February 28, 2019

A Brief introduction to the Russian bond market

Structure, history, and possible ways of evolution

- **The bond market in Russia is relatively small** – around 21% of GDP. This is both because of a relatively high-rate interest rate environment, holding back all kinds of debt, and a longer history of bank credit and shares financing.
- **The bond market in Russia is steadily growing as a lower inflation environment leads to the extended planning horizon** of investors and borrowers**.** Some government support is provided as well. Debt-aimed sanctions on Russian entities provide additional stimulus to borrow internally. While the development of non-government pension funds stopped due to ended support from the mandatory pension system, the biggest appetite to hold bond instruments comes from Russian commercial banks.
- **Government bonds play an important role in the debt market** accounted for approximately half of the outstanding debt securities. The yields on them are widely used as a benchmark for the privately issued bonds of companies with low credit risk. Among bonds of nonfinancial companies, 75% are issued by Oil & Gas, Construction & Development, and Metals & mining companies.
- **Issued bonds are mostly nominated in rubles and typically have maturities of around 4-6 years.** Issues with maturities of more than 10 years normally are mortgage-backed or issued by infrastructure companies (or alternatively have the explicit or implicit guarantee of a government). Since 2016, some of the biggest financial institutions have started using very short-term papers with maturities of less than 1 month to manage liquidity. At least 20-30% of bonds have a built-in put or call-option. Most coupons are fixed.
- **The credit risk of issuing entities in Russia can be assessed through national scale ratings** provided by two national rating agencies**.** The ratings contain, among other things, information on inherent sectoral risk, which is persistent and sufficiently different. This is why for some sectors the bond market is unavailable – in this case they have to rely on alternative means of financing.
- **Systemic financial risk can be assessed with the use of financial stress indicators.** Financial systems are interconnected and can contribute to more frequent defaults on the contract payments of agents in some markets to agents in other markets. Large-scale episodes of this kind (financial crises) can lead to disruptions in economic activity in the real sector (initially due to the emergence of local liquidity crises), which makes them a focal point of consideration in Russia or any other country.

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The historical development of the Russian bond market

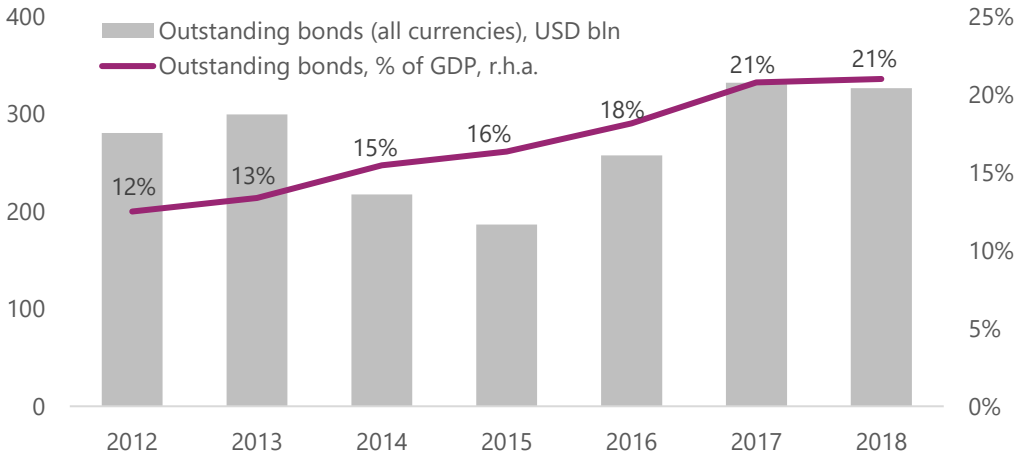
The total volume of outstanding bonds issued by Russian companies, the government, and regions & municipalities was about USD 300 bln as of December 31, 2018. The bond market has 350-450 potential issuers with yearly issues worth USD 50-150 bln[1]. The share of the Russian bond market in the global market is small (even less than its share in the global economy – 0.5% vs 1.5%). There are several reasons for this.

Firstly, the Russian bond market is relatively young. The first corporate bonds were issued at the end of the 1990s, long after other means of financing had become popular[2]. Shares and bank credit still dominate in servicing the financing needs of most entities. For the economy as a whole, the composition of outstanding shares/credit/bonds is on average 54/39/7 (nonfinancial companies: around 60/37/3, financial institutions: 58/32/10). The predominance of bank credit over bonds is partly because the banking market is concentrated; there are banks big enough to service even the biggest potential debtors. At the moment, the central government is the only debtor which relies mainly on marketable debt.

Secondly, a number of external shocks, which caused financial and economic instability, hindered the development of the Russian bond market (1998, 2009, 2014). However, the ratio of outstanding bonds to GDP continued to grow even in periods of instability (see Fig. 1). Today, the share of total outstanding bonds to GDP is about 21%, which is the highest it has been since 2004-2005. It has been increasing by approximately 1.5 pp of GDP per year over the last decade. The steady growth of the bond market is being driven by lowering inflation (which expands the horizon of planning), the "dedollarization" of savings and payments, and integration with international settlement organizations (Euroclear, Clearstream), which allows non-residents to hold internally issued debt with lower transaction costs.

The risk-oriented view on the medium-term future of the Russian economy is expressed in ACRA's macroeconomic outlook update from October 25, 2018, "Stressful scenarios are becoming more likely for the Russian economy."

Figure 1. Volume of the bond market (all figures as of the end of the year)



Source: Bank of Russia, Rosstat, ACRA

The growth of the Russian bond market in 2012-2018 mostly depended on the increased borrowing volumes of the old borrowers rather than new ones. And to some extent, this growth has occurred because bonds have been used in a different manner than previously. For example, since 2016, VTB has issued super short-term bonds to regulate its liquidity, which was previously done mostly through the interbank credit market.

[1] Excluding short-term bonds with 1-7 day maturities.
[2] Soviet financial connections were mostly destroyed during the transformation in the 1990s.

Since the transition to the market economy, the more or less gradual development of the modern Russian bond market[3] has witnessed at least three critical changes:

1. The government debt crisis of 1998. Two external shocks - the Asian financial crisis that began in 1997 and the following declines in demand for, and thus the price of, crude oil and nonferrous metals - severely impacted Russian foreign exchange reserves. This undermined the government's ability to maintain fixed exchange rates and service debt which had very small maturities at the time. On August 17, 1998, the Russian government devalued the ruble fourfold (previously having a managed float close to the fixed exchange rate regime), defaulted on domestic debt, and declared a moratorium on the repayment of foreign debt. This consequently destroyed the confidence of both residents and non-residents in the credibility of most Russian counterparties and debtors and resulted in at least a 2-year period of non-developing financial markets.

2. Opening up to foreign investors. In 2012, Euroclear and Clearstream were granted access to Russia's National Settlement Depository, making it easier for other countries connected to their systems to trade with Russia, and integrating Russia's capital market into London's and New York's markets. The share of non-resident bond holders sufficiently increased, allowing residents to borrow more cheaply. For example, the share of non-resident holders of national currency sovereign debt raised from 5% to 25% mostly as a result of international settlement availability.

3. US and EU sanctions imposed in 2014 or later (limiting borrowings or export-import for some Russian companies). A large number of sanctioned companies changed their borrowing policies; the share of borrowed funds raised from non-residents decreased. This trend is also typical for non-sanctioned companies. The debt structure of sanctioned companies may change even more because these companies are subject to potential sanctions that prohibit any interaction between them and US companies. This trend could be exacerbated by the concerns of non-US counterparts regarding secondary sanctions that may be imposed against them in the event of interaction with sanctioned Russian companies. At present, 57% of the debt of the entire Russian corporate sector and 16% of the total debt of the banking sector is accounted for by companies from the current sanctions list, which makes the development of sanctions an important driver in borrowing structures.

Read more about the effects of the sanctions in ACRA's research papers "Changing economic policy is a main channel of sanctions' influence on the Russian economy" from July 10, 2018, and "US residents hold 8% of Russian sovereign debt" from August 17, 2018.

[3] On the limits of the volume of growth, see Mamonov et al (2018). Identification of Financial Sector Optimal Depth and Structure from the Perspective of Economic Growth, Macroeconomic and Financial Stability. Russian Journal of Money and Finance, 77 (3), pp. 89-123.

How bond issuance and exchange are organized in Russia

The share of non-bond debt securities (e.g. promissory notes) in total outstanding debt securities is normally less than 5%.

The dominant part of outstanding bonds in Russia is issued and traded on the security exchange, even though bonds in Russia can be issued either on exchange or without listing (see Table 1). Since 2014, exchange bonds have replaced classic corporate bonds (more than 80-85% of new issues by volume), which is mostly due to faster and more convenient registration. Commercial bonds, the new OTC bond type which is aimed at replacing promissory notes, still has not gained popularity.

Table 1. Types of bonds in Russia

Type	Classic corporate bonds	Commercial bonds	Exchange bonds
Registration	Bank of Russia	National Settlement Depository	Exchange
Listing on the exchange	Possible	No	Yes
Issuance prospectus	No	No	Required
Secondary market	Exchange or OTC	OTC	Exchange or OTC
Issuance documents valid	For 1 year	No limit	No limit
Pledge	Possible	No	No
Placement	Public or private	Private	Public or private
Maturity	No limit	No limit	No limit
Issues within a program[4]	Possible	Possible	Possible

Source: National Settlement Depository

There are two security exchanges in Russia: MOEX (Moscow) and SPBEX (Saint Petersburg). All the bond exchange of Russian issuers' debt is concentrated on MOEX.

In MOEX, the bond needs to meet several requirements to be listed on 1 of 3 possible levels and traded. Investors use levels of listing as a preliminary assessment of the risk and potential liquidity of the bond.

Table 2. General requirements for an issue to be listed on MOEX as of January 31, 2019[5]

Level	1	2	3
Volume of an issue	> RUB 2 bln	> RUB 0.5 bln	-
Nominal value of a single bond	<50,000 RUB or 1,000 units in foreign currency		-
Issuer's existence	>3 years	>1 year	-
No issuer defaults	For 3 years	For 1 year	-
Disclosed consolidated annual accounts in accordance with IFRS	For the 3 previous years	For 1 previous year	-
Positive profit of an issuer	For 2 of 3 preceding years	For 1 of 3 preceding years	-
Credit rating	>=BBB+ (national scale) >=BB/Ba3 (international scale)	-	-
Management requirements	Board of directors and a system of internal or external audit	-	-

Source: MOEX

[4] New bonds can be issued sufficiently faster if most of their features are registered and fixed within a program beforehand.

[5] Full and up-to-date lists of requirements for all types of issuers are published on the Moscow Exchange website. The table above has only base case requirements for issues without a guarantee.

The issue of a foreign entity can be listed on MOEX if it is already listed on one of the major international exchanges or if it otherwise meets requirements similar to those for Russian issuers (see Table 2). However, it needs the additional permission of the Central Bank of Russia, the main regulator of Russian financial markets[6].

For most types of bonds, liquidity on the exchange is small relative to the deeper markets. The average yearly turnover ratio for government bonds is 0,7-0,8, while for corporate bonds 0,45-0,6 is more typical. To some extent, this is due to there being less variety in bond holders' motivation and the fact that in times of structural liquidity deficit, commercial banks tend to use REPO extensively in order to get money from the Central Bank.

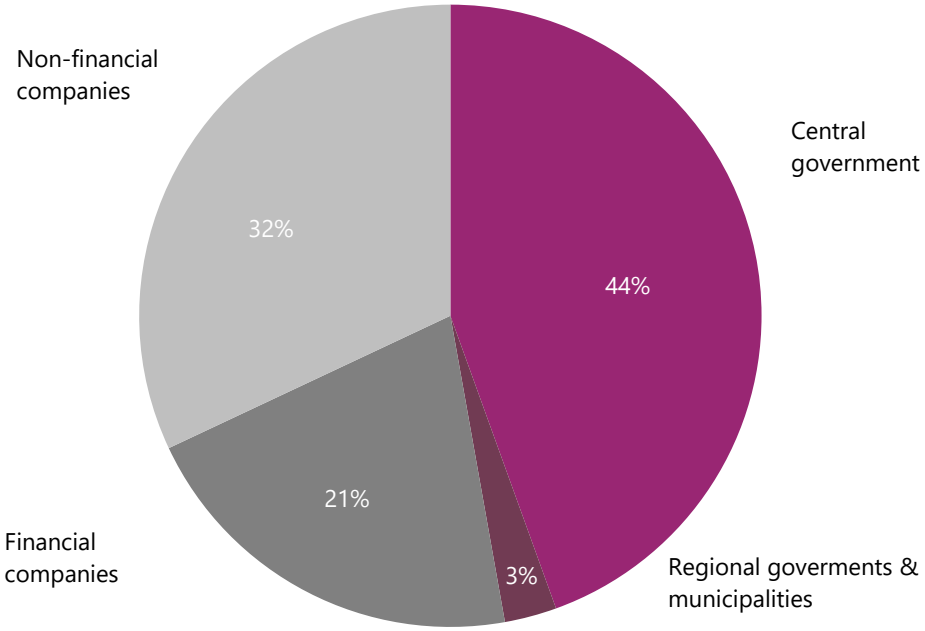
[6] Main regulatory documents can be obtained on the Central Banks's special page.

Who are the issuers in the Russian bond market?

In 2018, government bonds accounted for one-half of total outstanding bonds (see Fig. 2). They mainly consisted of OFZs, which are medium and long-term bonds with a fixed or floating coupon. Yields on government bonds are widely used as a benchmark for the privately issued bonds of companies with low credit risk.

The share of corporate bonds issued by financial and non-financial companies (NFCs) is constantly growing over time with the steady emergence of modern financial market infrastructure and growing planning horizons of investors (see Fig. 3). Moreover, along with the maturing of the financial market, more and more non-financial companies are becoming older (the market economy appeared in Russia only 30 years ago). Based on global experience, this means that these companies may be perceived as stable (having a public credit history), and therefore may be willing to borrow using bonds.

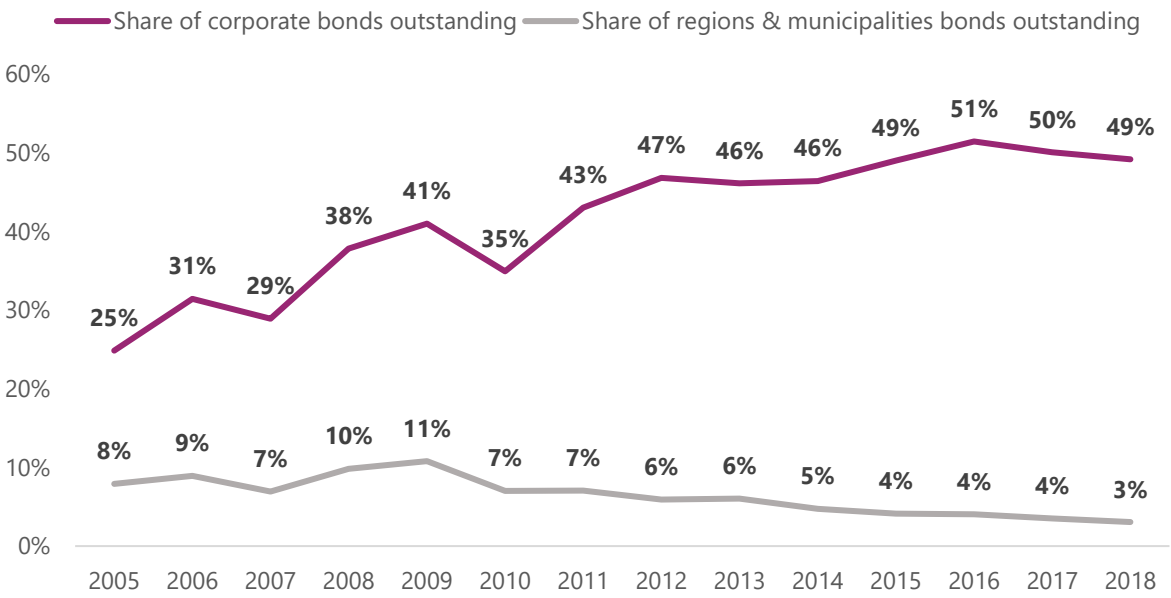
Figure 2. Government bonds are a very important part of the market (shares of outstanding bonds as of November 30, 2018)



Source: Bank of Russia, Ministry of Finance of Russia, ACRA

One-half of outstanding NFC bonds were issued by companies in the oil & gas sector (50%, see Fig. 4). They are followed by construction companies, development and building material companies (13%), and metals & mining companies (9%). This structure stems from the fact that companies in those sectors are relatively bigger in scale or have stocks of fixed assets which serve as a means of potential recovery in the case of default.

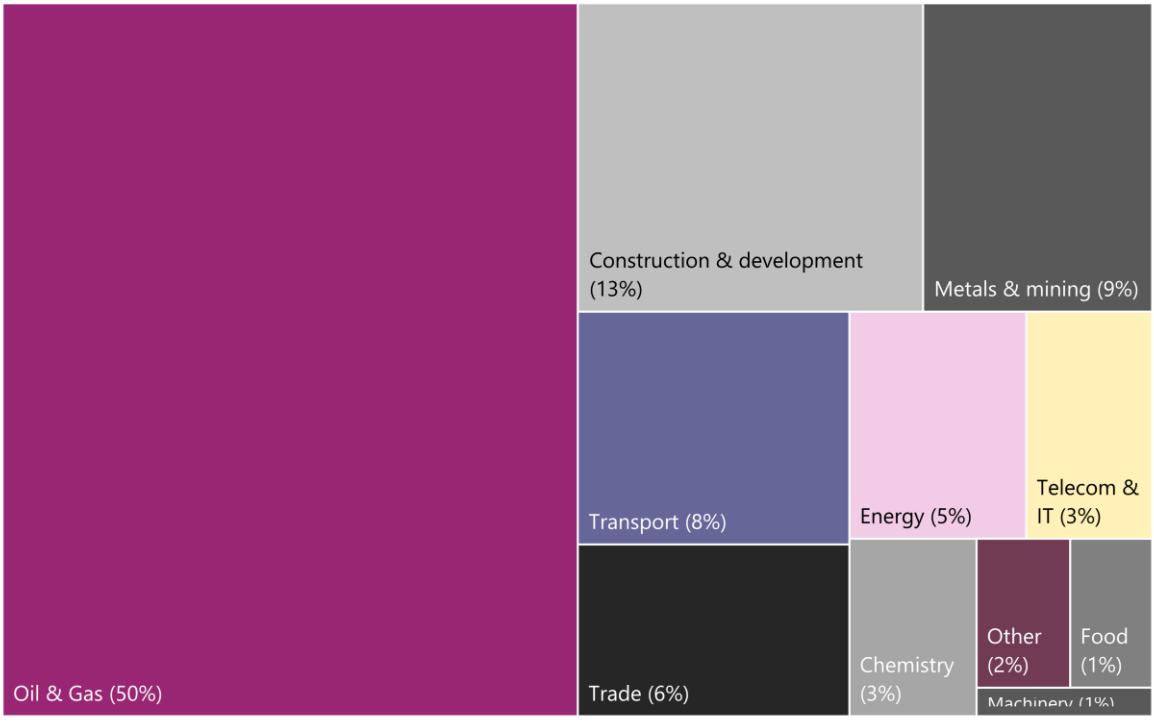
Figure 3. The share of corporate bonds is likely to continue growing due to the maturation of markets



Source: Cbonds, Bank of Russia, Ministry of Finance of Russia, ACRA

The corporate bond market in Russia is highly concentrated, with the biggest corporate bond issuer being Rosneft (see Fig. 5). The amount of its outstanding bonds is greater than USD 44.5 bln, which is around 40% of all outstanding NFC bonds. Such a large share emerged because of the major acquisition and capex programs it held in 2008-2015 followed by sanctions, which prevented the company from refinancing most of its debt (originally issued abroad).

Figure 4. Large companies with fixed assets dominate the NFC bond market (outstanding NFC bonds as of December 31, 2018)

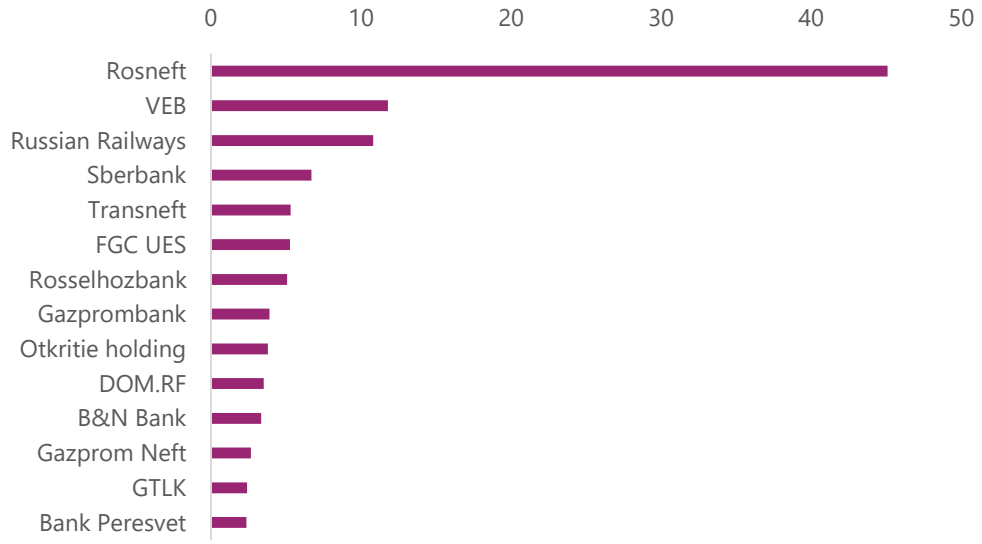


Source: Cbonds, ACRA

The real interest rate is an interest rate reduced by the expected or observed inflation rate.

The diversification of the corporate side of the bond market (by issuers) has been decreasing somewhat since 2015, which is also because of a recent recession and corresponding growth in real interest rate (due to lower inflation and the Central Bank's tight monetary policy). These conditions usually discourage borrowers if they are not driven by the need to refinance existing debt. The real interest rate is likely to stay positive, but the outcomes of the recession are steadily becoming less important for the current financial environment.

Figure 5. Largest corporate issuers by volume of outstanding bonds, USD bln, as of April 16, 2019

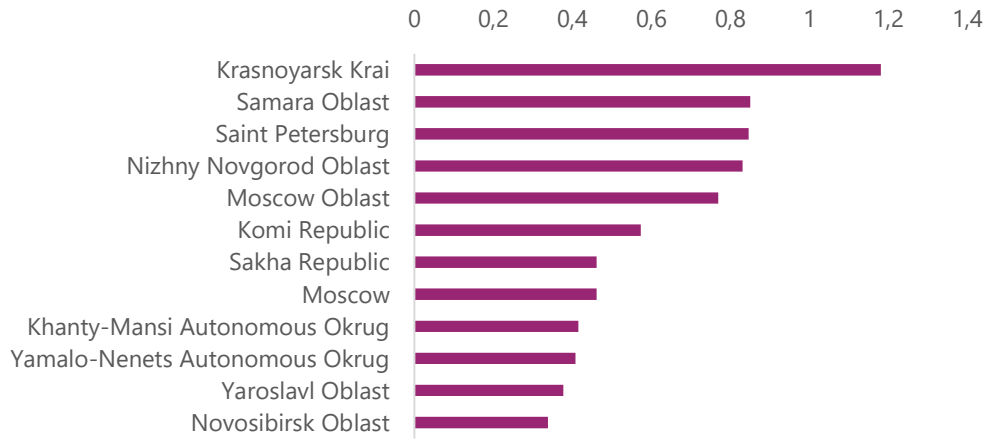


Source: Rusbonds, ACRA

Regional governments typically borrow in rubles only.

The total volume of outstanding regional and municipal bonds is relatively small. It was about USD 8.5 bln in September 2018, which is around 3% of Russian residents' outstanding bond debt. This is explained by the fact that the total yearly cash flow through the sub-federals is sufficiently less than through the corporates (the difference is around 1:7), which means that they could aggregately support less debt service payments and bear smaller nominal debt burden with a comparable maturity. For at least one third of the regions, bank credit remains the primary method of deficit financing, even though the federal government encourages them to enter the bond market more actively.

Figure 6. Largest sub-federal government issuers by volume of outstanding bonds, USD bln, as of April 16, 2019

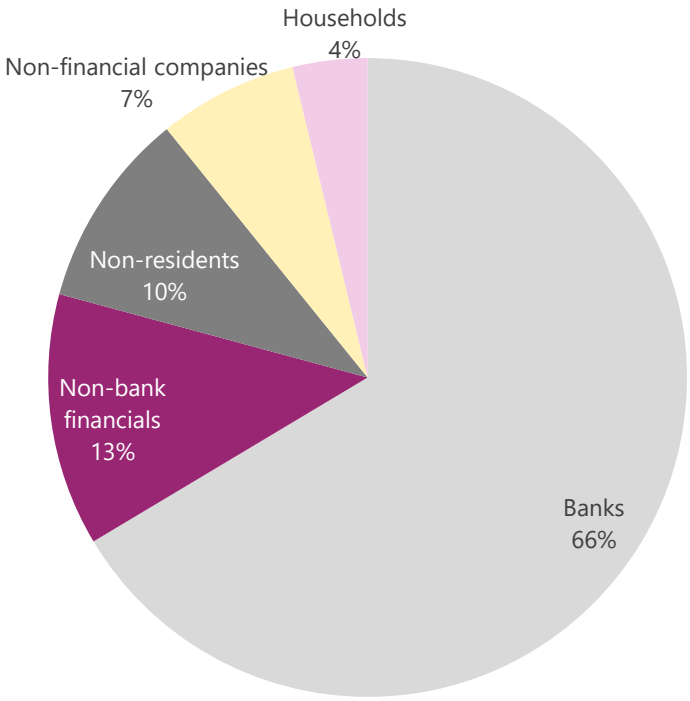


Source: Rusbonds, ACRA

Who are the bond holders in Russia?

Residential commercial banks and non-bank financial companies hold most of the bonds issued in Russia (see Fig. 7). In times of structural liquidity deficit (before 2015), these bonds were used to obtain liquidity from the Central Bank through REPO agreements and were perceived as a more liquid asset type when compared to an ordinary loan.

Figure 7. Distribution of bonds by holders in Russia as of June 30, 2018



The distribution for this graph was calculated using data on bonds issued by residents as well as by non-residents (only including the part held by residents).

Source: Bank of Russia, ACRA

Households in Russia are not as willing to hold bonds, which probably stems from the fact that all kinds of financial savings are perceived as risky and associated with the possibility of losing wealth. The transformation period of the 1990s provided the greater part of Russians with an extensive insight into all of the possible ways the economy could fail, which explains the high average level of investment risk perception across the country. That said, the proportion of economically active residents whose saving strategies are overshadowed by a strongly negative experience will wane with time.

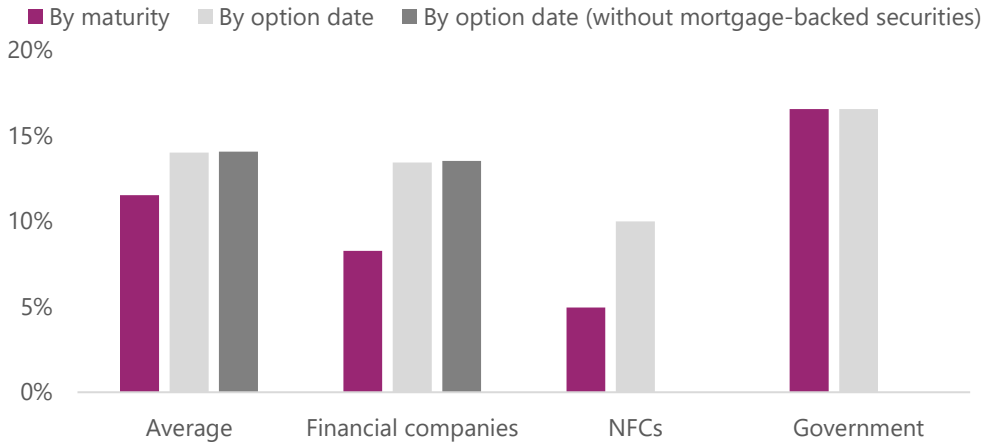
Financial companies and financial instruments in Russia do not garner much trust as a result of the troubles they had saving the real value of households' money. For Russia as a whole, negative real interest rates were common for a long time (before 2014) – that has started to change.

The currency and maturity structure of the Russian bond market

The average bond debt maturity is 4-6 years at the date of issue. Bonds of NFCs generally have longer than average maturities and at any given moment, a lower share of them are approaching maturity (see Fig. 8). Normally, the longest term bonds of financial institutions are mortgage-backed securities. The share of mortgage-backed securities is increasing and now accounts for about 3% of all outstanding bonds. At the same time, 15% of bonds issued by financial companies are short-term. The shortest-term bonds have a 1-day maturity and are issued by some commercial banks on a daily basis to manage liquidity.

Normally, 20-30% of bonds have a built-in put or call option.

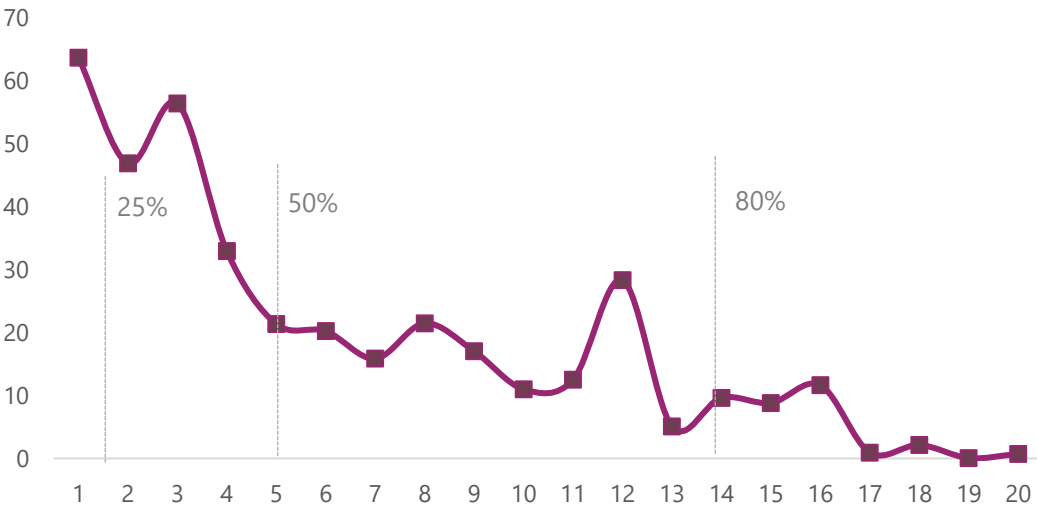
Figure 8. Share of short-term bond debt as of December 31, 2018[7]



Source: Cbonds, ACRA

Almost one half of bond debt is going to be repaid in the next 5 years and 80% in the next 14 years (see Fig. 9). The yearly distribution of the debt repayment is sloping downwards, which is typical for most countries. The peaks at 8-year and 12-year maturities are mostly long-term government Eurobonds.

Figure 9. Debt repayment schedule (by option date), USD bln, as of December 31, 2018



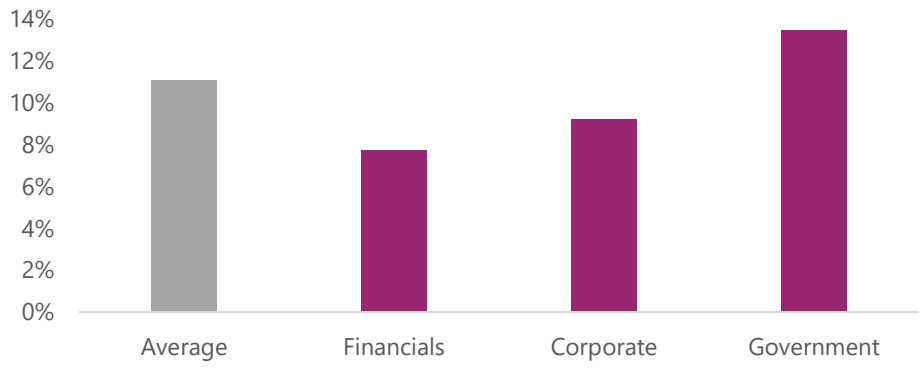
Source: Cbonds, ACRA

[7] Calculated using actual maturity (not the maturity at the date of issue).

To learn more about the overall structure of debt relations in Russia (including loans, etc.), see ACRA's research paper "Debt relationships structure may restrain development and growth in Russia" from February 14, 2018.

Government bonds have the largest share of foreign currency of all sectors (see Fig. 10), but the foreign debt itself is small in comparison to the foreign assets held in international reserves. Generally, lowering the share of foreign currency in government obligations is a global trend. Over the past 15 years, it has fallen from 45% to less than 20% in developing countries. In this sense, the Russian bond market structure is typical. On average, the share of foreign currency in Russian debt (including bank loans) is 40%, of which internal debt accounts for more than a half.

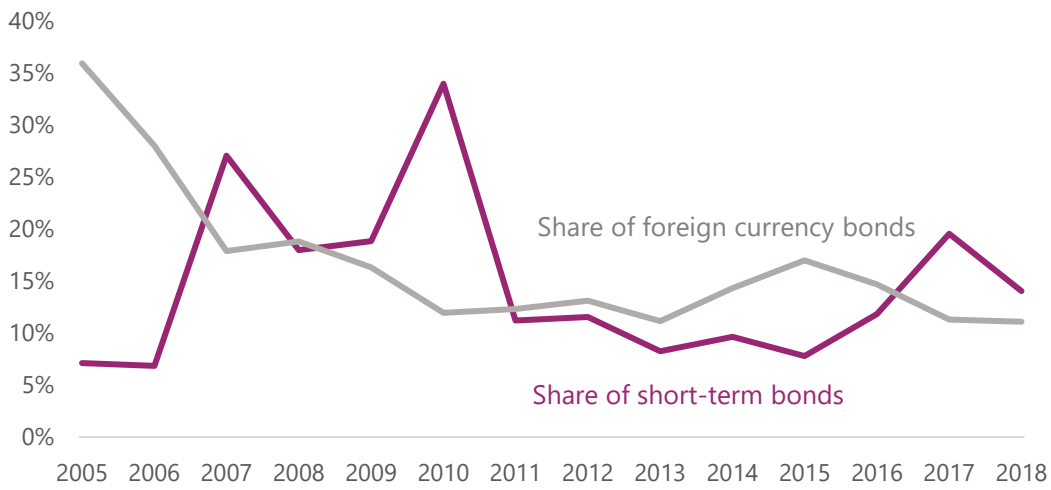
Figure 10. Share of foreign currency bond debt as of December 31, 2018



Source: Cbonds, ACRA

Currently, more than 95% of foreign currency bonds issued in Russia are in USD, even though the main trade partners are historically from EU countries (with the euro as the national currency). This is because most of the trade in goods that Russia exports is traditionally nominated in USD (oil & gas, for example), no matter who the trade partner is. Since the 1990s, the US dollar has been perceived in Russia as reliable for household savings; some internal payments were even held in dollars while the ruble experienced high inflation. The combination of these factors created an excessive propensity to use the dollar in internal finance as well. Now, while sanctions are making direct relations with US residents riskier (possible future sanctions could complicate USD-nominated transactions even with non-US companies), there is some stimulus to increase the share of debt and assets nominated in different foreign currencies. Trade and debt are likely to move in the same direction towards a bigger share of EUR and RMB.

Figure 11. Share of short-term bonds approaches 10% in normal years



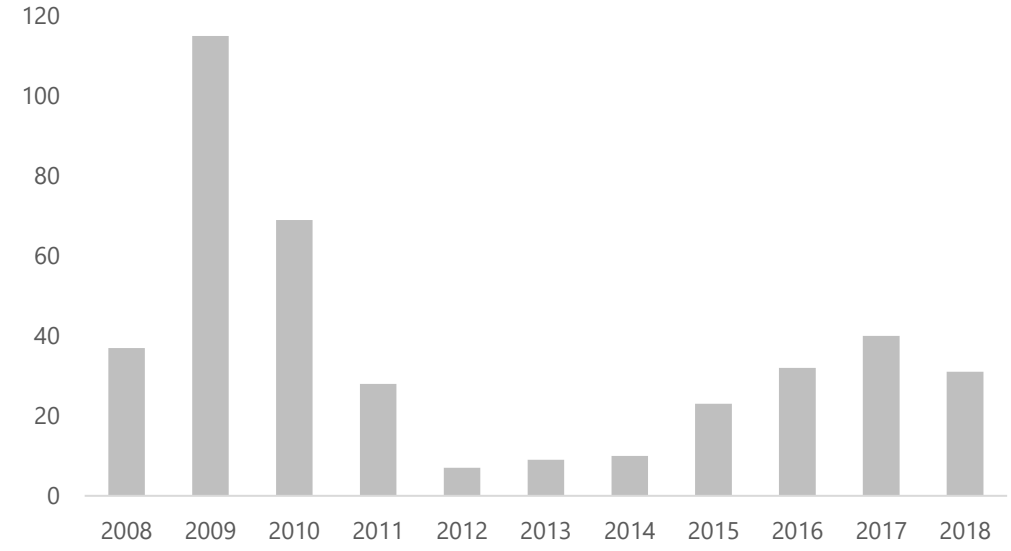
Source: Cbonds, ACRA

Assessing credit risk in Russia through default statistics

The vast number of bond defaults in the Russian market occurred during the global financial crisis in 2008-2009 (see Fig. 12). 31 companies (including SPVs) had bond defaults in 2018. There has been steady growth in the number of defaults since 2013 with a growing share of banks and non-banking financials (see Fig. 13), which reflects stricter regulation, a lower inflation environment, and falling nominal profits.

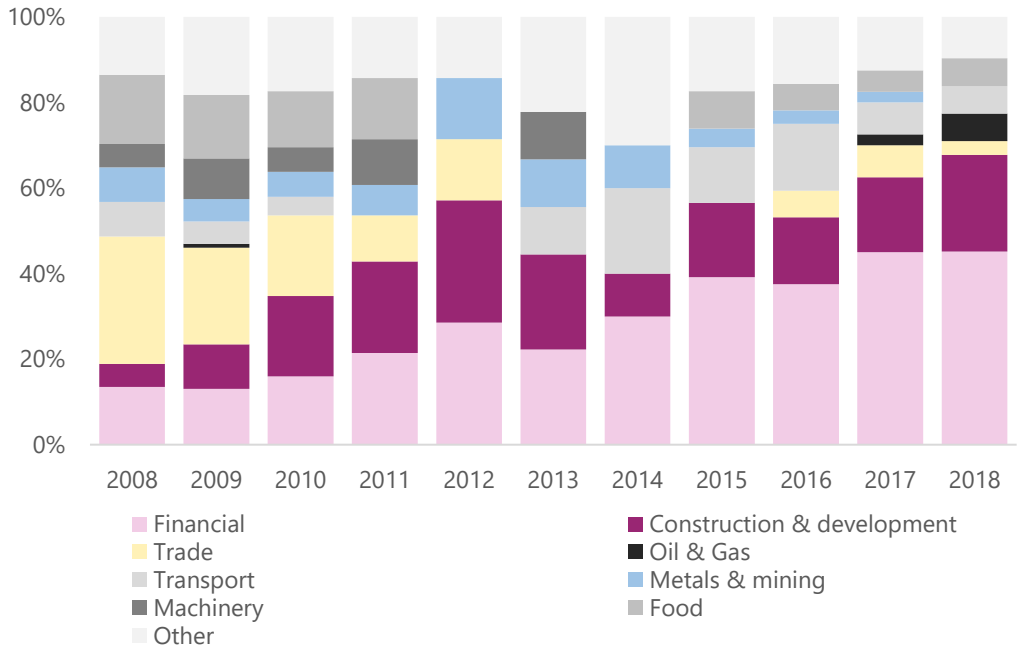
The share of trade companies in default has drastically fallen which follows the sector's consolidation and the reassessment of its riskiness after the consumption boom of 2006-2008 and the crisis of 2009.

Figure 12. Number of companies with defaulted bonds (without technical defaults)



Source: Cbonds, ACRA

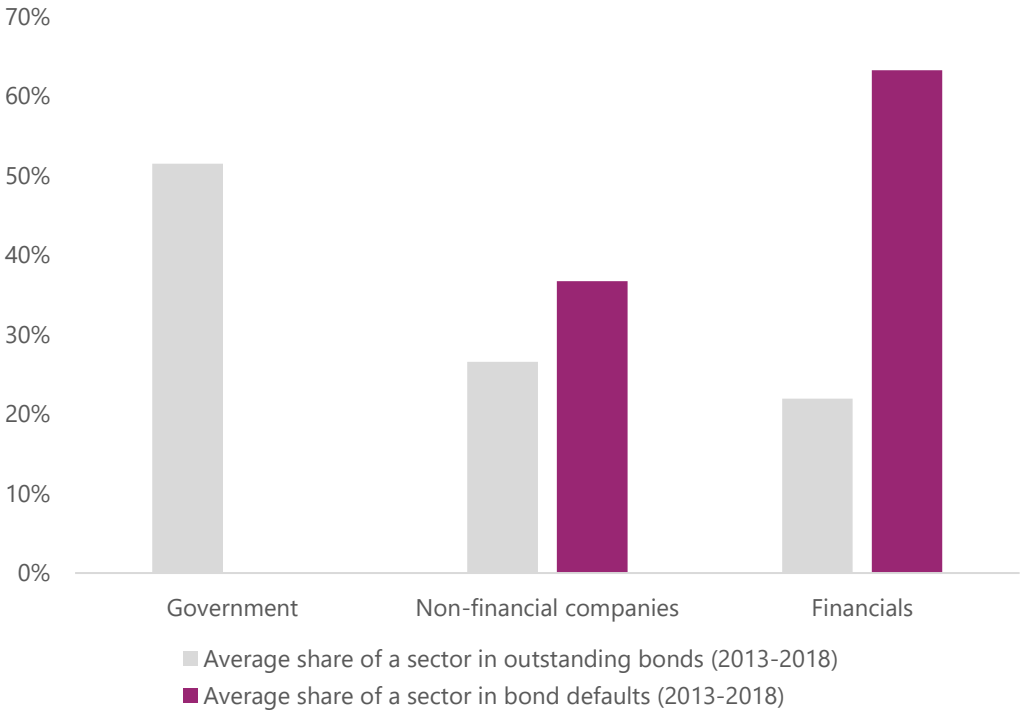
Figure 13. Distribution of defaulted entities by sector



"Other" includes soft industries, energy, paper, chemistry, telecom, IT, municipal governments, and those sectors difficult to classify.

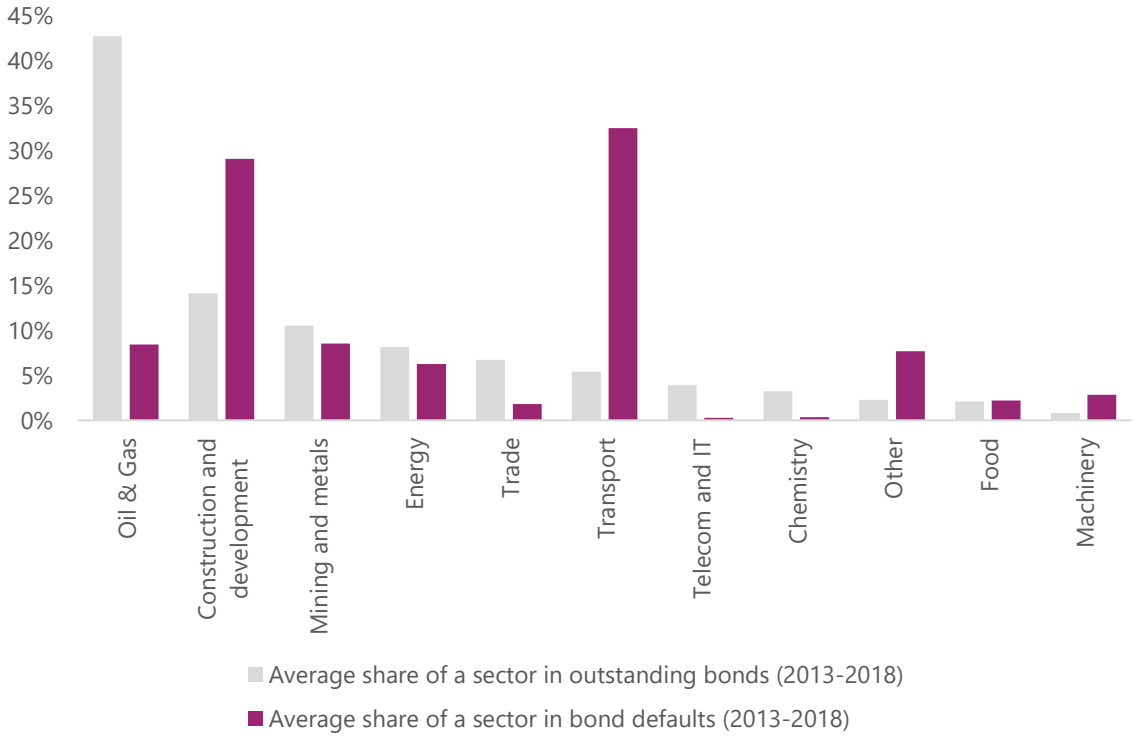
Source: Cbonds, ACRA

Figure 14. Average share of macrosectors in outstanding bonds vs average share of macrosectors in total non-serviced payments (2013-2018)



Source: Cbonds, ACRA

Figure 15. Average share of sectors in outstanding bonds vs average share of sectors in total non-serviced payments (2013-2018)

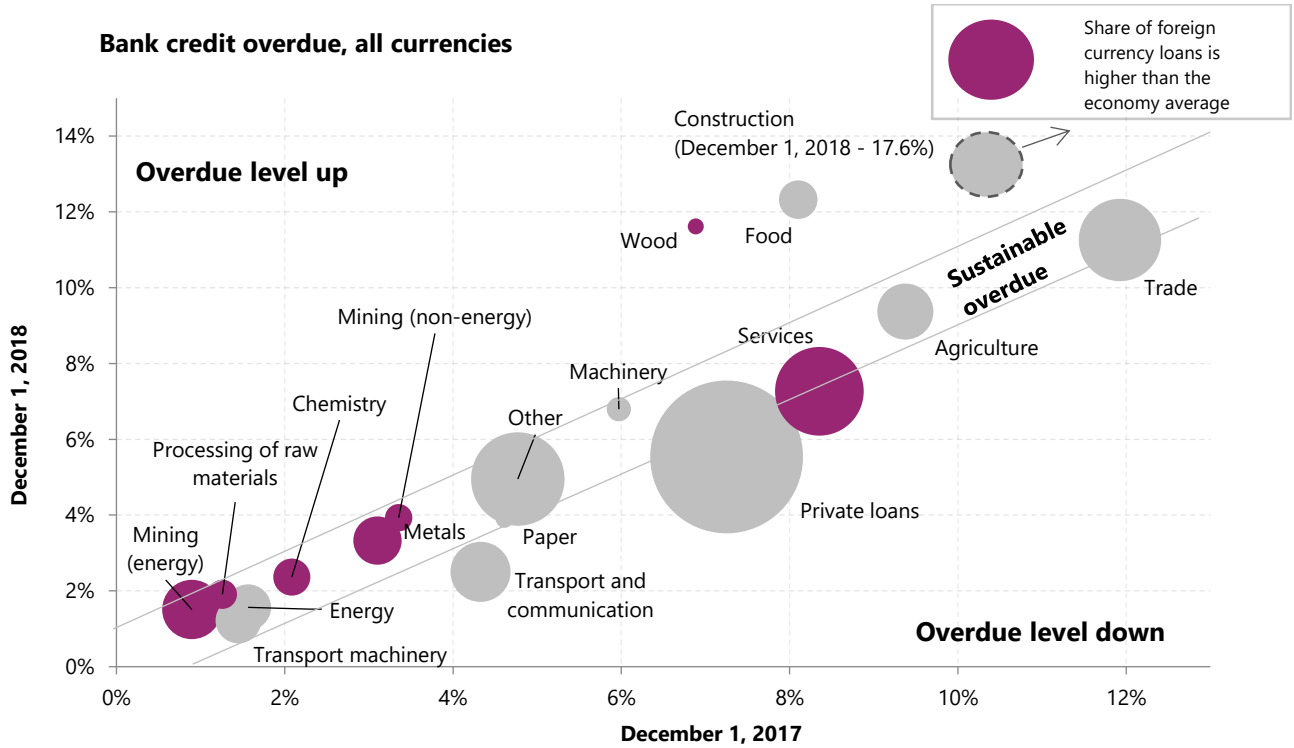


Source: Cbonds, ACRA

Sectoral perspective on credit risk in Russia

In the first approximation, aggregate overdue statistics of commercial banks stand as a trustworthy source of information about the difference in risk generated by industrial business specifics. Globally, it serves as a better source of information because it is less susceptible to a sample self-selection, meaning that in some sectors, only the most creditworthy companies obtain access to bond markets, which makes their visible credit risk less than total.

Figure 16. Credit quality has a persistent sectoral component, which is seen in how non-performing banking loans compressed back slowly after the crisis in 2015-2016



Source: Bank of Russia, ACRA

Overdue statistics are retrospective, but one can improve risk assessment using forward-looking features as well. To assess the industrial aspect of risk in detail, one should take into account at least the three following factors: cyclicality, entry barriers, and technological and overall development trends. These may be quite different in different countries' markets.

- Cyclicality may be approached both in terms of production volume and profitability, with the latter being a more fundamental indicator as it better reflects the ability to generate cash flows and, consequently, to service debt obligations. Investments rapidly respond to changes in the economic situation, which makes sectors fulfilling investment demand less predictable and more cyclical. In Russia, the lowest cyclicality is typical for infrastructure industries and sectors associated with the production of basic consumer goods, while the highest cyclicality is inherent in construction and mining industries.
- Companies in highly concentrated and capital intensive sectors with high entry barriers often boast greater stability in cash flows and profitability compared to enterprises representing highly competitive industries with minimal barriers. Less volatile cash flows and profitability have a positive effect on the credit profile of a

company. In Russia, the highest entry barriers are typical for oil & gas, metals and mining, power generation, as well as machinery production.

- Long-run development trends (as well as cyclical patterns) affect the production volume and profitability level of an industry. These may in turn affect the ability of companies to service debt obligations. Consolidation or deconsolidation processes, as well as overloaded or underutilized production capacities in a sector may have a significant impact on its prospects. In Russia, as in the rest of the world, relatively younger industries typically generate more credit risk and less physical capital, which is why they are less visible in a traditional financial market. Underutilized capacities, which were abundant in some industries in the first half of the 2000s, mostly disappeared. This lowered the ability of traditional sectors to expand quickly without costly fixed investments.

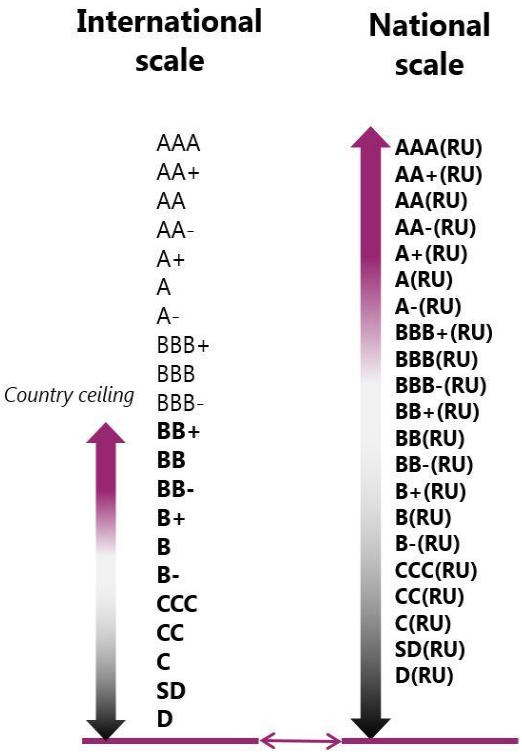
Table 3. Classification based on the long-run average of NPL's by industry in Russia

Group	Sector		
Group 1 (lowest risk)	Utilities	Transport infrastructure	Telecommunications
Group 2	Oil & Gas and Chemicals	Metals	Power generation
Group 3	Defense sector	Machinery	Mining
	Transportation	Retail trade	Agriculture
	Packaged food and beverages	Healthcare	IT & media
Group 4	Real estate	Paper and forest products	Oilfield services
Group 5 (highest risk)	Infrastructure construction	Residential construction	Wholesale trade

Source: ACRA

Assessing credit risk in Russia through credit ratings

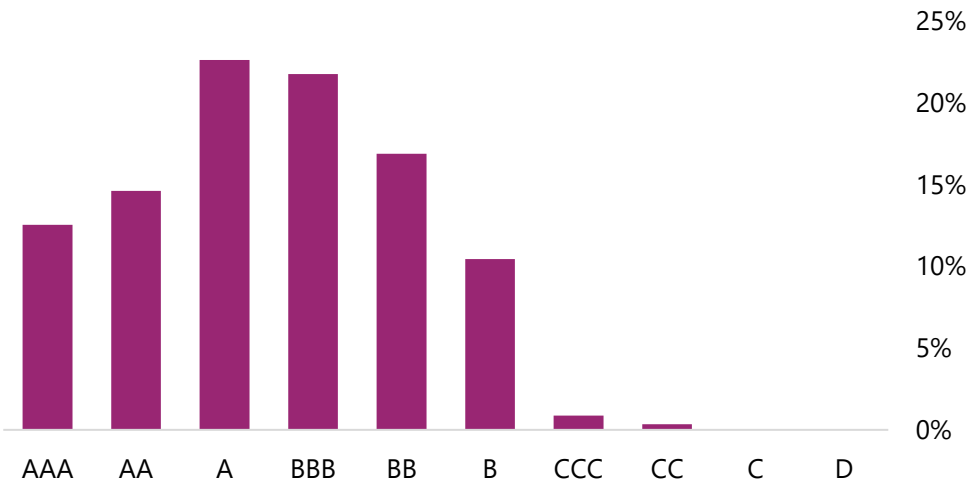
Public assessments of credit risk in Russia are provided by rating agencies. In 2015, the Central Bank of Russia adopted comparatively strict regulation for the credit rating industry, which led to a change in attitude towards national and international agencies (international agencies decided not to establish local subsidiaries). Currently there are two operational national agencies, ACRA and Expert, which issue ratings on a national scale. There are three global agencies traditionally covering companies that issue debt abroad. This is accomplished mainly using the international rating scale.



Inherent conceptual differences between scales make it somewhat difficult to directly compare ratings issued by the two types of agencies. National scale ratings aim at assessing the credit quality of domestic companies only – this is why the best possible resident debtors receive AAA ratings and not lower, as would be the case if they were compared with all companies worldwide. The central government in Russia is typically perceived as the best local debtor. The international rating scale (as opposed to the national scale) compares the creditworthiness of all borrowers around the world. The so-called country ceiling caps an issuer's rating at the sovereign level, which results in a strong rating scale compression in countries where the sovereign rating is not very high, i.e. borrowers of different qualities are assigned the same ratings. Regulators around the globe switch to national scale ratings to obtain better resolution in internal prudential policies.

In 2018, the national scale provided 21 possible ratings for Russian entities as opposed to the 11-12 possible ratings provided by the international scale (of which, only 6-7 are considered non-default). Around 85% of bonds in the Russian market have national scale ratings. Bonds with different ratings are normally priced differently. G-spreads usually demonstrate overall negative correlation with national scale ratings. However, it is not a highly reliable correlation in terms of credit quality signaling. National ratings correlate negatively with the realized probability of default.

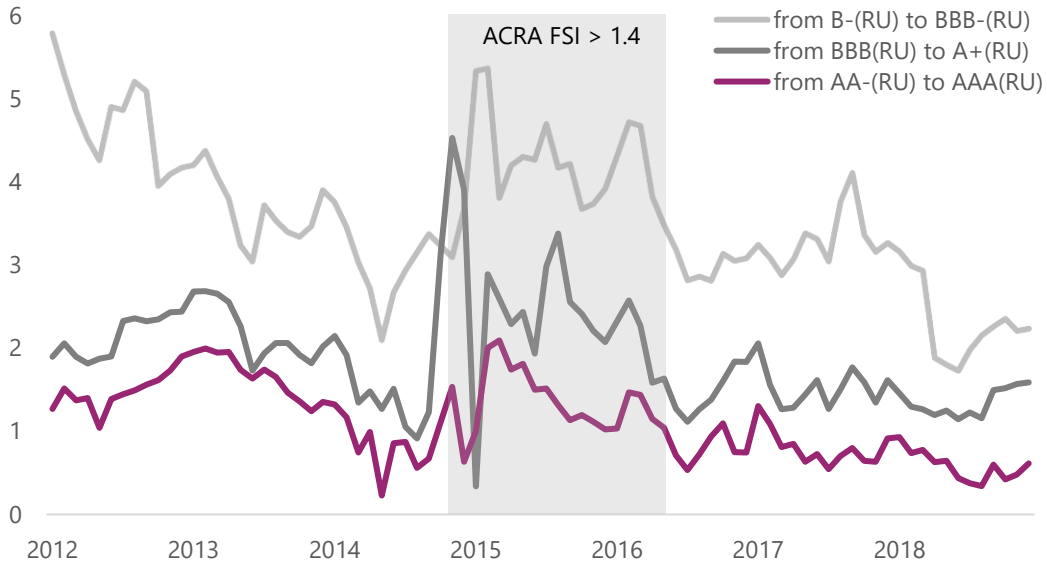
Figure 17. General distribution of rated entities by ratings on the national scale at the end of January 2019[8]



Source: ACRA, Expert

[8] For the sake of simplicity on this graph, rating steps are aggregated into categories. For example, a BBB rating includes BBB-, BBB, and BBB+ ratings. Data on the ratings of both ACRA's and Expert's issuers are used (excluding bond ratings).

Figure 18. Historical g-spreads for bonds of particular rating groups[9]



Source: Cbonds, ACRA

[9] ACRA FSI – financial stress index. For more information, see pages 18-19.

Systemic risk in the financial sector of Russia

Sectors which are highly dependent on short-term financing are those which are the most susceptible to liquidity shortages in the banking system, which is usually connected to systemic risk. Financial systems are interconnected and can contribute to more frequent defaults on the contract payments of agents in some markets to agents in others. Large-scale episodes of this kind (financial crises) can lead to disruptions in economic activity in the real sector (initially due to the emergence of local liquidity crises), which makes them a focal point of consideration in Russia or any other country.

Based on international experience, ACRA identifies five major external manifestations of financial stress:

For an extensive discussion of financial instability measurements, see the Methodology of ACRA's Financial Stress Index for Russia.

1. Uncertainty about the fundamental values of financial assets or commodities: this is correlated with the volatility of financial instrument prices and forces market participants to respond more energetically and expeditiously to any new information, even when it is irrelevant.
2. Lack of information on the behavior of other market participants: this can lead to misinterpretations of price dynamics and episodes of sudden and violent expectation adjustments.
3. Asymmetry of information about asset quality (seller knows more) or borrower quality (borrower is better informed): this occurs as a result of a growing spread in quality assessment and exacerbates problems of adverse selection and moral hazard, which in turn leads to eroded trust and more reluctant lending.
4. Flight to quality: the growing probability of losses forces investors to prefer less profitable and less risky investment mechanisms, which often triggers rapid changes in their relative prices.
5. Flight to liquidity: fewer lending opportunities create additional reasons to prefer more liquid assets necessary to meet the demand for cash gap financing.

Knowing that predicting episodes of high financial stress is practically impossible, we think that the adequate monitoring of coincident stress-indicators is the best one can achieve in order to correctly estimate the point-in-time risk of a particular liquidity-dependent entity.

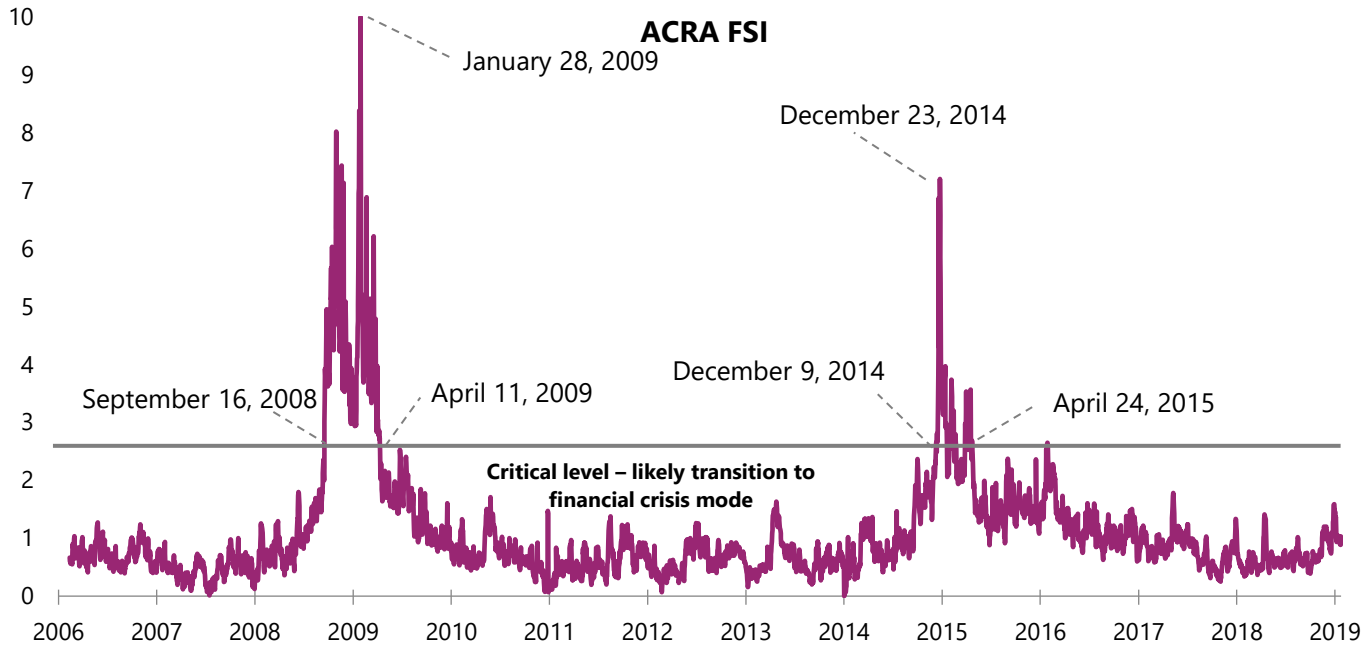
There are a number of rolling FSI indexes in Russia, of which there is only one which is public and freely distributed on a daily basis as of February 2019 – ACRA FSI.

The analysis of Index transition matrices allows index states that correspond to values to 2.5 or higher to be considered financial crises. Starting from this level, the probability that the Index will change by 0.5 or more within a week (with the median weekly change of 0.15) becomes steadily higher than the probability of it staying within the current range. In other words, stable Index states occur only when their values are low; elevated Index factor volatility is associated with high values.

Stable and unstable Index states correspond to different operating modes of the financial system. Distribution analyses of Index levels also speak in favor of the chosen threshold. Values in excess of 2.5 sampled between January 2006 and November 2018 occurred in less than 17% of cases. Thus, the Index exceeding the 2.5 threshold corresponds to those rarely occurring states of the financial system that are marked by great uncertainty and the high velocity of change with regards to rates, spreads, and prices.

The Index is constructed in a way that does not cap it from below or above. Its value dropping below zero is theoretically possible in a situation when individual factors drop to the levels below the historical input data (2006-2018). Index growth above 10 will indicate financial stresses more formidable than those observed in 2009 and 2015.

Figure 19. ACRA FSI dynamics for Russia in 2006-2018



Source: ACRA

How a foreign entity can invest in bonds in the Russian exchange

The Russian financial market has free capital flows, as there are no strict regulations that restrict foreigners from buying Russian fixed income assets. Russian bonds of comparable maturity are generally higher-risk and higher-yield than those issued by European or US companies. That is why many international risk-tolerant investors tend to buy them to diversify their portfolios. After the introduction of Euroclear and Clearstream, foreign investors have the ability to trade Russian bonds directly without any need to open special accounts in Russian banks or set up Russian subsidiaries. This opened the Russian capital market to foreign investors.

For more information on the sanctions and their effects, see ACRA's research "Changing economic policy is a main channel of sanctions influence on the Russian economy" from July 10, 2018.

There are several laws that regulate foreign investments in Russian securities, but they mostly relate to equity investments. For both equity and fixed income investments, there are external restrictions connected with western sanctions against Russian companies and banks. For instance, US residents are prohibited from buying public Russian bank bonds whose maturity is longer than 14 days, as well as some oil & gas company bonds with maturities over 60 days (for banks and companies in Sectoral Sanctions Identifications (SSI) list). If a Russian company is in the Specially Designated Nationals (SDN) list, then US residents cannot buy either stocks or bonds of any maturity issued by that company. Moreover, if any foreign company is dealing with a company in the SDN list, it may be subject to secondary US sanctions. As a result, all US assets of such a non-compliant foreign company are subject to freeze and its corresponding accounts in the USA are suspended (applicable to banks only). However, these secondary sanctions generally only relate to the military sector. Now, over 400 Russian companies and banks are sanctioned. For the full list of SND and SSI companies, see the OFAC sanctions list: https://sanctionssearch.ofac.treas.gov/. The EU, Canada, and Australia also raised their sanctions against Russia. In general they are similar to US sanctions and apply to the same companies.

Table 4. Taxes on operations with bonds for non-residents in the Russian market (DTT - Double Taxation Treaties)[10]

	Income from trade, buyback or principal repayment		Coupons	
	Individual	Entity	Individual	Entity
OFZs	30%	-	-	15%
Regional bonds	30%	-	-	15%
Municipal bonds	30%	-	-	9%/15%/DTT
Russian corporate bonds	30%	-	30%/DTT	20%/DTT
Eurobonds	30%	20%/DTT	30%/DTT	20%/DTT
Foreign corporate bonds	30%/DTT	-	30%/DTT	-

Source: MOEX, NSD, Tax Code of Russian Federation

[10] For more information on DTT, which aim to avoid double taxation of income and property, see https://www.nsd.ru/en/services/withholding_agent/in_nom/ and article 246.2 of the Russian Tax Code. Some foreign investors can get lower taxes in Russia, while the rest has to be paid in their jurisdiction.

Non-resident investors in Russian fixed income assets have to pay taxes. These taxes differ for companies and individuals and vary for different bond types (government bonds, corporate bonds, Eurobonds, etc.). Taxes on interest income on bonds are 15% for non-resident legal entities and 30% for non-resident individuals. For non-resident individuals who live in Russia for more than 183 days per year, the tax rate is 13%. For more information, refer to Table 4. However, this is general information on tax rates. For more information and special cases, refer to the Tax Code of the Russian Federation.

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