

February 28, 2019

A brief introduction to the history of China's bond market	2
How China's bond market is organized	3
The structure of issuers and investors in China's bond market.....	5
How China's bond market is regulated	8
What's going on in the primary market?.....	10
What's going on in the secondary market?.....	13
Assessing credit risk in China through credit ratings	17
Assessing credit risk in China through credit bond spread	18
Assessing credit risk in China through analysis on defaults	19
The opening-up of China's bond market	22
Opening-up on the investment side.....	27

Feng Lin
Analyst, Research and Development
Department, Golden Credit Rating
+86-10-52725431
fenglin@coamc.com.cn

Li Lei
Analyst, Financial Business
Department, Golden Credit Rating
+86-21-6881-8922
lilei@coamc.com.cn

Lu Zhou
Analyst, Industrial and Commercial
Corporate Department, Golden Credit
Rating
+86-10-8343-9879
luzhou@coamc.com.cn

Media Contact

Zhu Ningdi, Golden Credit Rating
+86-10-62299833
zhuningdi@coamc.com.cn

A brief introduction to China's bond market

Structure, regulation, and opening-up

- **China's bond market is ranked third globally in terms of size**, occupying about 95% of GDP. With rapid economic growth, stable financial conditions, and government support in its developing capital market, China's bond market is growing quickly in terms of both issuance and trading volume, with increasingly diversified bond varieties, issuers, and investors. Bond issuance is now the main channel of direct financing for corporates in China.
- **Market fragmentation is one of the features of China's bond market.** China's bond market is dominated by the interbank bond market (OTC market) and supplemented by the exchange bond market. Due to lack of connectivity, sub-markets are discrete, with different trading systems, market participants, and bond varieties. Accordingly, the regulatory framework is also fragmented. This is reflected in multiple systems of regulation with different regulatory concepts, operation mechanisms, and regulatory styles on different trading floors by different regulators.
- **Governmental institutions are the main issuers and commercial banks are the main holders.** As for outstanding bonds, China's bond market is dominated by bonds issued by governmental institutions—about 57% of the total, but the share of credit bonds issued by commercial financial institutions and non-financial corporates is increasing. As for investor structure, the market is commercial bank-dominated. This is one of the main reasons for the insufficient liquidity of the secondary market, as commercial banks are prone to holding bonds to maturity.
- **The volume of bond issuance in the primary market is growing rapidly, yet with structural divergence.** Bond issuance has tended to concentrate on highly-rated and short-term maturities in recent years. As for repayment schedules, about 25% of debt on bonds is going to be repaid within one year, and more than half of debt will be repaid in the next three years.
- **Initial credit ratings of bonds and issuers are generally between AAA and AA on the national scale**, being assigned by domestic rating agencies and subject to regulation and issuance constraints. Compared with the international scale assigned by international rating agencies, ratings on the national scale are normally 5 sub-notches higher due to restrictions set by the country ceiling and different adopted benchmarks.
- **The opening-up of China's bond market is accelerating.** Comparably, the opening-up of the issuance side started earlier with the emergence of the panda bond market, but the level of opening-up on the investment side is higher. However, foreign investors only account for 2.3% of the market and mainly invest in Treasury bonds with low risk appetite.

A brief introduction to the history of China's bond market

China's bond market was initiated when the issuance of Treasury bonds resumed in 1981. After 30 years of development, especially since 2015, with the promotion of market-based reform of interest rates, the construction of the bond market system, and the improvement of the regulation system, market participants and bond varieties have been increasingly diversified and both issuance and trading volumes have been growing rapidly. Since 2016, the size of China's bond market has been ranked third globally, surpassed only by the US and Japan. At the end of 2018, the total volume of outstanding bonds in China's bond market reached RMB 85.7 trln (about USD 12.5 trln¹), about 95.2% of China's GDP. The bond market has been an important component in China's financial market and the main channel of direct financing for corporates.

Figure 1. A sketch of China's bond market development

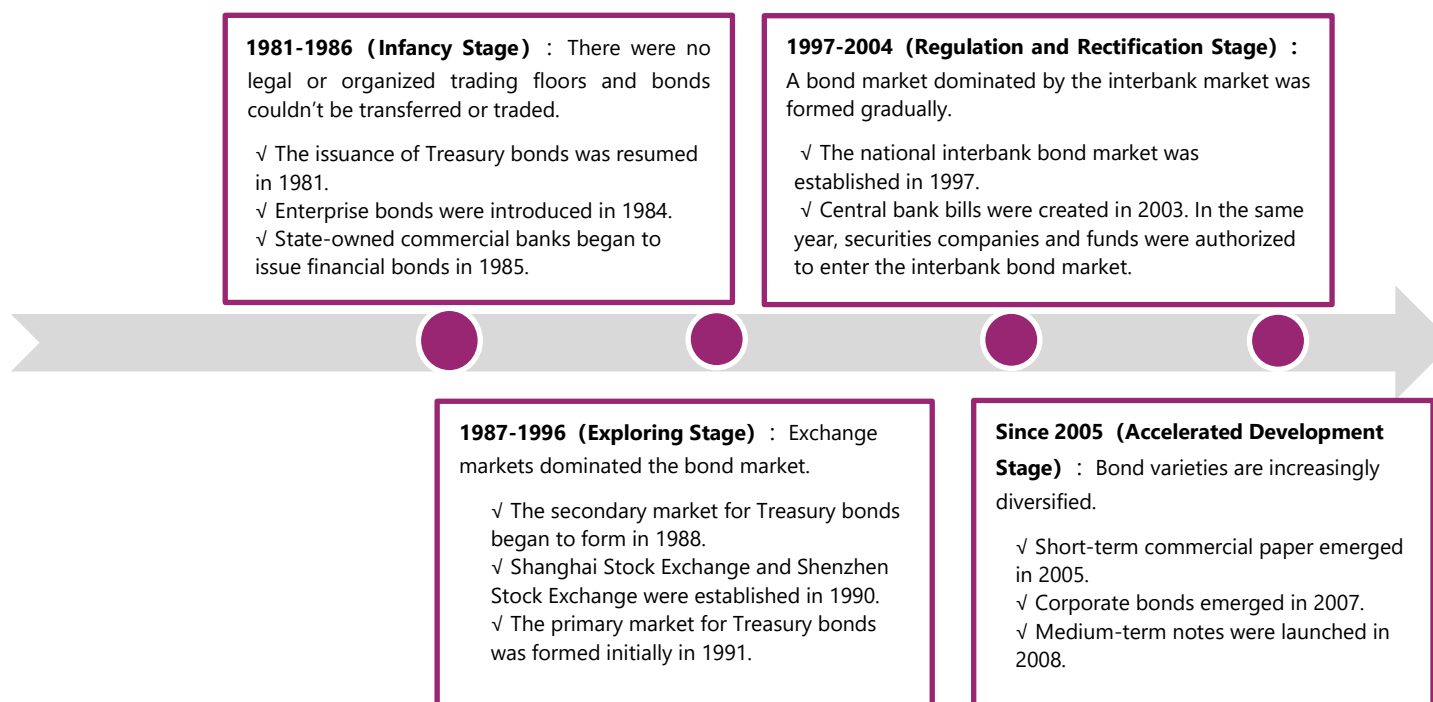
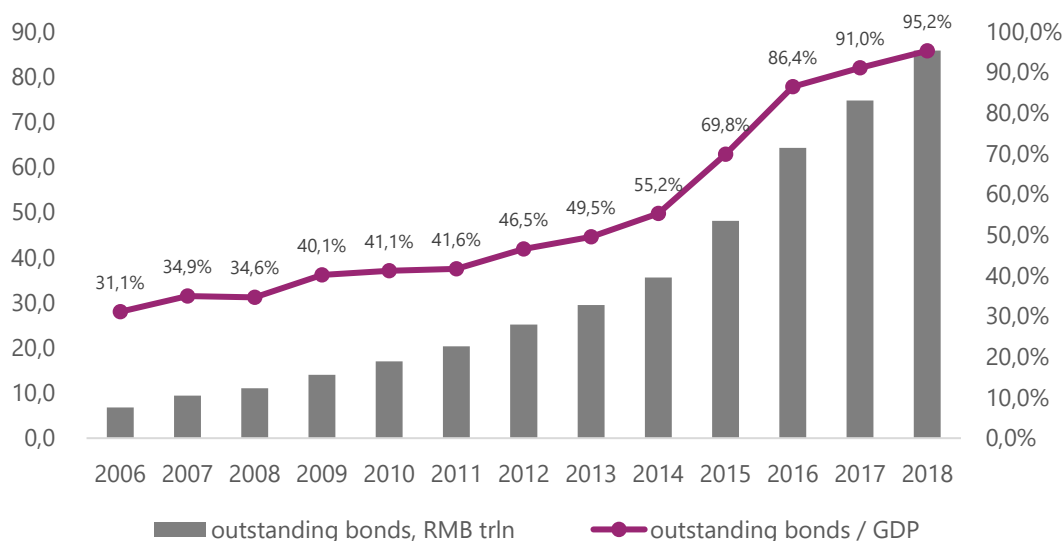


Figure 2. Outstanding bonds, % of GDP (at the end of the year)



Source: WIND, Golden Credit

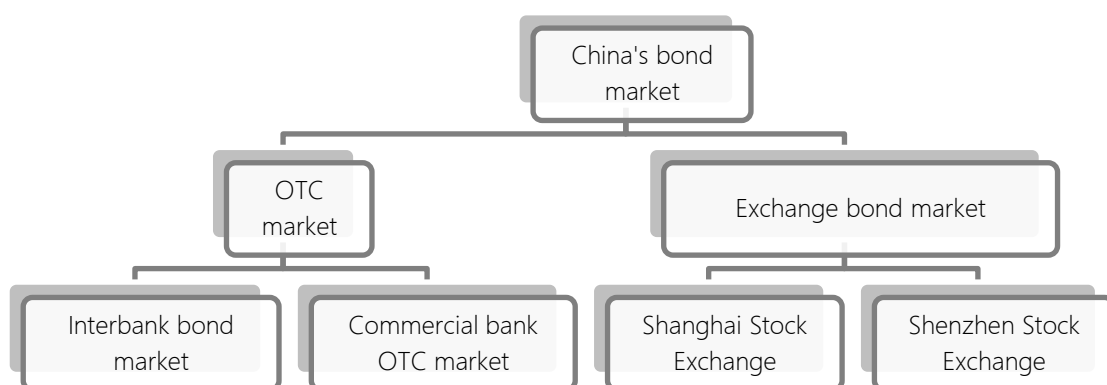
¹ On December 28, 2018, the central parity rate of the RMB against the USD was 6.8632.

How China's bond market is organized

OTC market – over-the-counter market for bonds.

China's bond market is comprised by of an OTC market and exchange market. The OTC market includes an interbank market and commercial bank OTC market, and the exchange market consists of the Shanghai Stock Exchange (SSE) and the Shenzhen Stock Exchange (SZSE). In 1997, the national interbank bond market was established and then developed rapidly. In 2001, the volume of bond issuance, trading, and custody in the interbank bond market surpassed that of the exchange bond market. Since then, China has formed a bond market system which is dominated by the interbank market and supplemented by the exchange and commercial bank OTC markets.

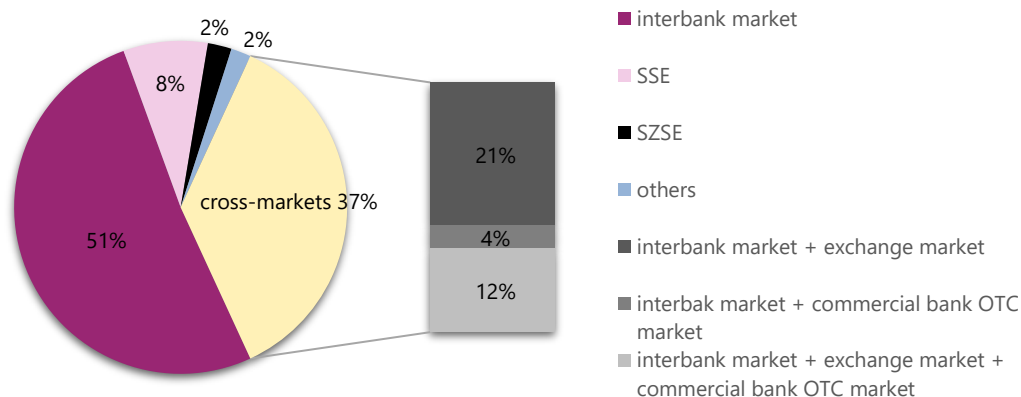
Figure 3. The framework of the bond market



Source: Golden Credit

The interbank bond market is a bulk trading market (wholesale market) for institutional investors. The participation of commercial banks makes it the main body of China's bond market. At the end of 2018, outstanding bonds in the interbank market accounted for 51.3% of the total. **The exchange market** is not only a retail market that carries out centralized matchmaking, but also a wholesale market composed of a fixed income platform and a bulk trading system. As only publicly listed commercial banks are allowed access to the exchange market² and some types of bonds can only be traded in the interbank bond market, both the issuance and trading volumes of the interbank market are larger than those of the exchange market. **The commercial bank OTC market** is a very small retail market for Treasury bonds and local government bonds.

Figure 4. Proportion of outstanding bonds of different sub-markets as of December 31, 2018

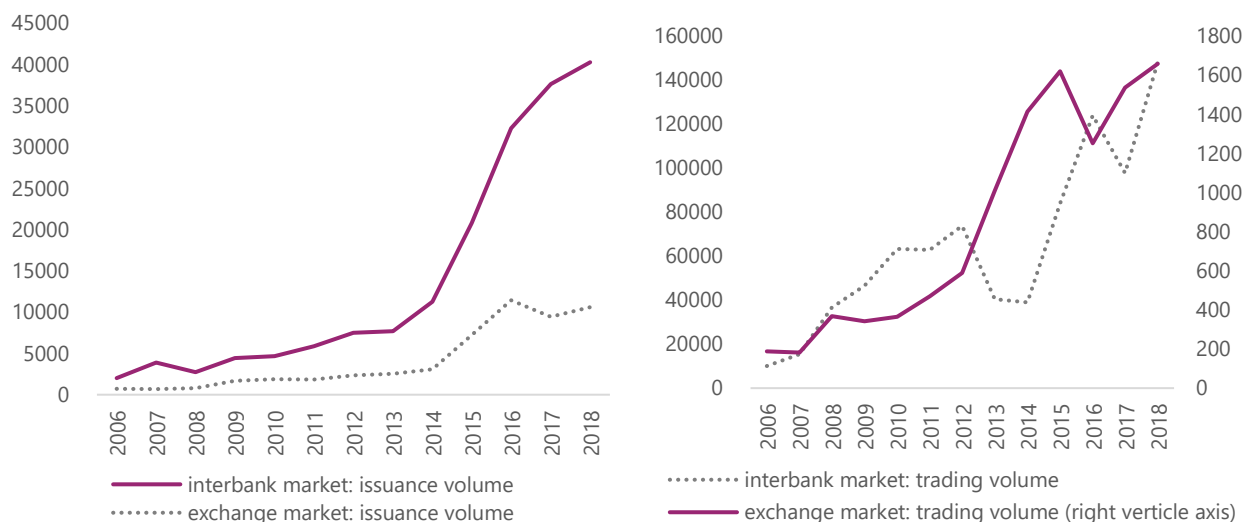


Certain types of bonds, such as Treasury bonds, can be traded in two or three sub-markets via custody transfer.

² In 1997, commercial banks were required by the People's Bank of China to withdraw from the exchange bond market and therefore could only participate in the interbank bond market. In 2010, publicly listed commercial banks were allowed to return to the exchange bond market to conduct trading and repo of cash bonds.

Source: WIND, Golden Credit

Figure 5. Comparison of the volumes of bond issuance and trading in the interbank market and the exchange market, RMB bln



Source: WIND, Golden Credit

Due to the lack of effective connectivity, China's bond market is characterized by **market fragmentation**. The interbank bond market and the exchange bond market are discrete, with different trading mechanisms, market participants, and bond varieties. They are also regulated separately, with different institutions responsible for registration, custody, and settlement. Market fragmentation results in low liquidity and decentralized trading, and encumbers market depth and efficiency. In this context, regulators have taken measures to promote bond market connectivity in recent years. In 2013, the People's Bank of China (PBoC) and China Securities Regulatory Commission (CSRC) approved China Development Bank to issue policy bank bonds in the exchange bond market. Before that, policy bank bonds could only be issued in the interbank bond market. In September 2018, PBoC and CSRC announced the promotion of the gradual unification of rating qualifications in different markets. In December 2018, PBoC, CSRS and the National Development and Reform Commission confirmed that CSRC is responsible for the unified law enforcement against illegal acts in both the interbank bond market and exchange bond market. These policies show that China's bond market has been progressing toward connectivity and unification. It is expected that regulators will continue to adjust policies to promote the connectivity of market participants, bond varieties, as well as the systems of settlement and custody of different sub-markets, and ultimately establish a bond market under unified regulation for coordinated development.

The structure of issuers and investors in China's bond market

Issuers in China's bond market include governments and governmental institutions, as well as financial institutions and non-financial corporates. For bond varieties classified by different issuers, see Table 1. As for bond varieties classified by payment modes, there are zero coupon bonds, discounted bonds, fixed interest rate bonds, floating interest rate bonds, and lump-sum cleared bonds. To satisfy diversified financing demands, many innovative types of bonds have been issued in recent years, such as green bonds, Belt and Road bonds, as well as innovative and entrepreneurial corporate bonds. Green bonds were initially issued in China in 2016 and the issuance volume that year by Chinese issuers both at home and abroad reached RMB 238 bln (about USD 35.8 bln), ranking first in the world.

Table 1. Bond varieties in China's bond market classified by issuers

Bond Varieties	Issuers	Issuance and Trading Markets
Government bonds		
Treasury bonds	Ministry of Finance	All
Local government bonds	Local governments	Interbank + exchange
Central bank bills	PBoC	Interbank
Government-backed agency bonds	China Railway Corporation, Central Huijin Investment	Interbank
Financial bonds		
Policy bank bonds	Development financial institutions and policy banks	Interbank
Commercial bank bonds	Commercial banks	Interbank
Non-bank financial bonds (including insurance company bonds, securities company bonds and other financial institution bonds)	Non-bank financial institutions	Interbank
Corporate credit bonds		
Enterprise bonds	Non-financial enterprises	Interbank + exchange
Non-financial enterprise debt-financing instruments (including short-term commercial paper, medium-term notes, collection notes for small and medium-sized enterprises, private placements and ABN)	Non-financial enterprises	Interbank
Corporate bonds	Listed companies or non- listed public companies	Exchange market
Convertible bonds	Listed companies	Exchange market
Exchangeable bonds	Listed companies	Exchange market
ABS		
Credit asset-backed securities	Trust companies	Interbank or cross-markets

Corporate asset-backed securities	Securities companies	Exchange market
Others		
Interbank negotiable certificates of deposits	Deposit financial institutions	Interbank
Panda bonds	Overseas institutions	Interbank + exchange

Source: ChinaBond

At the end of 2018, government bonds accounted for 40.4% of total outstanding bonds, among which 17.4% were Treasury bonds and 21.1% were local government bonds. Meanwhile, the outstanding amounts of corporate credit bonds and financial bonds accounted for 20.9% and 23.7% respectively.

Table 2. Composition of outstanding bonds at the end of 2018

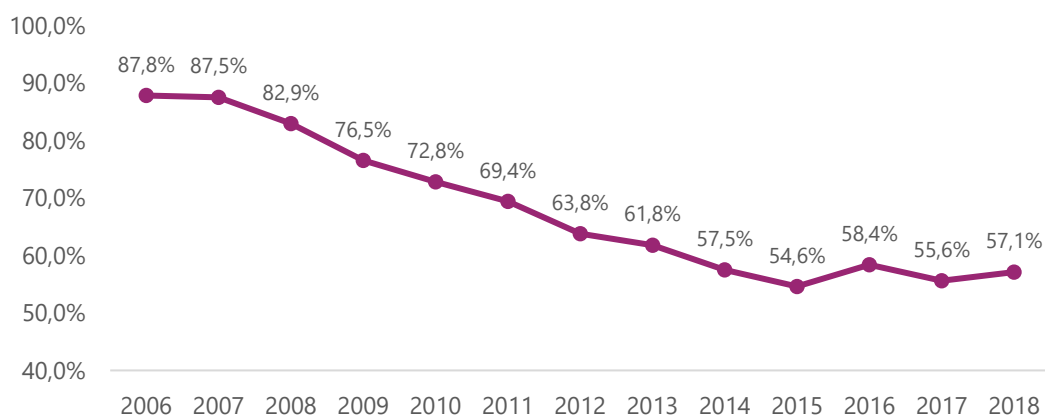
	Bond Varieties	Shares
Government bonds	Treasury bonds	17.4%
	Local government bonds	21.1%
	Government-backed agency bonds	1.9%
Financial bonds	Policy bank bonds	16.8%
	Financial bonds excluding policy bank bonds	6.9%
Corporate credit bonds	Enterprise bonds	3.0%
	Corporate bonds	6.8%
	Short-term commercial paper	2.3%
	Medium-term notes	6.6%
	Private placements	2.3%
Interbank negotiable certificates of deposits	Interbank negotiable certificates of deposits	11.5%
ABS	ABS	3.1%
Others ³	Others	0.5%

Source: WIND, Golden Credit

Rate securities in China's bond market are bonds issued by governments and governmental institutions, including Treasury bonds, local government bonds, central bank bills, policy bank bonds, and government-backed agency bonds.

In this report, **credit bonds** are financial bonds minus policy bank bonds, plus corporate credit bonds. There are different ways to define credit bonds. According to some research, the term credit bond refers to only corporate credit bonds issued by non-financial corporates.

If differentiated by rate securities and credit bonds, the outstanding amount of rate securities accounted for 57.1% at the end of 2018; that of credit bonds accounted for 27.8%. Therefore, China's bond market is still dominated by rate securities at present. However, with the continuous innovation of credit bond varieties and the relaxation of restrictions on issuers, the share of rate securities is declining.

Figure 6. Share of rate securities to the outstanding bonds (at the end of the year)

Source: WIND, Golden Credit

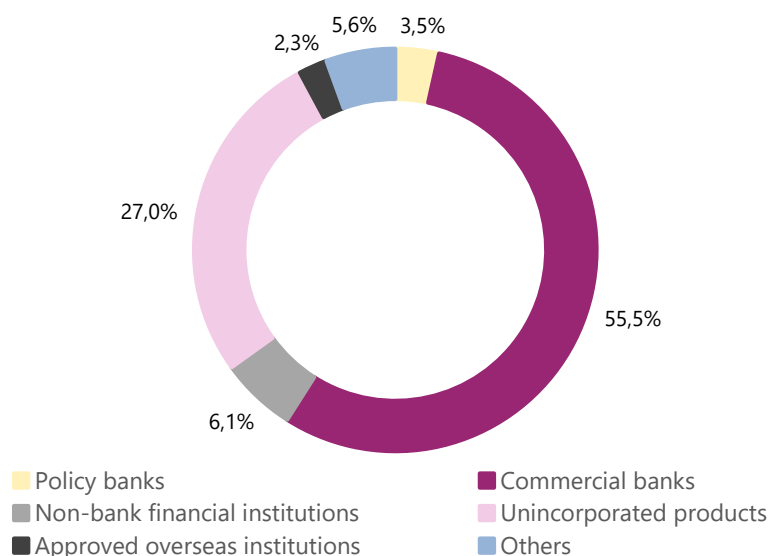
³ Others include convertible bonds, exchangeable bonds, and foreign institution bonds.

In recent years, the number and types of investors in China's bond market have been expanding, and the structure of investors tends to improve. But by far, commercial banks still dominate the market.

- Investors in the interbank bond market: qualified non-bank financial institutions and non-financial enterprises, commercial banks, policy banks, and QFII/RQFII with the approval of the People's Bank of China for interbank access.
- Investors in the exchange bond market: non-bank financial institutions, non-financial enterprises, listed commercial banks, QFII/RQFII with the approval of the People's Bank of China for interbank access, and individual investors.

To read more about
 QFII/RQFII, see page 28.

Figure 7. Structure of investors at the end of 2018



"Unincorporated products" include securities investment funds, national social security funds, trust plans, enterprise annuity funds, insurance products, asset management plans of securities companies, specific asset management portfolios of fund companies, commercial products of commercial banks, etc.

Source: WIND, Golden Credit

As for the structure of investors, China's bond market is bank-dominated as the banking sector being the main body of China's financial system. At the end of 2018, the outstanding bonds held by commercial banks accounted for 55.5% of the total outstanding bonds in China's bond market. This is an important reason for the low liquidity of the secondary market as commercial banks are more willing to hold bonds to maturity, and also, to some extent, hinders the transfer of risks from the banking sector to other sectors. However, with the gradual opening-up of the bond market and the entry of other types of investors, the proportion of bonds held by commercial banks has showed a tendency to decline. Currently, funds which tend to trade in the market more actively than other investors have become the largest holder of credit bonds.

How China's bond is market regulated

The regulatory framework of China's bond market is also fragmented. China's bond market has been developing from government planned to market-oriented and from unorganized to well-regulated. Throughout this process, the government has undertaken the role of coordinating interests and establishing fundamental systems. The emergence of different bond markets and bond varieties were promoted by different government departments and this led to a fragmented regulatory framework.

Table 3. The regulatory system of China's bond market

Regulatory category			Regulators
Regulation of initial issuance	Treasure bonds, Local government bonds		The Ministry of Finance
	Central bank bills		People's Bank of China
	Financial bonds	Policy bank bonds	
		Non-bank financial institution bonds	
		Commercial bank bonds	People's Bank of China, China Banking and Insurance Regulatory Commission
		Securities company short-term commercial paper	
		Securities company bonds	People's Bank of China, China Securities Regulatory Commission
		Insurance company bonds	China Banking and Insurance Regulatory Commission
	Non-financial bonds	Enterprise bonds	National Development and Reform Commission
		Medium-term notes	People's Bank of China. Non-financial bonds should be registered in China's National Association of Financial Market Institutional Investors, and shall conduct self-disciplined administration.
		Short-term commercial paper	
		Super short-term commercial paper	
		Collection bonds for small and medium-sized enterprises	
		Collection notes for small and medium-sized enterprises	People's Bank of China, China Banking and Insurance Regulatory Commission, China Securities Regulatory Commission
		Asset-backed securities	
		Convertible bonds	China Securities Regulatory Commission
		Warrant bonds	
		Corporate bonds	
	International institution bonds (Panda bonds)		People's Bank of China, National Development and Reform Commission, China Securities Regulatory Commission, the Ministry of Finance
Regulation of trading floors	Exchange market		China Securities Regulatory Commission
	Interbank market		People's Bank of China
	Commercial bank OTC market		People's Bank of China, China Banking and Insurance Regulatory Commission
Regulation of clearing, settlement, and custody	China Securities Depository and Clearing Corporation Limited		China Securities Regulatory Commission
	China Central Depository and Clearing Corporation Limited		People's Bank of China, the Ministry of Finance, China Banking and Insurance Regulatory Commission
	Shanghai Clearing House		People's Bank of China

Source: SSEBOND, Golden Credit

Regulation of initial issuance: There are multiple regulators responsible for the issuance regulation of different types of issuers and different bond varieties. The manner of approval has been converted from a filling, examination, and approval system to a verification and registration system.

Table 4. Issuance regulation of main varieties of corporate credit bonds

Regulator	Bond Varieties	Regulatory Approval	Issuance Market
NAFMII	Short-term commercial paper	Registration system	Interbank market
	Super short-term commercial paper	Registration system	Interbank market
	Medium-term note	Registration system	Interbank market
	Private placement	Registration system	Interbank market
CSRC	Corporate bond	Verification system	Exchange market
NDRC	Enterprise bond	Verification system	Cross-markets

Source: Golden Credit

Regulation of trading floors: The regulators of the interbank bond market and the exchange bond market are the People's Bank of China and the China Securities Regulatory Commission, respectively. Both markets have set specific requirements on information disclosure in terms of disclosure time, disclosure of major events, and so on. The information disclosure on enterprise bonds is regulated by the National Development and Reform Commission.

Regulation of clearing, settlement, and custody: There are three custody institutions that are regulated by different regulators. The opening of securities accounts for investors in the interbank bond market is in China Central Depository & Clearing Corporation Limited or Shanghai Clearing House, while China Securities Depository and Clearing Corporation Limited is responsible for the custody and settlement in the exchange bond market. The clearing and settlement mechanism applied in the interbank market includes full bilateral clearing and net amount centralized clearing. The former usually adopts the settlement method of DVP while the latter usually adopts "central counter party."

Regulation of rating agencies: The regulation of rating agencies is fragmented as well, which to some extent leads to the inconsistency of rating standards in different sub-markets. In September 2018, the People's Bank of China and the China Securities Regulatory Commission announced the promotion of the gradual unification of rating qualifications in different markets in order to promote the unified regulation of the credit rating industry. Together with the National Association of Securities Dealers, they will form a "concerted action person" to regulate rating agencies, showing that China's credit rating industry has formally entered the era of unified regulation.

The regulatory framework of China's bond market together with related systems has played a positive role in preventing market risk and boosting market development. But the existing regulatory system also has limitations mainly reflected by the lack of a unified legal system as well as by the existence of multiple regulatory systems with different morals, operation mechanisms, and styles of regulation in different trading floors with different regulators. This hinders the efficient allocation of financial resources, the unified prevention and control of risks, and the opening-up of the bond market. In this context, China's bond market will tend to be regulated in a unified way step-by-step, and recent policies have confirmed these tendencies.

NAFMII- National Association
of Financial Market
Institutional Investors ,

CSRS- China Securities
Regulatory Commission ,

NDRC- National Development
and Reform Commission

DVP - Delivery Versus
Payment.

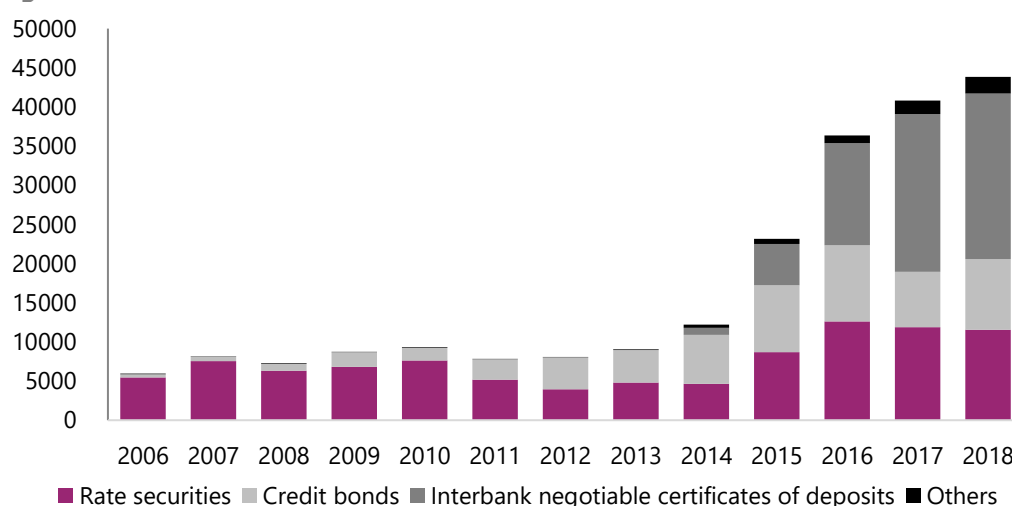
What's going on in the primary market?

- The volume of bond issuance in the primary market is growing rapidly, and the share of credit bonds⁴ is increasing.

China's primary bond market is where issuers obtain direct financing by issuing bonds. With the exception of 2008 and 2011, when the issuance volume grew negatively due to the effects of the financial crisis and tightened monetary policy, respectively, the issuance volume in China's bond market in the past decade has been on the rise, from RMB 5.9 trln in 2006 to RMB 43.8 trln in 2018.

In terms of issuance structure, the issuance volume of rate securities⁵ remains relatively stable and the proportion of the issuance volume of credit bonds has been increasing. Meanwhile, the issuance of interbank negotiable certificates of deposits, a main source of funds for the off-balance-sheet activities⁶ of banks, has expanded rapidly in recent years. In 2018, the total issuance volume of bonds in China's bond market was RMB 43.8 trln, of which 26.3% were rate securities, 20.6% were credit bonds, and 48.1% were interbank negotiable certificates of deposits.

Figure 8. Bond issuance in China's bond market, RMB bln



Source: WIND, Golden Credit

The issuance volume of rate securities has fluctuated somewhat in the past decade. As the issuance of central bank bills stopped in 2013, the issuance volume of rate securities was at its lowest point in the decade in 2014. Then, with the promotion of China's local government bond reforms (in May 2014, the Ministry of Finance published the 'Trial Measures on the Self-issuance and Self-payment of Local Government Bonds'), the issuance of local government bonds increased substantially after 2015 and consequently drove up the issuance volume of rate securities.

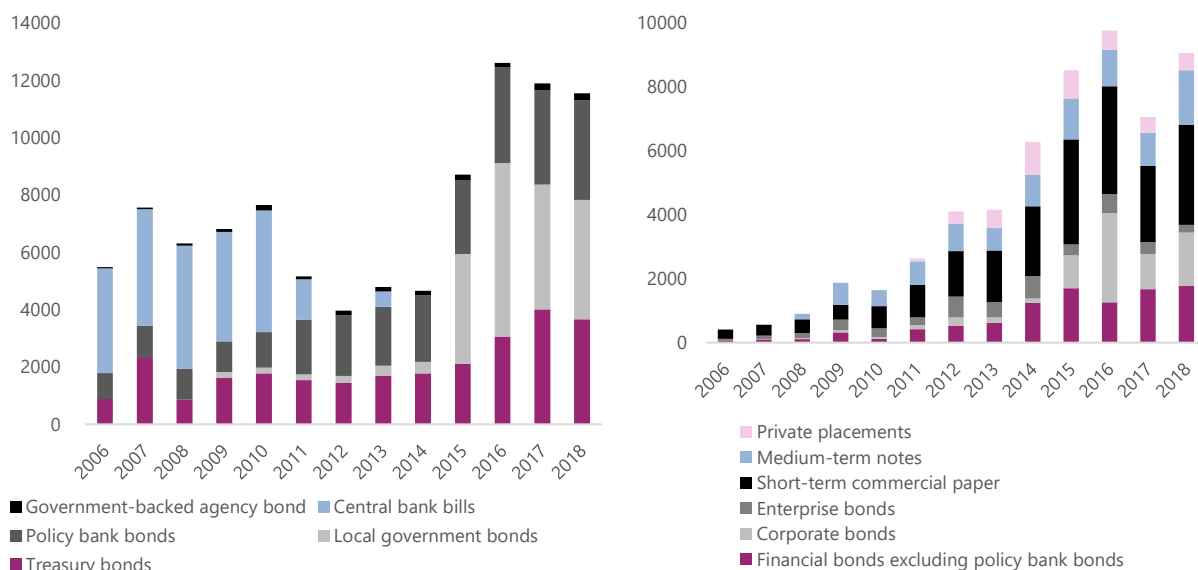
Over the past decade, the issuance volume of credit bonds has generally shown trends of growth. In 2017, due to the tightening of monetary policy and financial deleveraging, the issuance volume of credit bonds declined. In 2018, with the marginal easing of monetary policy, the liquidity of the money market remained reasonably abundant, and the issuance volume of credit bonds rebounded.

⁴ See page 6 for the definition of credit bonds.

⁵ See page 6 for the definition of rate securities.

⁶ Off-balance-sheet activities are the businesses of commercial banks that are not included on the balance sheets but are included in the profits and losses of the current period.

Figure 9. Issuance of rate securities (left) and credit bonds (right), RMB bln



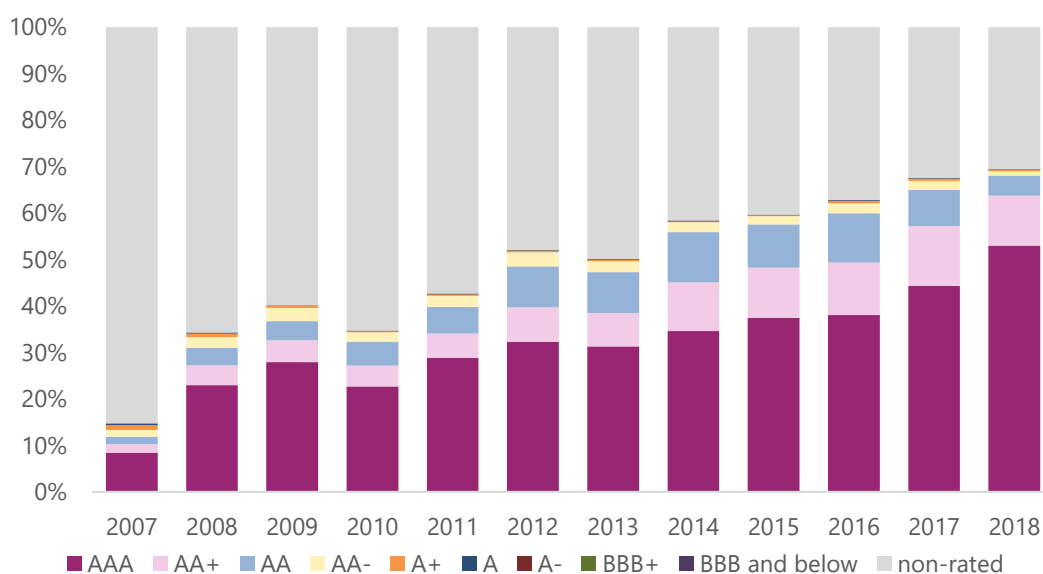
Source: WIND, Golden Credit

➤ Bond issuance tends to concentrate on highly-rated and short-term maturities.

The issuance volume of rated bonds increased from 0.6 trln in 2007 to 30.5 trln in 2018 and its share in total bond issuance is increasingly higher, indicating that the coverage ratio of credit ratings has risen year by year. Due to regulatory and issuance limitations, the credit ratings of issued bonds are mainly between AAA and AA.

Over the past decade, the proportion of the issuance volume of bonds with high credit ratings has continued to increase. After the first bond default in 2014, the exposure of credit risk and frequent occurrence of defaults has led to a downturn of investors' risk appetite. In recent years, the proportion of the issuance volume of issuers with a rating of AAA has increased significantly, while that of the low-rated issuers has declined.

Figure 10. Proportion of bonds issued by issuers with different credit ratings⁷



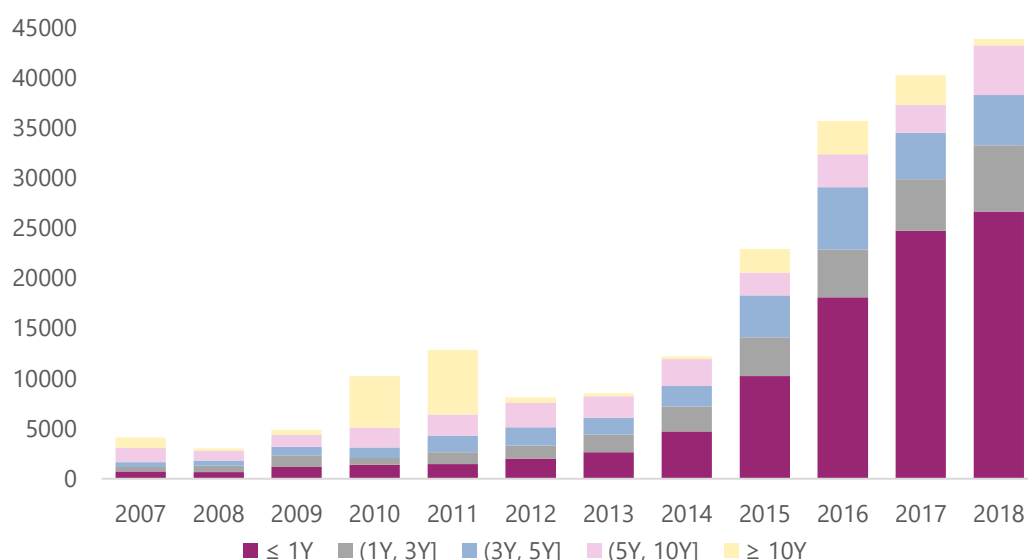
Source: WIND, Golden Credit

⁷ For all bond varieties in China's bond market.

As for term structure, bond maturities have shown the tendency to shorten over the past decade. The proportion of bonds issued with a maturity of within 1 year (including 1 year) was 17.6% in 2007 and climbed to 60.8% in 2018. At the same time, the proportion of bonds issued with a maturity above 5 years declined from 59.8% in 2007 to 12.8% in 2018.

For issuers, their willingness to make long-term investment declines with the slowdown of China's economic growth, so the issuance of short-term bonds is more suitable for issuers' needs. Investors are more inclined to hold short-term bonds due to the gradual exposure of credit risk. Since 2015, the issuance of interbank negotiable certificates of deposits, the maturity of which generally being within one year, has also aggravated the shortening trend of bond issuance.

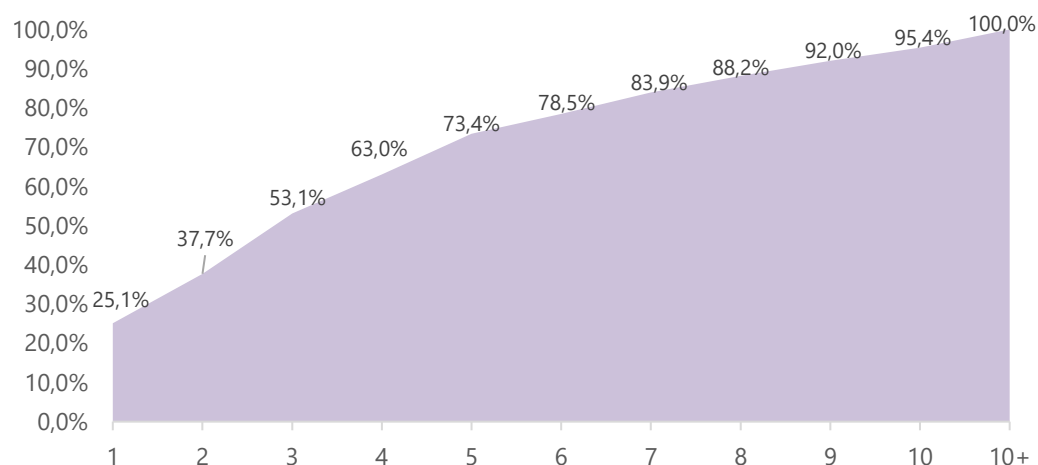
Figure 11. Issuance volume of bonds with different maturities, RMB bln



Source: WIND, Golden Credit

As for repayment schedules, almost one-fourth of debt on bonds is going to be repaid within one year, and more than half will be repaid in the next 3 years.

Figure 12. Debt repayment schedule (by option date), as of December 31, 2018



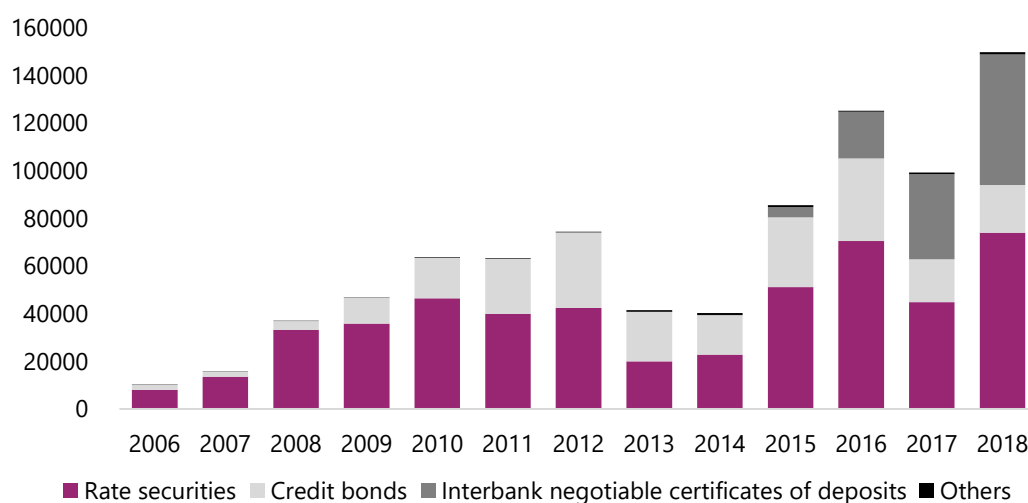
Source: WIND, Golden Credit

What's going on in the secondary market?

- The trading volume of bonds has increased overall but fluctuates heavily, and the liquidity of the secondary market is low.

The trading volume of bonds in the secondary market is closely related to the volume of bond issuance and the market environment. In recent years, as the volume of bond issuance continues to increase, the trading volume of China's bond market has shown an overall increase. However, the trading volume of bonds fluctuates heavily due to changes in market conditions such as interest rates and regulatory policies.

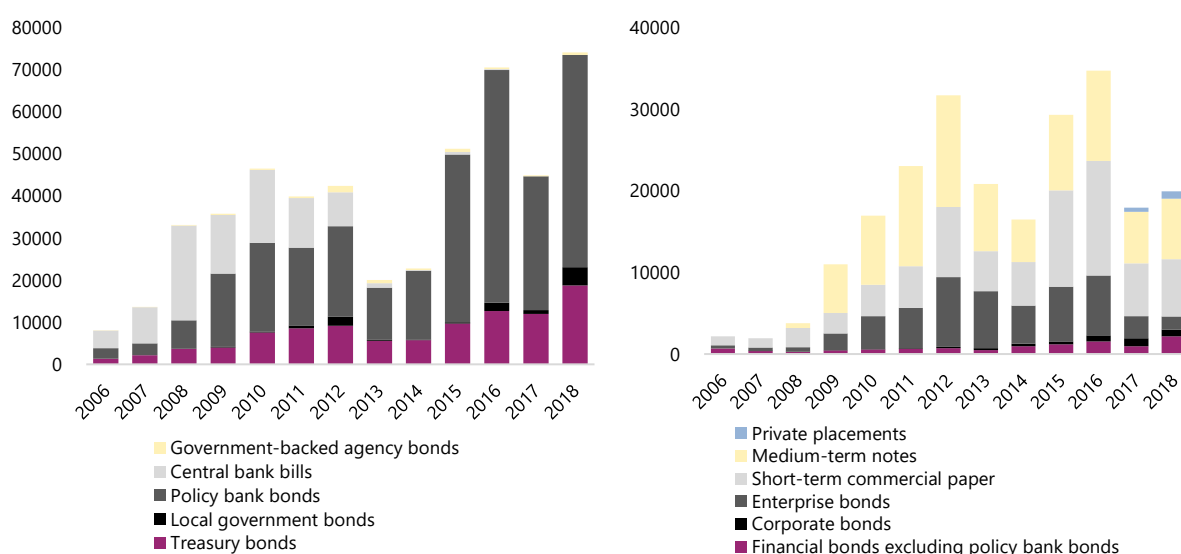
Figure 13. Trading volume of bonds, RMB bln



Source: WIND, Golden Credit

Policy bank bonds account for the largest proportion of the trading volume of rate securities, while the trading volume of local government bonds is relatively small and has shrunk year by year since 2016 due to intensified regulation. The trading of credit bonds is concentrated on highly-rated bonds, while the liquidity of low-rated bonds in the secondary market is insufficient.

Figure 14. Trading of rate securities (left) and credit bonds (right)⁸, RMB bln



Source: WIND, Golden Credit

⁸ See page 6 for the definition of rate securities and credit bonds.

Insufficient liquidity is one of the major problems faced by China's bond market. There are three main reasons. Firstly, the commercial banks which dominate the market have low trading frequency resulting in a large amount of bonds being held for a long time without flowing into the secondary market for trading. Secondly, the first default in China's bond market occurred in 2014, which means it is still difficult for investors to accurately price bonds through the default rate, causing them to buy and hold bonds as the underlying configuration instead of trading them in the secondary market. Thirdly, the market's maker system in the interbank bond market is ineffective, and as a result, makers provide insufficient liquidity to the market.

Table 5. Turnover rate in China's bond market in 2018

Bond Varieties	Turnover rate (trading volume in 2018/outstanding bonds at the end of 2018)
Rate securities	1.51
<i>Treasury bonds</i>	1.26
<i>Policy bank bonds</i>	3.50
<i>Local government bonds</i>	0.24
Credit bonds	0.84
<i>Non-financial corporate credit bonds</i>	0.99
<i>Financial bond excluding policy bank bonds</i>	0.37
Interbank negotiable certificates of deposits	5.55
Whole bond market	1.75

Source: WIND, Golden Credit

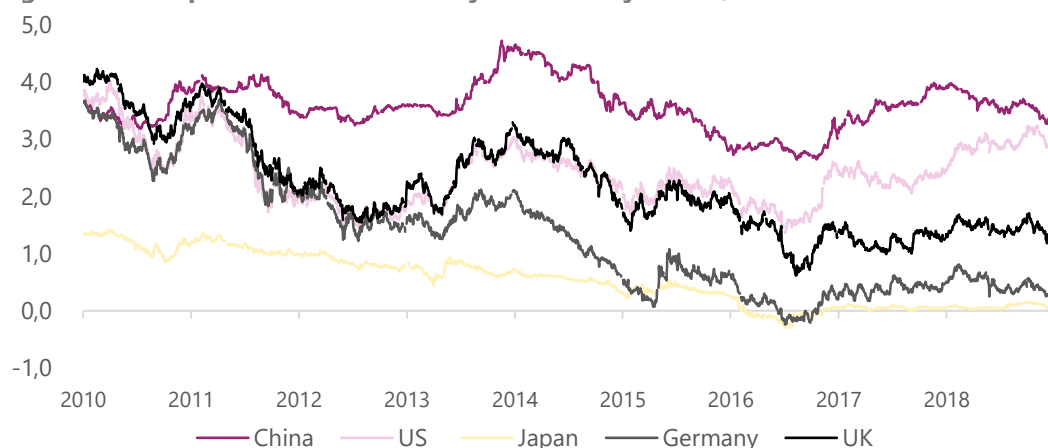
- China's rate securities market is attractive with relatively high yields.

YTM – Yield to Maturity

In recent years, YTM on China's ten-year Treasury bonds has fluctuated around 3.5%. By comparison, YTM on US ten-year Treasury bonds has stabilized and has been around 1% to 3% since 2011. The Bank of Japan adopted negative interest rates in 2016, and thus Japan's ten-year Treasury bond yield has reduced to the current level of 0%. The YTM on Treasury bonds of major European countries like Germany and the UK has also demonstrated the tendency to decline after the global financial crisis.

Since 2018, YTM on US ten-year Treasury bonds has continued to increase with rising interest rates, strong economic performance, and an increased supply of Treasury bonds. Meanwhile, the yield on China's Treasury bonds has showed the tendency to fall due to the easing of monetary policy, and thus the spread between yields on China and US ten-year Treasury bonds has declined.

Figure 15. Comparison of YTM on 10-year Treasury bonds, %



Source: WIND, Golden Credit

The issuers of policy bank bonds are development financial institutions (China Development Bank - CDB) and policy banks (The Export-Import Bank of China and the Agricultural Development Bank of China). Policy bank bonds enjoy sovereign credit, but their yields are higher than those of Treasury bonds, mainly reflecting tax differences as the interest income of Treasury bonds is exempt from taxes.

Table 6. Tax rate for investing in China's bond market

	VAT		Income tax	
	Held to maturity accounts	Trading accounts	Interest income	Capital gains
Treasury bonds	-	6%	-	25%
Local government bonds	-	6%	-	25%
Policy bank bonds	6%	6%	25%	25%
Financial bonds	6%	6%	25%	25%
Corporate bonds	6%	6%	25%	25%

Source: Summarized by Golden Credit

Securities investment funds and foreign investors are exempt from taxes when investing in policy bank bonds (see Table 7). It is difficult to use a single fixed tax rate to adjust the taxation difference between Treasury bonds and policy bank bonds because in different market conditions changes in investor structure and the position structure of different investors may lead to changes in the overall difference in taxation. In this case, an 'implied tax rate' is introduced (see Figure 16).

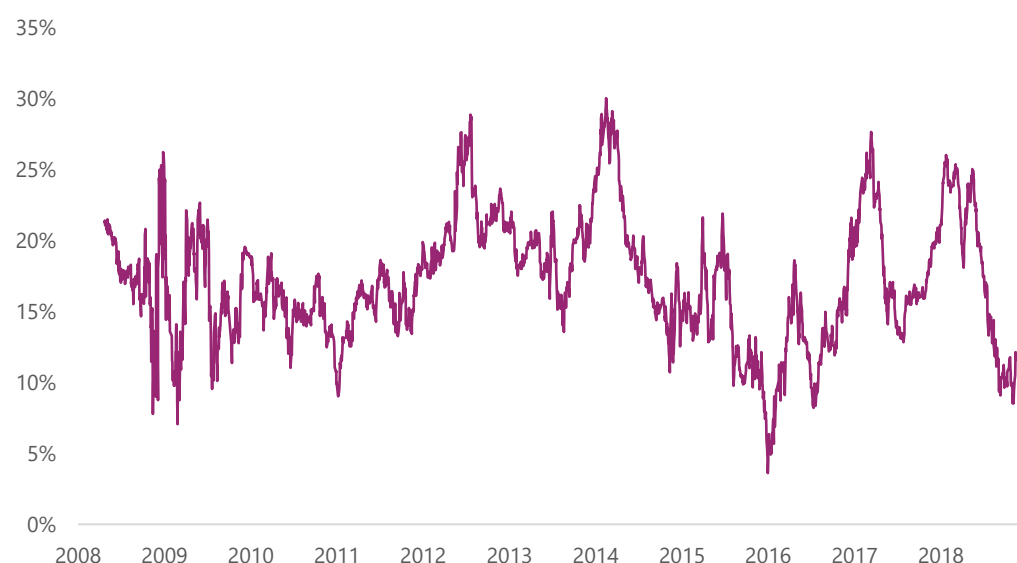
Table 7. Tax rate for securities investment funds and foreign investors investing in China's bond market

	VAT		Income tax	
	Held to maturity accounts	Trading accounts	Interest income	Capital gains
Securities investment funds	-6%	-	-	-
Foreign investors ⁹	-	-	-	-

Source: Summarized by Golden Credit

Implied tax rate = 1 - (YTM on Treasury bonds / YTM on policy bank bonds). The implied tax rate is the overall tax difference between policy bank bonds and Treasury bonds for all investors. The Implied tax rate is closely related to market liquidity, as the investment and trading of policy bank bonds are more susceptible to changes in market liquidity than Treasury bonds.

Figure 16. Implied tax rate between 3-year CDB bonds and 3-year Treasury bonds



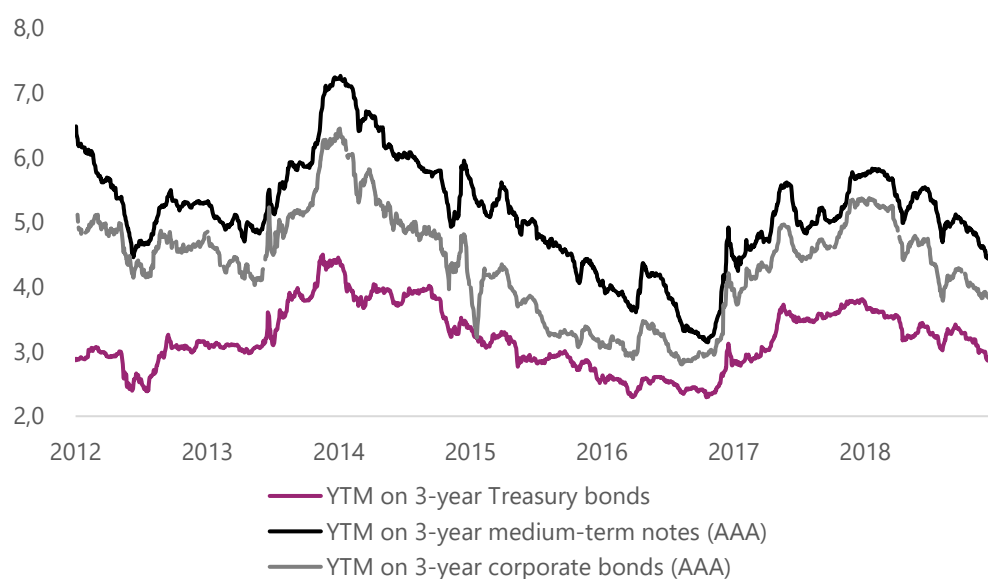
Source: WIND, Golden Credit

⁹ In November 2018, the Ministry of Finance and the State Administration of Taxation announced that the interest income of foreign investors investing in China's bond market would be exempt from both VAT and income tax from November 7, 2018, to November 6, 2021.

- The yield on credit bonds generally fluctuates with the yield on rate securities, however the range of fluctuation is wider.

There is no unified yield curve in China's credit bond market. We chose the yields on medium-term notes (interbank market) and corporate bonds (exchange market) to conduct the analysis. The yields on medium-term notes and corporate bonds are highly overlapping, and generally follow the yields on Treasury bonds but with larger fluctuations. During certain periods, yields on credit bonds may go in the opposite direction of the yields on Treasury bonds due to factors like the sharp downward trend of market risk appetite.

Figure 17. Comparison of yields on credit bonds with yields on Treasury bonds, %



Source: WIND, Golden Credit

Assessing credit risk in China through credit ratings

Subject to regulation and issuance constraints, the initial credit ratings of bonds and issuers are generally between AAA and AA. On average in China, for the same pool of issuing entities, the credit ratings assigned by domestic rating agencies are 5 sub-notches higher than the ratings assigned by international agencies.

Table 8. Distribution of latest credit ratings of rated corporates as of December 31, 2018

	Number of corporates	Proportion (%)	Outstanding loan (RMB bln)	Proportion (%)	Number of bonds	Proportion (%)
AAA	761	16.07	24,624	67.38	13,068	36.03
AAA-	21	0.44	243	0.66	122	0.34
AA+	976	20.62	5,955	16.30	9,101	25.09
AA	2,040	43.09	4,239	11.60	9,718	26.79
AA-	484	10.22	710	1.94	2,088	5.76
A+	202	4.27	312	0.85	1,142	3.15
A	114	2.41	215	0.59	562	1.55
A-	55	1.16	103	0.28	234	0.65
BBB+ and below	81	1.71	142	0.39	234	0.65
Total	4,734	100	36,543	100	36,269	100

Source: WIND, Golden Credit

Differences in the ratings between domestic and foreign rating agencies are due to the following:

- Restrictions set by sovereign “ceilings” in credit rating assignments: According to international common practice, corporate ratings should remain at or below the sovereign rating of their country of incorporation. Therefore, the fact that domestic and foreign rating agencies assign different sovereign ratings to China is an important factor underlying the differences between the credit ratings of Chinese corporates by domestic and foreign rating agencies.
- Different benchmarks for ratings: Another possible reason for the differences in credit ratings between domestic and foreign rating agencies is that they adopt different credit rating benchmarks. When assessing the credit risk of a corporate, domestic rating agencies assign a credit rating based on its rank among all corporates in that country, while international rating agencies try to assign a credit rating based on its rank among all corporates globally.
- Threshold requirements for issuing and investing in public offering bonds: The credit ratings of issuers in China’s bond market are mainly rated AA or above by domestic rating agencies, which is more concentrated than the scale of ratings assigned by international rating agencies. An important factor is that there are threshold requirements for issuing and investing in public offering bonds. For example, in January 2015, the China Securities Regulatory Commission released ‘Corporate Bond Issuance and Trading Management Rules,’ requesting that public offering corporate bonds should have AAA ratings.

Corporate bonds in China's bond market are non-financial corporate bonds issued and traded only in the exchange bond market.

Assessing credit risk in China through credit bond spread

The spread of credit bonds is affected by market interest rates, market sentiment, default events, etc. Moreover, the short-term oversupply of certain types of bonds may also drive up the spread in the short term. For example, the large issuance of medium-term notes led to the significantly increased spread in 2009. Credit bond spread rose to record highs in 2012 driven by a combination of rising benchmark interest rates and the fear of potential defaults. In 2018, the increase in spread was mainly due to the frequent occurrence of defaults.

Figure 18. Yield spread between 3-year AAA medium-term notes and 3-year CDB bonds, BPs

To adjust the taxation difference, credit bond spread is calculated by subtracting the yield on CDB bonds instead of Treasury bonds.

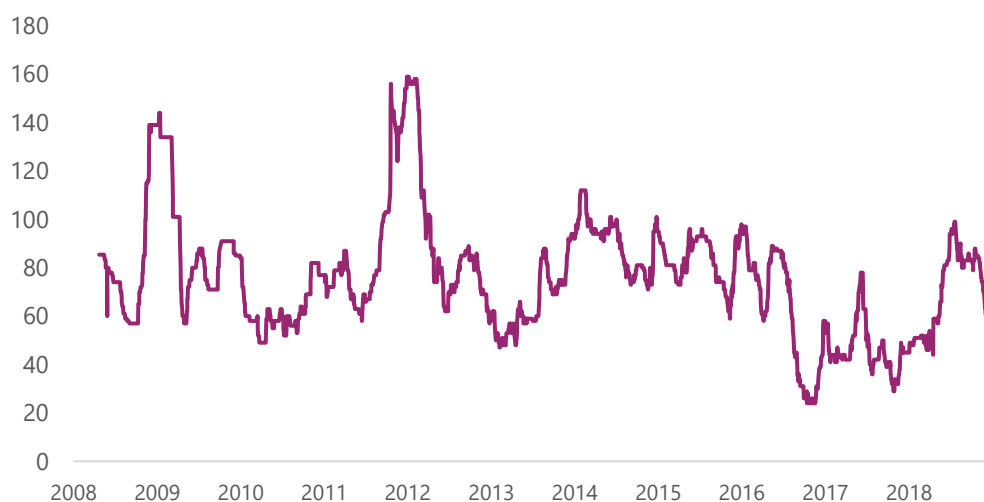
CDB bonds are bonds issued by China Development Bank and are the main proportion of policy bank Bonds.



Source: WIND, Golden Credit

The factors that affect the spreads of yields among different ratings are similar to those that affect the spreads between credit bonds and CDB bonds, and thus they tend to move in the same direction. In the first half of 2018, the spreads of yields among different ratings rose significantly. Credit spreads reflected the negative impact of credit risk events such as downgrades and defaults as they drove down the risk appetite of investors. The liquidity to low-rated bonds shrunk, generating higher liquidity premiums and therefore driving up the yields on low-rated bonds.

Figure 19. Yield spread between different ratings of 3-year medium-term notes, AA-AAA, BPs

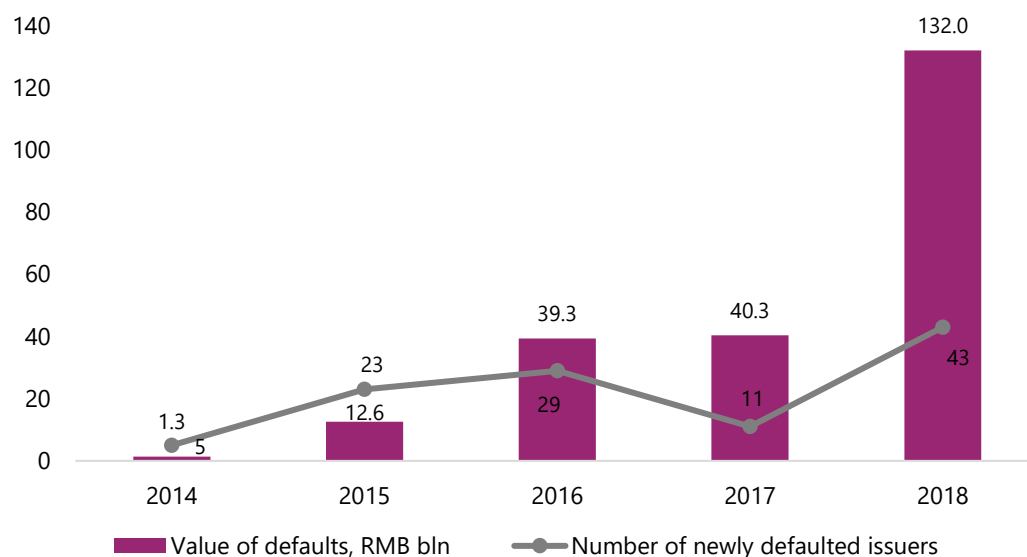


Source: WIND, Golden Credit

Assessing credit risk in China through analysis on defaults

Since “11 Chaori bond” defaulted in March 2014, and was marked as the very first default incident, the number of China's credit bond defaults has increased gradually with an increasing average defaulted value.

Figure 20. Number of defaults in China's bond market



Source: WIND, Golden Credit

In 2018, the number of newly defaulted issuers and defaulted bonds reached 43 and 161, respectively, both hitting a record high. 2018 is regarded as the second 'wave of defaults' after 2016, however the main default triggers are different. In 2016, the main cause of defaults was the low-sentiment and over-capacity of some industries. In 2018, the main cause was the increased difficulties in refinancing faced by corporates due to strict financial regulation and deleveraging.

As of the end of 2018, 23 industries¹⁰ had bond defaults in China's bond market, mainly in commercial trade, multiproduct companies, construction and decoration, mining, and iron & steel; and involving scattered industries and weak correlation among them. With different factors triggering defaults, the industries with frequent defaults were different in 2018 from those in 2016. With the changes in policies and economic conditions, the industries with frequent bond defaults have shifted from overcapacity industries to competitive industries.

Table 9. Distribution of industries of defaults, 2014-2018

	Number of defaulted bonds	Total value of defaults (RMB, bln)	Number of defaulted issuers
All	205	174.9	84
Commercial trade	31	42.2	8
Multiproduct companies	22	18.0	9
Mining	20	20.6	4
Machinery	18	7.2	7
Construction and decoration	17	23.9	6
Chemicals	12	6.3	8
Iron and steel	12	9.7	3

¹⁰ Based on the ShenWan Industry Classification Standard.

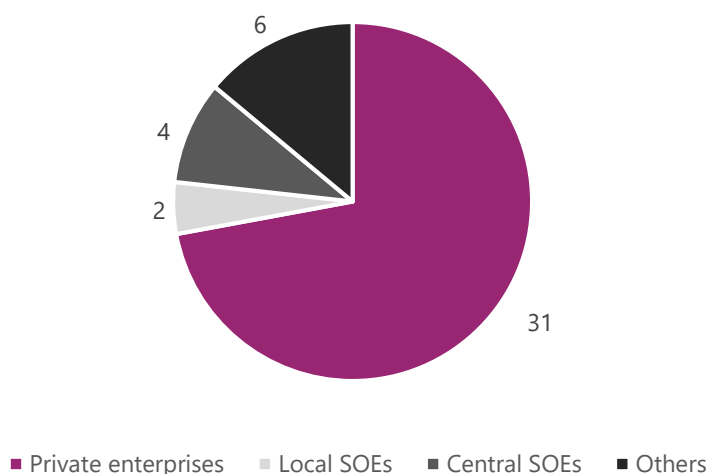
Utilities	11	6.5	5
Transportation	11	8.8	4
Food and drinks	7	3.9	3
Textile and clothing	6	2.7	5
Nonferrous metals	6	3.2	3
Real Estate	6	3.3	3
Electrical equipment	6	4.7	3
Construction materials	5	5.5	1
National defense	4	1.5	2
Agriculture	3	1.7	2
Electronics	2	2.2	2
Media	2	0.5	2
Light manufacturing	1	0.1	1
Non-bank finance	1	0.5	1
Leisure services	1	0.0	1
Pharmaceuticals	1	1.7	1

Source: WIND, Golden Credit

Defaulted issuers are mainly private enterprises. The credit ratings of defaulted issuers are gradually expanding from the low-rated to the highly-rated.

- There are two main reasons. Firstly, private enterprises are at a disadvantage compared to state-owned enterprises in terms of financing channels and financing costs. When the financing environment deteriorates, the ability of private enterprises to obtain financing will be the first thing affected. Secondly, as the risk appetite of investors decreases and their demand for high risk bonds declines, they tend to invest in government-backed or highly-rated bonds.

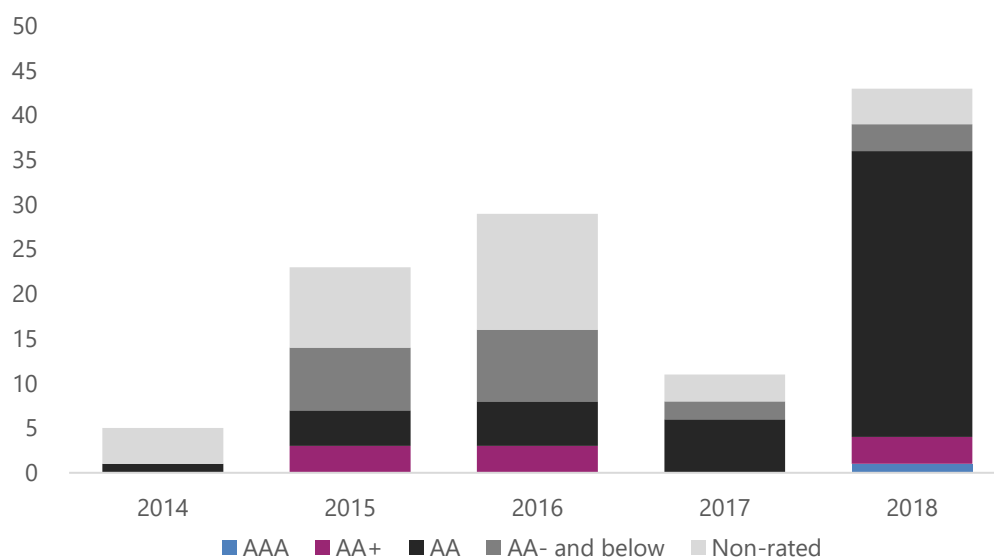
Figure 21. Number of newly defaulted enterprises of different types in 2018



Source: WIND, Golden Credit

- From 2014 to 2018, defaulted issuers gradually expanded from the low-rated to the highly-rated. In 2014, 80% of the defaulted entities had AA- ratings or lower. In 2015, AA+ rated entities started to default. In 2018, a AAA rated corporate defaulted for the first time, showing that even entities with high credit ratings are starting to default and that credit risk is gradually expanding.

Figure 22. Distribution of newly defaulted issuers with different credit ratings¹¹



Source: WIND, Golden Credit

Although a series of defaults have occurred since 2014, the overall credit risk of China's bond market is still low compared to other countries. Considering the large size of China's bond market, the total number of bonds that are materially defaulted is small. By the end 2018, the default rate in terms of value in China's bond market was only 0.61%, much lower than the NPL ratio of China's commercial banks (1.87%¹²). Nonetheless, it is still difficult to establish an effective and stable default rate because the number of defaults is small.

¹¹ According to the credit ratings at bond issuance.

¹² By the third quarter of 2018.

The Opening-up of China's Bond Market

China's bond market began to open up in 2005, and this process has accelerated since 2015 with the promotion of the Belt and Road Initiative and RMB internationalization. The stable economic growth of China, the improvement of the financial market system, and the liberalization reform of the RMB exchange rate forming mechanism have made China's financial market more appealing. Meanwhile, the government has gradually lifted related restrictions and tried to provide policy facilitations to foreign investors and issuers. Comparably, the issuance side opened up earlier, however the level on the investment side is currently higher.

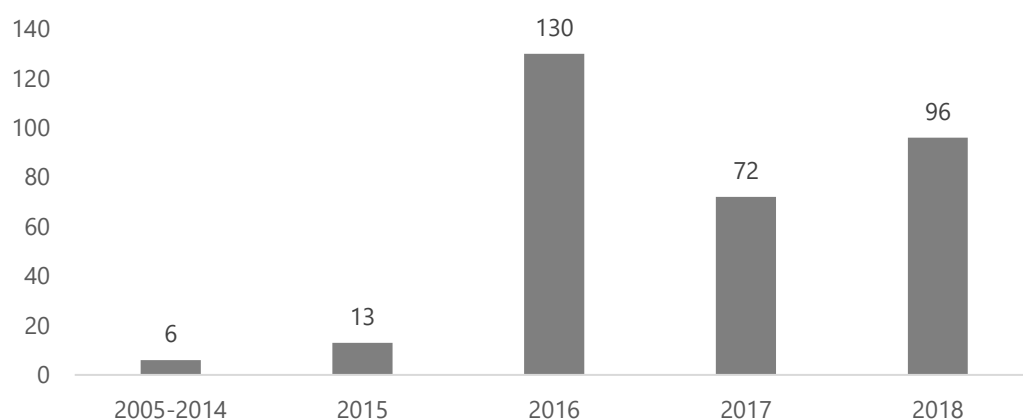
Opening-up on the issuance side

The start of the panda bond market signaled the beginning of the opening-up on the issuance side. Panda bonds are RMB denominated bonds issued by overseas investors (including Hong Kong, Macau, and Taiwan) in the bond market of mainland China. In 2005, the People's Bank of China and the Ministry of Finance published 'Provisional Administrative Rules on International Development Institutions' which allows said institutions to issue RMB bonds in China.

Issuance of panda bonds

From 2005 to 2014, the total issuance volume of panda bonds was only RMB 6.0 bln. Then, with the loosening of restrictions and the tendency of funding costs within China to decline, the issuance of panda bonds began to accelerate and reached RMB 130.0 bln in 2016. By the end 2018, foreign entities had issued 175 panda bonds with a total issuance volume of RMB 316.5 bln. However, compared with the scale of the whole bond market, the panda bond market is still very small and fluctuates greatly with changes in the market environment and regulation policies.

Figure 23. Issuance volume of panda bonds, RMB bln



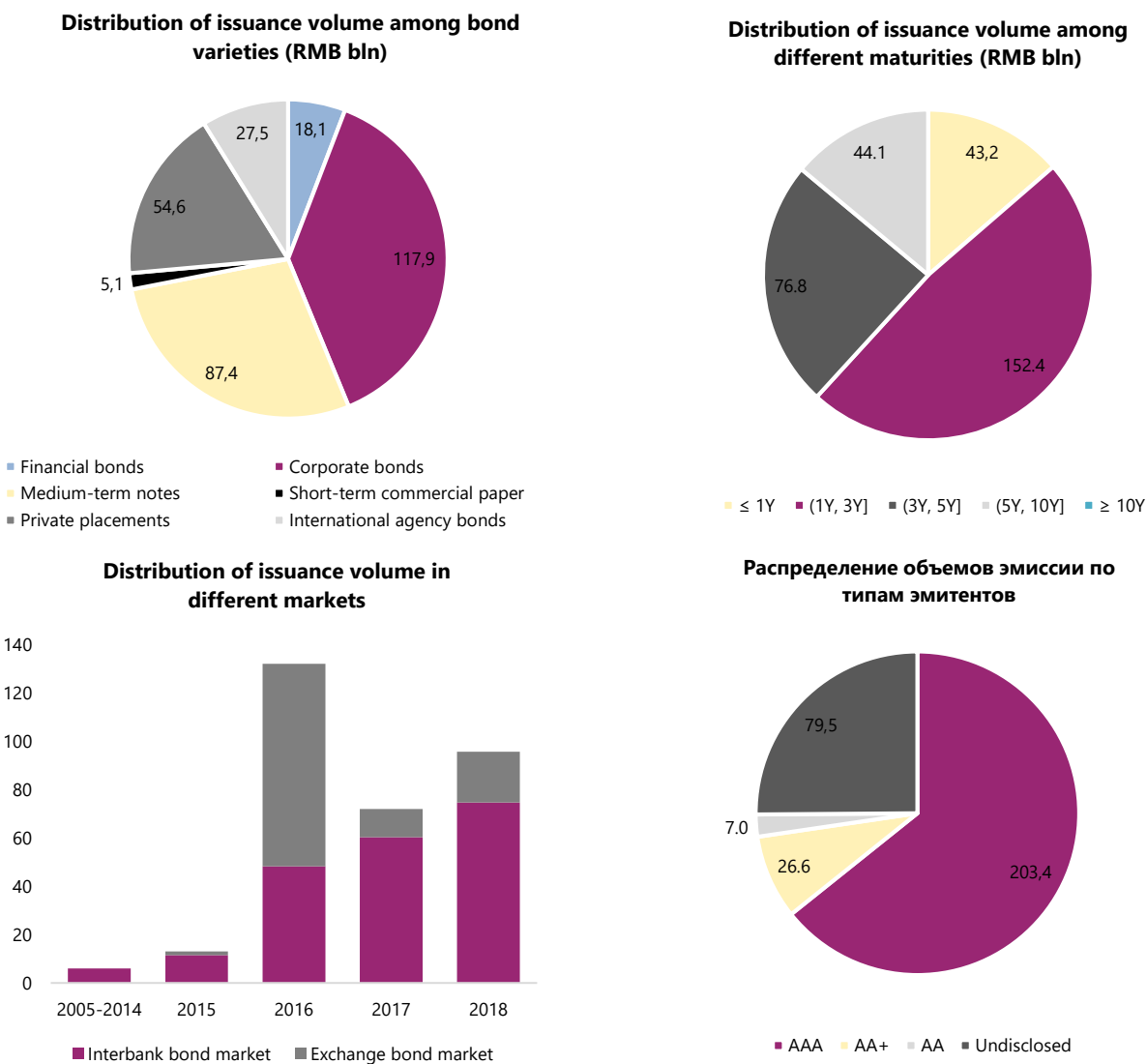
Source: WIND, Golden Credit

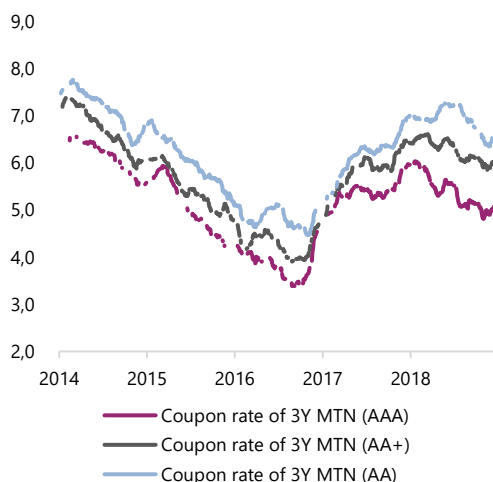
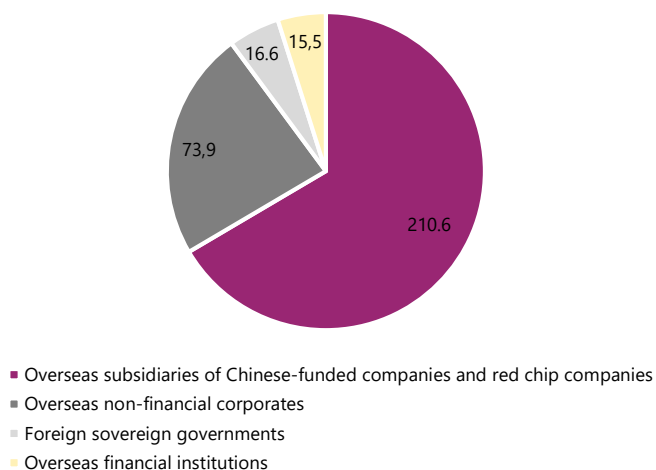
Key facts about the issuance of panda bonds:

- **Bond varieties:** International agency bonds, private placements, financial bonds, corporate bonds, medium-term notes, and short-term commercial papers.
- **Maturities:** By the end of 2018, the maturities of panda bonds issued had covered from 0.74 years to 10 years, and there had been no bonds issued with maturities over 10 years. Bonds with maturities of 3 years and 5 years account for the largest proportion in terms of issuance volume, 45.4% and 20.7% of the total issuance amount, respectively.

- **Issuance markets:** Panda bonds can be issued in both the interbank market and exchange market. Comparably, the issuance in the interbank market is mainly public offerings while the issuance in the exchange market is mainly private placements, which is more flexible in terms of regulations.
- **Issuers:** By the end of 2018, panda bond issuers included foreign sovereign governments, international financial institutions, overseas financial institutions, overseas non-financial corporates, overseas subsidiaries of Chinese companies and red chip companies. Among them, overseas subsidiaries of Chinese companies and red chip companies accounted for the largest proportion in terms of issuance volume.
- **Credit ratings:** By the end of August 2018, the credit ratings of rated panda bonds were only AAA, AA+, and AA according to the national scale. Among them, issuers with AAA ratings account for the largest proportion in terms of issuance volume.
- **Issuance cost:** Since the beginning of 2018, the average coupon rate of bonds in China's bond market has shown the tendency to decline, however the spread between different ratings is enlarging.

Figure 24. Key facts about the issuance of panda bonds



30-day rolling average coupon rates of bond issuance in China's bond market

Распределение объемов эмиссии по типам эмитентов


Source: WIND, Golden Credit

Regulation of panda bond issuance

Currently, the regulatory laws in this field are the following: *Provisional Administrative Rules on International Development Institutions' Issuance of RMB Bonds* and the *Interim Measures for the Administration of Bond Issuance of Foreign Institutions in China's Interbank Bond Market*.

Issuance in the Interbank Market

Issuance application	<ul style="list-style-type: none"> Bond issuances of foreign financial institutions should be approved by PBoC. If foreign governmental institutions and international development institutions issue relevant bonds, or foreign non-financial corporates issue non-financial corporate debt financing instruments, the issuers must apply for registration with NAFMII.
Language for disclosure	<ul style="list-style-type: none"> Issuance documents disclosed publicly by foreign institutions should be in simplified Chinese or a simplified Chinese translation must be provided.
Accounting and auditing	<ul style="list-style-type: none"> If the financial reports disclosed are not compiled according to Chinese Accounting Standards for Business Enterprises (ASBE) or the accounting standards which are deemed to be equal to ASBE by the Ministry of Finance on the basis of reciprocity, the statement on the major differences between the accounting standards applied in the financial reports and ASBE must be disclosed simultaneously.
Credit rating	<ul style="list-style-type: none"> Regarding the bond issuances of foreign institutions: if the credit rating report is publicly disclosed, the credit rating report must be issued by a credit rating agency recognized in China's interbank bond market.
Legal opinions	<ul style="list-style-type: none"> Regarding the bond issuances of foreign institutions: legal opinions must be issued by legal counselors with practicing qualifications in relevant legal fields, such as qualified law firms from both the PRC and the country or district where the issuer is incorporated. For domestic matters, legal opinions must be issued by lawyers practicing in accordance with the Lawyers Law of the People's Republic of China.

The above guidelines are mainly drawn from the '*Interim Measures for the Administration of Bond Issuance of Foreign Institutions in China's Interbank Bond Market*' published by the PBoC and the Ministry of Finance in September 2018. These interim measures are general rules on panda bonds issuances, so it is expected that detailed follow-up guidelines will be published by the appropriate government departments in the future.

One of the key tasks in promoting the development of the panda bond market is to improve the legal and institutional framework of market regulation as well as to increasing the transparency of regulation.

Issuance in the Exchange Market

- The issuance process in the exchange market is flexible and is mainly private placements.
- 'Regulatory Rules on Corporate Bond Issuance and Trading' stipulate that, 'the regulation of registered overseas corporates' bond issuance, trading, and transfer in China's bond market refer to this rule.'
- Public offerings should satisfy the following requirements: cumulative outstanding debt should not exceed 40% of net assets; the average disposable profits in the last three years should be no less than one-year interests of the bonds issued.
- Private placements should meet the regulatory requirements of both the Securities Association of China and the market in which the bonds will be issued and traded.

The development of China's panda bond market is still in its nascent stages. Weak regulation and low transparency are the main hindrances to market development. Therefore, increasing the transparency of regulation will be one of the key tasks in promoting the development of the panda bond market in the future. In this context, due to the relatively low transparency of regulation and the limited cases of issuance to summarize widespread experience, it is recommended to have preliminary communications with related government departments or financial institutions like underwriters or investment banks regarding key issues like financial statements, the use of proceeds, credit rating and information disclosure, etc.

Case study on panda bond issuance - UC RUSAL

In March 2017, the Russian aluminum producer UC Rusal issued panda bonds at the Shanghai Stock Exchange, becoming the first company from an economy along the Belt and Road Initiative to issue bonds in China.

Offering Overview

Issuer	United Company RUSAL Plc
Bond Type	Corporate bond (private placement to eligible investors only)
Issuer/Bond Rating	AA+/AAA
Guarantee	Fully secured by an unconditional and irrevocable joint and several liability guarantees provided by the China United SME Guarantee Corporation
Offering Size	RMB 1.0 bln
Maturity	3 years, with a put option at the end of the 2 nd year
Coupon rate	5.50%

Use of proceeds	After the deduction of issuance expenses, the funds raised were planned for total off-shoring through a special account expected to have up to 100% of raised funds used to replenish working capital (including, but not limited to, companies within the corporation for the procurement from Chinese suppliers), with the remainder to be used for repaying interest bearing debts.
Key Dates	Book building and price inquiry: March 16, 2017 First day of issuance: March 17, 2017 Value day: March 20, 2017
Market	Shanghai Stock Exchange

Source: CICC

A brief Introduction to Mulan Bonds, Dim Sum Bonds, and Belt and Road Bonds

A *Mulan Bond* is an SDR denominated bond issued by overseas investors (including Hong Kong, Macau, and Taiwan) in China's bond market. In August 2016, the World Bank issued a Mulan Bond for the first time. The advantages of Mulan Bonds are that they help to hedge exchange rate risks with lower costs better than other hedging instruments and that investors can obtain foreign currency exposure by purchasing Mulan Bonds in the context of capital control. The disadvantages are low yield and low liquidity.

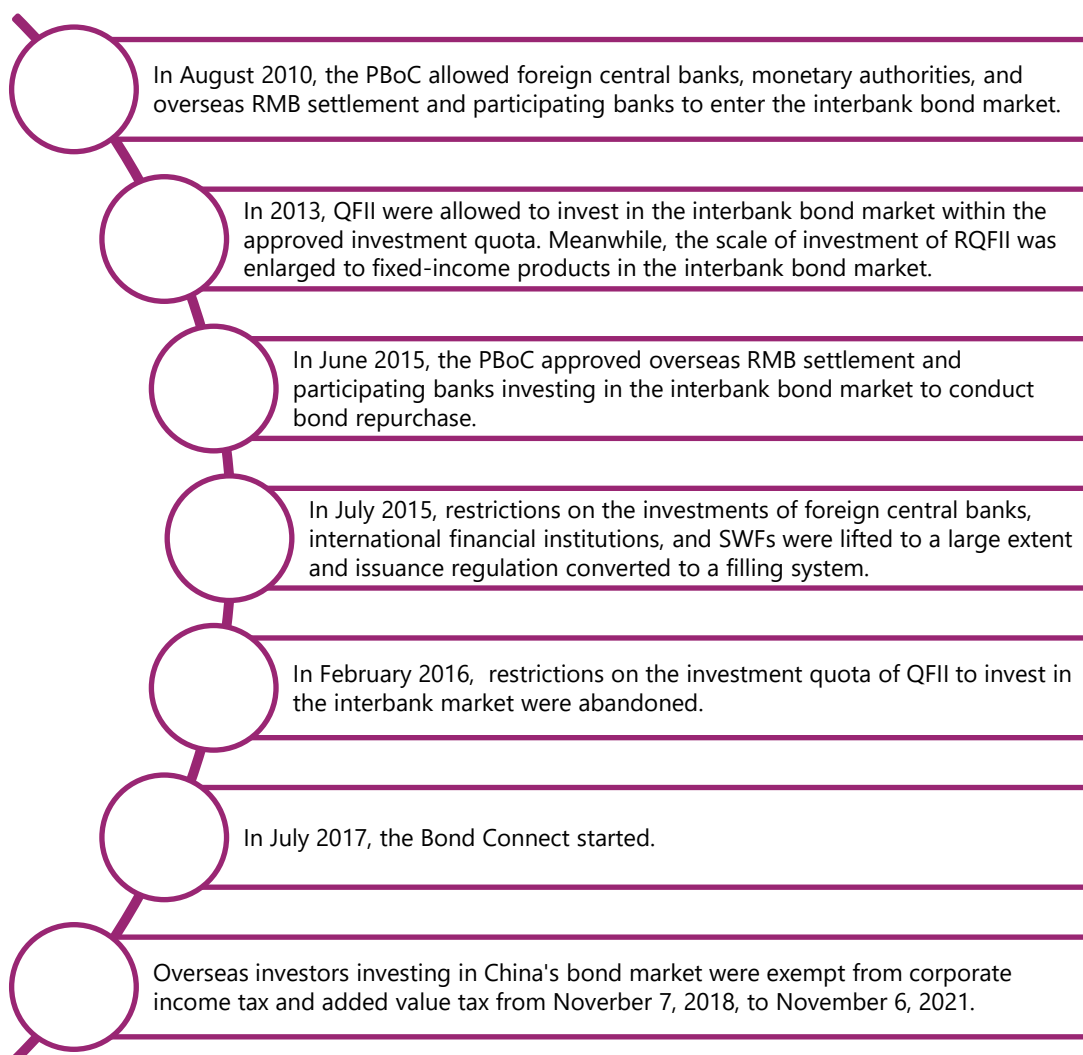
A *Dim Sum Bond* is an RMB denominated bond issued in Hong Kong, so unlike a panda bond, it is an offshore RMB bond. In 2015, the issuance volume of Dim Sum Bonds peaked at RMB 212.5 bln. However, the issuance volume of Dim Sum Bonds has significantly declined since 2016 with the depreciation of RMB, waning policy support, and the acceleration of panda bond issuances. In 2018, the cumulative issuance volume stood at only RMB 37.4 bln.

A *Belt & Road bond* includes not only the RMB-denominated bonds issued in China's stock exchanges by entities of countries involved in the B&R, but also the corporate bonds issued in China's stock exchanges by domestic and overseas corporates to finance the building of the B&R. In March 2018, the Shanghai and Shenzhen stock exchanges published their announcements on carrying out the pilot B&R bond program. According to the announcements, the stock exchanges will arrange teams to take charge of handling and reviewing B&R bond applications in order to increase the efficiency of B&R bond listing. Meanwhile, they will establish a B&R bond sector to improve the investing and financing mechanism that will support construction projects under the Belt and Road Initiative.

Opening-up on the investment side

In 2010, the PBoC allowed some overseas institutions to invest in the interbank bond market, thus accelerating the opening-up of the investment side.

Table 10. Policies supporting the opening-up on the investment side of the bond market



Source: WIND, Golden Credit

In 2018, the number of foreign institutions entering China's bond market increased by 380, reaching 1,186 in total. They can be classified as foreign governmental investors and foreign commercial institutions. Foreign governmental institutions include central banks or monetary authorities, international financial institutions, sovereign wealth funds, other official reserve management agencies, etc. Foreign commercial institutions include commercial banks, non-bank financial institutions, and other institutional investors. The products that overseas investors can invest in are increasingly plentiful with regard to the scale of investment. Specifically, the interbank market has almost fully opened up. Overseas investors can invest in cash bonds, forwards, and some interest rate derivatives. The exchange bond market allows overseas investors (mainly QFII and RQFII) to invest in treasury bonds, corporate bonds, ABS, etc., except pledged repos of credit bonds. It is reported that the People's Bank of China is considering to fully open up repos and derivatives trading to foreign investors and is planning to launch a bond ETF.

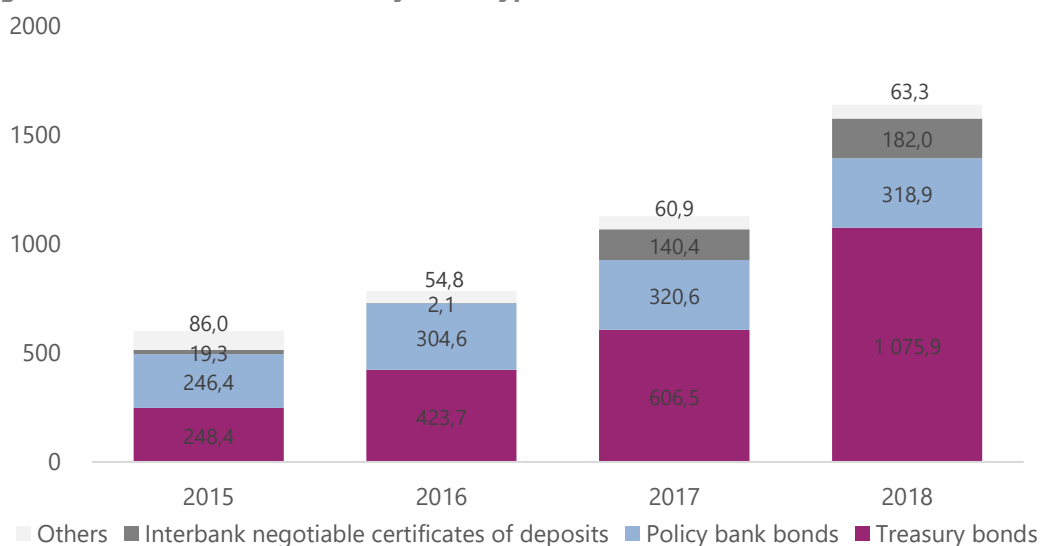
The opening up of the investment side of China's bond market is accelerating, but at a slow pace.

By the end of 2018, the amount of bonds held by foreign institutions approved by the People's Bank of China had reached RMB 1,640 bln, RMB 511.7 bln higher than at the end of 2017, indicating that foreign investors are continuing to increase their holdings. However, this amount only accounted for 2.3% (1.8% at the end of 2017) of the total, showing that China's bond market is still opening up at a slow pace. The main reasons for this are the following:

- China's bond market has only recently started to open up.
- China's bond market and its regulation are fragmented and regulatory policies often change.
- China's bond market lacks a developed, market-oriented default mechanism.
- The liquidity of the secondary market is low.
- There is inconsistency in the accounting, auditing, netting, and rating principles inside and outside of China.

Overseas investors mainly invest in Treasury bonds and policy bank bonds. Their investment in credit bonds is much less frequent due to higher credit ratings from domestic rating agencies compared to international rating agencies for the same issuers, as well as the relatively low risk appetite of foreign investors.

Figure 25. Overseas investment by bond type



Source: WIND, Golden Credit

A Brief Introduction to QFII, RQFII, and Bond Connect

QFII: QFII is the abbreviation for 'Qualified Foreign Institutional Investors.' Under the framework of QFII, qualified foreign investors are allowed to convert foreign currencies into local currency to invest in local securities markets through highly-supervised specialized accounts. Capital gains, such as dividends, spreads, etc., can be converted into foreign currency and remitted abroad. Therefore, the goal of QFII is to partially open up the capital market. In China, QFII can invest in "A" shares, Treasury bonds, convertible bonds, enterprise bonds, and other financial instruments approved by the China Securities Regulatory Commission.

RQFII: RQFII is the abbreviation for 'RMB Qualified Foreign Institutional Investors.' Under the framework of RQFII, qualified foreign investors are allowed to use offshore RMB to invest in China's securities market. RQFII should be the Hong Kong subsidiaries of Chinese fund management companies, securities companies,

commercial banks and insurance companies, or financial institutions incorporated or mainly operated in Hong Kong. RQFII are allowed to invest in stocks, bonds and warrants traded in stock exchanges, fixed-income products in the interbank bond market, securities investment funds, stock index futures, and other financial instruments approved by the China Securities Regulatory Commission.

In June 2018, the People's Bank of China and the National Administration of Foreign Exchange adjusted the regulatory policies on QFII and RQFII, lifting the restriction on the amount of capital remitted abroad and the requirement on the lock-up period of principals and allowing foreign exchange hedging.

Bond Connect: Bond Connect is a new mutual market access scheme that allows investors from mainland China and abroad to trade in each other's bond markets through the related mainland and Hong Kong financial infrastructure institutions. Bond Connect includes Northbound Trading and Southbound Trading.

Northbound Trading allows overseas investors from Hong Kong and other regions to invest in China's interbank bond market through mutual access arrangements concerning trading, custody, and settlement. It commenced on July 3, 2017. Southbound Trading allows investors from mainland China to invest in Hong Kong's bond market. It will be explored at a later stage.

Table 11. Channels for foreign investors to invest in China's bond market, end of 2018

	Bond Connect	QFII	RQFII	CIBM ¹³
Trading categories	Cash bonds	Cash bonds, bond lending, bond forwards, forward rate agreements, interest rate swaps	Cash bonds, bond lending, bond forwards, forward rate agreements, interest rate swaps	Cash bonds, bond repos, bond lending, bond forwards, forward rate agreements, interest rate swaps
Trading currency	Foreign currency or RMB	Foreign currency	RMB	RMB
Quotation	Market maker system	Single offer	Single offer	Single offer
Trading modes	Multi-layer custody	Single-layer custody	Single-layer custody	Single-layer custody
Trading quotas	No	Yes	Yes	Yes
Qualifications	Filing	Examination and approval	Examination and approval	Filing

Source: Golden Credit

¹³ CIBM is the regime for foreign central banks, international financial institutions, and sovereign wealth funds to participate in China's interbank bond market.

(C) 2019

Analytical Credit Rating Agency (Joint-Stock Company), ACRA (JSC)
75, Sadovnicheskaya embankment, Moscow, Russia
www.acra-ratings.com

Analytical Credit Rating Agency (ACRA) was founded in 2015, with its 27 shareholders representing major Russian corporate and financial institutions and its authorized capital exceeding RUB 3 bn. ACRA's main objective is to provide the Russian financial market with high-quality rating products. Methodologies and internal documents of ACRA are developed in compliance with Russian legislation and with regard to global rating industry best practices.

The provided information, including, without limitation, credit and non-credit ratings, rating assessment factors, detailed credit analysis results, methodologies, models, forecasts, analytical reviews and materials, as well as other information placed on the ACRA website (further referred to as Information), coupled with the ACRA website software and other applications, are intended for information purposes only. Information must not be modified, reproduced or distributed by any means, in any way or form, either in whole, or in part, in marketing materials, as part of public relations events, in news bulletins, in commercial materials or reports without prior written consent from, and reference to, ACRA. Any use of Information in violation of these requirements or the law is prohibited.

ACRA credit ratings reflect ACRA's opinion about the ability of a rated entity to meet its financial obligations or about the credit risk of individual financial obligations and instruments of a rated entity at the time of publication of the relevant Information.

Non-credit ratings reflect ACRA's opinion about certain non-credit risks assumed by interested parties interacting with a rated entity.

The assigned credit and non-credit ratings reflect all material information pertaining to a rated entity and known by ACRA (including the information received from third parties), the quality and reliability of which ACRA considers appropriate. ACRA shall not be responsible for the accuracy of information provided by clients or relevant third parties. ACRA does not audit or otherwise verify the provided data and shall not be held responsible for their accuracy and completeness. ACRA conducts rating analysis of information provided by customers using its own methodologies, with the texts thereof available on ACRA's website – www.acra-ratings.com/criteria.

No credit rating and/or credit rating outlook is regulated by the Central Bank of the Russian Federation, unless distributed so that such credit rating and/or credit rating outlook is in the public domain.

The only source that reflects the latest Information, including the one about credit and non-credit ratings assigned by ACRA, is ACRA's official website – www.acra-ratings.com. Information is provided on an "as is" basis.

Information shall be considered by users exclusively as ACRA's statement of opinion and must not be regarded as advice, recommendation or suggestion to buy, hold or sell securities or other financial instruments of any kind, nor shall it be viewed as an offer or advertisement.

Neither ACRA, nor its employees and persons affiliated with ACRA (further referred to as the ACRA Parties) provide any direct or implied guarantee expressed in any form or by any means regarding the accuracy, timeliness, completeness or applicability of Information for making investment and other decisions. ACRA does not act as a fiduciary, auditor, investment or financial advisor. Information must be regarded solely as one of the factors affecting an investment decision or any other business decision made by any person who uses ACRA's information. It is essential that each of such persons conduct their own research and evaluation of a financial market participant, as well as an issuer and its debt obligations that may be regarded as an object of purchase, sale or possession. Users of Information shall make decisions on their own, involving their own independent advisors, if they deem it necessary.

ACRA Parties shall not be responsible for any action taken by users based on Information provided by ACRA. ACRA Parties shall under no circumstances be responsible for any direct, indirect or consequential damages or losses resulting from interpretations, conclusions, recommendations and other actions taken by third parties and directly or indirectly connected with such information.

Information provided by ACRA is valid only as of the date of preparation and publication of materials and may be amended by ACRA in the future. ACRA shall not be obliged to update, modify or supplement Information or inform anyone about such actions, unless the latter was recorded separately in a written agreement or is required by legislation of the Russian Federation.

ACRA does not provide advisory services. ACRA may provide additional services, if this does not create a conflict of interest with rating activities.

ACRA and its employees take all reasonable measures to protect all confidential and/or material non-public information in their possession from fraud, theft, unlawful use or inadvertent disclosure. ACRA provides protection of confidential information obtained in the course of its business activities as required by legislation of the Russian Federation.