

# Financial markets in EMEs – what has changed in the last two decades

Central Bank of the Russian Federation

## Abstract

During the last two decades, financial market development in Russia was driven mainly by changes in monetary and fiscal policies rather than being itself the driver. The specifics of Russia's financial markets (the dominance of banks and big companies; an advanced FX segment; self-financing; a shallow government debt market; thin regulation) produced both positive and negative effects. On the one hand, the Russian financial sector has been more resilient to contagion effects than those of many advanced economies (AEs) and emerging market economies (EMEs). On the other hand, banks as the core of the system have needed more support in crisis times.

At the beginning of the century, owing to the low level of FMD, the central bank could influence the economy mainly by managing the exchange rate using FX interventions. The interest rate channel was underdeveloped. After the 2007–09 Great Financial Crisis, the interest rate channel started to gain importance along with the widening exchange rate corridor and a transition to a liquidity deficit. In 2013, the key rate and the interest rate corridor mode were introduced. Banks' adaptation to a stable liquidity deficit coincided with the implementation of asset and liability management (ALM) and, specifically, funds transfer pricing (FTP). Banks created individual internal transfer curves based on interbank loan rates, government bond zero coupon (OFZ) yields or their own estimates as a base for loan and deposit pricing. In effect, FTP has made transmission faster and synchronised it with the Bank of Russia key rate. The effect of overnight interest rates on long-term interest rates became more consistent. As a result, FMD has significantly contributed to the effectiveness of monetary transmission. Now interest and exchange rate channels remain the most developed while other channels (balance sheet, risk-taking) are less visible. They may become more influential in future, along with FMD.

In 2015–16, the Bank of Russia absorbed all excess liquidity caused by reserve fund spending under a corridor mode and thereby maintained further FMD. In addition, a number of Basel III regulations were implemented that incentivised banks to hold government and central bank bonds.

Traditional banks still dominate financial services because they have developed their own digital services, implemented new instruments and platform solutions, and are improving their business processes, while non-banks pose no serious threat to their profitability. However, in future, the role of fintech and big tech companies may become more important.

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## The Russian financial market through the lens of history and macroeconomic policy

In the 1990s, financial market development (FMD) in Russia started from scratch. The core segments (stock market, corporate<sup>1</sup> and government debt markets, money market and spot FX market) emerged on the back of the transition to the market economy. In this period, FMD was marked by hyperinflation and a lack of trust. To tame inflation, an orthodox stabilisation programme was established. This involved a fixed exchange rate (corridor) and a tight monetary and fiscal policy stance. The shift from monetary financing (1992–94) to debt financing (1995–98) led to the rapid growth of the short-term government debt market (GKO) and the FX forward market.<sup>2</sup> However, the economy remained vulnerable to domestic or external shocks. The financial turmoil of 1998 – a sizeable devaluation, a default on government debt and a banking crisis – set FMD back. At the same time, it laid the ground for the long-awaited recovery, which in turn gave FMD a new impetus.

The favourable external conditions of the early and mid-2000s not only let the authorities pay off debt in advance but also caused the exchange rate to overshoot, leading to a loss of competitiveness. In response, the Bank of Russia bought foreign currency while the government established a stabilisation fund in 2004 to accumulate windfall oil revenues. Although the floating exchange rate was managed within a narrow corridor, it was perceived by the public as fixed. The lifting of capital controls in 2006 led to an increase in capital inflows and, hence, rising pressure on the exchange rate. Economic growth was fast (5–8%) while inflation remained high (9–13%) but under control. In spite of low rouble money market rates, long-term rouble rates were much higher and depended on other factors. As a result, banks and companies preferred to borrow abroad on the back of attractive interest rate differentials, while foreign currency debt rocketed. When the Great Financial Crisis (GFC) hit, the Bank of Russia had to gradually devalue the rouble to alleviate the debt burden.

After the GFC, the transition to inflation targeting gained speed. The Bank of Russia gradually widened the exchange rate boundaries and optimised the operational framework. Consequently, rouble markets developed sufficiently for inflation targeting to be conducted. The floating exchange rate was introduced in November 2014, and inflation targeting began in January 2015 (as planned). Strong external shocks in 2014 exacerbated the problems with collateral and the remaining dominance of FX segments. To curb inflation and devaluation expectations, the Bank of Russia nearly doubled its key rate. As the interest rate channel had by then matured, rates and yields significantly rose as well. Notably, the monetary and fiscal authorities reacted to the latest crisis in different directions, opting for a “tight-loose” policy mix. Government expenses did not soar, deficits were financed with reserve fund spending, and debt issuance was still constrained by high yields. Moreover, a new fiscal rule was introduced in 2017, with the aim of smoothing out the effects of

<sup>1</sup> At the time, bills were used as substitutes for money to make payments and even to pay taxes.

<sup>2</sup> GKO were short-term coupon bonds. Soon, owing to high yields, they became attractive for non-residents, which hedged their purchases of GKO with three-month FX forwards. As a result, the market was prone to capital outflows.

oil price volatility.<sup>3</sup> In 2018, these operations were temporarily suspended because of capital outflows and heightened exchange rate volatility, then in 2019 they were resumed. Currently, FMD is constrained by sanctions, which, however, also make it immune to negative spillovers.

## The main drivers of FMD: the role of crises

During the last two decades, FMD was driven mainly by changes in monetary and fiscal policies rather than itself being their driver. Financial markets developed fast and in the 2010s, as the Bank of Russia moved from exchange rate to interest rate management (see Appendix Graph 1), they became mature enough for the implementation of inflation targeting.

The specifics of Russia's financial markets (the dominance of banks and big companies,<sup>4</sup> an advanced FX segment,<sup>5</sup> self-financing,<sup>6</sup> a shallow government debt market,<sup>7</sup> thin regulation<sup>8</sup>) have produced both positive and negative effects. On the one hand, the Russian financial sector has been more resilient to contagion effects than those of many advanced economies (AEs) and emerging markets (EMEs). On the other hand, banks as the core of the system have needed more support during a crisis.

The 2007–09 and 2014–15 crises exacerbated the problems of foreign currency liquidity availability<sup>9</sup> and collateral scarcity. As the banking sector moved to a liquidity deficit, collateral scarcity became critical in the moments when the structural liquidity deficit reached its peaks. In these circumstances, interest rates rocketed (see Graph 2 in the Appendix). In 2008–09, the Bank of Russia had to grant loans against non-

<sup>3</sup> The rule implies FX purchases by the Ministry of Finance if the oil price exceeds \$40 per barrel and FX sales otherwise.

<sup>4</sup> By nature, the Russian financial system is bank-based – domestic private credit to GDP amounts to 76% of GDP as of 2018. Institutional investors, such as pension funds or insurance companies, played a minor role (their share is less than 5%). All these, together with the conditions outlined above, accounted for the growth of mainly “bank-related” segments: deposits, loans, FX and money markets and FX derivatives. Also, historically, Russian financial markets were highly concentrated, and dominated by a number of big resource-extracting companies.

<sup>5</sup> High dollarisation, typical for emerging market countries, as well as a tightly managed exchange rate and elevated inflation were also favourable for the development of FX spot and forward markets and the dominance of the interbank FX market in the 2000s.

<sup>6</sup> Russian companies have tended to finance their investments with their own sources of funding or budgetary resources. This may be conditioned by the shallowness of financial market segments and high interest rates.

<sup>7</sup> During the last two decades, borrowings were either not needed (budget surpluses) or the Ministry of Finance was reluctant to borrow owing to high interest rates. In good times, the Ministry of Finance would accumulate reserve fund(s), absorbing excess demand and spending them when a crisis came.

<sup>8</sup> A legal framework was slow to emerge. Lax protection of property rights hindered the development of the market for years.

<sup>9</sup> In 2014, the Bank of Russia shifted to FX reverse operations (swaps, repos and loans) from FX interventions (which it conducted earlier in 2014). For a discussion, see Section 7: FMD, cross-border flows and the vulnerability to external shocks and global spillovers.

marketable assets or even offer them unsecured. In 2014–15 too, the largest amounts of liquidity were provided in the form of loans backed by non-marketable assets.

## The mutual influence of FMD on monetary policy implementation

**Exchange rate targeting (2002–08).** From the beginning of the 2000s to 2008, the Bank of Russia concentrated mainly on exchange rate management. In these circumstances, the Bank of Russia could only partially control interest rates (see Appendix Graph 2). The period gave rise to a number of new instruments: FX swaps, corporate bonds and interdealer repos. Nevertheless, the price of these rouble instruments was determined to a large extent by FX market dynamics.<sup>10</sup> Banks enjoyed comfortable liquidity conditions and did not need to actively interact in the money market. The painful experience of the 1998 crisis weaned the government away from the short-term segment (GKO). In addition, the government no longer needed to place large volumes of debt. As a result, the government debt market was shallow. Buy and hold strategies predominated throughout this period.

Thus, the favourable external environment and the policy mix of the time contributed to the development of FX segments while the rouble money market or the government debt market were less in demand and, as a result, less liquid.

**Transition to inflation targeting: dual system (2009–14).** After the GFC, the transition to a floating exchange rate regime gained speed. The Bank of Russia started expanding the exchange rate boundaries. The growing volatility of exchange rate set the ground for the development of FX derivatives. The declining involvement of the Bank of Russia in the FX market also gave a free hand to liquidity-absorbing forces (rising cash in circulation and budget surpluses), which led to a structural deficit in 2012. Stable demand for liquidity as well as the Bank of Russia's measures to optimise the operational framework<sup>11</sup> contributed to the development of the interbank lending market. Nevertheless, even the minimally managed exchange rate was not fully compatible with an independent monetary policy under this regime. It became more difficult to influence the economy via interest rates to achieve the inflation target and anchor inflation expectations. In general, however, the degree of FMD in this period was sufficient for the introduction of inflation targeting.

**Full-fledged inflation targeting (2015–19).** In 2015–16, unsterilised reserve fund spending generated a liquidity surplus. Other countries in similar situations have usually remunerated bank reserves and/or introduced a floor system. The Bank of Russia, instead, tried to absorb all excess liquidity under a corridor mode and

<sup>10</sup> For instance, the principal of corporate bonds was denominated in roubles but their coupons were linked to the USD/RUB exchange rate. The FX part of the money market outpaced the rouble one too.

<sup>11</sup> The Bank of Russia created the framework for inflation targeting (planned to be completed by 2015), including an interest rate corridor with the key rate in the centre. In this period, the Bank of Russia ceased to conduct repo auctions twice a day, gradually shifting to one-week auctions, and got rid of redundant facilities. These helped simplify the operational framework and brought it closer to those used by inflation targeters.

succeeded. In addition, a number of Basel III regulations were implemented.<sup>12</sup> The implications were, however, less severe for corporate bond market and short-term uncollateralised segments than in AEs.

After 2015, activity in the overnight rouble interbank market declined but remained sufficient to be an operationally important segment for the central bank. At the same time, the repo segment (especially against the pool of collateral and with the central counterparty) developed fast. In the new context of a floating exchange rate, low inflation and low interest rates, Russian banks have struggled to hedge interest rate risks and face legal issues with hedging the foreign currency risks of corporate customers. At the same time, as compared with other countries, interest rates (especially real ones) were high, which brought non-residents back to the market. While FX borrowing became more complicated for residents due to sanctions, non-resident flows went into government debt (OFZ).<sup>13</sup> Currently, the share of non-residents in OFZ amounts to almost 30%. At the same time, market volatility is lower than in other EMEs.

In this period, notwithstanding a structural liquidity surplus, the Bank of Russia has managed to maintain the effectiveness of its operational framework by preserving an interest rate corridor. Households, firms and banks have adapted to a flexible exchange rate, and interest rate risk has become an issue in the absence of liquid markets to hedge it.

## FMD and monetary transmission

Over the last two decades, monetary transmission has significantly improved. At the beginning of the century, owing to both the low level of FMD and weak exchange rate targeting, the central bank influenced the economy mainly by the level of exchange rate and the volume of FX interventions. The interest rate channel was underdeveloped. The Bank of Russia was able to set the floor for interest rates,<sup>14</sup> using deposit auctions and central bank bonds. Nevertheless, interbank interest rates were much lower than other yields in the financial market and experienced large swings. The rouble money market was weak and unconnected to other financial market segments.

The interest rate channel started to gain importance after the 2008–09 crisis, along with the widening exchange rate corridor and the transition to a liquidity deficit. In 2013, the key rate and the interest rate corridor mode were introduced. Banks' adaptation to a stable liquidity deficit coincided with the implementation of asset and liability management (ALM) and, specifically, funds transfer pricing (FTP). Banks created individual internal transfer curves based on interbank loan rates, OFZ yields

<sup>12</sup> Specifically, the Basel III regulations incentivised banks to hold government and central bank bonds.

<sup>13</sup> In Russia, foreign investors conducted carry trades of two different types: (i) positions in the FX market: exchanging foreign currency (dollars) for roubles in the spot market and selling them on through FX swaps; (ii) fixed income/equity positions: exchanging foreign currency (dollars) for roubles in the spot market and buying rouble assets.

<sup>14</sup> The key policy rate did not exist at the time. The Bank of Russia's refinancing rate played the principal role. Nevertheless, some banks linked their deposit rates to the refinancing rate, so that a weak transmission through the interest rate channel may have existed.

or their own estimates as the basis for loan and deposit pricing. In effect, FTP has made transmission faster and synchronised it with the Bank of Russia key rate. The development of the government bond market<sup>15</sup> also contributed to the efficiency of the transmission mechanism. Owing to the development of interest rate swaps (OIS), the effect of overnight interest rates on long-term interest rates became more stable. Also during the past decade, long-term loans with floating rates have become more widely used.

Thus, FMD contributed significantly to the effectiveness of the monetary transmission channel. The interest and exchange rate channels are currently the most developed while others (the balance sheet channel and risk-taking channel) are less visible. They may become more influential in future, in parallel with FMD.

## Financial market indicators for calibrating monetary policy

**Indicators of operational framework.** Under inflation targeting, the Bank of Russia regards the money market (interbank unsecured lending) interest rate as its operational target. In official communications, it does not specify precisely which rate this is, but the most informative for liquidity management purposes are the two rates estimated from statistics reported by banks: MIACR<sup>16</sup> and RUONIA.<sup>17</sup> Substantial deviations of these rates from the key rate may point to discrepancies between the supply of liquidity and demand and be an argument in favour of a fine-tuning operation (FTO).

**Indicators of interest rate expectations, country risk premium and others.** To estimate market participants' expectations of future policy decisions, the Bank of Russia considers a number of interest rate derivatives: MosPrime<sup>18</sup> forward rate agreements, futures on RUONIA and overnight RUSFAR.<sup>19</sup> Other derivatives are also useful in the monetary policy decision-making process: credit default swap spreads as a measure of the country risk premium, option-implied currency and stock market volatility, and others. In the next few years, due to the global reform of market interest rate indicators, some new indicators for the Russian money and derivative markets may emerge. This may alter the relative importance of the various interest rates that now prevail.

<sup>15</sup> In 2013, the government bond (OFZ) market was liberalised: non-residents gained access to the Russian market through Euroclear and Clearstream.

<sup>16</sup> MIACR (Moscow Interbank Actual Credit Rate) reflects the cost of unsecured overnight rouble borrowing by banks. MIACR is calculated by the Bank of Russia on the basis of the information on actual market transactions.

<sup>17</sup> RUONIA (Rouble Overnight Index Average) reflects the cost of unsecured overnight rouble borrowing by banks with a minimum credit risk. RUONIA is calculated by the Bank of Russia on the basis of the information on actual market transactions.

<sup>18</sup> MosPrime (Moscow Prime Offered Rate) is the National Foreign Exchange Association (NFEA) fixing of reference rate based on the offer rates of Russian rouble deposits as quoted by contributor banks – the leading participants of the Russian money market.

<sup>19</sup> The RUSFAR (Russian Secured Funding Average Rate) family of indicators is calculated based on trades and orders for REPO with Central Counter-Party (CCP), secured via General Collateral Certificates (GCP).

**Indicators of inflation expectations.** In 2015, the government issued bonds linked to inflation (OFZ-IN). The Bank of Russia extracts financial market inflation expectations from their yields (see Graph 3). However, the amount outstanding is small, totalling in 2019 only 0.3% of GDP (only two issues are in circulation so far).

## FMD and monetary policy communication

In recent years, the Bank of Russia has taken a large step towards transparency, actively using forward guidance in its official communication. It now publishes a wide range of materials on the Bank of Russia website that explain the strategy and the reasons for decisions, including press releases, the Monetary Policy Report, the Guidelines of the Single State Monetary Policy, and economic and financial market outlooks. Press conferences are regularly held, and public speeches by the Bank of Russia's management or comments on topical issues are given and so on.

## FMD, cross-border flows and the vulnerability to external shocks and global spillovers

Up to 2008, high inflation, the appreciating rouble, the shallowness of financial markets and cheap dollar funding all pushed Russian banks and corporates to borrow abroad. In other words, falling government debt and budget surpluses coincided with the massive accumulation of foreign currency debt by the private sector. Growing foreign currency imbalances severely constrained the policy space. The authorities could only partly meet the challenges of this period – the available instruments (to influence exchange rate dynamics, absorb liquidity and prevent the economy from overheating) were not sufficient to avoid a hard FX landing. As a result, the Russian financial markets were dramatically hit by the sudden stop of capital inflows in 2008. Soon the country became unable to service its foreign currency debts, and the Bank of Russia had to gradually devalue the currency, running down its international reserves and deepening the recession.

In 2014, high corporate foreign currency indebtedness again limited policy space. Owing to sanctions and falling oil prices, Russian banks became short of foreign currency liquidity. In response, the central bank promoted deleveraging. At first, it stepped up its FX interventions and then started to lend foreign currency liquidity.<sup>20</sup> Notably, capital controls were never considered an option after they were lifted in 2006. As the economy's heavy dependence on foreign currency is a risk factor for financial stability, the Bank of Russia encouraged the de-dollarisation of the Russian financial sector. It imposed increased reserve requirements on banks for liabilities in foreign currency to residents and non-resident legal entities as well as higher capital risk weights for foreign currency loans. Since 2016, reserve ratios on liabilities in foreign currency have been increased four times. Capital risk weights for bank foreign currency exposures have been increased from July 2018. In order to encourage de-dollarisation, as of July 2019, the Bank of Russia increased the compulsory reserve

<sup>20</sup> The Bank of Russia used reverse (sell-buy) FX swaps, FX repo auctions and FX loans secured by the pledge of claims on loans in foreign currency.

ratio for obligations to individuals in foreign currency from 7% to 8%. In addition, an amendment is under discussion of the current legislation aimed at increasing deposit insurance premiums for deposits in foreign currency with high rates.

## FMD, derivatives and shadow banking

The experience of a number of EMEs shows that risks can spread through derivatives and offshore markets, leading to higher exchange rate volatility. For example, in 1997–98, Thailand, Malaysia, Indonesia, the Philippines, Korea and Singapore implemented a number of measures to dampen speculation in offshore segments of the FX market. By contrast, Russia has not faced any risks of contagion through derivatives or offshore segments owing to the small size of these markets. Currently, the FX segment dominates the Russian derivatives market, with a 97% share. Overall, the Russian derivative market provides insurance against FX risks but market participants are still unable to fully hedge their interest rate risks.

In EMEs (excluding China), the share of other financial institutions (OFIs) and shadow banking tends to be much smaller than that of the traditional banking system. This may be the result of lower FMD accompanied by low financial literacy and weak overall trust in the financial system. For example, in Russia the share of OFI assets is slightly more than 5% of total financial system assets whereas actual shadow banking (ie companies that pose financial stability risks) accounts for less than 4%. This is much lower than in the majority of developed countries. Therefore, the shadow banking sector was not traditionally considered to be a significant source of systemic risk. Still, the Bank of Russia continuously monitors the perimeter of regulation, which includes constant assessment of innovations in the financial market, including those stemming from the growth of fintech.

Investment funds are estimated to account for the largest part of shadow banking activities globally, but their nominal growth has almost stopped recently. Yet, other shadow banking activities are flourishing, such as the provision of long-term lending based on short-term funding. The entities that perform these activities include finance companies such as leasing, factoring and microfinance institutions. The growth of this sector is most marked in China, India and Russia. Globally, the share of EMEs in this sector is around 25% (with the United States dominating the global share at more than 30%). For Russia, the overall size of leasing, factoring and microfinance companies accounts for an estimated 69% of the shadow banking sector. For comparison, the investment fund sector accounts for only around 2% of financial system assets. Therefore, reforms aimed at improving the resilience of leasing companies could be considered a key area for reducing shadow banking risks in Russia.

Finance companies are very susceptible to regulatory arbitrage. Indeed, with the tightening of banking regulation after the Great Financial Crisis, lending activities have become more attractive to unregulated entities. However, this is not the case in Russia. In 2013, the Bank of Russia became a lead regulator. Currently, the Bank of Russia sees no significant trend towards the migration of credit activities into the non-bank sector. Moreover, the Bank of Russia seeks to reduce the scope for regulatory arbitrage by taking a regulatory approach to microfinance institutions that is similar to one taken vis-à-vis banks (ie risk-oriented supervision). For example, measures based on debt-to-income ratios are also applied to microfinance companies.



FMD by increasing financial inclusion will undoubtedly further increase the role of non-bank financial intermediation, including shadow banking. The recently observed decline according to some indications was reversed in early 2019 by rebounding global markets.

## The influence of fintech and big tech developments on financial stability

Fintech and big tech developments, including large third-party payment companies and global stablecoins have the potential to transform the financial industry, and in doing so influence the effectiveness of macroprudential measures and the monetary policy transmission. Many new fintech players (such as robo-advisors, P2P lenders, payment providers etc) are now competing directly with banks in many of their core functions.

Currently, the volume of financial operations of fintech and big tech firms is limited, as is their effect on financial stability. However, their swift growth could change this situation. Greater competition from fintechs could sap the profitability of other entities, erode capital and lead to a higher tolerance for risk. Fintech and big tech firms may also cause financial stability concerns by creating dependencies on certain critical services (or third-party dependencies), increasing contagion and concentration risks. Some fintech applications such as robo-advice could depend on the same algorithms and gain information from the same services (moreover, such algorithms may not accurately distinguish fake news from sound information, and therefore might execute faulty investment decisions). Prolonged disruptions in such services (eg due to cyber attacks or system failures) might generate significant systemic stress. Contagion could occur due to concentration risk among financial market players (both banks and fintech/big tech companies).

In Russia, technical innovations affect virtually all banking products. At the same time, the competition from non-banks is less severe than in AEs since big banks are developing their own digital services, implementing new instruments and platform solutions, and improving their business processes. As a result, traditional banks still dominate financial services, and new actors pose no serious threat to their profitability. However, in future, the role of fintech and big tech companies may become more important.

## The role of macroprudential policy in mitigating financial stability risks

In Russia, financial stability concerns have been mainly connected with traditional market segments (FX market, rouble and foreign currency bank loans) rather than with the newer phenomena (shadow banking, derivatives and securitisation, fintech).

The experience of Russia has shown that, to mitigate changing financial stability risks, it is necessary to safeguard strong macroeconomic fundamentals and conduct forward-looking macroprudential policies to reduce dollarisation and to limit the impact of potential risks and spillovers. The resilience of the Russian economy against

external challenges has increased in recent years due to improvements in macroeconomic fundamentals (transition to a budget surplus, increase in the current account surplus, falling inflation, decrease in external debt, growing international reserves). The Bank of Russia also has a wide range of macroprudential measures to mitigate potential shocks from capital flow reversals.<sup>21</sup>

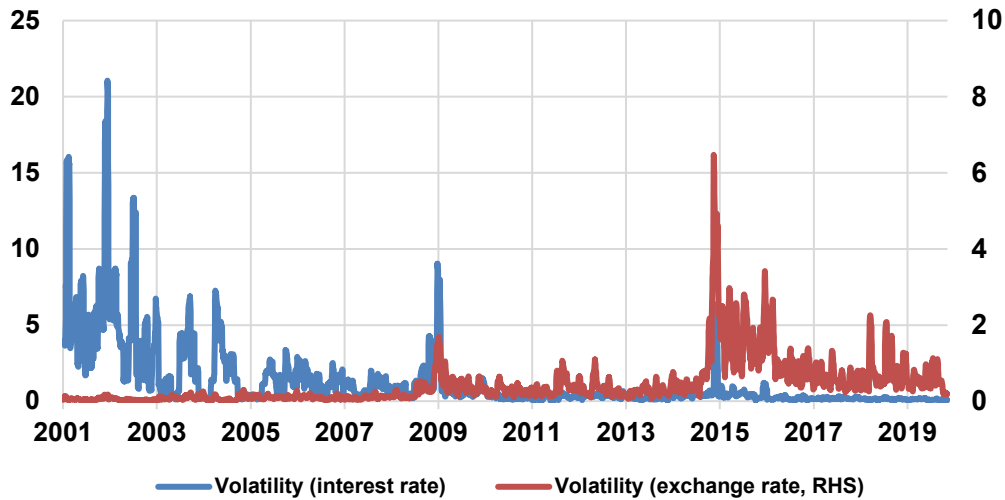
The Bank of Russia's experience shows that the efficiency of increased capital risk weights in curbing growth of unsecured consumer lending was limited, at least in the years 2011–13. By mid-2012, the annual growth rate of unsecured consumer lending exceeded the 50% threshold (while the overall lending growth rate was below 30%). In January 2013 to January 2014, in order to restrain further unsecured lending growth, the Bank of Russia took a number of steps to increase capital risk weights and tighten the provisioning requirements for unsecured consumer loans. Capital risk weights were differentiated based on the level of effective lending rates for loans. Since the transition to inflation targeting, the rouble has shifted to a floating exchange rate. The Bank of Russia does not intervene to support any specific exchange rate. The budget rule unpegs the rouble from the oil process, makes interventions more predictable and stabilises the domestic currency.

<sup>21</sup> See Chapter 7 (FMD, cross-border flows and the vulnerability to external shocks and global spillovers).

## Appendix

Changing operational targets: from exchange rate to money market interest rate

Graph 1

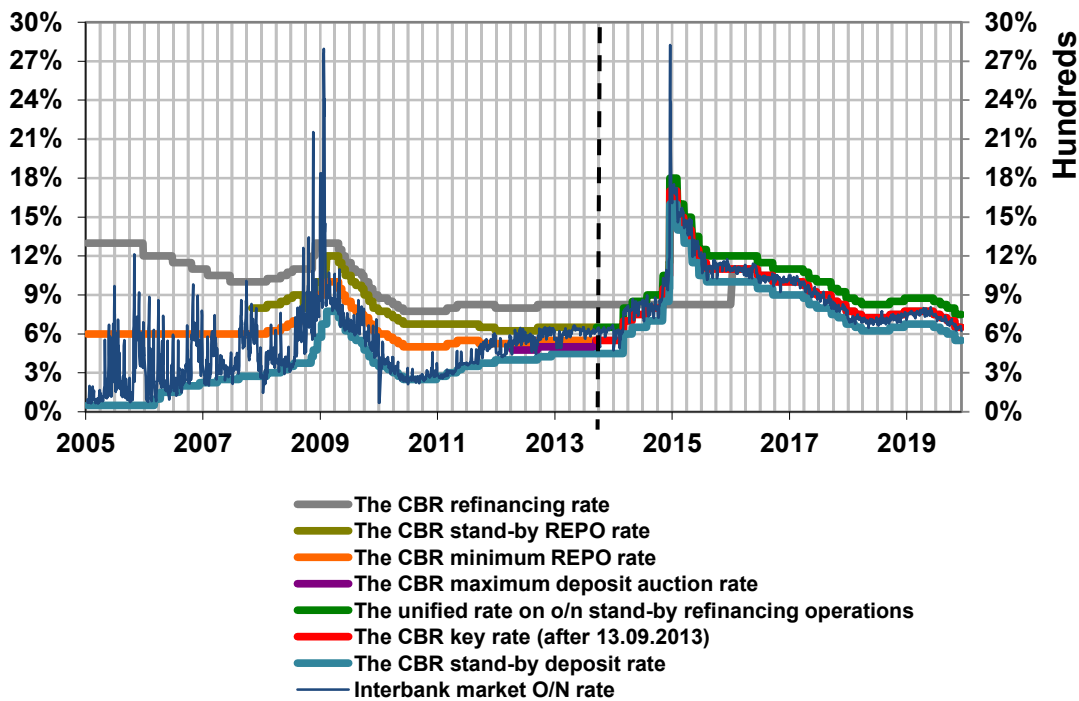


Note: volatility was estimated as a 20-day standard deviation moving average.

Source: Bloomberg.

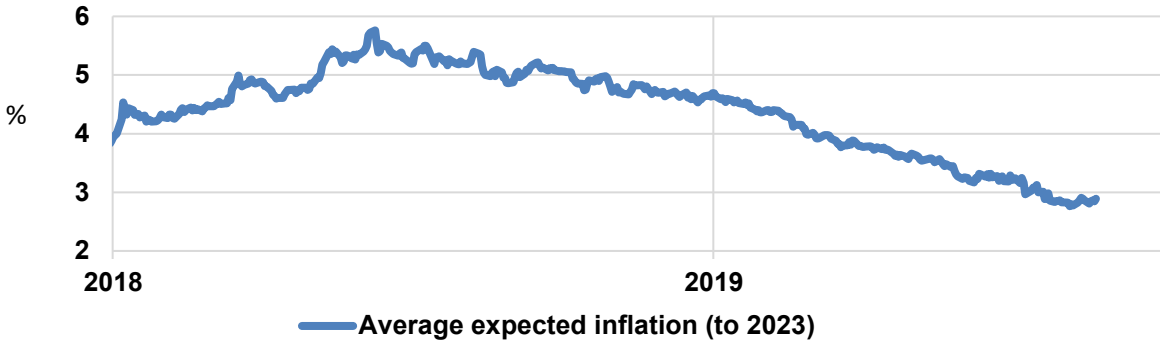
Operational framework

Graph 2



Note: volatility was estimated as a 20-day standard deviation moving average.

Sources: Bank of Russia; Bloomberg.



Note: each point in the graph corresponds to a value of perceived inflation, estimated as an average from that point to 2023 (maturity date).  
Source: Bank of Russia estimates.