CHINA FINANCIAL MARKET DEVELOPMENT REPORT

2018

PBC Shanghai Head Office
China Financial Market Development Report Committee

中国金融出版社

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Chapter I Overview

In 2018, the momentum of world economic growth dwindled down, the development of international financial markets diverged, and the overall financial environment became tightened to some extent. Notwithstanding the complicated economic and financial environment with increasing domestic and international affecting factors, China's economic development was generally stable and remained relatively resilient. The financial market achieved broadly stable growth while making further progress, with market reform and innovation deepened, and its functions optimized in serving the real economy, including private businesses and micro and small enterprises (MSEs). Measures for further opening-up were implemented step by step, and the efforts to prevent and defuse financial market risks in a market-and law-based manner were well paid off. The financial market of China witnessed stable development.

1.1 The macro environment for financial market development in 2018

1.1.1 International economic and financial conditions

According to the International Monetary Fund (IMF), the global growth in 2018 is estimated at 3.7 percent, lower than 3.8 percent as in 2017, and the projected growth rates for 2019 and 2020 are revised downward to 3.5 percent and 3.6 percent respectively[①], showing a weakened global economic expansion. In 2018, global financial conditions were tightened, international financial market development diverged, and market fluctuations intensified.

1.1.1.1 Global growth demonstrated softer momentum and greater divergence

(1) Economic growth generally decelerated.

In 2018, the growth momentum of world economic weakened. Aside from the United States (U.S.) and a few other countries seeing a continuously increasing growth, a majority of economies witnessed economic slowdown. In 2018, the U.S. economy grew at a rate of 2.9 percent, and the seasonally adjusted annualized GDP growth rates for each quarter were 2.2 percent, 4.2 percent, 3.4 percent and 2.2 percent respectively. Economic growth in the Eurozone slowed down. In 2018, its real GDP growth grew by 2.0 percent, decelerating by 0.4 percentage

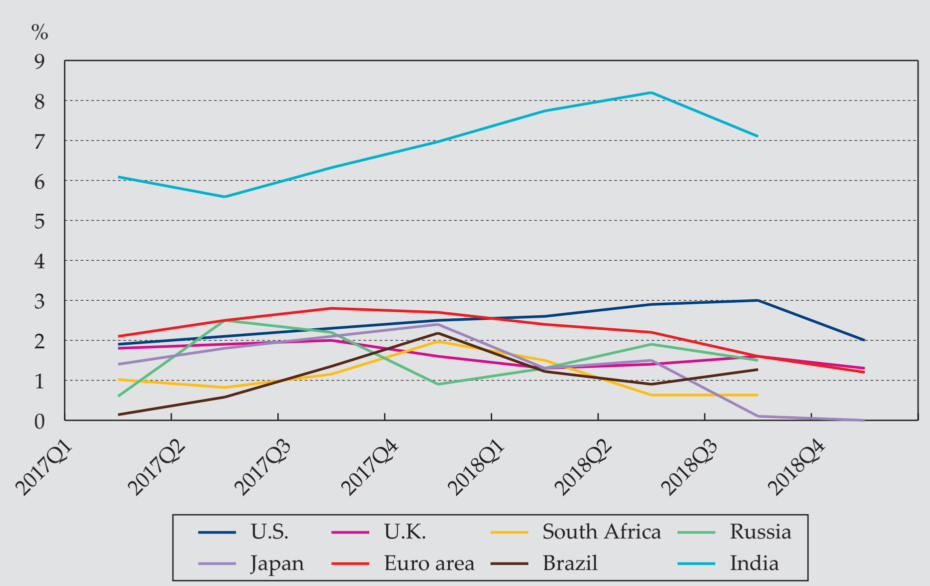
① Source: *World Economic Outlook*, IMF, January 2019.

point year on year. Real GDP in Japan grew by 0.7 percent, registering a significant fall of 1.6 percentage points compared with the previous year. Due to uncertainties arising from Brexit, the GDP growth in the United Kingdom (U.K.) decelerated by 0.3 percentage point from 2017, registering a record low since 2012. The economic growth of emerging markets and developing economies was greatly diverged. The overall GDP growth decelerated by 0.1 percentage point to 1.2 percent in Latin America and the Caribbean. The growth in South Africa was only 1.5 percent. Whereas, the Brazilian economy further rebounded, with its GDP growth rising from 1.0 percent in 2017 to 1.4 percent in 2018. In Russia, the GDP growth picked up slightly to 1.7 percent, up 0.2 percentage point year on year.

(2) Global trade growth fell down.

In 2018, as international trade frictions intensified, the growth of the global trade volume fell to 3.8 percent from 5.3 percent in 2017. In the first three quarters, the world exports of goods recorded a year-on-year growth of 14.3 percent, 12.7 percent and 8.4 percent respectively, demonstrating a continuous decline. After adjusting for price factors, the real exports of goods increased by 3.7 percent, 3.1 percent and 2.7 percent year on year respectively, down 1.1, 0.8 and 2.3 percentage points from the previous year. The Baltic Dry Index (BDI), a leading indicator of global trade activities, stood at 1,152 points at the beginning of the year, dropped to 1,055 points at end-March, then rose to 1,747 points at end-July, and finally plummeted to

Figure 1.1 Economic growth rates of major economies from 2017 to 2018



Note: The data are real GDP growth rates of major economies.
Source: Bloomberg.

1,231 points at year-end. Compared with the previous year, in the first three quarters of 2018, the exports and imports of goods in developing countries and regions rose by 5.06 percent, 2.38 percent, and 3.49 percent respectively, indicating a deceleration of 0.19, 3.14, and 3.42 percentage points. Specifically, the exports and imports of goods in Asia grew by 4.64 percent, 3.02 percent, and 3.86 percent year on year respectively, decelerating by 2.38, 2.94, and 3.05 percentage points from the previous year.

(3) Global direct investment dropped markedly. In 2018, the total inflow of foreign direct investment (FDI) stood at USD 1.43 trillion, registering a year-on-year decrease of 23 percent. Specifically, FDI inflow to developed economies was only USD 712.9 billion, decreasing by 37 percent from the previous year. And that to developing economies amounted roughly to USD 670.7 billion, among which USD 136.3 billion were attracted to China, and USD 39.9 billion to India, rising 1.9 percent and falling 9.5 percent year on year respectively. In terms of outbound direct investment (ODI), the European Union (EU) contributed USD 435.7 billion of overseas investment, a decrease of 3.8 percent year on year; Japan invested USD 160.4 billion overseas, an increase of 10.5 percent year on year; the outbound investment of the U.S. posted USD 342.3 billion, up 21.7 percent year on year; and the total ODI made by Asian developing economies slid by 9 percent to USD 350.1 billion.

(4) International oil price fluctuated significantly, and commodity price declined continuously.
In 2018, the international oil price measured by the U.S. West Texas Intermediate (WTI) fluctuated significantly, surging from USD 60.37 per barrel at the beginning of the year to USD 71.84 on May 23rd, and reached USD 74.14 on July 3rd; but after that, the price tumbled to USD 45.41 at year-end. The Bloomberg Commodity Index, after rising from 88.1647 at early-2018 to 91.5724 on May 23th amidst fluctuations, plummeted all the way down to 76.7154 at year-end. As for food prices, according to the data released by the Food and Agriculture Organization (FAO) of the United Nations, the FAO Food Price Index averaged 168.4 points in 2018, down around 3.5 percent from that of 2017. In respect of nonferrous metals, at the end of 2018, London Metal Exchange (LME) grade-A copper price closed at USD 5,965 per ton, a year-on-year decline of 17.2 percent; aluminum alloy price closed at USD 1,410 per ton, a year-on-year decline of 21.9 percent; zinc, lead and nickel prices closed at USD 2,467 per ton, USD 2,021 per ton, and USD 10,690 per ton respectively, a year-on-year decline of 26.1 percent, 18.7 percent and 15.9 percent. Prices of precious metal in the international market experienced slight fluctuations. Fixing price of spot gold registered USD 1,281.65 per ounce at end-2018, down 1.15 percent from end-2017.

1.1.1.2 Growth of international financial markets diverged

(1) Major developed economies tightened their monetary policies moderately.
In 2018, the new round of economic recovery peaked for the U. S. , and the growth of inflation slowed. The U.S. Federal Reserve (Fed) hiked

interest rates four times this year, and kept reducing its balance sheet by USD 50 billion per month. In December 2018, the European Central Bank (ECB) ended its quantitative easing (QE) program implemented since 2015, officially announcing the end of the program. The Bank of England (BOE) increased Bank Rate for the second time since the 2008 financial crisis; the Bank of Canada (BOC) hiked rates three times within the year; while the Bank of Japan (BOJ) kept its short-term rate target unchanged.

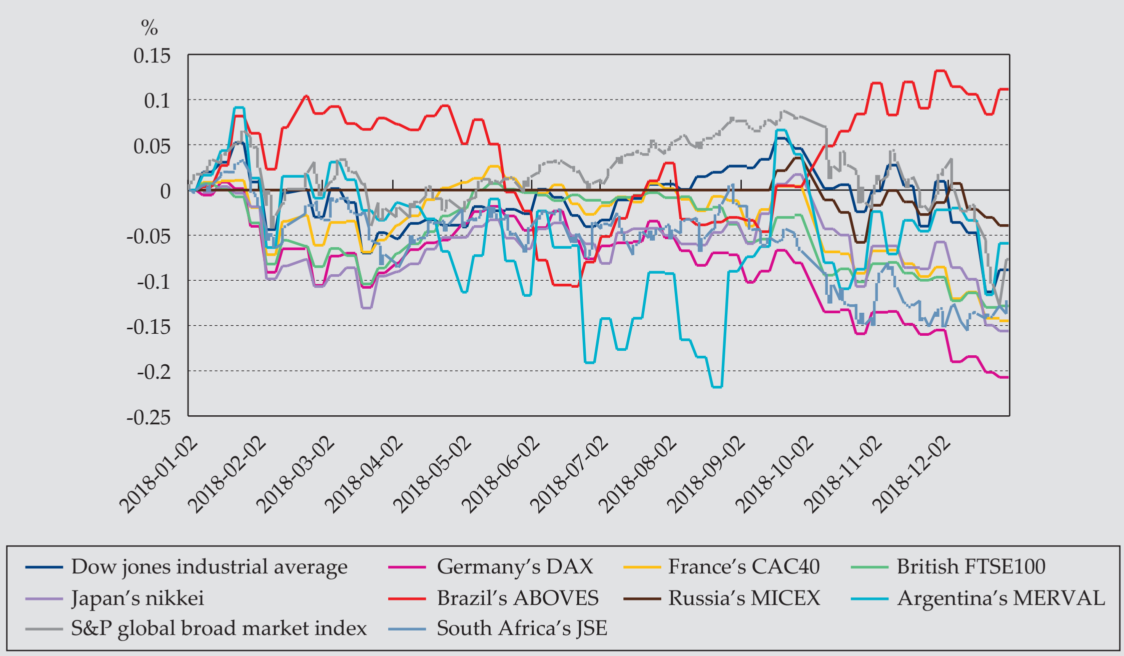
(2) Stock markets of most countries tumbled with fluctuations.

The S&P Global Broad Market Index, which included the majority of stocks in 48 countries, first rose to 2,839.21 points at the beginning of the year before rapidly plunging to 2,581 points, then gradually climbed up to 2,930 points on September 20th amidst fluctuations, and finally closed at 2,485.74 points. The stock markets in Germany, France, the U.K., Japan, and South Africa slumped by 20.7 percent, 14.5 percent, 12.8 percent, 15.6 percent, and 12.2 percent respectively. In the U.S., Russia and Argentina, the stock markets also experienced slight fall, down 8.8 percent, 3.9 percent, and 5.9 percent respectively. In particular, the stock market in Brazil, following a serious downfall in mid-2018, rebounded strongly and closed at 87,887.26 points, registering a rally of 11.15 percent.

(3) The yields on treasury bonds of major economies went up.

In 2018, the international bond market remained generally stable. The yield on U.S. 10-

Figure 1.2 Movements of stock indices in major economies in 2018



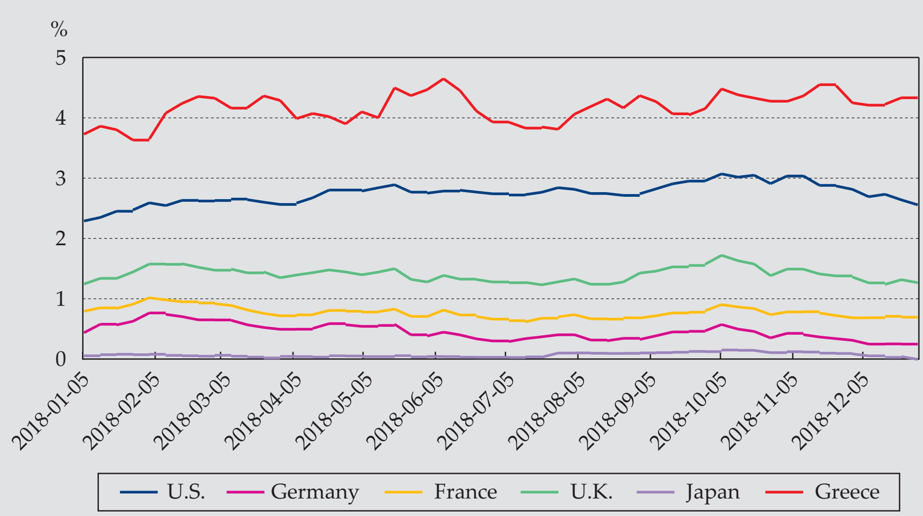
Source: Bloomberg.

year treasury bond rose from 2.29 percent at the beginning of the year to 3.07 percent on October 5th, and then settled at 2.556 percent, registering an overall rally of 11.6 percent. German 10-year treasury bond yield remained generally stable while falling back a little, and closed at 0.239 percent. The yield on French 10-year treasury bond recorded a similar trend as that of Germany, and closed at 0.705 percent. In the U.K., the 10-year treasury bond yield, closing at 1.226 percent and up 1.8 percent from the beginning of the year, demonstrated a generally stable performance. After BOJ proposed to keep the yield on its 10-year treasury bond at the level of 0 percent, the rate decreased back to negative at year-end and closed at -0.05 percent.

(4) The USD appreciated substantially, while the other major currencies depreciated to varying degrees.

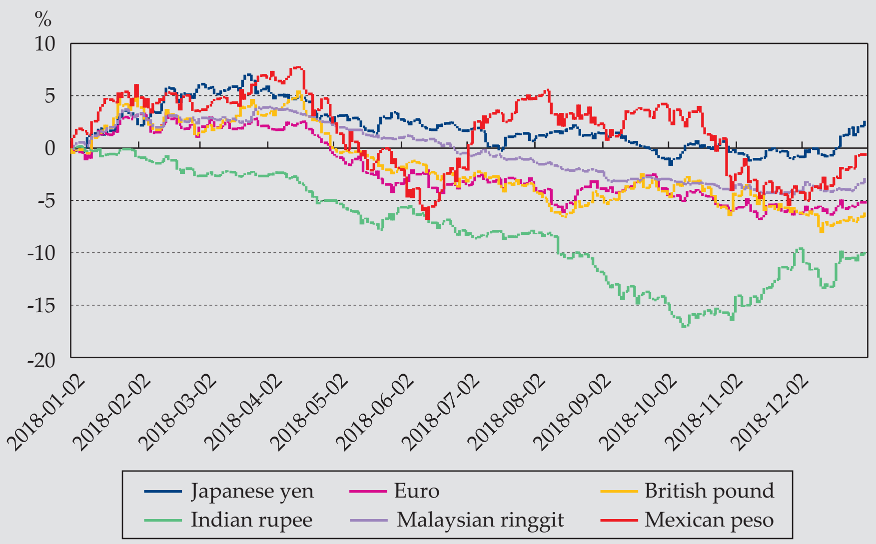
At end-2018, USD index closed at 96.07, an increase of 4.14 percent over the year and a significant rally compared with the downfall of 9.89 percent in 2017. Except for the Japanese yen which appreciated by 2.6 percent, the other major currencies all weakened against the USD. The exchange rates of EUR/USD and GBP/USD depreciated by 5.13 percent and 6.15 percent respectively throughout the year. Currencies of most emerging markets and developing countries also experienced depreciation. Indian rupee, Malaysian ringgit, and Mexican peso depreciated by 9.9 percent, 2.8 percent and 0.6 percent respectively against the USD; Brazilian real, Russian ruble, and South African rand devalued sharply by 19 percent, 20.6 percent and 15.1 percent respectively; Argentine peso and Turkish lira witnessed even more dramatic devaluations by 104.4 percent and 40.4 percent respectively.

Figure 1.3 Movements of 10-year treasury bond yields in major advanced economies in 2018



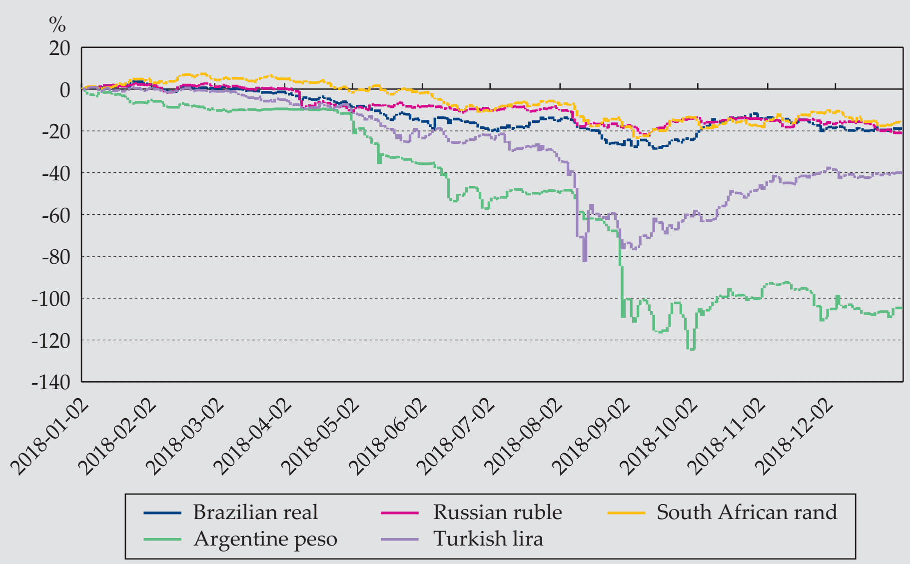
Source: Bloomberg.

Figure 1.4a Movements of major currencies in 2018



Note: The beginning of 2018 as the base .
Source: Bloomberg.

Figure 1.4b Movements of major currencies in 2018



Source: Bloomberg.

1.1.2 Domestic economic and financial conditions

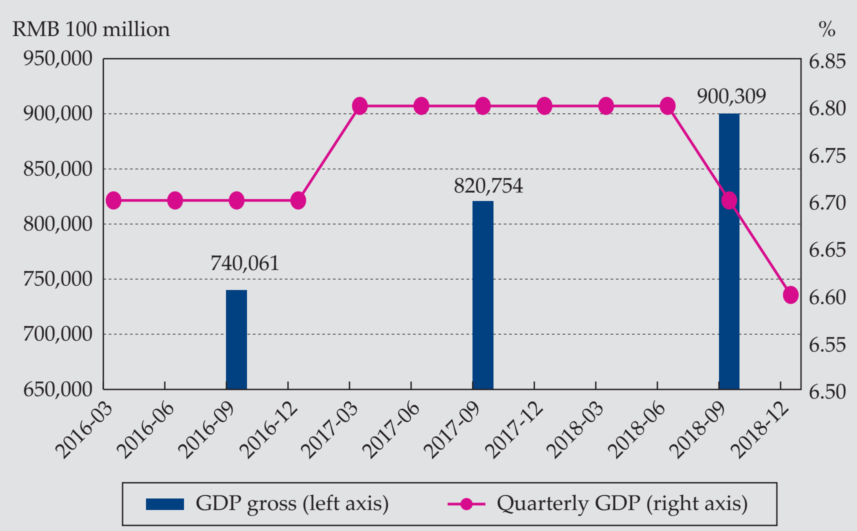
In 2018, China's economy performed within a reasonable range, economic growth maintaining generally stable along with improvements. The GDP posted a growth of 6.6 percent year on year, above the official target of around 6.5 percent. The prudent and neutral monetary policy was continued, the opening-up of the financial industry gained new achievements, and the mechanism for financial regulatory coordination was further strengthened, which all helped secure a stable and appropriate domestic financial environment.

1.1.2.1 The national economy achieved stable performance on the whole, and economic growth remained resilient

(1) The economy achieved generally stable growth while making further progress.

After exceeding RMB 80 trillion in 2017, China's GDP increased nearly RMB 8 trillion and stepped onto a new stage of over RMB 90 trillion in 2018. The CPI edged up 2.1 percent year on year, lower than the expected growth of around 3 percent. A total of 13.61 million urban jobs were created, an increase of 100,000 from the previous year, marking the 6th consecutive year of creating more than 13 million urban jobs, and surpassing the year's target by 23.7 percent. The surveyed urban unemployment rate ranged from 4.8 percent to 5.1 percent all year round, an indication that the official target of keeping the rate lower than 5.5 percent was well met. In 2018, national per capita disposable income stood at RMB 28,228, a nominal growth of 8.7 percent from the previous year, and 6.5 percent after adjusted for price factors, which outpaced per capita GDP growth. The total export-import volume of trade in goods amounted to RMB 30.505 trillion, passing the RMB 30 trillion mark.

Figure 1.5 China's quarterly GDP growth and annual volume from 2016 to 2018



Source: CEIC data.

(2) The economic structure kept optimizing.

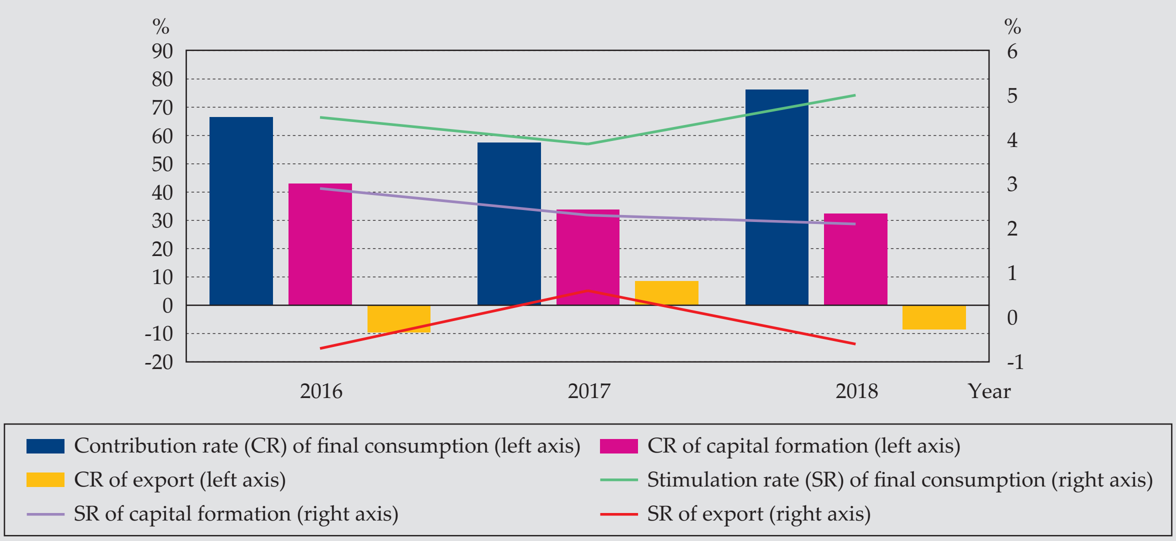
In 2018, goods for consumption upgrading kept a rapid growth, the contribution of final consumption to economic growth reached 76.2 percent, up 18.6 percentage points from the previous year, and 43.8 percentage points higher than the contribution of gross capital formation. The leading role of consumption in driving economic growth became more prominent. During the year, the internal structure of fixed-asset investment was greatly optimized, with private investment rising 8.7 percent year on year, an acceleration of 2.7 percentage points from 2017. Investment in the manufacturing sector increased by 9.5 percent year on year, an acceleration of 4.7 percentage points from the previous year. In particular, investment in the high-tech manufacturing sector and equipment manufacturing sector surged by 16.1 percent and 11.1 percent respectively. The added value of statistically large enterprises grew at a slower but stable rate; and for the high-tech manufacturing sector, strategically emerging sector, and equipment manufacturing sector, their added values grew faster than average at a rate of 5.5, 2.7, and 1.9 percentage points. China's secondary industry was upgrading towards the medium-high end. As to the tertiary industry, the industrial production index increased fast by 7.7 percent from 2017, and its contribution to the GDP growth reached 52.2 percent, well playing the role of a "stabilizer" in China's economic development.

1.1.2.2 The financial environment remained stable, and the financial industry operated soundly

(1) Money supply increased stably and RMB loans continued to grow rapidly.

At end-December 2018, outstanding broad

Figure 1.6 Contribution rate and stimulation rate of three major demands to economic growth from 2016 to 2018



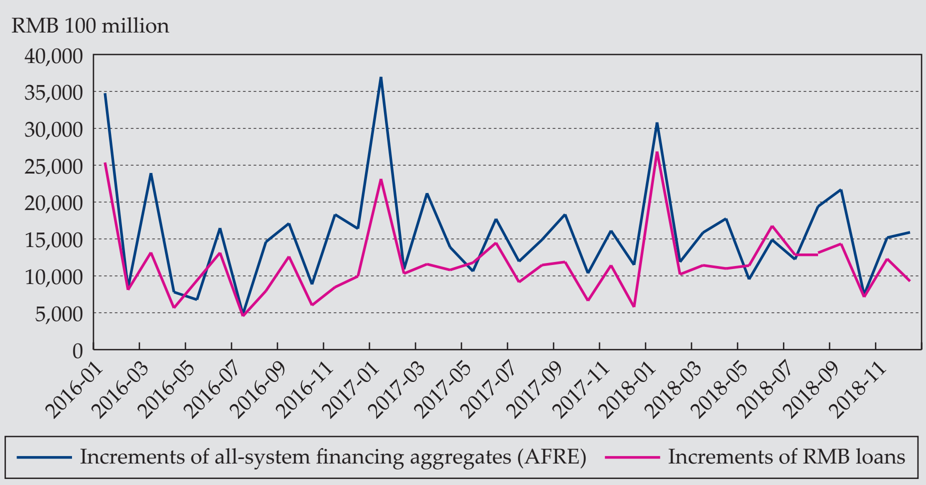
Source: National Bureau of Statistics.

money supply (M2) posted RMB 182.67 trillion, up 8.1 percent year on year. Outstanding RMB loans stood at RMB 136.3 trillion, up 13.5 percent year on year, 0.8 percentage point higher compared to the growth in 2017. The loans granted by financial institutions maintained a relatively rapid growth. In 2018, incremental all-system financing aggregates reached RMB 19.26 trillion. In particular, RMB loans to the real economy increased RMB 15.67 trillion, RMB 1.83 trillion more than the increase in 2017, accounting for 81.4 percent of the incremental all-system financing aggregates in the corresponding period, up 19.6 percentage points from the ratio in 2017; the net financing of corporate bonds amounted to RMB 2.48 trillion, up RMB 2.03 trillion year on year. In December alone, the incremental all-system financing aggregates stood at RMB 1.59 trillion, up RMB 3.3 billion year on year.

(2) Performance of the financial industry was generally stable, and its total asset grew steadily.

With relatively sufficient capability in risk compensation, the banking sector kept growing. By the end of 2018, outstanding RMB and foreign currency assets of China's banking financial institutions totaled RMB 268.24 trillion, up 6.27 percent year on year; outstanding RMB and foreign currency liabilities reached RMB 246.58 trillion, up 5.89 percent year on year. Outstanding non-performing loans (NPL) amounted to RMB 2.03 trillion, and the NPL ratio was 1.83 percent, slightly higher than the ratio 1.74 percent at end-2017. Outstanding balance of loan loss provisions stood at RMB 3.77 trillion, with a provision coverage of 186.31 percent and provision coverage for loans at 3.41 percent, while the capital adequacy ratio registered 14.2 percent. The liquidity ratio of

Figure 1.7 Incremental all-system financing aggregates from 2016 to 2018



Source: Website of the People's Bank of China.

commercial banks posted 55.31 percent, and the excess reserve ratio of RMB was 2.64 percent. All indicators proved better than those in 2017.

The assets of securities institutions remained stable, while profitability kept on declining. As of December 31st, 2018, assets of the 131 securities companies totaled RMB 6.26 trillion, net assets totalling RMB 1.89 trillion, and net capital RMB 1.57 trillion. In 2018, the total operating revenues and net profit posted RMB 266.287 billion and RMB 66.62 billion respectively. With only 106 companies making profit, the profitability of the sector further decreased.

In the insurance industry, growth of the premium income slightly slowed down, while that of the total assets remained steady. In 2018, the cumulative premium income of the insurance industry added up to RMB 3,801.663 billion, up 3.92 percent year on year, slower than the growth in 2017. The cumulative payments on claims and benefits reached RMB 1,229.787 billion, rising by 9.99 percent year on year, higher than the growth in 2017. The outstanding assets totaled RMB 18,330.892 billion, up 9.45 percent year on year, roughly flat with the growth in 2017. Outstanding investment stood at RMB 13,972.488 billion, down 6.35 percent year on year.

1.1.2.3 The financial macro regulation mechanism was improved

On July 2nd, 2018, the new Financial Stability and Development Committee (FSDC) of the State Council was established. At the first conference, the members reviewed a 3-year action plan for forestalling and defusing major financial risks, and studied key works including promoting financial reform and opening-up, continuing with the prudent and neutral monetary policy, keeping liquidity at reasonable and adequate levels, maintaining proper strength and pace of regulation, and bringing the market to better play its decisive role in resource allocation. On August 3rd, the second FSDC meeting was convened. It was stressed at the meeting that, in response to the difficulties and high costs of financing distressing the real economy, it's essential that the monetary policy transmission mechanism be smoothed, and the financial market's capability in serving the real economy enhanced. At the third FSDC meeting held on September 7th, the committee required that the financial system proactively implement the prudent and neutral monetary policy, and conduct well-timed preemptive adjustment and fine-tuning in a moderate way in light of Changing circumstances, so as to keep liquidity at reasonable and adequate levels. In August and October, the FSDC held two special meetings on preventing and defusing financial risks. The establishment of the FSDC propelled effective implementation of policies and arrangements made by the Party Central Committee and the State Council. Under the leadership of the FSDC, a unified and coordinated financial regulatory mechanism was put in place to coordinate all major issues concerning financial and economic policies. This mechanism strengthened the capability to respond to financial risks at home and abroad, safeguard financial stability, and promote the long-term and healthy development of China's economic and financial systems.

On March 17th , 2018, the First Plenary Session of the 13th National People's Congress voted "Institutional Reform Plan of the State Council" into effect, announcing to merge functions of China Banking Regulatory Commission (CBRC) and China Insurance Regulatory Commission (CIRC) and replace the two commissions with China Banking and Insurance Regulatory Commission (CBIRC). Hence, the financial regulatory framework of "One Bank and Three Commissions", namely the People's Bank of China (PBC), CBRC, CIRC, and CSRC, was reshuffled into "One Committee, One Bank and Two Commissions". Additionally, financial regulation reforms at the local level were deepened, with regional financial supervision and administration bureaus established nationwide to optimize the deliberation and coordination mechanism for financial issues. So far, a comprehensive and integrated financial regulation network has been formed, and the modern financial regulatory system further improved.

1.1.2.4 Financial macro adjustment became more forward-looking and targeted

In 2018, the PBC continued with the prudent and neutral monetary policy, strengthened targeted and range-based adjustment proactively, employed various policy instruments flexibly, and stepped up efforts to make forward-looking judgments on situations and take preemptive adjustment and fine-tuning measures when necessary. During the year, the PBC lowered the reserve requirement ratio (RRR) for four times, ensured the increase in Medium-term Lending Facility (MLF) loans, introduced Targeted Medium-term Lending Facility (TMLF), and raised the quotas on central-bank lending and central-bank discounts for three times, so as to keep liquidity in the banking system reasonably adequate, and effectively offset the weakening of credit growth. The PBC brought into full play the role of macro-prudential assessment (MPA) in counter-cyclical adjustment and structural guidance, adjusted relevant parameters in an appropriate way, and led financial institutions to increase credit extension at a better pace and for a better structure through window guidance, so as to maintain financial support for the real economy. The PBC also expanded the qualified collateral scope for central bank lending and central bank discounts, bolstered financial support for MSEs and private businesses, and encouraged financial institutions to support market- and law-based debt-for-equity swaps. Several provinces, autonomous regions and municipalities were selected as pilot regions to optimize the use of the pricing mechanism of central bank lending for poverty-alleviation. A series of effective measures were adopted to foster a favorable monetary and financial environment for the supply-side structural reform and high-quality development. Besides, the PBC adjusted the foreign-exchange risk reserve ratio of forward foreign exchange settlement and sale businesses, and reintroduced the "counter-cyclical factors" as part of the pricing mechanism of the RMB's central parity rate, which further enhanced the regulatory framework underpinned by the two pillars of monetary policy and macroprudential policy, stabilized market expectations, and ensured sound operation of not only the foreign exchange market, but also the financial market at large.

1.1.2.5 Regulatory policies were promulgated intensively to forestall financial market risks

The major regulatory policies issued in 2018 covered the regulation of asset management businesses, the banking sector, and the securities sector. The intensive issuance of these regulatory policies facilitated the setting-up of the institutional policy framework for relevant sectors, markets and businesses.

In terms of asset management businesses, in April 2018, the PBC, CBIRC, CSRC, and the State Administration of Foreign Exchange (SAFE) jointly issued the *Guidelines on Regulating Asset Management Services of Financial Institutions* to unify regulatory standards for similar asset management products; in July 2018, the PBC released the *Notice on Further Clarifying Issues Concerning the Guidelines on Regulating Asset Management Services of Financial Institutions* to specify the investment range of public offering asset management products, the valuation method for asset management products, and macro-prudential policy arrangements in the transition period; then in November 2018, the PBC, together with CBIRC, CSRC, and SAFE, introduced the *Statistical System for Financial Institutions' Asset Management Products* and *Statistical Format for Financial Institutions' Asset Management Products*, in a bid to provide data support for preventing and defusing systemic financial risks, and enhance the financial market's capacity to serve the real economy.

In terms of the banking and securities sectors, during the year, targeting financing guarantee companies, private lending, wealth management businesses of commercial banks, commercial banks' subsidiaries engaging in wealth management businesses, and off-site non-licensed entities of banking financial institutions, CBIRC and other departments concerned adopted a series policies and measures to further regulate relevant financial behaviors and the market order. In 2018, CSRC continued its effort in reforming the system of stock issuance and corporate listing, enhancing the inclusiveness and adaptability of the system, promoting the construction of a multi-tiered capital market, deepening the reform of the National Equities Exchange and Quotations (NEEQ), facilitating the regulated development of regional equity markets, as well as guiding sound development of the futures and derivatives markets.

Under the coordination and cooperation of the PBC, CBIRC, CSRC, SAFE and other financial regulation authorities, financial risks were well managed. It was mainly reflected in the following five aspects: (1) the momentum of a surging macro leverage ratio was restrained; (2) the sprawl of shadow banking was put under control; (3) financial order saw preliminary improvement; (4) the piling-up of implicit local government debts was curbed; and (5) the resilience of the financial market enhanced markedly. In 2018, in response to external shocks in implementing macro monetary and financial policies, and in order to forestall financial market risks, under the leadership of the FSDC of the State Council, the financial regulators strengthened market expectation guidance, and effectively formulated counter-measures with special notice of the potential transmission of financial risks among different markets such as the bond market, the foreign exchange market, and the stock market.

1.2 Main features of China's financial market performance in 2018

In 2018, China's financial market achieved generally stable growth while making further progress. Market reforms and innovations were pushed forward; the role of market in resource allocation was brought into play; and market capacity of targetedly serving the real economy was enhanced. Measures to further open up financial market were executed effectively and opening-up of the market continued to enhance. Great achievements were obtained in preventing and defusing major risks with market-based and law-based approaches, which laid a solid basis for the market's long-term and healthy development.

1.2.1 The size of the financial market grew continuously, and the financing capacity of the bond market enhanced markedly

In 2018, the size of the financial market expanded steadily. Money market maintained a stable growth, with the trading volume of interbank lending surging by 76 percent, that of acceptance bills rising steadily by 25 percent, and that of bond repo and interbank Negotiable Certificates of Deposit (NCD) also achieving sound growth. The stock volume in the bond market ranked third worldwide. Green bonds dominated the world market in terms of volume, and the amount of corporate credit bonds issued jumped by 33 percent. The net financing volume of corporate bond greatly increased, accounting for 13 percent of the incremental all-system financing aggregates. The bond market ranked second only to the credit market, to become the second largest financing channel for the enterprises. In the secondary bond market, the trading volume grew substantially by 45 percent, with market liquidity greatly improved. In the stock market, as the financing structure continued to optimize, the issuance of rights offering, preferred stocks and convertible bonds all increased. The turnover in the foreign exchange market grew steadily, as the trading volume of foreign currency pair transactions in the interbank market increased by over half. While the domestic and overseas gold market were somewhat imbalanced, China still retained its position of the world's second largest floor trader of gold. In the derivatives market, due to the continuous improvement of product structure and the diversification of tools for exchange rate risk management, the interest rate derivatives market obtained a high growth of 50 percent.

In 2018, the types and numbers of financial market participants continued to increase. A total of 165 institutional members and one overseas RMB clearing bank newly joined in the interbank lending market. In the interbank bond market, the number of all kinds of participants totaled 25,000 in 2018, the volume of investors kept expanding, and the scale of bonds held by overseas investors surged by 47 percent year on year. The percentage of domestic institutional investors and overseas investors in the stock market also augmented, demonstrating a significant optimization of the investor structure. The gold market newly attracted 74 overseas participants onto its international board, which further internationalized its participant composition.

In 2018, price fluctuations in the financial market intensified, and market correlation grew stronger. The overall interest rates in the money market generally edged down amidst increased volatility. The monthly weighted average interest rates of interbank lending, pledged repo, and bill discounts moved down 18bps, 26bps and 30bps respectively from 2017. The changes of interest rates in different markets showed greater synchronism, and these transactions featured a trend of short maturity in terms of the maturity structure. The price index of bonds rose with fluctuations, and the yield curve of bonds moved downwards, both demonstrating greater volatility than that in the previous year. The stock market also witnessed increased fluctuations, and the stock indices showed a downward trend. In particular, the Shanghai Stock Exchange (SSE) Composite Index experienced a change above 1 percent for as many as 82 days, 70 days more than the previous year. The RMB exchange rate index fell after a rise, as counter-cyclical adjustment policies helped stabilize expectations in the foreign exchange market. In the gold market, gold prices picked up moderately, and the spread between domestic and overseas spot gold prices decreased. Not only the linkage among financial sub-markets was strengthened, but also the correlation and interaction between the domestic and international financial markets intensified.

1.2.2 Reform and innovation were pushed forward step by step, and the quality and efficiency of serving the real economy improved

In 2018, efforts to reform and build up the financial market were accelerated. The night session was newly introduced into the interbank lending market; the bill trading system was upgraded to integrate the e-bill with the paper bill system; and tri-party repos were incorporated into the bond market. With the official launching of the CFETS-BOC Traded Bond Index, interbank bond index products got off to a good start. Local government bonds were included in the categories of over-the-counter (OTC) bond businesses; the pilots for financial bond and local government bond issuance by flexible tendering were launched; and trust companies were approved to act as underwriters of bond financing instruments for non-financial enterprises. In the stock market, the stocks trading suspension and resumption system for listed companies became more regulated, and the stock repurchase and withdrawal system was improved, which enhanced the quality of listed companies, and perfected the built-in stabilization mechanism of the capital market. As to the gold market, the listing of China Panda Gold Coins on the Shanghai Gold Exchange further enriched investment categories, while the formulation of rules on online gold businesses, gold accumulation operations, and gold asset management businesses contributed to system construction. The launching of the new-generation foreign exchange trading platform bolstered trading efficiency, and well conformed to the development trends of an increasingly liquid foreign exchange market. In the futures market, the categories of commodity futures expanded to 50, covering more areas in serving industries than before. The listing of 2-year treasury bond futures marked the full coverage of short-, medium-, and long-term treasury bonds in the futures market. All financial innovations and reforms were advanced step by step, and market mechanisms were further optimized, bolstering steady development of the financial market.

In 2018, the financial market stepped up efforts in serving the real economy with precision. In the bond market, to alleviate private businesses and MSEs from the mounting pressure of risk appetite weakening, and to increase support for their financing, supporting instruments of bond financing were devised. The banking financial institutions issued a total of RMB 10.8 billion worth of securities backed by MSE loans, 15.4 times that of the volume in 2017. During the year, MSEs issued a total of RMB 124.5 billion worth of financial bonds, 11.3 times that of 2017. After three times of quota increase, RMB 200 billion worth of central bank discount was put in place, pushing the outstanding bill financing up 48.67 percent year on year. A myriad of products and services, including innovative bill-management products in the supply chain sector, online bill discount services, and special discount offering, were introduced to bolster the capability of the bill market in serving the real economy. Comprehensive measures, including targeted RRR cuts, expansion of acceptable MLF collaterals, and introduction of TMLF, were taken to guide capital flow from financial institutions to private businesses and MSEs. Insurance assets management enterprises launched special products to meet the long-term financing needs of private businesses. To intensify financial support for the structural adjustment and transformation of high-tech enterprises, emerging industries, as well as the manufacturing sector, innovation-oriented enterprises were encouraged to issue depository receipts (DR) and stocks in the domestic stock market on a pilot basis.

1.2.3 Opening-up of the financial market was steadily advanced, and the level of openness continued to increase

In 2018, as measures to promote opening-up of the financial market were further implemented, international cooperation kept strengthening. In the bond market, the administration rules on Panda Bond issuance were promulgated; registration requirements for overseas investors to enter the interbank bond market were streamlined; and detailed provisions on the opening-up of credit rating businesses in the interbank bond market were executed to attract foreign-funded rating agencies. Services supporting transactions through the Bond Connect were improved in all aspects, and the first asset-backed note was issued through Bond Connect. Overseas institutions, for the first time, participated in local government bond distribution. Tax preferential policies facilitating overseas institutions' investment in the domestic bond market were formulated, and the preparation for international cooperation on the trading platform of the international financial market was completed. Both the depth and width of overseas institutions' participation in the bond market was enhanced. With the inclusion of China's policy bank bonds and treasury bonds in the Bloomberg Barclays Global Aggregate Index, RMB-denominated bonds will become the fourth largest currency component following the USD, euro and Japanese yen. The pilot launching of several bonds for the Belt and Road Initiative (BRI) by exchanges vigorously promoted the market's financing to countries along the Belt and Road. RMB 20 billion worth of central bank bills was issued successfully in Hong Kong, and the issuance of RMB 4 billion worth of the "Lotus Bond" in the Macao market not only marked the first offshore RMB bond issued in the region, but also impressed the market with widespread recognition and active subscription. In the stock market, the daily quota of the Shanghai-Hong Kong Bond Connect was raised, and the interconnection mechanism for the stock markets of Mainland China and Hong Kong was optimized. The unveiling of a string of policies supporting DR businesses between SSE and London Stock Exchange (LSE), the release of detailed rules on the full circulation pilot program in the H-share market, and the official inclusion of A-share stocks into the Morgan Stanley Capital International (MSCI) Emerging Markets Index and global benchmark index all demonstrated significant progress made in capital market opening-up in the new era. In the foreign exchange market, the central counterparty clearing of cross-border spot foreign exchange transactions was officially introduced. Overseas institutions' participation in the regional trading in the interbank foreign exchange market greatly enhanced the efficiency of bilateral settlement in local currencies. In the gold market, the influence of Shanghai Gold futures continued to expand, which bolstered China's in-depth cooperation with countries worldwide, especially those along the Belt and Road. In the futures market, crude oil futures denominated in RMB were officially listed for trading, and overseas investors have already been attracted to several listed futures, indicating proactive internationalization of the commodity futures market.

In 2018, the opening-up of the financial industry made significant headway. The market access standards for domestic and foreign banks were unified, the legal basis for foreign corporate banks to conduct equity investment in banking financial institutions was clarified, and the cap on foreign ownership of domestic banks and asset management companies was removed, thus treating domestic and foreign capital equally in terms of equity ownership. Foreign investors were allowed to take controlling shares of joint-funded securities companies and domestic futures companies. Restrictions on the business scope of joint-funded securities companies and foreign-invested insurance brokerage companies were lifted. The first foreign-invested insurance holding company was founded, and securities fund management institutions were encouraged to "go global" in an orderly fashion. The degree of openness of the financial industry was enormously elevated.

1.2.4 With stronger market- and law-based approaches, efforts to prevent and defuse major financial risks were paid off

In 2018, preventing financial market risks with market-and law-based approaches achieved positive results. Implicit repayment guarantees in the bond market were cancelled step by step, the mechanism for transferring defaulted bonds upon maturity was introduced, and in the market- and law-based principle, the bond default risk disposal mechanism continuously improved and strengthened. Centralized clearing of credit default swaps and services supporting to transfer defaulted bonds upon maturity further enriched market-based risk management tools. Supervision and management rules on the duration of green bonds and asset-backed securities (ABS) were released to better supervise capital usage in the duration of these bonds. Information disclosure in the bond market and unified management of credit rating were advanced. A unified law enforcement mechanism was also set up to reinforce law enforcement, and enhance regulation efficiency and deterrence against violations of laws and regulations in the bond market. Fintech regulation was intensified in the securities market, in a bid to boost regulation efficiency at the first-line of trade, strengthen real-time monitoring of abnormal transactions, reinforce management of accounts under key monitoring, and crack down on market trading behaviors in violation of laws and regulations. *Notice on the Management of Short-Term Financing Bonds of Securities Companies* was issued to guide securities companies to scale up liquidity risk management capacity. *Measures on Stock Pledged Repo Transactions and Registration and Settlement Businesses* was drafted to prevent and control risks arising out of stock pledged repo businesses. Internet sales and redemption services of the money market funds were also regulated, with an aim to forestall relevant risks and safeguard sound development of the money market. And to guard against bill market risks, prudential regulation of inter-provincial bill businesses of banking financial institutions became tightened.

In 2018, regulation of the financial market was continuously strengthened, and efforts to prevent financial risks in key areas were implemented earnestly. The financial market continued to serve the supply-side reform, and steadily advance structural deleveraging. Efforts were intensified in shoring up the weak spots of the financial regulatory system. Unified regulatory standards on asset management businesses of financial institutions and specific rules on asset management businesses of different types of institutions were issued, which ensured long-term and sound development of the business. Steady progress was made in the special program on addressing Internet financial risks, and serious punishments were imposed on illegal financial activities. As a result, the overall risk level of Internet finance has decreased significantly. Regulatory policies for systemically important financial institutions, and guidelines on strengthening supervision on investments in financial institutions by non-financial enterprises were issued. The management of local government special bonds were improved by clarifying regulatory responsibility of the government in the locality, optimizing the market restraint mechanism and enhancing the capability in managing local government debts, thus keeping a tight control of relevant risks. Requirements for commercial banks on liquidity risk management were further intensified, and those on large risk exposure were specified. The capacity in risk monitoring and response was bolstered, so as to effectively guard against systemic risks and financial risks in major areas.

1.3 Outlook of China's financial market development in 2019

Looking into 2019, the development of the financial market will follow the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, fully implement the spirits of the 19th National Congress of the Communist Party of China (CPC), the Second and the Third Plenary Sessions of the 19th CPC Central Committee as well as the Central Economic Work Conference, adhere to the principle of pursuing progress while ensuring stability, remain committed to the new development philosophy for high-quality development, continue to pursue supply-side structural reform as the main task, make the financial better serve the real economy, deepen market reform and opening-up, step up efforts in innovative development, continue fighting the tough battle of preventing and defusing major risks, and promote the long-term and sound development of the financial market.

1.3.1 Efforts to serve the real economy will be further strengthened

We will enable the market to fully play its role in resource allocation, thus supporting high-quality development of the Chinese economy. Financial services supporting the structural adjustment and transformation of high-tech enterprises, emerging industries, as well as the manufacturing sector will be strengthened. The ChiNext board and the NEEQ market will be further reformed, while policies on the science and technology innovation board and the pilot on the IPO registration system will be implemented in a faster pace, in order to support enterprises to make full use of the functions of the financial market and to expand channels of direct financing. In adherence to the market- and law-based principle, financial support for private businesses and MSEs will be further enhanced. The support instruments of both bond and equity financing for private businesses will be promoted. Comprehensive measures will be taken to keep the financing costs of private businesses at a reasonable level, so as to foster a virtuous cycle that invigorates private businesses and optimizes resource allocation. The financial market will continue to support the implementation of significant national strategies, promote the development of financial inclusion, step up supports for weak areas in the national economy, provide financial services for rural vitalization, contribute to winning the battle of targeted poverty reduction and the battle of pollution prevention and treatment, and enhance its capability in offering targeted services to the real economy.

1.3.2 Financial market innovation and development will advance in an orderly way

Oriented at serving the real economy, the innovation in and the building of the financial market will pick up speed. Continuous efforts will be made in institutional innovation, product innovation and regulated development, in a bid to enhance both market depth and width, attract more medium to long-term capital into the capital market, and thus improve the multi-tiered capital market framework. Functions of the derivatives market will be enriched, and institutional arrangements and regulation approaches of the market will be optimized, thus stimulating the market vitality, quickening pace in establishing a multi-tiered and differentiated financial market support system featuring a wide coverage, and finally boosting sound economic and financial development. Coordinated management and financial infrastructure inter-connectivity will be reinforced. Efforts will also be made in the coordination and integration of institutional arrangements for the market, aiming at helping market entities increase the self-restraint and self-administration capacities, and increasing the efficiency and security of market operations.

1.3.3 Opening-up of the financial market will be pushed forward

We will remain steadfast in promoting financial opening-up, and committed in implementing relevant policy arrangements. In accordance with the situations of international economic and financial development and in response to the strategic needs of domestic financial market development, new policies for financial opening-up will also be devised. Overseas institutional investors will be encouraged to invest in China's bond market, and to finance in China's financial market. Efforts will also be made to advance coordinated management of financial infrastructures, strengthen international cooperation on market infrastructures, and optimize and innovate the inter-connectivity mechanism for domestic and overseas financial markets, thus creating a more effective and favorable market environment for both overseas and domestic market players. Endeavors will be taken to advance in-depth cooperation with overseas financial markets, promote in-depth execution of all financial services bolstering the Belt and Road Initiative and other national strategies, enhance the influence and competitiveness of China's financial market, and make new grounds in opening the market up.

1.3.4 Continuous efforts will be made in preventing and defusing financial risks

Great importance will still be attached to preventing and defusing financial risks, especially those in key areas. Proactive measures will be taken to forestall major risks in the market, market-based constraint mechanism will be strengthened, and more explorations will be made to establish a long-term mechanism for law-based financial risk disposal, in a bid to curb all kinds of market behaviors and financial activities in violations of laws and regulations. Efforts will be stepped up to make up for the weaknesses in financial regulation. The coordinated regulation mechanism will be strengthened and implemented. By constructing a unified and effective regulation mechanism and formulating a series of policies and measures, efforts will be made to prevent local risks from spreading, and to avoid "risk resonance" among different markets. The special program on addressing Internet financial risks will be carried forward, so as to crack down on illegal financial engagements seriously, dispose of high-risk events according to law, and safeguard the healthy and sound development of Internet finance.

Chapter 2 Money Market

In 2018, the money market performance was generally stable. The interbank lending volume rebounded markedly, and the trading volume of bond repo and interbank Negotiable Certificate Deposits (NCDs) kept growing. The bill acceptance business increased steadily, and bill discounts rose substantially. The overall market interest rates moved down amidst moderately increased volatility, and short-term maturities dominated the maturity stucture.

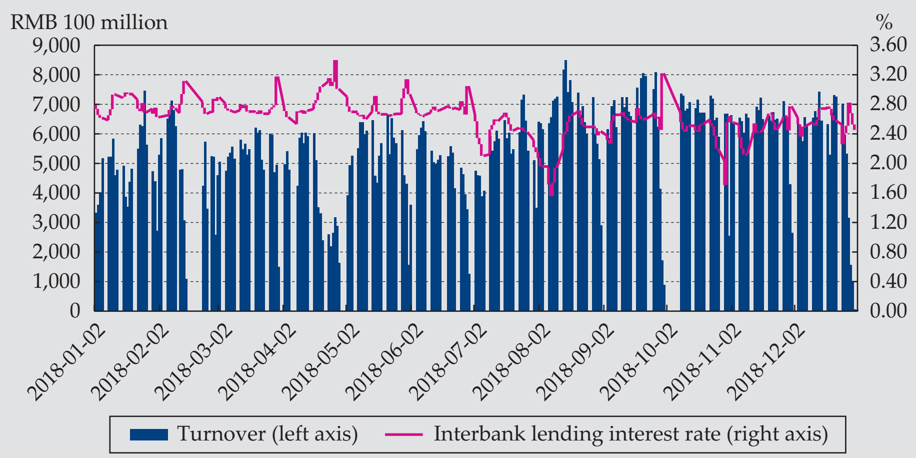
2.1 Interbank lending market

In 2018, the overall operation of the interbank lending market was stable. The number of market participants continued to grow, and the trading volume rebounded significantly. The terminal interest rate went down with increased volatility, and the maturity structure was still dominated by short-term maturities.

2.1.1 Performance of the interbank lending market

In 2018, the trading volume of interbank lending market totaled RMB 139.30 trillion, up 76.37 percent year on year and reporting an average daily trading volume of RMB 552.778 billion. Within the year, the peak and trough monthly trading volume was RMB 15.27 trillion in August and RMB 8.44 trillion in April respectively. The annual weighted average interest rate was 2.59 percent, with the highest point of 3.40 percent being registered on April 27th and the lowest of 1.56 percent being registered on August 8th.

Figure 2.1 Interbank lending volume and interest rate movement in 2018



Source: CFETS.

In 2018, the number of market participants continued to grow. In the interbank lending market, the number of institutional members totaled 2,123 at end-2018, up 165 over the previous year. The categories of market participants were increasingly diversified. With the participation of the Agricultural Bank of China Dubai Branch as an offshore RMB clearing bank in the interbank lending market, 11 offshore RMB clearing banks joined the interbank lending market altogether by the end of 2018.

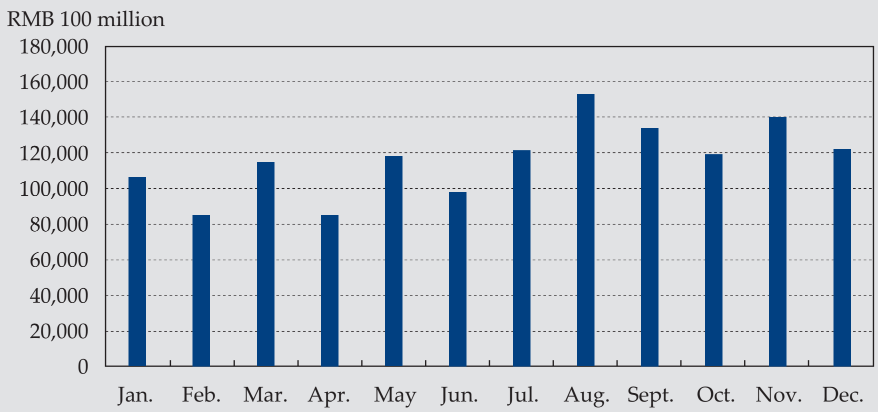
The participants in the interbank lending market were mainly banking financial institutions, the trading volume of whom accounted for 88.35 percent of the total. Among them, joint-stock commercial banks held the largest share, which accounted for 42.12 percent; the shares of city commercial banks, large-scale commercial banks, rural commercial banks, rural cooperative banks, and policy banks were 17.51 percent, 14.69 percent, 5.56 percent, and 4.49 percent respectively; as to the non-banking financial institutions, the securities companies and financial companies traded most actively, with a contribution rate of 7.26 percent and 2.81 percent respectively.

2.1.2 Main features of the interbank lending market

2.1.2.1 Trading volume took a great leap forward

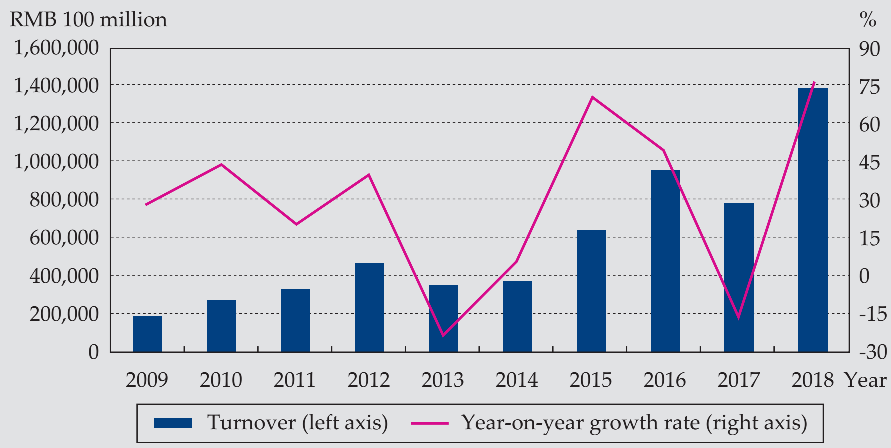
In 2018, the trading volume in the interbank lending market, for the first time, exceeded RMB 100 trillion, up 76.37 percent year on year. The turnover of each month all increased compared to the same period of last year, with that in May, July, August, and October each reporting a year-on-year growth of more than 100 percent. The largest growth in monthly turnover was recorded in August, up 144.40 percent from a year earlier.

Figure 2.2 Interbank lending market trading volume in 2018



Source: CFETS.

Figure 2.3 Trading volumes and growth rates of the interbank lending market from 2009 to 2018



Source: CFETS.

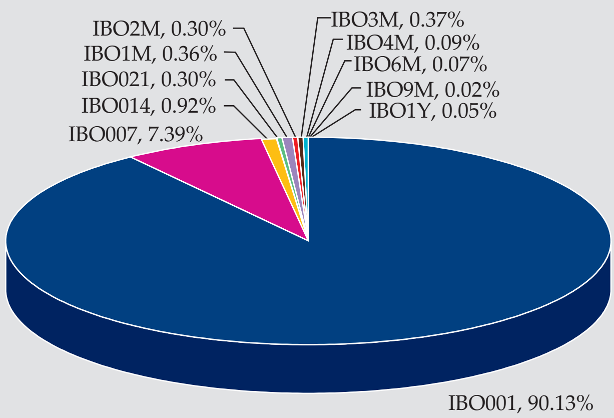
2.1.2.2 The terminal interest rate went down

In 2018, the weighted average interest rate of the interbank lending market decreased by 18 bps year on year. The range difference between the highest and lowest daily weighted rate was 184 bps in 2018, up 37 bps from the previous year. At the end of 2018, the daily weighted rates of the Overnight (O/N) and 7-day interbank lending stood at 2.35 percent and 3.50 percent respectively, decreasing 57 bps and 55 bps respectively compared to the last trading day of the previous year.

2.1.2.3 Short-term maturities dominated the maturity structure, and the share of O/N interbank lending reported a further growth

The maturity structure in the interbank lending market was still dominated by short-term maturities. The transactions with a maturity of no more than 7 days amounted to RMB 135.84 trillion, accounting for 97.52 percent of the total, up 1.25 percentage points from the previous year. Specifically, the trading volume of O/N products posted RMB 125.55 trillion, accounting for 90.13 percent of the total, up 4.05 percentage points from the previous year; and that of 7-day interbank lending products was 7.39 percent, down 2.80 percentage points over the previous year. The share of interbank lending with maturities between 14 days and 3 months was 2.25 percent, down 1.32 percentage points from the previous year; and the share of interbank lending transactions with a maturity of more than 3 months was 0.23 percent, up 0.08 percentage point from a year earlier.

Figure 2.4 Maturity structure of interbank lending in 2018



Source: CFETS.

2.1.2.4 Large-scale commercial banks remained as the major capital lenders

In 2018, large-scale commercial banks was the largest net lender in the interbank lending market, with an accumulative net lending of RMB 24.63 trillion, accounting for 50.21 percent of the total. Following them were policy banks and joint-stock commercial banks, with a net lending volume of RMB 11.75 trillion and RMB 9.10 trillion respectively, accounting for 23.96 percent and 18.56 percent respectively. Among the net borrowers, securities companies, city commercial banks, and financial companies held the largest net borrowing volume of RMB 20.14 trillion, RMB 19.24 trillion and RMB 5.95 trillion respectively, accounting for 41.06 percent, 39.22 percent and 12.14 percent respectively.

2.1.3 Outlook of the interbank lending market

In 2019, the interbank lending market will continue playing a positive role in the transmission of monetary policies and liquidity management of financial institutions. Firstly, based on macro-prudential management, measures will be taken to strengthen prevention of market risks and ensure the stable and healthy development of the market. Secondly, an efficient and safe trading platform and capital clearing system will be leveraged to further improve market efficiency and service quality. Thirdly, the two-way opening-up of the market will be further enhanced, and the categories of market participants will be increasingly diversified, so as to constantly adapt to the course of RMB internationalization.

2.2 Bond repo market

In 2018, the overall bond repo market remained stable. The market institutional arrangements and infrastructure continued to improve, and the trading volume expanded further. The repo rates went down with fluctuations diverging in the market. The maturity structure also remained stable with short-term products playing a dominant role, and the structure of pledged bonds continued to optimize.

2.2.1 Performance of the bond repo market

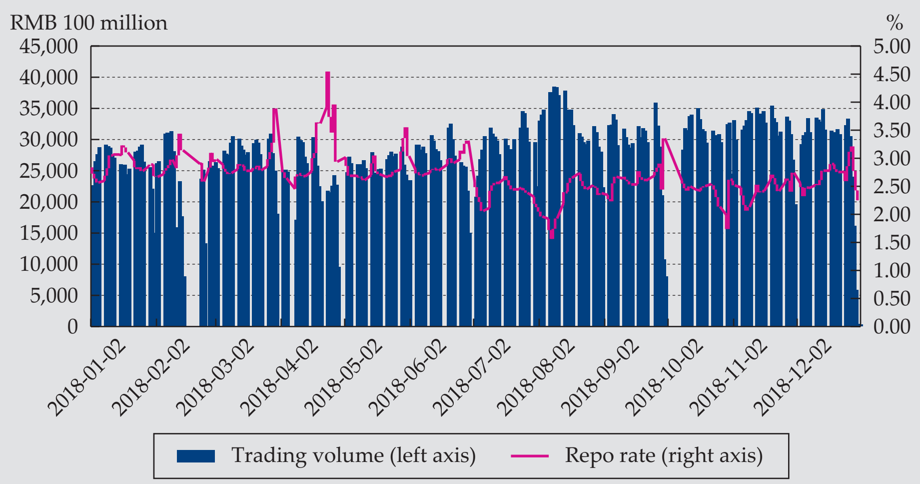
In 2018, the cumulative turnover of the bond repo market was RMB 954.06 trillion, up 8.8 percent year on year. Among them, the cumulative turnover of the interbank bond repo accounted for 75.8 percent of the total, up 5.5 percentage points from the same period of the last year; and the cumulative turnover of the exchange bond repo represented 24.2 percent of the total, down 5.5 percentage points from a year earlier.

2.2.1.1 Performance of the interbank bond repo market

In 2018, the cumulative turnover of the interbank bond repo was RMB 722.68 trillion, up 17.2 percent year on year. In particular, the cumulative turnover of pledged repo stood at RMB 708.67 trillion, up 20.5 percent year on year; and the cumulative turnover of outright repo was RMB 14.00 trillion, down 50.2 percent year on year.

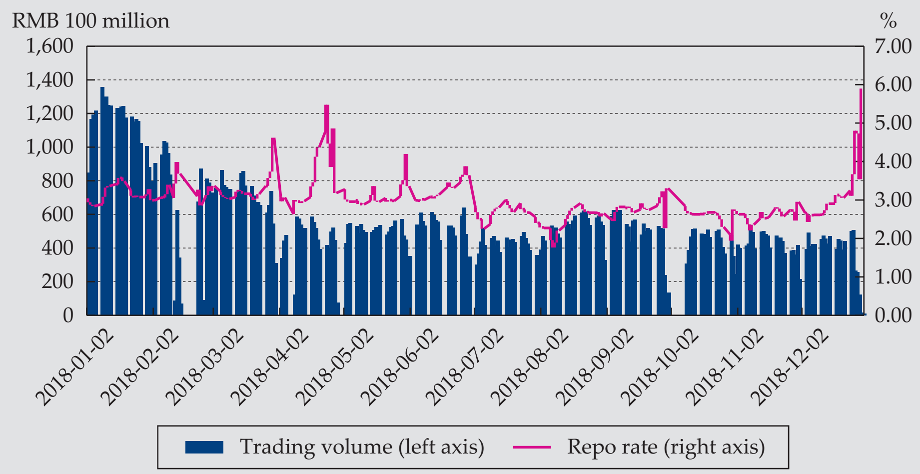
The interest rates of the interbank bond repo market fluctuated slightly more and went down compared with the previous year. The weighted average rate of pledged repo was 2.66 percent, down 26 bps from 2017, with the highest point of 4.6 percent registered on April 24th and the lowest point of 1.6 percent registered on August 8th; and the range difference of interest rate spread was 298 bps, up 30 bps from 2017. The weighted average rate of outright repo was 3.0 percent, down 32 bps from 2017, and the range difference of interest rate spread was 414 bps, up 164 bps from 2017.

Figure 2.5 Volume and price of interbank pledged repo market in 2018



Source: CFETS.

Figure 2.6 Volume and price of interbank outright repo market in 2018



Source: CFETS.

2.2.1.2 Performance of the exchange-traded bond repo market

In 2018, the cumulative turnover of exchange-traded bond repo was RMB 231 trillion, down 11.2 percent year on year. Specifically, the cumulative turnover of bond repo of the Shanghai Stock Exchange (SSE) was RMB 212 trillion, down 12.7 percent year on year; and the cumulative turnover of bond repo of the Shenzhen Stock Exchange (SZSE) was RMB 19 trillion, up 10.9 percent year on year. Meanwhile, the exchange bond repo market launched the tri-party repo business in 2018, which reported a cumulative turnover of RMB 0.33 trillion. The cumulative turnover of pledged repo was RMB 226 trillion, down 12.0 percent from the previous year; and the cumulative turnover of agreement-based repo was approximately RMB 3 trillion, up 3.5 percent year on year.

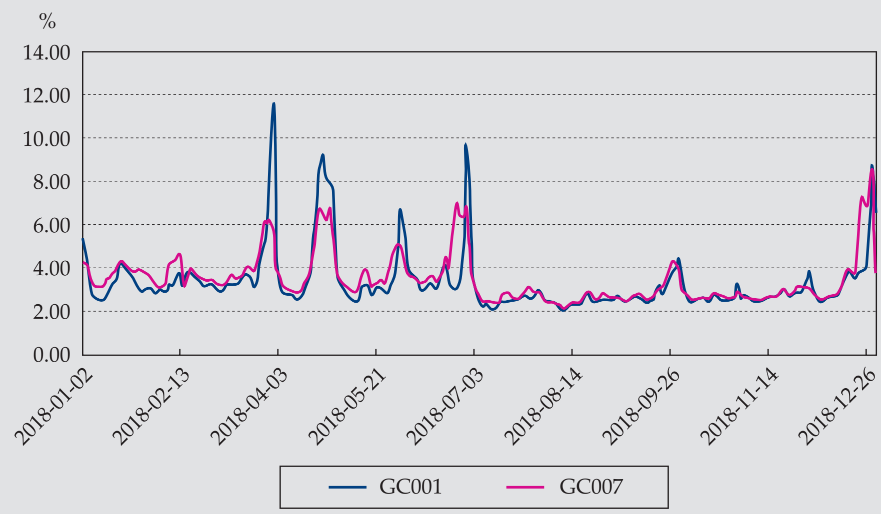
The interest rates of the exchange pledged repo market declined significantly. For the SSE, the average 1-day fixing repo rate and the average 7-day fixing repo rate was 3.3 percent and 3.5 percent respectively, down 78 bps and 59 bps respectively from the previous year; for the SZSE, the weighted average rate of 1-day pledged repo was 3.3 percent, down 111 bps from a year earlier. The weighted average 7-day repo rate was 3.5 percent, down 82 bps year on year.

2.2.2 Main features of the bond repo market

2.2.2.1 The trading volume of interbank pledged repo largely recovered

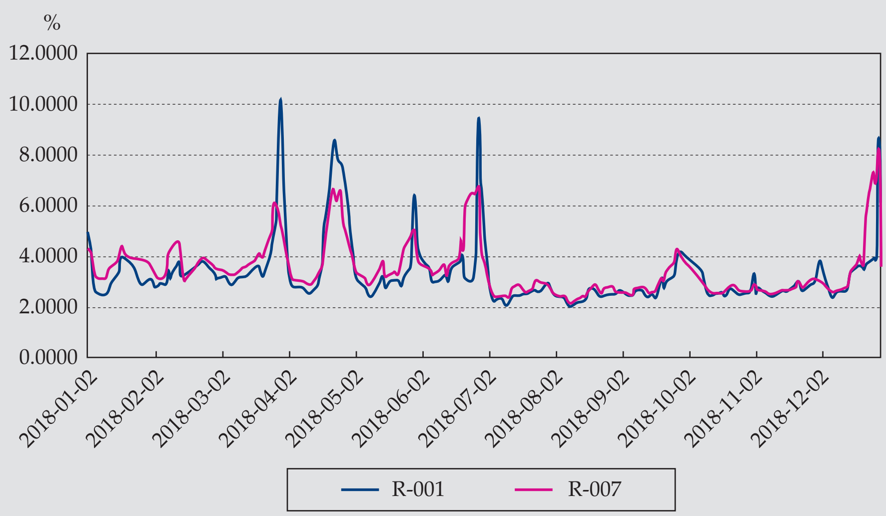
In 2018, the trading volume of the interbank bond repo market increased by RMB 106.31 trillion from a year earlier, with pledged repo accounting for all the growth. The trading volume of pledged repo increased 20.5 percent

Figure 2.7 Movements of pledged fixing repo rates of the SSE in 2018



Source: SSE.

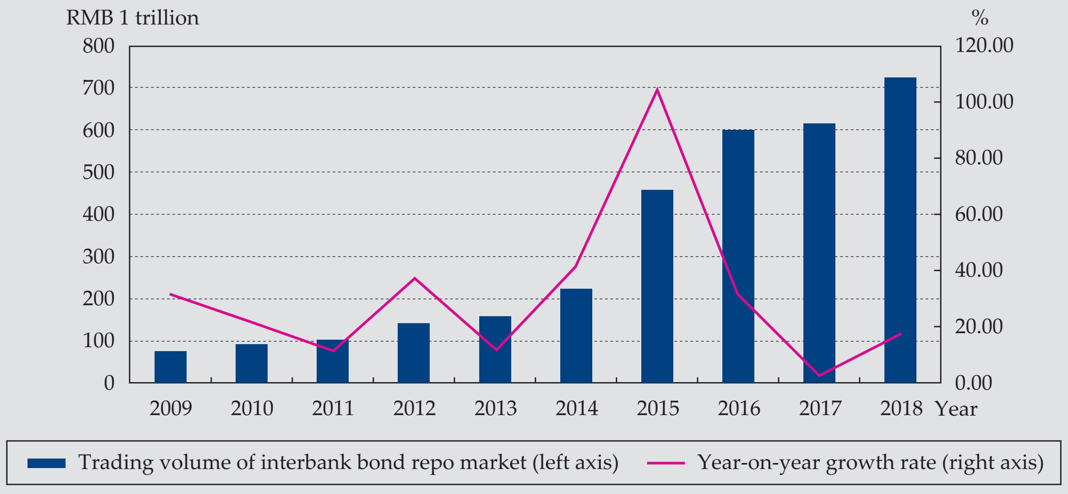
Figure 2.8 Movements of pledged repo rates of the SZSE in 2018



Source: SZSE.

year on year, with growth rate apparently higher than 2.5 percent of the previous year; the trading volume of outright repo continued to fall since 2017, decreasing by RMB 14.11 trillion from a year earlier and down 50.2 percent year on year.

Figure 2.9 Scale and growth rate of interbank market bond repo trading volume from 2009 to 2018

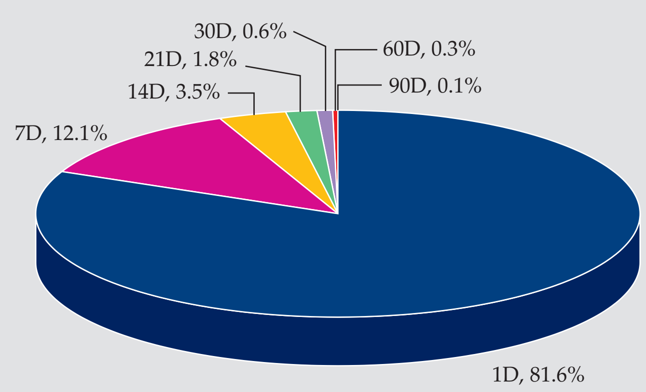


Source: CFETS.

2.2.2.2 The maturity structure remained stable, with short-term products playing a dominant role

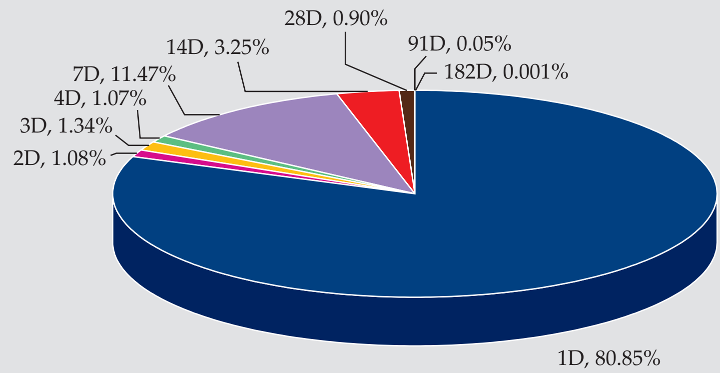
In the interbank market, the shares of products with different maturities were basically flat with the previous year, and the share of pledged repo transactions with a term of up to 7 days was 93.7 percent. In the exchange repo market, pledged repo transactions with a term of 7 days and 14 days accounted for 14.7 percent and 7.8 percent of the total respectively, up 4.7 and 1.4 percentage points from a year earlier respectively. Pledged repo transactions with a term of up to 7 days still dominated the SSE and SZSE market, accounting for 95.8 percent and 91.8 percent respectively.

Figure 2.10 Maturity structure of pledged repo transactions in the interbank bond market in 2018



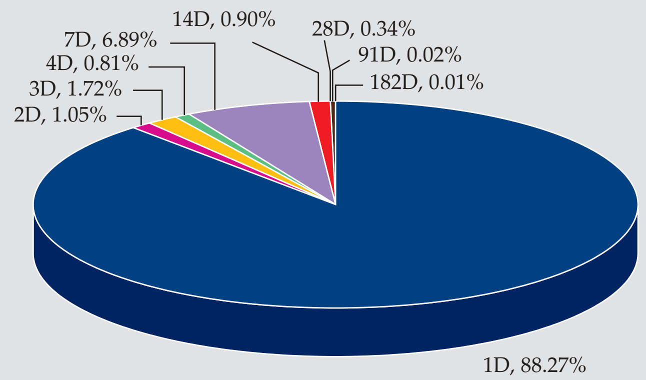
Source: CFETS.

Figure 2.11 Maturity structure of pledged repo transactions in the SSE market in 2018



Source: SSE.

Figure 2.12 Maturity structure of pledged repo transactions in the SZSE market in 2018



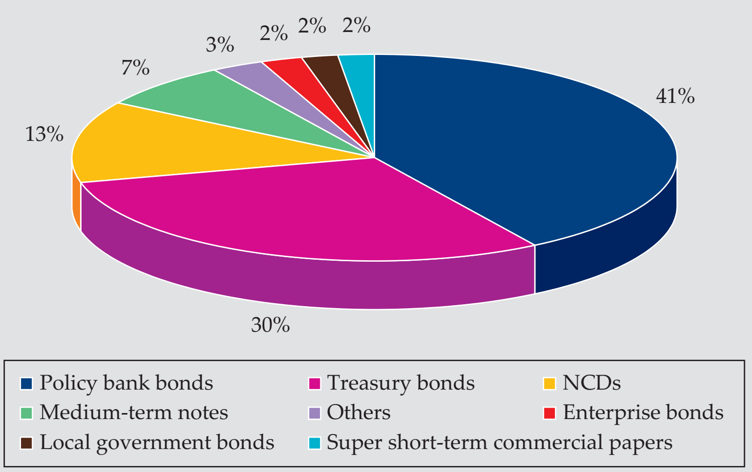
Source: SZSE.

2.2.2.3 The structure of underlying assets for interbank repo transactions was stable, and the structure of pledged bonds in the exchange repo market continued to improve

The shares of interbank repo transactions with policy bank bonds and NCDs grew 0.2 and 1.0 percentage point year on year respectively to 40.0 percent and 13.1 percent, and the share of interbank repo transactions with government bonds as underlying assets declined by 2.0 percentage points from a year earlier to 32.0 percent. The share of pledged repo transactions with medium-term notes, enterprise bonds or super short-term commercial papers as underling assets amounted to 10.7 percent, reporting a moderate decrease of 0.1 percentage point year on year.

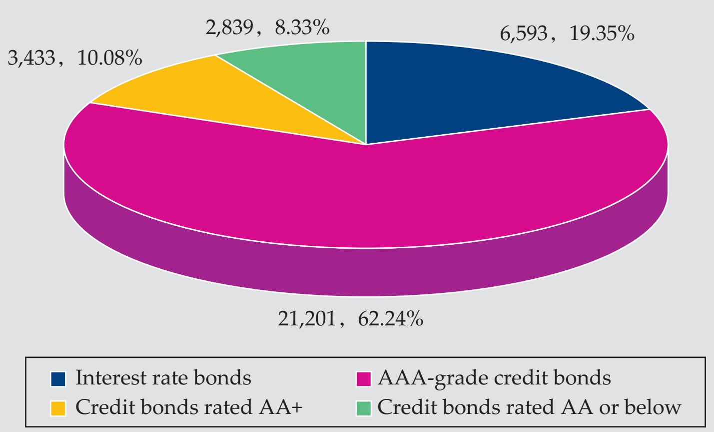
The structure of pledged bonds in the exchange repo market continued to upgrade. Among the pledged bonds traded in the SSE, interest rate bonds accounted for 19.4 percent of the total, down 4.7 percentage points year on year; AAA-grade credit bonds held a share of 62.2 percent, up 10.4 percentage points year on year; credit bonds rated AA+ or below made up for 18.4 percent, down 5.7 percentage points year on year; and interest rate bonds and AAA-grade credit bonds together accounted for 81.6 percent of the total, up 5.7 percentage points over the previous year.

Figure 2.13 Structure of underlying assets for pledged repo transactions in the interbank bond market in 2018



Source: CFETS.

Figure 2.14 Structure of underlying assets for pledged repo transactions in the SSE bond market in 2018



Source: SSE.

Among the pledged bonds traded in the SZSE, interest rate bonds accounted for 11.5 percent of the total, up 2.2 percentage points year on year; AAA-grade credit bonds accounted for 61.1 percent, up 17.9 percentage points year on year; the share of credit bonds rated AA+ or below was 27.4 percent, down 20.0 percentage points year on year; and interest rate bonds and AAA-grade credit bonds together accounted for 72.6 percent of the total, up 20.0 percentage points over the previous year.

2.2.2.4 Interest rate fluctuations diverged among repo markets

In 2018, the interbank bond repo market generally experienced greater fluctuations in terms of interest rates. The standard deviation of the daily weighted average rate of pledged repo was 0.4, up 9.6 percent year on year; and the standard deviation of the daily weighted average rates of outright repo was 0.5, up 36.5 percent year on year.

The interest rates of the exchange repo market became more stable than before. In the SSE market, the standard deviation of the 1-day pledged fixing repo rates was 1.40, down 29.3 percent year on year; the standard deviation of the 7-day fixing repo rates was 0.01, down 12.8 percent year on year. In the SZSE market, the standard deviation of the daily weighted average rates of pledged repo was 0.99, reporting a year-on-year decline of 31.7 percent.

2.2.2.5 Non-banking financial institutions and their products were major borrowers in the repo market

In 2018, from the perspective of capital inflow, the largest net borrowers in the interbank repo market were fund companies, securities companies, and investment products, with a net borrowing of RMB 80.49 trillion, RMB 69.17 trillion, and RMB 47.35 trillion respectively. As of the end of 2018, in the SSE repo market, asset management products[①], securities products traded by securities companies themselves, and publicly offered funds ranked top three in terms of outstanding net capital inflow, accounting for 34.3 percent, 18.6 percent, and 13.1 percent respectively. In the SZSE repo market, segregated fund accounts, securities products traded by securities companies themselves, and publicly offered funds were the top three items in terms of outstanding capital inflow, representing a share of 27.6 percent, 22.2 percent, and 13.8 percent respectively.

From the perspective of capital outflow, the largest net lenders in the interbank repo market were large-scale commercial banks, policy banks, and joint-stock commercial banks, with a net lending of RMB 112.14 trillion, RMB 90.07 trillion, and RMB 64.85 trillion respectively. As of the end of 2018, in the SSE repo market, legal persons, individuals, and publicly offered funds ranked top three in terms of outstanding net capital outflow, accounting for 35.5 percent, 27.5

① Asset management products in a broad sense include segregated fund products, asset management products of securities companies, insurance asset management products, trust, futures asset management products, and financial products of banks.

percent, and 12.5 percent respectively. In the SZSE repo market, segregated fund accounts, securities products traded by securities companies themselves, and publicly offered funds were the top three items in terms of outstanding net capital outflow, representing a share of 87.3 percent, 4.9 percent, and 3.0 percent respectively.

2.2.3 Outlook of the bond repo market

In 2019, the repo market is expected to continue with a sound momentum of growth. With reasonably adequate liquidity, the turnover in the repo market will rise steadily and the repo interest rates will be maintained at reasonably low levels most of the times. In terms of the maturity structure, short-term products will continue to play a dominant role and products of various maturities will report a stable increase. Types of investors will diversify further, and the capital demand of non-banking financial institutions and non-legal-person products will hold steady. The repo pricing mechanism will be more reasonable, and the tri-party repo business is expected to be launched in the interbank market.

2.3 NCD market

The year of 2018 witnessed a slowdown in the growth of NCD issuance, with interest rates going down and maturities becoming longer. Trading in the secondary market remained active, and market participants further diversified.

2.3.1 Performance of the NCD market

In 2018, a total of 511 institutions issued NCDs, down 30 over the previous year; 27,306 NCDs were issued, up 352 over the previous year; the issuance amount stood at RMB 21.12 trillion, up 4.58 percent year on year; the number of subscription entities was 3,678, down 1,078 over the previous year. At the end of 2018, the balance of NCDs stood at RMB 9.23 trillion, up 23.56 percent year on year.

In 2018, a total of 675,497 NCD transactions were concluded in the secondary market, and the turnover increased 32.76 percent year on year to RMB 149.85 trillion. Specifically, the turnover of pledged repo transactions stood at RMB 92.87 trillion, up 30.86 percent year on year and accounting for 61.97 percent of the total; the transactions concluded via cash bond deals amounted to RMB 55.54 trillion, up 49.81 percent year on year and accounting for 37.06 percent of the total; the outright repo totaled RMB 1.44 trillion, down 70.11 percent year on year and accounting for 0.96 percent of the total; and the bond lending transactions amounted to RMB 1.551 billion.

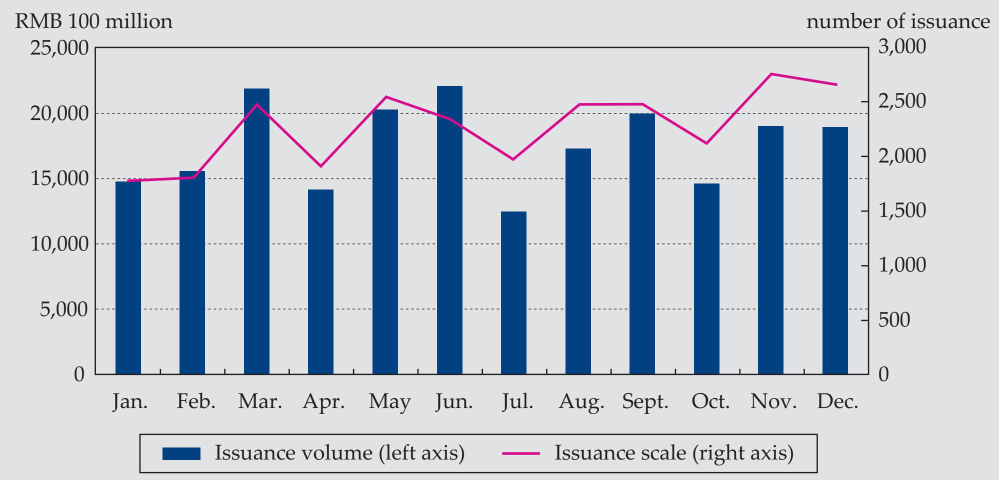
2.3.2 Main features of the NCD market

2.3.2.1 The issuance volume grew at a slower pace, and the issuance share of large-scale commercial banks increased

After four years of rapid expansion with an annual growth rate of over 50 percent from 2014 to 2017, and under the influence of the institutions' endogenous demand for leverage ratio stabilization and prudential operations, the issuance volume of NCDs grew at an apparently slower pace in 2018. Specifically, towards the end of each quarter, the issuance volume would go up, and on average, the quarterly issuance volume was RMB 5.28 trillion. In the second quarter (Q2), due to the reissuance pressure from the maturity peak in June, the quarterly issuance volume rose to a yearly high of RMB 5.65 trillion; while in the third quarter (Q3), the quarterly issuance volume fell to RMB 4.98 trillion, the lowest in the whole year.

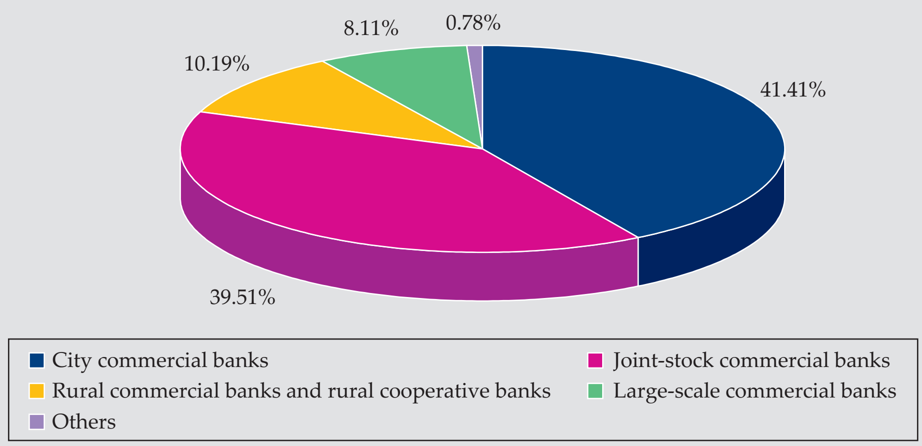
In 2018, the share of NCDs issued by large-scale commercial banks in the total issuance increased significantly to 8.11 percent, up 6.29 percentage points from a year earlier. City commercial banks, joint-stock commercial banks, and rural commercial banks and rural cooperative banks were still top three NCD issuers, accounting for 41.41 percent, 39.51 percent, and 10.19 percent of the total respectively, all down one to two percentage points over the previous year.

Figure 2.15 Monthly issuance of NCDs in 2018



Source: CFETS.

Figure 2.16 Structure of NCD issuers in 2018



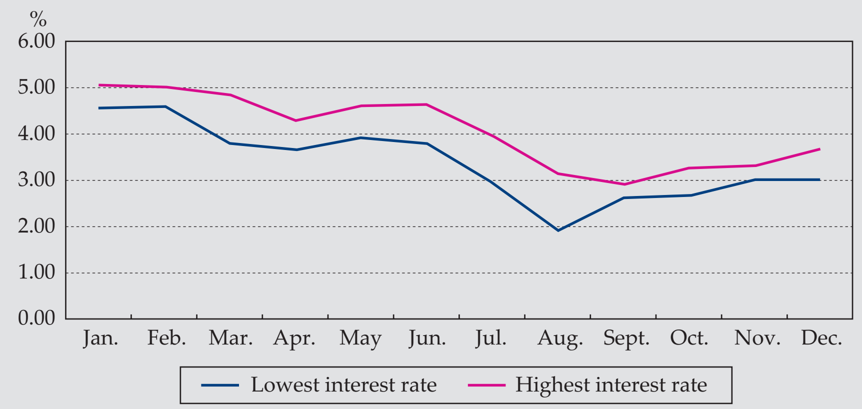
Source: CFETS.

2.3.2.2 The issuing rates of NCDs declined gradually

In 2018, the issuing rates of NCDs went down gradually. For example, the average issuing rate of 3-month NCDs of joint-stock commercial banks, as a market benchmark, ranged between 4.55 percent and 5.05 percent in January, between 3.8 percent and 4.65 percent in June, and between 3 percent and 3.65 percent in December.

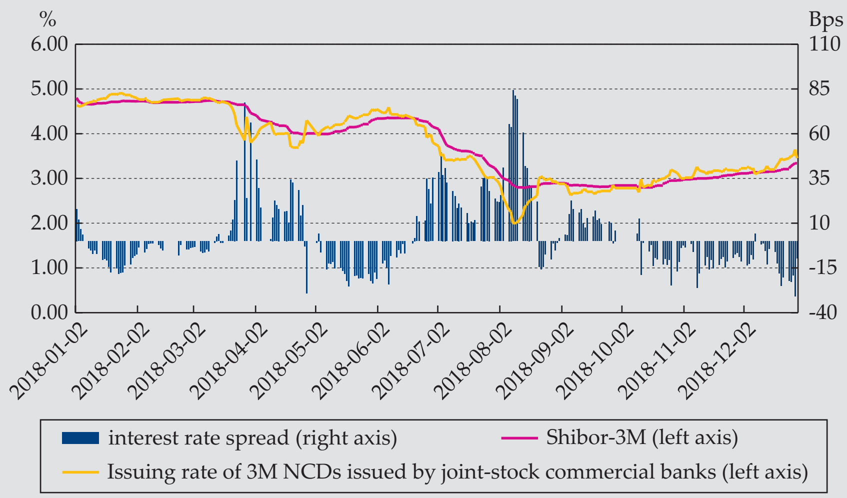
The issuing rates basically fluctuated around the Shibor benchmark interest rate. Except for a few time-points in March, April, July, and August, the spread between the issuing rates of NCDs and Shibor interest rates of the same tenor generally remained within 35 bps.

Figure 2.17 Movement of issuing rate of 3-month NCDs of joint-stock commercial banks in 2018



Source: CFETS.

Figure 2.18 Issuing rate and spread trend of 3-month NCDs in 2018



Source: Wind.

2.3.2.3 The share of NCDs with 9-month and 1-year maturities in total NCD issuance increased

In 2018, NCDs with 3-month, 1-year, and 6-month maturities dominated the new issuance, accounting for 37.44 percent, 20.36 percent, and 17.32 percent of the total issuance amount respectively. Compared with the previous year, the shares of NCDs with 1-month, 3-month, and 6-month maturities decreased by 9.46, 3.29, and 3.88 percentage points respectively, and the shares of NCDs with 9-month and 1-year maturities rose by 8.41 and 8.22 percentage points respectively.

2.3.2.4 Trading in the secondary market remained active

In 2018, the quarterly turnover in the NCD secondary market stood at RMB 37.46 trillion on average. NCD was the most traded product in the cash bond market, representing a market share of 36.85 percent. Due to the superior advantages in credit rating, liquidity, and yields, the NCDs also attracted numerous foreign institutional investors. The top three net buyers of NCDs were fund companies and fund products, large-scale commercial banks and policy banks, and overseas institutions, with a net purchase of RMB 2.55 trillion, RMB 0.68 trillion, and RMB 0.37 trillion respectively.

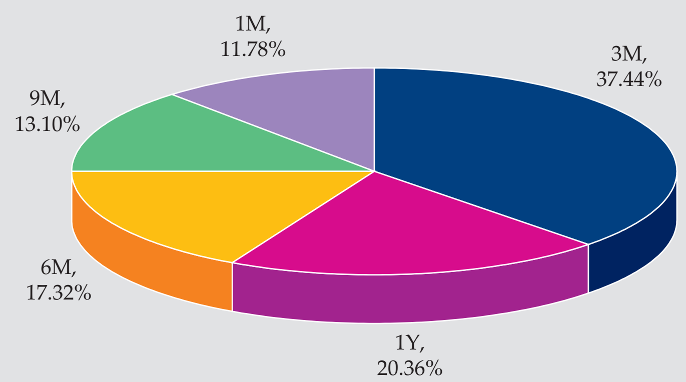
2.3.3 Outlook of the NCD market

In 2019, the NCD market is still expected to achieve an orderly and sound development. The issuing rates of NCDs will fluctuate within a stable range, and the correlation between NCDs and the mid- to long-term Shibor will further increase. The maturities of NCDs are expected to be extended, and the NCD secondary market will maintain its vitality.

2.4 Bill market

In 2018, the bill market in China advanced

Figure 2.19 Maturity structure of NCDs in 2018



Source: CFETS.

rapidly and soundly. The bill acceptance business grew steadily, the volume of bill discounts increased significantly, the interests rates went down generally, and orderly improvements were made to infrastructure and institutional arrangements of the bill market. Overall, the bill market played a positive role in supporting the real economy, especially by facilitating the financing of private businesses as well as micro, small and medium-sized enterprises.

2.4.1 Performance of the bill market

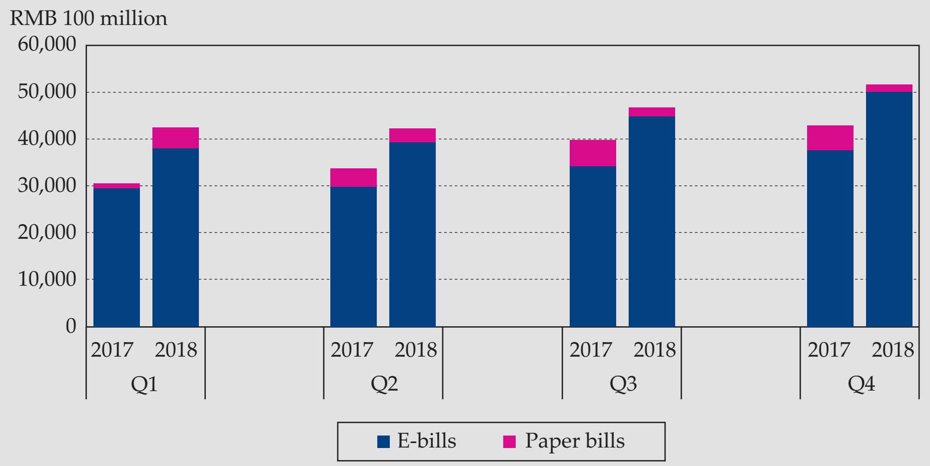
2.4.1.1 Bill acceptance businesses grew steadily

At the end of 2018, outstanding commercial bills stood at RMB 9.4 trillion, up 14.9 percent year on year. The volume of bill acceptances throughout the year totaled RMB 18.3 trillion, up RMB 3.6 trillion over the previous year and reporting a year-on-year increase of 24.8 percent. In particular, e-bill acceptances amounted to RMB 17.2 trillion, accounting for 94.1 percent of the total; paper bill acceptances stood at RMB 1.1 trillion, representing a share of 5.9 percent in the total. Bills issued in 2018 were mostly mid- to long-term, among which those with a maturity of no less than 6 months accounted for 76.8 percent of the total.

2.4.1.2 Bill discount businesses rose rapidly

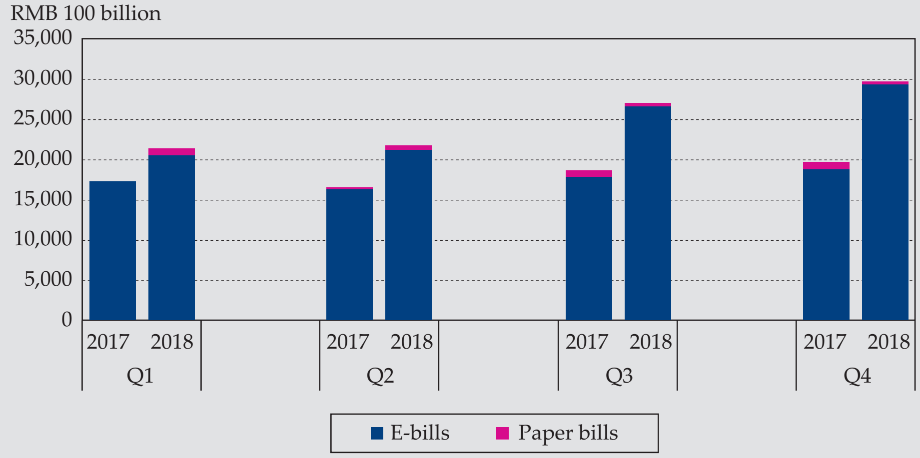
At the end of 2018, the outstanding balance of bill discounts registered RMB 5.8 trillion, up 48.7 percent year on year. Financial institutions discounted a total of RMB 9.9 trillion of commercial bills through out the year, up RMB 2.8 trillion over the previous year and reporting a year-on-year increase of 38.8 percent. In particular, e-bill discounts amounted to RMB 9.7 trillion, accounting for 97.9 percent of the total; paper bill discounts stood at RMB 212.36 billion, representing a share of 2.1 percent in the total.

Figure 2.20 Volume of quarterly bill acceptances from 2017 to 2018



Source: Shanghai Commercial Paper Exchange.

Figure 2.21 Volume of quarterly bill discounts from 2017 to 2018



Source: Shanghai Commercial Paper Exchange .

2.4.1.3 The decline of interbank discounts and repo transactions slowed down

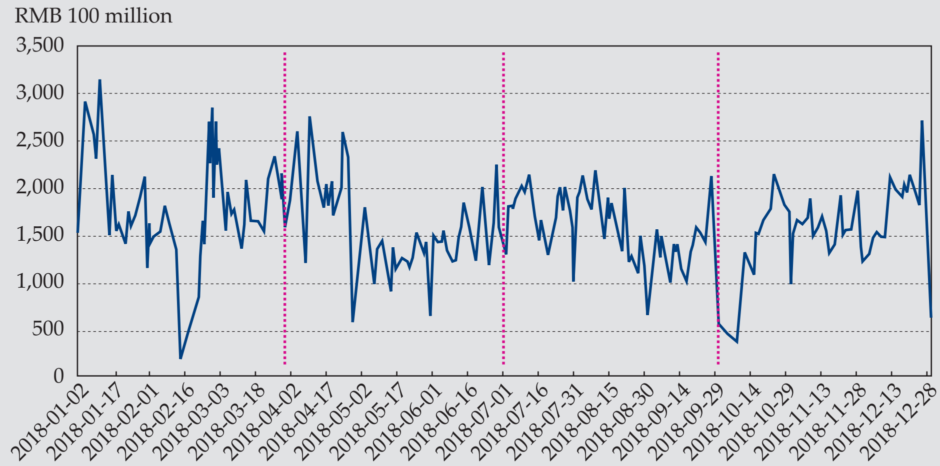
In 2018, the trading volume of bills stood at RMB 41.8 trillion, down RMB 10.4 trillion over the previous year, representing a year-on-year decrease of 20.0 percent, down 32.3 percentage points compared with a year earlier. Specifically, the trading volume of interbank discounts was RMB 34.6 trillion, down RMB 10.0 trillion over the previous year and reporting a year-on-year decrease of 22.4 percent; the trading volume of pledged repos stood at RMB 7.1 trillion, down RMB 471.31 billion over the previous year and reporting a year-on-year decrease of 6.2 percent; and the outright repos registered RMB 12.86 billion.

By transactional medium, e-bill transactions added up to RMB 40.6 trillion, accounting for 97.3 percent of the total, and transactions of paper bills amounted to RMB 1.1 trillion, representing 2.7 percent of the total. By maturity structure, the distribution of interbank discounts with different maturities was relatively even, with those having a maturity of no more than 3 months, 3-6 months, 6-9 months, and 9-12 months accounting for 30.8 percent, 25.8 percent, 12.6 percent, and 30.8 percent of the total respectively, while in contrast, transactions with a maturity of no more than 7 days registered a dominating share of 61.9 percent.

2.4.1.4 Central bank discounts expanded remarkably

In 2018, the PBC strengthened its support for central bank discounts, increasing the quota in June and October each by RMB 50 billion and later in December by RMB 100 billion. The boosted quota enhanced the willingness of commercial banks to discount their bills, and thus helped optimize the financing environment for MSEs and private businesses. Throughout the year, the central bank discounts totaled RMB 696.87 billion, up 82.4 percent from the previous year.

Figure 2.22 Daily volume of bill transactions in 2018

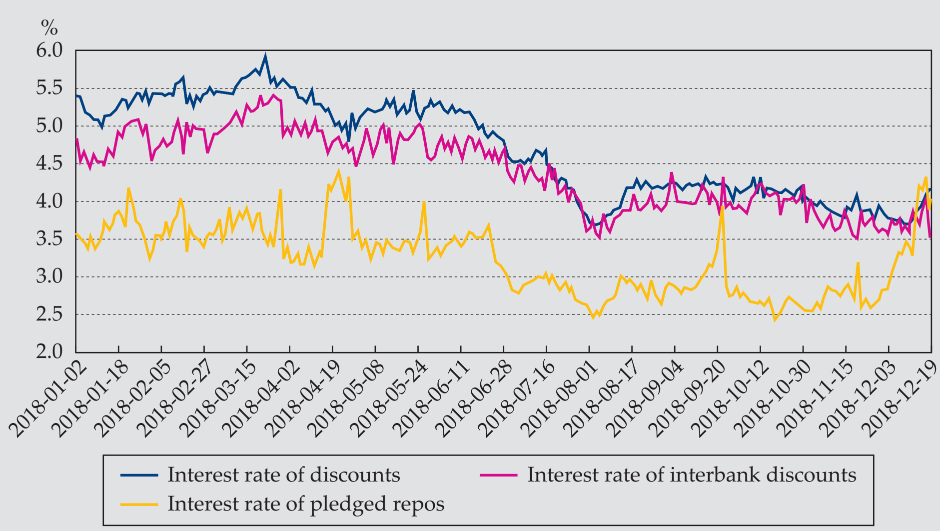


Source: Shanghai Commercial Paper Exchange.

2.4.1.5 Bill interest rates generally dropped

In 2018, the weighted average interest rate of bill discounts and pledged repos was 4.6 percent and 3.2 percent, down 30 bps and 55 bps year on year respectively, and the weighted average interest rate of interbank discounts stood at 4.4 percent, up 15 bps year on year. In Q1, the bill interest rates went up month by month and hit a yearly high in March, while in Q2 and Q3, the rates kept declining. It was not until the end of Q4 that the interest rates of interbank discounts and repos pointed to a bit of a rebound.

Figure 2.23 Daily movements of bill interest rates in 2018



Source: Shanghai Commercial Paper Exchange.

2.4.2 Main features of the bill market

2.4.2.1 Bills played a prominent role in serving the real economy

In 2018, the CPC Central Committee and the State Council attached great importance to the development of the real economy, and particularly demanded to enhance the support for private businesses and MSEs with a focus on alleviating them from the difficulties and high costs in financing. As the PBC has strengthened its support for central bank discounts, commercial bills featuring short maturities, strong liquidity, and controllable credit risks can properly cater to the banks' risk appetite and satisfy their demand for liquidity management. As a result, the volume of bill financing increased substantially. Throughout the year of 2018, the number of bill acceptances totaled 20.77 million, up 59.9 percent year on year; the outstanding bill financing at the end of 2018 increased 48.7 percent year on year to RMB 5.8 trillion, accounting for 4.2 percent of total loans, up 1.0 percentage point from the previous year. Thus, commercial bills played a significant role in supporting the real economy.

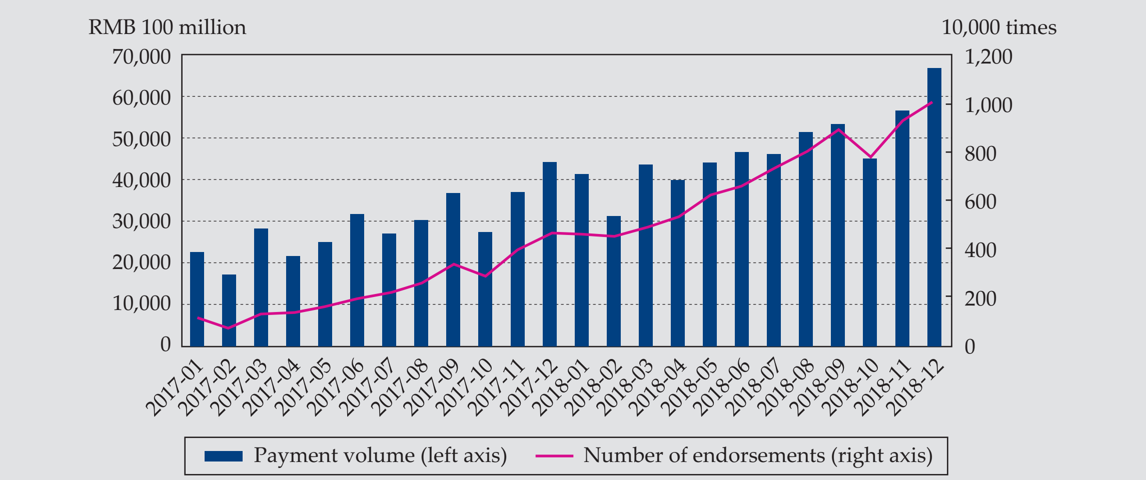
2.4.2.2 Electronization of the bill market was further enhanced

In recent years, with policy support from the PBC, e-bill acceptances became ever more popular for its advantages in terms of security, convenience and efficiency. According to the *Notice on Regulating and Promoting the Development of Electronic Commercial Bill* (Yinfa〔2016〕No. 224), from January 1st, 2018 onward, any commercial bill with a par value of over RMB 1 million must be issued by the electronic commercial bill system, driving the share of e-bill transactions further up. In 2018, the share of e-bill transactions in all bill acceptances crossed the 90 percent mark for the first time, hitting a record high of 94.1 percent, up 5.1 percentage points from a year earlier. Meanwhile, e-bills accounted for 97.9 percent and 97.3 percent in bill discounts and bill trading respectively.

2.4.2.3 The payment function of bills was constantly improved

Bills can be used for both payment and financing purposes. By leveraging the function of payment, bills transmit the credit of commercial banks and high-quality enterprises to small and medium-sized enterprises, thus broadening financing channels of small and medium-sized enterprises and reducing their financing costs. In 2018, the average par value of bill acceptances stood at RMB 880,000, down 21.9 percent compared with the previous year, which was conducive to payment transfers among enterprises. In 2018, the total volume of enterprise payments with e-bills reached RMB 56.6 trillion, up RMB 21.8 trillion over the previous year. The figure represented a year-on-year increase of 62.6 percent, while that of total bill acceptances was only 24.8 percent.

Figure 2.24 Payment volume of commercial drafts and number of endorsements from 2017 to 2018

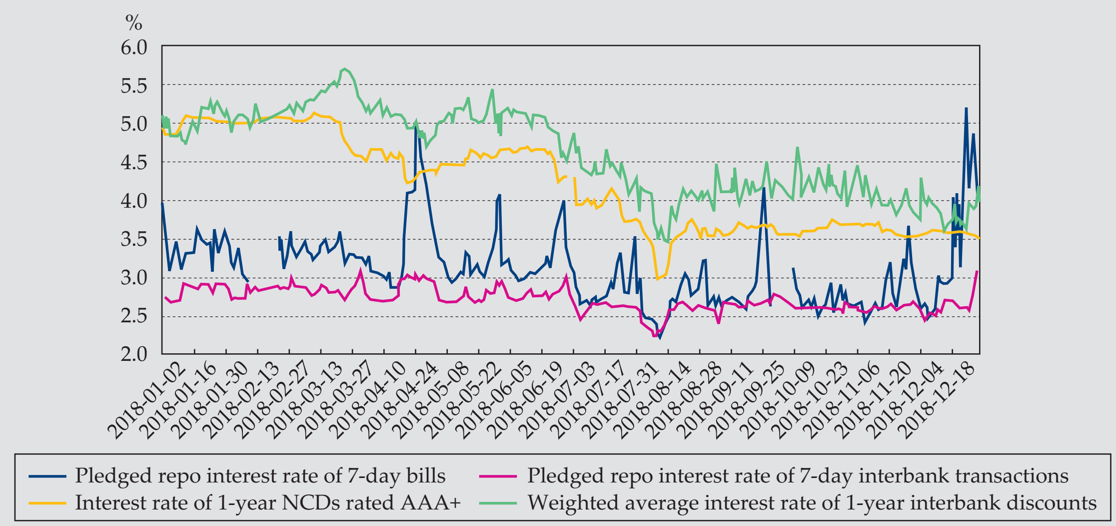


Source: Shanghai Commercial Paper Exchange.

2.4.2.4 Bill interest rates moved in relatively strong tandem with other money market interest rates

The bill market serves as a bridge between the money market and the real economy. Throughout 2018, the pledged repo interest rate of 7-day bills moved basically in tandem with the pledged repo interest rate of 7-day interbank transactions, reporting a correlation coefficient of 0.67; and the interest rate of 1-year interbank discounts moved highly in tandem with that of 1-year NCDs rated AAA+, with their correlation coefficient reaching 0.91.

Figure 2.25 Interest rates of bills with key maturities and interest rates of other sectors in money market in 2018



Source: Shanghai Commercial Paper Exchange.

2.4.2.5 Bill businesses of joint-stock commercial banks thrived

Joint-stock commercial banks was the top market player in all categories of bill businesses. In 2018, bills accepted, discounted, and traded by joint-stock commercial banks represented a market share of 42.2 percent, 38.2 percent, and 44.9 percent respectively. City commercial banks were relatively active in bill acceptances and transactions, accounting for 25.5 percent in the total transaction volume of both categories; large-scale commercial banks were relatively active in bill discounts, securing a market share of 23.2 percent.

2.4.3 Institutional arrangements and infrastructure development of the bill market

2.4.3.1 Institutional arrangements of the bill market were further improved

In order to establish a national unified bill market, the PBC transferred the operation of the Electronic Commercial Draft System (ECDS) to the Shanghai Commercial Paper Exchange on October 7th, 2017, and then revised the *Administrative Measures for the Electronic Commercial Bill System*, the *Administrative Measures for the Operation of the Electronic Commercial Bill System*, the *Administrative Measures for Digital Certificates of the Electronic Commercial Bill System*, and the *Contingency Plans for Crises of the Electronic Commercial Bill System* on June 4th, 2018 to further clarify the regulation and management of the ECDS.

On August 12th, 2018, the Shanghai Commercial Paper Exchange published the *Operational Procedures for Non-Trading Transfers of Bills*, in a bid to provide institutional reference for market participants in need of modifying the registration of bill ownerships out of non-trading matters (such as court decisions and bestowal), and further improve the system of trading rules in the Shanghai Commercial Paper Exchange.

2.4.3.2 Systematic steps were taken to promote infrastructure development of the bill market

First, the project of integrating the paper bill system and the e-bill system was implemented smoothly. From October 1st to 5th, 2018, in accordance with PBC arrangements, the Shanghai Commercial Paper Exchange successfully completed the project of integrating the paper bill system with the e-bill system. After the integration, the paper bill system and the e-bill system would employ a same set of trading rules and operate on the same trading platform, which truly realized co-field trading of paper bills and e-bills. Thus far, a national unified, safe, and efficient electronic bill trading platform was basically set up, and China's modern bill market entered a period of fast growth. Second, steady progress was made in the construction and promotion of the Direct Connect Interface project, with the system being launched on January 29th, 2018. Third, the experimental production system for the digital bill trading platform was put into service, which kept businesses of all kinds in a lifecycle of bills, ensured that all business operations could be incorporated into the block chain within the valid time frame, and safeguarded the authenticity, reliability, and tamper resistance of each business operation. Fourth, functions of the Commercial Paper Exchange System (CPES) were constantly optimized. The "One-Click-Order" mode for interbank discounts, the anonymous "One-Click-Order" mode for pledged repos, the subsystem of custody accounting, and the subsystem of charging and payment were successively released. The central bank discount system was further improved.

2.4.4 Outlook of the bill market

In 2019, the bill market will continue growing in a well-regulated and healthy manner. Systematic steps will be taken to improve institutional arrangements, and constant efforts will be made in infrastructure development. The application scenarios of bills are expected to be expanded at a faster pace, the efficiency of bill usage will be constantly boosted, and the convenience of bill financing will be enhanced substantially. The potential of bill businesses for a larger market and more innovations will be further brought out. The bill market will better leverage its advantages in serving the real economy and supporting financial inclusion and therefore contribute to the high-quality development of China's economy.

BOX 1 The interbank market launched the tri-party repo business

In October 2018, the PBC issued the announcement No. 18, opening the interbank market to tri-party repo businesses. The tri-party repo business refers to the kind of bond repo business where bond registration, depository, and settlement agencies are regarded as the third party for professional collateral management services. Compared with bilateral repos, the advantage of tri-party repos lies in that counterparties in the transaction only need to agree on such basic factors as amount, maturity, and interest rate, while the third-party professional agency will take full charge of collateral management matters, i.e., the whole set of services including the collateral selection, valuation, market-to-market management, replacement , and adjustment.

1. Business models of the international tri-party repo market

Tri-party repos originated in the U.S. After four decades of development, it has become a common practice in the international repo market. International experience indicates that mainstream third-party service providers in the international tri-party repo market are large-scale custodian banks (e.g. the BNY Mellon) or central securities depositories (e.g. Euroclear and Clearstream). From the perspective of the vertical combination of trading platform, clearing mode, and collateral management, there are mainly three business models in the international tri-party repo market:

The first model features the combination *of "electronic trading platform + central counterparty (CCP) clearing + third-party collateral management". In this model, the two parties of a transaction will anonymously trade bonds in the standardized basket of pledged securities on an electronic trading platform. Once the trading agreement is concluded, the CCP*① *will replace the contract with two new contracts between the CCP and each of the two parties, guarantee the performance of collateral arrangements, and undertake default risks, while a third party will provide collateral management services. This model is adopted in the general collateral finance repos of U.S. Depository Trust and Clearing Corporation as well as the euro general collateral repos of London Clearing House.*

The second model is characterized by the combination of "bilateral transaction + bilateral clearing + third-party collateral management". Upon the conclusion of a trading agreement, the two counterparties will commission a third party to manage their collaterals. The process constitutes the traditional European tri-party repo model.

The third model represents the combination of "electronic trading platform + bilateral clearing + third-party collateral management". After a trading agreement is reached on an electronic trading platform, the two counterparties will conduct bilateral clearing and authorize a third party to manage collaterals.

2. Effects of introducing tri-party repo businesses

Tri-party repos can effectively address the risk and cost-related challenges faced by participants in bilateral repos, thus representing a natural evolution of and useful complement to bilateral repos. The introduction of tri-party repos into the interbank market is expected to exert critical and positive effects.

First, tri-party repos can significantly improve labor specialization in the repo market and boost operational convenience of pledged repos. As professional collateral management agencies are commissioned to manage collaterals, the management costs of financial institutions can be lowered effectively and the two counterparties in repo transactions can focus on capital borrowing and lending. In this way, the trading efficiency will be greatly bolstered, and thus better satisfy the liquidity management demand of investors.

Second, tri-party repos vitalize fractional credit bonds and improve liquidity of the secondary market. At present, participants dealing in traditional interbank bilateral repos prefer interest rate bonds with larger balances as collaterals, hence the use of credit bonds and fractional bonds is limited. By contrast, in tri-party repos, any bonds that are up to certain criteria are qualified collaterals. Therefore, financial institutional investors, especially small

① Once a trade agreement is reached, it would be transferred to the CCP—the single contract between the two initial counterparties is replaced by two new contracts between the CCP and each of the two parties.

and medium-sized institutions, can fully leverage credit bonds and fractional bonds they hold without altering investment strategies. In this way, the efficiency of bond usage of market participants will be enhanced, and the liquidity of the secondary market will also be substantially boosted.

Drawing upon international experiences, bond registration, depository, and settlement agencies in China's interbank market launched the tri-party repo business suitable for China's bond market, so as to improve security of financing, optimize the third-party collateral management mechanism in the interbank market, and establish better connections with the international financial market.

BOX 2 The bill market strengthened its support for the development of MSEs and private businesses

After over four decades of trials and practices, China's bill market, recognized as a national unified bill trading system, has grew into an indispensable part of the domestic financial industry. In recent years, the size and participant base of the bill market constantly expanded, with gradual improvements to infrastructure, steady progress in institution and product innovation, and significant advancement of risk prevention capabilities. In general, the bill market has offered vigorous support for the sustainable and healthy development of the real economy.

In 2018, as China stepped up efforts in supporting the real economy, especially micro, small and medium-sized enterprises and private businesses, under the collaboration of regulatory authorities, market infrastructure platforms, and financial institutions, the bill market constantly strengthened its support for MSEs and private businesses. Throughout the year, the PBC enhanced policy guidance and targeted support by boosting the central bank discount quota by RMB 200 billion, specially for MSEs and private businesses. The central bank discount business system was upgraded to improve business efficiency and ensure more accurate provision of central bank discount funds for the real economy. The central bank discounts totaled RMB 0.7 trillion throughout the year, reporting a monthly growth of 10 percent; outstanding central bank discounts at the end of 2018 amounted to RMB 329 billion, up 81.2 percent year on year; the weighted average discount interest rate of outstanding central bank discounts at the end of 2018 stood at 3.93 percent, 46 bps lower than that of bills without central bank discounts.

Market infrastructure platforms and financial institutions proactively pursued innovations in bill products and constantly improved the efficiency of bills in serving entity enterprises. The Shanghai Commercial Paper Exchange released an innovative product—"Bill Payment Connect", offering online bill payment services in scenarios of B2B e-commerce and supply chains.

By enabling online processing of bill issuance and enterprise endorsements, the product enriched application scenarios of bill payment and filled in the gap of online bill payment. Industrial and Commercial Bank of China (ICBC) launched "ICBC Electronic Discount", a product characterized by the combination of "online submission + intelligent review and approval + real-time payment receipt", enabling self-service discounts without any manual intervention throughout the business process. Shanghai Pudong Development Bank worked to improve top-level design of supply chain products, and created a "1 + N" ecosystem for supply-chain financial services based on supply chain bills. Based on advancements in Fintech, China Merchants Bank launched intelligent bill discount services, and concluded the first transaction of "online bill discount through mobile banking" in China, which marked the beginning of "APP era" for bill businesses. The Bank of Jiangsu joined hands with the State Grid Corporation of China to launch the "Electronic Electricity Bill", which allowed users to pay for electricity with bills, and offered favorable discount services to ease MSEs' and private enterprises' burden of electricity expenses. Wujiang Rural Commercial Bank launched the "Benefit Discount", discounting qualified bankers' acceptances with small face values and low credit levels held by MSEs at a rate lower than the benchmark lending rate of 1-year loans.

In 2018, the volume of bill acceptances and discounts grew by 24.84 percent and 38.83 percent year on year respectively. Bills held by MSEs and private enterprises accounted for more than 80 percent of the total, and the total volume of enterprises' payment with e-bill acceptances reported a year-on-year increase of 62.59 percent, indicating a growing need for bill payment. In December 2018, the weighted average interest rate of bill financing was 3.84 percent, 2.07 percentage points lower than that of general loans. Therefore, bills are playing prominent roles in relieving enterprises from the problem of financing difficulties and high costs.

Chapter 3 Bond Market

In 2018, China's bond market maintained a good momentum of development in general. Bond issuance grew steadily, with a substantial growth in corporate credit bond issuance and net financing of corporate bonds. Cash bond transactions increased sharply and the volume surged. Bond yield was lower in general while the aggregate price index went up. The number of investors further increased. Overseas institutions had greater participation in the market. Innovation in products and mechanism as well as standardized management was continuously strengthened. The market accelerated its pace of opening-up and played an increasingly important role in serving the real economy and promoting the supply-side structural reform.

3.1 Performance of the bond market

3.1.1 Primary market

3.1.1.1 Bond issuance grew steadily

In 2018, a total of RMB 43.59 trillion of bonds were issued, up RMB 2.77 trillion or 6.8 percent year on year, 6.1 percentage points lower than the previous year, of which RMB 37.79 trillion was issued in the interbank bond market (up 2.9 percent year on year, 11.3 percentage points lower than the previous year, and accounting for 86.7 percent of the total) and RMB 5.81 trillion was issued in the exchange market (13.3 percent of the total).

The three types of bonds with the largest volume of issuance were NCDs, corporate credit bonds and local government bonds, with issuances at RMB 21.08 trillion (up 4.4 percent year on year), RMB 7.30 trillion (up 32.7 percent year on year) and RMB 4.20 trillion (down 4.4 percent year on year) respectively.

Table 3.1 Issuances of major bonds in 2018

Types of bond	Issuance (RMB 100 million)	YoY growth (%)	Types of bond	Issuance (RMB 100 million)	YoY growth (%)
Treasury bonds	35,411.00	-8.4	Corporate credit bonds	73,012.50	32.7
Local government bonds	41,651.70	-4.4	Financial bonds	19,727.20	13.7
Government-sponsored bonds	2,530.00	-11.5	NCDs	210,832.40	4.4
Policy bank bonds	33,681.80	2.6	ABS	18,187.50	18.1
International institution bonds	898.60	34.9	Total	435,932.70	6.8

Note: 1. Financial bonds include interbank and exchange-traded financial bonds. The former refers to financial bonds issued by financial institutions established in China (including general financial bonds, subordinated debts, hybrid capital bonds, and tier-2 capital instruments issued by commercial banks), supplementary capital bonds issued by insurance companies, and bonds issued by non-bank financial institutions such as auto-finance companies.

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

Sources: CSRC, China Central Depository & Clearing Co., Ltd. (CCDC), and Shanghai Clearing House (SHCH).

3.1.1.2 Bond custody volume maintained steady growth

At the end of 2018, the outstanding bond custody volume reached RMB 86.39 trillion, up 15.0 percent year on year, accounting for 96.0 percent of China's GDP in 2018, of which RMB 75.69 trillion was in the interbank bond market (up 15.3 percent year on year, accounting for 87.6 percent of total bond custody volume) and RMB 10.70 trillion was in the exchange market (up 12.3 percent year on year, accounting for 12.4 percent of the total). Corporate credit bond custody reached RMB 18.54 trillion, up 9.4 percent year on year, accounting for 21.5 percent of the outstanding bond custody. Specifically, RMB 11.89 trillion of corporate credit bond custody was in the interbank bond market, up 8.4 percent year on year; RMB 6.65 trillion was in the exchange market, up 11.3 percent year on year. This reflected the effective implementation of the spirit of the Central Economic Work Conference in the bond market and concrete efforts made to raise the proportion of direct financing.

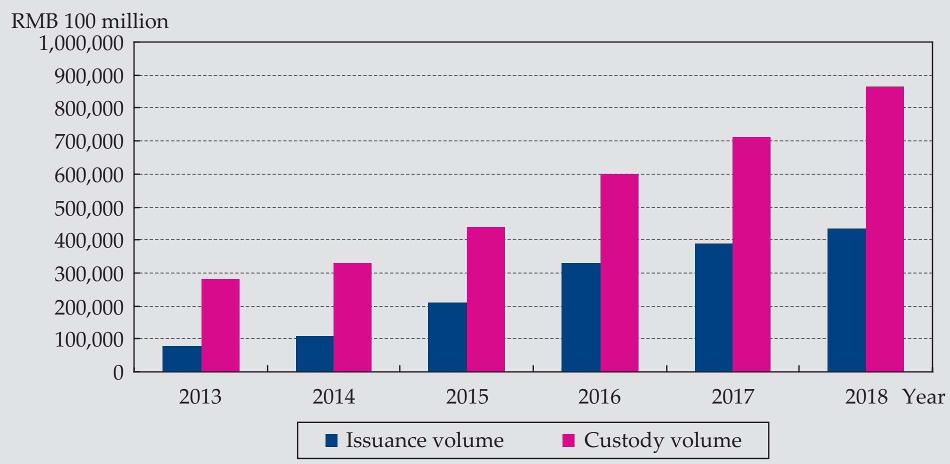
3.1.2 Secondary market

3.1.2.1 Cash bond trading volume grew substantially

In 2018, cash bond transactions totaled RMB 156.67 trillion (up 44.6 percent year on year, 62.6 percentage points higher than the previous year), of which RMB 150.74 trillion was in the interbank bond market (up 46.6 percent year on year, 65.7 percentage points higher than the previous year, accounting for 96.2 percent of the total) and RMB 5.93 trillion was traded at the exchanges (up 6.6 percent year on year, accounting for 3.8 percent of the total).

In terms of bond types in the cash bond transactions in the interbank bond market, the most traded three categories were NCDs, policy bank bonds and treasury bonds, which

Figure 3.1 Bond issuance and custody volumes in the interbank bond market from 2013 to 2018

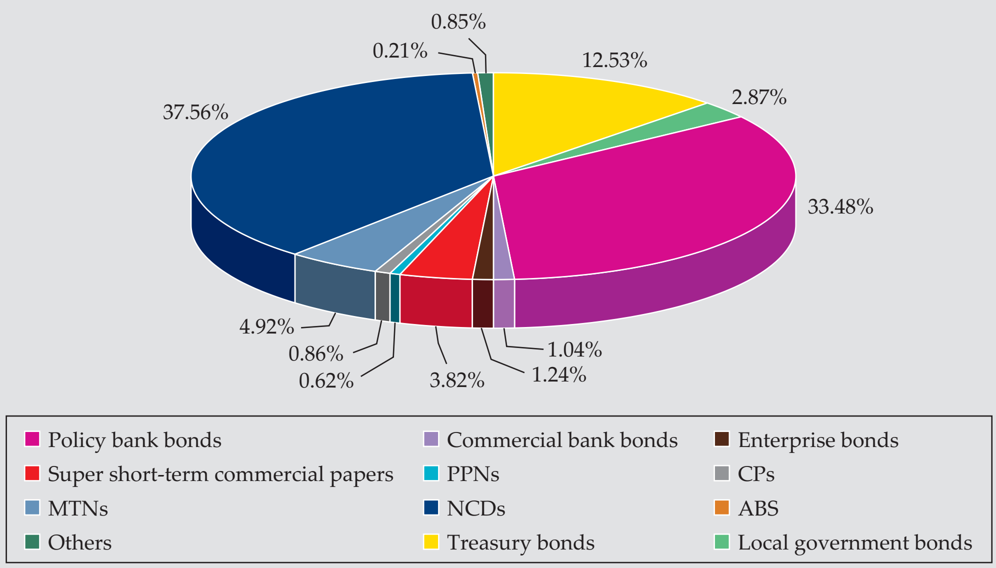


Sources: CCDC and SHCH.

accounted for 37.6 percent, 33.5 percent, and 12.5 percent (and together accounted for 83.6 percent) of the transaction volume respectively.

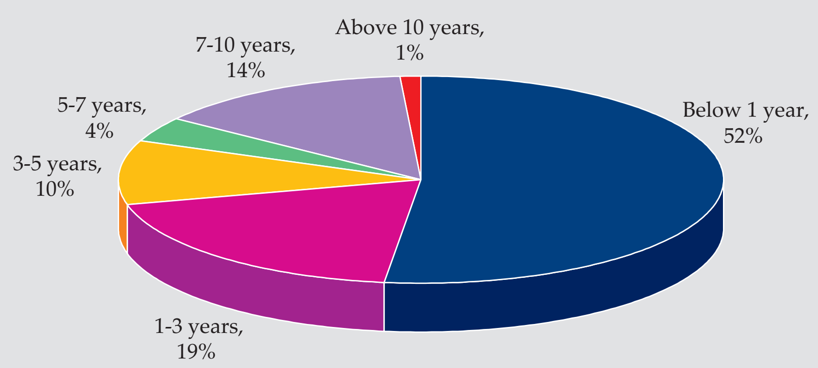
In terms of maturities of cash bond transactions in the interbank bond market, bonds with a maturity of less than 1 year, 1-3 years, 3-5 years, 5-7 years, 7-10 years and more than 10 years recorded trading volume of RMB 77.64 trillion, RMB 28.42 trillion, RMB 15.47 trillion, RMB 6.04 trillion, RMB 21.03 trillion, and RMB 2.12 trillion respectively, accounting for 52 percent, 19 percent, 10 percent, 4 percent, 14 percent, and 1 percent of the total.

Figure 3.2 Trading structure of cash bond transactions in the interbank bond market in 2018



Sources: CCDC and SHCH.

Figure 3.3 Maturity structure of cash bond transactions in the interbank bond market in 2018



Source: CFETS.

3.1.2.2 Bond price index generally went up

The aggregate price index climbed up amidst volatilities. The ChinaBond Aggregate Index-Total Return Index (Total Value) was 167.96 points at the beginning of the year, and then rose by 9.5 percent to 183.98 points at the end of the year. The most significant daily percentage gain of 2018 was recorded in April, standing at 0.9 percent. The Credit Bond Composite Index (Total Return) of SHCH registered 110.89 at the end of the year, an increase of 7.8 percent from 102.94 at the beginning of the year. The SSE Corporate Bond Index (Total Price) was 182.04 at the beginning of the year. It continued an uptick trend during the year, reaching 192.36 at the end of the year, up 5.7 percent from the beginning of the year.

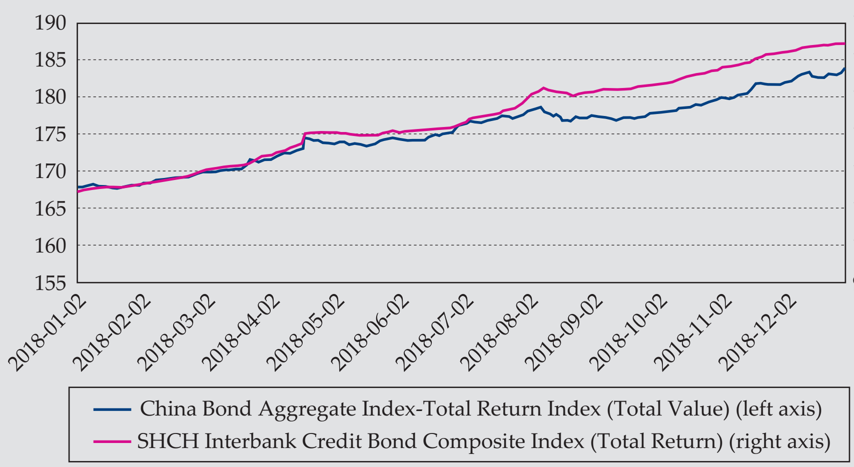
3.1.2.3 Investor structure in the interbank bond market remained stable

In 2018, investor structure of the interbank bond market changed slightly in general. At the end of 2018, bonds held by deposit-taking financial institutions posted RMB 43.43 trillion, accounting for 57.4 percent of the total outstanding bonds, down 0.7 percentage point year on year. Bonds held by non-legal-person institutional investors reached RMB 21.86 trillion, accounting for 28.9 percent of the total, up 0.6 percentage point year on year. Among the bonds held by deposit-taking financial institutions, local government bonds took up the largest share, accounting for 35.6 percent. Among the bonds held by non-legal-person institutional investors, corporate credit bonds took up the largest share, accounting for 37.2 percent.

3.1.2.4 Over-the-counter bond transactions in the interbank bond market tended to be more active

OTC bond transactions in the interbank bond market became increasingly active in 2018. Bonds distributed over the counter amounted to RMB 0.32 trillion, up 39.5 percent year on

Figure 3.4 Trend of interbank bond indexes in 2018



Sources: CCDC and SHCH.

year. The cumulative OTC trading volume of bonds posted RMB 0.13 trillion, surging by 439.1 percent year on year. At the end of 2018, the custody balance in the OTC market posted RMB 0.78 trillion, up 7.1 percent year on year, accounting for 1.0 percent of the total custody balance in the interbank bond market. The major types of bonds traded over the counter were treasury bonds and policy bank bonds. The custody balance of treasury bonds in the OTC market reached RMB 0.73 trillion, up 3.7 percent year on year, accounting for 93.8 percent of the total custody volume in the interbank bond market.

3.2 Main features of the bond market

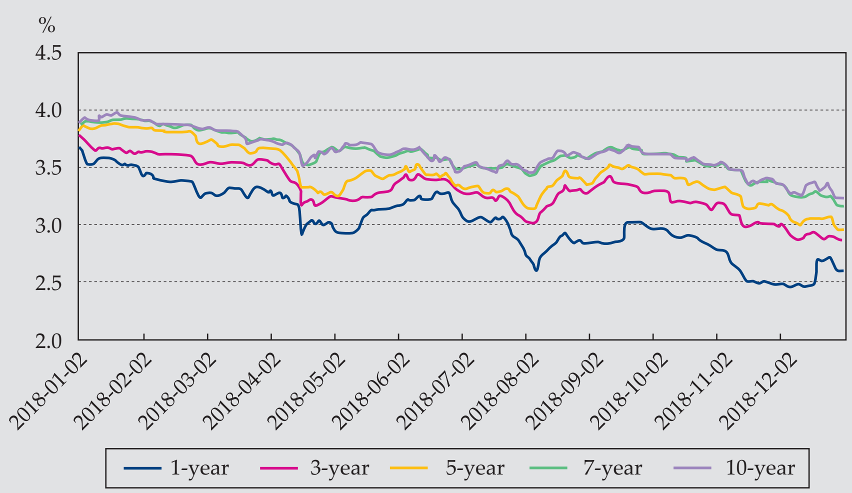
3.2.1 The market kept strengthening throughout 2018 and yields fell constantly

Due to monetary/liquidity easing, China-U.S. trade frictions, and increasing downward pressure on China's economy, the bond market went up in 2018, while interest rates fell and yields went down amidst fluctuations.

Yields of the interbank bonds fluctuated and went down as a whole. Interbank bond yields dropped slowly in Q1, remained stable on the whole with certain volatilities and see-saw movements in Q2 and Q3, continued to decline in Q4, and stood at 3.2 percent at the end of 2018. Yields of 1-year and 10-year treasury bonds fell 119 bps and 65 bps respectively from a year earlier.

Yields at the exchange market dropped sharply. Yields of 1-year, 3-year and 5-year corporate bonds of the SSE fell 140 bps on average. In particular, yields of 1-year corporate bonds fluctuated and continued to decline since the beginning of the year, standing at 3.7 percent at the end the 2018. Yields of treasury bonds of the SZSE fell from 3.9 percent at the beginning

Figure 3.5 Changes in yields of treasury bonds with key maturities in 2018



Source: CCDC.

of the year to 3.2 percent at the end of 2018, a decrease of 65 bps. Yields of 5-year and 1-year treasury bonds dropped 76 bps and 99 bps respectively, leading to steep yield curves where the scale of downward shift of the short end eclipsed that of the long end.

3.2.2 Corporate credit bond issuance grew substantially, with a surge in net financing

In 2018, the issuance of corporate credit bonds increased substantially, reaching RMB 7.55 trillion, rising 32.7 percent year on year, 65.6 percentage points higher than the previous year. In particular, debt financing instruments of non-financial enterprises and corporate bonds hit RMB 5.79 trillion and RMB 1.63 trillion, up 36.3 percent and 42.6 percent year on year, accounting for 74 percent and 22 percent of total issuance of corporate credit bonds respectively. The net financing of corporate credit bonds stood at RMB 2.49 trillion, accounting for 12.9 percent of all-system financing aggregates in 2018, 10.9 percentage points higher than the previous year.

3.2.3 Major types of bonds became more active on the whole and turnover rate of interest rate bonds in the interbank bond market rose by a large margin

In 2018, the total turnover rate in the bond market was 1.38, a notable improvement from the previous year. In particular, bond transactions in the interbank bond market were more active, while turnover rate of the exchange market fell slightly short of the previous year. The top three bonds in terms of transaction volume were NCDs, policy bank bonds, and treasury bonds, accounting for 36.9 percent, 34.0 percent and 12.7 percent of the total respectively. Their turnover rates increased 114.0, 101.0 and 31.0 percentage points year on year respectively. Turnover rate of local government bonds rose by 19.0 percentage points year on year as well.

Table 3.2 Comparison of Turnovers of major bonds in the interbank bond market between 2018 and 2017①

Unit: percent

Types of bonds	2018 (%)	2017 (%)	Difference from prior year percentage point
Treasury bonds	138	107	31
Local government bonds	26	7	19
Policy bank bonds	360	259	101
Corporate credit bonds	95	99	-4
NCDs	630	516	114
ABS	13	22	-9

Source: CFETS.

① Turnover formula: (cash bond trading amount/custody amount)×100 (percent).

3.2.4 Participants in the interbank market increased and bond holdings of overseas investors grew substantially

At the end of 2018, market participants in the interbank bond market totaled 25,674, an increase of 4,172 year on year. Among them, 2,963 were domestic legal person institutions, an increase of 216 year on year; 21,525 were domestic non-legal-person institutions, an increase of 3,576 year on year; 1,186 were overseas institutions, an increase of 380 year on year.

Bonds held by overseas institutions totaled RMB 1.73 trillion, up RMB 0.55 trillion or 46.7 percent year on year, accounting for 2.3 percent of total bond holdings of institutional investors, which fell slightly month on month in October and November and saw different levels of increase in the other months of the year, with the most significant increase by 7.9 percent recorded in June.

3.2.5 The number and scale of defaults rose with issuers widely dispersed across different industries

In 2018, a total of 46 enterprises defaulted, involving 130 bonds and RMB 124.3 billion, of which 40 private enterprises defaulted for the first time, involving 116 bonds and RMB 113.6 billion, and 6 state-owned enterprises defaulted, involving RMB 10.7 billion. On the whole, default was kept at a reasonably low level. In 2018, the total amount of defaults in the bond market accounted for 0.8 percent of the entire market, lower than the year's non-performing loan rate of 1.9 percent in the banking sector as well as the default rate of 1.1 percent-2.2 percent in the international bond market over recent years.

Issuers were widely dispersed across different industries, including both asset-intensive industries with strong cyclicity, such as coal and energy, and asset-light industries with weak cyclicity, such as agriculture, Internet, information services, and textile.

3.3 Innovation in the bond market

3.3.1 The launch of support instrument for bond financing by private enterprises

In October 2018, the State Council Executive Meeting decided to launch the support instrument for bond financing by private enterprises (hereinafter referred to as "support instrument"). The initial funding for the support instrument is partly provided by the PBC through central bank lending. Run by professional institutions, it provides various services such as credit risk mitigation (CRM) and credit enhancement guarantees to support bond financing by private enterprises facing temporary difficulties, and actively help recover the financing function of private corporate bonds. At the end of 2018, the interbank bond market, by launching CRM instruments of RMB 6.32 billion, directly or indirectly supported 35 private enterprises to issue 50 bonds and secure financing of RMB 22.9 billion; the exchange market, by launching CRM instruments of RMB 0.26 billion, directly or indirectly supported

6 private enterprises to issue 6 bonds and secure financing of RMB 1.22 billion. Since the introduction of the support instrument, the weighted rate of bond issuance by private enterprises rated AA+ or AA with the support instrument were 70bps lower on average than that of equivalents without the support instrument, which effectively supported bond financing by private enterprises.

3.3.2 Special bonds for MSEs boomed

In March 2015, the former CBRC issued the *Guidance on Financial Services for MSEs in 2015*, which required that on the basis of effectively increasing loan increments, "the growth rate of MSE loans would be no less than the average growth rate of all loans, the number of MSE loan borrowers no less than that of the previous year, and the approval ratio of MSE loans no less than that of the previous year" (hereinafter referred to as "three no less than"). In June 2018, the PBC, the CBIRC, the CSRC, the National Development and Reform Commission (NDRC), and the Ministry of Finance (MOF) jointly released the *Opinions on Further Deepening Financial Services for MSEs*, eliminating the precondition of "three no less than" and noting that providing financial services for MSEs was significant in serving the real economy as well as preventing and defusing financial risks. Banking financial institutions were encouraged to issue financial bonds for MSEs. Bond issuance requirements were eased and follow-up supervision was strengthened to ensure that funds would be used to issue loans for MSEs. MSE financial bonds totaled RMB 124.5 billion, 11.3 times that of 2017.

3.3.3 Types of local government bonds increased

In 2018, the PBC, the MOF, and the CBIRC issued the *Notice on Launching the OTC Business for Local Government Bonds in the National Interbank Bond Market* (hereinafter referred to as the *Notice*). The *Notice* clarified that OTC businesses could be conducted in the interbank bond market for previously issued local government bonds recognized by the issuers. The MOF and the Ministry of Housing and Urban-Rural Development jointly formulated the *Administrative Measures for the Pilot Program of Issuing Special Local Government Bonds for Shanty Towns Transformation*, which clarified volume controls, budgeting, financial statement, implementation and other regulations of special local government bonds for shanty town renovation. The MOF released the *Opinions on the Issuance of Local Government Bonds in 2018*, encouraging commercial banks, securities companies, insurance companies, and other institutions and individuals to fully participate in the investment of local government bonds. In addition, the first specific bond for shanty towns renovation, the first medical bond, the first publicly-offered local government bond ETF and the first set of Xiong'an New Area government bonds were successfully issued.

3.3.4 Efforts were made to promote innovation in assets securitization of MSEs

To implement the spirit of the *Opinions on Further Deepening Financial Services for MSEs* (Yinfa〔2018〕No.162) jointly issued by five ministries, the National Association of Financial

Market Institutional Investors (NAFMII) in 2018 revised and released the *Guidelines for Information Disclosure of Securities Backed by MSE Loans (2018)*, which specified types of SMB loans, broadened the scope of eligible assets, and introduced flexible information disclosure indicators. Under the revised guidelines, five banks have registered securities backed by MSE loans which totaled RMB 15 billion. The cumulative issuance reached RMB 10.8 billion, about 15.4 times that of 2017.

3.3.5 Breakthroughs were made in targeted convertible bonds and convertible notes

In November 2018, the CSRC proposed to promote a pilot program for the use of targeted convertible bonds as payment instruments for mergers and acquisitions, and supported all kinds of enterprises, including private-owned listed companies, to become better and stronger. Several listed companies explored how to incorporate the mechanism of targeted convertible bonds into mergers and acquisitions.

In December 2018, the first publicly-offered perpetual convertible notes were successfully issued by Shandong Iron and Steel Group, totaling RMB 5 billion and featuring the combination of convertible notes and perpetual notes. The debt could be classified as equity at the initial stage of issuance, and investors were granted the right to convert the debt to equity within an agreed period, which helped lower the leverage ratio of enterprises in a market-oriented way. At the end of 2018, the interbank bond market has helped two enterprises to issue RMB 5.1 billion of convertible notes.

3.3.6 CFETS-BOC Traded Bond Index was launched

In June 2018, the CFETS-BOC Traded Bond Index was launched. It was the first traded bond index in the interbank bond market, including four sub-indexes, namely CFETS-BOC Traded Treasury Bond Index, CFETS-BOC Traded Policy Financial Bond Index, CFETS-BOC Traded High Credit Rating Bond Index, and CFETS-BOC Traded High Credit Rating NCD Index. Based on the trading characteristics of various types of bonds in China's interbank bond market, with bond trading volume, number of market makers, and other transactional components taken into consideration and a reasonable number of active bonds chosen as sample bonds, the bond indexes could provide accurate and practical performance benchmarks for investors to enable their effective portfolio investments and risk managements in the bond market.

3.4 Institutional arrangements and infrastructure development in the bond market

3.4.1 The management system of bond issuance was constantly improved

3.4.1.1 Capital replenishment of commercial banks was supported with diversified channels

In February 2018, based on extensive research and consultation, the PBC drafted and released the *Notice on the Issuance of Capital Replenishment Bonds by Banking Financial Institutions* (PBC Announcement〔2018〕No.3) to regulate the issuance of capital replenishment bonds by banking financial institutions.

In March 2018, the CBRC, the PBC, the CSRC, the CIRC, and the SAFE jointly released the *Opinions on Further Supporting Innovation on Capital Instruments of Commercial Banks* to support commercial banks in creating and issuing capital replenishment instruments of various types through diversified channels. In December 2018, the FSDC Office held a symposium with regard to the support for the capital replenishment of commercial banks with diversified channels such as perpetual bond issuance. Meanwhile, the Bank of China announced its plan to sell as much as RMB 40 billion of perpetual bonds, which is a beneficial attempt on capital replenishment of commercial banks.

3.4.1.2 Flexible tendering issuance and public underwriting were introduced in the interbank market

In August 2018, the PBC issued *the Notice on Carrying out Pilot Project for Flexible Tendering Issuance of Financial Bonds*; the MOF issued the *Business Procedures of Flexible Tendering Issuance of Local Government Bonds*; and China Development Bank for the first time increased the supply of its 10th tranches of financial bonds in 2018 by flexible tendering. The MOF issued the *Business Procedures of Public Underwriting of Local Government Bonds*, which specified the application scope of public underwriting so that issuers could work on bond issuance under the assistance of bookrunners. In September 2018, three project revenue specific bonds of Xinjiang Uygur Autonomous Region were successfully issued by public underwriting.

3.4.1.3 The well-known seasoned issuer system was improved

In August 2018, the SSE studied and launched the system of well-known seasoned issuers. The SSE opened green channels for quality issuers who met the “8+1” standard. The review process for them was reduced to within 5 workdays on average, which boosted the financing efficiency. At the end of 2018, a total of 108 enterprises were included in the list of well-known seasoned issuers, with annual issuance totaling RMB 278.4 billion and approval quota reaching RMB 429 billion, covering green corporate bonds, renewable corporate bonds, and other types of bonds.

3.4.1.4 Private placement system was actively optimized

In 2018, the NAFMII revised and improved the *Provisions for the Selection of Specialized Institutional Investors of Private Placement Notes* and selected “specialized institutional investors of private placement notes of the year 2018”, so as to increase the number of specialized institutional investors, boost various participants’ enthusiasm, improve the efficiency of market operation, help the construction and development of a multi-tiered debt capital market, and further allow the private placement note to play a positive role in serving the real economy.

3.4.2 The construction of bond trading management system was promoted

In April 2018, the PBC issued the Announcement 〔2018〕No. 18 to regulate tri-party repos in the interbank bond market. The SSE and the SZSE successively issued the *Interim Measures of Shanghai Stock Exchange and China Securities Depository and Clearing Co. Ltd. for Transactions and Settlement of Bonds in Pledged Tri-Party Repo* and the *Interim Measures of Shenzhen Stock Exchange and China Securities Depository and Clearing Co. Ltd. for Transactions and Settlement of Bonds in Pledged Tri-Party Repo*, which enriched and improved the pledged repo system in the exchange market.

3.4.3 The risk prevention and disposal mechanism was strengthened

3.4.3.1 Asset management businesses of financial institutions were further regulated

In April 2018, the PBC, the CBIRC, the CSRC, and the SAFE jointly issued the *Guidelines on Regulating Asset Management Services of Financial Institutions* to unify regulatory standards for similar asset management products. In July 2018, the PBC issued the *Notice on Further Clarifying Issues Concerning the Guidelines on Regulating Asset Management Services of Financial Institutions* to specify the investment range of publicly offered asset management products, the valuation method for asset management products during the transition period, as well as macro-prudential policy arrangements in the transition period. In December, the PBC, the CBIRC, the CSRC, and the SAFE jointly issued the *Statistical System for Financial Institutions' Asset Management Products*, with an aim to provide data support for preventing and defusing systemic financial risks, and enhance the financial market's capacity to serve the real economy.

3.4.3.2 Investor protection provisions were improved and promoted

In 2018, the NAFMII drew on experience of overseas mature markets, took into consideration the protection of domestic investors' rights and interests, and proactively sought to improve the investor protection provisions. The provisions will be made open to the market after well-established research. The protection provisions include proper intervention in corporate governance, conditional limitation on issuers' operational behavior, and definition, quick response, and resolution mechanism of bond default. According to statistics, in 2018, about 32.5 percent bond financing instruments incorporated investor protection provisions.

3.4.3.3 The mechanism for transferring defaulted bonds upon maturity was launched

To improve default resolution mechanism in the bond market, provide more exit channels for investors, and reduce risk accumulation, the China Foreign Exchange Trade System (CFETS) worked with Beijing Financial Assets Exchange (BFAE) to launch a pilot project of transferring defaulted bonds upon maturity. The project followed the framework of the current interbank market, provided transference services for defaulted bond upon maturity through approaches such as one-to-one inquiry, anonymous auction, and dynamic offer, and met the diversified demands of different investors.

3.4.4 The information disclosure and credit system in the bond market were enhanced

3.4.4.1 Information disclosure of issuers was further regulated

In 2018, the PBC and four other ministries jointly issued the *Opinions on Further Deepening Financial Services for MSEs*; the NAFMII organized market members to revise and release the *Guidelines for Information Disclosure of Securities Backed by MSE Loans (2018)*; the SSE released the *Shanghai Stock Exchange Guidelines on Content and Format of Regular Report for Assets-Backed Securities*, so as to further improve the information disclosure mechanism of the bond market.

3.4.4.2 The self-discipline management system in the credit rating industry was improved

In March 2018, the NAFMII issued the *Self-Discipline Pact for Credit Rating Agencies on Debt Financing Instruments Offered by Non-Financial Enterprises* and *Questionnaire and Interview Procedures on Credit Rating Business for Debt Financing Instruments Offered by Non-Financial Enterprises*, to further strengthen the layered and systematic self-discipline management system in the credit rating industry and establish an investor-oriented market-based evaluation system. Meanwhile, *Rules on the Registration and Evaluation of Credit Rating Agencies in the Interbank Bond Market* was also released as an endeavor in this regard.

3.4.4.3 The regulatory system for bonds within the duration was consolidated

In 2018, the SSE and the SZSE revised and released the *Corporate Bond Listing Rules* and *Interim Measures for the Administration of the Non-Publicly Offered Corporate Bonds* to consolidate the self-discipline management system in the exchange market, and regulate behaviors of market participants, including listings, information disclosure, and transaction transfer. Meanwhile, the SSE established a sound regulatory mechanism for assets-backed securities(ABS), released and implemented the *Guidelines on Content and Format of Regular Report for Assets-Backed Securities* and the *Shanghai Stock Exchange Guidelines on the Credit Risk Management for Asset-Backed Securities within the Duration*, and enhanced the quality of ABS information disclosure and ABS credit risk management within their duration. The *Guidelines on Bond Trading and Circulation of the National Interbank Funding Center* was revised and procedures for modification during the duration of bonds were regulated.

3.4.5 Infrastructure development of the bond market was promoted

3.4.5.1 Performance guarantee system was adopted in the pre-issuance of treasury bonds

In December 2018, the *Notice on Issues Concerning Performance Guarantee for Pre-Issuance of Treasury Bonds in the Interbank Bond Market* was issued. It clarified that the performance guarantee system should be adopted in the pre-issuance of treasury bonds and that the system should involve both guarantee margins and securities. Guarantee securities should include treasury bonds, local government bonds, central bank bills, and bonds of development financial institutions and policy banks. Both counterparties could choose either bilateral performance guarantee or centralized management of performance guarantee provided by a third party. Pre-issuance of treasury bonds helped lower the underwriting risk of treasury bond underwriters, improve the price discovery function of treasury bond market, and give full play to the function of the treasury bond market.

3.4.5.2 Advances were made in bond collaterals

In December 2018, China Central Depository and Clearing Co.Ltd. (CCDC) signed an agreement on the pledged business of interbank credit-granting with the Bank of Communications, which marked the official launch of collaterals for interbank credit-granting businesses. The SZSE issued the *Interim Measures for Transactions and Settlement of Bonds in Pledged Tri-Party Repo* to incorporate non-publicly offered bonds and assets-backed securities into collaterals. The SSE issued the *Guidelines of the Shanghai Stock Exchange on the Services of the Bond Collateral Resolution Platform* to officially introduce the bond collateral resolution platform, which further improved the mechanism of default resolution in the bond market, safeguarded the legitimate rights and interests of relevant parties, and ensured the stable operation of the bond market.

3.4.5.3 IDEAL, the tool for real-name requests, was launched

The CFETS designed and launched IDEAL, a tool that allowed real-name requests and connected with local-currency deal system via formatted quotes, which enhanced trading efficiency, ensured real-time monitoring of transactions, and kept a full record of the trading process. It met the demand of monitoring and supervision, and offered an effective way for institutions to control internal risks.

3.4.5.4 The non-financial platform was constantly optimized and services for non-financial institutional investors were improved

In November 2014, in order to improve the construction of a multi-tiered bond market system and further consolidate the foundation of investors in the interbank market, the PBC launched the trading platform for qualified non-financial institutional investors (hereinafter referred to as the non-financial platform), allowing qualified non-financial institutional investors to engage in bond investment via the trading platform. In 2018, BFAE, as the operating agency of the non-financial platform, continued with its efforts in improving the non-financial platform by increasing the number of financial bonds held by the SHCH, introducing online training sessions, proactively encouraging local asset management companies and local credit enhancement companies to participate in the market, and making the non-financial platform more popular and active. At the end of 2018, 43 lead underwriters and 88 investors gained access to the non-financial platform, handling 139 transactions with total face value of RMB 2.554 billion.

3.4.6 Regulation coordination of the bond market was strengthened

3.4.6.1 A unified law enforcement mechanism in the bond market was established

In December 2018, the PBC, the CSRC, and the NDRC jointly released the *Opinions on Further Enhancing Law Enforcement in the Bond Market* to specify that the CSRC has the mandates to carry out unified law enforcement against violations of laws in the interbank bond market and the exchange bond market, and act within the *Securities Law of the People's Republic of China* to identify and impose punishment on violations, including information disclosure violations, insider trading, and other violations of the *Securities Law* in relation to various bonds like corporate bonds, enterprise bonds, and debt financing instruments of non-financial enterprises. The PBC, the CSRC, and the NDRC should take concerted efforts in unified law enforcement in the bond market, further improve the management system of the bond market, and form a regulation coordination mechanism that features clear division of work, close cooperation, and effective collaboration.

3.4.6.2 The unified management of the credit-rating industry was strengthened

In September 2018, the PBC and the CSRC jointly issued the Announcement〔2018〕No. 14, requiring that efforts be made to gradually unify the qualification requirements for rating business in the interbank and exchange bond market, strengthen the regulation of credit rating agencies and sharing of information, and improve the internal system of credit rating agencies. The Announcement clearly stated that the PBC, the CSRC, and the NAFMII should coordinate in qualification review and registration of the bond market rating agencies, and establish a green channel for mutual recognition of credit rating agencies that had already carried out rating business in the interbank or exchange bond market.

3.4.6.3 The Green Bond Standard Board was established

In December 2018, the Green Bond Standard Board was established to regulate the evaluation and certification of green bonds, carry out the filing and market review of green bond evaluation and certification institutions as well as in an orderly manner, and promote self-discipline in the industry. The first Board is composed of relevant market self-discipline organizations, infrastructure platforms, and influential and professional market institutions in green finance, where the NAFMII serves as the director institution and takes charge of organization and coordination.

3.5 Opening-up of the bond market

3.5.1 Opening-up policies were constantly improved

3.5.1.1 The *Interim Measures for the Administration of Bond Issuance by Overseas Institutions in the Interbank Bond Market* was issued

In September 2018, the PBC and the MOF jointly issued the *Interim Measures for the Administration of Bond Issuance by Overseas Institutions in the Interbank Bond Market* (hereinafter referred to as the *Measures*) to further clarify the conditions and registration procedures for bond issuance by overseas institutions in China's interbank bond market, regulate issues such as information disclosure, issuance registration, custody and settlement, opening of RMB capital account, funds transfer, and investor protection. In the aspect of information disclosure, the *Measures* specified the disclosure requirements for financial reporting and accounting standards, as well as rules of auditing services offered by overseas institutions for the issuance of Panda Bonds. At the end of 2018, great achievements have been made in the issuance of Panda Bonds. In China's bond market, 175 Panda Bonds were issued, totaling RMB 321.53 billion in issuance and RMB 274.45 billion in custody balance. In particular, the issuance in the interbank market posted RMB 198.06 billion, with a custody of RMB 154.96 billion.

3.5.1.2 Filing requirements for investors were simplified

In June 2018, following the arrangements of the PBC headquarters, the PBC Shanghai Head Office issued the Announcement〔2018〕No. 2, in which information collection and filing requirements for overseas investors who invest in China's interbank bond market were simplified. The Announcement further improved the business environment in China, promoted the opening-up of the financial market, and provided facilitation for overseas investors to invest in China's market.

3.5.1.3 Tax incentives for overseas institutional investors were implemented

In 2018, in order to attract overseas capital, the *Notice on Enterprise Income Tax and Value-added Tax Policies for Overseas Institutions Investing in the Domestic Bond Market* was issued and implemented in the bond market, which announced the temporary exemption of enterprise income tax and value-added tax for China-sourced bond interest derived by overseas institutional investors during the period from November 7th, 2018 to November 6th, 2021. Meanwhile, the tax exemption does not apply to bond interest which is derived by an establishment(s) of overseas institutions and is effectively connected with the establishment(s).

3.5.2 Overseas institutions enjoyed greater participation in the interbank market

3.5.2.1 The number of overseas institutions participating in the interbank market increased and the scale of investment expanded

In 2018, another 380 overseas institutional investors gained access to the bond market, with 224 via the scheme of Bond Connect and the others directly investing in the market. At the end of 2018, the bond custody of overseas institutions in the interbank market totaled RMB 1.73 trillion, up 46.7 percent year on year; overseas issuers in the interbank market included foreign government institutions, international development institutions, financial institutions, and non-financial institutions, with the issuance of RMB-denominated bonds totaling RMB 198.06 billion.

3.5.2.2 The number of foreign underwriters increased

In 2018, another two foreign banks entered the bond market and became Class B lead underwriters of debt financing instruments for non-financial enterprises; another foreign bank entered the bond market and became the underwriter of debt financing instruments for non-financial enterprises. At the end of 2018, there were three foreign banks classified as Class B lead underwriters and three foreign banks classified as underwriters of debt financing instruments for non-financial enterprises. The number increased from last year and the structure was constantly improved. In July, Shanghai municipal government allowed for the first time two foreign banks—Standard Chartered Bank and Development Bank of Singapore, to underwrite local government bonds, which marked the beginning of foreign financial institutions' underwriting of local government bonds in China.

3.5.3 The opening-up of market pricing and trading was constantly deepened

3.5.3.1 China's treasury bonds and policy bank bonds were officially included in the Bloomberg Barclays Global Aggregate Index

In March 2018, Bloomberg confirmed that starting from April 2019, it will include China's RMB-denominated treasury bonds and policy bank bonds to the Bloomberg Barclays Global Aggregate Index, which was the world's most widely-used fixed income benchmark. RMB-denominated bonds would become the fourth largest currency component, following the USD, euro and Japanese yen.

3.5.3.2 Functions of the Bond Connect were improved

In 2018, the PBC released the *Procedures of Bond Connect (Northbound Trading) Settlement*, allowing CFTES to cooperate with Bloomberg, regulating and facilitating tradings of foreign investors. The Bond Connect online platform launched the function of pre-trade allocations for block trade to further meet the trading demand of overseas asset managers. The function of domestic custodian institutions was improved to fully achieve Delivery Versus Payment(DVP)settlement. The first mortgage-backed securities products and asset-backed commercial bills that introduced foreign investors via Bond Connect were successfully issued. At the end of 2018, bonds held by Bond Connect investors totaled RMB 180.089 billion, an increase of 102.8 percent year on year.

3.5.3.3 Bond market cooperation and exchanges were deepened

In 2018, Bloomberg and CFETS jointly announced to offer qualified global investors the access to China's interbank bond market via the Bloomberg Terminal, and support investor access to China Interbank Bond Market Direct and Bond Connect. In addition, China had engaged in cooperation with the Luxembourg Stock Exchange, the Toronto Stock Exchange, World Bank, IHS Markit, and other institutions in the bond market. China's three domestic green bond indexes, including the ChinaBond China Green Bond Index, were simultaneously displayed in the Luxembourg bourse. A memorandum of understanding was signed by China with the Toronto Stock Exchange. Two indexes, including ChinaBond SDR CNY 3-Month Constant Maturity Index, were released and served as a benchmark to measure investment performance on RMB-denominated fixed-income assets by the World Bank. China also collaborated with IHS Markit to launch the iBoxx ChinaBond Government & Policy Banks Bond Index, the first globally-branded index using ChinaBond Index as benchmark for indexing investment.

3.5.3.4 Foreign rating agencies were encouraged to participate in the interbank bond market

In March 2018, the NAFMII issued the *Rules on the Registration and Evaluation of Credit Rating Agencies in the Interbank Bond Market* (hereinafter referred to as the *Rules*) to regulate the registration and evaluation of credit rating agencies as well as layered and category-based management. The *Rules* made it clear that domestic and foreign rating agencies could apply to the NAFMII for registration of a certain category of bond rating business in accordance with relevant regulations, and carry out rating business within the approved category of bond rating business. The requirements and procedures of application for domestic and foreign rating agencies are roughly the same. The release of the Rules helps promote the opening-up of the interbank bond market and enhances the self-discipline management of credit rating business.

3.5.4 The bond market strengthened its support to the Belt and Road Initiative

The bond market continued to serve government institutions as well as overseas enterprises that promoted the interconnectivity of infrastructure in countries along the Belt and Road. At the end of 2018, the interbank bond market issued RMB 71.62 billion of Panda Bonds for government institutions from Poland, Hungary, Philippines and other countries along the Belt and Road, as well as overseas non-financial enterprises such as Air Liquide of France and GLP Pte. Ltd. that supported the building of the Belt and Road Initiative(BRI). In 2018, the exchange market issued RMB 13.2 billion of Belt and Road bonds, which was widely recognized and subscribed by investors from countries along the Belt and Road.

3.6 Outlook of the bond market

According to the spirit of the 19th National Congress of the CPC and the decisions and arrangements of National Financial Work Conference, in 2019, the bond market will continue to focus on three key tasks, namely, serving the real economy, preventing and defusing financial risks, and deepening financial reforms. Efforts will be made to seek progress while maintaining stability, apply the new vision of development, uphold the market-oriented, law-based, and international principles, promote innovative development of the financial market, further improve the basic system and infrastructure services of the bond market, steadily develop the credit derivatives market, constantly deepen the opening-up of the bond market, and enhance its capability to serve the real economy.

Innovation in bond products and instruments will be constantly promoted. The bond market will strengthen its support for MSEs, agriculture, rural areas, and farmers, green industry, mass entrepreneurship and innovation, poverty alleviation, and emerging industries of strategic importance, adopt multiple measures to promote the issuance of credit bonds, steadily facilitate the securitization of assets, vigorously promote the issuance of local government specific bonds, constantly propel the issuance of perpetual bonds and other innovative types of bonds and establish mature mechanisms for them, accelerate the implementation of tri-party repos and treasury bond lending, continuously serve the advancement of the BRI, and strengthen coordinated development of the Beijing-Tianjin-Hebei region, Yangtze River Delta and Guangdong-Hong Kong-Macau Greater Bay Area. In the future, the bond market will explore new growth areas while pursing constant innovation. The size of issuance and custody is expected to hit another high.

Infrastructure and institutional arrangements in the bond market will be improved. In the future, efforts will be made to improve the trading and settlement mechanism and technology system building, strengthen the coordinated regulation of financial infrastructure, promote the construction of China's multi-level custody system, regulate the bond life-cycle management system, formulate and publish rules on identifying standardized credit assets, ensure a smooth connection with new regulations on asset management business and develop relative supporting rules, study and formulate unified management measures for ABS, and promote the sound development of the asset securitization market.

The risk prevention, control and resolution mechanism will be improved. Steps will be taken to further explore a market-oriented, and law-based mechanism for bond default risk disposal; further improve the information disclosure rules on issuance and duration of corporate credit bonds, and enhance the information disclosure mechanism; and further improve the capability of transaction monitoring and risk warning, crack down on violations of laws in the bond market, and accelerate the development of credit derivatives and collaterals market.

The opening-up of the bond market will be deepened. As China further integrates itself into the global mainstream bond indexes and gradually improves institutions that provide facilitation for overseas investors, the bond market will attract investment of more overseas institutions. The bond market will continue to promote the interconnectivity between domestic and international markets, optimize relevant institutional arrangements for overseas investors to participate in foreign exchange hedging transactions, promote the application of credit derivatives, and fully liberalize repo transactions when appropriate, so as to meet the reasonable investment and risk hedging demand of overseas investors.

Box 3 Support Instruments of Bond Financing for Private Enterprises

The CPC Central Committee and the State Council have always paid close attention to financial services for private enterprises. As General Secretary Xi Jinping puts it, private economy is a major driver of the development of the socialist market economy, and the Two Unwavering Commitments should therefore be firmly implemented. To implement the important instructions of the CPC Central Committee and the State Council on supporting the development of the private sector, in October 2018, upon the approval of the State Council and in line with market- and law-based principles, the PBC provided guidance for setting up a support instrument to stabilize and promote bond financing for private enterprises.

1. Background

The difficulties in and high costs of financing for private enterprises, especially micro, small and medium-sized enterprises, have long been troubling the Chinese economy. Since 2018, under the influence of such factors as complexities and changes in both domestic and international economy, some private enterprises and MSEs have encountered difficulties in operation and financing, and debt default cases have increased as a result. Some market players lowered their risk appetite for the private sector, and irrational financing actions were taken against private enterprises. The herd behaviour in the market left many private enterprises in financing difficulties although they were in normal operations. Therefore, it was widely agreed that measures should be taken to release some positive signals to rectify the deviation and improve market expectations.

The bond market is open, transparent, and the expectations are highly instructive, so starting with the bond market to support private enterprises is a wise choice in improving market expectations and boosting investor confidence. On October 22nd, 2018, the State Council Executive Meeting approved the launch of the support instruments for bond financing by private enterprises (hereinafter referred to as "support instruments") to alleviate financing difficulties in a market-based manner.

2. Mode of operation

Basically, the PBC uses central bank lending to provide part of the initial capital for the support instruments, and entrusts professional institutions to operate in a market-based manner. Through measures such as selling credit risk mitigation instruments and providing guarantee credit enhancement, private enterprises in normal operation yet stuck in temporary liquidity crunch are supported through bond financing.

Several principles should be followed in the implementation of the support instruments. The first is to abide by laws and regulations, and allow the market to play a dominant role, so as to protect the private property right of private enterprises. The second is to set clear targets and withdraw at the appropriate time. Private enterprises which enjoy market recognition, good prospects, and competitive technologies should be provided help through bond financing when they encounter temporary liquidity problems. But such support instruments are temporary in nature, and should be withdrawn when the market is back to normal. The third is to share risks and prevent moral hazards. The support instruments, local credit enhancement or guarantee institutions, and other market participants should share the credit risk involved following the principle of risk-return equivalence. Potential moral hazards involved in the entrustment process should be prevented.

3. Performance and achievements

The support instruments help address the difficulties in and high costs of financing for private enterprises in many ways. First, they make it easier for private enterprises to issue bonds. Credit risk mitigation warrants are bought and paid by investors, so the various demand of investors with different risk preferences can be met, thus attracting more of those with low risk preference. This makes it easier for private enterprises to issue bonds. Second, they reduce the cost of bond issuance for private enterprises. Mitigation warrants and joint bond issuance do not add extra costs for the issuing enterprises. Rather, since the number of bond investors has increased, bond issuance costs for private enterprises have been reduced. Third, they bring benefits to all participants. Financing costs are reduced for the issuers, investors with a lower risk appetite have a larger range of investment targets through buying mitigation warrants, and those with a higher risk appetite like funds and city commercial banks have also increased their inputs. Praises have been given by all parties involved.

By the end of 2018, RMB 6.32 billion of credit risk mitigation warrants were created in the inter-bank market to support, directly or indirectly, 35 private enterprises to issue 50 bonds, with a total financing volume of RMB 22.9 billion. RMB 260 million of credit risk mitigation warrants were created in the exchange market to support, directly or indirectly, 6 private enterprises to issue 6 bonds, with a total financing volume of RMB 1.22 billion. The weighted interest rates of AA+ and AA bonds involving support instruments issued by private enterprises were on average 70 bps lower than those with same ratings and maturities yet without support instruments, which gave solid help to the financing of private enterprises.

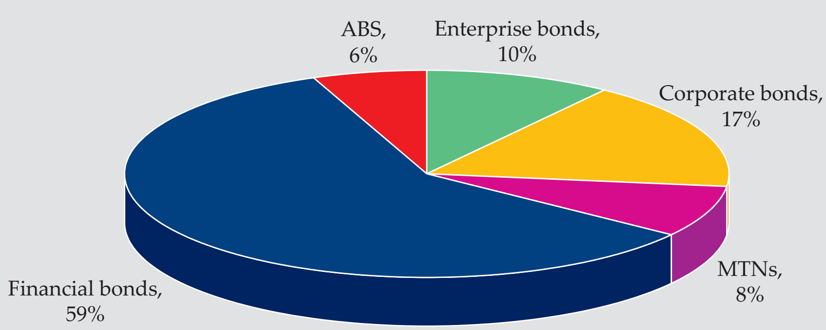
Box 4 China's Green Bond Market

As a part of green finance, green bonds can help promote green development. As General Secretary Xi Jinping points out, green finance is an important measure towards green development and a key part of the supply-side structural reform. Financial instruments like green loans and green bonds, as well as relevant policies, should serve the purpose of green development. As regulatory policies and institutions improve, China's green bond market grows steadily and becomes increasingly regulated. In 2018, the number and size of green bonds issued kept growing, multiple policies were developed to support its development, and many new products and ways of issuance were created.

In terms of the quantity and size of bond issuance, by the end of 2018, the size of labeled green bonds① in China's domestic bond market was RMB 282.6 billion②, representing a year-on-year increase of 13.7 percent, including 208 bonds [financial bonds, enterprise bonds, corporate bonds, Medium Term Notes (MTNs) and asset-backed securities (ABS)] issued by 115 bodies. The financial industry accounted for a majority of 63.5 percent of total green bond issuance. Newly issued green bonds maintained good/high ratings, with 77.9 percent of all green bonds being rated AAA. The percentage of low-rated bonds decreased substantially.

As for policy support, in 2018, the PBC developed

Figure 3.6 Size of green bond issuance (by category)



Source: CCDC.

① Labeled green bonds refer to those that are issued with official approval, and the funds raised are primarily used in assets or projects which aim at tackling climate change.

② RMB 220.053 billion of 186 green bonds were issued onshore by 101 issuing bodies; RMB 62.581 billion of 22 green bonds were issued offshore by 14 issuing bodies. Since offshore green bonds are categorized differently from onshore ones, the former is excluded in this paper.

a series of policies to support green finance. First, it issued the Notice on Enhancing the Supervision and Management of Green Financial Bond within the Duration and the Information Disclosure Standards for Green Financial Bond within the Duration to improve the supervision and management of green financial bonds. Second, green bonds were classified as qualified Medium-term Lending Facility (MLF) collaterals, in a bid to encourage financial institutions to further support the green economy.

In terms of new products and ways of issuance, participants in the green bond market were diversified and many new products were issued for the first time. In 2018, the first green bond was issued on the NEEQ for the construction of the "Optical Grade BOPET Film Production Line Project"; the first green bond for financial leasing was issued for clean energy lease projects like wind power, water power, and solar photo-voltaic power generation; the first high-quality private enterprise bond was issued to promote the sound development of private enterprises. Green bonds were targeted at key green sectors. China Green Bond Index was included in overseas exchanges for the first time. The ChinaBond Green Indices (including ChinaBond China Green Bond Index, ChinaBond China Green Bond Select Index, and ChinaBond China Climate Aligned Bond Index) were included in the Luxembourg Stock Exchange, which was a huge step taken in the internationalization of China's green bonds. In 2018, the NAFMII carried forward with product innovation, and succeeded in implementing several green projects. The first green "Bond Connect" was issued to raise funds for green building construction and improve openness of the green bond market; the first sustainable development bond for non-financial enterprises was issued to raise funds for green affordable housing projects, helping to achieve the goal of "housing for all" in an environmentally friendly manner; and the first "Three Greens" ABN project was launched, with green issuer, green underlying assets, and green use of fund, to help enterprises mobilize green assets.

Improvements in the green bond market have been instrumental in green development and ecological civilization construction. First, green bonds can help green enterprises lower the financing threshold and cost, improve their image, accelerate their growth, and push forward with green transformation and upgrading. Second, green bonds help with popularizing the idea of green investment, enhancing the awareness of environmental protection and green social responsibility of investors (both institutional and individual) , and promoting China's transformation to a green economy. In the future, it is expected that Chinese enterprises will participate directly in the green bond market with much room for green bond issuance improvement.

Chapter 4 Stock Market

In 2018, the overall operation of the Chinese stock market saw increased fluctuation, Initial Public Offering (IPO) maintained regular operation, long-term funds and international funds entered the market at an accelerated pace, and the capital market offered enhanced support to science and technology innovation businesses, better serving the Belt and Road Initiative with market supervision and risk management mechanism being improved and endogenous stability mechanism being enhanced.

4.1 Performance of the stock market

4.1.1 Stock issuance and financing

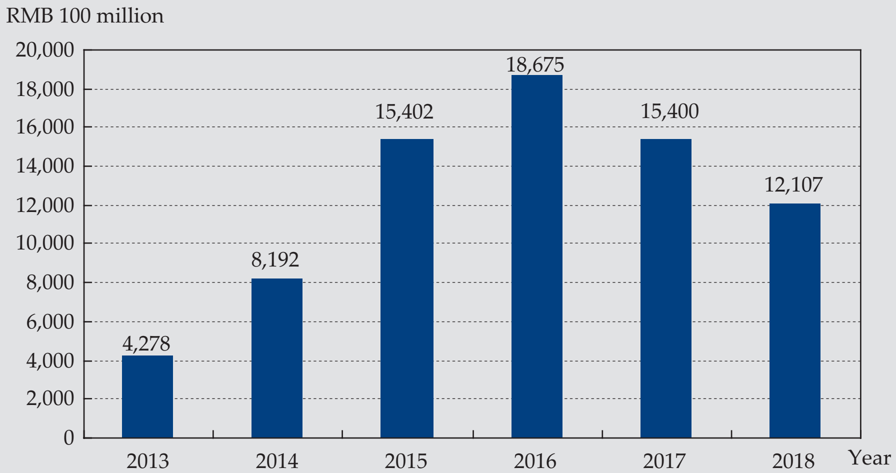
In 2018, a total of 509 enterprises raised funds at Shanghai Stock Exchange (SSE) and Shenzhen Stock Exchange (SZSE) with a volume of RMB 1,210.7 billion, the number down 53.8 percent and the volume down 29.7 percent. Among these enterprises, 105 raised funds through IPO, down 76 percent year on year and the total IPO financing volume stood at RMB 137.82 billion, down 40.1 percent year on year. A total of 267 enterprises issued additional shares, down 50.56 percent from the previous year, and the volume was RMB 752.35 billion, down 40.8 percent from RMB 1,270.53 billion last year. A total of 15 enterprises completed share allotment, 114.3 percent higher than the same period last year, involving a volume of RMB 22.83 billion, up 40.1 percent year on year. Seven enterprises issued RMB 134.98 billion preferred stocks while only one listed company did so in 2017 with a volume of RMB 20 billion. A total of 77 enterprises issued convertible bonds, up 234.8 percent year on year, with a volume of RMB 107.11 billion, up 77.7 percent. Besides, 38 enterprises issued exchangeable bonds, down 59.1 percent year on year, with a volume of RMB 55.65 billion, down 55.5 percent from a year earlier.

4.1.2 Stock indices and trading

Throughout the year, turnover of A-share on the SSE and SZSE totaled RMB 89.65 trillion, a year on year decrease of 19.78 percent, including RMB 19.95 trillion from SZSE SME Board, down 20.83 percent year on year, and RMB 15.83 trillion from SZSE ChiNext Board, down 3.89 percent year on year. The market index kept falling with the SSE Composite Index closing at 2,493.90 points at the end of the year, the biggest year-on-year decline of 24.59 percent in ten years, and the SSE 50 Index, SSE 100 Index and SSE 150 Index dropped by 19.8 percent, 29.5 percent and 36.6 percent respectively. The SZSE Component

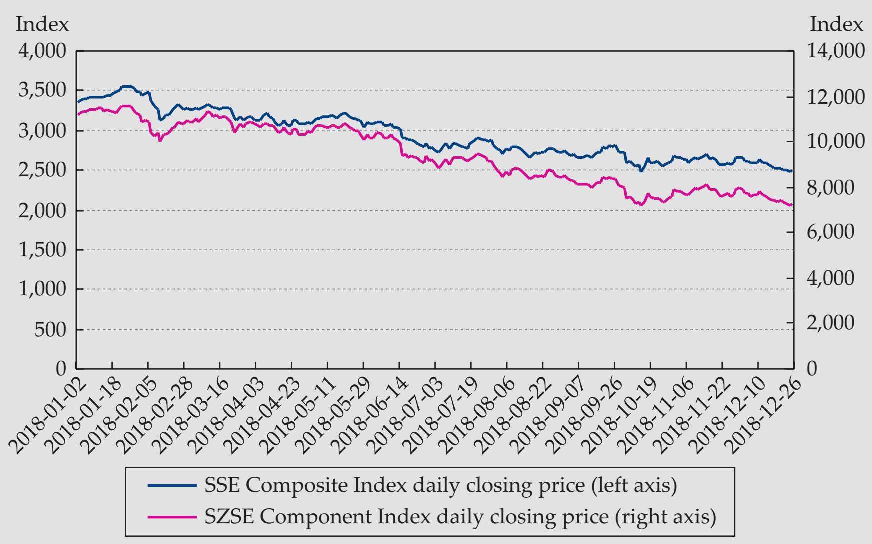
Index closed at 7,239.79 at the end of the year, falling by 34.42 percent in the year. The SZSE SME Board Index and the ChiNext Board Index reduced by 37.75 percent and 28.65 percent respectively. By the end of 2018, the total market cap of the free floating A-share stood at RMB 35.25 trillion, representing a year-on-year decrease of 21.23 percent, and the averaged price earning (PE) ratio was 13.138, down 32.65 percent year on year.

Figure 4.1 Total financing volume in the stock market from 2013 to 2018



Source: Wind.

Figure 4.2 Movements of Stock Market Indices in 2018



Source: Wind.

4.2 Main features of the stock market operation

4.2.1 Financing structure was continuously optimized to support the development of new economy

In 2018, stock market financing grew at a slower pace. Total financing volume, numbers of listed enterprises that issued IPO and additional shares, and issuance volume were all on a downward trend. IPOs were launched in a normalized way. The percentage of refinancing remained at a relatively low level for recent six years. The financing structure was optimized as share allotment and the issuance of preferred stock and convertible bonds rose rapidly, and the percentage of IPO by new economy-related industries climbed up. The top five industries in terms of IPO volume in 2018 were computer, telecommunication and other electronic devices manufacturing industry (RMB 39.532 billion), currency and financial service industry (RMB 11.709 billion), capital market service industry (RMB 10.608 billion), special equipment manufacturing industry (RMB 9.883 billion) and electric machinery and equipment manufacturing industry (RMB 8.508 billion). The support for the development of new economy was further intensified.

4.2.2 External uncertainties increased and market fluctuations intensified

In 2018, both internal and external economic and financial environments experienced intensified complexities and fluctuations, as China-US trade frictions impacted on the market sentiments concerning macro economy and stock market, and domestic downward economic pressure constituted evident obstacles for the profitability of listed enterprises. Under these circumstances, the fluctuation in the stock market heightened as the volatility rate (standard deviation of price rise and fall) of the SSE Composite Index stood at 1.2 percent, up 0.7 percentage point year on year. A total of 82 days saw a price rise or fall of over 1 percent, 70 days more than the previous year. Moreover, the volatility rate (standard deviation of price rise and fall) of the SZSE Component Index was 1.2 percent, up 0.6 percentage point. In the year, 109 days saw price rise or fall over 1 percent, a year on year increase of 60 days.

4.2.3 Investor structure was improved with noticeable increase of the percentage of institutional investors

In 2018, the share of trading by natural person investors reduced from 82 percent in the previous year to 76 percent with their percentage of shareholding (free float market cap, similarly hereinafter) declining from 45 percent to 42 percent. The proportion of professional institutional investors in the SSE A-share market rose markedly from 14 percent to 18 percent with a trading volume of RMB 14.5 trillion, and a possession of RMB 2.7 trillion worth of shares, accounting for 27 percent, up 1 percentage point from the previous year. The shareholding proportion of professional institutional investors in the SZSE A-share market increased from 11.9 percent in 2014 to 14.64 percent in 2018, and the share of trading volume rose from 7.1 percent in 2014 to 14.59 percent in 2018.

4.2.4 Turnover of Shanghai- and Shenzhen-Hong Kong Stock Connect increased with a larger share of overseas institutional investors

The yearly turnover of Shanghai-Hong Kong Stock Connect was RMB 4.67 trillion, a huge increase from RMB 2.26 trillion in 2017, including RMB 2.66 trillion turnover made by investors from Hong Kong in the SSE A-share market with the net inflow exceeding RMB 181 billion. The total trading volume concluded through Shenzhen-Hong Kong Stock Connect amounted to RMB 2.01 trillion with the net inflow exceeding RMB 181 billion. The proportions of foreign capital in the trading volume of the SSE A-share market and SZSE A-share market through Shanghai- and Shenzhen-Hong Kong Stock Connect were 4.4 percent and 2.59 percent respectively. At the end of 2018, the positions of foreign capital in the SSE A-share market and SZSE A-share market reached RMB 730 billion and RMB 224.46 billion respectively, accounting for 7.3 percent and 3.1 percent of the cap in two markets. Both the trading volume and positions by foreign capital increased year on year.

4.3 Product innovation and institutional construction of the stock market were advanced

4.3.1 New investment products were introduced to support key national development strategies

4.3.1.1 Fullgoal CSI 10-year T-bond ETF was launched

The first domestic bond ETF created and redeemed with cash—Fullgoal CSI 10-year T-bond ETF was launched in the SSE with a volume of RMB 240 million. The successful launch of cash-created and -redeemed bond is an effective complement for the creation and redemption mechanism of existing bond ETF portfolio securities as well as a successful exploration of the diversified development of ETF products.

4.3.1.2 Two SOE Restructuring ETFs were launched

Huaxia SOE Restructuring ETF and Bosera SOE Restructuring ETF were launched, raising up to RMB 41 billion upon its launching, in which Bosera SOE Restructuring ETF raised over RMB 25 billion, the equity ETF product with the largest fund-raising volume upon launching in recent years.

4.3.1.3 HFT SSE 10-year Local Gover Debt ETF was launched

The first domestic local government debt ETF, HFT SSE 10-year Local Government Debt ETF, was listed on the SSE, raising over RMB 6 billion upon launching.

4.3.1.4 Multiple key index products were introduced

In 2018, newly introduced key index products included such themes as innovation composite index, environmental improvement, artificial intelligence, Sichuan SOE reform, global video game, founder operation, green energy, and share incentive. Diversified index products were developed with an aim to support major national development strategies.

4.3.2 The IPO of innovative businesses was promoted and the CDR issuance mechanism was set up

On March 30th, the General Office of the State Council forwarded the *Opinions on the Pilot Programs of the Share or Depository Receipt Issuance by Innovative Businesses in Mainland China* by the CSRC, making systemic institutional arrangements to support innovative businesses to go public in Mainland China. On June 6th, the CSRC officially issued *Administrative Rules on Depository Receipt Issuance and Trading (Trial)*, revised and released the *Administrative Rules on Initial Public Offering and Listing of Enterprises* and *the Administrative Rules on Initial Public Offering and Listing of Enterprises on the SZSE ChiNext Board*, issued supporting rules on related pilot work, specified law application and basic regulation principles of depository receipt, and made detailed arrangements for the issuance, listing, trading and information disclosure of the depository receipts. On June 15th, the SSE and SZSE respectively issued relevant supporting business rules including measures for the implementation of the pilot programs on the listing and trading of shares or depository receipt of innovative businesses, and revised existing supporting regulations to standardize the listing and trading of the shares or depository receipts of innovative businesses. The issuance and implementation of a series of institutional rules made proper institutional arrangements for the share or depository receipt issuance of innovative businesses in Mainland China, and were conducive to improving the structure and mechanism of the capital market and giving play to the functions of investment and financing of the capital market, so as to further facilitate the reform, opening-up and steady development of the capital market.

4.3.3 The science and technology innovation board was established and the IPO registration system was in pilot, accelerating development of a multi-tiered capital market

On November 5th, President Xi Jinping delivered a keynote speech at the First China International Import Expo, announcing that "We will launch a science and technology innovation board at the Shanghai Stock Exchange and experiment with a registration system for listed enterprises. We will also support Shanghai in cementing its position as an international financial center and a hub of science and innovation, and steadily improving the fundamental institutions of its capital market." The science and technology innovation board aimed at addressing the weak link of the capital market in supporting science and technology innovation. It constitutes an incremental reform that carried out more appropriate differentiated arrangements with regards to such aspects as profitability and ownership structure, boosts tolerance and adaptability for innovative businesses, and launches a series of supporting innovation in links including issuance, listing, trading, regulation, and delisting. At the same time, the registration system pilot is to strengthen the accountability of intermediary agents, which is conducive to the establishment and development of a new market with the registration system at the core, qualified institutional investors as the foundation, and science and technology innovative businesses as the objects to go public, in which intermediary agents like investment banks perform their due responsibilities, regulation becomes more effective, more vitality is injected, and a multi-tiered capital market grows at a faster pace.

4.3.4 Stock trading suspension and resumption system for listed companies was regulated while delisting and stock repo system improved

4.3.4.1 Stock trading suspension and resumption system for listed companies was improved

The CSRC released *Guidelines on Improving the Suspension and Resumption of Trading of Stocks of Listed Companies*, setting up basic principles of the stock trading suspension and resumption system for listed companies, and making explicit the compulsory stock trading resumption responsibility of the stock exchange. Moreover, the SSE and SZSE respectively issued business guidelines on stock trading suspension and resumption, in a bid to regulate stock trading suspension and resumption practices of listed companies, help address the problem of long-time, willful or arbitrary stock trading suspension, and establish a uncoupling mechanism between the time of stock trading suspension and elimination from component stock index, and the suspension information publicity system.

4.3.4.2 A new round of delisting system reform was launched

The CSRC amended the *Opinions on Reforming, Improving and Strictly Implementing the Rules on the Delisting of Listed Companies*, guided the SSE and SZSE in the issuance of *Implementation Measures of the Shenzhen Stock Exchange for Compulsory Delisting Due to Major Violations of Law*, and intensified its regulation on delisting practices. As a result, a market eco-system gradually took shape, where companies would be allowed to list on or delist from the market under the principle of survival of the fittest.

4.3.4.3 Relevant rules on stock repo businesses were revised

The NPC Standing Committee adopted the *Decision on the Amending the Company Law of the People's Republic of China*, making specific revision on Article 142 concerning rules on the repo of company stocks. The revised law made proper complement and improvement regarding scenarios where permitted stock repo, simplified the decision procedure of stock repo, and allowed companies to repo their stocks in due course. The major reform of the repo system further improved the capacity of listed companies in adjusting their equity structure and managing risks, raised the overall quality and investment value of listed companies, and drove the modernized development of corporate governance system and capacity.

4.3.5 Market regulation system was strengthened and regulation efficiency improved with Fintech

4.3.5.1 Regulation on stock issuance was tightened

In 2018, the CSRC strengthened regulation on stock issuance, raised the standards for performance and sustainability evaluation of listed companies, and enhanced regulation on the operation and trading of listed companies. Throughout the year, the IPO pass rate stood at 55.8 percent, lower than the level 76.3 percent in 2017 and 89.8 percent in 2016.

4.3.5.2 Market practices in violation of laws or regulations were cracked down on

The CSRC enforced 310 administrative penalties in 2018, a year-on-year increase of 38.4 percent, involving fines and forfeiture worth of RMB 10.64 billion, a year-on-year increase of 42.3 percent, and banning 50 people from entering the market, up 13.6 percent compared with the previous year, which helped properly maintain the order of the capital market. Both the SSE and SZSE amended and published relevant regulation measures, which enhanced front-line trading regulation, strengthened real-time monitoring of unusual transactions and administration of key monitored accounts, and cracked down illegitimate market trading behaviors.

4.3.5.3 Regulation instruments were upgraded with Fintech

The SSE and SZSE actively implemented the CSRC's overall development plan of regulatory technologies by comprehensively improving with the level of technological-based and intelligent regulation, steadily finishing the phase-one construction of new inspection system and the construction of a big data platform, enhancing clue discovery, analysis and data assistant investigation, constantly raising the technological capacities in investor profile analysis, market fluctuation analysis, public opinion analysis, online stock market manipulators monitoring and data management, improving the efficiency in spotting legal violations, and giving full play to multiple financial technological instruments to constantly improve the market regulation capabilities.

4.3.6 Risk management instruments were improved and market risk prevention mechanism optimized

4.3.6.1 The indicator system for risk prevention, control and early warning was under construction

In 2018, the SSE further improved the market risk management system by establishing a flexible and easy-to-use risk analysis system prototype and a counter-cyclical adjustment tool kit for risk prevention and control. The SZSE independently researched into and developed "company profile", an intelligent auxiliary regulatory system that enabled cross comparable analysis of information disclosure, public opinion information and tip-offs, as well as quick feedback on potential risks including affiliation, pledge warning and financial abnormality, thus realizing preventing and defusing of risks.

4.3.6.2 The regulation was constructed and monitoring panorama was drawn

In 2018, a three-pronged investor transaction behavior analysis model of active buying and selling, net transaction amount and commission order books was developed at the SSE. With the market playback system, a closed loop analysis of the market, stock and investors can be realized, and thus help clearly, accurately and profoundly understand the market situation. The SZSE issued the *Notice on Strengthening the Management of Accounts under Special Monitoring*, carried forward with a transaction behavior regulation model centering on the regulation of members, and specified member management rules to guide members to intensify the monitoring and control of key accounts.

4.3.6.3 Efforts to prevent stock-pledge risks were stepped up

To further fortify the role of stock pledged repo transactions in supporting the development of the real economy, the SSE and SZSE, together with China Securities Depository and Clearing Corporation Limited (CSDC) amended the *Measures on Stock Pledged Repo Transactions and Registration and Settlement Businesses* on January 12th, 2018, and at the same time launched work on comprehensively trouble-shooting and dynamically tracking the stock pledge risks of listed companies, which reinforced the risk monitoring, prevention and control of stock pledged repos, and practically guarded against stock-pledge risks.

4.4 Opening-up of the stock market

4.4.1 Connectivity between the stock markets of the Mainland China and Hong Kong was improved

4.4.1.1 Daily transaction quota at Shanghai and Shenzhen Stock Connects was raised

Since May 1st, the daily quota of Shanghai Stock Connect and Shenzhen Stock Connect was adjusted from RMB 13 billion to RMB 52 billion, and that in Hong Kong Stock Connect adjusted from RMB 10.5 billion to RMB 42 billion. The quadrupled quota improved connectivity mechanism, and steadily expanded the two-way opening-up of the capital markets, which was favorable for overseas long-term institutional investors to participate in the A-share market.

4.4.1.2 The northbound see-through mechanism was established and implemented

Since September 26th, the northbound see-through mechanism of Shanghai Stock Connect and Shenzhen Stock Connect (investor identification code system) was officially implemented. The "see-through" regulation on the trading of Shanghai Stock Connect and Shenzhen Stock Connect strengthened the monitoring of abnormal transactions using foreign capital, improved cross-border market inspection efficiency in both Mainland China and Hong Kong, further improved connectivity of the stock markets, and maintained secure and steady operation of the market.

4.4.2 Works of Shanghai-London Stock Connect were implemented in an orderly fashion

With the unified arrangements of the CSRC, the SSE and LSE studied and explored the listing of qualified listed companies of the two sides on each other's market in the form of depository receipt, with a view to realizing the connection of both markets (Shanghai-London Stock Connect). In June 2018, the CSRC issued the *Administrative Rules on Depository Receipt Issuance and Trading*

(Trial), making explicit the legal application and basic regulatory principles of depository receipts. In October, the CSRC released regulation for Shanghai-London Stock Connect, regulating such behaviors as the issuance, listing, trading, information disclosure, and cross-border conversion of its depository receipt business. In November, the SSE published relevant supporting rules on Shanghai-London Stock Connect depository receipt business. Since then, the rule system of depository receipt business under Shanghai-London Stock Connect virtually has taken shape.

4.4.3 A-share stocks were officially included into MSCI EM Index

Since June 1st, 2018, China's A-share stocks were officially included into the Morgan Stanley Capital International (MSCI) Emerging Markets Index and global benchmark index, given 5 percent initial inclusion factor. On September 26th, 2018, the MSCI announced its plan to further raise the weight of A-share stocks. On March 1st, 2019, the MSCI announced to raise the inclusion factor of China's A-share stocks in its global benchmark index up to 20 percent in three steps, and at the same time to include the mid-cap A-share stocks into the MSCI in November, 2019. As the capital market of China continues to open up, overseas capital and institutional investors will be more encouraged to enter the A-share market, which is conducive to the improvement of investor structure, enhance the capacity of the capital market to serve the real economy, and promote the internationalization and long-term healthy development of China's capital market.

4.4.4 Remarkable progress was made in supporting the Belt and Road Initiative

4.4.4.1 Communication and cooperation among capital markets along the Belt and Road was further deepened

The Astana International Exchange in Kazakhstan, in which SSE invested as a strategic partner, officially opened to operation. The SSE and SZSE as a Consortium bought 25 percent stake in Dhaka Stock Exchange in Bangladesh, pushing forward with the practical cooperation with Dhaka Stock Exchange in key areas including trading technologies, market cultivation and product development in an orderly fashion.

4.4.4.2 Financial products aiming at supporting BRI were constantly diversified, and business rules improved

The SSE and SZSE respectively released the Pilot Rules on Belt and Road Bonds. Qingdao Haier Inc. successfully issued its D shares and got listed on China Europe International Exchange (CEINEX). The *Green Investment Principles for the Belt and Road* launched by China-U.K. Green Finance Taskforce, in which the SSE is a participant, was officially released in London.

4.4.4.3 Positive progress was made in the construction of an investment and financing platform

The SSE International Exchange and Cooperation Center completed its registration and establishment, and is expected to provide a platform for the cooperation among stock exchanges and capital markets along the Belt and Road. The SZSE, relying on V-Next, a cross-border investment and financing service platform of innovation and entrepreneurship, explored and formed a cross-border investment and financing eco-system with the promotion of cross-border capital formation as the target, information disclosure and display as the measure, and the online-offline investment and financing matching platform as the carrier. At the end of 2018, V-Next had offered road show presentation and information exchange services for over 90 overseas enterprises in 9 countries along the Belt and Road.

4.5 Outlook of the stock market

In 2019, the stock market will closely focus on the arrangements and requirements of the supply-side structural reform of the financial industry, and constantly press ahead with the reforms and development of various basic institutions centering on such key areas as improving the quality of listed companies, strengthening the responsibility and capacity of intermediary agencies, further improving the trading system, enhancing the whole-process regulation on transactions, and creating favorable conditions for medium—to long-term fund to enter the market. The capital market will continue to prop up its capacity and adhere to the fundamental orientation to serve the real economy, push ahead with the structural improvement of direct financing, and better support the high-quality development of the real economy. It will also continue to forestall and defuse risks in such key areas as stock pledge, private equity, OTC funding and relevant asset management businesses, increase the awareness of eventualities, prop up the development of market crisis monitoring mechanism, and ensure a steady and sound operation of the stock market. Moreover, the capital market will further open up, the cross-border market connectivity mechanism with more diversified forms and wider coverage will be explored and established, and all-round cooperation with the capital markets of countries along the Belt and Road will be deepened.

BOX 5 Actively preparing the STAR Market innovation board for new economic development

1. Background and significance

On November 5th, 2018, during the keynote speech at the first China International Import Expo, Chinese President Xi Jinping announced that China would "launch the STAR Market at the Shanghai Stock Exchange and experiment with a registration system for listed companies". Also, China "will also support Shanghai in cementing its position as an international financial center and a hub of science and innovation, and steadily improve the fundamental institutions of its capital market". This is a significant endeavor for further implementing the innovation-driven development strategy, improving capital market support for innovation capability on core technologies, *and promoting the development of high-tech industries and strategic emerging industries. Also, it will effectively encourage Shanghai to cement its position as an international financial center and a hub of science and innovation, improve the fundamental institutions of its capital market, and promote high-quality development. The launch of the STAR Market and the experiment of registration system for listed companies are a systematic project aiming at accelerating the formation of a multi-tiered capital market system with complete financing functions, sound fundamental institutions, and effective market supervision, in which the legitimate rights and interests of investors will be well-protected. Starting with the STAR Market launched at SSE, China will steadily push forward the experiment with the registration system, coordinate reforms on fundamental institutions including issuance, listing, information disclosure, trading and delisting. As a result, the capital market is expected to boost support for improving science and innovation capabilities and enhancing competitiveness of the real economy, thus better serving the high-quality development.*

2. Implementing principles

First, upholding market-oriented development and enhancing market discipline. We will respect the law of the market, clarify and stabilize market expectations, and set up new institutional arrangements for share issuance guided by the market mechanism. Second, adhering to law-based market regulation. The capital market legal system will be improved, and the full and strict law-based supervision will be enhanced to protect investors' legitimate rights and interests. The rights and obligations of market participants shall be further specified to gradually form a market environment where all participants perform their duties and safeguard their legitimate rights and interests in a law-based manner. Third, strengthening supervision on information disclosure and fulfilling due obligations. A share issuance and listing mechanism focusing on information disclosure will be established and improved to stress issuers' fiduciary duties and legal obligations regarding information disclosure. We will give full play to financial intermediaries in information verification, and guide investors to increase their capabilities of risk identification and awareness of rational investment. Fourth, committing to coordination and defending the bottom line. Relevant government authorities and parties will properly coordinate to form a synergy for the sound and steady development of the market, and forestall and dissolve market risks.

3. Reform and innovation

Regarding its orientation, oriented towards world's loading edge of science and technology, the economic battlefield, and major national demand, the STAR Market will mainly support scientific and technological innovation-oriented companies that serve national strategies, with breakthroughs in core technologies and high market recognition. Focusing on the high-tech industries and strategic emerging industries such as new information technologies, high-end equipment, new materials, new energies, energy *conservation, environment protection, and biological medicine, the STAR Market will deeply integrate the internet, big data, cloud computing and artificial intelligence with the manufacturing industry, with a view to leading middle and high-end consumption and pushing forward the revolution in economic quality, efficiency and motivation.*

Regarding the listing criteria, more emphasis will be put on scientific and technological innovation capabilities. Companies that have yet turned profitable or have cumulative undistributed deficit but are in line with the positioning of the STAR Market will be allowed to list. Diversified and inclusive listing criteria involving estimated market value, revenue, net profit, research input and cash flow will be designed, and enterprises with particular ownership structure and red-chip enterprises will be allowed to list.

Regarding the registration and verification, the experiment with a registration system for listed companies will be steadily carried out. The SSE will be responsible for pre-listing verification on the STAR Market, including accepting companies' applications for public offerings as well as listing, examining and judging whether the companies satisfy issuance conditions, listing conditions and requirements of information disclosure. The CSRC will be responsible for the registration of share issuance on the STAR Market while proceeding with registration procedures, and enforce the whole-process supervision of the verification process carried out by the SSE.

Regarding the improvement of fundamental institutions, first, a market-oriented underwriting mechanism for shares on the STAR Market will be constructed, where the price, size and pace of initial offering will be mainly decided by market means, and no limit will be set for its pricing. The experiment with the "follow-up investment" mechanism for affiliated subsidiaries of the sponsor will be carried out. Companies will be encouraged to list on the STAR Market to introduce strategic investors. The arrangement of over-allotment option will be given full play to stabilize share price. Second, regulation on information disclosure will be strengthened. The issuer, as the first person responsible for information disclosure, should fully disclose necessary information for investors to make value judgement and investment decisions. The regulators will effectively uphold the regulatory philosophy centering on information disclosure, and fully establish a strict information disclosure system to enhance targeted information disclosure relating to performance fluctuation, industrial risks and corporate governance according to the characteristics of scientific and technological innovation-oriented companies. Third, the trading mechanism will be improved. There will be a stronger market-oriented trading mechanism for the STAR Market based on the characteristics of listed companies and investor eligibility requirements, with independent trading modules and market quotations display. Fourth, an efficient merger and acquisition (M&A) mechanism will be set up, including verification standards and rule system according to the characteristics of listed companies on *the STAR Market. Fifth, the delisting system will be strictly enforced, with trading-related delisting indicators tightened, financial delisting indicators optimized, and the delisting rules in case of major illegal practices.*

Regarding the supplementary reform, sustained regulation of listed companies on the STAR Market will be tightened through regulatory enquiries and on-site inspections, and the quality of information disclosure will be improved. The intermediary institutions are expected to take greater responsibilities and behave in an honest and diligent manner by setting up the mechanism of linking sponsors' qualification with the quality of information disclosure at initial offering and moderately extending the period of continuous supervision. Investors' legitimate rights and interests will be protected by taking strict actions against illegal behaviors such as fraudulent issuance and false statement and by making attempts to establish mechanisms for dispute resolution and redress between issuers and investors. Efforts will also be made to improve relevant laws and regulations, establish a sound mechanism for security-aided lawsuits and demonstrative judgement, and explore a legal system of security-related civil actions adaptive to the registration system.

Box 6 Understanding stock-pledge risks in a comprehensive and objective manner

Since its launch in 2013, stock pledged repo has played an active role in supporting the real economy and alleviating the problem of difficulties in and high costs of financing by SMBs, especially the private ones. Due to various reasons such as the macro environment and market fluctuations, risks relating to stock pledge started to emerge in 2018.

1. Stock-pledge risks are generally under control

The size of stock pledged repos witnessed a steady increase between 2013 and 2015, before picking up in 2016 and reaching its peak in 2018. This was followed by a rapid fall of 26.9 percent till the year (2018) end. With its fluctuating size, risks started to accumulate, and the following characteristics could be observed:

First, default risks relating to stock pledge mainly concentrate in a small number of enterprises with limited market cap in the manufacturing industry. At the end of 2018, in the Shanghai and Shenzhen 300 Index, Shanghai Stock Exchange 180 Index and Shenzhen Stock Exchange 100 Index, the number of enterprises with over 80 percent of controlling shareholders' equity in pledge was 26, 4 and 12 respectively, representing 8.7 percent, 2.2 percent and 12 percent of all component enterprises. The relatively low proportion meant that stock-pledge risks had not extended to highly representative component enterprises with high market capitalization and sound liquidity, and the impact on listed companies has been limited as a whole.

Second, fluctuations in stock prices led the *market value of default-declaring pledges to fall below that of pledges with lower performance guarantee ratios. At the end of 2018, the market value of pledges with performance guarantee ratio lower than that specified in the agreement was RMB 299 billion, accounting for 14.9 percent of the total value of pledges. Throughout the year, only 179 agreements involving the default of the controlling shareholder and persons acting in concert were declared by sponsors, amounting to RMB 48.2 billion in default. Among these, 162 agreements involved controlling shareholders pledging over 80 percent of their stocks, amounting to RMB 42.9 billion in default.*

Third, as there were few stocks disposed in the secondary market, default resolution only led to limited direct market influences. Since 2018, a total of RMB 11.4 billion has been sold as a means of default resolution through the secondary market in both SSE and SZSE, averaging RMB 50 million per day, which accounted for roughly one ten-thousandth of their daily average turnover. The relatively low turnover ratio meant that sales in the secondary market would be unlikely to significantly impact on market prices. Neither abnormal stock price changes nor alterations of controlling rights of listed companies had taken place as a result of the disposal in the secondary market.

2. Market fluctuations and risk control of the trading parties are the major causes of stock-pledge risks

First, drastic fluctuations in stock prices led to increased default. In 2018, major indices of the SSE and SZSE experienced greater volatility. The price of certain stocks declined sharply: 14.2 percent of stocks devalued by over 50 percent, whereas 58.9 percent of stocks devalued by over 30 percent. Consequently, a considerable number of stock pledged repo agreements fell below the agreed performance guarantee ratio, where default emerged as the shareholders failed to provide supplementary guarantee or repurchase in due course.

Second, the pledge ratio for stocks held by certain shareholders was too high to allow them to provide additional guarantee in times of sharp price fluctuations. Among the 82 companies declaring default resolution since 2018, 82.9 percent were private companies, in which 70 had over 80 percent of their controlling shareholders' equities in pledge, accounting for 85.4 percent. Due to lack of alternative financing channels, shareholders of certain listed private companies had to pledge a large part of their stocks for funding. When stock prices are on the decline, these shareholders may not be fully capable of providing additional pledge or raising funds for repayment, which will easily lead to stock pledge-related default.

Third, some sponsors failed to enhance risk control timely when liquidity situation of pledged stocks changed. Following the new regulation on stock position reduction, which took effect in May 2017, the option of sponsors to exercise the right of pledge by selling the pledged stocks at default was restricted, and the original means of risk control in stock pledged repos were undermined.

The new regulation only brought the average pledge rate down 3 percentage points, which was unable to cover the risks caused by reduced liquidity.

3. Understanding stock-pledge risks in a comprehensive and objective manner

The above analysis shows that while stock-pledge risks were gradually accumulated and finally emerged due to various factors such as market fluctuations, they concentrated in a relatively limited group with generally controllable market impacts.

First, shareholders of private listed companies were the major group seeking stock pledged repos, representing 82.4 percent of the total market value of pledged stocks, and over 80 percent of funds raised is invested to meet actual business demand for production, operation and working capital. The average interest rate of stock pledged repos is 6.5 percent, which is relatively moderate compared with alternative financing channels for private companies. In this sense, stock pledged repos have played a significant role in supporting the real economy, especially in alleviating the financing difficulty of shareholders of private listed companies.

Second, stock-pledge risks were shareholders' credit risks, rather than operational risks of listed companies. Among the listed companies with over 80 percent of their controlling shareholders' equities in pledge, 81.2 percent saw positive net profit during the first three quarters of 2018, and 52.6 percent saw increased net profit year-on-year. Hence, the operation of listed companies was largely unaffected by risks relating to shareholders' pledge.

4. Improving the stock pledged repo system and creating a favorable environment for addressing the difficulties of private enterprises

Since the second half of 2018, with a view to forestalling and defusing risks and maintaining the sound operation of the stock market, achievements have been made in mitigating stock pledge-related risks through market- and law-based approaches and instruments. On November 15th, Gao Yugen, controlling shareholder of Victory Precision, reached consensus with Suzhou Asset Management, Suzhou High-tech Asset Management entrusted by the Administrative Committee of Suzhou New District, as well as Soochow Securities, reached a consensus before signing the Framework Agreement of Development Fund for Private Enterprises that encourages the controlling shareholder to control the pledge rate and effectively alleviates the liquidity pressure for listed companies. On December 3rd , Soochow Venture Capital signed the Stock Transfer Agreement and its supplementary agreement with Gao Yugen on behalf of "No.1 Private Equity Investment Fund of Soochow Securities (contractual) as an effort of the securities industry to support the development of private enterprises". Based on the agreements, Gao Yugen is expected to transfer the 173 million unlimited transferable stocks (5.027 percent of the company's total equity) to Soochow Venture

Capital through contract transfer, which reduced the stock pledge ratio and eased the liquidity pressure for the listed company caused by excessively high pledge rate. Besides, the CSRC also organized securities companies, private equity firms and publicly offered funds to participate in resolving stock pledge risks. The CBIRC allowed insurance funds to set up special products to help defuse stock pledge risks without including them in the supervision of equity investment ratio and increase the amount of funds invested by insurance funds. Shenzhen, Beijing, Guangzhou and Zhejiang set up tens of billions of funds to support the development of local listed companies. Market entities such as SOEs, banks, brokerages, insurance companies and fund companies jointed hands to proactively defuse stock pledge risks.

On January 18th, 2019, the SZSE and SSE issued the Notice on Matters Concerning Stock pledged Repo Transactions (hereinafter referred to as the Notice), in a bid to optimize the stock pledged repo mechanism. First, the Notice improved arrangements of the extension of agreements in default. According to the Notice, when there is default at the financing side and an extension is necessary to defuse its credit risks, on condition that the cumulative repo period has reached or is reaching three years, upon consensus between both parties through consultation, the total repo period after the extension may exceed three years, so that the repayment pressure of the financing side can be alleviated through extensions of existing debt. Second, special arrangements will apply to additional stock pledged repo for defusing pledge-related risks. Current regulations set limits for the pledge ratio of single offering party and the whole market, as well as for asset management schemes to involve in stock pledged repo relating to performance commitments as the offering party and to control the maximum pledge rate. The articles may be exempted from application if funds received from stock pledged repo are entirely used for repayment of debt obligations under the agreement in default, thus alleviating the liquidity pressure of the financing side by relaxing conditions for additional financing. Meanwhile, the Notice also required members to assess the credit risks and performance capacity of the financing side in a prudent manner, and continuously manage risks relating to stock pledged repos. The release of the Notice created a favorable market environment for solving the dilemma of stock pledge, and is expected to support the implementation of relevant resolutions and help private companies with their financing issues.

Chapter 5 Foreign Exchange Market

In 2018, the trading volume in China's foreign exchange market maintained stable growth, the number of members in the market increased steadily, and the product structure continued to optimize. Exchange rate of RMB against a basket of currencies and USD depreciated. Factors influencing the rate of RMB/USD diversified and the counter-cyclical adjustment policy well played its role in stabilizing foreign exchange market expectations. The new-generation foreign exchange trading platform was launched, product innovation was promoted, trading mechanism was continuously improved, and the two-way opening-up of the market was further strengthened.

5.1 Performance of the foreign exchange market

5.1.1 Trading volumes continued to grow and the number of market members increased steadily

In 2018, the interbank foreign exchange market maintained stable growth, with the cumulative turnover reaching USD 34.0 trillion, an increase of 25.8 percent year on year, and the daily average turnover posting nearly USD 140 billion. Among them, RMB foreign exchange market turnover was USD 24.85 trillion, representing an increase of 22.2 percent year on year, and accounting for 73.1 percent of the total interbank market turnover; currency pairs market turnover was USD 0.19 trillion, making up for 0.5 percent, up 0.1 percentage point from 2017; and foreign currency interest rate market turnover was USD 8.93 trillion, occupying 26.3 percent of the market, up 2.1 percentage points from 2017.

In the RMB spot exchange market, the cumulative turnover stood at USD 7.63 trillion, accounting for 30.7 percent of the total RMB foreign exchange market turnover, down 0.7 percentage points from the previous year, and the daily average turnover posted USD 31.412 billion. The cumulative turnover of RMB foreign exchange transactions in the derivatives market made up 69.3 percent of the total, and the daily average turnover was USD 70.832 billion.

In terms of market participants, the number of market members also grew steadily in 2018. As of the end of 2018, there were 678 members in the RMB foreign exchange market. Among them, 33 were newly introduced members, including 13 overseas central bank institutions, overseas clearing banks, and overseas participating banks. The number of currency pair members and foreign currency lending members reached 187 and 526 respectively, an increase of 12 and 57 from the end of 2017.

5.1.2 RMB exchange rate index depreciated slightly

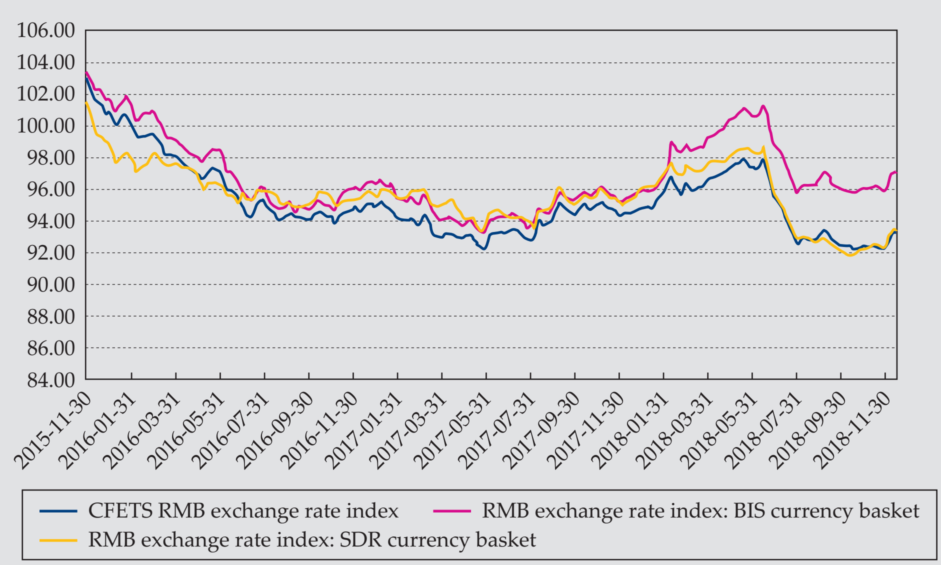
In 2018, the USD index moved upwards by 3.1 percent amidst fluctuations. Under the influences, currencies of some emerging markets experienced a sharp devaluation. In 2018, the Argentine peso and Turkish lira devalued sharply by 98.2 percent and 97.4 percent respectively against the USD.

In 2018, the exchange rate of RMB against a basket of currencies depreciated slightly compared to the previous year. At the end of December 2018, the CFETS RMB exchange rate index, the RMB exchange rate index against the BIS and SDR currency basket were 93.28, 96.78, and 93.14 respectively, representing a depreciation of 1.7 percent, 0.9 percent, and 3.0 percent compared to the end of the previous year.

The central parity rate of RMB depreciated against the USD. At the end of 2018, the central parity rate of RMB against the USD posted 6.8632, representing a year-on-year depreciation of 4.8 percent. The spot rate of the interbank foreign exchange market (CNY) and the overseas market (CNH) closed at 6.8658 and 6.8819 respectively, registering a depreciation of 5.2 percent and 5.4 percent compared to the end of the previous year.

RMB recorded both appreciation and depreciation against other major currencies. At the end of 2018, the central parity rate of RMB against Euro and 100 Japanese yen was 7.8473 and 6.1887 respectively, depreciating by 0.4 percent and 6.7 percent compared to the beginning of the year; and that against British pound, Australian dollar, and Canadian dollar was 8.6762, 4.825, and 5.0381 respectively,

Figure 5.1 Fluctuations of RMB exchange rate index in 2018



Source: CFETS.

appreciating by 1.8 percent, 5.3 percent, and 2.9 percent compared to the beginning of the year.

According to the data from the Bank for International Settlements (BIS), in 2018, the real effective exchange rate of RMB appreciated by 0.9 percent to close at 122.73, and the nominal effective exchange rate appreciated by 1.2 percent to close at 119.19.

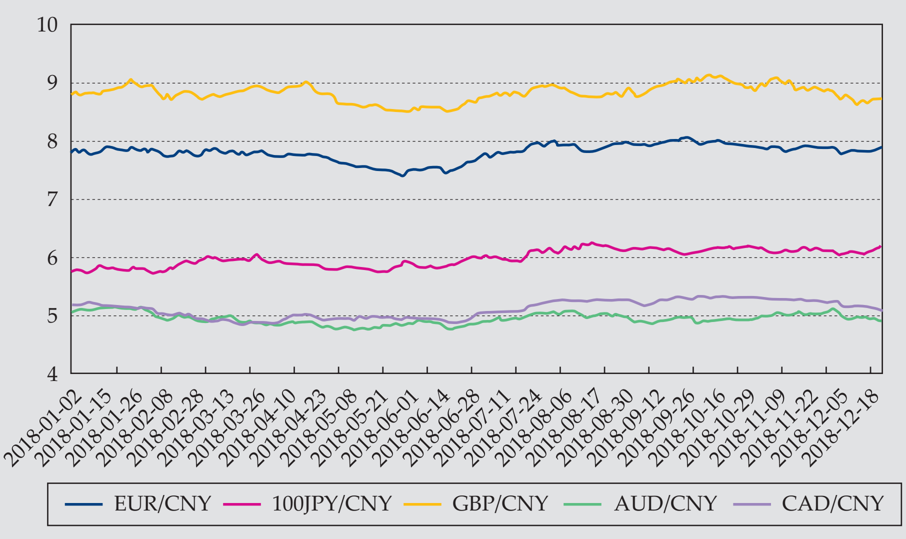
5.2 Main features of the foreign exchange market

5.2.1 Foreign currency businesses developed briskly

In 2018, the trading volume of interbank currency pair businesses grew by more than 50 percent year on year. During the year, the function of Executed Streaming Prices (ESP) was launched, supporting spot transactions of all foreign currencies against currency pairs; the precision of spot transactions was enhanced; the spot, forward, and swap transactions of New Zealand dollar against USD, and those of Euro against British pound were introduced. In 2018, the spot trading volume of currency pairs amounted to RMB 672.47 billion, registering a year-on-year increase of 26.4 percent; the swap trading volume of currency pairs added up to RMB 512.58 billion, registering a year-on-year increase of 135 percent; and currency swaps for currency pairs stood at RMB 54 million.

In 2018, the interbank foreign exchange lending market continued with the booming development of 2017. The trading volume surged by 34.3 percent year on year. On May 2nd, the CFETS launched interest rate swap transactions of six currencies, including the

Figure 5.2 Fluctuations of central parity rate of RMB against major currencies in 2018



Source: CFETS.

USD, EUR, GBP, JPY, HKD and AUD. On July 23rd, the CFETS started the foreign currency repo businesses with overseas foreign currency-denominated bonds as collaterals. The enrichment of the categories of transactions further enhanced market liquidity.

5.2.2 RMB first appreciated and then depreciated against USD

In 2018, the exchange rate of RMB against the USD experienced a transition from an appreciation to depreciation. At the beginning of the year, internationally, the USD index moved downwards; domestically, the considerable volume of foreign exchange purchases upon customers' requests drove up the spot trading rate of RMB/USD rapidly, continuing the upward trend of RMB that had started since the second half of 2017 further forward. On February 7th, the trading rate of RMB/USD hit a stage-high of 6.2596. After that, as the performance of the U.S. economy turned positive, a deficit appeared in China's current accounts in Q1, and the China-U.S. trade frictions escalated, the rate of RMB started to wane, and posted an all-year low of 6.9734 on October 31st, also the lowest level since China's exchange rate reform initiated in 2015. In 2018, the RMB/USD trading rate closed at 6.8658, depreciating by 5.2 percent compared with the previous year; and the central parity rate of RMB against the USD closed at 6.8632, representing a depreciation of 4.8 percent year on year.

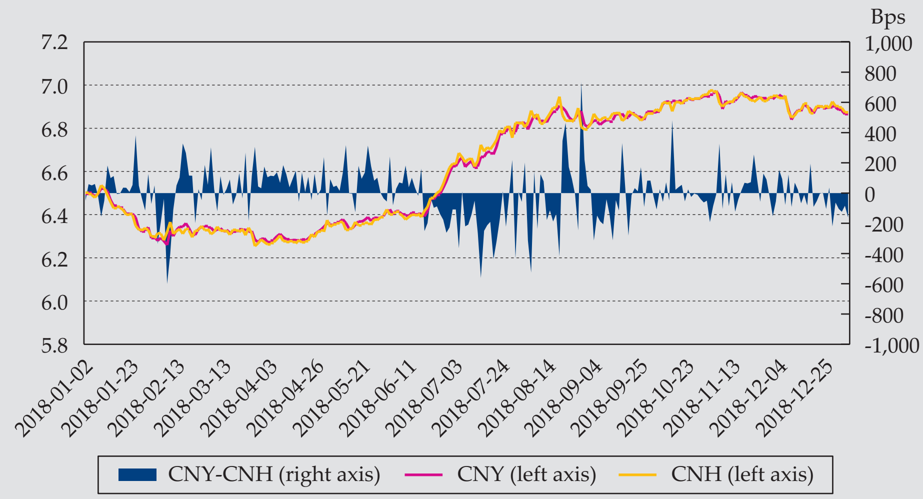
The CFETS RMB exchange rate index also demonstrated a trend of first rising up and then falling down, only featuring a turning point lagging behind that of the RMB/USD rate. From December 29th, 2017 to June 15th, 2018, the CFETS RMB exchange rate index rose from 94.85 to 97.85; from June 15th, 2018 to July 31rd, 2018, the rate plunged from 97.85 to 92.41; then, after some corrections at around 92-93, the rate closed at 93.28, registering a depreciation of 1.7 percent from the previous year.

In 2018, the USD index was still a major factor influencing the movement of RMB exchange rate. From the beginning of the year to mid-February, the USD index weakened by 3.4 percent and slipped from 91.8 to a stage-low of 88.6. In the same period, the RMB exchange rate rebounded by 3.1 percent, and edged up from 6.4967 to around 6.30. Since late March 2018, the USD index went strong, recovering from 88.6 to a stage-high of 97.69 on November 12th, an increase of 10.3 percent. In the same period, the RMB exchange rate started to wane, depreciating by 9.1 percent from 6.27 to 6.90. The strength of the USD exerted its influence on the RMB exchange rate through not only adjusting the basket of currencies, but also changing market supply and demand by diverting the direction and scale of global capital flows.

5.2.3 Factors influencing the RMB/USD exchange rate became more diversified

In 2018, the factors influencing the supply and demand situation in the interbank foreign exchange market became increasingly diversified. The first was the China-U.S. trade

Figure 5.3 Movements of RMB/USD exchange rate and CNY-CNH spread in 2018



Source: CFETS.

frictions. As the U.S. is China's largest source of trade surplus, a pillar of China's balance of payments and foreign exchange market supply, concerns over the China-U.S. trade frictions naturally exacerbated investors' panic about potential changes in foreign exchange supply and demand and the weakening of the RMB exchange rate. In mid-June 2018, the U.S. officially announced to levy additional tariff on USD 50 billion worth of Chinese goods. After that, the RMB exchange rate depreciated rapidly. From June 14th to July 13th, the RMB/USD exchange rate weakened by 4.4 percent from 6.3962 to 6.6905. The second was a combination of institutional factors, such as the internationalization of RMB and the proactive expansion of bond market opening-up. In 2018, domestic assets gained more popularity among overseas institutional investors. In Q1 2018, the net capital inflow of securities investment posted USD 10.3 billion, and in Q2 2018, the figure further increased to USD 61 billion, among which 73.9 percent was from bond investment.

5.2.4 Expectations of exchange rate in both domestic and overseas market remained stable

In 2018, though the RMB/USD exchange rate once weakened to over 6.9, there was no large-scale panic buying of foreign currencies in the domestic market, and market expectations of the exchange rate remained relatively stable, which formed a stark contrast to market reactions in 2016 when RMB rapidly devaluated. At the end of 2018, the implied exchange rate of the 1-year forward of CNY appreciated by 0.3 percent, while that of CNH depreciated by 0.3 percent, and the implied exchange rate of the 1-year non-deliverable forwards (NDFs) depreciated by 0.4 percent. At the end of 2016, the above three items experienced an implied depreciation of 0.9 percent, 5.2 percent, and 5.2 respectively.

This round of depreciation of the RMB exchange rate was greater, whereas market expectations at both home and abroad remained stable. For one thing, with the deepening of market opening-up, RMB-denominated assets became increasingly popular among overseas institutional investors. Offshore RMB investment products and RMB liquidity management tools were enriched as well. For another, China's macro-prudential management measures continued to improve, including the PBC's adjustment of the risk reserve requirement on financial institutions' foreign exchange forward sales from 0 to 20 percent, and Secretariat of Foreign Exchange Market Self-Disciplinary Mechanism's announcement to reintroduce the counter-cyclical factor, which to some extent reduced the demand for speculative foreign exchange purchases.

5.3 Institutional construction of the foreign exchange market

5.3.1 The new-generation foreign exchange trading platform was launched with improved functions

On February 5th, 2018, the new-generation foreign exchange trading platform CFETS FX2017 (Phase Ⅱ) was launched, enabling spot (bidding and inquiry), forward, swap, and currency swap transactions of foreign exchange, as well as gold inquiry trading businesses. The C-trade system for standardized RMB foreign exchange derivatives transaction was incorporated into a unified terminal of the new platform, well realizing the function of single sign-on.

On the basis of enabling inquiry and intentional quotation of market makers, the new platform supported quotations in batches and with varied volumes, thus facilitating the execution of more precise and flexible market-making strategies. Besides that, the new platform integrated the functions of authorization maintenance, quota management, and risk prevention in a more effective way, promoting all-around upgrading of market participants. Originally, the platform was able to process dozens of quotations and conclude 10-odd businesses per second. After this round of renovation, the trading efficiency of the platform was greatly enhanced. In merely one second, over 8,000 quotations could be processed and over 1,000 businesses concluded, well answering to the needs of an increasingly liquid foreign exchange market. The full launch of the new platform marked a major upgrading of financial infrastructure in China's foreign exchange market. As international experience and domestic practices were well integrated, not only technical performance was greatly improved, but also institutional innovation and system function achieved a leap forward, ushering in a new era for the development of infrastructure in China's interbank foreign exchange market.

5.3.2 Product categories were enriched, and the domestic benchmark USD interest rate system was constructed

The year 2018 witnessed the rapid development of foreign currency-related products and the smooth construction of a domestic USD interest rate benchmark system. For one thing, several products of foreign currency interest rate were launched in the interbank foreign exchange market, which further enriched the categories of foreign currency interest rate and exchange rate risk management tools. On February 5th, currency pairs cross currency swaps hit the market, enabling swap transactions of five currencies pairs, namely AUD/USD, EUR/USD,GBP/VSD, USD/HKD, and USD/JPY. On May 2nd, swap transactions of foreign currency interest rates were introduced, covering six foreign currencies of USD, Euro, British pound, Japanese yen, HK dollar, and Australian dollar. On July 23rd, the business of foreign currency lending collateralized by overseas foreign currency-denominated bonds was launched, in a bid to satisfy domestic institutions' demands for managing their foreign currency-denominated assets and debts. For another, the domestic USD interest rate benchmark was formed on the basis of the interbank foreign currency interest rate product system. The CFETS, in collaboration with Shanghai CFETS-ICAP International Money Broking Co., Ltd., unveiled the Interbank USD Lending Market Sentiment Indicator to directly reflect money supply situations in the USD lending market. Besides, the domestic USD interbank interest rate benchmark was calculated and released according to the quotation of foreign currency lending quotation banks, so as to offer trading and pricing reference for financial institutions. On September 3rd, the interbank foreign exchange market introduced quoting bank businesses for foreign currency lending. A total of 20 banks were designated as the first batch of quoting banks for the quotation of lending products in 8 standard terms, namely the O/N, 1-week, 2-week, 1-month, 3-month, 6-month, 9-month, and 1-year term. In addition, with the quotation data from quoting banks for foreign currency lending, the CFETS would calculate and then release reference rates of interbank USD lending in the domestic market for the quotation and trading of financial institutions.

In terms of currency pair businesses, the function of ESP was launched to support spot transactions of all foreign currencies against currency pairs; the precision of spot transactions was enhanced; the spot, forward, and swap transactions of two more currency pairs-NZD/USD and EUR/GBP-were made available; the business scope of spot currency pair products was specified for unified services.

5.3.3 The trading mechanism was improved, and supporting products and services were optimized

In 2018, the trading mechanism and business functions of the interbank foreign exchange market became further improved. The introduction of Central Limit Order Book (CLOB) for spot matching transactions based on bilateral credit and the ESP function enabled the trading mechanism of "seeing is having", greatly enhanced trading efficiency, and advanced the price discovery mechanism of the foreign exchange market. As the mechanism for matching trading kept improving, the volume of matching trading accounted for as much as 55.9 percent of the total volume of spot transactions.

In 2018, a variety of products and services supporting transactions in the interbank foreign exchange market were unveiled as a complement to the core systems and products, facilitating the conclusion of transactions and satisfying relevant demands of investors.

The first was the foreign exchange instant messaging tool. It enabled negotiation transactions of foreign currency lending, futures, currency swap, and other foreign exchange derivatives, as well as the interconnectivity between internal and external networks. The tool was designed to fill in gaps in the negotiation transaction function of the electronic trading platform, and meet users' customized demands of trading in complex derivatives or non-standard products. What's more, with the function of saving, searching, and downloading chatting records, the tool would be conducive to compliance management in a backtracking way.

The second was the improvement of information services and products. Functions of iTrader were optimized to upgrade the content of market information and the way they would be presented, offering users timely access to all kinds of information in the interbank foreign exchange market. Data categories, product composition, and charging plan of CMDS were all improved to enhance the value of market information services. Additionally, studies were made into the development and implementation of Ultra service, in a bid to satisfy members' multi-tiered demands for market data.

5.3.4 The two-way opening-up of the foreign exchange market was enhanced, and active efforts were made to engage in international cooperation

In June 2018, the PBC released the *Notice on Improving the Administration of RMB Purchases and Sales*, further expanding the business scope of RMB purchases and sales. First, the business that used to cover only trade in goods and services under current account items is then expanded to include all current account items. Second, on top of direct investments, the business starts to involve approved cross-border securities investment.

In the light of the policy adjustments for RMB purchase and sale business, the interbank foreign exchange market released an announcement on market access standards and relevant arrangements concerning overseas participating banks and overseas clearing banks, and drafted guidelines on the reporting of RMB purchases and sales information. Through this channel, a total of 6 overseas central banks, 1 overseas clearing bank, and 6 overseas participating banks entered the RMB foreign exchange market, while 7 overseas institutions gained access to the foreign currency lending market. In addition, studies on the introduction of the first-batch Free Trade Accounting Units (FTU) in Shanghai Free Trade Zone into the interbank foreign currency lending market were also underway. As of the end of 2018, there were 94 overseas institutions participating in China's interbank foreign exchange market, posting a year-on-year growth of 16.1 percent. Among them, 21 were overseas clearing banks, 34 were overseas participating banks, and 39 were overseas central bank institutions, recording a respective increase of 1, 6, and 6 from the previous year.

5.4 Outlook of the foreign exchange market

In 2019, greater efforts will be made to promote the two-way opening-up of China's foreign exchange market, to deepen international cooperation, and to strengthen business cooperation with overseas trading platforms. Innovative development of products and trading mechanisms of the foreign exchange market will be advanced. The market infrastructure will also be optimized to further enhance functions of the trading systems, and thus build an advanced trading platform in line with international standards. System configuration will be adjusted for user-friendliness and feasibility, so as to meet members' customized demands. Besides these measures, risk monitoring and prevention will be enhanced, cross-market and cross-category risk monitoring and analysis will be strengthened, and the monitoring of abnormal market trading behaviors will be tightened, so that abnormal activities can be identified in a timely manner and the risk early-warning mechanism will operate effectively. Self-disciplinary mechanism will coordinate with market monitoring, thus perfecting the market management framework, and preventing and defusing potential market risks.

Box 7 Develop currency trading businesses along the Belt and Road

Ever since the launch of the currency trading between RMB and Malaysian ringgit and Russia ruble in 2010, currency trading businesses along the Belt and Road has attained fast development. At present, there are 24 currency pairs in trading in the interbank RMB foreign exchange market, mostly currencies of countries and regions along the Belt and Road.

In 2018, in response to the (Belt and Road Initiative, BRI), the interbank foreign exchange market proactively advanced regional trading development, and earnestly implemented measures to optimize currency trading businesses along the Belt and Road. The Notice on the Participation of Overseas Banks in Regional Trading in the Interbank Foreign Exchange Market was released to introduce qualified overseas banks to regional trading in the interbank foreign exchange market, with rules on institution qualification and application procedures being specified.

Under the proactive efforts of the CFETS and the PBC Urumchi Central Sub-branch, registered with and approved by the PBC, the Industrial *and Commercial Bank of China (Almaty) Joint Stock Company and the ICBC Standard Bank Plc. became the first two overseas banks participating in regional trading in the interbank foreign exchange market starting from September 3rd, 2018. As the overseas quoting bank and participating bank for regional trading of CNY/KZT, the two institutions are expected to play a positive role and inject new vigor into the market. Currently, regional trading in the interbank foreign exchange market involves the trading of CNY/KZT, CNY/MNT, CNY/KHR, etc.*

In 2018, to promote bilateral trades and investments between China and Thailand, facilitate the use of RMB and Thai baht in the settlement of trade and investment funds, and satisfy market entities' appeal in reducing remittance costs, upon the authorization of the PBC, the trading mode of CNY/THB in the interbank foreign exchange market was optimized. Specifically, since February 5th, 2018, the regional trading of CNY/THB was replaced by the direct trading, and no commission would be charged until July 31st, 2020.

In 2018, the China (Xinjiang) Silk Road Currency Regional Trading Information Platform, collectively constructed by the CFETS and the PBC Urumchi Central Sub-branch, was officially put into service. The platform gave adequate currency information in the interbank market and over-the-counter (OTC) market of countries neighboring Xinjiang, as well as the listing prices of RMB against currencies such as Tajikistani somoni and Pakistan rupee in the local OTC market. The launch of the platform is of many benefits. It can help increase the transparency of currency information in regional trading and improve the information sharing mechanism of the foreign exchange market, so that enterprises and financial institutions at home and abroad can fully grasp the currency information in regional trading, the efficiency of bilateral local currency settlement can be enhanced, and the settlement of trade and investment funds for investors of China, Kazakhstan, and other neighboring countries can be more convenient. Additionally, it can play an exemplary role for currency cooperation among countries neighboring Xinjiang.

Chapter 6 Gold Market

In 2018, domestic gold price fluctuated in a tight range. Spot gold price increased by 4.25 percent. The trading volumes of various gold products either increased or decreased. The trading volume of the Shanghai Gold Exchange (SGE) continued to grow while that of gold futures in the Shanghai Futures Exchange (SHFE) decreased for the second year in a row, though at a slower rate. The OTC gold market of commercial banks continued to rise on the whole. Account gold, gold-based wealth management, and gold derivatives quoted in USD saw fast growth, while gold leasing and gold accumulation shrank. China's gold market is steadily opening up, market innovation is picking up speed, and relevant infrastructure, institutions, and regulations are further improved.

6.1 Performance of the gold market

6.1.1 Gold trading in SGE

6.1.1.1 Spot gold price rose slightly, and trading volume continued to grow

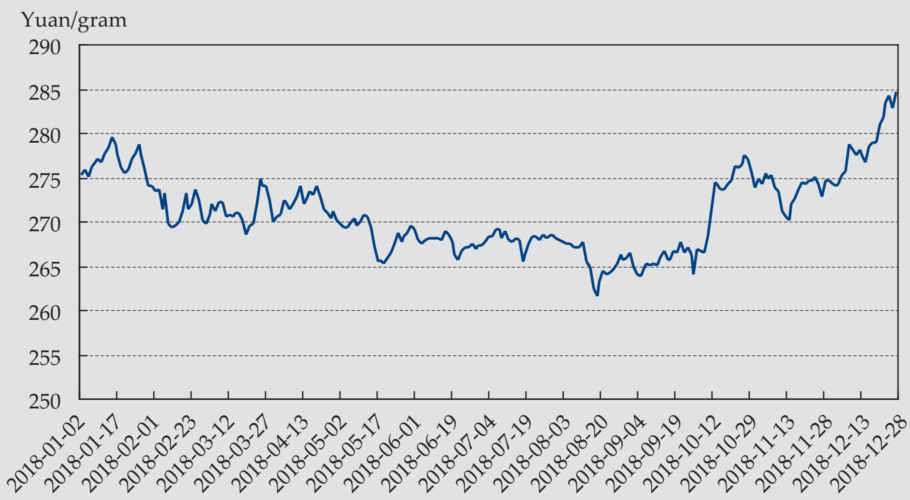
In 2018, domestic spot gold price fluctuated in a tight range. The Au99.99 contract of SGE opened at RMB 274.00 per gram at the beginning of the year, registering a yearly high of RMB 284.90 per gram and a yearly low of RMB 260.75 per gram, and closed at RMB 284.60 per gram, representing an increase of 4.25 percent year on year. Throughout the year, the weighted average price was RMB 271.42 per gram, a drop of 1.48 percent from 2017.

In 2018, the total gold trading turnover of SGE reached RMB 21,317.539 billion, up 9.20 percent year on year. Among that, the gold trading volume reached 67,510.25 metric tons, up 24.35 percent year on year, and the turnover was RMB 18,304.644 billion, up 22.23 percent year on year, registering an increase for six consecutive years.

6.1.1.2 Gold auction market shrank, inquiry market grew fast, and pricing market expanded steadily

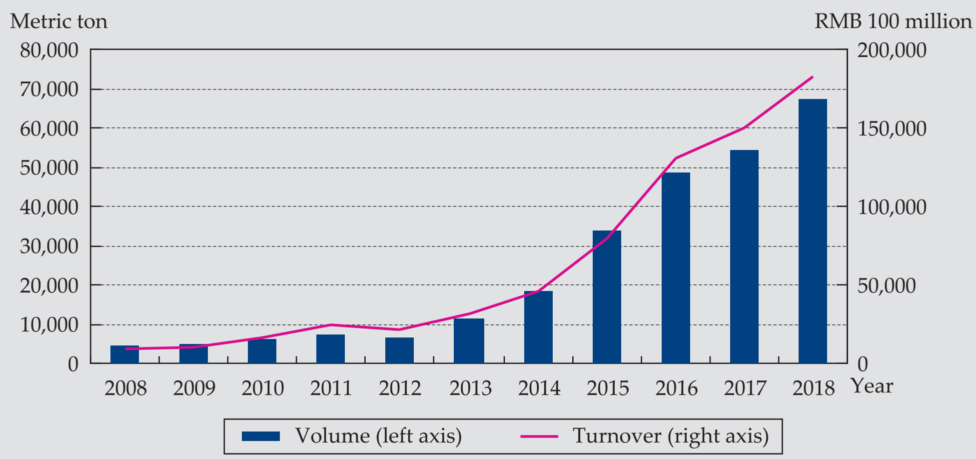
The trading volume of deferred gold products decreased, and that of physical gold products grew steadily. In 2018, the trading volume of price bidding market was 20,389.77 metric tons, a drop of 32.39 percent year on year. Specifically, trading volume of deferred products was 13,650.41 metric tons, down 41.39 percent year on year, and that of physical products was 6,739.36 metric tons, up 1.36 percent year on year.

Figure 6.1 Trend of Au99.99 contract price in SGE in 2018



Source: SGE.

Figure 6.2 Gold trading in SGE from 2008 to 2018



Note: Calculated bilaterally.
Source: SGE.

The gold inquiry market grew fast, and trading volume almost doubled. In 2018, inquiry trading volume was 45,645.77 metric tons, up 99.57 percent year on year. In particular, the trading volume of interbank inquiry on the platform of CFETS reached 30,996.90 metric tons, main board inquiry in SGE was 9,362.69 metric tons, and international board inquiry was 5,286.18 metric tons, up 110.84 percent, 129.24 percent, and 29.37 percent respectively.

The pricing market grew steadily with a more diversified combination of pricing bodies. In 2018, the volume of the Shanghai Gold Benchmark Price trading in the pricing market reached 1,474.71 metric tons, up 16.79 percent from 2017, trading turnover was RMB 399.795 billion, up 15.03 percent year on year, and daily trading volume averaged 6.07 metric tons. Now, 26 members and 33 institutional clients participate in the Shanghai Gold Benchmark Price trading, including commercial banks, gold manufacturing and consuming enterprises, and domestic and international members.

6.1.1.3 Clearing, storage, and delivery remained safe and smooth, and withdrawal amount rose slightly

In 2018, SGE cleared RMB 3,381.232 billion of funds, a decrease of 9.15 percent compared with 2017, averaging RMB 13.915 billion per day. Particularly, SGE cleared RMB 2,309.94 billion of funds for proprietary trading and RMB 1,071.292 billion for agent trading, representing a year-on-year decrease of 6.78 percent and 15.88 percent respectively.

The physical gold withdrawal remained steady with a slight increase. A total of 2,054.62 metric tons were withdrawn on the main board, up 1.19 percent compared with 2017. In 2018, 64 designated warehouses in 36 different areas in China were in use by SGE.

6.1.2 Gold futures market

6.1.2.1 Domestic and overseas gold futures prices followed a similar trend, yet the spread between gold spot and futures expanded

In 2018, gold futures price in the SHFE followed the international trend closely in a fall-rise pattern. The domestic gold futures contract opened at RMB 279.55 per gram, reaching RMB 287.95 per gram at its highest and RMB 262.7 per gram at its lowest, and closed at RMB 287.85 per gram, an increase of 3.62 percent from the end of 2017. In terms of the spread between gold spot and futures, the closing prices of domestic gold futures were higher than the ones of gold spot Au99.99 in all 243 trading days. The average spread between gold futures and spot changed within the range of (0.08, 5.54), smaller than that of the previous year. The average spread rose by 11.46 percent from RMB 2.53 per gram in 2017 to RMB 2.82 per gram.

6.1.2.2 Domestic gold futures trading volume dropped while gold positions increased

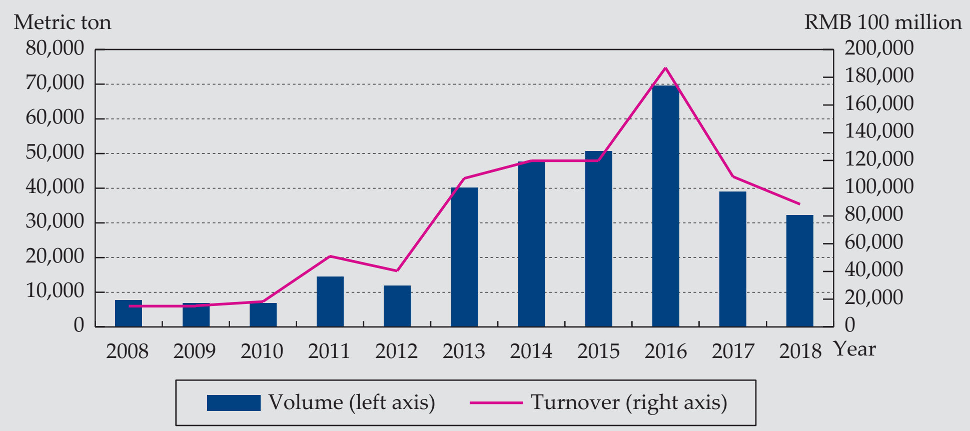
In 2018, the trading volume of SHFE gold futures reached 32,247,800 lots (32,247.78 metric tons), down 17.22 percent year on year, slower than that of 44 percent in 2017. The daily trading volume averaged 132.71 metric tons. Turnover of gold futures was RMB 8,849.599 billion, down 18.35 percent from 2017, accounting for 5.43 percent of turnover of all the products in SHFE.

Gold futures positions rose slightly. In 2018, the month-end gold futures positions in SHFE averaged 165.16 metric tons, up 5.43 percent from 2017.

6.1.2.3 Physical delivery volume shrank

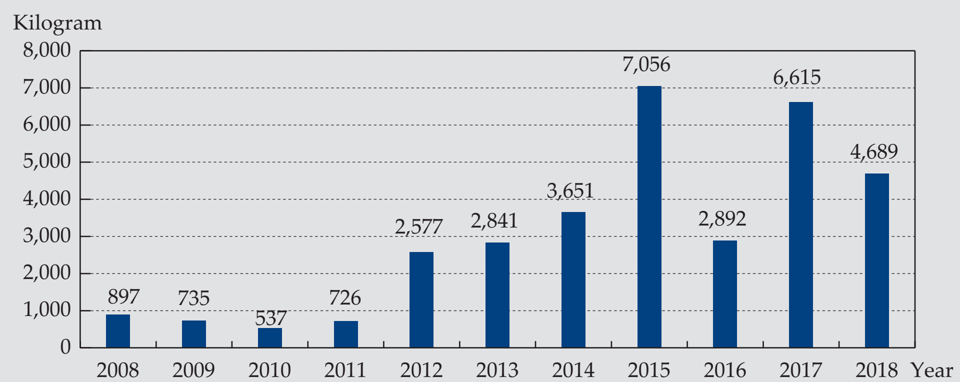
By the end of 2018, the SHFE had 6 designated gold delivery warehouses, namely Industrial and Commercial Bank of China (ICBC), Agricultural Bank of China (ABC), Bank of China (BOC), China Construction Bank (CCB), Bank of Communications (BOCOM), and Shanghai Pudong Development Bank (SPDB), involving 39 depository locations. In 2018, the gold futures delivery volume in SHFE was 4,689 lots (4.69 metric tons), down 29.12 percent from 2017. The value of delivery was RMB 1.284 billion, a decrease of 27.97 percent year on year.

Figure 6.3 Gold futures trading from 2008 to 2018



Note: Calculated bilaterally.
Source: SHFE.

Figure 6.4 Gold futures delivery volume from 2008 to 2018



Note: Calculated unilaterally.
Source: SHFE.

6.1.3 Gold business of commercial banks

6.1.3.1 Commercial banks further secured their dominant position in SGE

In 2018, the total gold trading volume of commercial banks on SGE reached 59,282.64 metric tons and sales turnover stood at RMB 16,068.612 billion, a year-on-year increase of 49.60 percent and 47.08 percent respectively, accounting for 87.81 percent of the total trading volume, 14.8 percentage points higher than the previous year. In terms of market structure, proprietary trading of commercial banks in SGE rose substantially while agent trading slipped. Proprietary gold trading of commercial banks in SGE in 2018 soared by 61.59 percent to 54,056.75 metric tons, and agent gold trading for institutions and individuals stood at 5,225.88 metric tons, down 15.38 percent year on year. In particular, agent business amounted to 1,683.14 metric tons for institutions and 3,542.75 metric tons for individuals, down 30.31 percent and 5.79 percent year on year respectively. In terms of trading modes, commercial banks played a dominant part in gold auction, inquiry, and pricing businesses. In 2018, the gold auction business of commercial banks reached 12,790.06 metric tons, down 22.26 percent year on year, accounting for 62.73 percent of the total; inquiry trading business reported a size of 45,088.96 metric tons, up 104.90 percent year on year, accounting for 98.78 percent of the total; and pricing trading business registered 1,403.62 metric tons, a year-on-year increase of 20.04 percent, accounting for 95.18 percent of the total.

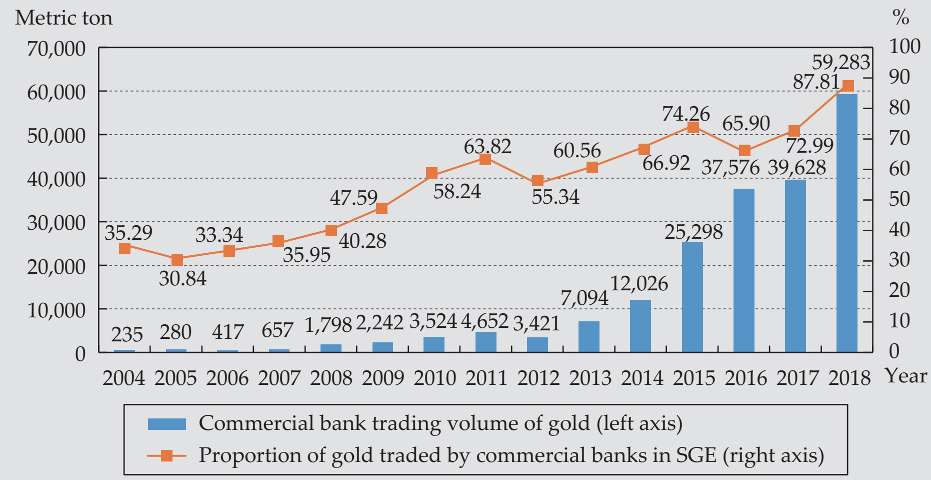
6.1.3.2 Domestic proprietary gold business of commercial banks continued to rise

In 2018, commercial banks traded 9,312.77 metric tons[①] of gold in the domestic OTC market, up 15.34 percent year on year. In particular, a fast rise was seen in account gold, gold-based wealth management, and gold derivatives quoted in USD.

(1) Physical gold sales decreased. In 2018, commercial banks sold a total of 254.4 metric tons of physical gold and sales turnover reached RMB 75.131 billion, down 16.32 percent and 15.57 percent year on year respectively. In particular, proprietary trading of physical gold reached 81.72 metric tons, down 1.20 percent year on year, and agent trading of physical gold posted 25.62 metric tons, up 31.79 percent year on year. Gold accumulation (regular investment) sales reached 147.06 metric tons, down 27.14 percent from a year earlier.

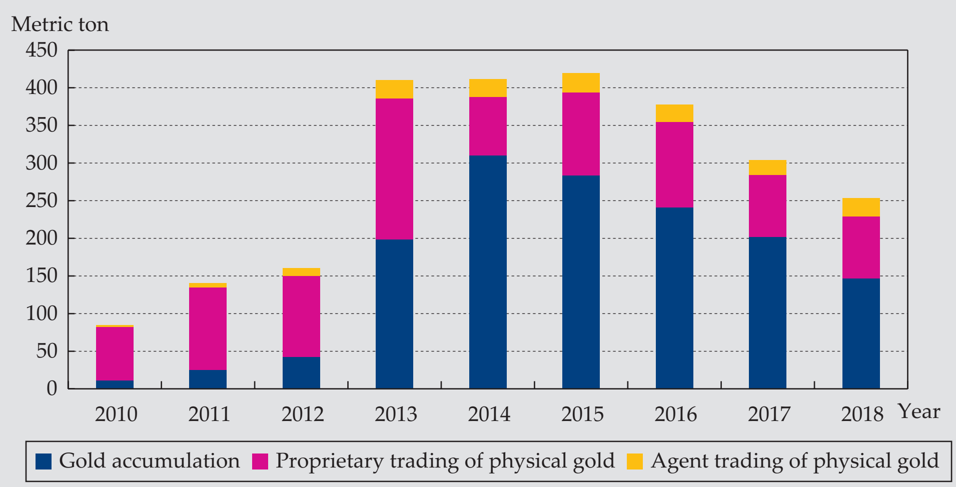
① Trading volumes of physical gold, account gold, and domestic gold derivatives are calculated bilaterally; gold pledging is calculated on a weight basis; and gold leasing is calculated based on the amount leased.

Figure 6.5 Gold trading volume by commercial banks in SGE and its percentage from 2004 to 2018



Source: PBC Shanghai Head Office.

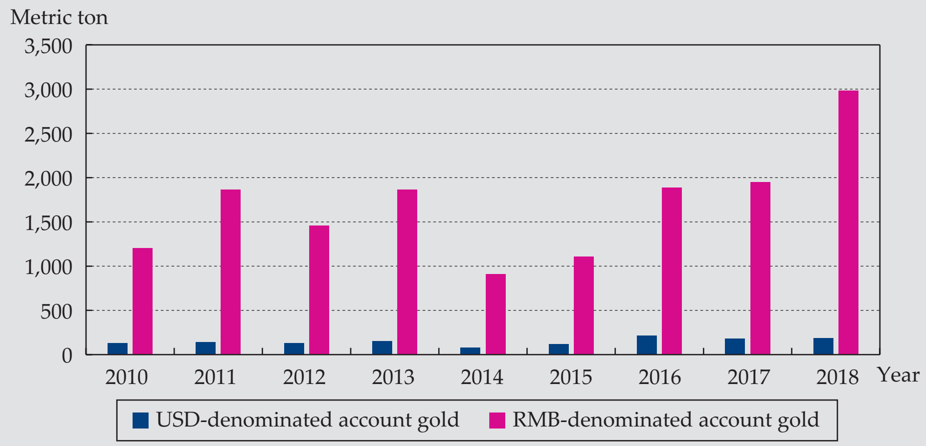
Figure 6.6 Physical gold trading volume of commercial banks from 2010 to 2018



Source: PBC Shanghai Head Office.

(2) Account gold trading volume rose fast. In 2018, 14 commercial banks in China were engaged in account gold business. Total trading volume was 3,168.69 metric tons and turnover was RMB 853.599 billion, up 48.71 percent and 46.29 percent year on year respectively. In particular, the trading volumes of USD-denominated account gold and RMB-denominated account gold were 184.64 metric tons and 2,984.04 metric tons, up 2.80 percent and 52.93 percent year on year respectively.

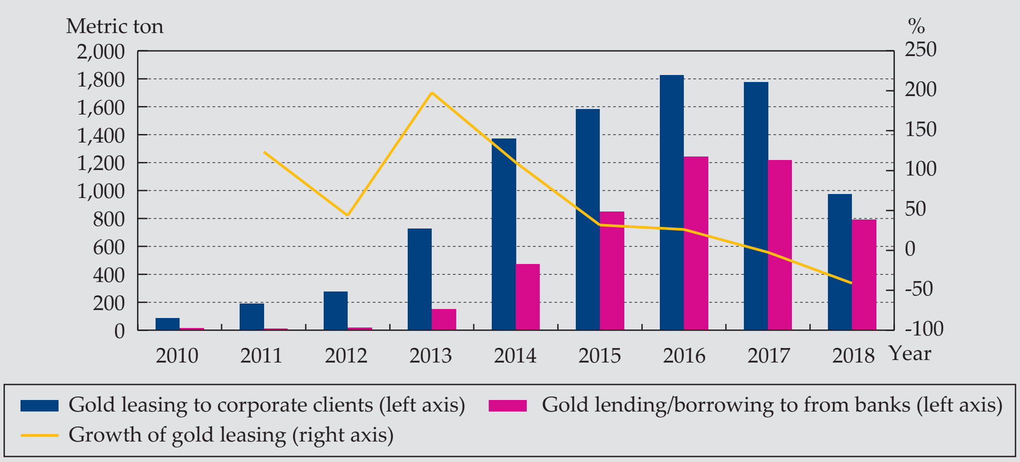
Figure 6.7 Account gold trading volume of commercial banks from 2010 to 2018



Source: PBC Shanghai Head Office.

(3) Gold leasing shrank visibly. Gold leasing business consists of two parts, i.e. interbank gold lending/borrowing, and gold leasing from commercial banks to corporate clients. In 2018, commercial banks leased 1,775.06 metric tons of gold on a cumulative basis, down 40.73 percent year on year, equivalent to a notional value of RMB 482.7 billion, a year-on-year decrease of 41.62 percent. In particular, commercial banks leased 984.48 metric tons of gold to clients, down 44.63 percent year on year, and lent 790.58 metric tons of gold to interbank clients, a year-on-year decline of 35.02 percent. By the end of 2018, the balance of gold leasing business was 1,261.23 metric tons, down 50.66 percent compared to the previous year.

Figure 6.8 Gold leasing and gold lending/borrowing volume of commercial banks and its growth from 2010 to 2018



Source: PBC Shanghai Head Office.

(4) Gold pledging business continued to decrease. In 2018, only two commercial banks, namely the BOC and the CCB, were engaged in gold pledging business. They received 0.17 metric ton of pledged gold, down 79.52 percent year on year.

(5) Sales of gold-based wealth management products soared. In 2018, notional principal value of various gold-based wealth management products sold by commercial banks was RMB 1,874.153 billion, up 50.10 percent year on year, while RMB 1,821.506 billion of gold-based wealth management products were redeemed upon maturity, up 70.96 percent year on year. At the end of 2018, the balance of outstanding gold-based wealth management products was RMB 388.378 billion, up 15.94 percent from a year earlier.

(6) Domestic gold derivatives trading grew fast. OTC gold derivatives traded by commercial banks in China include USD- and RMB-quoted gold forward, gold swap, and gold options. In 2018, the trading volume of domestic OTC gold derivatives by commercial banks was 3,979.54 metric tons, up 63.16 percent year on year. In particular, gold forward trading reached 1,167.51 metric tons, down 9.79 percent year on year, gold swaps trading was 2,481.76 metric tons, up 121.73 percent year on year, and gold options trading amounted to 330.27 metric tons, a year-on-year increase of nearly 12 times. In terms of currencies, the trading volume of gold derivatives quoted in RMB amounted to 1,239.70 metric tons, and those quoted in USD reached 2,739.84 metric tons, increasing by 5.46 percent and 116.85 percent year on year respectively.

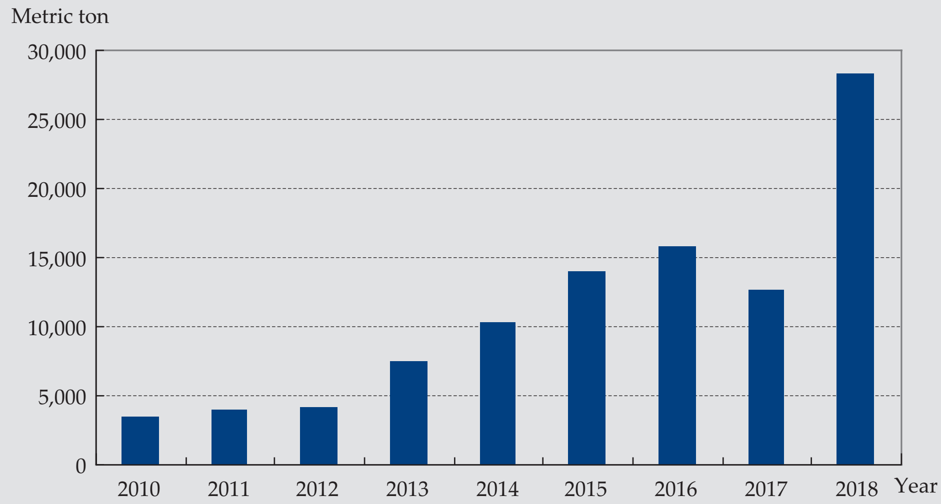
6.1.3.3 Overseas gold trading by commercial banks rose fast

In 2018, China's commercial banks traded 28,293.17① metric tons of gold through overseas gold trading channels and the total turnover stood at USD 1,153.326 billion, a year-on-year rise of 47.46 percent and 48.49 percent respectively. In particular, overseas gold swap trading amounted to 11,683.58 metric tons, up 52.72 percent from 2017. Overseas forward trading reached 1,721.96 metric tons, a year-on-year increase of 31.57 percent. Overseas gold futures trading registered 148.59 metric tons, up 90.61 percent year on year. Overseas gold options trading rose by over 28 times to 4.74 metric tons. Overseas gold spot trading volume amounted to 4,843.89 metric tons, up 40.49 percent from the previous year. Overseas gold leasing was 9,890.40 metric tons.② From the perspective of market structure, gold spot accounted for 17.13 percent of the total overseas gold trading volume of commercial banks, gold leasing accounted for 34.96 percent, gold swap and gold forward made up 41.30 percent and 6.09 percent respectively, and gold futures, gold options, and other gold derivatives combined accounted for less than 1 percent.

① Statistics of overseas gold businesses by commercial banks in 2018 include overseas gold leasing business, after year-on-year adjustments.

② Statistics of overseas gold leasing started from January, 2018, so there's no year-on-year comparison.

Figure 6.9 Trading volume of overseas gold businesses of commercial banks from 2010 to 2018



Source: PBC Shanghai Head Office.

6.2 Main features of the gold market

6.2.1 Domestic gold price rose slightly, and spread of domestic-international gold prices narrowed

International gold price continued to fluctuate in 2018. At the end of the year, London spot gold price closed at USD 1,281.65 per ounce, USD 14.85 lower than the end of 2017 and reporting a year-on-year decline of 1.15 percent. Under the influence of RMB exchange rate fluctuation, domestic gold price changed within a smaller range and saw a slight increase. At the end of 2018, domestic gold price was RMB 284.6 per gram, 4.25 percent higher than a year earlier. The average domestic-international gold price spread dropped by 32.72 percent, or RMB 0.72 per gram, to RMB 1.47 per gram.

6.2.2 Market structure was diversified and development was differentiated

On the whole, the domestic gold market was expanding, yet market structure and business varieties were diversified and characterized by unbalanced development. First, SGE and SHFE gold products performed unevenly. In 2018, the trading volume of various gold products in SGE rose by 24.35 percent year on year, while that of gold futures in SHFE dropped by 17.22 percent from a year earlier. Second, the development of proprietary and agent businesses of the SGE was imbalanced. Throughout the year, agent gold business volume of the SGE was 9,614.14 metric tons, down 43.43 percent year on year, while proprietary business reached 57,896.11 metric tons, up 55.23 percent year on year. Third, gold auction, inquiry, and pricing businesses of the SGE developed unevenly. Gold auction shrank by 32.39 percent year on year, while gold inquiry and pricing increased by 99.57 percent and 16.79 percent year on year respectively. Fourth, OTC gold businesses of commercial banks had mixed performance. Account gold, gold-based wealth management, and overseas gold businesses grew fast, while physical gold sales and gold leasing decreased.

6.2.3 Gold market became more closely related to other financial sub-markets

Since 2018, the U.S. interest rate and USD index rose, the U.S. stock market became more volatile, and the international financial market experienced turmoil and buildup of risk-aversion sentiment. Under such circumstances, the negative correlation between the international gold price and USD index strengthened: the correlation coefficient changed from -0.739 in 2017 to -0.894 in 2018. As financial regulation tightened and macro policies for deleveraging and risk prevention were implemented in China, the influence of RMB exchange rate changes on the prices of precious metal became pronounced, and the correlation between the gold market and foreign exchange, securities, and bond markets strengthened. In 2018, domestic gold ETF trading volume was 1,095.51 metric tons, and the year-end position was 45.02 metric tons, down 11.63 percent and 10.78 percent year on year respectively. The SGE worked together with the CCDC to improve the bond-deposit offset business, included policy financial bond as one that could be offset, and expanded the application scope of RMB-denominated bond collateral in the precious metal market. Domestic trading of gold derivatives quoted in USD was vibrant, and overseas gold businesses of commercial banks rose fast.

6.3 Innovation, institutions, and infrastructure of the gold market

6.3.1 Strengthen institutional norms of the gold market

First, the PBC issued three rules regarding the management of gold market businesses. To maintain sound and steady growth of the gold market and protect the legitimate rights and interests of investors, after sought opinions from the public, the PBC General Administration Department issued the *Interim Administrative Measures for Internet Gold Business of Financial Institutions* (Yinbanfa〔2018〕No. 221), the *Interim Administrative Measures for Gold Accumulation Business* (Yinbanfa〔2018〕No.222), and the *Notice on Matters Concerning Gold Asset Management Business* (Yinbanfa〔2018〕No. 215) on December 14th, 2018. These new rules regulated Internet gold, gold accumulation, and gold-based asset management businesses, improved the regulatory system for the gold market, and strengthened the foundation for gold market growth. They can help prevent market risks and encourage business innovation to serve the real economy.

Second, the SGE enhanced anti-money laundering (AML) management. Following the overall arrangements of the PBC, the SGE finished establishing the organizational structure and developing the regulations for AML purposes. Management regulations and operational rules like the *Administrative Measures for Anti-Money Laundering* were issued. An online AML management information system was developed to gather due diligence information of members and assess their AML risk levels. Publicity and training programs were carried out to enhance market participants' AML awareness and promote the establishment of an AML working network covering the entire market. Peer review was conducted following the standards of the Financial Action Task Force (FATF) on money laundering.

Third, the market maker system was introduced into the gold futures market. In October 2018, the SHFE issued the *Administrative Measures for Market Makers of Shanghai Futures Exchange*, and recruited market makers for gold and nickel futures in the first round. This would improve the activeness and consistency of contract trading of gold futures, which is not yet the dominant trading mode.

6.3.2 Encourage product innovation in the gold market

The 30 gram panda gold coin was approved for trading. On September 12th, 2018, panda gold coin was listed for trading in the SGE. By the end of 2018, the trading volume amounted to 2,059.14 kg, a total of 68,638 coins, with a turnover of RMB 566 million. They were sold at an average premium of 2.02 percent compared with the basic gold price (Au99.99 contract).

6.3.3 Improve infrastructure development of the gold market

First, the construction of price benchmark was pushed forward. The SGE officially issued the price fixing curve for gold forward business. With the establishment of the implied volatility curve of inquiry futures business, options asset management and derivatives application were further concentrated in the Shanghai Gold Benchmark Price market.

Second, new trading rules were established. A total of 29 rules on business operation were revised and issued, including the *Trading Rules of Shanghai Gold Exchange* and rules on management of trading invoices. Management rules on block trade, gold auction, and inquiry businesses were further detailed. Supporting rules including those on settlement, delivery, leasing, and pledge were revised.

Third, the new-generation trading system was launched. In June 2018, the SGE completed the construction of the the third generation trading system (GEM-3), which covers nearly 100 structural demands and involves three major business segments: core business, international business, and Internet business. Technological structure was enhanced, and the membership service system was improved.

Fourth, the Chinese standards on gold bars and gold ingots were promoted. The SGE developed and issued the English version of two standards, namely *Gold Ingots* (SGEB1—2002) and *Gold Bars* (SGEB2—2004), as a core part of (SGE'S) quality standard system. It includes the international mainstream specifications and standards on gold ingots of 1kg, 3kg, and 12.5kg, which makes it China's gold standard system covering internationally adopted gold ingots standards.

6.4 Opening-up of the gold market

6.4.1 Trading of the international board continued to grow

An increasing number of international players participated in China's gold market, the structure of international members and investors further diversified, and their involvement in trading continued to grow. By the end of 2018, the international board had 74 international members, and 77 international customers for which international members acted as agency; 43 members (58 percent of the total) participated in the market trading, an increase of 16 percent year on year. The international board had a good momentum of growth and played a more significant role in the market with a steadily growing trading volume. In 2018, a total of 28,332.60 metric tons of precious metal were traded through the international board, a year-on-year increase of 133.12 percent, and the total turnover reached RMB 1,842.36 billion, up 37.77 percent from a year earlier. In particular, the trading volume of gold reached 6,548.62 metric tons, a year-on-year growth of 37.09 percent, with the trading turnover registering RMB 1,764.676 billion, up 34.85 percent from 2017.

6.4.2 Commercial banks were active in the overseas gold market

Chinese commercial banks became more active in the international gold market. First, overseas gold trading volume grew fast. In 2018, overseas gold trading of commercial banks reached 28,293.17 metric tons with a turnover of USD 1,153.326 billion, up 47.46 percent and 48.49 percent from 2017 respectively. Second, product varieties of overseas trading further diversified. Commercial banks were engaged in gold spot, gold forward, gold swap, gold futures, and gold options businesses, covering almost all types of products in the international gold market. Third, commercial banks were further involved in the international gold market. At the beginning of 2018, following the BOC, the ICBC, the CCB, and the BOCOM, China Minsheng Banking Corporation (CMBC) also became a member of the London Bullion Market Association (LBMA), and the BOC and the CCB are already LBMA Gold Price benchmarking participants. The voice of China has become louder in the international gold market.

6.4.3 Shanghai Gold Benchmark Price became more influential in the world

Trading, delivery, and settlement-every stage of the Shanghai Gold Benchmark Price trading has been running smoothly following strict standards since its launch. Trading volume has been growing steadily, pricing mechanism has been transparent and fair, and the RMB gold price began playing a benchmark role. First, the trading volume grew steadily. From its start in 2016 to the end of 2018, the volume of Shanghai Gold Benchmark Price trading on a cumulative basis reached 3,204.57 metric tons with a turnover of RMB 902.622 billion. In 2018, the volume of Shanghai Gold Benchmark Price trading in the pricing market reached 1,474.71 metric tons, up 16.79 percent year on year; trading turnover was RMB 399.795 billion, up 15.03 percent year on year; and daily trading volume averaged 6.07 metric tons. All these set new records. Second, the pricing mechanism is transparent and fair. The Shanghai Gold Benchmark Price businesses follow the principle of "quantity-based inquiry" and "quantity-price balance" which ensures an open and transparent pricing process, so as to guarantee that the benchmark price is fair and reasonable. In 2018, 486 trades involving 2,381 rounds took place in the pricing market, averaging 4.9 rounds per trade, and 6.07 metric tons and RMB 1.645 billion per day. Third, market influence continued to expand. Domestically, the Shanghai Gold Benchmark Price is used by many commercial banks as the price foundation for gold leasing and gold pledging, as well as the cash settlement price for gold derivatives. Internationally, the Shanghai Gold Benchmark Price began to exert influence on the trading and settlement in the global gold market. Trading and price data of the Shanghai Gold Benchmark Price are now released in real time on many globally well-known trading data platforms as well as precious metal websites such as Kitco. In 2018, the SGE continued to authorize Dubai Gold and Commodity Exchange (DGCX) to use the Shanghai Gold Benchmark Price to estimate gold futures price, which made it more recognized and competitive in the overseas market.

6.4.4 Cooperation with the international market and countries along the Belt and Road was enhanced

In 2018, China accelerated the opening-up of its gold market. The output of overseas gold mines of major gold corporate groups reached 23.4 metric tons[①]. China National Gold Group bought 70 percent of equities of the Russian gold mine Krutch; Zijin Mining Group bought Serbia's biggest copper mine project RTB Bor and the Canadian company Nevsun, with a total investment of over RMB 20 billion; and Chifeng Gold bought the Sepon opencast copper and gold mine of Laos for RMB 275 million. It has become a trend for Chinese gold enterprises to go global. Communication between the SGE and major international markets like London and New York has been enhanced, and cooperation with CME, LBMA and Gruppe Deutsche Börse (German Stock Exchange) has been strengthened to facilitate market interconnectivity. In April 2018, within the framework of the gold exchange memorandum of cooperation signed by the PBC

① Source: Ma Chunhong, "China produced 401 tons of gold in 2018", *China Gold News*, February 1, 2019.

and Russian central bank, the SGE signed the memorandum of understanding (MOU) with the Moscow Exchange to point the direction and provide specific contents for their future business expansion.

6.5 Outlook of the gold market

At the new stage of development, China will follow the global trend of shifting the center of the gold market from the west to the east, further emphasize the role of the market, push forward internationalization, and make more efforts to fit into the global market. Innovative development of the gold market will be accelerated, functions of the gold market will be deepened, and more financial institutions will be introduced into the gold market, so as to constantly extend and deepen the market. The gold market systems will be further improved while management and monitoring will be enhanced to prevent and resolve market risks.

Box 8 China Panda Gold Coins listed for trading in China

On September 12th, 2018, China Panda Gold Coins the launched jointly by SGE and China Gold Coin Incorporation (CGCI) was listed for trading. This not only diversified the product categories of SGE, but also represented a major reform of the issuance management and trading mode of precious metal commemorative coins in China. By the end of 2018, a total of 68,638 China Panda Gold Coins, weighing 2,059.14kg, were traded with a turnover of RMB 566 million.

1. Business model and rules

As the sole distributor of China Panda Gold Coins, the CGCI sells these coins to dealers (such as dealers in block trade) through the SGE system. Institutional clients qualified for tax exemption in buying China Panda Gold Coins and individual clients are allowed to participate in the trade. Unqualified institutional clients can only take delivery of the coins after purchasing, and cannot sell them on the SGE platform.

China Panda Gold Coins are traded through spot auction in full payment following the principle of "price first, time first, and centralized matching". The SGE provides centralized performance guarantee for the trading. The contract code is PGC30g and trading unit is 30g. The year or version of issuance makes no difference in the trading.

China Panda Gold Coins are cleared in a "centralized, net amount-based, and tiered" manner in the SGE. Members and clients can apply for delivery after the contract trade completes. Minimum delivery weight is 30 gram, and the applied amount should be an integral multiple of 30 gram. Actual operations should follow the Delivery Rules of Shanghai Gold Exchange and relevant regulations which are currently effective.

China Panda Gold Coins are traded on the spot and paid in full amount, which avoids the risk of short selling compared with margin trade and eliminates the possibility of default. A major risk to prevent is irrational price hype in the market by boasting the concept of gold and silver coins. Therefore, risk management of China Panda Gold Coins trading should focus on price risk, liquidity risk, and investor education.

2. Impacts and significance

Listing China Panda Gold Coins for trading opened up the product channel between the gold spot market and the gold and silver coin market in China, diversified trading modes in the gold coin market, and promoted the sound development of the gold coin market. By adopting the mechanism of centralized auction matching, the traditional one-to-one selling approach has been changed and this significantly pushed forward the development of the gold coin market. First, the distribution channels of China Panda Gold Coins have been extended to reach a larger group of clients. Second, the transparency of China's gold and silver coin market has been improved and market trade has become better-regulated. Third, the role of the market in pricing has been enhanced and the balance between supply and demand has been strengthened. Fourth, the function of gold coins in market investment has been enhanced as the secondary trading market plays an important role. Fifth, public demand for investment in gold coins has been increased and a virtuous market cycle is taking shape.

Chapter 7 Insurance Market

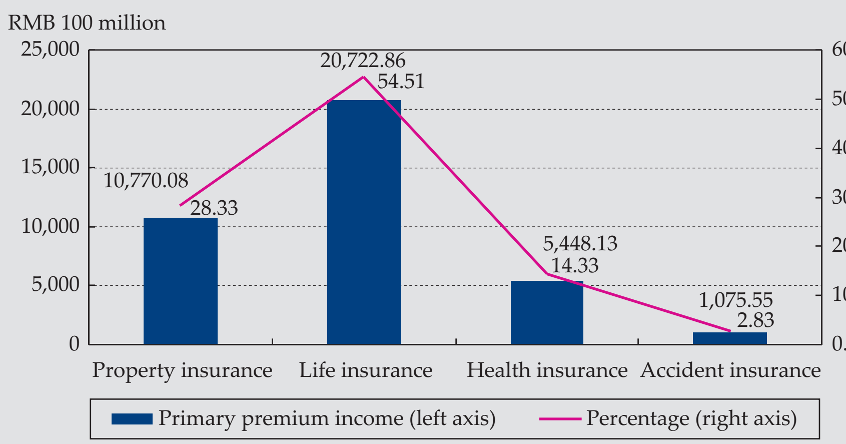
In 2018, the overall operation of the insurance market was stable. Progress was made in the transformation of the industry, with business structure improved and the function of insurance guarantee enhanced. The risk management capability of insurance companies was steadily boosted, and the foundation for warding off risks in the insurance industry was consolidated. Meanwhile, changes in the external environment played a increasingly important role, while cyclical, structural, and institutional problems still existed in the industry.

7.1 Performance of the insurance market

7.1.1 Primary premium income

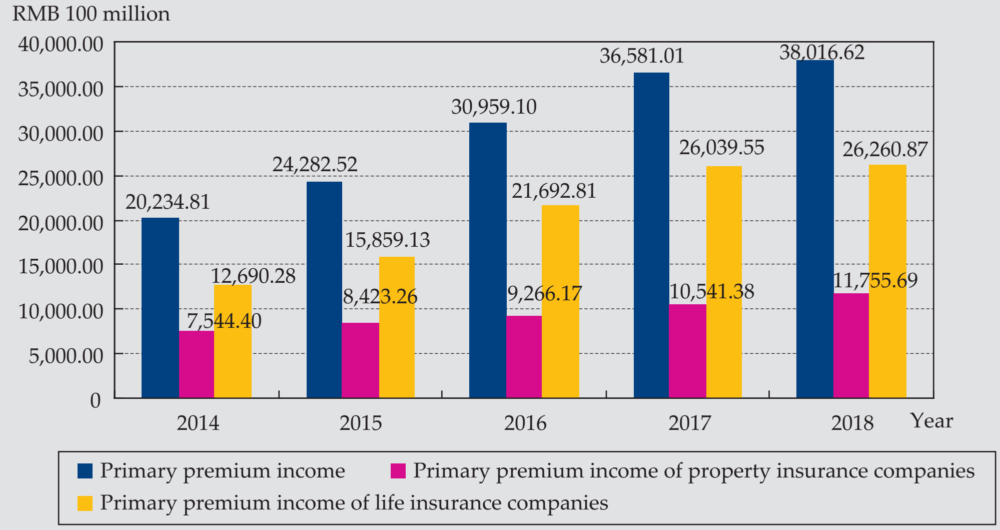
In 2018, China's insurance industry achieved premium income of RMB 3,801.662 billion, up 3.92 percent year on year. Property, life, health, and accident insurances accounted for 28.33 percent, 54.51 percent, 14.33 percent, and 2.83 percent respectively. From 2014 to 2017, primary premium income of insurance companies recorded RMB 2,023.481 billion (up 17.49 percent year on year), RMB 2,428.252 billion (up 20.00 percent year on year), RMB 3,095.910 billion (up 27.50 percent year on year), and RMB 3,658.101 billion (up 18.16 percent year on year). In particular, primary premium income of property insurance companies increased by 16.41 percent, 11.65 percent, 10.01 percent, and 13.76 percent respectively, and that of life insurance companies increased by 18.15 percent, 24.97 percent, 36.78 percent, and 20.04 percent respectively.

Figure 7.1 Primary premium income structure in 2018



Source: Official website of China Banking and Insurance Regulatory Commission (CBIRC).

Figure 7.2 Primary premium income from 2014 to 2018



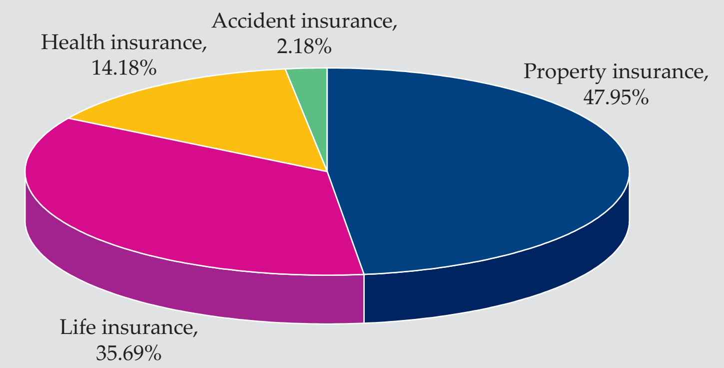
Source: Official website of the CBIRC.

7.1.2 Claims and payments

In 2018, insurance companies paid RMB 1,229.787 billion in claims and payments, up 9.99 percent year on year, of which property accounted for 47.95 percent, life 35.69 percent, health 14.18 percent, and accident 2.18 percent.

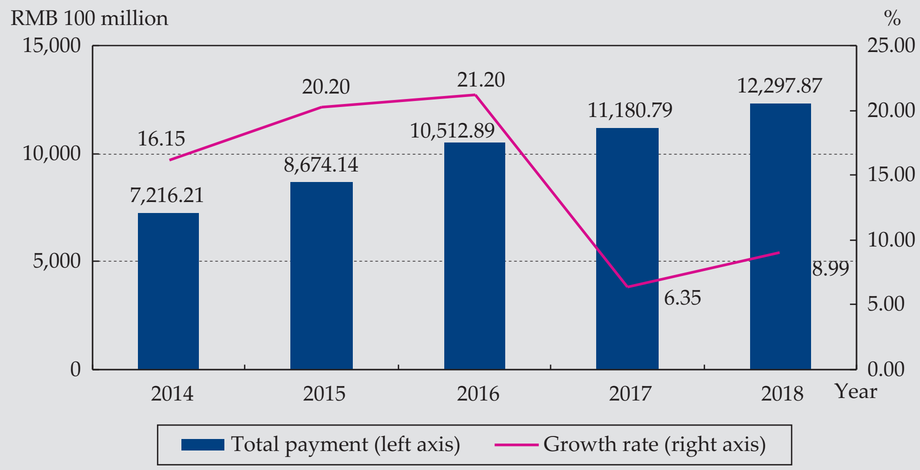
From 2014 to 2017, claims and payments of the insurance industry recorded RMB 721.621 billion (up 16.15 percent year on year), RMB 867.414 billion (up 20.20 percent year on year), RMB 1,051.289 billion (up 21.20 percent year on year), and RMB 1,118.079 billion (up 6.35 percent year on year) respectively.

Figure 7.3 Structure of claims and payments in 2018



Source: Official website of the CBIRC.

Figure 7.4 Claims and payments from 2014 to 2018

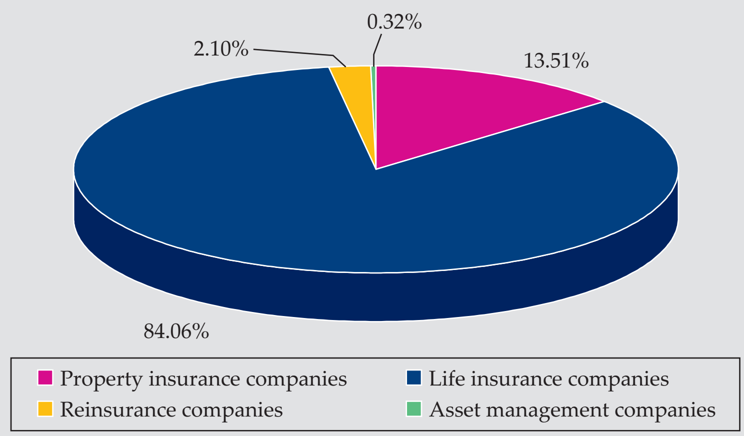


Source: Official website of the CBIRC.

7.1.3 Total asset of the insurance industry

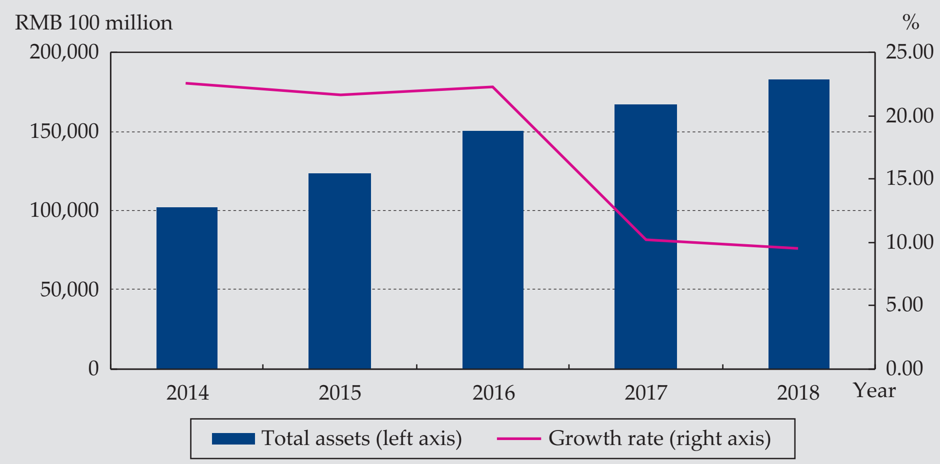
In 2018, total assets of the insurance industry amounted to RMB 18,330.892 billion, up 9.45 percent compared with the beginning of the year, with that of property insurance companies, life insurance companies, reinsurance companies, and asset management companies accounting for 13.51 percent (down 5.92 percent), 84.06 percent (up 10.55 percent), 2.10 percent (up 15.87 percent), and 0.32 percent (up 13.41 percent) respectively. From 2014 to 2017, assets of the insurance industry registered RMB 10,159.147 billion (up by 22.57 percent year on year), RMB 12,359.776 billion (up 21.66 percent), RMB 15,116.916 billion (up 22.31 percent), and RMB 16,748.937 billion (up 10.08 percent) respectively.

Figure 7.5 Structure of total assets in the insurance industry in 2018



Source: Official website of the CBIRC.

Figure 7.6 Total assets in the insurance industry from 2014 to 2018



Source: Official website of the CBIRC.

7.2 Main features of the insurance market

7.2.1 The role of the insurance industry in preventing risks was constantly enhanced

In 2018, the insurance industry registered RMB 6,897.04 trillion in the total amount insured, up 66.23 percent from a year earlier; claims and payments totaled RMB 1.229787 trillion, up 9.99 percent year on year. The property insurance business grew steadily, and the personal insurance business stabilized before recovery. In particular, the amount insured by property insurance companies and personal insurance companies was RMB 5,777.37 trillion (up 90.65 percent year on year) and RMB 1,119.67 trillion (up 0.10 percent year on year) respectively. In terms of insurance types, the amount insured registered RMB 211.26 trillion (up 24.92 percent) for auto insurance, RMB 866.14 trillion (up 244.04 percent) for liability insurance, RMB 3.46 trillion (up 24.23 percent) for agricultural insurance, RMB 30.00 trillion (down 5.46 percent) for life insurance, RMB 797.80 trillion (up 50.02 percent) for health insurance, and RMB 3,808.86 trillion (up 32.80 percent) for accident insurance.

7.2.2 The insurance industry proactively pursued transformation to return to its core business

In 2018, the number of new insurance sold was 29.072 billion, up 66.13 percent from a year earlier, including 28.263 billion (up 70.10 percent year on year) for property insurance companies and 809 million (down 8.46 percent year on year) for personal insurance companies. In terms of insurance types, the accumulated number of new policy issuance stood at 4.890 billion (up 31.91 percent year on year) for cargo transportation insurance, 7.270 billion (up 81.70 percent year on year) for liability insurance, 2.286 billion (up 35.62 percent year on year) for guarantee insurance, 448 million (up 12.09 percent) for auto insurance, 89 million (down 19.86 percent year on year) for life insurance (among them 55.4910 million were attributed to general life insurance, down 20.35 percent), 3.201 billion (up 417.28 percent) for health insurance, and 6.499 billion (up 168.51 percent) for accident insurance. In terms of income growth in insurance premium, among various types of property insurance, the primary premium income recorded RMB 203.438 billion (up 8.85 percent) for compulsory insurance for traffic accident of motor-driven vehicle and RMB 57.265 billion (up 19.54 percent) for agricultural insurance; among various types of personal insurance, the primary premium income registered RMB 2,072.286 billion (down 3.41 percent) for life insurance, RMB 544.813 billion (up 24.12 percent) for health insurance, and RMB 107.555 billion (up 19.33 percent) for accident insurance. By the end of 2018, 195 million rural households were included in agricultural insurance, with total risk coverage of RMB 3.46 trillion and 1.112 billion *mu* (approximately equal to 7.413 ares) of crops insured. The guarantee insurance for small rural loans achieved a premium income of RMB 410 million and claims and payments of RMB 830 million, helping 200,000 rural households secure loans for agriculture, rural areas, and farmers of RMB 13.8 billion. More than 140 million rural houses were included in rural housing insurance, with a total risk coverage of RMB 3.6 trillion. A total of 147 agricultural insurance products were developed specifically for poverty alleviation, involving 60 types of crops in 22 provinces and autonomous regions.

7.2.3 The capability to ward off risks was constantly enhanced

The CBIRC issued the *Administrative Measures for Independent Directors of Insurance Institutions*, aiming to clarify primary responsibilities, standardize behaviors of market entities, strengthen institutional arrangements such as regulatory constraints, further improve the internal and external environment for independent directors' performance of duties, and enable independent directors to give full play to their roles in the corporate governance structure, by establishing and improving the operation mechanism of independent director system. At the end of 2018, the average general and core solvency ratios of 178 insurance companies, which were reviewed at the working meeting of the CBIRC solvency committee, stood at 242 percent and 231 percent respectively. In particular, the general solvency ratios of property insurance companies, personal insurance companies, and reinsurance companies were 274 percent, 235 percent, and 282 percent respectively. According to the review, 104 insurance companies were rated A in the composite rating of risks, with 69 rated B, 2 rated C, and 2 rated D.

7.2.4 The insurance industry actively participated in safeguarding financial stability

At the end of 2018, the insurance fund balance stood at RMB 16,408.838 million, up 9.97 percent from the beginning of the year. Specifically, bank deposits totaled RMB 2.436350 trillion and accounted for 14.85 percent of the total, investment in bonds RMB 5.638297 trillion and 34.36 percent, investment in stocks and securities investment funds RMB 1.921987 trillion and 11.71 percent, and other investments RMB 6.412204 trillion and 39.08 percent. Insurance funds launched special investment products to defuse the liquidity risk of stock pledges of listed companies and gave full play to their advantage in long-term sound investments. Since the CBIRC published the *Notice on the Establishment of Special Products by Insurance Asset Management Companies*, all insurance asset management companies have been carrying out the business of special products in an active and prudent way. Currently, China Life Asset Management Co. Ltd. and nine other insurance asset management companies have completed pre-launching registration of special products, with a total target size of RMB 116.0 billion. So far five special products have been launched and altogether completed investments of approximately RMB 2.2 billion.

7.3 Insurance market innovation

7.3.1 Innovation of insurance products and services

7.3.1.1 A crucial step was taken in the pilot program for individual tax-deferred pension insurance.

In April 2018, the MOF, the State Administration of Taxation, the Ministry of Human Resources and Social Security, the CBIRC, and the CSRC jointly published the *Notice on Carrying out Pilot Program for Individual Tax-deferred Commercial Pension Insurance*. In accordance with the Notice, a one-year pilot program for individual tax-deferred commercial pension insurance was launched in Shanghai, Fujian Province (Xiamen included), and Suzhou Industrial Park in Jiangsu Province, starting from May 1st. In May 2018, the CBIRC successively released the *Guidelines for Development of Individual Tax-Deferred Commercial Pension Insurance Products*, the *Interim Administrative Measures for the Individual Tax-Deferred Commercial Pension Insurance Business*, and the *Interim Administrative Measures for Use of Funds of Individual Tax-Deferred Commercial Pension Insurance*, aiming to clarify product development principles, business management requirements, and regulatory requirements for use of funds, regarding the tax-deferred pension insurance. By the end of October, 19 insurance companies were qualified to participate in the pilot program and a total of 61 products were launched to the market. The abovementioned documents helped standardize the behaviors of insurance companies in developing individual tax-deferred commercial pension insurance products, promote the healthy development of the pilot program, and further improve China's pension system.

7.3.1.2 Further improvements were made to the catastrophe insurance system and preparations were made for the release of multi-peril insurance and catastrophe insurance products.

In 2018, 6.08 million households were included in earthquake catastrophe insurance, with premiums of RMB 201 million and total risk coverage of RMB 267.1 billion. On that basis, China Residential Earthquake Insurance

Pool (CREIP) earnestly implemented the requirements of the CBIRC to promote constant improvements of the catastrophe insurance system and develop multi-peril and multi-term catastrophe insurance products. As the operator of the CREIP, Shanghai Insurance Exchange has completed the development and testing of the system for catastrophe insurance products for typhoon and flood as well as multi-year earthquake catastrophe insurance, so as to prepare for its release.

7.3.1.3 Efforts were continued to promote poverty alleviation through insurance.

In exploring the model of targeted poverty reduction, a working pattern featuring leadership of regulatory authorities, the participation of the whole industry, and collaboration of various parties was created, with a critical focus on deeply impoverished areas. In 2018, insurance companies actively undertook the business of the supplementary health insurance for farmers living in dire poverty as part of the new rural cooperative medical care system and the major disease insurance scheme for rural and urban residents (including working rural residents), replicated and promoted the model of poverty alleviation through agricultural insurance, and made significant progress during the process. Shanghai Insurance Exchange bidding platform for poverty alleviation through public welfare became a brand and renewed four projects in 2018, including the Project of Public Welfare Insurance for Children in Yunnan Province (funded by Shanghai Pudong Development Bank), the Public Welfare Insurance Project for Shigatse of Tibet (funded by Shanghai Rural Commercial Bank), the Public Welfare Insurance Project for Xianyang of Shaanxi Province (funded by Bank of China), and the Carefree Growth Project (funded by Guotai Junan Securities), with renewed premiums of RMB 5.55 million and total amount insured of RMB 29.79 billion. Since the release of the bidding mechanism for poverty alleviation through public welfare, China has leveraged public welfare funds of RMB 17.4932 million to enable insurance coverage of RMB 68.347 billion and benefit 1.3287 million people living in hardship.

7.3.2 Innovation of functions and services of the insurance exchange

7.3.2.1 Major breakthroughs were made in the construction of floor trading rules, and 8 products were traded on the trading system for insurance products.

In April 2018, the *Business Rules on Insurance Product Transactions (No. 1-3)* was officially released, involving rules on listing and trading of products, information disclosure, and works of experts' committee. Later on July 25th, the "Love Health" individual tax-deducted health insurance product, launched by the PICC Health Insurance Company Limited, was listed for trading, which marked a critical step in the construction of a standardized public floor trading market in China's insurance industry. It was not only a major innovation in the centralized floor trading model of insurance, but also an important pioneering practice in China's multi-layer insurance market system. By the end of 2018, four insurance companies had got eight individual tax-deducted health insurance products listed for trading, with the total amount insured standing at more than RMB 2 billion.

7.3.2.2 The China Insurance Asset Registration and Trading System was approved for operation. In March 2018, China Insurance Asset Registration and Trading System (CIARTS) was officially put into operation. The system offers services like issuance, registration, custody, trading, settlement, and information disclosure of products as well as credit enhancement and mortgage/ pledge financing for the insurance asset management industry, with an aim to promote the well-regulated, IT-enabled, and standardized development of the insurance asset management market. The business regulations which were first released include one Measures and four Guidelines, covering several aspects such as registration, issuance, account management, and information disclosure of insurance asset management products. By June 2019 when the book was published, the amount of registered products stood at RMB 1.34 trillion, and there were altogether 1,330 debt investment plans, equity investment plans, and asset-backed plans. These products, within their maturities, could provide the industry with management services such as information disclosure, instalment payment of principal, distribution of returns, and ahead-of-schedule repayment.

7.3.3 Innovation of insurance technology

Insurance technology is the fundamental driving force for the expansion of risk protection capability, and will represent the core competitiveness of the insurance industry in its transformation and development. At present, China's insurance technology is in infancy and maintains a momentum of rapid development. In particular, big data and cloud computing technologies are relatively mature, and artificial intelligence is growing rapidly. Overall, the insurance technology has been transitioning from the conceptual to the practical level. It is not only the technological force which can drive the development of the industry, but also a staunch force promoting industrial transformation. First, the big data technology was used to satisfy the data query need of insurance companies and enable the sharing of data information between different industries. Second, the application of the block chain technology in the insurance industry was actively promoted. In 2018, the block chain technology was applied in various fields, such as pension management, reinsurance, coinsurance, anti-fraud initiatives, reconciliation, and custody of digital insurance policies.

7.4 Opening-up of the insurance market

7.4.1 Requirements for the establishment of foreign institutions in China were eased, and the business scope of foreign institutions was expanded

In April 2018, President Xi Jinping announced at the Boao Forum for Asia Annual Conference that, China would ensure that major moves towards financial opening-up, which had been proposed earlier, could be implemented at an early date, and that outcomes of China's opening-up efforts would deliver benefits as soon as possible to all enterprises and people around the world. So far, a number of measures have been implemented. First, greater facilitation were provided for foreign investors. The foreign ownership cap was lifted to 51 percent for foreign personal insurance companies, and the cap will be removed in three years. Second, requirements for the establishment of foreign institutions in China were eased, and foreign insurance companies no longer needed to have a representative office in China for two consecutive years prior to establishing a fully-owned institution. Third, the business scope of foreign institutions was expanded, and eligible overseas investors were allowed to provide insurance agent and assessor services in China.

7.4.2 Investment facilitation was promoted, and new breakthroughs were made in the opening-up of the insurance industry

In November 2018, the German insurer Allianz SE received approval for the preparatory establishment of Allianz (China) Insurance Holding Company Limited in Shanghai, China's first-ever insurance holding company wholly owned by a foreign insurer. The ICBC-AXA Life Insurance Company obtained the approval for the preparatory establishment of ICBC-AXA Asset Management Company, and Korean Reinsurance Company received approval for setting up its branch in China.

7.4.3 The International Reinsurance Platform was established to serve the BRI construction

The International Reinsurance Platform is an important infrastructure project in the insurance industry which was explicitly required by the State Council. On August 8th, 2018, the International Reinsurance Platform was officially put into operation, offering all-round, whole-process, and digital transaction-related services. Upon the signing of a memorandum of system access with the PBC Shanghai Head Office, the platform can carry out reinsurance business and cross-border capital settlement for overseas institutions. At the end of 2018, there were 22 institutional users on the International Reinsurance Platform, achieving a total risk coverage of RMB 8.8 billion. The launch of the platform can further promote the opening-up of China's reinsurance market, improve Shanghai's capability for allocating international resources, increase China's voice and pricing power in the international reinsurance market, and boost the building of China's international financial center.

7.4.4 Constant improvements were made to laws and regulations, and the investment and business environment was optimized

In order to constantly optimize the investment and business environment for the insurance industry and further open up the industry, the CBIRC has revised and improved relevant laws and regulations and as well as supporting rules. In February 2018, the former CIRC revised the *Detailed Rules on the Implementation of the Regulation of the People's Republic of China on the Administration of Foreign-Funded Insurance Companies* and the *Measures on Administration of Chinese Representative Institutions of Foreign Insurance Institutions*, making adjustments to provisions concerning several removed intermediary services such as "notarization of documents submitted for establishment of a foreign insurance company" and "notarization of documents submitted for establishment or major changes of Chinese representative institutions of foreign insurance institutions". In April 2018, the CBIRC published the *Notice on Relaxing Restrictions on the Business Scope of Foreign Insurance Brokerage Companies*, announcing to lift restrictions on the business scope of foreign insurance brokerage companies and treat them as equals of domestic companies. Qualified foreign insurance brokerage institutions can apply to (former) local bureaus of insurance regulation for changes to their permits, so that they can have the same business scope as domestic ones. In May 2018, the CBIRC sought public feedback on the *Decision on Revising the Administrative Regulative on Foreign-Funded Insurance Companies of the People's Republic of China (proposal draft)* and the *Detailed Rules on the Implementation of the Regulation on the Administration of Foreign-Funded Insurance Companies of the People's Republic of China*, stating that foreign insurance companies will no longer need to have a representative office in China for two consecutive years prior to establishing a foreign-funded institution.

7.5 Outlook of the insurance market

At the 2019 Banking and Insurance Regulatory Conference, it was pointed out that the risks in the insurance industry were overall under control, but it still faced complicated and challenging situations. The insurance industry will earnestly implement the decisions and arrangements of the CPC Central Committee and the State Council, constantly deepen the supply-side structural reform, promote product innovation with a focus on serving people's livelihood, and keep enhancing its role in protecting against risks. Emphasis should be placed on main business so that the insurance industry can return to its core business and construct a multi-level, differentiated insurance institutions system with a wide coverage. We should give full play to advantages of insurance funds in long-term sound investments, focus on major strategies, support important projects and programs, and strengthen financial services for key sectors and people's wellbeing. Efforts will also be made to improve the corporate governance mechanism, constantly consolidate enterprises' solvency, keep improving the capability for operations, management, risk prevention, and risk control in an opened-up market, resolutely forestall and defuse financial risks, realize high-quality development, and ensure that the insurance industry can serve the real economy in an increasingly effective and efficient way.

Box 9 Supplementary regulation serves the real economy and an insurance asset management platform is launched

President Xi Jinping noted at the 2nd Full Assembly of the Fifth Plenary Session of the 18th CPC Central Committee that, we must "coordinate the regulation of key financial *infrastructure, including important payment institutions, clearing institutions, financial assets registration and depository institutions, and safeguard the sound and effective operation of financial infrastructure". He also emphasized on the 5th National Financial Work Conference that efforts should be made to "enhance the coordinated regulation and interconnectivity of financial infrastructure and promote comprehensive financial statistics and information-sharing on supervision".*

In order to implement the requirements specified in the Several Opinions of the State Council on Accelerating the Development of the Modern Insurance Service Industry, the insurance administration under the State Council launched its core system, the China Insurance Asset Registration and Trading System (hereinafter referred to as the CIARTS), in March 2018. As an infrastructure platform of the insurance industry which has been recognized by the insurance administration under the State Council, the system is dedicated to promoting the well-regulated, IT-enabled, and standardized development of the insurance asset management market, proactively forestalling financial risks, and striving to serve the real economy.

1. High standards are adopted in developing accurate plans, and institutions are designed with a focus on forestalling and defusing financial risks and serving the real economy. *Institutional design is the fundamental issue, and details are easy to arrange when the fundamental issue is settled. The centralized registration, trading, and circulation of financial assets are important solutions to forestalling and defusing market risks. The goal of the CIARTS is "to become a comprehensive platform which can offer major basic services in insurance funds use and insurance asset management, and effectively leverage its role in enabling industry self-discipline and supplementary regulation and boosting innovation". On this basis, the system will integrate the tasks of forestalling and defusing financial risks and serving the real economy, and strive to develop into an industry infrastructure which can match leading exchanges as well as registration and settlement agencies at home and abroad in terms of both function and role.*

How to forestall and defuse financial risks? We need to proceed from this task, and leverage the information collection function of establishments which engage in centralized registration and trading of asset management products through on-exchange registration and trading mechanisms. The CIARTS should perform the duty of regulating industry self-discipline as a market organizer, so as to build up a frontline barrier for risks in the insurance industry.

How to make concerted efforts to serve the real economy?

First, the CIARTS should strive to tackle the pains and difficulties currently troubling the insurance asset management industry and become a basic platform to serve the development and innovation of the industry. It offers common, basic services regarding insurance funds use *and insurance asset management, with aims to reduce the operations cost of the industry, improve market liquidity and vitality, and boost technological applications in the insurance asset management industry.*

Second, the CIARTS should pay close attention to key strategic sectors of the country and propel insurance funds to serve the real economy. At the end of 2018, the insurance fund balance stood at RMB 16.41 trillion, among which financing to the real economy totaled around RMB 12 trillion. By building up a transparent, fair, and effective platform for product issuance and trading, the system can guide insurance funds to better serve the real economy and China's key strategies.

Third, with an understanding of industry trends, the CIARTS should strive to become a testing ground for deepened reform of the insurance asset management industry. It can serve as a bridge that links various parties together, create favorable conditions for interconnectivity between institutions within and without the insurance asset management industry as well as cross-sector investment, and provide a platform for the industry's reform and innovation in products and trading mechanisms.

2. "Five goals" should be attained in high-quality financial infrastructure development.

With characteristics of insurance funds use and insurance asset management taken into full consideration, the goal of the CIARTS entails "three ones", namely "one system, one set of rules, and one database".

To set up "one system", we need to establish a unified system of holder accounts and product codes, so as to conduct the insurance asset management in a more unified and better-regulated manner; deliver the function of insurance asset management product issuance, registration and information disclosure business, so as to lay a foundation for the development of more complicated functions such as on-exchange trading; enable front-end control and whole-process management of system functions, so as to effectively reduce risks in business operations. Meanwhile, "five goals" should be attained in high-quality financial infrastructure development.

The first goal is the standardization of non-standard assets. Through centralized registration and trading mechanisms in exchanges, the non-standard assets in the industry can be transformed into standard assets, which can improve the competitiveness of insurance asset management products in various industries. The second goal is the centralization of off-exchange trading. Through centralized platform-based services, we can transfer off-the-counter (OTC) trading of insurance asset management products to the exchanges inside, so as to ensure that businesses are conducted in a better-regulated and transparent way. The third goal is the electronization of manual trading. By transforming components in manual trading of insurance asset management products, such as commands of purchase and redemption, commands of fund transfer, and signing of *contract, into electronic commands, the system can improve trading efficiency and lower trading costs. The fourth goal is the integration of trading and settlement. By unifying information and capital flow concerning insurance asset management and insurance capital investment, the system can deliver changes to the ineffective mode of trade and OTC settlement. The fifth goal is to enable the control of risks throughout all stages of trading. By incorporating offline investment into the system of risk control covering all stages of trading, the system can effectively reduce operational risks, moral hazards, and operational risks in relevant businesses.*

By the end of 2018, more than 300 institutions had registered their financial assets, with a total size of RMB 7.77 trillion, including over 2,200 insurance asset management products which totaled RMB 2.54 trillion, investment of insurance institutions in bank deposits, bank financial products, trusts, and other financial products, which totaled approximately RMB 3.83 trillion, and direct investment of insurance institutions in equities, equity funds, and real estate, which totaled around RMB 1.31 trillion.

3. Multiple channels are employed to serve the real economy, and forestall and defuse financial risks.

First, the CIARTS can help the industry serve the real economy in a more efficient way. It should fully leverage its features and advantages manifested in close contact with the market and wide-reaching connections, proactively cooperate with other financial establishments and industry associations, and promote the construction of a multi-level service industry system. For one thing, the CIARTS can give full play to its professional capability as a third-party registration agency, unify basic elements such as product codes and holder accounts, get rid of market information asymmetry by building a credible and binding market platform, and propel insurance asset management institutions to regulate intermediary businesses. At the end of 2018, there were 5,570 market participants involved in the CIARTS, and a total of 2,591 holder accounts of market-participant institutions were opened. For another, the CIARTS has enabled broad connectivity in the market. Currently, it has forged internet connections with the IT systems of 211 institutions, established an information interaction mechanism with the Insurance Asset Management Association of China, and initiated the construction of system interconnectivity of institutions like insurance asset management companies and custodian banks, thus effectively promoting the building of a convenient, efficient, and low-cost ecosystem and a comprehensive service platform which enables broad connectivity between the real economy and the insurance asset management industry as well as other financial establishments.

Second, the CIARTS can promote the capability of the industry to serve the real economy. In recent years, insurance funds have played a positive role in supporting the real economy as well as social and economic development strategies of China. By creating a transparent, fair, and efficient environment for product *issuance and trading, the CIARTS can liquidize idle assets through the open market trading mechanism, and provide inexhaustible resources for insurance funds to serve national strategies and the real economy. At the end of 2018, a total of 20 insurance asset management products were issued in the exchanges, reporting a total size of RMB 29.896 billion and covering a number of key national strategic programs and livelihood projects, such as "large aircrafts", "the Yangtze River Economic Belt", "coordinated development of the Beijing-Tianjin-Hebei region", "financial inclusion", and "rebuilding of run-down areas". In terms of trading in the exchanges, the system launched innovative businesses like "standardization of non-standard assets", accelerated the building of features like transaction and product valuation, and steadily advanced the pilot program of trading business. On September 6th, 2018, the first single floor transaction of the insurance asset management industry, "Debt Investment Program (Phase Ⅱ) of Taikang Life Insurance in the Tianjin International City Project of China Railway Construction Corporation Limited", was launched. By the end of 2018, six floor trading were completed, totaling RMB 1.173 billion.*

4. The three-step development strategy will be steadily pursued to achieve sustainable growth.

First, the focus should be placed on the industry, so as to consolidate the foundation of services. Starting with centralized registration, the CIARTS can help to get through all institutions in the insurance industry, activate basic system functions such as account system, product management system, centralized registration system, issuance system of asset management products, trading system, and information disclosure system, and thus constantly improve its capability of information services and operational management which can promote both regulation and industry development.

Second, it should expand its reach outside the industry, so as to steadily promote the standardization of non-standard assets. Based on constant enrichment and improvement of the functions, efforts should be made to expand the features of payment and settlement, establish a scientific and fair insurance asset management product valuation system, further the standardization of insurance asset management products, and push forward the project non-standard asset standardization in the insurance industry.

Third, proactive measures should be taken to promote innovative development in the future. With a primary focus on demands for insurance fund investment, an investment sharing system should be established targeting products like publicly-offered funds, trusts, and equity funds, which can offer index-based, comprehensive information and data services for regulatory authorities and market participants. Insurance funds should be used in a more international and market-based manner, so as to serve the BRI and create new driving forces for the development of the real economy. All in all, diversified infrastructure and functions should be fostered to promote the high-quality and healthy development of the insurance asset management industry.

Chapter 8 Derivatives Market

In 2018, China's derivatives market continued to expand with optimized structure and enhanced function in serving the real economy. Innovation on futures varieties was pushed ahead in an orderly fashion. The first international crude oil futures were officially launched. The commodity options market saw a steady rise in size. The liquidity of the stock index futures market was improved to some extent. The treasury bond futures market became increasingly mature. The economic function of SSE 50 ETF option was gradually given play. The size of interest rate swap market kept the trend of high growth. The CRMW played an important role in supporting the bond financing of private enterprises. The same landscape as the international forex market where the ratio between the trading volume of futures and that of spot is 2:1 took shape in the exchange rate derivatives market. The size of the OTC commodity derivatives market picked up with improvement achieved in the product line.

8.1 Commodity futures and options market

8.1.1 Performance of the commodity futures and options markets

In 2018, China's commodity derivatives market realized a cumulative trading volume of 3.002 billion lots (unilateral, similarly hereinafter) and a cumulative trading turnover of RMB 184.70 trillion, down 1.6 percent and up 13.1 percent year on year respectively. As for exchanges, Shanghai Futures Exchange (SHFE)[①] realized a cumulative trading volume of 1.202 billion lots and a cumulative trading turnover of RMB 94.28 trillion, down 11.9 percent and up 4.8 percent year on year respectively, accounting for 40.04 percent and 51.05 percent in the national commodity derivatives market, decreasing by 4.7 and 4.0 percentage points year on year respectively. Zhengzhou Commodity Exchange (ZCE) realized a cumulative trading volume of 818 million lots and cumulative trading turnover of RMB 38.22 trillion, up 39.6 percent and 78.9 percent year on year respectively, taking up 27.25 percent and 20.69 percent in the national commodity derivatives market, up 8.1 and 7.6 percentage points year on year respectively. Dalian Commodity Exchange (DCE) realized a cumulative trading volume of 980 million lots and cumulative trading turnover

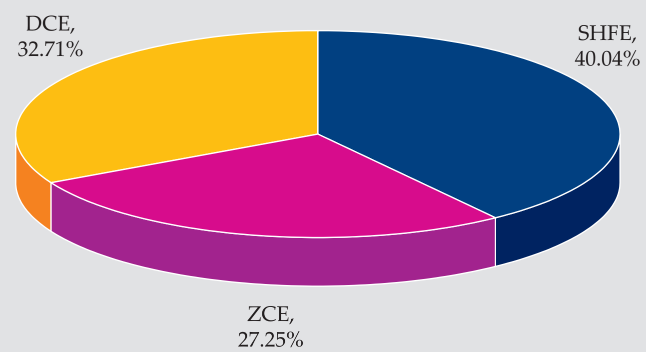
① Shanghai Futures Exchange referred to in this report includes its subsidiary Shanghai International Energy Exchange.

of RMB 52.2 trillion, down 10.8 percent and up 0.4 percent year on year respectively, accounting for 32.71 percent and 28.26 percent in the national commodity derivatives market, down 3.4 and 3.6 percentage points respectively compared with the same period in the previous year.

According to trading volume statistics of Futures Industry Association (FIA) in 2018 for the trading volume of exchange-traded derivatives, SHFE ranked 10th in the world, down 1 spot compared to 2017; DCE ranked 12th, down 2 spots from 2017; ZCE ranked 13th, the same place as 2017. Only in terms of the trading volume of exchange-traded commodity derivatives in 2018, SHFE, DCE and ZCE ranked 1st, 3rd and 4th respectively, which were the same, the same, and up 1 spot compared with 2017.

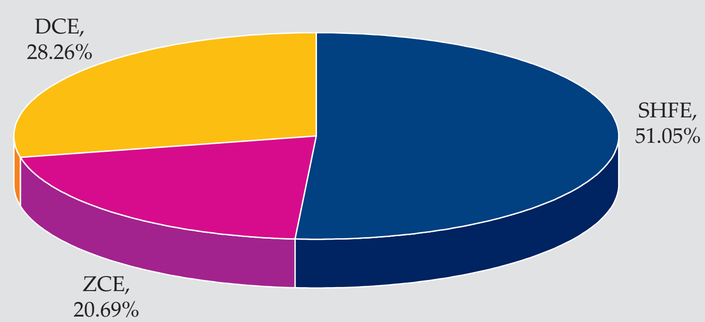
In terms of the trading volume, top ten commodity futures products of 2018 were Steel Rebar, Soybean Meal, Iron Ore, PTA, Methanol, Nickel, Rapeseed Meal, Apple, Zinc and Hot Rolled Coil, with a total

Figure 8.1 Trading volume proportion of each commodity futures exchange in 2018



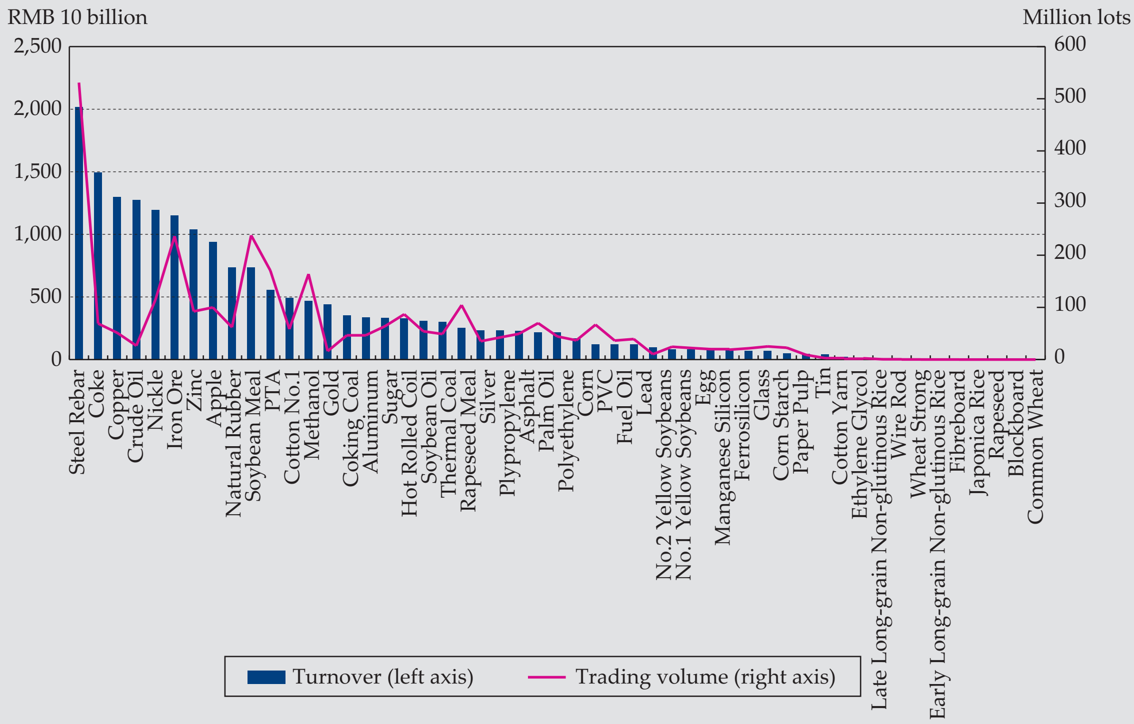
Source: China Futures Association (CFA).

Figure 8.2 Turnover proportion of each commodity futures exchange in 2018



Source: CFA.

Figure 8.3 Cumulative trading volume and turnover of various commodity futures in China in 2018



Source: CFA.

of 1.839 billion lots and accounting for 61.3 percent in the total commodity futures trading volume. The top ten varieties (ranked by trading turnover) were Steel Rebar, Coke, Copper, Crude Oil, Nickel, Iron Ore, Zinc, Apple, Natural Rubber and Soybean Meal, with a total of RMB 118.88 trillion and accounting for 64.4 percent in the aggregated commodity futures turnover.

8.1.2 Main features of the commodity futures and options market

8.1.2.1 Trading volume in the commodity futures market declined slightly

In 2018, China's commodity futures market saw a cumulative trading volume of 2.983 billion lots, a drop by 2.1 percent year on year. Under major commodity categories, among the primary energy and chemical futures products, the trading volume of Fuel Oil skyrocketed 27,421 folds year on year, the major reason behind which was that the SHFE amended the CST 180 Fuel Oil futures contracts and newly launched bonded 380 Fuel Oil futures contracts whose size of transactions grew steadily since the listing. The trading volume of Fiberboard, Coke and Thermal Coal climbed up to some extent. Besides, the trading volume of Blockboard, Polyethylene, Glass, Natural Rubber and Bitumen fell by over 20 percent year on year.

Among primary metal varieties, the trading volume of Wire Rod rose sharply by 1,604 times, which was mainly because the SHFE amended Wire Rod futures contracts and relisted them. The trading volume of Nickel, Ferrosilicon and Tin all grew by 30 percent year on year. The trading volume of Copper saw a slight drop of 5.3 percent. Moreover, the trading volume of Aluminum, Iron Ore, Steel Rebar, Manganese Silicon and Silver all decreased by over 20 percent year on year.

Among the primary agricultural product varieties, the trading volume of Late Indica Rice, No. 2 Yellow Soybeans, Apple, Japonica Rice, Early Indica Rice and Cotton Yarn rose considerably by 2,661 times, 574 times, 125 times, 47 times, 36 times and 11 times year on year respectively. The trading volume of Common Wheat, Cotton No. 1, Soybean Meal, Rapeseed Oil and Rapeseed Meal climbed by over 30 percent year on year. The trading volume of Soybean Oil, No. 1 Yellow Soybeans and Rapeseed decreased to some extent year on year. Furthermore, the trading volume of Wheat Strong, Corn Starch, Corn, Egg and Palm Oil saw year-on-year decrease of over 30 percent.

8.1.2.2 The size of the commodity futures market rose steadily

In 2018, the trading volume and turnover of commodity options were 18.3088 million lots and RMB 21.017 billion, rose by 257.0 percent and 450.0 percent year on year respectively. Specifically, the trading volume and turnover of Soybean Meal options were 12.5216 million lots and RMB 9.266 billion, up 244.4 percent and 287.9 percent year on year respectively. The trading volume and turnover of Sugar options were 4.5934 million lots and RMB 3.463 billion, climbed up 207.8 percent and 141.0 percent year on year respectively. Since the launch of Copper options on September 21st, their cumulative trading volume and turnover had reached 1.1938 million lots and RMB 8.289 billion.

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

8.1.3.1 The *Administrative Rules on Foreign-Funded Futures Companies* was issued

On August 24th, 2018, the CSRC issued the *Administrative Rules on Foreign-Funded Futures Companies* (hereinafter referred to as the Measures). The Measures, firstly, made explicit the scope of application; secondly, specified requirements for overseas shareholders; thirdly, regulated indirect shareholding; fourthly, clarified the duty performance requirements for the senior management; fifthly, put forward requirements for text language and information system arrangements. Against the background of the internationalization of futures varieties, the introduction of the Measures will facilitate overseas institutional investors to enter the Chinese futures market, which is conducive to the docking of China's futures market institution and international rules.

8.1.3.2 Innovation on futures variety was advanced in an orderly manner

Throughout the year of 2018, the newly launched three commodity futures and one commodity option were Crude Oil futures, Pulp futures, Ethylene Glycol (EG) futures, and Copper options. China's first Crude Oil futures started trading on Shanghai International Energy Exchange on March 26th; first Pulp futures were listed on the SHFE for trading on November 27th; first EG futures were launched on the DCE on December 10th; and first Copper options were launched on the SHFE on September 21st. The launch of new varieties enriched market risk management instruments, better gave play to the role of the futures market in serving the real economy, and promoted the internationalization of China's futures market steadily.

8.1.3.3 The *Futures Law (Draft)* was approved after review of the Financial and Economic Affairs Committee of the CPC

As China's innovative futures business and international business were pressed ahead, legislation on the futures market become a matter of great urgency. So far, the *Futures Law (Draft)* has been approved by the Financial and Economic Affairs Committee of the 12th NPC, and listed in the 2018 legislative work plan of the NPC Standing Committee to be reviewed. The 13th NPC Standing Committee also laid great emphasis on the legislation for futures, and listed the *Futures Law* among the Second Grade Project Plan[①] of the current session of the NPC. The launch of the higher-level law of *Futures Law* will provide legal guarantee for China's establishment of an international commodity pricing hub, and for global financial institutions and investors participating in futures trading.

8.1.4 Opening-up of the commodity futures and options market

The year of 2018 marked the first year of the opening-up of China's futures market. In line with the overall arrangements of the opening-up of national financial sectors, Chinese futures market was oriented towards "Bringing in", successfully launching China's first international variety-Crude Oil futures on Shanghai International Energy Exchange in March, which had become the third largest trading site of Crude Oil futures after NYMEX and ICE with its average daily trading volume (in barrels) exceeding Oman Crude Oil futures of Dubai Mercantile Exchange. Also, the DCE's Iron Ore futures and the ZCE's PTA futures officially brought in overseas traders in May and November respectively, which accumulated experience of the internationalization development for the already listed futures varieties. Besides, the CSRC approved the application of technically specified rubber (TSR) 20 futures to launch on the SHFE in June that would copy relevant policies of Crude Oil futures and bring in overseas traders in an all-round manner. At

① The legislation plan of the Standing Committee of the NPC usually categorizes the legislation projects listed in the plan into three groups: The first group contains legislative drafts with rather mature conditions that are planned to file for review in this term; the second group involves those that require close attention and will be filed for review when conditions permit; the third group is consisted of the legislative projects that are not in fully prepared conditions and require further research and proof.

the same time, the overseas layout of futures exchanges accelerated. So far, the SHFE and DCE has opened their representative offices in Singapore, and the application of the ZCE to establish its representative office in Singapore has been approved by the CSRC. China Financial Futures Exchange (CFFE) and the DCE successfully registered the Global Entity Identifier (LEI) codes, which would be helpful for the confirmation of the status of the CFFE and DCE in the global identification system as the Central Counterparties (CCP) in the derivatives market, and for the participation of overseas financial institutions in futures trading in a legally compliant way.

8.1.5 Outlook of the commodity futures and options market

In 2019, China's futures market will remain oriented at market demand, constantly provide new market risk management instruments, proactively develop a constantly improving product system, steadily accelerate market infrastructure construction, and keep deepening and widening its service for the real economy. In the meantime, the OTC derivatives market will gain momentum, with an increasingly sound regulation system. Additionally, the internationalization development of the futures market will be pushed forward, to give play to the functions of existing international varieties. The supply of varieties open to international markets will be increased in an orderly fashion. It will become well prepared for foreign capital to invest in China's futures companies. The attractiveness of the Chinese market will be strenuously improved to enable overseas investors to further engage in the Chinese futures market widely and deeply.

8.2 Financial futures and options market

8.2.1 Performance of the financial futures and options market

In 2018, China's financial futures and options market witnessed a year of safe and stable operation. Total annual trading volume of the financial futures market reached 270 million lots with a value of RMB 26.12 trillion, up 10.6 percent and 6.2 percent year on year respectively, and each accounting for 0.9 percent and 12.4 percent of the total futures market. The annual cumulative trading volume of ETF futures reached 320 million contracts. By the end of 2018, there were up to around 382,700 accounts in the financial futures market, and the number of ETF investor accounts reached 308,000.

In the equity index futures market, the total trading volume of the three equity index futures-CSI 300, SSE 50 and CSI 500-was 16.3443 million lots with a total value of RMB 15.74 trillion, up 66.3 percent and 49.8 percent year on year respectively. The average daily trading volume and average daily positions were 67,300 lots and 119,000 contracts, growing by 67.0 percent and 16.4 percent year on year respectively. The average daily transaction to position ratio was 0.57, up 43.6 percent year on year.

In the treasury bond market, the 2-year, 5-year and 10-year treasury bond futures totaled a trading volume of 10.8657 million lots with an average daily volume of 44,700 lots, down 26.1 percent year on year. The accumulative trading value was RMB 10.38 trillion with an average daily trading value of RMB 42.724 billion, a year-on-year drop of 26.0 percent. At the end of 2018, the total open interest of treasury bond futures was 80,100 lots, a year-on-year decline of 25.5 percent, including 1,033 lots of 2-year treasury bond futures, 15,000 lots of 5-year treasury bond futures and 64,000 lots of 10-year treasury bond futures.

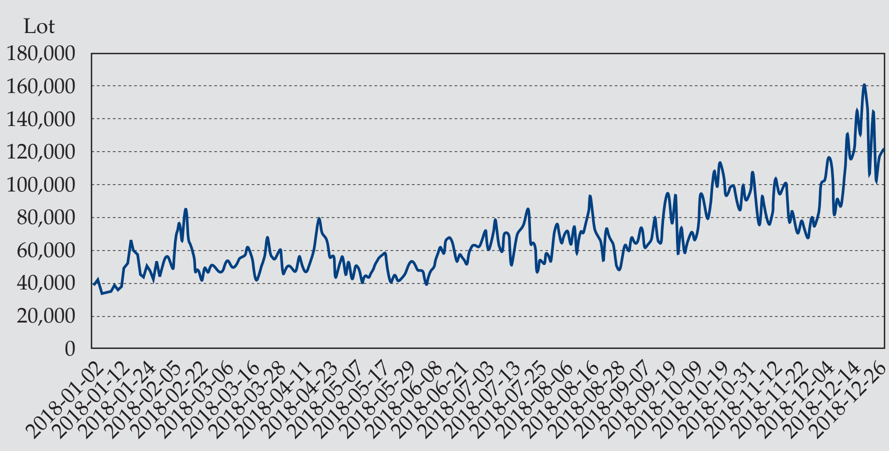
In the ETF options market, the cumulative trading volume of SSE 50 ETF options was 320 million contracts with an average daily volume of 1.3011 million contracts, and the largest daily volume of 3.7316 million. The open interest at the end of year was 1.9592 million contracts, with an average daily position of 1.8181 million contracts and the largest daily position of 2.7742 million contracts. The cumulative notional trading value was RMB 8.43 trillion with an average daily value of RMB 34.378 billion. The cumulative premium trading value was RMB 179.77 billion with an average daily trading value of RMB 740 million. The average daily trading volume, average daily position, average daily notional trading value and average daily premium trading value respectively grew by 72.6 percent, 8.4 percent, 72.8 percent and 102.1 percent year on year.

8.2.2 Main features of the financial futures and options market

8.2.2.1 The spot prices and futures prices of equity indices were highly correlated, and the market liquidity was improved

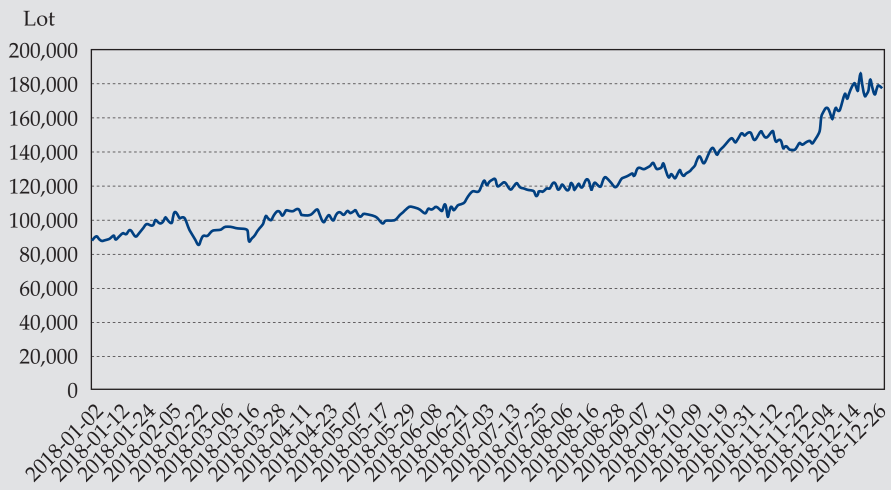
In 2018, the equity futures market showed the following features: First, institutional investors took up relatively big shares in the average

Figure 8.4 Average daily trading volume of equity index futures in 2018



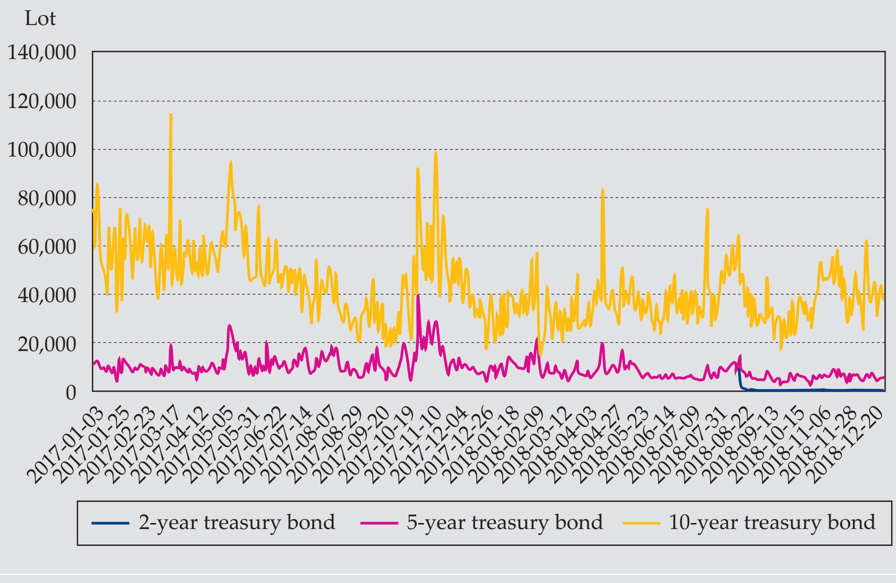
Source: CFFEX.

Figure 8.5 Average daily positions of equity index futures in 2018



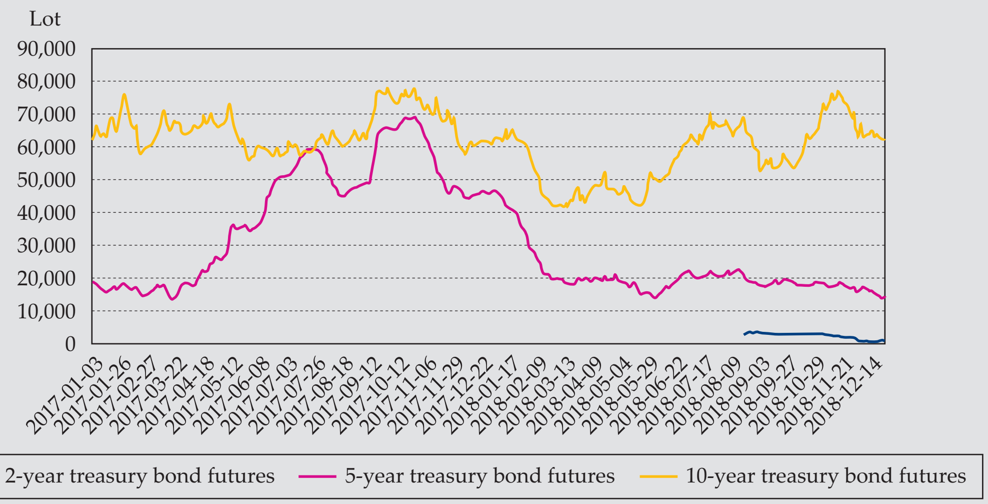
Source: CFFEX.

Figure 8.6 Average daily trading volume of treasury bond futures from 2017 to 2018



Source: CFFEX.

Figure 8.7 Average daily position of treasury bond futures from 2017 to 2018



Source: CFFEX.

daily positions in CSI 300, SSE 50 and CSI 500 futures, respectively 56.6 percent, 51.2 percent and 71.8 percent. Second, the correlation between the futures prices and spot prices of equity index futures was high. The price correlation coefficients between the closing price of the dominant contracts and the closing price of the corresponding spot index of CSI 300, SSE 50 and CSI 500 futures were respectively 99.90 percent, 99.88 percent and 99.94 percent. Third, on December 3rd, 2018, the CFFEX continued to make adjustment to the trading arrangements of equity index futures, including raising the intraday position limits and lowering charges for closing today's position and premium standard. The implementation of relevant measures improved the liquidity of the equity index futures market, yet slightly, which awaited further improvement. The average five depth of the CSI 300, SSE 50 and CSI 500 futures were respectively 11.63, 10.65 and 8.22 lots. The optimal bid-ask spread of equity index futures was fairly high, and the shortage of liquidity affected the function of the equity index futures market.

8.2.2.2 Treasury bond futures market became increasingly mature

In 2018, the treasury bond futures market showed the following characteristics: First, the market operation was steady and smooth as the futures and spot prices were soundly correlated, and the delivery business went on smoothly. The correlation between the dominant contract price and the spot price of 2-year, 5-year and 10-year treasury bond futures reached 97 percent, 99 percent and over 99 percent respectively. The deliveries of 9 treasury bond futures contracts were completed successfully in 2018, and the total number of deliveries was 9,140 lots with an average delivery rate of 4.2 percent. The second was that the basis between the futures price and the spot price for the 5-year and 10-year treasury bond further converged. The average trading volume of institutional investors accounted for 43.5 percent, up 5.1 percentage points compared to the same period in the previous year, indicating that the treasury bond futures market was steadily growing mature. In 2018, both the trading volume and open interest of treasury bond futures went down.

8.2.2.3 The economic function of SSE 50 ETF options gradually unfolded

In 2018, a total of 494 SSE 50 ETF option contracts were newly listed, 460 were delisted, 102 were adjusted and 2,776 were alerted. The average daily transaction to position ratio of the options market was 0.7, the average futures trading volume to spot trading volume ratios was 0.7, and the share of speculative transactions (directional transactions) was 18.4 percent. Throughout the entire year, all of the indicators measuring market quality and risks like market quality index, risk index and speculation index were at reasonable levels. The role of options in risk management became more prominent, as the shares of insurance-type and yield-enhancing transactions reached 14.0 percent and 45.3 percent respectively. Generally speaking, the size of the SSE 50 ETF options market grew steadily, investors participated in the transactions in a rational way, with a wide market participation, controllable overall risk, and the economic function of options gradually given play.

8.2.3 Innovation and institutional construction of the financial futures and options market

8.2.3.1 The 2-year treasury bond futures were listed, and the product system became improved

On August 17th, 2018, 2-year treasury bond futures were listed on the CFFEX, a milestone that the treasury bond futures product system covering short-, medium-, to long-term products broadly took shape in China. The underlying 2-year treasury bond futures is the RMB 2 million notional short- to medium-term treasury bond with a notional interest rate of 3 percent. Treasury bonds that can be delivered are the book-entry coupon-bearing treasury bonds whose maturity shall be no more than 5 years, and the term left on the first day of the contract expiration month shall be 1.5 to 2.25 years. The price limit is set to be ±0.5 percent of the settlement price on last trading day. The minimum trading margin is 0.5 percent. Other terms are the same as those of the 5-year and 10-year treasury bond futures. The listing of the 2-year treasury bond futures further completed the treasury yield curve reflecting market supply and demand, enriched the interest rate risk management instruments of the financial market, and raised the ability of the bond market to serve the real economy.

8.2.3.2 Trading rules were constantly optimized, and functions of the market deepened

As for the equity index market, upon the approval of the CSRC, on December 3rd, 2018, the CFFEX further adjusted the trading arrangements for equity index futures, and optimized the operation of equity index futures transaction by adjusting the daily open position limit to 50 lots per contract, and lowering the charge for closing today's position to 4.6‱ of the trading volume, cutting the margins for CSI 300 and SSE 50 futures to 10 percent, and reducing the margin for CSI 500 futures to 15 percent. After the trading arrangements were adjusted, the market responded positively as the market size increased, the transaction to position ratio remained stable, the basis between the futures price and the spot price narrowed, the use efficiency of fund was improved, and market liquidity improved, yet slightly. Generally speaking, the arrangements were conducive to the participation of investors in the trading of equity index futures, and had moderately improved market liquidity, raised market operation quality and efficiency, and better given play to the role of equity index futures market.

With regards to the treasury bond futures market, the CFFEX proactively adapted to the development demand of the treasury bond futures market, and timely optimized the treasury bond futures transaction rules. First, it optimized the open interest limit for treasury bond futures, cut the grades of position limit and margin, raised position limit quota, and revised the application and entry-into-force time of hedging and arbitrage. The margin grades of 5-year treasury bond futures were adjusted from "1.2 percent - 1.5 percent-2 percent" to "1.2 percent-2 percent", and those of 10-year treasury bond futures were adjusted from "2 percent-3 percent-4 percent" to "2 percent-3 percent". The position limit for ordinary months was increased to 2,000 contracts, and that for the approaching-delivery months was raised to 600 contracts. Second, some old bonds were eliminated from the deliverable bonds. The old bonds with a maturity of more than 7 years were eliminated from the deliverable scope of 5-year treasury bond futures. The old bonds with a maturity of more than 10 years were eliminated from the deliverable scope of 10-year treasury bond futures. The optimization and adjustment of the rules of treasury bond futures contracts are conducive to improving the supporting capacity of the treasury bond futures market, enhancing market liquidity in the approaching-delivery month, removing the impact of the pricing difference between old and new bonds, increasing the pricing accuracy of treasury bond futures, and giving play to the role of the treasury bond futures market.

Regarding the ETF options market, the SSE increased the number of initial exercise prices from 5 to 9 (1 at-the-money price, 4 in-the-money prices and 4 out-of-the-money prices) in January 2018, in order to meet the market demand for accurate hedging and add to the depth of the options market. Meanwhile, to boost market transaction efficiency and make it easier for investors to trade, the SSE adjusted the maximum number in a single declaration for a limit order from 10 contracts to 30 contracts, and the maximum number in a single declaration for a market order from 5 contracts to 10 contracts.

8.2.4 Opening-up of the financial futures and options market

In 2018, the CFFEX served the Belt and Road

Initiative construction with international projects. The first one was promoting the development and improvement of the Pakistan Stock Exchange (PSE). And work in Pakistan achieved all-round progress. The CFFEX continued to exercise its rights and perform its obligations, set up a representative office in Pakistan, and participate in the corporate governance of the PSE earnestly; in coordination with the construction of the "China-Pakistan Economic Corridor", facilitated the listing of the China-invested enterprises in Pakistan on the PSE with the backing of the MOUs on the cooperation of the PSE and Gwadar Free Trade Zone; and enhance the cooperation between the capital markets of the two countries with ETF products as a basis. The second was driving the business innovation of CEINEX jointly with the SSE, and proactively coordinated with the launch and publicity of the D-shares. By the end of December, 2018, a total of 52 products were listed on CEINEX, in which 1 was stock, 14 were ETF products, 2 were ETN products and others were bond products. Since opening, the total trading value of CEINEX had reached RMB 14.205 billion (calculated bilaterally), about 99 percent of which came from ETF product transactions. The trading value of the RMB-denominated products was RMB 378 million.

8.2.5 Outlook of the financial futures and options market

In 2019, China's financial futures and options market will serve the target of supporting the real economy and the spot market development, accelerate the improvement of the financial futures and options product system; continue to enhance the infrastructure construction of the financial market, optimize business rules and institutions, complete the market trading mechanism, better give play to the role of the market; develop in compliance with the opening-up of the spot market, steadily push forward with the opening-up of the financial futures and derivatives market both inwards and outwards, strenuously help such institutions as commercial banks and insurance funds to enter the market, and introduce overseas investors into the market in an orderly fashion.

8.3 RMB interest rate derivatives market

8.3.1 Performance of the RMB interest rate derivatives market

In 2018, the RMB interest rate derivatives market turnover stood at RMB 21.57 trillion, a year-on-year growth of 49.7 percent, among which plain vanilla interest rate swap transactions were RMB 21.45 trillion, bond forward transactions were RMB 3.96 trillion, and standard bond forward transactions were RMB 79.38 billion. By the end of the year, the notional amount of outstanding interest rate swap contracts totaled RMB 19.34 (calculated unilaterally), a year-on-year increase of 53.4 percent.

The participants of RMB interest rate derivatives market continued to grow. By the end of the year, a total of 407 institutions or products have their qualification field in the interest rate swap market system, up 90 from the year end of last year. The institutions (products) committed to the use of transaction confirmation function of interest rate swaps totaled 382, an increase of 109 from the year end of last year.

8.3.2 Main features of the RMB interest rate derivatives market

8.3.2.1 The size of the interest rate swap market continued with the strong growth momentum

The interest rate swap market continued with its high growth trend in 2018. The trading volume increased year on year in all months, except December when it declined year on year. The year-on-year growth in January, April and May all exceeded 100 percent, with January seeing a yearly-high turnover of RMB 2.32 trillion, up 249.0 percent, hitting a yearly-high in terms of the year-on-year growth.

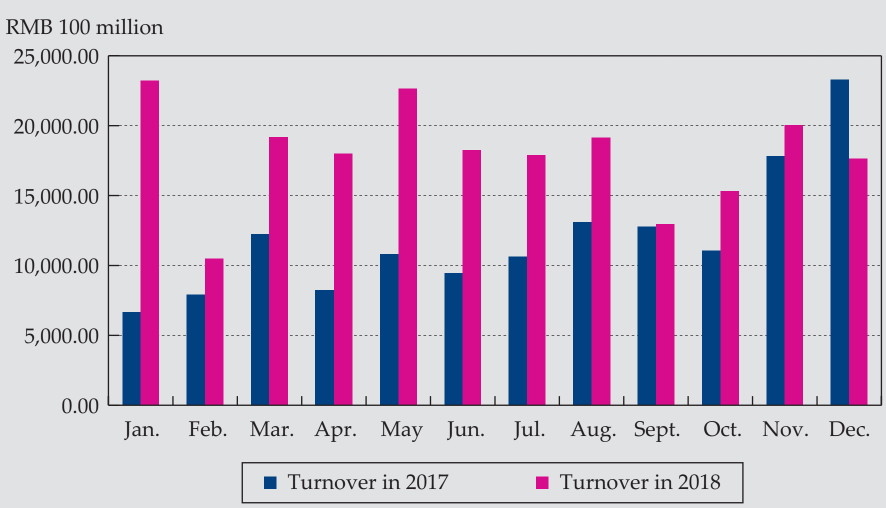
8.3.2.2 The interest rate swap curve shifted down and flattened

Throughout the year, the interest rate swap curve of all terms shifted downward in parallel quarter by quarter, and the curves maintained the characteristic of flattening shown since the end of 2017. As of the end of the year, transactions with the most active 1-year and 5-year FR007 closed at 2.62 percent and 2.93 percent, respectively down 102 bps and 111 bps from the beginning of the year. The swap rates of 1-year and 5-year Shibor 3M closed at 3.21 percent and 3.45 percent respectively, dropping by 146 bps and 129 bps from the beginning of the year.

8.3.2.3 Transaction proportion of varieties of more than one year climbed up, and the reference rate remained dominated by FR007

Regarding term structure, the proportion of varieties of one year or less was 70.6 percent,

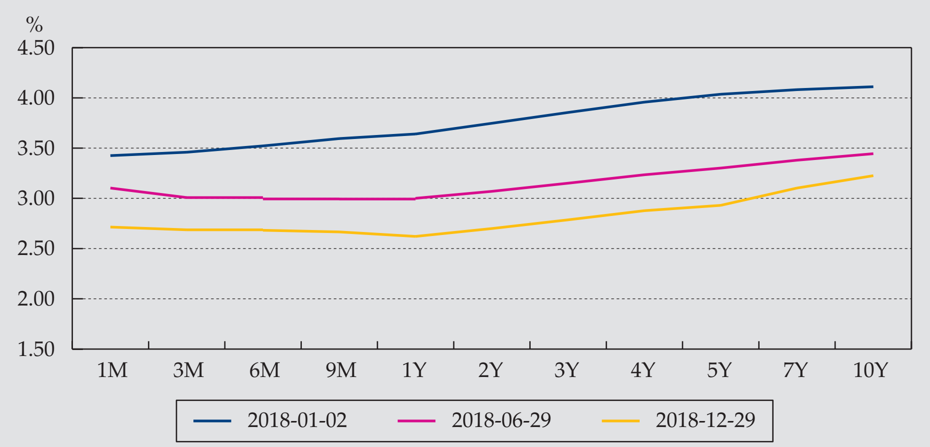
Figure 8.8 Notional principal of RMB interest rate swaps from 2017 to 2018



Source: CFETS.

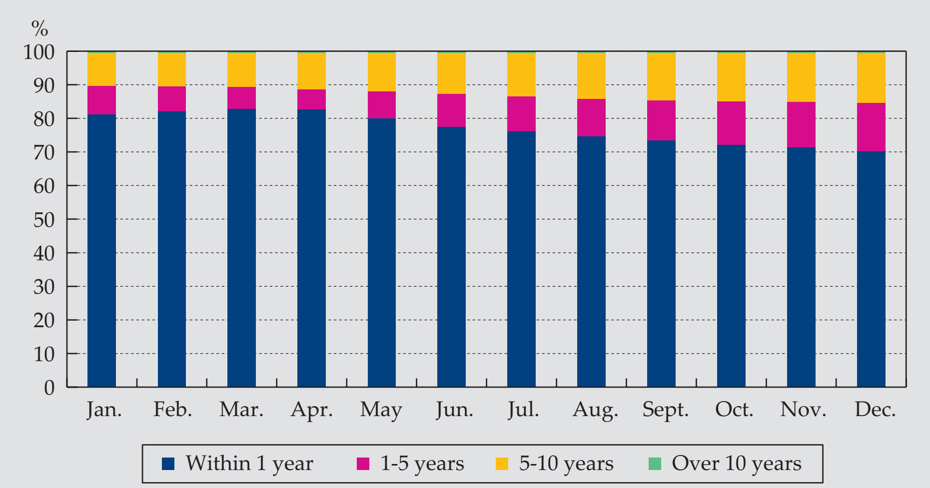
down 6.3 percentage points from the previous year. The transaction of varieties of 1-5 years accounted for 14.4 percent, up about 7.4 percentage points from the previous year. The transactions of varieties of over 5 years accounted for 15.0 percent, down 1.1 percentage points year on year. In terms of reference rate, transactions with FR007 as the reference rate at the floating end accounted for 79.35 percent, transactions with Shibor as the reference rate at the floating end took up 19.1 percent, and transactions with other interest rate as the reference rate at the floating end made up 1.6 percent. The structure was close to that of the previous year.

Figure 8.9 IRS-FR007 trend of closing curve in 2018



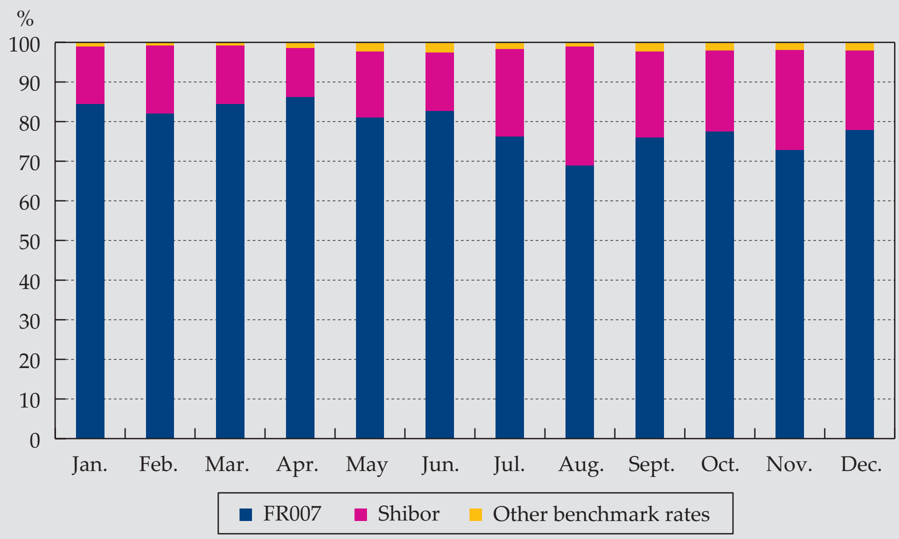
Source: CFETS.

Figure 8.10 Term structure of RMB interest rate swaps in 2018



Source: CFETS.

Figure 8.11 Reference rate structure of RMB interest rate swaps in 2018



Source: CFETS.

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

8.3.3.1 Performance of interest rate swaps transaction platform was improved

Central Counterparty Interest Rate Swap service (X-Swap) can effectively raise market transaction efficiency and price discovery function. It had been widely recognized by the market since it was launched. In 2018, X-Swap accounted for up to 55 percent in the interest rate swap business, a mainstream transaction means on the market. Also in the year, the CFETS made lots of efforts in improving the performance of X-Swap business system, elevating its processing capacity from the original 50 transactions/second to 1,000 transactions/second. After the system improvement was made, the number of average daily orders grew by 40 percent, offering greater support to the quantitative strategies and demand for automated transaction of institutions in the market.

8.3.3.2 Replacement risk management service was introduced, and post-transaction service system further improved

In 2018, in order to effectively manage the replacement risk of derivatives and promote sound development of the market, the CFETS and Shanghai CFETS-NEX International Money Broking Co., Ltd. jointly launched replacement risk management service, in which the CFETS provides risk calculation that belongs to the application extension of derivatives write-off service, and Shanghai CFETS-NEX International Money Broking Co., Ltd. is responsible for organizing market institutions in multilateral matching and conducting accurate hedging against original mismatched cash flow through newly added reverse transactions, so as to offset risks resulting from the fact that the risk exposures or transaction structures do not fully match, and reduce income fluctuation of the transaction portfolio caused by changes in future reference price.

8.3.4 Outlook of the RMB interest rate derivatives market

In 2019, the interest rate derivatives market is expected to maintain its growth momentum. Market participants will continue increasing, transaction automation will be more widely used among market participants. At the same time, research will be carried out in a bid to launch interest rate options and long-term interest rate swaps products, the incorporation of standard interest rate swaps into the centralized clearing will be explored, and the supporting policy for the Central Counterparty mechanism will be further improved.

8.4 RMB credit derivatives market

8.4.1 Performance of the RMB credit derivatives market

In 2018, the development of the Credit Risk Mitigation (CRM) market achieved remarkable results. A total of 54 Credit Risk Mitigation Warrants (CRMW) were made available with a total notional amount of RMB 6.655 billion, in which most underlying debt was the Super Short-term Commercial Paper or Short-term Commercial Paper of private enterprises. The corporate credit ratings of these issuers of the underlying debt covered AAA, AA+ and AA. In the interbank market, a total of 51 Credit Default Swap (CDS) transactions were made with a total notional principal of RMB 1.946 billion; 2 Credit Risk Mitigation Agreement (CRMA) transactions were made with a total notional principal of RMB 41 million; and 2 Credit-Linked Notes (CLN) were launched with a total notional principal of RMB 60 million.

In 2018, the CRM market saw a marked expansion of its participants. As of the end of the year, there were a total of 49 CRM Major Dealers (including 35 banks, 13 securities companies and 1 credit enhancement institution), an increase of 15 year on year, 37 CRM Dealers (including 5 banks, 2 non-financial institutions and 30 unincorporated product accounts), an increase of 16 from the previous year, 43 CRMW issuers (including 32 banks, 10 securities companies and 1 credit enhancement institution), up 18 from the previous year, and 41 CLN issuers (including 30 banks, 10 securities companies and 1 credit enhancement institution), an increase of 15 year on year.

8.4.2 Innovation and institutional construction of the RMB credit derivatives market

8.4.2.1 CRMW played an important role in supporting private enterprises in bond financing

To implement the significant decisions made by the CPC Central Committee in support of the development private enterprises and under the guidance of the PBC, the National Association of Financial Market Institutional Investors (NAFMII) has been proactively promoting the CRMW market development since October 2018. First, the book building mechanism was introduced in the launch of CRMW. Book building is a market-oriented means of issuance that is widely used internationally, and has been widely applied in the issuance of credit products including corporate bonds and bond financing instruments. The introduction of the book building mechanism in the creation and establishment of CRMW had transformed the original direct pricing method by the issuer after one-on-one enquiry, which was not only beneficial to enhancing the market orientation of CRMW issuance and pricing, but also conducive to enhancing market transparency and pricing rationality and attracting more potential investors to join in. Second, a simultaneous issuance mechanism of CRMW and underlying debt was launched, which was an innovative practice. Creating and establishing CRMW at the same time of issuing the underlying debt can enable investors to effectively manage credit risk exposure, improve credit risk preference, further rectify the "herd effect" caused by the irrational circumvention of private enterprises by some financial institutions, and ease the financing difficulties for private enterprises through the purchase of the "CRMW + underlying debt" portfolio. The third was the collaborative CRMW creation and establishment mechanism. The collaborative CRMW creation and establishment by principal debt underwriters and credit enhancement institutions could offer "double guarantee" services to CRMW investors while fully giving play to the business expertise of both parties, strengthening risk identification, and promoting the scientific pricing for CRMW. So far, supporting the financing of private enterprises with CRMW has achieved a good win-win start: companies successfully conducted bond financing, and the financing difficulty was relieved to some extent; principal underwriters completed the sales of bonds quickly, and effectively maintained customer relationships; issuers obtained premium income, and further increased market presence; investors locked in prospective earnings in advance, further diversified investment varieties, and controlled credit risk exposure properly by holding the "CRMW + underlying debt" portfolio. From October to December, 2018, a total of 52 CRMWs with private enterprise bonds as the underlying debt were created and launched on the interbank market that supported 35 private enterprises in issuing bond-financing instruments with a total financing volume of RMB 21.92 billion.

8.4.2.2 Self-discipline management achieved new progress

With regard to qualification filing, the filing requirements for Dealers were further optimized. In October 2018, to continue to improve the self-discipline management institution of CRM trial business and promote the regulated and healthy development of the trial business, NAFMII made explicit the requirements of record filing materials for financial institutions to become Dealers, and allowed Dealer participants to submit record filing materials within 30 natural days after they first start to conduct the CRM business. Throughout the year, a total of five financial institutions filed the record to become Dealers, and participated in the CRMW investment and transactions actively. Regarding transaction filing, the online-based development of the whole-chain CRM loop-chain businesses was comprehensively promoted. In 2018, the information-based development of the CRM market was pushed forward steadily, and the online operation of the creation, launch and record filing of CRMW was realized. At this point, the creation, launch and record filing of warrant-type products (including CRMW and CLN) and the post-transaction record filing of agreement-type products (including CRMA and CDS) have been made online, which would provid convenience to market players and increase market efficiency while benefiting the entire loop-chain business management of the CRM market and promoting the steady and healthy development of the market.

8.4.2.3 Market infrastructure construction was constantly improved

First, the CDS trial quotation business ran smoothly. Since August 2017, NAFMII had begun to organize some CRM Major Dealers to try out quotations for the CDS contracts of reference entities of varied credit ratings, and realized online operations. To further regulate the CDS trial quotation business and improve the CDS pricing and valuation system, in 2018, NAFMII led the amendment to the *Interbank Market Credit Default Swap Trial Quotation Plan* based on opinions of market players. The CDS trial quotation business went on well, and to some extent, satisfied the demand of part of participants for product liquidity and pricing and valuation. Second, the CDS centralized clearing mechanism was officially established. At the end of January, 2018, Shanghai Clearing House (SHCH) started to conduct the CDS centralized clearing business. The launch of the business filled the blank of the CCP clearing business for credit derivatives in the SHCH, which was favorable to raise clearing efficiency, reduce counterparty risk, and further increase market transparency, constituting one of the important measures for China to honor the commitments made at the G20 Pittsburgh Summit and facilitate the centralized clearing of OTC derivatives transactions. Third, CRMW pricing and valuation methods became enriched and improved. To facilitate the market-oriented pricing of CRMW, China Bond Valuation Center, Beijing Financial Asset Exchange and the SHC successively and respectively provided market participating institutions with CRMW valuation information. Given that the pricing of credit derivatives on the international financial market usually employs the risk-neutral default probabilities model, taking into consideration of the basic provision design of the existing interbank market CRMW products, Beijing Financial Asset Exchange adopted the binomial tree model in the pricing and valuation of CRMW, so as to take into account both the accuracy of pricing and valuation and the consistency and uniformity of the pricing of complex products in the future. The SHC mainly offer CRMW valuation services based on the reduced form models, in which it was assumed that the default risks observe the Poisson process, the survival rate and default probability were calculated with default intensity, and the valuation of CRMW was obtained by calculating the discounted expected cash flow.

8.4.3 Outlook of the RMB credit derivatives market

In 2019, relevant requirements for derivative mitigation capital will be made more explicit, and products of CRM tools will be promoted, so as to facilitate the accurate pricing of credit risk, and improve the credit risk pricing mechanism of the bond market. The liquidity of the credit derivatives market is expected to gradually improve, which can attract more investors, continue with the support for private enterprises in bond financing, and effectively improve market expectations.

8.5 Exchange rate derivatives market

8.5.1 Performance of the exchange rate derivatives market

In 2018, the interbank exchange rate derivatives market saw an accumulated trading volume of USD 17.3 trillion, a year-on-year growth of 23.7 percent, in which RMB foreign exchange forward transactions were USD 95.3 billion, down 14.1 percent year on year; RMB foreign exchange swap transactions were USD 16.5 trillion, a year-on-year increase of 23.0 percent; RMB foreign exchange currency swap transactions were USD 65.81 billion, up 15.1 percent year on year; and RMB foreign exchange options transactions were USD 0.6 trillion, up 64.6 percent year on year. The proportion of exchange rate derivatives in the interbank foreign exchange market (excluding foreign currency lending) climbed from 68.3 percent in the previous year up to 69.1 percent, which was basically consistent with the pattern of 1:2 in terms of the turnover of spot and derivatives markets of the international foreign exchange market.

In 2018, the membership of the exchange rate derivatives market continued to expand. The numbers of RMB foreign exchange forward members, RMB foreign exchange swap members, RMB foreign exchange currency swap members, and RMB foreign exchange options members reached 212, 207, 175 and 124, up 18, 15, 12 and 8 from the end of the previous year respectively.

8.5.2 Main features of the exchange rate derivatives market

8.5.2.1 Local-foreign currency interest rate spread narrowed, and USD/RMB swap curve shifted downward

In early 2018, the RMB capital was tight in the market, while domestic USD capital was on the loose. The RMB/USD interest rate spread remained at the high level of 2.25 percent. The USD/RMB swap point continued with the upward trend starting from December 2017, with the 1-year term swap points of 1,200 bps at the peak. Later, with multiple positive factors including loosen money, relaxed regulation and the PBC maintaining stability, the yield of long-end RMB interest rate securities began to go down, demand for long-end swap buy order started to weaken, and the 1-year term swap point gradually fell back. As the China-US trade deficit upgraded and the US dollar strengthened, the RMB unveiled a round of fast depreciation in mid-June. Driven by the synchronized decline of capital spreads and bond spreads, swap point fell back quickly, and turned to discount in July. The swap points fluctuated violently from -300 bps to 100 bps from mid-August to the end of the year.

8.5.2.2 Volatility of foreign exchange options was relatively high, presenting two-way violent fluctuation

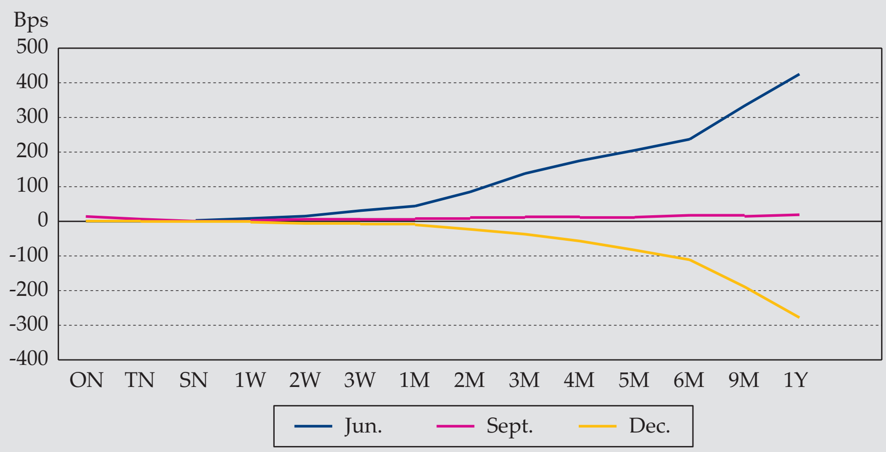
In early 2018, as the US Dollar Index (USDX) declines, the RMB spot rate went through a round of fast appreciation. Volatile spot market, added by poor liquidity conditions regarding options at the beginning of the year rendered the demand for market volatility buy order strong, and the volatility of options rose to a yearly high. As the USDX stopped falling and recovered, the RMB spot market entered into a phase of relative stability, and the volatility of options gradually fell back as well. After mid-June, catalyzed by the deteriorating external environment triggered by China-U.S. trade war, the RMB depreciated rapidly, and the volatility of foreign exchange options went up accordingly, as the 1-year at-the-money options implied volatility rate reached the highest of the year at 5.53. After August, the RMB foreign exchange rate gradually became stable, and the implied volatility of options remained fluctuating at high levels of the year after a short-term decline.

8.5.3 Innovation and institutional development of the exchange rate derivatives market

8.5.3.1 Foreign currency-RMB swap was launched, and principal swap was added to currency swap

With regard to currency swap, AUD-RMB swap transactions were newly launched.

Figure 8.12 Foreign exchange swap curve in 2018



Source: CFETS.

The new form of principal swap was added, which supported such functions as principal amortization, back value, user-defined interest period, separation of accrual and payable interest, residual processing optimization.

8.5.3.2 Excel quotation tool of foreign exchange options was launched

Regarding options, the foreign exchange options Excel quotation tool was launched, to cover the shortage of manual quotation. The options pricing engine that was independently developed by the CFETS was officially launched and put to use, in which such functions as user-defined volatility surface and the postposition of option premium were developed.

8.5.3.3 Functions of C-trade were further improved

Functions of forward and swap C-Trade were further improved, with newly added functions like chief dealer, directly clinching a deal upon double-click, automatic generation of spread order, slippage control, and self-defined work area.

8.5.3.4 Consensual dealing function of foreign exchange derivatives was launched

The consensual dealing function of foreign exchange derivatives was launched. Under the OTC transaction model, one party initiates complete transaction factors, and the counterparty can choose to reject or confirm. And if confirmed, the deal is reached. The consensual dealing can be clinched via the new platform or directly connected to the platform through instant communication tools or money brokers. Currently, this function supports the transactions of RMB foreign exchange options, currency swaps, currency swap of currency pairs and foreign currency interest rate swaps. In the future, it will be applied in the transactions of other foreign exchange derivatives.

8.5.4 Outlook of the foreign exchange derivatives market

In 2019, the liquidity of domestic USD is likely to tighten, and swap point may continue to fall. The trend of RMB exchange rate is likely to return to a two-way fluctuation, and the options volatility surface will return to a smiling curve. As for the market development, efforts will be taken to study and carry out the liquidity improvement plan of the foreign currency interest rate swap market, realize the consensual transaction function of foreign exchange derivatives, and support the connection with money brokerage service through instant communication tools.

8.6 OTC derivatives market

8.6.1 Performance of the OTC derivatives market

The OTC derivatives central counterparty clearing business of the SHCH has covered the six industries of energy, chemical, ferrous metal, non-ferrous metal, freight, and carbon emission, including 13 OTC derivatives. Thanks to the fast product innovation, the SHCH cleared a total of 311,800 OTC derivatives clearing contracts (monthly-based, unilateral), with the cumulative clearing volume reaching

RMB 51.7 billion, up 8.5 percent year on year. The number of market participants increased by 141 from the previous year to 713.

In terms of the industry-distribution, chemical derivatives contributed to 82.3 percent of the total clearing volume, Copper Swap 10.4 percent, and Iron Ore Swap 7.3 percent.

Regarding the price trend, the price of CNY Mono Ethylene Glycol Swap fluctuated sharply upwards; the price of CNY Styrene Monomer Swap (CSM) kept declining; the prices of CNY Methanol Swap and Copper Swap remained stable with slight drop; the price of CNY Iron Ore Swap stood basically stable, and though it saw slight fall generally, there were several sharp and marked increases in the first half of the year; the price of CNY Platts Iron Ore Swap fluctuated; the price of CNY Steam Coal Swap remained held steady.

8.6.2 Innovation and institutional development of the OTC derivatives market

8.6.2.1 Product system was further improved

In 2018, the SHCH continued with the promotion and improvement of the OTC derivatives clearing platform with the CCP mechanism as the core, constantly promoted product innovation, and improved the product system. On January 8th, it launched the CCP clearing business of CYN Mono Ethylene Glycol Swap; on April 2nd, the CCP clearing business of CNY Methanol Swap was issued; on May 7th, the CCP clearing business of CNY Platts Iron Ore Swap was unveiled.

8.6.2.2 SOCDA issued self-discipline standards for the first time, drawing closer to the standards of the international self-regulatory organization

In early 2018, Shanghai OTC Commodity Derivatives Association (SOCDA) issued five basic self-regulatory norms and unified standards, including brokerage business self-regulatory principles, brokerage service agreement template, risk disclosure statement template, and transaction self-regulatory principles, etc. The issuance was in line with market demand, effectively promoted the regulated development of OTC derivatives brokerage and transactions, and practically protected the legal rights and interests of market participating institutions, indicating that the self-regulatory management organization of China's OTC derivatives market was drawing close gradually to the standards of international self-discipline organizations, which was of great significance to the improvement of China's influence and soft power in global OTC derivatives market.

8.6.3 Outlook of the OTC derivatives market

In 2019, the OTC derivatives market will continue with its innovation to keep improving the existing product system and business mechanism. It will also enhance the CCP clearing service, promote the construction of the OTC derivatives clearing platform, accelerate the arrangement of the OTC derivatives market, keep expanding the market size, and elevate remarkably the capacity to undertake OTC transactions.

Box 10 SHFE Standard Warrants Trading Platform put into operation

In 2014, a global center for commodities allocation and trading was proposed to be established in China (Shanghai) Pilot Free Trade Zone (SHFTZ); in 2016, the Shanghai municipal government and the SHFTZ authorities initiated a high-level market of factors, and provided active support for the "futures-spot linkage" pilot program in the commodities market of the SHFE; later in 2017, it was stated at the 19th CPC National Congress that measures should be taken to "make the financial sector better serve the real economy and promote the healthy development of multilevel capital market". To become a world-class exchange, the SHFE earnestly implemented the decisions made by the CPC Central Committee, the CSRC, and Shanghai municipal government, practiced the development strategy of "one major task and two supplementary tasks" (enriching the existing categories of futures products; promoting the listing of option and index derivatives and facilitating warrants trading businesses), and established the SHFE Standard Warrants Trading Platform. Featuring futures-spot integration, the platform was launched into operation on May 28th, 2018, enabling standard warrants trading of copper futures and aluminum futures as a pilot, and later incorporating lead futures, zinc futures, tin futures, and nickel futures on October 18th, 2018. With stable market performance, increasingly active trading, and proactive participation of real economy businesses, the exchange gradually unleashed its capacity in serving the real economy.

1. Significance of the platform

The SHFE Standard Warrants Trading Platform is a comprehensive platform established on the basis of SHFE's 20 years of experience in operating the current system of futures trading, settlement, delivery, risk control, warrant management, and warehousing, as well as "Internet of Things" and internet technologies. The platform features futures-spot integration and one-stop services of commodity account-opening, trading, settlement, delivery, and risk management. In the initial stage after its launch, the platform mainly dealt with the standard warrants trading of non-ferrous metal futures. After a period of operation, the platform gradually took on the trading of all listed futures products in the SHFE, non-standard warrants trading, and OTC derivatives like OTC options and swaps, in a bid to build up a multi-tiered commodity market system. The building of the platform marks an important step of the SHFE in serving the real economy, bolstering Shanghai's initiative of "Five Centers" (international economic center, international financial center, international trade center, international shipping center, and scientific and technological innovation center), and deepening financial cooperation in the Yangtze River Delta.

First, the platform further enriches Shanghai's market of core financial and trading factors, enables the coordinated development of spot commodity market and futures market, and facilitates the construction of a high-level market *against the background where new business forms continue to emerge in the commodity circulation sector. Thus, it helps promote Shanghai's initiative of "Five Centers", implement the "100 measures for further opening-up", as well as deepen financial cooperation in the Yangtze River Delta.*

Second, the platform is conducive to the prevention of financial market risks and the regulation of circulation order in the commodity market. The 2018 Report on the Work of the Government required that efforts be made to "bring better order to the financial markets, prevent and diffuse risks in key sectors, forestall systemic risks, and safeguard China's economic and financial security". To this end, the SHFE must establish a standard warrants trading platform which is "well-regulated, transparent, and fair", so as to prevent risk events like those concerning steel trade in eastern China in 2012 and non-ferrous metals in Qingdao Port in 2014, exert demonstration effects, and ensure orderly circulation and trading in the commodity market.

Third, the platform helps remove the last crucial hurdle for the futures market in serving the real economy and enhance the clout of China's commodity market in the global pricing mechanism. Warrants trading addresses the difficulties of a standardized futures market in serving customized demands of the real economy, such as the mismatching between the futures and spot markets, between times, between locations, and between levels and specifications. It also enables higher-quality operation of the futures market, and expands and deepens functions of the futures market in serving the real economy.

2. Performance of the platform

2.1 The platform ran smoothly and the market grew steadily.

In 2018, a total of 177,997 warrants were traded on the platform, including 17,663 for copper, 142,384 for aluminum, 14 for lead, 819 for zinc, 5,040 for tin, and 12,077 for nickel. The total trading volume stood at 4.1089 million metric tons, including 441,600 metric tons of copper, 3.5644 million metric tons of aluminum, 400

Figure 8.13 Trading volume of the platform in 2018

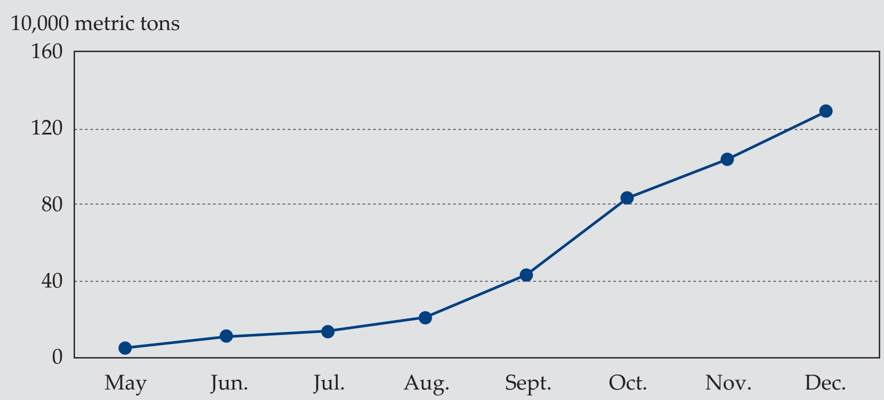
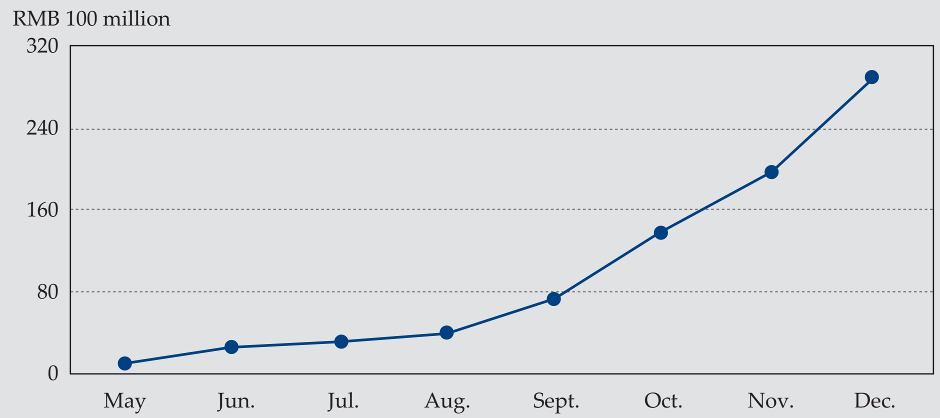


Figure 8.14 Trading turnover of the platform in 2018



metric tons of lead, 20,500 metric tons of zinc, 10,100 metric tons of tin, and 71,900 metric tons of nickel. The platform posted a total turnover of RMB 80.418 billion, including RMB 21.851 billion from copper, RMB 49.894 billion from aluminum, RMB 7 million from lead, RMB 460 million from zinc, RMB 1.480 billion from tin, and RMB 6.726 billion from nickel (all figures are calculated unilaterally).

2.2 The trading price of warrants is closely correlated with the futures and spot market prices.

Based on a comparison between the average daily trading prices of copper and aluminum warrants, corresponding products' daily settlement prices in delivery months in the futures market, and corresponding products' spot prices in Shanghai Metals Market, it is concluded that the correlation coefficient between the trading price of copper warrants and the market price of copper futures stands at 99.58 percent, and that between the trading price of copper warrants and the market price of physical copper is 99.62 percent. For aluminum, the coefficients are 99.44 percent and 98.17 percent respectively. They can reflect changes in market supply and demand in a timely manner.

2.3 Enterprises were actively involved in the platform, and most of the investors came from the Yangtze River Delta, forming a relatively reasonable investor structure.

A total of 401 traders have submitted account-opening applications, and 296 of them have signed dealer agreements, among which the number of non-ferrous metal companies, trade companies, and risk management companies accounted for around 22.1 percent, 63.2 percent, and 14.7 percent respectively. Geographically, the dealer applicants came from 23 provinces and regions, 278 dealer of them came from the Yangtze River Delta, accounting for approximately 70 percent of the total.

2.4 Trading, settlement, and delivery were processed in a stable and orderly manner, and constant improvements were made to business rules.

Trading, settlement, and delivery were processed in a stable and orderly manner, with no risk events reported. By the end of 2018, the cumulative amount of money deposit and withdrawal made via the platform stood at RMB 33.20 billion and RMB 32.97 billion respectively. In total, the platform received 52,655 sales invoices, valuing RMB 79.964 billion, and sent out 8,264 purchase invoices totaling RMB 80.317 billion. The average daily trading volume was 28,000 metric tons, and the average daily trading turnover registered RMB 547 million. Moreover, several measures were taken to better serve the real economy, make the best of standard warrants trading services, and optimize trading and settlement rules: starting from October 18th, 2018, the margin level of invoices was adjusted from 20 percent of the total transaction value to 17 percent, in a bid to reduce dealers' capital cost; the deadline for issuing Value-Added Tax (VAT) invoices was postponed from the 20th to the 23rd day of each month, so as to ease traders' invoicing pressure.

3. Effectiveness of the platform

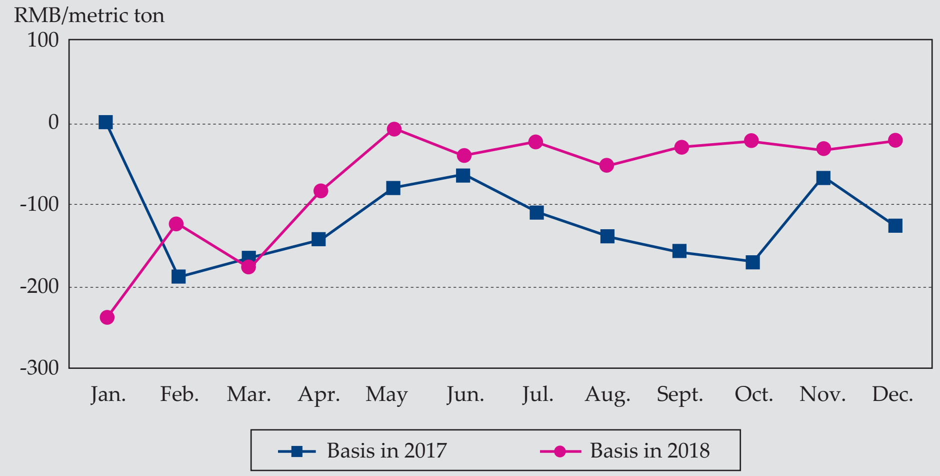
3.1 A pricing mechanism featuring "futures-spot linkage" was initially set up, with futures prices as the benchmark and market-based quotation for spot premiums and discounts at the core.

Statistics suggest that in Shanghai, Huzhou, Wuxi, Changzhou, Suzhou, and Nantong with large amount of aluminum warrants trading, the average premium/discount was RMB -5 per metric ton, RMB -10 per metric ton, RMB -2 per metric ton, RMB -3 per metric ton, RMB -8 per metric ton, and RMB -13 per metric ton respectively. The regional and branded market-based mechanism of futures premiums and discounts is taking its shape, and is expected to facilitate the formation of a fairer and more transparent pricing system with "futures-spot linkage" as its characteristic, enable a price guidance mechanism in the industry, improve the pricing system in the commodity market, and bolster China's pricing power in the global commodity market.

3.2 The futures-spot basis narrowed significantly, which promoted effective combination of the futures and spot markets.

After the platform was launched, from May to December, 2018, the average futures-spot basis of aluminum was RMB -30 per metric ton, a significant pullback compared with the figure RMB -127 per metric ton in the same period in 2017, and also with the figure in the first four months of 2018. Moreover, the basis was quite stable throughout the period. The pronounced narrowing of the futures-spot basis could not only promote effective combination of the futures and spot markets, help spot market enterprises to circumvent risks by connecting with the futures market, offer opportunities for spot-futures arbitrage, but also indicate close interactions of the platform with the monthly delivery mechanism and the hedging and risk management mechanism in the futures market.

Figure 8.15 Futures-spot basis of aluminum in 2018



3.3 Circulation of standard warrants accelerated, allocation of warrant resources became more efficient, and deliveries in the futures market increased.

Circulation of standard warrants accelerated markedly, which vitalized idle warrants and enhanced the efficiency of warrant resource allocation. For example, after the launch of the platform, a large state-owned futures delivery warehouse in Shanghai saw a constant increase in the monthly volume of warrant transfer-37,654 metric tons in June, 31,242 metric tons in July, 51,279 metric tons in August, 78,101 metric tons in September, 136,361 metric tons in October, and 167,915 metric tons in November. From May to December 2018, deliveries by warrant traders of the platform in the futures market increased by around 105 percent year on year. As it were, the standard warrants trading has significantly promoted the increase of physical deliveries in the futures market.

3.4 The channels for raw materials procurement and product sales were expanded, and innovations were made in enterprises' trading models.

Enterprises in major industrial chain fully acknowledged the standard warrants trading as an important innovation in promoting futures-spot integration and potential contributor to the development of real economy enterprises. First, the standard warrants trading enables warrant swap and allocation, reduces allocation costs, and adds a final touch to inventory strategies. Second, it expands the trading models and business scope of industry chain enterprises. Third, it satisfies the continuous demand of non-ferrous metal enterprises for production and operation and also serves to lower their risks. Fourth, it supplements the channels for raw materials procurement and *product sales of real economy enterprises.*

3.5 The platform could facilitate enterprises to develop new businesses and serve the development of real economy enterprises.

The SHFE Standard Warrants Trading Platform secures ample room for all enterprises in the industry chain to engage in warrant swap, spot-futures arbitrage, regional arbitrage, brand arbitrage, basis trading, purchase and sales channel expansion, warrant financing, and other futures-spot integration businesses.

4. Development plan

The construction of the SHFE Standard Warrants Trading Platform is an innovative, long-term, and systematic project. With vigorous support of relevant authorities such as the CSRC and the Shanghai municipal government, the SHFE will continue with its efforts to better serve the real economy by carrying out the following initiatives. First, the SHFE plans to enrich varieties in standard warrants trading in a phased manner based on market conditions; second, the SHFE will work to constantly diversify business models and enhance business functions; third, proactive efforts will be taken to study the feasibility of non-standard warrants trading and OTC derivatives like OTC options and swaps; fourth, based on the platform, the futures-spot integration will be intensified and the financial cooperation and economic integration in the Yangtze River Delta will be further enhanced.

Box 11 China's crude oil futures launched, showing international influence

On March 26th, 2018, China launched its crude oil futures on the platform of Shanghai International Energy Exchange (INE), a wholly-owned subsidiary of the SHFE. The introduction of crude oil futures represented a practical measure taken by all parties of the Chinese capital market in studying and implementing the Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era and the spirit of the 19th CPC National Congress, an effective attempt to explore the opening-up of the futures market, and a critical step towards the construction of Shanghai as an international financial center.

1. Significance of the listing of China's crude oil futures

The construction of the crude oil futures market meets the objective demand of serving the real economy. China is the world's second-largest consumer and largest importer of crude oil, and it needs to import around 70 percent of its oil consumption. However, the oil price is passively and unilaterally dependent on overseas market prices. Once in place, a crude oil futures market can reflect oil supply and demand in China as well as the Asia-Pacific region in an objective and comprehensive way, fill the gap in the existing international crude oil pricing mechanism, and *help establish a price system reflecting supply and demand in the oil market of China and the Asia-Pacific region. Ever since 2001, China has been exploring how to set up its own crude oil futures market.*

The construction of the crude oil futures market meets the objective demand of proactively promoting the opening-up of the futures market and developing a modernized economy. The 19th CPC National Congress identified the goals of building up a modern economic system, developing an open economy of higher standards, and making new ground in pursuing opening-up on all fronts, which shed light on the transformation and development of the futures industry. The launch of crude oil futures is a pilot program in the reform and opening-up of China's futures market, and another steady step China takes in promoting internationalization of the futures market. Such efforts are taken based on the current national conditions and the need of furthering reform and opening-up; meanwhile, they are also effective in enabling a higher-level and deeper opening-up of the financial sector and constructing a modern economic system.

The construction of the crude oil futures market marks a key step in facilitating the construction of Shanghai as an international financial center based on the development and innovation of the SHFTZ. By launching crude oil futures in Shanghai and leveraging preferential policies regarding development and innovation of the SHFTZ, we can further enrich Shanghai's market of core financial factors, shore up weak links in Shanghai's financial reform and innovation, and improve its financial market system. Meanwhile, we can also give full scope to the role of the futures market as a window and platform in deepening reform and opening-up, constantly boost the radiating capacity and global clout of Shanghai as an international financial center, and bolster its future development.

2. Major practices of crude oil futures

2.1 The international crude oil futures market plan featuring "globalized platform, net pricing, bonded delivery, and RMB denomination" was determined.

The oil industry is highly complicated per se, and its high-quality development is troubled by many deep-rooted problems and pain points. Besides that, in recent years, fluctuations in the international oil market have intensified, and the engagement of Chinese market entities remains insufficient. To reach consensus to the largest extent and secure support from various parties, after years of research and deliberation, China finally decided on the basic principles of crude oil futures development, namely "globalized platform, net pricing, bonded delivery, and RMB denomination." "Globalized platform" entails the internationalization of trading, delivery, and settlement; "net pricing" means that trading prices are net of tariffs and VAT; "bonded delivery" means that bonded oil warehouses are leveraged to realize physical deliveries; "RMB denomination" refers to RMB-denominated trading and delivery and acceptance of foreign currencies, like USD, as margin collaterals.

2.2 Relevant policies were improved to remove institutional barriers and lay foundations for the launch of crude oil futures.

In the launch of the crude oil futures, the ministries and commissions under the State Council, including the CSRC, the National Development and Reform Commission, the National Energy Administration, the Ministry of Foreign Affairs, the Ministry of Justice, the Ministry of Finance, the Ministry of Commerce, the PBC, the State-owned Assets Supervision and Administration Commission, the General Administration of Customs, the State Administration of Taxation, Hong Kong and Macao Affairs Office, the CBIRC, and the SAFE, as well as Shanghai municipal government, have all provided strong supports. A complete institutional framework and legislative system for the opening-up of crude oil futures was formulated, and the major papers include the Circular on Policy of VAT for Crude Oil and Iron Ore Futures Bonded Delivery Business, the Interim Measures for the Administration of Overseas Traders' and Overseas Broker's Trading of Specified China Futures Contracts, the Circular on the Administration of Cross-border Settlement for Onshore Crude Futures Trading, the Circular on Issues Concerning the Administration of Foreign Exchange for Overseas Traders' and Overseas Broker's Trading of Specified China Futures Contracts, the Notice on Carrying out Bonded Delivery of China Crude Futures Contract, the Notice of the General Administration of Quality Supervision, Inspection and Quarantine on Inspection and Regulation of Crude Oil Futures, and the Circular on Tax Policies for Supporting Opening-up of Crude Oil Futures and Other Commodity Futures Markets. The release of these policies has laid a solid foundation for the launching of crude oil futures.

2.3 Four modes were adopted to attract overseas participants, a central counterparty mechanism was established, overseas registration and promotion was advanced, and the market maker system was introduced.

A system of rules was established for the crude oil futures market, which not only meets the requirements of China's market supervision mechanism but also assimilates common practices of the international community. A total of four overseas participation modes were designed accordingly. First, a local futures firm member (FF Member) can participate in the crude oil futures market directly on behalf of overseas clients; second, overseas clients can trade through an overseas intermediary, which will then entrust its clients to local FF members or Overseas Special Brokerage Participants (OSBPs) (one account for one code); third, overseas clients can entrust OSBPs with trading of crude oil futures (OSBPs directly engage in trading and FF Members are entrusted with settlement and deliveries); fourth, overseas clients can directly participate in trading at the INE as an Overseas Special Non-Brokerage Participant ("OSNBP").

Meanwhile, following common practices in the international market, the INE serves as a centralized clearing counterparty to interpose *itself between the buyer and seller when each transaction is done, act as buyer to every seller and seller to every buyer, make settlement in the amount of net value, and provide centralized performance bond to all the transactions. In addition, in order to enhance overseas investors' trading confidence, the INE obtained the Automated Trading Services (ATS) license in Hong Kong on March 15th, 2018, and then became a recognized market operator (RMO) in Singapore on November 15th the same year. Besides the overseas office in Singapore, the SHFE plans to establish more overseas offices in Dubai, Hong Kong SAR of China and other cities, in a bid to better facilitate overseas promotion of China's crude oil futures. Since trading and position are concentrated in one contract in the infancy of the crude oil futures market, and the continuity of dominant contracts and the market participation of non-quarterly contracts needs to be improved, the INE introduced the market maker system, which effectively enhanced dynamism of subsequent contracts and ushered in the trend of constant rollover of dominant contracts in the nearby month.*

3. Performance of crude oil futures

3.1 Trading remained stable and market size grew steadily.

Throughout all the 189 trading days at the end of December 28th, 2018, despite a number of major holidays and great changes like the unilateral plump of the international oil market price, China's crude oil futures overall demonstrated a good momentum with "stable trading, smooth settlement, proper delivery, stringent regulation, satisfactory risk control, positive social response, and initial effectiveness of its functions". Over the period, the total trading volume stood at nearly 27 million lots (calculated unilaterally, the same below), with a daily average over 140,000 lots and the highest daily volume exceeding 350,000 lots. The cumulative turnover totaled more than RMB 12 trillion, and a number of trading days reported a daily turnover of more than RMB 100 billion. By the end of 2018, the total positions stood at nearly 30,000 lots. According to the figures, China's crude oil futures market performed even better than those of major international exchanges when they were in their infancies, as well as the present crude oil futures markets in the Dubai Mercantile Exchange (DME), the Tokyo Commodity Exchange (TOCOM) and others.

3.2 Domestic and overseas clients actively participated in the market, and the market structure was continuously optimized.

As of December 28th, 2018, more than 37,000 accounts were opened in China's crude oil futures market, double the number when it was first launched. As the first internationalized futures product in China, it attracted active participation of overseas clients. Though the number of accounts of overseas clients accounted for less than 1 percent of the total, the trading volume made up around 10 percent of the total and the positions 15-25 percent. Geographically speaking, the overseas clients came from lots of regions and countries, including Hong Kong SAR of China, Chinese Taipei, Singapore, the U.K., and the USA. As the INE has obtained the ATS license in

Hong Kong SAR of China and RMO license in Singapore, it could be expected that the overseas participants will enter the market at a faster pace. Meanwhile, institutional clients dominated the market and have become a staunch force ensuring market stability. From the perspective of positions, individuals held 40 percent of the total positions, and special legal persons and general legal persons each around 30 percent. In terms of contract months, the structure has been substantially improved and contracts no longer concentrated in one single month. When crude oil futures were first launched, a large part of the trading volume was contributed by SC1809 contracts. However, after the introduction of the market maker system on October 20th, dominant contracts shifted from SC1812 to SC1901, and SC1902 and SC1903 both reported a considerable trading volume. With the structure constantly optimized, the market will be more capable of satisfying real economy enterprises.

3.3 Deliveries were taken smoothly and the market initially demonstrated its capability to serve the real economy.

In 2018, deliveries of crude oil futures contracts were taken in a smooth and orderly manner, and various types of entities were involved in the deliveries. As of December 28th, 2018, four physical deliveries were completed in the market, totaling 2.849 million barrels and RMB 1.217 billion. The deliveries involved two sorts of oil, namely Sultanate of Oman Oman Crude Oil and Republic of Iraq Basra Light Crude Oil, as well as three storage sites in three designated delivery warehouses. Various types of entities were engaged in physical deliveries, including state-owned oil companies, general trading companies, futures companies, and risk management companies. The smooth deliveries have greatly reassured the market, and also provided more reliable market basis and experience for continued activeness and gradual maturing of various products.

3.4 China's crude oil futures received fair appraisal from the international market.

On September 20th, 2018, the INE Crude Oil Futures won the award of Best New Derivatives Contract in the Asian Capital Market in 2018 from the U.K.-based magazine Futures & Options World (FOW); later in December, it picked up the Best New Derivatives Contract of the Year award from FOW. Meanwhile, international organizations like International Energy Agency (IEA) and the Organization of the Petroleum Exporting Countries (OPEC) all paid high attention to INE's crude oil futures and delivered positive comments in an objective and fair manner.

3.5 The price of crude oil futures has been adopted by spot market enterprises as the benchmark for spot goods pricing.

In late March, 2018, Shell Group of companies (shell) and the China International United Petroleum & Chemicals Co., Ltd. (Unipec) signed a one-year crude oil trade agreement which would last from September 2018 to August 2019. As the first spot crude oil trade priced with the INE Crude Oil Futures as benchmark, it drew intense attention from both home and abroad. In *mid-October, Unipec sold over 350,000 barrels of spot crude oil priced against INE Crude Oil to Shandong Chambroad Petrochemicals Co., Ltd., an independent refinery based in Shandong Province. To be more specific, the oil was sold based on premiums/discounts to INE Crude Oil Futures contracts of December, representing the first use of INE Crude Oil Futures as a pricing benchmark in spot trade in China's oil market.*

Appendix I Chronicle of China's Financial Market Development, 2018

On January 2nd, the Shanghai Gold Exchange officially launched the bilateral transactions of silver.

On January 4th, China Banking Regulatory Commission (CBRC) issued the *Notice of the China Banking Regulatory Commission on Issuing the Rules for the Measurement of Default Risk Assets of Counterparties in the Trading of Derivatives* (Yinjianfa〔2018〕No.1), which greatly increased the risk sensitivity of the measurement of assets in the trading of derivatives.

On January 5th, the People's Bank of China (PBC) issued the *Notice on Further Improving Cross-Border RMB Service Policies to Promote Trade and Investment* Facilitation (Yinfa〔2018〕No. 3).

On January 5th, the Shenzhen Stock Exchange (SZSE) launched the Belt and Road public raising Panda cooperate bonds for the first time.

On January 5th, the CBRC issued the *Administrative rules on the Entrusted Loans of Commercial Bank* to make explicit that entrusted loan fund shall not be used for financial investment (such as bonds, futures, derivatives and asset management products, etc.), equity investment or capital increase and share enlargement.

On January 8th, the China Insurance Regulatory Commission (CIRC) and the Ministry of Finance (MOF) jointly issued the *Guidelines on Tightening Management of Use of Insurance Funds and Supporting Prevention and Mitigation of Local Government Debt Risks* (Baojianfa〔2018〕No.6) to encourage insurance institutions to purchase local government bonds. Illegally providing financing to local governments and asking local government to illegally providing collateral are strictly prohibited.

On January 11th, China Foreign Exchange Trade System (CFETS) issued the *Guidelines for Access to Regional Trading on the Interbank Foreign Exchange Market (Trial)* to specify the application requirements, materials and access procedures in regional trading in the interbank foreign exchange market.

On January 19th, National Development and Reform Commission (NDRC), the PBC, the MOF, the CBRC, the State-owned Assets Supervision and Administration Commission (SASAC), the China Securities Regulatory Commission (CSRC), and the CIRC jointly issued the *Notice on the Specific Policy Issues Concerning the Implementation of the Market-Oriented Debt-Equity Swaps of Banks* (Fagaicaijin〔2018〕No.152).

On January 24th, China Development Bank (CDB) sold financial bonds via Nanjing Bank counters and other channels. It was the first time that policy bank bonds were sold over-the-counter at city commercial banks, expanding the sound investment channels for the public.

On January 24th, the CFETS issued the *Notice on the Launch of Foreign Currency Pair Swaps and AUD/RMB Currency Swap* (Zhonghuijiaofa〔2018〕No.33) and decided to officially launch the business of currency swap of currency pairs and AUD/RMB swap on February 5th to further improve the function of currency swaps.

On January 29th, Jilin Forest decided not to redeem the 15 Sengongji MTN001 perpetual bond, making it the first perpetual bond with an interest rate jump.

On January 30th, Shanghai Clearing House (SHCH) officially launched the centralized clearing business of credit default swap. The launch marked SHCH's extension of central counterparty clearing to credit derivatives, achieving the full coverage of interest rate, exchange rate, commodities and credit derivatives.

On January 30th, Huatai Securities Asset Management—CALC Phase I Asset-backed Securities Program, China's first asset-backed securities denominated and settled in dollars, was successfully listed today on the SSE, making it China's first foreign currency denominated ABS transaction.

On February 1st, the CIRC issued the *Provisions on the Supervision and Administration of Insurance Brokers* (CIRC Decree〔2018〕No.3) to strengthen the review of shareholders of insurance brokerage companies, promote professional and legally-compliant brokerage operations, and protect the rights and interests of consumers. The Provisions came into effect as of May 1st.

On February 2nd, the SHCH officially launched the central counterparty clearing business of cross-border foreign exchange spot transactions, marking SHCH's extension of centralized clearing businesses to the foreign exchange business, which was a breakthrough in the building of clearing infrastructure for cross-border foreign exchange transactions.

On February 8th, the NDRC General Office and MOF General Office jointly issued the *Notice on Further Strengthening the Capacity of Corporate Bond Services Serving the Real Economy and Strictly Preventing Local Debt Risks* (Fagaicaijin〔2018〕No.194) to give full play to the direct financing function of corporate bonds and take strict precautions against local debt risks.

On February 11th, the CSRC issued the *Guidelines on Pension-Targeted Securities Investment Fund (Trial)* (CSRC Announcement〔2018〕No.2) to support the publicly offered funds to serve pension investment of individual investors.

On February 13th, the CBRC issued the newly amended *Implementation Measures for Administrative Permission Items for Foreign Banks* (Yinjianbanfa〔2018〕No.45) to cut administrative permission items to the largest extent and simplify the procedures, enhance the convenience for banking institutions to extend businesses, and promote the integration of market access standards for domestic and foreign banks.

On February 24th, the MOF issued the *Notice on the Management of Local Government Debt in 2018* (Caiyu〔2018〕No.34), requiring local financial authorities to strictly fulfill their local management responsibility and take forestalling and defusing local government debt risks as the priority among priorities in the current fiscal management work.

On February 26th, BOC Macau Branch successfully issued the Lotus Bond worth of RMB 4 billion, which was the first offshore RMB bond issued in Macau.

On February 27th, the PBC issued announcement No. 3〔2018〕to regulate the issuance of capital supplement bonds by banking financial institutions.

On February 28th, the CBRC issued the *Notice on Adjusting the Regulatory Requirements of Loan Loss Provisions for Commercial Banks* (Yinjianfa〔2018〕No.7) to lower the provision coverage ratio from 150 percent to 120-150 percent and set the loan provision ratio at 1.5 to 2.5 percent from 2.5 percent for commercial banks.

On February 28th, Shanghai Gold Exchange revised and issued the *Administrative Rules on Market Makers of Interbank Gold Inquiry Trading* to guide market makers of interbank gold inquiry trading to improve their market-making ability.

On March 1st, the MOF and the Ministry of Housing and Urban-Rural Development (MHURD) jointly issued the *Administrative Measures for the Pilot Program of Issuing Special Bonds on Shanty Town Renovation* (Caiyu〔2018〕No.28) to further improve the management of the special bonds of local government and regulate the financing behaviors for shanty town renovation.

On March 1st, the CSRC issued the *Special Rules on Reducing Equity Holdings by Venture Investment Fund Shareholders in Listed Companies* (CSRC Announcement〔2018〕No.4), clarifying differentiated policy supports for reducing pre-IPO shares of listed companies by venture investors who focus on long-term investments and value investments.

On March 2nd, the SSE and SZSE formulated and issued the *Notice on the Launch of the Pilot Program of Belt and Road Bonds* (Shangzhengfa〔2018〕No.8, Shenzhengshang〔2018〕No.93) to guide the exchange bond market to further serve the building of the Belt and Road Initiative (BRI) programs, promote financial connectivity among countries and regions along the Belt and Road, and deepen the opening-up of the exchange bond market.

On March 5th, the first domestic BRI corporate bonds of listed companies was issued on the SZSE. The issuer Hengyi Petrochemicals raised funds for the PMB project in Brunei.

On March 14th, the PBC issued the *Notice on Enhancing the Supervision and Management of*

Green Financial Bond within the Duration (Yinfa〔2018〕No. 29) and formulated the *Information Disclosure Standards for Green Financial Bond within the Duration*.

On March 18th, the General Office of the State Council issued the *Opinions of the General Office of the State Council on Promoting Comprehensive Financial Statistics* (Guobanfa〔2018〕No.18).

On March 22nd, the State Council issued *Opinions on Launching the Pilot Program of Issuing Stocks or Depository Receipts in Mainland China by Innovative Enterprises* (Guobanfa〔2018〕No.21) to formulate systematic institutional arrangements for innovative enterprises to issue and go public in China.

On March 26th, crude oil futures were listed for trading on the Shanghai International Energy Exchange.

On March 27th, NAFMII issued the *Rules on the Registration and Evaluation of Credit Rating Agencies in the Interbank Bond Market, the Self-Discipline Pact for Credit Rating Agencies on Debt Financing Instruments Offered by Non-Financial Enterprises and Questionnaire and the Interview Procedures on Credit Rating Business for Debt Financing Instruments Offered by Non-Financial Enterprises* to promote the opening-up of the interbank bond market, enhance the self-discipline management of credit rating business, and enable the sound development of credit rating business as well as the interbank bond market.

On March 28th, the MOF issued the *Notice on Regulating the Investment and Financing Behavior of Financial Enterprises to Local Governments and State-Owned Enterprises* (Caijin〔2018〕No.23) to further urge the financial enterprises to strengthen risk control and financial management.

On April 2nd, China Banking and Insurance Regulatory Commission (CBIRC), the PBC and other five ministries jointly issued the *Notice regarding the Issuance of Four Supporting Measures of the Regulations on the Supervision and Administration of Financing Guarantee Companies* (Yinbaojianfa〔2018〕No.1).

On April 8th, the CBIRC was unveiled in Beijing, marking the official opening of the newly established CBIRC.

On April 11th, the CSRC and Hong Kong Securities and Futures Commission agreed to increase the daily quotas under both Shanghai-Hong Kong Stock Connect and Shenzhen-Hong Kong Stock Connect. With effect from May 1st 2018, the daily quota for the Hong Kong Stock Connect under Shanghai Stock Connect was adjusted to RMB 52 billion and the daily quota for the Hong Kong Stock Connect under Hong Kong Stock Connect was adjusted to RMB 42 billion to further improve the connectivity between mainland and Hong Kong stock markets.

On April 12th, the PBC released the *Notice on the Management of Short-Term Financing Bonds of Securities Companies* (Yinfa〔2018〕No.14) to further guide securities companies to enhance liquidity risk management capacity and promote sound development of the currency market.

On April 17th, the PBC decided to cut the RMB reserve requirement ratio by 1 percentage point for large commercial banks, joint-stock commercial banks, city commercial banks, non-county rural commercial banks, and foreign banks, effective from April 25th. From the same day on, the above-mentioned banks would use funds released from the required reserve ratio reduction to repay their respective outstanding Medium-term Lending Facility (MLF) borrowed from the central bank on a "first borrow, first repay" basis.

On April 17th, National Association of Financial Market Institutional Investors (NAFMII) issued the *Announcement on the Market-Oriented Evaluation Results of Prospective Underwriter Members (Trust Companies)*. CITIC Trust and other five institutions became the first trust companies to be approved as underwriters of bond financing instruments for non-financial enterprises.

On April 20th, the CSDC and SZSE jointly issued the *Implementation Rules on the Pilot Program on "Full Circulation" of the H-Shares (Trial)* to accelerate the reform and opening-up of the capital market in the new era and further improve the financing environment for the overseas listing of domestic enterprises.

On April 24th, the SSE and China Securities Depository and Clearing Corporation Limited (CSDC) jointly issued the *Interim Measures of Shanghai Stock Exchange and China Securities Depository and Clearing Co. Ltd. for Transactions and Settlement of Bonds in Pledged Tri-Party Repo* (Shangzhengfa〔2018〕No. 22).

On April 24th, the CSRC and MOHURD jointly issued the *Notice on Promoting the Asset-Backed Securitization of House Leasing* (Zhengjianfa〔2018〕No. 30) to promote development of the house leasing market.

On April 27th, the PBC, CBIRC and CSRC jointly issued the *Guidelines on Tightening Supervision of Investments in Financial Institutions by Non-Financial Enterprises* (Yinfa〔2018〕No. 107) to regulate investments in financial institutions by non-financial enterprises, strengthen supervision of such investments, and promote mutual development of the real economy and the finance sector.

On April 27th, the PBC, CBIRC, CSRC and SAFE jointly issued the *Guidelines on Regulating Asset Management Services of Financial Institutions* (Yinfa〔2018〕No. 106) to regulate the asset management business of financial institutions and to unify the regulatory standards for similar asset management products.

On April 27th, the CFETS issued the *Notice on Launching Foreign Currency Interest Rate Swap* (Zhonghuijiaofa〔2018〕No. 151) to officially launch the interest rate swap (IRS) businesses on May 2nd, 2018, covering six foreign currencies including the USD.

On April 27th, the CFETS issued the *Notice on*

Providing Interbank Overnight Trading and the Operation Rules on National Interbank Overnight Trading (Zhonghuijiaofa〔2018〕No. 149) to officially launch the interbank overnight trading services on May 1st and thus meet the liquidity management needs of direct participants in the RMB cross-border interbank payment system.

On April 27th, the CBIRC issued the *Notice on Lifting Restrictions on the Business Scope of Foreign Insurance Brokerage Companies* (Yinbaojianfa〔2018〕No. 19) to ensure that the business scope of foreign-owned insurance brokers is the same as that of their Chinese counterparts.

On April 28th, the CSRC issued *the Administrative Rules on Foreign-Funded Securities Companies* (CSRC Decree No. 140) to allow foreign investors to take controlling shares of joint-funded securities companies, gradually lift restrictions on the business scope of joint-funded securities companies, and unify the equity percentage threshold for both listed and non-listed foreign securities companies.

On May 1st, the CFETS officially launched the interbank overnight trading services.

On May 2nd, the CBIRC issued the *Notice on Regulating the Inter-Provincial Commercial Bill Business of Banking Financial Institutions* (Yinbaojianbanfa〔2018〕No. 21) to regulate the inter-provincial commercial bill business of banking financial institutions.

On May 3rd, the PBC issued the *Notice on Further Clarifying Regulations on Overseas Securities Investment by the RQDIIs* (Yinbanfa〔2018〕No. 81) to forbid RMB Qualified Domestic Institutional Investors (RQDIIs) from remitting funds overseas for foreign currency purchase purposes.

On May 4th, the CBIRC issued the *Administrative Rules on Large-Sum Risk Exposure of Commercial Banks* to specify the supervision requirements on large-sum risk exposure of commercial banks.

On May 4th, overseas traders were officially introduced for iron ore futures on the Dalian Commodity Exchange (DCE).

On May 4th, the MOF released the *Opinions on the Issuance of Local Government Bonds in 2018* (Caiku〔2018〕No. 61) to strengthen the management of local government bonds issuance plan and improve the market-oriented pricing of local government bonds issuance.

On May 11th, Securities Association of China (SAC) issued the newly revised *Guidelines on the Negative List for Undertaking Non-Publicly Offered Corporate Bond Projects* (2018 Revision).

On May 11th, the SSE and SZSE respectively issued the *Guidelines on Credit Risk Management for Asset-Backed Securities within the Duration (Trial)* to enhance the credit risk management of asset-backed securities within their duration.

On May 11th, the NDRC and MOF jointly issued the *Notice on Improving the Market Restraint Mechanism to Strictly Prevent from Risks of*

Foreign Debt and Local Debt (Fagaiwaizi〔2018〕No. 706).

On May 16, SASAC, MOF and the CSRC jointly issued the *Administrative Rules on the Supervision of State-Owned Equity of Listed Companies* (SASAC MOF CSRC Decree No. 36) to strengthen the regulation on changes in the state-owned equity of listed companies.

On May 23rd, the CBIRC issued *the Administrative Rules on Liquidity Risk Management of Commercial Banks* (CBIRC Decree〔2018〕No. 3), which came into force on July 1st, 2018, to enhance liquidity risk management of commercial banks and maintain sound operation of the banking system.

On May 30th, the CSRC and the PBC jointly issued the *Guidelines on Further Regulating the Internet Sales and Redemption Services of Money Market Funds* (CSRC Announcement〔2018〕No. 36) to prevent the risks of money market funds and promote the sound development of the market.

On June 1st, the PBC announced to moderately extend the acceptable collateral range of medium-term lending facility (MLF). The newly included collaterals are the MSEs, green and agriculture-related financial bonds that are rated AA and above, corporate debenture bonds that are rated AA+ or AA, and high-quality SMEs and green loans.

On June 6th, 2018 China Railway Construction Bonds (9th Tranche), the first that supported cross-market transactions between the interbank and exchange bond markets, were successfully issued, and the bonds were listed on the SZSE on June 11th.

On June 7th, the CSRC issued a series of regulations and other regulatory documents, including the *Administrative Rules on Depository Receipt Issuance and Transaction (Trial)*.

On June 14th, the CFETS and the PBC jointly issued the CFETS-BOC Traded Bond Index, which was the first traded bond index in the interbank bond market.

On June 19th, the PBC Shanghai Head Office issued Announcement〔2018〕No. 2, according to which that information collection and filing requirements for overseas investors who invest in China's interbank bond market were simplified.

On June 20th, the CFETS and the National Interbank Funding Center released the *Notice on Carrying out Anonymous Bond Auctions* (Zhonghuijiaofa〔2018〕No. 192).

On June 21st, China Insurance Assets Registration and Trading System Co., Ltd., an insurance asset management platform of the Shanghai Insurance Exchange, officially launched the first set of regulations, which marked a crucial step in the building of China's insurance assets registration and trading system.

On June 23rd, the PBC, CBIRS, CSRC, NDRC and MOF jointly released the *Opinions on Further Deepening Financial Services for MSEs* (Yinfa〔2018〕No. 162) to guide financial institutions to increase investment in critical and weak economic and social links including MSEs.

On June 24th, the PBC announced to support the market and law-based debt-to-equity swap and financing for MSEs via targeted reserve requirement ratio (RRR) cut. It decided to cut the RRR of RMB deposits by 0.5 percentage points for large state-owned commercial banks, joint-stock commercial banks, Postal Savings Bank of China (PSBC), city commercial banks, non-county rural commercial banks and foreign-funded banks since July 5th, 2018.

On June 29th, the CBIRC issued the *Administrative Rules on Financial Asset Investment Companies (Trial)* (CBIRC Decree〔2018〕No. 4) to further regulate banks' debt-to-equity swaps.

On July 13th, the PPP Project special bond of Jiangsu Meishang Ecological Landscape Co., Ltd., China's first private enterprise PPP Project special bond, was approved after the review of the NDRC.

On July 13th, the SZSE and CSDC jointly issued the *Interim Measures of Shenzhen Stock Exchange and China Securities Depository and Clearing Co. Ltd. for Transactions and Settlement of Bonds in Pledged Tri-Party Repo* to further improve the repo mechanism. Relevant rules came into force on July 30th, 2018.

On July 19th, the CFETS issued the *Notice on Introducing Foreign Currency Lending Business that Uses Overseas Foreign Currency-Denominated Bonds as Collaterals* (Zhonghuijiaofa〔2018〕No. 252) to further enrich the foreign currency financing instruments and meet the demand of asset and liability management of foreign currency lending institutions in the Chinese mainland.

On July 20th, the PBC issued the *Notice on Further Clarifying Issues Concerning the Guidelines on Regulating Asset Management Services of Financial Institutions* (Yinbanfa〔2018〕No. 129) to encourage flow of private capital into the real economy and provide better support for structural adjustment as well as economic transformation and upgrading.

On July 27th, the CSRC issued the *Decision on Revising the Opinions on Reforming, Improving and Strictly Implementing the Rules on the Delisting of Listed Companies* (CSRC Decree〔2018〕No. 146).

On July 30th, the MOF issued the *Business Procedures of the Public Underwriting of Local Government Bonds* (Caiku〔2018〕No. 68) to launch the public underwriting system of local government bonds.

On August 3rd, ICBC Financial Asset Investment Co., Ltd. gained the private-equity license. It was the first private equity firm in the banking sector established by the implement agency of market-based debt-to-equity swaps.

On August 3rd, the PBC adjusted the foreign-exchange risk reserve ratio of the forward foreign-exchange sale business from 0 percent to 20 percent so as to prevent macro-financial risks, promote the sound operation of financial institutions, and strengthen macro-prudential regulation.

On August 9th, the PBC issued the *Notice on Carrying out Pilot Project for Flexible Tendering and Issuance of Financial Bonds* (Yinshichang〔2018〕No. 141) to further improve the issuance mechanism of financial bonds.

On August 10th, the CBIRC issued the *Notice of the CBIRC General Office on Issues Concerning Underwriting Local Government Bonds by Commercial Banks* (Yinbaojianbanbianhan〔2018〕No. 1234) to eliminate the restriction that the amount of investment by commercial banks in local government bonds mainly underwritten by the bank itself should not exceed 20 percent of the issuance.

On August 11th, NAFMII announced the successful issuance of the two batches of asset-backed notes (ABNs) through the Bond Connect in recent days. They were the first batches of ABNs successfully issued following the launch of the Bond Connect.

On August 14th, the MOF issued the *Business Procedures of Flexible Tendering and Issuance of Local Government Bonds* (Caiku〔2018〕No. 74) and decided to implement the flexible tendering system of local government bonds.

On August 15th, the CSRC issued the *Decision on Revising the Administrative Rules on Securities Registration and Settlement* (CSRC Decree No. 147) and the *Decision on Revising the Administrative Rules on Equity Incentives of Listed Companies* (CSRC Decree No. 148).

On August 17th, ICBC (Macau), Luso International Banking Ltd., BOC Macau Branch and other financial institutions in Macau distributed and subscribed the Guangdong-Hong Kong-Macau Greater Bay Area land reserve special bonds of RMB 5 billion via the settlement agent model. This was the first time that members of the underwriting group distributed local government bonds to offshore financial institutions, and that offshore financial institutions participated in China's local government bond market, which promoted the diversification of entities investing in local government bonds.

On August 17th, the 2-year treasury bond futures were successfully listed on the China Financial Futures Exchange, indicating that China had basically formed a product system covering short-, medium- and long-term treasury bond futures.

On August 20th, the Financial Department of Sichuan Province launched the Sichuan Province Lu County Rural Revitalization Special Bond (1st Tranche) of RMB 500 million, marking the official launch of the first rural revitalization special bond nationwide.

On August 23th, the CDB increased the supply of its 10th tranches of 2018 financial bonds through flexible tendering on the interbank market via the bond issuance system of the PBC to carry out pilot project for flexible tendering and issuance of financial bonds.

On August 24th, the counter-cyclical factors to the USD-CNY central parity rate model was reintroduced to moderately hedge against pro-cyclical sentiments of the RMB depreciation.

On August 24th, the CSRC issued the *Administrative Rules on Foreign-Funded Futures Companies* (CSRC Decree No. 149), specifying that qualified foreign investors could submit the application to the CSRC in accordance with relevant rules, and that the percentage of equity in a futures company held by foreign investors would be limited to 51 percent for the first three years, after which the cap would be lifted.

On September 4th, the PBC and the CSRC jointly issued the Announcement〔2018〕No. 14, requiring efforts be made to gradually unify the qualification requirements for the rating business in the interbank and exchange bond market, strengthen the regulation of credit rating agencies and the sharing of regulatory information, improve the internal system of credit rating agencies, unify the rating standard, and raise the rating quality.

On September 8th, the PBC and the MOF jointly issued the *Interim Measures for the Administration of Bond Issuance by Overseas Institutions in the Interbank Bond Market* (PBC MOF Announcement〔2018〕No. 16) to integrate the management mechanism of Panda Bond.

On September 12th, upon the approval of the PBC, Chinese Panda Gold Coins were officially listed on the Shanghai Gold Exchange (SGE). Linking China's gold market with its gold coin market, this listing helped create a centralized and standardized investment market for physical gold with the Panda Gold Coin as the underlying, meet the diverse needs of investors, further give play to the price discovery function of China's gold market, and enrich the market's investment offerings.

On September 19th, the CSDC amended the *Guidelines on the Business of Securities Accounts for Special Institutions and Products* to specify the substantive constraints on opening securities accounts for commercial banks' wealth management products and the facilitation measures for application.

On September 20th, the PBC and the Hong Kong Monetary Authority signed the *Memorandum of Cooperation on Using Central Money-Markets Units for the Issuance of PBC Bills*.

On September 21st, the Shanghai Futures Exchange officially launched Copper options.

On September 25th, the CSRC officially issued the *Administrative Rules on the Formation, Acquisition and Purchase of a Non-Controlling Stake in Overseas Business Institutions by Securities Companies and Securities Investment Fund Management Companies* (CSRC Decree No. 150) to promote the securities and fund management institutions to go global in an orderly manner and strengthen the management of overseas institutions by securities and fund management institutions.

On September 26th, the CBIRC issued the *Administrative Rules on the Supervision of Wealth Management Business of Commercial Banks* (CBIRC Decree〔2018〕No. 6) to further unify the regulatory standards for asset management products and promote the sound development of wealth management business.

On September 26th, the CFETS issued the *Notice on the Launch of Bond Index Products* (Zhonghuijiaofa〔2018〕No. 362), and National Interbank Funding Center officially launched the issuance, trading and information disclosure services of bond index products in the interbank market.

On September 30th, the Shanghai Commercial Paper Exchange Corporation Ltd. officially integrated the paper bill system and the e-bill system to ensure the same-site trading of both paper and electronic bills, which marked the establishment of a unified, safe and efficient centralized trading platform of electronic bills.

On October 7th, the PBC decided to cut RRR for large commercial banks, joint-stock commercial banks, city commercial banks, non-county rural commercial banks, and foreign-funded commercial banks by 1 percentage point, effective from October 15th, 2018. MLF loans that matured on the day would not be renewed.

On October 8th, NAFMII issued the *Guidelines for Information Disclosure of Securities Backed by Small and Micro Enterprise Loans (2018)* to support banking financial institutions to issue securities backed by loans of small and micro businesses.

On October 8th, the CSRC introduced the review mechanism of small and fast Merger and Acquisitions (M&As) to further boost market vitality and give full play to the important role of M&A in serving the real economy.

On October 10th, to regulate the anti-money laundering and counter-financing of terrorism works in the Internet finance industry, the PBC, CBIRC and CSRC jointly issued the *Administrative Rules on Anti-Money Laundering and Combating Terrorist Financing of Internet Financial Institutions (Trial)*, which came into force on January 1st, 2019.

On October 12th, the CSRC issued the *Provisions on the Supervision and Administration of Depository Receipts under the Stock Connect Scheme between Shanghai Stock Exchange and London Stock Exchange (Trial)* (CSRC Announcement〔2018〕No. 30) to further expand the two-way opening-up of the capital market.

On October 16th, the PBC released the Announcement〔2018〕No. 18 to officially launch the tri-party repo in the interbank bond market and further strengthen risk control on the money market.

On October 16th, the SSE issued the *Guidelines of the Shanghai Stock Exchange on the Services* *of the Bond Collateral Resolution Platform* (Shangzhengfa〔2018〕No. 82) to work on establishing a centralized bond collateral resolution platform.

On October 22nd, the PBC decided to guide the establishment of the support instruments of bond financing for private enterprises. The initial funding for the support instrument was partly provided by the PBC through central bank lending. Run by professional institutions on a market-oriented basis, support instruments took various approaches such as selling CRM instruments and providing credit enhancement guarantees to support bond financing by private enterprises.

On October 22nd, the CSRC issued the *Administrative Rules on Private Asset Management Business of Securities and Futures Operators* (CSRC Decree No. 151) and *Regulations on the Operation and Management of Private Asset Management Business of Securities and Futures Operators* (CSRC Announcement〔2018〕No. 31) to detail regulatory requirements on private asset management business of securities and futures operators.

On October 24th, the SZSE disclosed that Shenzhen Investment Holdings Co. Ltd. would issue the 2018 bailout special corporate bond, marking the first bailout special corporate bond issued on the SZSE.

On October 24th, the NAFMII began the market evaluation on the participation of underwriting members (foreign banks) in Class B Lead Underwriting business. Foreign banks granted the Class B Lead Underwriting License could carry out the lead underwriting of debt financing instruments for non-financial enterprises.

On October 24th, the CBIRC issued the *Notice on Launching Special Products by Insurance Asset Management Companies* (Yinbaojianfa〔2018〕No. 65) to allow insurance asset management companies to launch special products, in order to help mitigate the liquidity risks of listed companies' stock pledged lending and provide long-term financing support for high-quality listed companies and private enterprises.

On October 26th, the NPC issued the *Decision of the Standing Committee of the National People's Congress on Amending the Company Law of the People's Republic of China*, which specifically amended the share repurchase provisions in Article 142 of the current Company Law and came into effect on the day of its promulgation.

On October 29th, China Insurance Assets Registration and Trading System Co., Ltd. issued the *Notice on the Registration of Special Products by Insurance Asset Management Companies* and completed the registration for the first special product by insurance asset management companies.

On November 2nd, the SSE issued a set of relevant regulations on the Shanghai-London Stock Connect including the *Interim Measures for the Listing and Trading of Depository Receipts under the Stock Connect Scheme between the*

Shanghai Stock Exchange and the London Stock Exchange to regulate the listing, trading, cross-border conversion and information disclosure of depository receipts under the stock connect scheme between the SSE and the LSE.

On November 6th, the CSRC issued the *Guidelines on Improving the Suspension and Resumption of Trading of Stocks of Listed Companies* (CSRC Announcement〔2018〕No. 34) to further ensure the timely and equitable disclosure of information, warn about major risks, and maintain an equitable trading order.

On November 7th, the MOF and State Administration of Taxation (SAT) jointly issued the *Notice on Enterprise Income Tax and Value-Added Tax Policies for Overseas Institutions Investing in Domestic Bond Market* (Caishui〔2018〕No. 108), exempting overseas institutional investors from enterprise income tax and value-added tax for the bond interest acquired in domestic bond market during the period from November 7th, 2018 to November 6th, 2021.

On November 9th, the CSRC, MOF and SASAC jointly issued the *Opinions on Supporting Listed Companies in Stock Repos* (CSRC Announcement〔2018〕No. 34) to further improve the quality of listed companies, strengthen the endogenous stability mechanism, and promote the long-term sound development of the capital market.

On November 9th, the CSRC revised and issued the *Issuance Regulatory Q&A-Regulatory Requirements on Guiding and Regulating the Financing Behavior of Listed Companies* to further optimize the resource allocation of the capital market, encourage technological innovation, as well as guide and regulate the listed companies' financing behaviors.

On November 10th, the PBC, MOF and CBIRC jointly issued the *Notice on Launching the OTC Business for Local Government Bonds in the National Interbank Bond Market* (Yinfa〔2018〕No. 283). Local government bonds became another type of bonds that could be traded OTC in the interbank bond market after book-entry treasury bonds, policy bank bonds and bonds issued by the CDB.

On November 10th, the Ethylene Glycol (EG) futures were officially launched at the Dalian Commodity Exchange (DCE).

On November 13th, the NDRC General Office, the PBC General Office, the MOF General Office, the CBIRC General Office and the CSRC General Office jointly issued the *Notice on Encouraging Relevant Institutions to Participate in Market-Oriented Debt-to-Equity Swaps* (Fagaibancaijin〔2018〕No. 1442) to increase the quantity and improve the quality of market-oriented debt-to-equity swaps.

On November 15th, the CSRC revised and issued *Standard No.26 for the Contents and Formats of Information Disclosure by Companies that Issue Securities Publicly-Application Documents for Major Asset Restructuring of Listed Companies (2018 Revision)* (CSRC Announcement〔2018〕No. 36) to carry out the reform of trading suspension/resumption system and simplify the disclosure requirements for the M&A plans of listed companies.

On November 16th, the SSE and SZSE respectively issued the *Implementation Measures of the Shenzhen Stock Exchange for Compulsory Delisting Due to Major Violations of Law* (Shangzhengfa〔2018〕No. 98; Shenzhengfa〔2018〕No. 556) to build a completely new delisting system for listed companies.

On November 25th, Allianz received CBIRC approval for the preparatory establishment of Allianz (China) Insurance Holding Company Limited, China's first-ever fully foreign-owned insurance holding company.

On November 26th, the debt-to-equity swap business plan for Yuexiu Group in the form of preferred equity by ICBC Financial Asset Investment, the implementation institution of debt-to-equity swap business of the ICBC, was officially approved, which was the one of the first innovative debt-to-preferred equity plans for non-listed, non-public joint-stock companies in China.

On November 27th, the PBC, CBIRC and CSRC jointly issued the *Guidelines on Improving Regulation of Systemically Important Financial Institutions* (Yinfa〔2018〕No. 301) to improve China's regulatory framework for Systemically Important Financial Institutions (SIFIs) and forestall systemic risks.

On November 27th, the Pulp futures, China's 50th commodities futures contract, were officially listed on the Shanghai Futures Exchange.

On November 28th, the CSRC issued the *Operating Guidance of the Guidelines on Regulating Asset Management Services of Financial Institutions Applicable to the Collective Asset Management Business of Securities Companies* (CSRC Announcement〔2018〕No. 39) to clarify the standard and procedures for collective products to further match with publicly offered funds and achieve well-regulated development.

On November 29th, the CFETS and Bloomberg completed their preparations and officially launched the collaboration project, allowing foreign institutional investors to obtain access to China's interbank bond market via trading platforms.

On November 30th, overseas investors were allowed to trade Purified Terephthalic Acid (PTA) futures on the Zhengzhou Commodity Exchange.

On December 2nd, the CBIRC issued the *Administrative Rules on the Wealth Management Subsidiaries of Commercial Banks* (CBIRC Decree〔2018〕No. 7). A wealth management subsidiary was hence referred to as a non-bank financial institution engaged in wealth management business for commercial banks.

On December 3rd, the PBC, CSRC and NDRC jointly released the *Opinions on Further Enhancing Law Enforcement in the Bond Market* (Yinfa〔2018〕No. 296) to build a unified law enforcement mechanism of the bond market.

On December 5th, the NDRC issued the *Notice on Supporting Direct Financing by High-Quality Enterprise and Further Strengthening the Capability of Corporate Bonds in Serving the Real Economy* (Fagaicaijin〔2018〕No. 1806) to further strengthen the capability of corporate bonds in serving the real economy as well as prevent and mitigate major risks.

On December 6th, Shanghai Commercial Paper Exchange Corp. Ltd. officially released the first yield curve of the paper market.

On December 7th, China Central Depository & Clearing Co., Ltd. (CCDC) issued the *Notice on Pre-Issuance of Treasury Bonds in the Interbank Bond Market* (Zhongzhaizi〔2018〕No. 161) to regulate the pre-issuance of treasury bonds in the interbank bond market.

On December 11th, Shanghai International Gold Exchange and CCDC jointly issued the *Announcement on Adjusting the Types of Bonds as Margin Collateral of Shanghai International Gold Exchange and the Conversion Rate of Bond as Margin Collateral* to optimize the business of margin payment with bonds.

On December 14th, the PBC issued the *Notice on Matters Concerning Gold Asset Management Business* (Yinbanfa〔2018〕No. 215), the *Interim Administrative Measures for Internet Gold Business of Financial Institutions* (Yinbanfa〔2018〕No. 221), and the *Interim Administrative Measures for Gold Accumulation Business* (Yinbanfa〔2018〕No.222) to strengthen the development of the gold market system, help prevent market risks, and protect the rights and interests of investors.

On December 14th, the support instruments for bond financing by private enterprises were launched in the exchange bond market to support bond financing by private enterprise in a market-based approach. Meanwhile, relevant financial institutions were encouraged to provide credit protection instruments for bond issuance by private enterprises.

On December 19th, the PBC announced the launch of the TMLF, aiming to provide targeted support for financial institutions to grant loans to MSEs and private businesses.

On December 20th, the CFETS issued the *Notice on Introducing Negotiated Derivatives Transactions in the Interbank Foreign Exchange Market* (Zhonghuijiaofa〔2018〕No. 481) to further improve the trading mechanism and trading efficiency.

On December 28th, the CBIRC issued the *Guidelines on Regulating Off-Site Non-Licensed Entities of Banking Financial Institutions* (CBIRC〔2018〕No. 71) to further regulate the off-site non-licensed business of banking financial institutions, maintain the market order, and prevent financial risks.

On December 28th, China Financial Futures Exchange issued the *Administrative Rules on Market Makers of China Financial Futures*

Exchange to further regulate the management of financial futures market makers, and enhance market liquidity and efficiency. *Detailed Rules and Regulations of China Financial Futures Exchange for Exchange of Futures for Physicals on Treasury Bond Futures Contract* was issued on the same day, which announced the launch of exchanges of futures for physicals on treasury bond futures contract.

Appendix II China Financial Market Statistics

Table 1 Major macroeconomic and financial indicators, 2000—2018 (year-end balance)

Units: RMB 100 million, percent

Item	2000	2001	2002	2003	2004	2005	2006	2007
Gross domestic product (GDP)	99,215	109,655	120,333	135,823	159,878	184,937	216,314	265,810
Growth rate	8.4	8.3	9.1	10	10.1	10.4	12.7	14.2
Exports & imports (USD100 million, RMB 100 million)	4,743	5,097.7	6,208	8,512	11,547	14,221	17,607	21,738
Growth rate	31.5	7.5	21.8	37.1	35.7	23.2	23.8	23.5
Exports (USD100 million, RMB 100 million)	2,492	2,661	3,256	4,384	5,934	7,620	9,690	12,205
Imports (USD100 million, RMB 100 million)	2,251	2,436.1	2,952	4,128	5,614	6,601	7,915	9,561
Foreign exchange reserves (USD100 million)	1,655.7	2,121.7	2,864	4,033	6,099	8,189	10,663	15,282
Foreign direct investment (USD100 million)	408	468.5	527	535	606	603	694.7	747.7
Fiscal revenue	13,380.1	16,371	18,914	21,691	26,355.9	31,628	38,760.2	51,304
Fiscal expenditure	15,879.4	18,844	22,012	24,607	28,360.8	33,708.1	40,222.7	49,565.4
Deficit/surplus	-2,499.3	-2,473	-3,098	-2,916	-2,004.9	-2,080.1	-1,462.5	1,738.6
Money supply (M_2)	134,610.3	158,301.9	185,007	221,222.8	254,107	296,040.1	345,577.9	403,401.3
Growth rate	12.3	17.6	16.9	19.6	14.9	16.5	16.7	16.7
Money supply (M_1)	53,147.2	59,871.6	70,822	84,118.6	95,969.7	107,279.9	126,028.1	152,519.2
Growth rate	15.9	12.7	18.3	18.8	14.1	11.8	17.5	21.0
Money supply (M_0)	14,652.7	15,688.8	17,278	19,746	21,468.3	24,032.8	27,072.6	30,334.3
Growth rate	8.9	7.1	10.1	14.3	8.7	11.9	12.6	12.0
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
Real growth rate	6.4	8.5	13.4	9.0	7.7	9.6	10.4	12.2
Net income of rural residents (RMB)	2,253	2,366	2,475.6	2,622	2,936	3,255	3,587	4,140
Real growth rate	2.1	4.2	4.8	4.3	6.8	6.2	7.4	9.5
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
Growth rate	13.8	16.0	19.0	21.7	16.0	24.3	15.9	15.2
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
Growth rate	6.0	13.0	16.9	21.1	12.1	16.1	15.2	16.6
Consumer Price Index (CPI)	0.4	0.7	-0.8	1.2	3.9	1.8	1.5	4.8

Note: 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.

Sources: National Bureau of Statistics (NBS), PBC, and MOF.

concluded

Units: RMB 100 million, percent

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
314,045	340,903	408,903	484,124	534,123	595,244	643,974	689,052	743,585	827,122	900,309
9.6	9.2	10.6	9.5	7.7	7.8	7.3	6.9	6.7	6.9	6.6
25,616	22,073	201,723	236,402	244,160	258,168	264,242	245,503	243,386	277,923	305,050
17.8	-13.9	34.7	17.2	3.2	5.7	2.4	-7.0	-0.9	14.2	9.7
14,307	12,016	107,023	123,241	129,359	137,131	143,884	141,167	138,419	153,321	164,177
11,326	10,059	94,700	113,161	114,801	121,037	120,358	104,336	104,967	124,602	140,874
19,460	23,992	28,473	31,811	33,116	38,213	38,430	33,304	30,105	31,399	30,727.1
924	900	1,057	1,160	1,117	1,176	1,196	1,263	1,260	1,310	1,350
61,330	68,518	83,102	103,874	117,254	129,210	140,370	152,269	159,605	172,567	183,352
62,593	76,300	89,874	109,248	125,953	140,213	151,662	175,768	188,793	203,330	220,906
-1,263	-7,782	-6,772	-5,374	-8,699	-11,003	-11,312	-23,499	-29,188	-30,763	-37,554
475,166.6	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
17.8	27.6	19.7	13.5	14.4	13.6	11.0	13.3	11.4	8.2	8.1
166,217.1	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
9.0	32.4	21.2	7.9	6.5	9.3	3.2	15.2	21.4	11.8	1.5
34,218.96	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
12.8	11.8	16.7	13.8	7.7	7.1	2.9	4.9	8.1	3.4	3.6
15,781	17,175	19,109	21,810	24,565	26,955	28,844	31,195	33,616	36,396	39,251
8.4	9.8	7.8	8.4	12.6	9.7	6.8	6.6	5.6	8.3	7.8
4,761	5,153	5,919	6,977	7,917	8,896	9,892	11,422	12,363	13,432	14,617
8.0	8.5	10.9	11.4	13.5	9.3	11.2	7.5	6.2	7.3	8.8
478,444.2	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
19.3	27.9	19.8	12.7	14.1	13.5	9.6	19.1	11.3	8.8	7.8
320,048.7	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
15.2	33.0	19.6	14.3	15.6	13.9	13.3	14.5	12.8	12.1	12.9
5.9	-0.7	3.3	5.4	2.6	2.6	2.0	1.4	2.0	1.6	2.1

Table 2 Composition and growth of RMB and foreign currency deposits and loans, 2000—2018 (year-end balance)

Units: RMB 100 million, percent

Item	2000	2001	2002	2003	2004	2005	2006	2007
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
YoY growth	13.8	16.0	19.0	21.7	16.0	24.3	15.9	15.2
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
YoY growth	7.9	14.7	17.8	19.2	15.4	23.0	13.3	5.8
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
YoY growth	18.6	16.9	16.5	20.8	16.8	20.2	16.8	21.8
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
YoY growth	6.0	13.0	16.9	21.1	12.1	16.1	15.2	16.6
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
YoY growth	2.9	2.4	14.1	13.8	3.9	0.4	11.6	16.9
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
YoY growth	16.5	40.5	31.8	30.0	20.5	14.7	21.6	22.6

Source: PBC.

concluded

Units: RMB 100 million, percent

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
478,444.21	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
19.3	27.9	19.8	12.7	14.1	13.5	9.6	19.1	11.3	8.8	13.2
221,503.47	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
25.7	19.5	16.0	16.5	16.1	13.4	8.9	7.6	9.9	7.5	11.1
164,385.79	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
13.5	36.5	12.7	67.3	13.2	13.2	9.1	-22.9	16.6	7.7	3.1
320,048.68	425,622.6	509,225.95	581,892.50	672,874.61	766,326.64	867,867.89	993,459.69	1,120,551.79	1,256,073.74	1,417,516.44
15.2	33.0	19.6	14.3	15.6	13.9	13.3	14.5	12.8	12.1	12.9
128,571.47	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
8.1	17.7	13.11	27	23.3	16.3	7.9	6.8	3.4	9.2	6.7
164,160.42	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
18.5	43.5	29.5	9.4	9.0	12.8	15.0	14.0	17.9	18.3	13.9

Table 3 Outstanding loans, outstanding bonds and stock market capitalization as percentage of GDP

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	1,120,552	151	636,614	85.6	508,245.11	68.3
2017	827,122	1,256,074	152	740,098	89.5	567,475.37	68.6
2018	900,309	1,417,516	157	863,922	96.0	434,924	48.3

Note: 1. *Outstanding loans* refers to the outstanding amount of all RMB and foreign currency loans of financial institutions.
2. *Outstanding bonds* includes bonds in custody in the interbank market and on the stock exchange.

Sources: PBC and CSRC.

Table 4 Composition of aggregate financing to the real economy (flow), 2010—2018

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	0.29
2011	12.83	7.47	0.57	1.30	0.20	1.03	1.37	0.44	0.45
2012	15.76	8.20	0.92	1.28	1.28	1.05	2.26	0.25	0.00
2013	17.29	8.89	0.58	2.54	1.84	0.78	1.80	0.22	0.00
2014	16.41	9.78	0.36	2.51	0.52	-0.13	2.43	0.44	0.00
2015	15.29	11.27	-0.64	1.59	0.04	-1.06	2.82	0.76	0.00
2016	17.80	12.40	-0.56	2.18	0.86	-1.95	3.00	1.24	0.60
2017	19.44	13.84	0.0018	0.77	2.26	0.54	0.45	0.87	0.71
2018	19.26	15.67	-0.4203	-1.61	-0.69	-0.63	2.49	0.36	4.10

Source: PBC.

Table 5 Interbank funding and bond repo trading, 1997—2018

Unit: RMB 100 million

Year	Interbank funding	Pledged repo trading	Outright repo trading
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

Source: CFETS.

Table 6 Change in the number of interbank funding market participants, 2000—2018

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	1,207	101	49	64	229	57	292	0	4	22	9	1	2,056

Source: National Interbank Funding Center (NIBFC).

Table 7 Spot trading and futures trading in the bond market, 2006—2018

Units: RMB 100 million, percent

Year	Interbank market				Stock 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	103,140.9	-26.77

Source: PBC.

Table 8 Spot trading in the bond market, 2018

Units: RMB 100 million, percent

Month	Interbank bond market				Stock exchange market			
	Spot trading	YoY growth	Interbank bond aggregate index	OTC market trading	YoY growth	Spot trading	YoY growth	SSE treasury bond index
Jan.	92,379.2	71.6	175.28	245	1,442.5	5,339.4	47.7	161.27
Feb.	53,381.2	-16.4	176.67	56.6	226.8	3,306.7	-9.6	162.05
Mar.	98,547.7	9.9	178.0	47.1	685.5	5,873.4	22.9	162.96
Apr.	92,702.3	32.4	180.13	112.6	690.8	4,248.8	7.3	163.92
May	116,037.4	51.9	180.42	71.6	759.0	4,840.8	1.1	164.70
Jun.	115,627.5	26.0	181.56	117.2	615.3	4,060.9	-23.1	165.44
Jul.	138,524.1	51.1	183.53	127.3	477.6	5,338.7	19.3	166.42
Aug.	165,649.7	69.1	183.61	153.1	803.9	5,190.5	5.2	166.60
Sept.	147,080.2	44.2	184.20	112.2	207.0	4,765.2	8.1	166.92
Oct.	134,207.4	64.3	185.85	121.1	300.4	4,316.4	0.9	167.64
Nov.	180,142.3	69.5	187.66	155.9	233.0	5,670.3	-6.4	168.69
Dec.	173,088.8	67.6	189.17	177.8	605.0	6,331.6	18.2	169.88
Total	1,507,367.9	46.6	—	1,320.3	438.9	59,282.6	6.6	—

Note: *The interbank bond aggregate index* refers to the ChinaBond Interbank Aggregate Index.

Sources: PBC, CCDC, SSE, and CFETS.

Table 9 Bond market issuance, 2004—2018

Unit: RMB 100 million

Year	Government debentures			Government-backed agency bonds	Central bank bills	Financial bonds				Interbank certificates of deposits	Corporate debentures				Asset-backed securities	International institutional bonds	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	2,078	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	41,651.7	77,062.6	2,530	0	33,681.8	1,425	18,302.2	53,409	210,832.4	54,271.1	2,404.8	16,336.7	73,012.5	18,187.5	898.6	435,932.7

Note: 1. *Treasury bonds* includes book-entry treasury bonds and electronic saving bonds.

2. *Other financial bonds* includes interbank and exchange-traded financial bonds from 2015, and *asset-backed securities* includes interbank and exchange asset-backed securities.

3. *International institutional bonds* refers to bonds issued in China by overseas institutional legal persons, including sovereign institutions, quasi-sovereign institutions, and overseas financial and non-financial institutions.

Source: PBC.

Table 10 Bond custody, 2006—2018

Unit: RMB 100 million

Year	Government debentures			Government-backed agency bonds	Central bank bills	Financial bonds				Interbank certificates of deposit	Corporate debentures				Credit asset-backed securities	International institutional bonds	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	95,874	31,133	58,437	185,444	28,917	1,550	756,921	107,000	863,922

Note: 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 11 Number of interbank bond market participants, 2014—2018

Institution			2014	2015	2016	2017	2018
Domestic participants	Incorporated entities	Depository financial institutions	1,088	1,302	1,560	1,745	1,859
		Other banking financial institutions	158	182	242	278	324
		Securities financial institutions	169	171	179	185	189
		Insurance financial institutions	148	152	154	163	173
		Non-financial institutions	278	280	274	274	274
		Other	7	7	21	20	23
		Sub-total	1,848	2,094	2,430	2,665	2,842
	Unincorporated Products	Securities investment funds	1,556	2,151	3,137	3,919	4,212
		Corporate annuities	1,275	1,431	1,528	1,625	1,684
		Social Security fund	105	105	106	163	197
		Insurance products	145	311	641	976	1,087
		Trust products	569	666	684	869	949
		Specific asset management portfolios of fund companies	176	1,140	3,061	3,425	3,315
		Asset management schemes of securities companies	560	1,388	2,743	3,586	3,965
		Wealth management products of banks	48	48	445	679	1,006
		Other	0	0	114	216	320
		Sub-total	4,434	7,240	12,459	15,458	16,735
Overseas participants			180	302	407	617	1,186
Total			6,462	9,636	15,296	18,740	20,763

Source: PBC.

Table 12 Interbank bond market settlement agents

No.	Institution	No.	Institution
1	Industrial and Commercial Bank of China	26	Bank of Dalian
2	Agriculture Bank of China	27	Bank of Qingdao
3	Bank of China	28	Bank of Chengdu
4	China Construction Bank	29	Bank of Chongqing
5	Bank of Communications	30	Bank of Hebei
6	China Merchants Bank	31	Xiamen Bank
7	China Minsheng Bank	32	Fudian Bank
8	China Everbright Bank	33	Jinshang Bank
9	China CITIC Bank	34	Haixia Bank of Fujian
10	Huaxia Bank	35	Bank of Guiyang
11	Industrial Bank	36	Bank of Xi'an
12	Shanghai Pudong Development Bank	37	Bank of Dongguan
13	China Guangfa Bank	38	Harbin Bank
14	Bank of Beijing	39	Shunde Rural Commercial Bank
15	Hengfeng Bank	40	Bank of Ningbo
16	Bank of Nanjing	41	Changshu Rural Commercial Bank
17	Bank of Shanghai	42	Baoshang Bank
18	Bank of Hangzhou	43	Hankou Bank
19	Shanghai Rural Commercial Bank	44	HSBC Bank (China) Co., Ltd.
20	Bank of Tianjin	45	Standard Chartered Bank (China) Ltd.
21	Qishang Bank	46	BNP Paribas (China) Ltd.
22	Ping An Bank	47	Deutsche Bank (China) Co., Ltd.
23	Qilu Bank	48	Citibank (China) Co., Ltd.
24	Bank of Urumqi	49	J.P. Morgan Chase Bank (China) Co., Ltd.
25	Bank of Changsha		

Note: The list was updated on December 31st, 2018.

Source: FETS website.

Table 13 Primary dealers for open market operations, 2018

Industrial and Commercial Bank of China	Bank of China
China Development Bank	Agricultural Bank of China
China Construction Bank	Postal Savings Bank of China
Bank of Communications	Export-Import Bank of China
Industrial Bank	China Merchants Bank
Ping An Bank	China Everbright Bank
China CITIC Bank	Shanghai Pudong Development Bank
China Guangfa Bank	Huaxia Bank
China Minsheng Bank	China Zheshang Bank
Hengfeng Bank	Bank of Shanghai
Bank of Beijing	Bank of Jiangsu
Bank of Nanjing	Huishang Bank
Shengjing Bank	Bank of Luoyang
Bank of Changsha	Xiamen Bank
Bank of Hebei	Bank of Zhengzhou
Haixia Bank of Fujian	Bank of Guangzhou
Bank of Tianjin	Harbin Bank
Bank of Dalian	Bank of Ningbo
Bank of Hangzhou	Bank of Qingdao
Zhongyuan Bank	Shanghai Rural Commercial Bank
Shunde Rural Commercial Bank	Beijing Rural Commercial Bank
Guangzhou Rural Commercial Bank	HSBC Bank (China) Co., Ltd.
Standard Chartered Bank (China) Ltd.	Citibank (China) Co., Ltd.
CITIC Securities	China International Capital Co., Ltd.

Source: PBC.

Table 14 Stock market statistics, 2000—2018

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	—	60,826.6	492.9	509.1	58.2	56	6,123.2
2001	1,160	5,218.0	43,522.2	15,228.8	—	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	737.23	27,990.5	214.0	198.8	34.4	37	6,841.8
2003	1,287	6,428.5	42,457.7	13,178.5	665.07	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	642.78	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	339.03	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	2,335.22	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	7,791.57	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	2,619.71	267,113.0	392.5	—	14.86	17.13	10,449.7
2009	1,718	26,162.85	243,939.12	151,258.7	3,894.53	535,986.7	—	—	28.73	46.01	12,037.7
2010	2,063	33,184.35	265,422.59	193,110.41	8,954.99	545,633.54	—	—	21.61	44.69	13,391.04
2011	2,342	36,095.52	214,758.10	164,921.3	5,073.07	421,649.72	—	—	13.4	23.11	14,050.37
2012	2,494	38,295.0	230,357.62	181,658.26	1,380.42	314,667.41	—	—	12.3	22.01	14,054.91
2013	2,489	40,569.08	239,077.19	199,579.54	2,802.76	468,728.6	—	—	10.99	27.76	13,247.15
2014	2,613	43,610.13	372,546.96	315,624.31	4,856.43	743,912.98	—	—	15.99	34.05	14,214.68
2015	2,827	49,997.26	531,304.20	417,925.40	8,329.89	2,550,538.29	—	—	17.63	52.75	21,477.57
2016	3,052	55,820.50	508,245.11	393,266.27	18,910.35	1,267,262.64	—	—	18.94	62.36	—
2017	3,482	60,919.15	567,475.37	449,105.31	15,213.81	1,124,625.07	—	—	19.67	39.53	—
2018	3,584	57,581.02	434,924.02	353,794.19	9,412.08	901,739.39	—	—	12.45	20.00	—

Source: *Wind*.

Table 15 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	10,453.0	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	896,501.12	3,689.3	3,314.03	3,587.03	2,449.20	2,493.90	1,903.49	1,966.15	1,212.23	1,267.87

Sources: CSRC, SSE, and SZSE.

Table 16 Market makers for RMB trading in the interbank spot foreign exchange market

No.	Institution	No.	Institution
1	Industrial and Commercial Bank of China	17	Bank of Nanjing
2	Agricultural Bank of China	18	Bank of Ningbo
3	Bank of China	19	BNP Paribas (China) Ltd.
4	China Construction Bank	20	Shanghai Pudong Development Bank
5	Bank of Communications	21	DBS Bank (China) Ltd.
6	China CITIC Bank	22	Bank of America, Shanghai Branch
7	China Merchants Bank	23	HSBC Bank (China) Co., Ltd.
8	China Everbright Bank	24	Bank of Montreal (China) Co., Ltd.
9	Huaxia Bank	25	Citibank (China) Co., Ltd.
10	China Guangfa Bank	26	Standard Chartered Bank (China) Ltd.
11	Ping An Bank	27	J.P. Morgan Chase Bank (China) Co., Ltd.
12	Industrial Bank	28	Société Générale (China) Limited
13	China Minsheng Bank	29	Banque de L'Indo Chine (China) Co., Ltd.
14	China Development Bank	30	Deutsche Bank (China) Co., Ltd.
15	Postal Savings Bank of China	31	Mizuho Bank (China), Ltd.
16	Bank of Shanghai	32	Bank of Tokyo-Mitsubishi UFJ (China), Ltd.

Source: CFETS.

Table 17 RMB/FX central parity rates, 1994—2018

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	1532.3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2007	730.46	1,066.7	6.4064	93.638	1458.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2008	683.46	965.9	7.565	88.189	987.98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2009	682.82	979.71	7.3782	88.048	1097.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
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	17,371.0	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	16,369.0	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	16,327.0	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

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/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.

Source: SAFE.

Table 18 Futures market trading, 1993—2018

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

Note: Starting from 2011, the trading volume was calculated unilaterally. And data of exchange for physical transactions are not included in the table.

Source: China Futures Association.

Table 19 Gold market trading, 2003—2018

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

Source: Shanghai Gold Exchange.

Table 20 OTC gold businesses of commercial banks, 2007—2018

Business type		Account gold		Physical gold			Others									
Product (Units)		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 options (10,000 oz, RMB 100 million)	Domestic RMB gold swaps (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	1094.43	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

Notes: 1. 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 2007—2013, covers leases only from 2014 onwards. Volume of gold lending/borrowing, comprising gold lending and borrowing for the years 2007—2013, covers lending only from 2014 onwards. Volume of gold pledging is the weight of gold received as pledge.

Source: Gold Market Monitoring and Analysis System of PBC Shanghai Head Office.

Table 21 Interest rate derivatives trading, 2006—2018

Unit: RMB 100 million

Year	Interest rate swaps		X-swap		Bond forwards		Standard bond forwards		Forward rate agreements	
	Number of trades	Notional principal amount	Number of trades	Notional principal amount	Number of trades	Trading volume	Number of trades	Trading volume	Number of trades	Notional principal amount
2006	103	355.7	—	—	398	664.5	—	—	—	—
2007	1,978	2,186.9	—	—	1,238	2,518.1	—	—	14	10.5
2008	4,040	4,121.5	—	—	1,327	5,005.5	—	—	137	113.6
2009	4,044	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	5024	83	19.6	59	17.2	—	—
2016	87,882	99,306.95	8	8	7	14.86	8	1.0	1	1.0
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

Source: CFETS.