE) released an announcement to include the special treasury bond for pandemic control in the deliverable treasury bond futures.

On June 22nd, the Low Sulphur Fuel Oil was launched for trade at the Shanghai International Energy Exchange (INE).

On June 22nd, the SZSE released the notice on accepting the application of the first 33 enterprises under the registration-based IPO system of ChiNext Board.

On June 23rd, the CBIRC released the *Provisions for the Participation of Insurance Funds in Treasury Bond Futures*, the *Measures on the Participation of Insurance Funds in Financial Derivatives Trading* and the *Provisions for the Participation of Insurance Funds in Stock Index Futures Trading*.

On June 30th, the thermal coal futures were traded on the ZCE.

On July 1st, the State Council executive meeting decided to allow local government special bonds to reasonably support capital replenishment of small and medium-sized banks, aiming at enhancing the capability of serving MSMEs with finance.

On July 3rd, the PBC, CBIRC, CSRC and SAFE formulated the *Rules for Recognition of Standard Debt-based Assets* to be effective from August 3rd, 2020.

On July 6th, the Polypropylene, PVE and LLDPE options were traded on the DCE.

On July 10th, the CSRC and CBIRC jointly released the *Administrative Measures for the Custody Business of Securities Investment Funds*.

On July 13th, the interbank RMB foreign exchange market launched the prime brokerage business, for foreign exchange risk management of the direct market entry under the China Interbank Bond Market (CIBM Direct) scheme in the interbank bond market, strongly supporting the opening-up of foreign exchange market and RMB internationalization.

On July 15th, the Supreme People's Court (SPC) officially published the *Minutes of the National Courts Symposium on the Trial of Bond Disputes*. It was the first systematic judicial document for the adjudication of bond-related cases, which unified the legal applicability of such adjudication, and further smoothed the relief channel for bond disputes, with great significance for the law-based development of the bond market.

On July 19th, the PBC and CSRC Announcement [2020] No. 7 was released, which decided to allow cooperation on interconnectivity between infrastructure institutions in the interbank bond market and exchange-traded bond market.

On July 24th, the CSRC approved the IPO registration of first 4 enterprises on the ChiNext board, and the SZSE officially kicked off the underwriting of ChiNext enterprises under the registration-based IPO system.

On July 25th, the technical system of the ChiNext board reform and the pilot program of registration-based IPO system of the SZSE was officially launched for operation.

On July 28th, the *Administrative Measures on Standardized Bills* (PBC Notice [2020] No. 6) drafted by the PBC was officially implemented. On the same day, the SHCPE, NIFC and SHCH jointly drafted and released the *Rules on Information Disclosure of Standardized Bills.*

On July 29th, the CFETS/NIFC supported the subscription of first standardized bills, marking the official adoption of this innovative tool that supports the funding of SMEs, aligns with the fund trading features of financial institutions, and facilitates the liquidity management of small and medium-sized financial institutions.

On August 5th, the first "Shanghai Gold" ETFs were launched for trade.

On August 10th, the Aluminum options and Zinc options were traded on the SHFE.

On August 11th, the General Office of the NDRC released the *Guideline for Issuance of Special Enterprise Bonds for New-type Urbanization in County Areas* to launch the special enterprise bonds for new-type urbanization in county areas.

On August 17th, the China Central Depository & Clearing Co., Ltd. (CCDC) and Shanghai Clearing House (SHCH) jointly released the *Rules on the Transfer and Settlement Services for Defaulted Bond upon Maturity of Custody and Settlement Institutions in the Interbank Bond Market*.

On August 24th, the first 18 enterprises under the ChiNext board reform and pilot registration-based IPO system were listed on the SZSE.

On September 11th, the CBIRC released the supporting rules for the *Interim Administrative Measures for Insurance Asset Management Products*, including the *Detailed Rules on the Implementation of Portfolio Insurance Asset Management Products*, *Detailed Rules on the Implementation of Debt Investment Plans*, and the *Detailed Rules on the Implementation of Equity Investment Plans*.

On September 14th, the NIFC, CCDC and SHCH decided to extend the interbank cash bond trading period to 20:00 from September 21st, 2020.

On September 15th, the CCDC and International Swaps and Derivatives Association (ISDA) jointly released the whitepaper of the *Use of RMB-denominated Chinese Government Bonds as Margin for Derivatives Transactions*. This was the first cooperation between a domestic financial infrastructure and international authoritative industry association to explore the feasibility of using RMB-denominated Chinese government bonds (CGBs) as collateral in the OTC derivatives market, providing new ideas for the cross-border application of RMB-denominated bond assets.

On September 22nd, the PBC, the Ministry of Industry and Information Technology (MIIT), the Ministry of Justice (MOJ), the Ministry of Commerce (MOFCOM), State-owned Assets Supervision and Administration Commission (SASAC), State Administration for Market Regulation (SAMR), CBIRC and SAFE jointly released the *Opinions on Promoting Regulated Development of Supply Chain Finance in Support of Stable Circulation, Optimization and Upgrading of Supply Chains and Industrial Chains* (Yinfa [2020] No. 226).

On September 24th, the CFETS/NIFC released the *Notice on Implementing the Arrangements Concerning the Currency Conversion and Foreign Exchange Risk Management under the Bond Connect Scheme* (CFETS Announcement [2020] No. 45), to improve the business arrangement of overseas institutional investor's participation in the foreign exchange market under the Bond Connect scheme in the interbank bond market.

On September 25th, the FTSE Russell announced to add Chinese government bonds to its World Government Bond Index (WGBI) in October 2021.

On September 25th, to practically improve the opening-up of capital market, upon approval of the State Council, the CSRC, PBC and SAFE released the *Measures for the Administration of Domestic Securities and Futures Investment by Qualified Foreign Institutional Investors and RMB Qualified Foreign Institutional Investors*, and the CSRC released the supporting rules of *Regulations on Implementing Measures for the Administration of Domestic Securities and Futures Investment by Qualified Foreign Institutional Investors and RMB Qualified Foreign Institutional Investors*.

On October 10th, the CBIRC released the *Notice on Optimizing the Supervision of Investment Management Capability of Insurance Institutions* (CBIRC [2020] No.45).

On October 19th, the New Generation Trading System of CFETS launched the autonomous inquiry function for cash bond (X-Bargain) to further improve the liquidity of the bond market.

On October 23rd, the Shenzhen-Hong Kong ETF Connect was launched. Among the first batch of Shenzhen-Hong Kong ETF Connect products, Harvest Hang Seng China Corporate ETF and Yinhua ICBC CSOP S&P China New Economic Industry ETF were listed on the SZSE, and Hang Seng Harvest CSI 300 ETF and CSOP Yinhua CS 5G Communications Theme ETF were listed on the HKEX.

On October 30th, the China Financial Futures Exchange released the *Notice on Matters Concerning the Participation in Equity Index Futures Investment by Qualified Foreign Institutional Investors and RMB Qualified Foreign Institutional Investors*.

On October 30th, the first collective short-term financing bond of science and technology innovative businesses in Yangtze River Delta valuing RMB 500 million was launched in the interbank market, with a total financing volume of RMB 500 million.

On November 3rd, the SHCPE officially launched the transfer service platform for RMB cross-border trade financing. The platform provided cross-border RMB trade and financing services for domestic and international financial institutions, and the business of phase one included interbank refinance and forfaiting transfer.

On November 6th, the online pledge business was launched at the SHFE Standard Warrants Trading Platform, and the applicable varieties for pledge included Copper, Aluminum, Pb, Zinc, Tin, Nickel, Silver, Natural Rubber, Steel Rebar, Wire Rod, Hot Rolled Coil and Stainless Steel.

On November 13th, the China Bond Valuation Center (CBVC) released the ChinaBond ESG

Select Credit Bond Index, as the world's first broad base RMB credit bond ESG factor index.

On November 16th, the CFETS/NIFC launched the FDR001 interest rate swap transaction services, offering more interest rate risk management tools for financial institutions.

On October 16th, the CFETS/NIFC improved the foreign currency repo business together with the SHCH, and launched several new functions such as Delivery Versus Payment (DVP). 21 institutions participated in the first-day trading, with a trading volume of around USD 1 billion.

On November 23rd, the CBIRC released the *Provisions for the Supervision of Insurance Agents*, to be effective from January 1st, 2021.

On November 30th, the SHCH increased the varieties and maturities for clearing of the central counterparty clearing of cross-border foreign exchange transactions and included the T+1 transaction in interbank foreign exchange market and the foreign exchange options portfolio transaction into the scope of central counterparty clearing. The total clearing volume of the first day amounted to around RMB 568.872 billion.

On December 8th, the SHCH and the Euroclear Bank signed a contract and hosted the opening ceremony of Yulan Bond business in Shanghai.

On December 9th, the CCDC supported the China Trust Protection Fund Co., Ltd. and Shanghai Rural Commercial Bank to practice the first collateral management business for interbank deposit of trust protection fund, which was the first time for the financial protection fund industry to introduce the collateral management mechanism.

From December 9th, the SHFE launched the extended warrants transaction of Natural Rubber at the SHFE Standard Warrants Trading Platform.

On December 14th, the CBIRC released the *Measures for the Regulation of Internet Insurance Business*, to be effective from February 1st, 2021.

On December 15th, the *Notice on Implementing Risk Identification of Principal and Interest Payment and Duration Supervision of Corporate Bonds 2021* (NDRC Caijin [2020] No. 942) was released to follow the spirits of the 43rd meeting of the Financial Stability and Development Committee (FSDC) under the State Council to reinforce the investigation and identification of risks, prevent and forestall major risks in the bond market and hold fast to the bottom line that no systemic financial risk should occur, so as to further strengthen the capability of corporate bonds in serving the real economy.

On December 16th, the Bank of Jiangsu and the Nanjing Bank offered China's first interbank discount business of supply chain bills.

On December 21st, the China Merchants Bank offered China's first central bank discount business of supply chain bills.

Appendix II China Financial Market Statistics

Table 1 Major macroeconomic and financial indicators from 2000 to 2020 (year-end balance)

Item	2000	2001	2002	2003	2004	2005	2006	2007	2008
Gross domestic product (GDP)	99,215	109,655	120,333	135,823	159,878	184,937	216,314	265,810	314,045
Growth rate	8.4	8.3	9.1	10.0	10.1	10.4	12.7	14.2	9.6
Exports & imports (USD 100 million, RMB 100 million)	4,743	5,097.7	6,208	8,512	11,547	14,221	17,607	21,738	25,616
Growth rate	31.5	7.5	21.8	37.1	35.7	23.2	23.8	23.5	17.8
Exports (USD 100 million, RMB 100 million)	2,492	2,661	3,256	4,384	5,934	7,620	9,690	12,205	14,307
Imports (USD 100 million, RMB 100 million)	2,251	2,436.1	2,952	4,128	5,614	6,601	7,915	9,561	11,326
Foreign exchange reserves (USD 100 million)	1,655.7	2,121.7	2,864	4,033	6,099	8,189	10,663	15,282	19,460
Foreign direct investment (USD 100 million)	408	468.5	527	535	606	603	694.7	747.7	924
Fiscal revenue	13,380.1	16,371	18,914	21,691	26,355.9	31,628	38,760.2	51,304	61,330
Fiscal expenditure	15,879.4	18,844	22,012	24,607	28,360.8	33,708.1	40,222.7	49,565.4	62,593
Deficit/surplus	-2,499.3	-2,473	-3,098	-2,916	-2,004.9	-2,080.1	-1,462.5	1,738.6	-1,263
Money supply (M2)	134,610.3	158,301.9	185,007	221,222.8	254,107	296,040.1	345,577.9	403,401.3	475,166.6
Growth rate	12.3	17.6	16.9	19.6	14.9	16.5	16.7	16.7	17.8
Money supply (M1)	53,147.2	59,871.6	70,822	84,118.6	95,969.7	107,279.9	126,028.1	152,519.2	166,217.1
Growth rate	15.9	12.7	18.3	18.8	14.1	11.8	17.5	21.0	9.0
Money supply (M0)	14,652.7	15,688.8	17,278	19,746	21,468.3	24032.8	27,072.6	30,334.3	34,218.96
Growth, rate	8.9	7.1	10.1	14.3	8.7	11.9	12.6	12.0	12.8
Per capita disposable income of urban residents (RMB)	6,280	6,859.6	7,703	8,500	9,422	10,493	11,759	13,786	15,781
Real growth rate	6.4	8.5	13.4	9.0	7.7	9.6	10.4	12.2	8.4
Net income of rural residents (RMB)	2,253	2,366	2,475.6	2,622	2,936	3,255	3,587	4,140	4,761
Real growth rate	2.1	4.2	4.8	4.3	6.8	6.2	7.4	9.5	8.0
Total deposits with financial institutions	123,804.4	143,617.2	170,917.4	208,055.6	241,424.3	300,208.6	348,015.6	401,051.4	478,444.2
Growth rate	13.8	16.0	19.0	21.7	16.0	24.3	15.9	15.2	19.3
Total loans by financial institutions	99,371.1	112,314.7	131,293.9	158,996.2	178,197.8	206,838.5	238,279.8	277,746.5	320,048.7
Growth rate	6.0	13.0	16.9	21.1	12.1	16.1	15.2	16.6	15.2
Consumer Price Index (CPI)	0.4	0.7	-0.8	1.2	3.9	1.8	1.5	4.8	5.9

Sources: National Bureau of Statistics (NBS), PBC, and MOF.

Notes: 1. Data of previous years have been adjusted according to latest statistical releases.

2. From 2009 onwards, the total value of exports and imports, the value of imports, and the value of exports are denominated in RMB.

Units: RMB 100 million, percent

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
340,903	408,903	484,124	534,123	595,244	643,974	689,052	743,585	832,036	919,281	990,865	1,015,986
9.2	10.6	9.5	7.7	7.8	7.3	7.0	6.8	6.9	6.7	6.1	2.3
22,073	201,723	236,402	244,160	258,168	264,242	245,503	243,386	278,099	305,010	315,505	321,557
-13.9	34.7	17.2	3.2	5.7	2.39	-7.0	-0.9	14.2	9.7	3.4	1.9
12,016	107,023	123,241	129,359	137,131	143,884	141,167	138,419	153,309	164,129	172,342	179,326
10,059	94,700	113,161	114,801	121,037	120,358	104,336	104,967	124,790	140,881	143,162	142,231
23,992	28,473	31,811	33,116	38,213	38,430	33,304	30,105	31,399	30,727	31,079	32,165.22
900	1,057	1,160	1,117	1,176	1,196	1,263	1,260	1,310	1,350	1,381	1,444
68,518	83,102	103,874	117,254	129,210	140,370	152,269	159,605	172,593	183,360	190,382	182,895
76,300	89,874	109,248	125,953	140,213	151,662	175,768	188,793	203,330	220,906	238,874	245,588
-7,782	-6,772	-5,374	-8,699	-11,003	-11,312	-23,499	-29,188	-30,734	-37,546	-48,492	-62,693
606,223.6	725,851.79	851,590.9	974,148.8	1,106,524.98	1,228,374.81	1,392,278.11	1,550,066.67	1,676,768.54	1,826,744.22	1,986,488.82	2,186,795.89
27.6	19.7	13.5	14.4	13.6	11.0	13.3	11.4	8.2	8.1	8.7	10.1
220,004.5	266,621.54	289,847.7	308,664.2	337,291.05	348,056.41	400,953.44	486,557.24	543,790.15	551,685.91	576,009.15	625,580.99
32.4	21.2	7.9	6.5	9.3	3.2	15.2	21.4	11.8	1.5	4.4	8.6
38,245.97	44,628.17	50,748.46	54,659.77	58,574.44	60,259.53	63,216.58	68,303.87	70,645.6	73,208.4	77,819.47	83,314.53
11.8	16.7	13.8	7.7	7.1	2.9	4.9	8.1	3.4	3.6	5.4	9.2
17,175	19,109	21,810	24,565	26,955	28,844	31,195	33,616	36,396	39,251	42,359	43,834
9.8	7.8	8.4	12.6	9.7	6.8	6.6	5.6	8.3	7.8	5.0	3.5
5,153	5,919	6,977	7,917	8,896	9,892	11,422	12,363	13,432	14,617	16,021	17,131
8.5	10.9	11.4	13.5	9.3	11.2	7.5	6.2	7.3	8.8	9.6	6.9
612,005.1	733,382.03	826,701.35	943,102.27	1,070,587.72	1,173,734.59	1,397,752.11	1,555,247.07	1,692,727.15	1,825,158.24	1,981,642.58	2,183,744.07
27.9	19.8	12.7	14.1	13.5	9.6	19.1	11.3	8.8	7.8	8.6	10.2
425,622.6	509,225.95	581,892.5	672,874.61	766,326.64	867,867.89	993,459.69	1,120,551.79	1,256,073.74	1,417,516.44	1,586,020.56	1,784,033.85
33.0	19.6	14.3	15.6	13.9	13.3	14.5	12.8	12.1	12.9	11.9	12.5
-0.7	3.3	5.4	2.6	2.6	2.0	1.4	2.0	1.6	2.1	2.9	2.5

Table 2 Composition and growth of RMB and foreign currency deposits and loans from 2000 to 2020 (year-end balance)

Item	2000	2001	2002	2003	2004	2005	2006	2007	2008
Total deposits with financial institutions	123,804	143,617.2	170,917.4	208,055.6	241,424.3	300,208.6	348,015.6	401,051.4	478,444.21
YoY growth	13.8	16.0	19.0	21.7	16.0	24.3	15.9	15.2	19.3
of which: Deposits of urban & rural residents	64,332.4	73,762.4	86,910.7	103,617.7	119,555.4	147,053.7	166,616.2	176,213.3	221,503.47
YoY growth	7.9	14.7	17.8	19.2	15.4	23.0	13.3	5.8	25.7
Corporate deposits	44,093.7	51,546.6	60,028.6	72,487.1	84,669.5	101,750.6	118,851.7	144,814.1	164,385.79
YoY growth	18.6	16.9	16.5	20.8	16.8	20.2	16.8	21.8	13.5
Total loans by financial institutions	99,371.1	112,314.7	131,293.9	158,996.2	178,197.8	206,838.5	238,279.8	277,746.5	320,048.68
YoY growth	6.0	13.0	16.9	21.1	12.1	16.1	15.2	16.6	15.2
of which: Short-term loans	65,748.1	67,327.2	76,822.4	87,397.9	90,808.3	91,157.5	101,698.2	118,898	128,571.47
YoY growth	2.9	2.4	14.1	13.8	3.9	0.4	11.6	16.9	8.1
Medium and long-term loans	27,931.2	39,238.1	51,731.6	67,251.7	81,010.1	92,940.5	113,009.8	138,581	164,160.42
YoY growth	16.5	40.5	31.8	30.0	20.5	14.7	21.6	22.6	18.5

Source: PBC.

Units: RMB 100 million, percent

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
612,005.1	733,382.03	826,701.35	943,102.27	1,070,587.72	1,173,734.59	1,397,752.11	1,555,247.07	1,692,727.15	1,825,158.24	1,981,642.58	2,183,744.07
27.9	19.8	12.7	14.1	13.5	9.6	19.1	11.3	8.8	7.8	8.6	10.2
264,756.9	307,166.39	357,901.58	415,549.87	471,090.18	512,790.14	551,928.92	606,522.23	651,983.38	724,438.51	821,296.39	934,383.14
19.5	16.0	16.5	16.1	13.4	8.9	7.6	9.9	7.5	11.1	13.4	13.8
224,360	252,960.27	423,086.61	478,730.2	541,793.87	591,069.28	455,208.83	530,895.41	571,640.83	589,104.74	621,147.01	688,218.21
36.5	12.7	67.3	13.2	13.2	9.1	-22.9	16.6	7.7	3.1	5.4	10.8
425,622.6	509,225.95	581,892.5	672,874.61	766,326.64	867,867.89	993,459.69	1,120,551.79	1,256,073.74	1,417,516.44	1,586,020.56	1,784,033.85
33.0	19.6	14.3	15.6	13.9	13.3	14.5	12.8	12.1	12.9	11.9	12.5
151,390.7	171,236.64	217,480.1	268,152.19	311,771.97	336,371.27	359,190.66	371,286.36	405,492.17	432,776.46	462,715.17	487,247.04
17.7	13.11	27	23.3	16.3	7.9	6.8	3.4	9.2	6.7	6.9	5.3
235,591.3	305,127.55	333,746.51	363,894.22	410,345.5	471,818.36	537,832.55	634,209.87	750,130.12	854,188.75	971,567.92	1,137,402.06
43.5	29.5	9.4	9.0	12.8	15	14	17.9	18.3	13.9	13.7	17.1

Table 3 Outstanding loans, outstanding bonds and stock market capitalization as percentage of GDP from 2006 to 2020

Units: RMB 100 million, percent

Year	GDP	Outstanding loans	Outstanding loans/GDP	Outstanding bonds	Outstanding bonds/GDP	Stock market cap	Stock market cap/GDP
2006	216,314	238,280	110.2	92,740	42.9	89,404	41.3
2007	265,810	277,747	104.5	124,470	46.8	327,140.9	123.1
2008	314,045	320,049	101.9	151,648	48.3	121,366.4	38.6
2009	340,903	425,623	124.9	176,430	51.8	243,939.12	71.6
2010	397,983	509,226	128	205,481	51.6	265,422.59	66.7
2011	471,564	581,893	123	223,786	47.5	214,758.1	45.5
2012	519,470	672,875	130	262,058	50.4	230,357.6	44.3
2013	568,845	766,327	135	296,165	52.1	239,077.2	42
2014	636,463	867,868	136	355,778	55.9	372,546.92	59
2015	676,708	993,460	147	478,978	70.8	531,304.2	78.5
2016	744,127	120,552	151	636,614	85.6	508,245.11	68.3
2017	827,122	256,074	152	740,098	89.5	567,475.37	68.6
2018	900,309	417,516	157	870,016	96.6	434,924	48.3
2019	990,865	586,021	160	991,043	100	483,461.26	48.8
2020	1,015,986	1,784,034	175	1,167,200	115	797,238	78.5

Source: PBC and CSRC.

Notes: 1. Outstanding loan refers to the outstanding amount of all RMB and foreign currency loans of financial institutions.

2. Outstanding bonds include bonds in custody in the interbank market and on the stock exchange.

Table 4 Composition of aggregate financing to the real economy (flow) from 2010 to 2020

Unit: RMB 1 trillion

Year	Flow of the incremental all-system aggregate financing	RMB loans	Foreign currency loans	Entrust loans	Trust loans	Undiscounted bankers' acceptances	Net bond financing by enterprises	Domestic equity financing by non-financial enterprises	Others
2010	13.94	7.86	0.49	0.88	0.39	2.34	1.11	0.58	13.94
2011	12.83	7.47	0.57	1.3	0.2	1.03	1.37	0.44	12.83
2012	15.76	8.20	0.92	1.28	1.28	1.05	2.26	0.25	15.76
2013	17.29	8.89	0.58	2.54	1.84	0.78	1.8	0.22	17.29
2014	16.41	9.78	0.36	2.51	0.52	-0.13	2.43	0.44	16.41
2015	15.29	11.27	-0.64	1.59	0.04	-1.06	2.82	0.76	15.29
2016	17.8	12.4	-0.56	2.18	0.86	-1.95	3	1.24	17.8
2017	19.44	13.84	0.0018	0.77	2.26	0.54	0.45	0.87	19.44
2018	19.26	15.67	-0.4203	-1.61	-0.69	-0.63	2.49	0.36	19.26
2019	25.67	16.88	-0.1274	-0.9396	-0.3467	-0.4755	3.34	0.3478	25.67
2020	34.86	20.03	0.1450	-0.3954	-1.1	0.1746	4.45	0.8923	10.66

Source: PBC.

Table 5 Interbank lending and bond repo trading from 1997 to 2020

Unit: RMB 100 million

Year	Interbank lending	Pledged repo	Outright repo
1997	8,298	310	—
1998	1,978	1,021	—
1999	3,291	3,957	—
2000	6,728	15,785	—
2001	8,082	40,133	—
2002	12,107	101,885	—
2003	24,113	117,203	—
2004	14,556	93,105	1,263
2005	12,783	156,784	2,223
2006	21,503	263,021	2,892
2007	106,466	440,672	7,253
2008	150,492	563,830	17,376
2009	193,505	677,007	25,891
2010	278,684	846,533	29,402
2011	334,412	966,650	27,885
2012	467,044	1,366,174	50,966
2013	355,190	1,519,757	61,882
2014	376,626	2,124,191	120,035
2015	642,135	4,324,109	253,528
2016	959,131	5,682,693	330,335
2017	789,811	5,882,607	281,077
2018	1,392,987	7,086,726	140,036
2019	1,516,372	8,100,887	96,427
2020	1,471,425	9,527,158	70,357

Source: CFETS.

Table 6 Change in the number of interbank funding market participants

Year	Banks	Securities companies	Insurance companies	Trust companies	Finance companies	Leasing companies	Rural credit cooperatives	City credit cooperatives	Asset management companies	Auto finance companies	Consumer finance companies	Other	Total
2000	232	14	—	—	20	—	148	—	—	—	—	3	417
2001	246	18	—	—	25	—	198	—	—	—	—	3	490
2002	261	41	—	—	25	—	202	4	—	—	—	3	536
2003	289	56	—	—	32	—	229	10	—	—	—	1	617
2004	309	64	—	—	35	—	236	11	—	—	—	1	656
2005	323	66	—	—	38	—	239	12	—	—	—	1	679
2006	339	53	—	—	46	—	250	15	—	—	—	0	703
2007	326	56	—	3	49	—	267	16	—	—	—	0	717
2008	340	58	—	16	55	4	298	13	2	2	—	0	788
2009	348	65	6	26	68	6	320	9	3	3	—	0	854
2010	347	68	6	30	72	11	338	8	3	5	—	0	888
2011	347	70	7	38	77	11	369	7	4	6	—	1	937
2012	359	77	7	39	81	16	422	7	5	8	—	1	1,022
2013	368	82	9	45	98	16	482	7	5	9	—	1	1,122
2014	349	87	10	54	129	17	547	7	5	13	—	1	1,219
2015	355	90	15	57	154	20	661	7	5	16	—	2	1,382
2016	390	95	31	62	180	24	916	0	8	17	—	2	1,725
2017	497	96	43	62	213	40	973	0	8	21	3	2	1,958
2018	573	97	52	62	226	54	1,017	0	8	23	8	3	2,123
2019	1,338	102	53	66	236	66	282	0	9	24	13	1	2,190
2020	1,432	102	53	66	238	66	266	0	9	24	20	2	2,278

Source: National Interbank Funding Center (NIFC).

Table 7 Trading in the bill market from 2000 to 2020

Unit: RMB 1 trillion

Year	Cumulative volume of signed commercial bills	Cumulative volume of bill discounts
2000	0.74	0.64
2001	1.28	1.55
2002	1.61	2.31
2003	2.77	4.44
2004	3.42	4.71
2005	4.45	6.75
2006	5.43	8.49
2007	5.87	10.11
2008	7.09	13.51
2009	10.27	23.16
2010	12.2	48.60
2011	15.1	25
2012	17.9	31.6
2013	20.3	45.7
2014	22.1	60.7
2015	22.4	102.1
2016	18.1	84.5
2017	17.0	40.3
2018	18.28	27.33
2019	20.4	34.3
2020	22.1	10.4

Source: PBC.

Table 8 Spot trading and futures trading in the bond market from 2006 to 2020

Units: RMB 100 million, percent

Year	Interbank bond market				Exchange market			
	Spot trading	YoY growth	OTC market trading	YoY growth	Spot trading	YoY growth	Treasury bond futures market	YoY growth
2006	102,558.6	70.55	42.8	-34.86	1,977.83	—	—	—
2007	156,038.21	52.15	35.7	-16.59	2,051.75	3.74	—	—
2008	371,082.7	137.82	30.4	-14.85	4,294.73	109.32	—	—
2009	472,646.43	27.37	62.8	106.58	4,659.86	8.5	—	—
2010	640,418.98	35.5	41.7	-33.6	5,832.26	25.16	—	—
2011	636,422.9	-0.62	27.89	-33.12	6,839.9	17.28	—	—
2012	751,952.83	18.15	14.99	-46.25	9,852.7	44.05	—	—
2013	416,106.44	-44.66	18.72	24.88	17,387.6	76.48	3,063.89	—
2014	403,565.2	-3	71.7	283.01	27,874.4	60.31	8,785.17	186.73
2015	867,370.1	114.9	109.3	52.4	33,994.6	22	60,106.8	584.18
2016	1,270,918.3	46.5	87.6	-19.8	51,269.9	50.8	89,013.6	48.09
2017	1,028,351.7	-19.1	245	179.7	55,597.0	8.4	140,849.1	58.23
2018	1,507,367.9	46.6	1,320.3	438.9	59,282.6	6.6	103,819.3	-26.77
2019	2,087,499.4	41.8	175.5	-1.3	83,530.2	40.9	148,158.3	40.71
2020	2,328,245.2	11.5	3,237.6	28	201,785.8	141.6	263,689.3	77.98

Source: PBC.

Table 9 Spot trading in the bond market in 2020

Units: RMB 100 million, percent

Month	Interbank bond market				Exchange market			
	Spot trading	YoY growth	Interbank bond aggregate index	OTC market trading	YoY growth	Spot trading	YoY growth	SSE treasury bond index
Jan.	145,446.7	-2.5	118.7	197.4	-38.1	6,572	-6	239.67
Feb.	98,239.5	-9.3	119.74	251.9	10.7	7,943.2	68.8	241.21
Mar.	244,347.5	39	120.25	493.3	78.4	19,347.9	160.8	242.65
Apr.	254,526.8	44.7	121.58	593.1	186.5	19,995.8	166.3	244.33
May	217,099.2	17.1	120.13	291.5	101.8	13,211.6	88.4	245.42
Jun.	234,933.2	50.9	118.9	292.3	1.9	13,769.6	116.7	246.08
Jul.	263,739	38.5	118.07	125.2	-32.4	20,388.8	167	246.49
Aug.	227,280.5	13.4	117.41	175.1	-21.2	19,163.2	155.1	247.16
Sept.	235,132.2	23.3	117.01	208.5	17.3	15,512.5	127	247.69
Oct.	105,441.7	-37.5	117.06	102.8	-26.1	21,345.3	274.8	248.41
Nov.	141,789	-33.7	116.95	273.3	63.2	21,188.6	196.7	248.75
Dec.	160,385.9	-28.3	117.45	269.3	53.4	23,347.3	167.7	249.44
Total	2,328,245.2	11.5	—	3,273.6	28	201,785.8	141.6	—

Sources: PBC, CCDC, SSE, and CFETS.

Note: The interbank bond aggregate index refers to the month-end close value of ChinaBond Interbank Aggregate Index. SSE treasury bond index refers to the month-end net close value of the SSE treasury bond.

Table 10 Bond market issuance

Unit: RMB 100 million

Year	Government credit bonds			Government-backed agency bonds	Central bank bills	Financial bonds				Interbank certificate of deposits	Government credit bonds				Asset-backed securities	International institutional bonds	Standard commercial paper	Total
	Treasury bonds	Local government bonds	Sub-total			Policy bank bonds	Short-term financing bonds of securities companies	Other financial bonds	Sub-total		Debt financing instruments of non-financial enterprises	Enterprise bonds	Corporate bonds	Sub-total				
2004	7,318.8	0	7,318.8	0	17,037	4,348	0	748.8	5,096.8	—	0	326	209	535	—	—	—	29,988
2005	7,042	0	7,042	0	27,882	6,051.7	29	1,036.3	7,117	—	1,424	654	0	2078	172.74	—	—	44,160.8
2006	8,883.3	0	8,883.3	0	36,574	8,980	0	525	9,505	—	2,919.5	995	142.9	4,057.4	280.01	—	—	59,135.3
2007	23,483.4	0	23,483.4	0	40,721	10,931.9	0	972.7	11,904.6	—	3,349.1	1,720	407.3	5,476.4	178.08	—	—	81,763.8
2008	8,546.3	0	8,546.3	0	42,960	10,809.3	0	974	11,783.3	—	6,075.5	2,367	976.5	9,419	302.01	—	—	73,010.6
2009	16,213.6	2,000	18,213.6	0	39,740	11,678.1	0	3,071	14,749.1	—	11,509.7	4,252	715	16,476.7	0	—	—	89,179.4
2010	17,778.2	2,000	19,778.2	1,090	46,608	13,192.7	0	979.5	14,172.2	—	11,863	3,627	1,320.3	16,810.3	0	—	—	98,458.6
2011	15,397.9	2,000	17,397.9	1,000	14,140	19,972.7	0	3,528.5	23,501.2	—	18,503.2	2,473.5	1,707.4	22,684.1	12.79	—	—	78,723.2
2012	14,360.4	2,500	16,860.4	1,500	0	21,399	561	4,233.7	26,193.7	—	26,547.2	6,499.3	2,722.8	35,769.3	224.42	—	—	80,515.9
2013	16,945	3,500	20,445	1,900	5,362	20,760.3	2,995.9	1,321	25,077.2	340	28,357.9	4,752.3	4,081.4	37,191.6	231.7	—	—	90,133.5
2014	17,047.3	4,000	21,047.3	2,100	0	22,900.5	4,246.9	5,459.5	32,606.9	8,985.6	41,217.6	6,952	3,483.8	51,653.4	3,220.63	—	—	110,201.1
2015	19,875.4	38,350.6	58,226	2,400	0	25,790.2	3,515.6	14,794.9	44,100.7	52,975.9	53,660.6	3,431	13,292.4	70,384.1	6,157.2	115	—	234,358.9
2016	29,457.7	60,428.4	89,886.1	2,250	0	33,529.7	1,178.6	12,717.9	47,426.2	129,931	50,297.9	5,917.7	25,770	81,985.5	8,647	1,330.4	—	361,456.2
2017	38,661.8	43,580.9	82,242.7	2,860	0	32,814.8	392	16,961	50,167.8	201,872.4	39,813.5	3,731	11,460.2	55,004.7	15,398.4	666	—	408,212
2018	35,411.0	41,651.7	77,062.6	2,530.0	0	33,681.8	1,425.0	18,302.2	53,409.0	210,832.4	57,915.9	2,404.8	16,336.7	76,657	18,187.5	898.6	—	439,577.6
2019	40,091	43,624.3	83,715.3	3,720.0	0	37,401.0	4,491	26,693.4	68,585.4	179,712.7	67,975.7	3,606.2	25,704.9	97,286.8	19,668.3	538.4	13.8	453,240.7
2020	70,173.3	64,438.1	134,611.4	3,580	0	51,257.2	7,983	33,318	92,558.2	189,719.8	91,060.9	3,908.7	34,480.3	129,449.9	22,526.1	606.5	61.2	573,113.1

Source: PBC.

Notes: 1. Treasury bonds includes book-entry treasury bonds and electronic saving bonds.

2. Other financial bonds include interbank and exchange-traded financial bonds from 2015, and asset-backed securities includes interbank and exchange asset-backed securities.

3. International institutional bonds refer to bonds issued in China by overseas institutional legal persons, including sovereign institutions, quasi-sovereign institutions, and overseas financial and non-financial institutions.

Table 11 Bond custody in bond market

Unit: RMB 100 million

Year	Corporate credit bonds			Government-backed agency bonds	Central bank bills	Financial bonds				Interbank certificates of deposits	Corporate credit bonds				Credit asset-backed securities	International institutional bonds	Standard commercial paper	Interbank custody	Exchange custody	Total custody
	Treasury bonds	Local government bonds	Sub-total			Policy bank bonds	Short-term financing bonds of securities companies	Other financial bonds	Sub-total		Debt financing instruments of non-financial enterprises	Enterprise bonds	Corporate bonds	Sub-total						
2006	29,048	0	29,048	30	32,300	22,836	0	2,552	25,388	0	2,667	2,832	288	5,786	188	—	—	88,910	3,830	92,740
2007	46,503	0	46,503	30	36,587	28,784	0	3,486	32,270	0	3,203	4,422	1,131	8,756	324	—	—	120,102	4,368	124,470
2008	48,753	0	48,753	30	48,121	36,720	0	4,255	40,975	0	5,875	6,803	539	13,218	551	—	—	148,100	3,548	151,648
2009	55,411	2,000	57,411	40	42,326	44,498	0	6,454	50,952	0	13,196	10,971	1,135	25,301	399	—	—	172,476	3,954	176,430
2010	62,628	4,000	66,628	1,130	40,909	51,604	0	6,662	58,266	0	20,271	14,511	3,584	38,366	182	—	—	199,019	6,462	205,481
2011	67,839	6,000	73,839	2,130	21,290	64,778	0	9,785	74,563	0	29,047	16,799	6,023	51,869	95	—	—	214,260	9,526	223,786
2012	74,236	6,500	80,736	8,532	13,440	78,582	295	13,126	92,003	0	40,327	19,310	7,441	67,078	269	—	—	250,014	12,044	262,058
2013	83,165	8,615	91,780	10,067	5,522	88,720	810	13,535	103,064	340	51,483	23,359	10,553	85,394	354	—	—	277,128	19,377	296,505
2014	91,450	11,624	103,073	11,706	4,282	99,874	1,134	17,213	118,221	5,995.3	67,901	29,513	12,335	109,749	2,751	—	—	329,803	25,975	355,778
2015	101,503	48,255	149,757	13,275	4,282	110,069	436	32,174	142,678	30,274	85,910	31,632	15,582	133,123	5,463	125	—	440,640	38,337	478,978
2016	114,663	106,250	220,913	14,605	60	124,070	82	42,026	166,178	62,761	87,771	35,305	42,312	165,387	6,174	531	—	563,292	73,316	636,608
2017	129,028	147,419	276,447	16,045	60	135,437	152	52,300	187,889	80,051	83,741	35,067	50,652	169,460	9,132	1,013	—	654,324	85,774	740,098
2018	143,616	180,669	324,285	17,195	59.7	144,706	460	62,447	306,472	98,859	101,968	31,133	58,437	191,538	28,917	1,550	—	763,015	107,000	870,016
2019	161,041	211,153	372,193	19,445	280	156,927	1,745	75,937	234,609	107,239	117,064	29,840	70,570	217,474	38,142	1,659	—	864,460	126,583	991,043
2020	201,781	254,494	456,274	20,975	210	182,762	1,429	93,486	277,677	111,537	135,051	29,359	91,750	256,161	45,332	1,588	29	1,007,172	162,611	1,169,783

Notes: 1. Treasury bonds includes book-entry government bonds and electronic savings bonds.
2. Other financial bonds includes interbank and exchange-traded financial bonds.

Source: PBC.

Table 12 Number of interbank bond market participants

Institution			2014	2015	2016	2017	2018	2019	2020
Domestic participants	Incorporated entities	Depository financial institutions	1,088	1,302	1,560	1,745	1,859	2,068	2,261
		Other banking financial institutions	158	182	242	278	324	349	370
		Securities financial institutions	169	171	179	185	189	194	199
		Insurance financial institutions	148	152	154	163	173	183	184
		Non-financial institutions	278	280	274	274	274	265	86
		Other	7	7	21	20	23	23	23
		Sub-total	1,848	2,094	2,430	2,665	2,842	3,082	3.123
	Unincorporated Products	Securities investment funds	1,556	2,151	3,137	3,919	4,212	4,796	5,659
		Corporate annuities	1,275	1,431	1,528	1,625	1,684	2,748	3,270
		Social Security fund	105	105	106	163	197	206	211
		Insurance products	145	311	641	976	1,087	1,164	1,511
		Trust products	569	666	684	869	949	1,032	1,038
		Specific asset management portfolios of fund companies	176	1,140	3,061	3,425	3,315	3,395	3,610
		Asset management schemes of securities companies	560	1,388	2743	3,586	3,965	4,832	5,501
		Wealth management products of banks	48	48	445	679	1,006	1,611	2,581
		Other	0	0	114	216	320	412	549
		Sub-total	4,434	7,240	12,459	15,458	16,735	20,196	23,930
Overseas participants			180	302	407	617	1,186	2,610	3,417
Total			6,462	9,636	15,296	18,740	20,763	25,888	27,958

Source: PBC.

Table 13 Interbank bond market settlement agents

No.	Institution	No.	Institution
1	Industrial and Commercial Bank of China	27	Bank of Qingdao
2	Agricultural Bank of China	28	Bank of Chengdu
3	Bank of China	29	Bank of Chongqing
4	China Construction Bank	30	Bank of Hebei
5	Bank of Communications	31	Bank of Xiamen
6	China Merchants Bank	32	Fudian Bank
7	China Minsheng Bank	33	Jinshang Bank
8	China Everbright Bank	34	Haixia Bank of Fujian
9	China CITIC Bank	35	Bank of Guiyang
10	Huaxia Bank	36	Bank of Xi'an
11	Industrial Bank Co., Ltd.	37	Bank of Dongguan
12	Shanghai Pudong Development Bank	38	Harbin Bank
13	China Guangfa Bank	39	Shunde Rural Commercial Bank
14	Bank of Beijing	40	Bank of Ningbo
15	Hengfeng Bank	41	Changshu Rural Commercial Bank
16	Bank of Nanjing	42	Mengshang Bank
17	Bank of Shanghai	43	Hankou Bank
18	Bank of Hangzhou	44	HSBC Bank (China) Co., Ltd.
19	Shanghai Rural Commercial Bank	45	Standard Chartered Bank (China) Ltd.
20	Bank of Tianjin	46	BNP Paribas (China) Ltd.
21	Qishang Bank	47	Deutsche Bank (China) Co., Ltd.
22	Ping An Bank	48	Citibank (China) Co., Ltd.
23	Qilu Bank	49	J.P. Morgan Chase Bank (China) Co., Ltd.
24	Bank of Urumqi	50	Bank of Tokyo-Mitsubishi UFJ (China), Ltd.
25	Bank of Changsha	51	DBS Bank (China) Limited
26	Bank of Dalian		

Source: CFETS.

Table 14 Primary dealers for open market operations, 2020

No.	Institution	No.	Institution
1	Industrial and Commercial Bank of China	26	Huishang Bank
2	Agricultural Bank of China	27	Bank of Nanjing
3	Bank of China	28	Bank of Guangzhou
4	China Construction Bank	29	Bank of Luoyang
5	Bank of Communications	30	Bank of Zhengzhou
6	Postal Savings Bank of China	31	Bank of Changsha
7	China Development Bank	32	Zhongyuan Bank
8	The Export-Import Bank of China	33	Bank of Qingdao
9	China Merchants Bank	34	Xiamen Bank
10	Industrial Bank	35	Bank of Guiyang
11	Shanghai Pudong Development Bank	36	Bank of Xi'an
12	China Zheshang Bank	37	Qilu Bank
13	China Everbright Bank	38	Beijing Rural Commercial Bank
14	Huaxia Bank	39	Shanghai Rural Commercial Bank
15	China CITIC Bank	40	Guangzhou Rural Commercial Bank
16	China Minsheng Bank	41	Chongqing Rural Commercial Bank
17	Ping An Bank	42	Shunde Rural Commercial Bank
18	Hengfeng Bank	43	Standard Chartered Bank (China) Ltd.
19	China Guangfa Bank	44	HSBC Bank (China) Co., Ltd.
20	Bohai Bank	45	Citibank (China) Co., Ltd.
21	Bank of Beijing	46	Bank of Tokyo-Mitsubishi UFJ (China) Co., Ltd.
22	Bank of Ningbo	47	CITIC Securities Co., Ltd.
23	Bank of Hangzhou	48	China International Capital Co., Ltd.
24	Bank of Jiangsu	49	China Bond Insurance Co., Ltd.
25	Bank of Shanghai		

Source: PBC.

Table 15 Stock market statistics

Year	Number of listed companies	Listed share capital (100 million shares)	Market cap (RMB 100 million)	Free-float market cap (RMB 100 million)	Total capital raised via the A-share market (RMB 100 million)	Turnover (RMB 100 million)	Average turnover ratio (%)		Average P/E ratio (%)		Investor accounts (10,000)
							Shanghai	Shenzhen	Shanghai	Shenzhen	
2000	1,088	3,791.7	48,090.9	16,087.5	1,415.17	60,826.6	492.9	509.1	58.2	56.0	6,123.2
2001	1,160	5,218.0	43,522.2	15,228.8	1,277.33	38,305.2	269.3	227.9	37.7	39.8	6,898.7
2002	1,224	5,875.5	38,329.1	12,484.6	738.14	27,990.5	214.0	198.8	34.4	37.0	6,841.8
2003	1,287	6,428.5	42,457.7	13,178.5	806.24	32,115.3	250.8	214.2	36.5	36.2	6,981.2
2004	1,377	7,149.4	37,055.6	11,688.6	715.53	42,333.9	288.7	288.3	24.2	24.6	7,215.7
2005	1,381	7,629.5	32,430.3	10,630.5	344.13	31,663.1	274.4	320.6	16.3	16.4	7,336.1
2006	1,434	14,897.6	89,403.9	25,003.6	2,305.86	90,468.7	541.1	671.3	33.4	33.6	7,854.0
2007	1,550	22,416.9	327,140.9	93,064.4	8,303.34	460,556.2	927.2	1,062.1	59.2	72.1	9,280.6
2008	1,625	24,522.85	121,366.44	45,213.9	3,429.29	267,113.0	392.5	—	14.86	17.13	10,449.7
2009	1,718	26,162.85	243,939.12	151,258.7	4,816.07	535,986.7	—	—	28.73	46.01	12,037.7
2010	2,063	33,184.35	265,422.59	193,110.41	10,424.74	545,633.54	—	—	21.61	44.69	13,391.04
2011	2,342	36,095.52	214,758.10	164,921.3	7,312.2	421,649.72	—	—	13.4	23.11	14,050.37
2012	2,494	38,295.0	230,357.62	181,658.26	4,558.23	314,667.41	—	—	12.3	22.01	14,054.91
2013	2,489	40,569.08	239,077.19	199,579.54	4,674.98	468,728.6	—	—	10.99	27.76	13,247.15
2014	2,613	43,610.13	372,546.96	315,624.31	8,914.31	743,912.98	—	—	15.99	34.05	14,214.68
2015	2,827	49,997.26	531,304.20	417,925.40	16,064.7	550,538.29	—	—	17.63	52.75	21,477.57
2016	3,052	55,820.50	508,245.11	393,266.27	21,028.16	267,262.64	—	—	18.94	62.36	—
2017	3,482	60,919.15	567,475.37	449,105.31	17,223.86	124,625.07	—	—	19.67	39.53	—
2018	3,584	57,581.02	434,924.02	353,794.19	12,107.35	901,103.17	—	—	12.45	20.00	—
2019	3,777	61,719.92	592,934.57	483,461.26	15,413.25	1,366,232.67	—	—	14.55	26.15	—
2020	4,154	65,455.93	797,238.16	643,605.29	16,676.54	2,068,252.52	—	—	16.76	34.51	—

Source: Wind.

Table 16 Change in stock market turnover and indices

Unit: RMB 100 million

Year	Turnover	Average daily turnover	SSE composite index				SZSE composite index			
			Open	High	Low	Close	Open	High	Low	Close
2000	60,826.6	254.5	1,368.69	2,125.72	1,361.21	2,073.48	402.71	654.37	414.69	635.73
2001	38,305.2	159.6	2,077.08	2,245	1,515	1,645.97	636.62	664.85	439.36	475.94
2002	27,990.5	118.1	1,643.49	1,748.89	1,339.2	1,357.65	475.14	512.38	371.79	388.76
2003	32,115.3	133.25	1,347.43	1,649.6	1,307.4	1,497.04	386.61	449.42	350.74	378.63
2004	42,333.9	174.21	1,492.72	1,783.01	1,259.43	1,266.5	377.93	470.55	315.17	315.81
2005	31,663.1	130.84	1,260.78	1,328.53	998.23	1,161.06	313.81	333.27	237.18	278.75
2006	90,468.7	375.39	1,163.88	2,698.9	1,161.91	2,675.47	278.99	710.14	278.99	706.01
2007	460,556.2	1,903.12	2,728.19	6,092.06	2,612.54	5,261.56	555.26	1,567.74	547.89	1,447.02
2008	267,113.0	1,085.82	5,265	5,497.9	1,706.7	1,820.81	1,450.33	1,584.39	452.33	553.08
2009	535,986.7	2,196.67	1,849.02	3,478.01	1,844.09	3,277.139	560.09	1,234.12	560.1	1,201.34
2010	545,633.54	2,254.68	3,289.75	3,306.75	2,319.74	2,808.08	1,207.33	1,412.64	890.24	1,290.87
2011	421,649.72	1,728.06	2,825.33	3,067.46	2,134.02	2,199.42	1,298.59	1,316.19	828.83	866.65
2012	314,667.41	1,294.93	2,212.00	2,460.69	1,959.77	2,269.13	871.93	1,020.29	724.97	881.17
2013	468,728.6	1,969.45	2,289.51	2,434.48	1,950.01	2,115.98	887.37	1,106.27	815.89	1,057.67
2014	743,913.0	3,036.38	2,112.13	3,239.36	1,974.38	3,234.68	1,055.88	1,504.48	1,004.93	1,415.19
2015	2,550,538.29	1,0453.0	3,258.63	5,178.19	2,850.71	3,539.18	1,419.44	3,156.96	1,408.99	2,308.91
2016	1,267,262.64	5,193.7	3,536.59	3,538.69	2,638.3	3,103.64	2,304.48	2,304.49	1,618.12	1,969.11
2017	1,124,625.07	4,609.1	3,105.31	3,450.50	3,016.53	3,307.17	1,972.55	2,054.02	1,753.53	1,899.34
2018	901,103.17	3,708.24	3,314.03	3,587.03	2,449.20	2,493.90	1,903.49	1,966.15	1,212.23	1,267.87
2019	1,273,572.04	5,219.56	2,497.88	3,288.45	2,440.91	3,050.12	1,270.50	1,799.10	1,231.83	1,722.95
2020	2,068,252.52	8,511.33	3,066.34	3,474.92	2,646.81	3,473.07	1,734.63	2,333.46	1,552.96	2,329.37

Sources: CSRC, SSE, and SZSE.

Table 17 Market makers for RMB trading in the interbank spot foreign exchange market

No.	Institution	No.	Institution
1	Industrial and Commercial Bank of China	16	Bank of Shanghai
2	Agricultural Bank of China	17	Bank of Nanjing
3	Bank of China	18	Bank of Ningbo
4	China Construction Bank	19	BNP Paribas (China) Ltd.
5	Bank of Communications	20	Shanghai Pudong Development Bank
6	China CITIC Bank	21	DBS Bank (China) Co., Ltd.
7	China Merchants Bank	22	HSBC Bank (China) Co., Ltd.
8	China Everbright Bank	23	Bank of Montreal (China) Co., Ltd.
9	Huaxia Bank	24	Citibank (China) Co., Ltd.
10	China Guangfa Bank	25	Standard Chartered Bank (China) Ltd.
11	Ping An Bank	26	J.P. Morgan Chase Bank (China) Co., Ltd.
12	Industrial Bank	27	Sumitomo Mitsui Banking Corporation
13	China Minsheng Bank	28	Deutsche Bank (China) Co., Ltd.
14	China Development Bank	29	Mizuho Bank (China) Co., Ltd.
15	Postal Savings Bank of China	30	Bank of Tokyo-Mitsubishi UFJ (China) Co., Ltd.

Source: CFETS.

Table 18 RMB/FX central parity rates

Year	USD	EUR	JPY	HKD	GBP	MYR	RUB	ZAR	KRW	AED	SAR	HUF	PLN	DKK	SEK	NOK	TRY	MXN	AUD	CAD	NZD	SGD	CHF
1994	844.91	—	7.78	112.66	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1995	831.79	—	8.0703	107.6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1996	829.92	—	7.1613	107.19	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1997	827.98	—	6.3627	106.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1998	827.87	—	7.1719	106.78	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1999	827.93	—	8.0933	106.51	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2000	827.81	—	7.2422	106.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2001	827.66	—	6.3005	106.06	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2002	827.73	863.6	6.9035	106.11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2003	827.69	1,033.8	7.7263	106.57	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2004	827.65	1,126.3	7.9701	106.37	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2005	807.02	957.97	6.8716	104.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2006	780.87	1,026.7	6.563	100.47	1,532.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2007	730.46	1,066.7	6.4064	93.638	1,458.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2008	683.46	965.9	7.565	88.189	987.98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2009	682.82	979.71	7.3782	88.048	1,097.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2010	662.27	880.65	8.126	85.093	1,021.8	46.649	462.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2011	630.09	816.25	8.1103	81.07	971.16	50.279	508.6	—	—	—	—	—	—	—	—	—	—	—	640.93	617.77	—	—	—
2012	628.55	831.76	7.3049	81.085	1,016.1	48.865	485.28	—	—	—	—	—	—	—	—	—	—	—	653.63	631.84	—	—	—
2013	609.69	841.89	5.7771	78.623	1,005.6	54.141	539.85	—	—	—	—	—	—	—	—	—	—	—	543.01	572.59	—	—	—
2014	611.9	745.56	5.1371	78.887	954.37	56.737	905.36	—	—	—	—	—	—	—	—	—	—	—	501.74	527.55	480.34	463.96	—
2015	649.36	709.52	5.3875	83.778	961.5	66.051	1131	—	—	—	—	—	—	—	—	—	—	—	472.76	468.14	444.26	458.75	640.18
2016	693.7	730.68	5.9591	89.451	850.94	64.406	869.06	196.75	17,371	52.938	54.062	4,247.68	60.355	101.71	131.16	124.27	50.757	298.64	501.57	514.06	483.08	479.95	679.89
2017	653.42	780.23	5.7883	83.591	877.92	62.224	881.4	189.5	16,369	56.212	57.397	3,973.0	53.576	95.43	126.24	126.24	57.834	301.65	509.28	520.09	463.27	488.31	667.79
2018	686.32	784.73	6.1887	87.62	867.62	60.683	1,013.83	211.19	16,327	53.537	54.685	4,091.61	54.732	95.17	131.34	127.74	77.151	287.02	482.5	503.81	459.54	500.62	694.94
2019	689.01	774.7	6.3828	89.608	905.74	59.236	885.06	202.69	16,618	52.612	53.758	4,285.15	54.983	96.47	134.65	127.7	85.049	271.62	483.34	530.69	463.88	515.4	712.67
2020	652.49	802.5	6.3235	84.164	899.03	61.833	1,140.11	224.33	16,675	56.302	57.505	4,542.9	57.079	92.71	125.99	130.77	113.161	304.86	501.63	511.61	470.5	493.14	740.06

Source: SAFE.

Notes: 1. Listed in the table are central parity rates on the last trading day of the year.

2. The central parity rates of CNY/MYR, CNY/RUB, CNY/ZAR, CNY/KRW, CNY/AED, CNY/SAR, CNY/HUF, CNY/PLN, CNY/DKK, CNY/SEK, CNY/NOK, CNY/TRY, and CNY/MXN are under indirect Quotation; the central parity rates of CNY against the other 10 currencies are under direct Quotation.

Table 19 Futures market trading

Units: RMB 100 million, 10,000 lots

Year	Commodity futures market		Financial futures market	
	Trading value	Trading volume	Trading value	Trading volume
1993	5,521.99	890.69	—	—
1994	31,601.41	12,110.72	—	—
1995	100,565.3	63,612.07	—	—
1996	84,119.16	34,256.77	—	—
1997	61,170.66	15,876.32	—	—
1998	36,967.24	10,445.57	—	—
1999	22,343.01	7,363.91	—	—
2000	16,082.29	5,461.07	—	—
2001	30,144.98	12,046.35	—	—
2002	39,490.16	13,943.26	—	—
2003	108,389.03	27,986.42	—	—
2004	146,935.31	30,569.76	—	—
2005	134,448.38	32,284.75	—	—
2006	210,046.34	44,947.41	—	—
2007	409,722.43	72,842.68	—	—
2008	719,141.94	136,388.71	—	—
2009	1,305,107.20	215,742.98	—	—
2010	2,269,852.69	304,194.19	821,397.94	9,147.66
2011	937,503.93	100,372.53	437,659.55	5,041.62
2012	952,862.59	134,546.42	758,406.78	10,506.18
2013	1,264,695.8	186,827.38	1,410,066.21	19,354.93
2014	1,279,712.5	228,343.25	1,640,169.73	21,758.1
2015	1,356,307.36	323,715.31	4,173,852.33	34,052.95
2016	1,774,124.99	411,943.24	182,191.10	1,833.59
2017	1,633,042.09	305,155.38	245,922.02	2,459.59
2018	1,846,960.97	300,165.53	261,222.97	2,721.01
2019	2,209,875.26	389,566.73	696,210.17	6,641.04
2020	3,220,907.56	603,734.46	1,154,350.96	11,528.14

Source: CFA.

Note: Starting from 2011, the trading volume was calculated unilaterally. And data of exchange for physical transactions are not included in the table.

Table 20 Gold market trading

Units: RMB 100 million, metric ton

Year	Trading value	Trading volume
2003	459.2	470.7
2004	731.0	665.3
2005	1,069.8	906.4
2006	1,947.5	1,249.6
2007	3,164.9	1,828.1
2008	8,683.9	4,457.6
2009	10,288.8	4,710.8
2010	16,157.8	6,051.5
2011	24,772.2	7,438.5
2012	21,506.3	6,350.2
2013	32,133.8	11,614.5
2014	45,891.6	18,486.7
2015	80,083.9	34,067.3
2016	130,240.6	48,676.6
2017	149,751.9	54,292.0
2018	183,046.4	67,510.3
2019	214,944.8	68,574.4
2020	225,507.8	58,671.5

Source: SGE.

Table 21 OTC gold businesses of commercial banks from 2007 to 2020

Year	Trading volume/value	Account gold		Physical gold			Others								
		USD-denominated (10,000 oz, USD100 million)	RMB-denominated (metric ton, RMB 100 million)	Proprietary (metric ton, RMB 100 million)	Agent (metric ton, RMB 100 million)	Gold accumulation and regular investment (metric ton, RMB 100 million)	Gold leasing (metric ton, RMB 100 million)	Gold lending/borrowing (metric ton, RMB 100 million)	Gold pledging (metric ton, RMB 100 million)	Domestic USD gold forwards (10,000 oz, USD100 million)	Domestic USD gold options (10,000 oz, USD100 million)	Domestic USD gold swaps (10,000 oz, USD100 million)	Domestic RMB gold forwards (10,000 oz, RMB 100 million)	Domestic RMB gold swaps (10,000 oz, RMB 100 million)	Domestic RMB gold options (10,000 oz, RMB 100 million)
2007	Trading volume	157.68	352.71	6.09	3.96	—	33.11	1.20	—	204.93	8.48	—	—	—	—
	Trading value	11.08	607.05	11.20	7.16	—	56.40	2.31	—	11.84	0.60	—	—	—	—
2008	Trading volume	293.09	1,332.55	33.12	4.13	—	73.99	11.40	—	574.85	6.28	—	—	—	—
	Trading value	25.37	2,546.30	66.68	8.18	—	141.50	20.16	—	54.44	0.58	—	—	—	—
2009	Trading volume	579.96	1,381.16	40.73	3.43	0.54	91.29	7.56	—	162.06	2.29	—	—	—	—
	Trading value	57.34	2,923.48	89.90	7.64	1.30	191.98	15.09	—	15.98	0.22	—	—	—	—
2010	Trading volume	418.67	1,205.15	80.40	3.06	12.27	155.80	10.63	0.27	257.82	1.74	—	3.09	—	—
	Trading value	51.47	3,227.49	222.90	8.53	35.29	413.25	28.85	—	32.75	0.21	—	8.78	—	—
2011	Trading volume	447.20	1,864.40	129.50	6.16	30.30	301.30	31.99	4.56	407.04	6.06	17.99	5.09	—	—
	Trading value	72.21	6,271.71	428.50	21.49	102.18	970.55	104.92	—	64.69	0.90	2.74	17.59	—	—
2012	Trading volume	424.35	1,458.89	126.20	10.55	59.85	465.01	54.80	7.43	1,331.50	61.46	49.93	20.95	—	—
	Trading value	70.71	4,947.18	443.70	41.20	205.82	1,583.70	187.23	—	222.01	10.17	8.35	70.91	—	—
2013	Trading volume	497.26	1,864.54	198.63	24.89	298.24	947.65	407.23	39.85	991.99	146.88	524.56	29.76	18.63	—
	Trading value	70.39	5,159.69	618.25	87.76	838.09	2,656.29	1,094.43	78.96	136.48	20.39	75.63	79.86	60.86	—
2014	Trading volume	250.37	910.78	91.36	25.16	594.24	1,370.69	474.80	17.14	1,735.95	40.87	341.08	197.29	10.35	0.03
	Trading value	31.59	2,289.79	250.76	94.19	1,483.77	3,438.19	1,180.97	32.83	218.64	5.18	43.68	496.33	26.01	0.07
2015	Trading volume	377.34	1,109.83	128.18	27.54	535.02	1,582.71	849.22	27.47	2,414.39	28.74	1,314.93	737.86	309.82	0.31
	Trading value	43.95	2,609.08	321.01	100.54	1,252.41	3,739.06	2,009.87	74.63	281.36	3.37	151.75	1,767.57	7,101.86	0.74
2016	Trading volume	685.04	1,889.54	143.47	34.40	463.96	1,827.78	1,242.59	3.42	1,359.40	50.53	1,814.90	799.26	32.01	0.08
	Trading value	86.47	5,064.28	396.04	135.83	1,239.66	4,855.60	3,319.76	6.00	168.84	6.34	217.35	2,134.97	85.47	0.21
2017	Trading volume	577.48	1,951.19	101.47	27.97	378.72	1,778.05	1,216.60	0.83	707.64	73.92	3,280.59	1,074.17	98.92	1.16
	Trading value	72.87	5,344.52	288.74	117.22	1,044.04	4,901.43	3,367.16	1.66	89.45	9.28	414.87	2,982.79	277.73	3.34
2018	Trading volume	593.63	2,984.04	95.66	36.04	257.61	984.48	790.58	0.17	965.25	51.45	7,792.08	867.28	58.15	314.27
	Trading value	76.39	8,035.55	269.00	146.13	700.93	2,677.72	2,149.29	0.30	122.81	6.57	996.77	2,384.96	159.77	890.08
2019	Trading volume	758.14	3,277.63	116.05	42.74	247.01	769.12	1,448.03	0.04	475.99	40.25	9,129.24	414.16	217.02	433.44
	Trading value	107.11	10,391.20	372.13	164.67	772.06	2,355.38	4,431.75	0.07	66.39	5.63	1,258.21	1,280.18	686.48	1,381.71
2020	Trading volume	946.63	4,185.73	155.45	32.26	298.02	602.89	1,410.12	0.78	480.39	45.82	7,410	360.92	248.93	76.34
	Trading value	164.28	15,592.76	621.53	142.24	1,154.44	2,304.64	5,340.85	2.2	83.2	7.8	1,253.18	1,377.40	941.83	302.42

Source: Gold Market Monitoring and Analysis System of PBC Shanghai Head Office.

Notes: Proprietary trading and agent trading of physical gold comprise sales and repos. Volume of gold accumulation (regular gold investment) comprises sales and redemptions. Volume of gold leasing, comprising leases and repayments for the years from 2007 to 2013, covers leases only from 2014 onwards. Volume of gold lending/borrowing, comprising gold lending and borrowing for the years from 2007 to 2013, covers lending only from 2014 onwards. Volume of gold pledging is the weight of gold received as pledge.

Table 22 Interest rate derivatives trading

Unit: Number of transactions, RMB 100 million

Year	Interest rate swaps		X-swap		Bond forwards		Standard bond forwards		Forward rate agreements	
	Number of Transactians	Notional principal amount	Number of Transactians	Notional principal amount	Number of Transactians	Trading volume	Number of Transactians	Trading volume	Number of Transactians	Trading volume
2006	103	355.7	—	—	398	664.5	—	—	—	—
2007	1978	2,186.9	—	—	1,238	2,518.1	—	—	14	10.5
2008	4040	4,121.5	—	—	1,327	5,005.5	—	—	137	113.6
2009	4044	4,616.4	—	—	1,599	6,556.4	—	—	27	60
2010	11,643	15,003.4	—	—	967	3,183.4	—	—	20	33.5
2011	20,202	26,759.6	—	—	436	1,030.1	—	—	3	3
2012	20,945	29,021.4	—	—	56	166.1	—	—	3	2
2013	24,409	27,277.8	—	—	1	1.01	—	—	1	0.5
2014	43,071	40,384.51	207	393	—	—	—	—	—	—
2015	64,812	82,587.33	996	5,024	83	19.6	59	17.2	—	—
2016	87,882	99,306.95	8	8	7	14.86	8	1	1	1
2017	138,404	144,057.59	0	0	15	12	0	0	0	0
2018	188,461	214,906.57	0	0	5	3.93	2,859	796.2	0	0
2019	237,654	181,394	—	—	—	—	3,891	4368	—	—
2020	274,029	195,564.6	—	—	—	—	6,366	4,532.3	—	—

Source: CFETS.