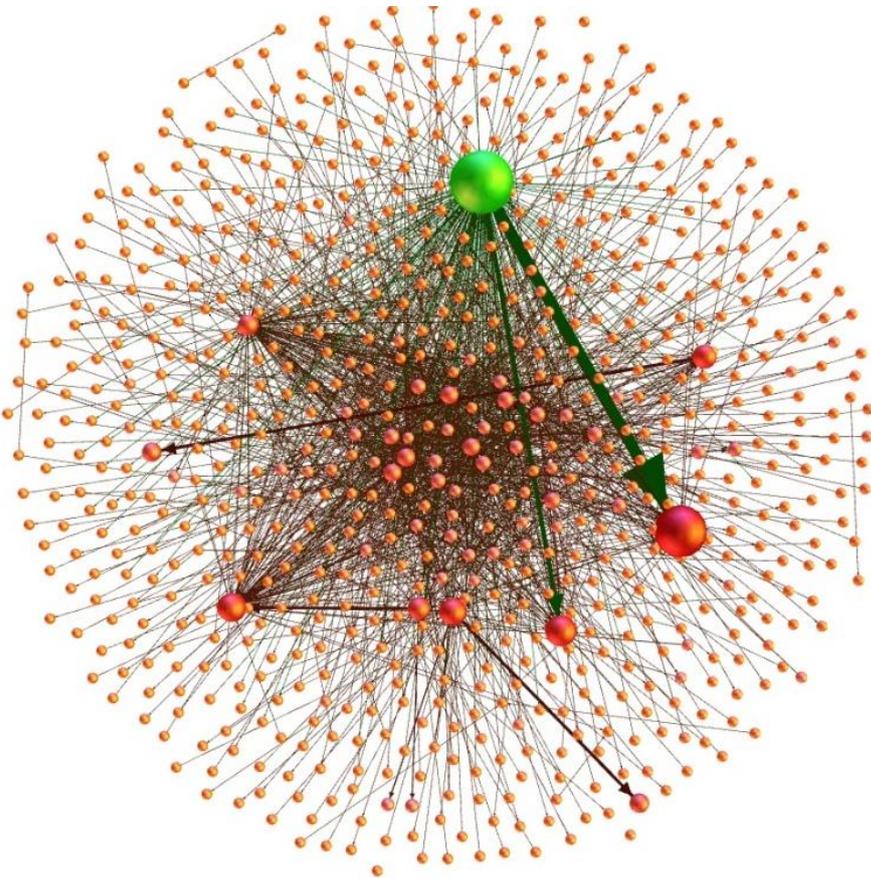


Quarter 3, 2014

# Money Market Review



The Central Bank of the  
Russian Federation (Bank  
of Russia)

This Review was prepared by the Bank of Russia Financial Stability Department

The statistics used in the Review and the methodological comments are published on the Bank of Russia website under Financial Stability:

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Comments and suggestions on the Review's structure and contents are welcome at: [reports@cbr.ru](mailto:reports@cbr.ru).



*All references to this Bank of Russia document should be appropriately cited*

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## Contents

Purpose of the Money Market Review .....	<b>Ошибка! Закладка не определена.</b>
Summary .....	8
Key events in the money market.....	100
1. Money market conditions and trends .....	12
1.1. Money market structure and conditions .....	122
1.2. Liquidity transmission among groups of money market participants .....	144
1.3. FX liquidity squeeze in the money market .....	15
2. Money market systemic risk.....	177
2.1. Money market stress testing .....	177
2.2. Marketable asset encumbrance and collateral risk .....	200
2.3. Liquidity risk and monitoring the liquidity coverage ratio of Russian banks.....	200
2.4. International payment system risk and risk of SWIFT disconnection.....	222
3. Development of money market infrastructure and instruments .....	255
3.1. Financial Derivatives Committee: progress report.....	255
3.2. Regulatory changes in the operations of Russian trade repositories.....	27
3.3. Results of FSB Feasibility Study on Aggregation of OTC Derivatives Trade Repository Data...	299

**List of charts**

Chart 1. Value of open positions in the money market with maturities of up to 7 days .....	122
Chart 2. Structure of open positions in the money market with maturities of up to 7 days .....	122
Chart 3. Maturity breakdown of the OTC repo market. ....	133
Chart 4. Maturity breakdown of the FX swap market. ....	13
Chart 5. Net positions of various groups of banks in the interbank lending market.....	144
Chart 6. Net positions of various groups of banks in the swap market.....	14
Chart 7. Bank of Russia interest rate corridor and money market rates.....	155
Chart 8. US dollar short-term borrowing rate and volumes in the interbank lending market .....	15
Chart 9. Money market actual network.....	18
Chart 10. Money market modified network .....	188
Chart 11. Bank debt to the Bank of Russia and marketable asset utilization ratio .....	200
Chart 12. Marketable asset utilization ratio .....	200

**List of tables**

Table 1. Structure and growth rates of money market segments .....12

Table 2. Comparative results of stress testing.....19

**List of boxes**

Box 1. The OTC secured money market (repos and swaps) .....	133
Box 2. Market participants' perception of the interbank lending market.....	166
Box 3. New approaches to money market stress testing.....	17
Box 4. Stress testing methodology with regard to potential changes to network configuration .....	188
Box 5. Financial messaging systems analogous to SWIFT .....	244
Box 6. Centralized clearing of financial derivatives in foreign jurisdictions .....	27

### **Purpose of the Money Market Review**

In this Review, the money market includes the interbank lending market, the FX swap market, and the interdealer repo market. The focus is somewhat more on the repo market due to its cross-sectoral nature. The Bank of Russia is committed to promoting money market development to achieve the following:

- A stable environment for liquidity redistribution, i.e. with acceptable volatility of short-term interest rates and smoother changes in transaction values;
- Equal access to liquidity for market participants;
- Counterparty risk minimized through sound collateral management;
- The balanced development of various market segments, specifically, a full-fledged segment beyond overnight maturities;
- A favourable environment for the development of the CCP-cleared market.

### **The importance of money market monitoring is underpinned by the following:**

- The money market plays a key role in banking intermediation, which provides for on-going conversion of short-term borrowings into long-term loans to the economy; its uninterrupted functioning enables banks to refinance their liabilities continuously and efficiently use their capital to provide funding to the economy;
- The money market is the first to come under pressure in case of a financial turmoil, therefore, its parameters may serve as early warning indicators;
- The money market is crucial in the intragroup operations of financial groups and conglomerates, which require close attention under consolidated supervision;
- The money market, in its interdealer repo and swap segments, may concentrate financial sector systemic risks, because its players include not only banks but also non-bank professional securities market participants;
- Money market trends are a good indication of liquidity conditions in the banking sector;
- Potential disruption of the money market and panic sales of collateral would significantly push up the cost of market funding and make it more difficult for non-financial entities to access it;
- Money market conditions affect the central bank's capacity to manage banking sector liquidity and short-term interest rates.

In view of the money market's importance for financial stability, the Bank of Russia issues **regular quarterly reviews** of its developments and the level of systemic risk.

**The ultimate purpose of this publication** is to promote financial stability by minimizing systemic liquidity risk via enhancing money market transparency. A better awareness of the market structure and trends will allow market participants to improve their perception and assessment of their own risks. Moreover, the Bank of Russia seeks to communicate to market participants potential collective implications of their individual investment decisions in case of domino effects that are not quite fully addressed in market risk assessments.

**The Review, rather than being a Bank of Russia official publication**, is a research paper focused on the analysis of market developments in the period under review. The latest reported data are given as of the last business day of the quarter, while potential material events after the reporting date are excluded from the analysis. The Review is available in Russian and English on the Bank of Russia website.

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## SUMMARY

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- The total value of outstanding trade in the interbank lending, swap and repo markets stood at about 2.1 trillion rubles early in the third quarter of 2014, to increase to 2.7 trillion rubles by the end of the quarter. The interbank lending and repo markets expanded more rapidly, with their average volume of open positions increasing by 40% year on year in October 2014. Swap trade grew at a lower rate (adding 7% on October 2013), bringing the share of this segment down to 57% of the total interbank lending market trade. This dynamics of money market open positions can be attributed, in particular, to higher availability of short-term ruble liquidity, amid heightened demand for FX liquidity.
- Cash flows in government accounts and changes in currency in circulation had a minor positive impact on banking sector liquidity. Amid higher demand of credit institutions for balances in correspondent and deposit accounts with the Bank of Russia, the bank debt under refinancing operations edged up from 5.2 trillion rubles to 5.3 trillion rubles, while the structure of their debt showed a growing share of loans secured by non-marketable assets and guarantees. As a result, the utilization ratio for marketable assets (the share of encumbered collateral) declined, improving bank resilience to liquidity risk.
- Conditions in the interbank lending and swap segments were driven by market participants' increased demand for foreign currency. In July 2014, the USA and the European Union imposed sanctions on a number of Russian largest banks, restricting their access to international debt markets. As a result, FX liquidity supply in the banking sector shrank, driving up the cost of FX borrowings in the interbank lending and swap markets, and contracting the volumes of interbank FX trade. On 17 September 2014, the Bank of Russian launched its FX swap facility to sell US dollars for rubles. As of 30 September, this facility provided \$581 million (as of 7 October 2014, \$137 million). This new Bank of Russia instrument helped to normalize the situation in the money market by mitigating dollar liquidity risk, as reflected in a narrower spread between the RUONIA rate and the NFEA FX swap rate.
- The results of money market stress testing suggest that the Bank of Russia refinancing capacity is sufficient to withstand potential shocks affecting the money market. However, a limited number of participants may lack collateral to secure Bank of Russia funding if they face a shortage of liquidity. Liquidity scarcity may aggravate if periphery banks lose access to the interbank lending market.
- Russia plans to phase in the liquidity coverage ratio (LCR). The Bank of Russia intends to implement the LCR as a prudential requirement from 1 July 2015, which leaves enough time for the banking community to get prepared for this new approach to liquidity risk management. The Bank of Russia is now considering what banks this ratio will apply to. It is envisaged that in the first stage it will apply to the largest Russian banks of systemic

importance. At present, the Bank of Russia is designing contracted credit lines to be completed in 2015.

- Sanctions targeting a number of largest Russian banks and calls from politicians in certain countries to switch off Russian credit institutions from the SWIFT system brought to light the issue of risks associated with the servicing of Russian entities by international payment systems. However, even if it is impossible to use the SWIFT network, internal transfers in rubles may be done via the Bank of Russia payment system. To make FX transfers, Russian banks may exchange messages using back-up technologies: the Bank-Client system, fax and telex. In addition, work is currently under way to build an integrated national infrastructure to support payment and other financial message exchange.
- The SRO NSMA Financial Derivatives Committee in its meetings in the third quarter of 2014 decided on a range of over-the-counter instruments to be subsequently subject to centralized clearing. In the first stage, the Committee suggests including only interest rate derivatives (OIS, IRS) in the clearing pool, to be later joined by cross currency interest rate swaps (XCCY), FX swaps and FX forwards. In the final stage, centralized clearing should cover FX options and equity options. Until the Russian Central Counterparty (hereinafter CCP) is recognized by foreign regulators (ESMA primarily), the Committee thinks it would be advisable to encourage centralized clearing by easing capital requirements for participants.
- On 1 October 2014, Bank of Russia Ordinance No. 3382-U of 17 September 2014, 'On Amending Bank of Russia Ordinance No. 3253-U of 30 April 2014', which sets forth new regulatory requirements for the operations of Russian repositories. Specifically, the document lists legal entities obliged to report to a repository and prescribes their obligation effective from 1 April 2015 to report financial derivatives contracts to a repository on top of reporting repo and FX contracts. Further on, for close-out netting purposes, the repository shall be authorized to maintain registers of other general agreement contracts.

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## KEY EVENTS IN THE MONEY MARKET

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### Sanctions and external reactions

- Sectoral sanctions were imposed against a number of Russia's largest financial institutions.
- Fitch Ratings downgraded Russia's country ceiling and the long-term debt ratings of 13 Russian foreign-owned banks from BBB+ to BBB.
- Stock index provider MSCI Inc. announced new indices that exclude Russian paper (MSCI ACWI ex Russia and MSCI EM ex Russia).

### Bank of Russia monetary policy

- On 25 July 2014, the Bank of Russia Board of Directors decided to raise the key policy rate to 8% p.a. In its meeting on 12 September, the Board maintained the rate at this level.
- Effective from 18 August, the Bank of Russia changed the parameters of the exchange rate policy mechanism to further increase the ruble exchange rate flexibility: 1) the permissible range of the dual-currency basket ruble values (floating operational band) was symmetrically widened from 7 to 9 rubles; 2) FX intervention volumes aimed at smoothing the volatility of the ruble exchange rate was set at zero in all the internal ranges of the floating operational band; 3) the cumulative volume of FX interventions, which lead to the shift of floating operational band's borders by 5 kopecks, was decreased from \$1 billion to \$350 million.
- Effective from 17 September, the Bank of Russia introduced overnight FX swap operations to sell US dollars for rubles with their further repurchase as an instrument of its monetary policy.

### Government and Ministry of Finance policies

- The Russian Government changed its requirements as regards investing temporarily free funds of government companies and corporations (Resolution No. 724 of 30 July 2014). Now a list of eligible assets includes deposits in rubles and foreign currency with Russian credit institutions and deposits and accounts with Vnesheconombank. Capital requirements for credit institutions where these funds may be invested were tightened: own funds (capital) should be at least 10 billion rubles (up from 5 billion rubles) or they should be under direct or indirect control of the Bank of Russia or the Russian Federation. Simultaneously, the requirement that a credit institution should have a local or foreign currency long-term debt rating from an international or a national rating agency was lifted.
- Since 23 July 2014, the Ministry of Finance cancelled 8 auctions of federal loan bonds (OFZs) due to unfavorable market conditions. After a two-month break, the Ministry held an auction on 24 September placing 10 billion rubles in OFZs amid demand of 47.5 billion rubles.
- On 22 August, the Russian Government issued the Resolution 'On Purchasing Preferred Shares of Credit Institutions with National Wealth Fund Resources'. Pursuant to this Resolution, in 2014, the Ministry of Finance shall buy the preferred shares of VTB Bank and Rosselkhozbank worth

214 billion rubles and 25 billion rubles respectively after these banks repay Vnesheconombank's subordinated loans for the same amounts.

### **Moscow Exchange developments**

- Effective from 14 August 2014, the Moscow Exchange expanded the range of instruments for repos by including additional 10 issues of Eurobonds from the Bank of Russia Lombard List. As a result, since May 2014, the total number of Eurobond issues available for repos with the Bank of Russia and interdealer repos exceeded 120.
- Since 18 August 2014, the Moscow Exchange broadened the range of standardized financial derivatives with cash-settled USD/RUB FX futures. Market participants can conclude contracts with any expiration date and any underlying asset size.
- On 10 September, the Moscow Exchange derivatives market started trading in futures contracts on the Russian Volatility Index.
- On 16 September, the Moscow Exchange derivatives market started trading in futures contracts on Russian Eurobond maturing in 2030.

### **Money market infrastructures**

- On 26 September 2014, the Bank of Russia acknowledged the National Settlement Depository (NSD) and the National Clearing Centre (NCC) as systemically important financial market infrastructures (by its Ordinance No. 3341-U of 25 July 2014, 'On Recognizing Systemic Importance of Financial Market Infrastructures'). This Ordinance lists criteria to identify a systemically important central depository, central counterparty, settlement depository and national repository. The Bank of Russia shall check the compliance of financial market infrastructures with systemic importance criteria on a quarterly basis.

## 1. MONEY MARKET CONDITIONS AND TRENDS

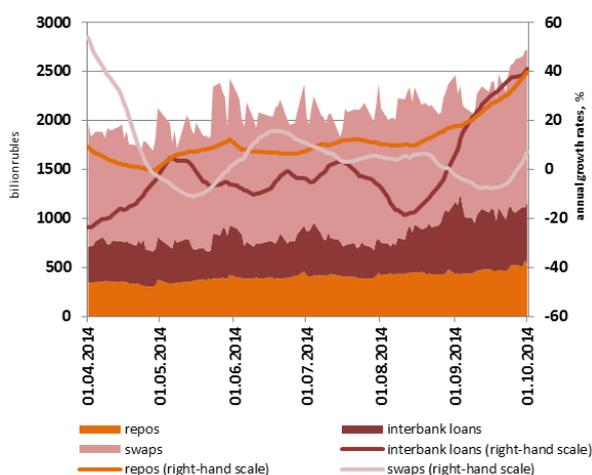
### 1.1. Money market structure and conditions

In the third quarter of 2014, money market outstanding volumes were trending up. While at the beginning of the quarter, the total value of interbank, swap and repo trade stood at about 2.1 trillion rubles, by the end of the quarter it increased to 2.7 trillion rubles (Table 1).

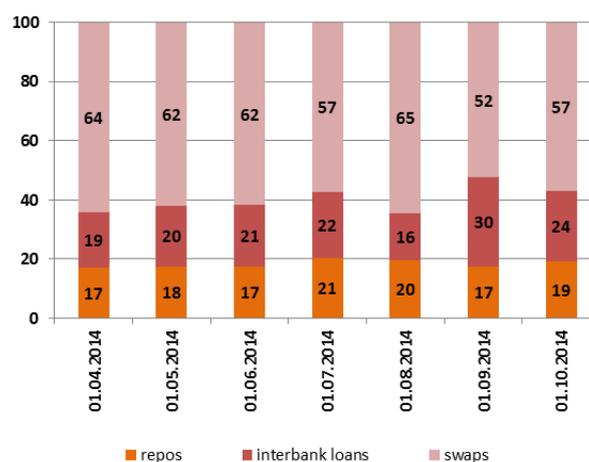
**Table 1. Structure and growth rates of money market segments**

Segment	Open positions, billions of rubles	Share of total outstanding volume, %			Growth rate, %		
		01.10.2014	01.10.2014	01.07.2014	01.04.2014	Over 12 months	Over 6 months
Interbank loans	650	24	22	19	41	81	49
Repos	523	19	21	17	40	31	21
Swaps	1,545	57	57	64	7	-3	3
<b>Money market</b>	<b>2,718</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>20</b>	<b>16</b>	<b>15</b>

**Chart 1. Value of open positions in the money market with maturities of up to 7 days**



**Chart 2. Structure of open positions in the money market with maturities of up to 7 days, %**



In the third quarter, all the money market segments showed a year on year growth. The strongest expansion was observed in the interbank lending and repo markets, with outstanding values in October 2014 exceeding those in October 2013 by 40% on average. The interbank lending market posted the strongest quarter on quarter growth (with the average value of positions 50% more than that in June), while repo contract values increased more moderately (by 20% for the same period).

The share of CCP-cleared repos changed only marginally over the period, standing at 25% by the end of the quarter. Average swap values stayed almost unchanged, while the swap market showed a near to zero growth.

This suggests a growing importance of the interbank lending market in the third quarter. While in the second quarter of 2014, the interbank lending market accounted for 19–21% of open positions, by the end of the third quarter it took up 24%, peaking at 30% in some periods of the third quarter. The share of the swap segment in the total money market volume contracted to 57%.

This dynamics of money market open positions can be attributed, in particular, to higher availability of short-term ruble liquidity, including increased volumes of unpledged marketable collateral (see Section 2.2), amid heightened demand for FX liquidity (see Section 1.3).

**Box 1. The OTC secured money market (repos and swaps)**

The value of outstanding repo transactions reported to a repository stood at 521 billion rubles at the end of the third quarter of 2014, or 121 billion rubles more than at the end of the previous quarter. This amount included 384 billion rubles taken up by resident-to-resident trade and 137 billion by resident-to-non-resident transactions. Therefore, the share of non-residents in total repo trade was 26%.

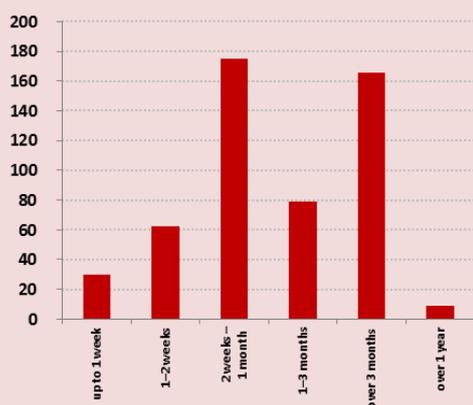
OTC repo trade between residents was dominated by interbank transactions, with their size as much as 239 billion rubles by the end of the third quarter. Trade between banks and non-credit institutions accounted for 112 billion rubles, while trade between non-credit institutions 33 billion rubles. OTC repos with non-residents were largely conducted by banks. The value of these transactions amounted to 116 billion rubles, while trades between non-credit institutions and non-residents stood at a mere 21 million rubles. Most repo transactions were made in foreign currency, with outstanding FX trades at 335 billion rubles, or 64% of the total as of 1 October 2014. The maturity structure of trade was dominated by longer-term transactions (Chart 3).

FX swaps with the ruble as one of the currencies amounted to 1,618 billion rubles as of 1 October 2014, with 1,135 billion falling on resident-to-resident trade and 483 billion on operations with non-residents. Non-resident trade accounted for 30% of the total OTC swaps.

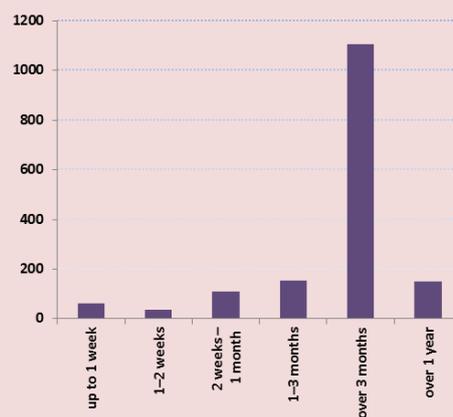
The OTC swap market featured longer maturities, with 68% of outstanding transactions having maturities beyond 3 months (Chart 4).

In contrast to OTC repo trade described above, OTC swaps between residents were dominated by trade between banks and non-credit institutions (680 billion rubles) rather than by interbank trade as of the end of the third quarter.

**Chart 3. Maturity breakdown of the OTC repo market, billions of rubles**



**Chart 4. Maturity breakdown of the FX swap market, billions of rubles**

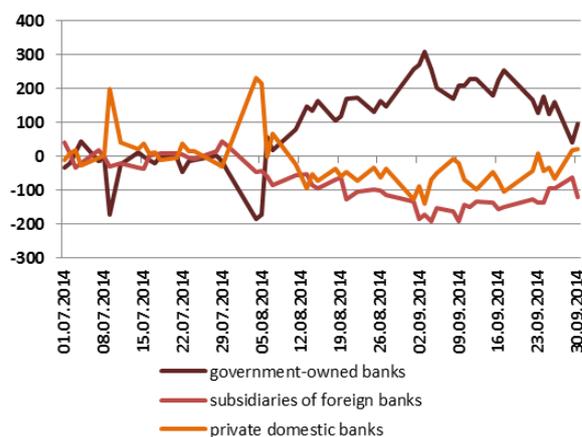


### 1.2. Liquidity transmission among groups of money market participants

The impact of autonomous factors on banking sector liquidity was insignificant in the third quarter, while the Bank of Russia funding to credit institutions increased moderately. That said, the composition of net liquidity flows among groups of money market participants showed significant changes. The largest structural changes were observed in the interbank lending and swap markets, showing differently directed trends.

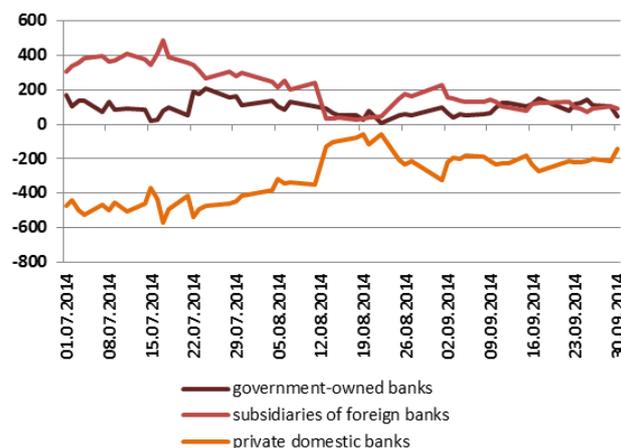
In the early third quarter and in the previous months, net positions of each of the groups of banks (government-owned, private banks and foreign subsidiaries) in the interbank lending market were close to zero. However, later in the third quarter, all the groups of the banks increased the absolute values of their net positions (Chart 5). Government-owned banks were in most cases the borrowers of ruble funds, while private banks and subsidiaries acted as lenders.

**Chart 5. Net positions of various groups of banks in the interbank lending market, billions of rubles**



Positive values mean borrowing rubles.

**Chart 6. Net positions of various groups of banks in the swap market, billions of rubles**



Positive values mean borrowing FX.

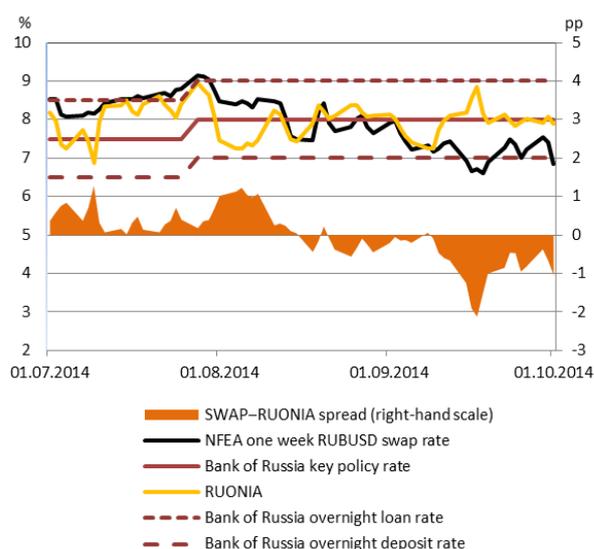
The swap market, in contrast, showed declining net positions of private credit institutions and subsidiaries of foreign banks, while the government-owned banks that were the borrowers of foreign currency kept their average positions unchanged (Chart 6).

### 1.3. FX liquidity squeeze in the money market

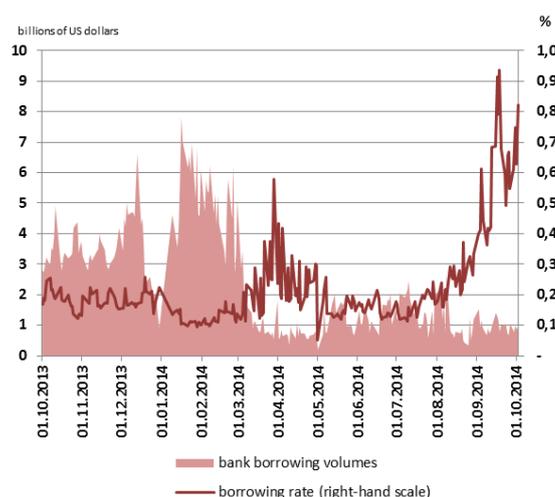
Conditions in the interbank lending and swap markets were driven by a FX liquidity squeeze in the third quarter of 2014. In July 2014, the USA and the European Union imposed sanctions targeted at a number of Russian banks, which made FX borrowings abroad more difficult.

In particular, heightened demand for US dollar liquidity was suggested by the spread between the RUONIA rate and the FX swap rate (Chart 7). In the last year, the FX swap rate for borrowing ruble liquidity was somewhat higher than the RUONIA rate (with the spread averaging 30 bp). However, starting from August 2014, the spread started narrowing and subsequently became negative, to hit a low of -212 bp on 17 September 2014. On the same day, the Bank of Russia launched its new FX swap facility to sell US dollars for rubles. As of 30 September 2014, the value of these transactions stood at \$581 million (\$137 million as of 7 October 2014). The Bank of Russia's selling of US dollars for rubles through its FX swap facility helped to narrow the spread by mitigating FX liquidity risk.

**Chart 7. Bank of Russia interest rate corridor and money market rates**



**Chart 8. US dollar short-term borrowing rate and volumes in the interbank lending market**



In the interbank FX lending market, increased demand for US dollar liquidity was reflected in lower trade volumes. Specifically, in August–September 2014, US dollar lending volumes were under \$10 billion, while in July these volumes were steadily higher. US dollar lending by government-owned banks was essentially depositing these funds with foreign banks. However, as the external environment deteriorated, these transactions became less attractive. Against this backdrop, borrowings in US dollars also contracted in the third quarter, as the interest rates shot up.

As a result, higher demand for FX liquidity impacted both the volumes and the cost of borrowing in the money market. Money market direct participants also noted a substantial change in the money market situation (see Box 2).

**Box 2. Market participants' perception of the interbank lending market environment**

In September 2014, the self-regulating organization National Securities Market Association (hereinafter NSMA) conducted a quick survey of the members of the NSMA board of treasurers. The survey suggested by the Bank of Russia asked them to assess the current conditions in the interbank lending market, its threats and risks, and to share their prevailing expectations of its further development.

Overall, the majority of market participants said that Russian banks' restricted access to external funding had materially changed the situation in the interbank lending market. Starting from August 2014, FX liquidity shortage increased local players' demand for liquidity, especially, from government-owned banks. These participants stepped up their ruble borrowings to further bring these rubles to the swap market, primarily, to purchase US dollars.

The interbank lending market showed two concurrent processes. On the one hand, stepped up ruble borrowings by larger players increased market volumes, with exposures to relatively reliable participants. On the other hand, uncertainty about further external political developments and sanctions made lender banks more selective in their choice of counterparties, resulting in reduced unsecured limits and tighter collateral requirements for interbank secured loans.

Therefore, some participants noted signs of higher market segmentation and shrinking liquidity, first of all due to eroding mutual trust of market participants against the backdrop of sectoral sanctions targeting the Russian financial sector. In addition, market conditions were affected by a general long-term trend that had emerged even before the Ukrainian crisis escalated, specifically, widened use of required reserves averaging by banks.

When asked about prevailing risks, interbank market participants named reputational risk arising from sanctioned participants' uncertain financial position, and associated credit and liquidity risks. They also noted operational risk arising from increased settlement time due to tightened compliance control procedures for non-resident counterparties. Respondents emphasized that this risk is associated with FX transactions of Russian banks with resident and non-resident banks.

In response to a question about expected trends, interbank market participants said that external political conditions will remain the key determinant. If the situation in Ukraine normalizes and certain countries stop toughening the sanctions, market conditions may be expected to stabilize, strengthening mutual trust of market players.

## 2. MONEY MARKET SYSTEMIC RISK

### 2.1. Money market stress testing

In addition to earlier applied stress testing methodology<sup>1</sup>, the Bank of Russia uses new approaches in this issue of the Review, taking into account the reconfiguration of participants' network connections (see Box 3).

#### Box 3. New approaches to money market stress testing

The global financial crisis of 2008–2009 revealed financial markets' vulnerability to contagion (domino effect), i.e. a rapid spread of shocks across the financial system due to close connectivity among a wide community of market participants. To gauge the exposure to this risk, central banks use a set of methods based on potential shock simulation and assessment of the consequences of its repercussions in the network of interlinkages between market participants. Normally, such an analysis will be based on the current network configuration.

This approach does not control for the fact that the degree of contagion exposure largely depends on the configuration of linkages, which tends to change with the change of market conditions. In times of crisis, the network of interconnections gets more fragmented, because participants are more risk averse, seeking to deal only with reliable borrowers. In addition, the network density decreases and the allocation of counterparties of market participants changes. As a result, contagion may have other negative consequences (more large-scale) compared to those simulated assuming network configuration under normal market conditions.

K. Anand, B. Craig et al.<sup>1</sup>, and also G. Halay and Ch. Kok<sup>2</sup> have designed approaches to construct a network of financial interconnections that may potentially emerge in crisis periods. K. Anand, B. Craig et al. suggest that when risks build up, the number of interlinkages in the network is reduced to minimum provided the participants want to keep their lending and borrowing volumes unchanged. As a result, compared to the original network, significant linkages (large volume trades) are strengthened (further increase in volumes), while weak linkages are destroyed resulting in the changed volumes of potential losses when stress materializes.

G. Halay and Ch. Kok discuss a mechanism of network modification whereby participants optimize the selection of their counterparties on the basis of profit maximization taking into account interest rate risk and counterparty risk. In the first round, participants specify the preferred allocation of their funds. In the second round, lenders and borrows negotiate volumes and rates. Some agents may have some uncommitted funds left, for which they find preferred allocation in the next round, and the optimization process is repeated. All this results in a new network configuration evolved with regard to intensified risks.

<sup>1</sup> Anand K., Craig B., Peter G. Filling in the Blanks: Structure and Interbank Contagion // BIS Working Paper. 2014. No. 455.

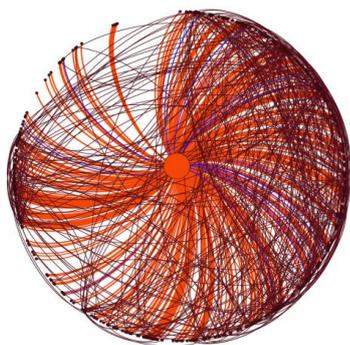
<sup>2</sup> Halay G., Kok Ch. Modeling Emergence of the Interbank Networks // ECB Working Paper. 2014. No. 1646.

Further analysis discussed two potential scenarios of a stress test. The first scenario analyzed the actual positions of money market participants assuming a moderate market shock (ruble and securities depreciation) and reduced bilateral counterparty limits. As a result, some participants faced liquidity scarcity prompting them to reduce their supply of rubles (if they were simultaneously lenders).

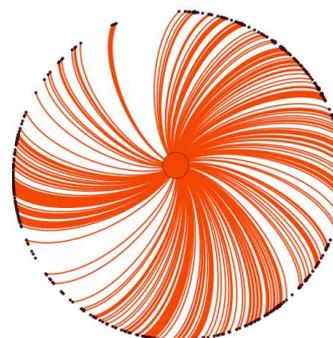
<sup>1</sup> See Money Market Review for Quarter 2, 2014 ([http://www.cbr.ru/analytics/fin\\_stab/MMR\\_14@2.pdf](http://www.cbr.ru/analytics/fin_stab/MMR_14@2.pdf)).

The second scenario assumed that hit by a severe shock participants would also change their range of counterparties resulting in a modified network configuration (Chart 9 and Chart 10). A new network structure was modeled using the core-periphery approach. The core is a group of participants with dense interlinkages, concentrating the bulk of money market transactions. The model assumes that if a shock materializes, trust in small volume players decreases, halting unsecured lending.

**Chart 9. Money market actual network**



**Chart 10. Money market modified network**



*The center features a core, including 38 most active participants of the money market. Periphery participants are located on the outer circle.*

#### **Box 4. Stress testing methodology with regard to potential changes to network configuration**

In the first stage, the money market core and periphery are identified. It is assumed that in case of a shock, money market participants will provide only secured funding to periphery participants (in the repo and swap segments). In case of collateral scarcity, periphery participants will face liquidity deficit as early as in the first stage.

Then, a market shock and its transmission across the money market is modeled according to the following scenario:

1. As a result of the ruble depreciation (assuming that demand for FX in the swap market stays unchanged), swap market participants increase their supply of rubles. If a bank does not have enough rubles, it would tap the repo market for them (provided it has adequate collateral).
2. As collateral in the repo market is falling in value, borrowers are subject to margin calls and have to deposit extra funds under their outstanding repo contracts.
3. The remaining (unsatisfied) demand for liquidity is transferred to the interbank lending market. The moderate shock scenario simulates a 10% decline in interbank money supply, while a severe shock scenario expects a 30% contraction.
4. If the bank still needs rubles after going through the first three steps, and if it has adequate refinancing capacity, it will resort to Bank of Russia funding.
5. As money market participants have received less cash in the money market as a result of the shock, they, in their turn, will also decrease their lending.
6. Further on, the money market goes repeatedly through steps 2-5 until equilibrium is restored. The results of the stress testing exercise are the values of liquidity shortage and excess when the money market is in equilibrium.

Stress test results indicate that under a severe shock scenario the behavior of participants seeking to change the range of their counterparties to mitigate potential risks results in a liquidity shortage of 84 billion rubles. Liquidity shortages under a severe shock scenario compared to moderate shock cases increase largely for periphery participants (-30 billion rubles), while core participants are affected less (-6 billion rubles).

**Table 2. Comparative results of stress testing**

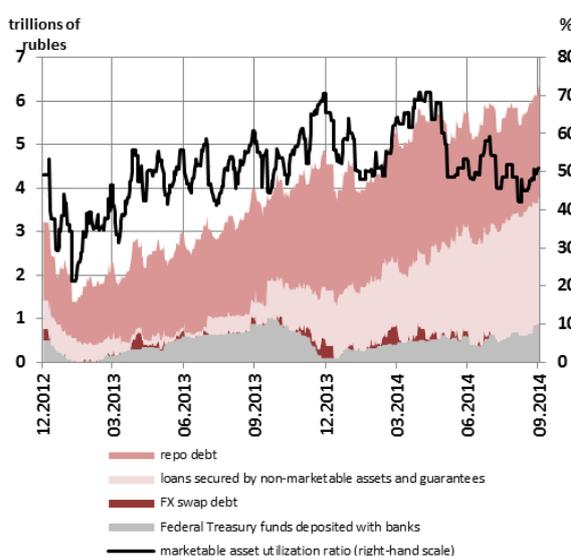
	swaps	Actual network repos	interb ank loans	Total	swaps	Modified network repos	inter bank loans	Total
<b>Market volume change (excluding Bank of Russia repos), billions of rubles</b>	+68	-47	-336	-315	+68	-47	-424	-402
<b>Market volume change, %</b>	+6	-16	-32	-13	+6	-16	-40	-16
<b>Liquidity shortage, billions of rubles</b>		48				84		
<b>Liquidity shortage to own funds, %</b>		-1.1				-1.3		
<b>Liquidity shortage to capital</b>		-12				-13		
<b>Number of banks having liquidity shortages</b>		33				34		
<b>Excess liquidity, billions of rubles</b>		262				363		
<b>Additional borrowings from Bank of Russia, billions of rubles</b>		243				300		

The result is explained by the adequate capacity of key network participants to get Bank of Russia refinancing; in the second scenario, they are most severely hit by the shock. Therefore, in case of stress, the changed structure of participants' positions in favor of larger players does not have any significant impact on banking sector total losses and money market stability.

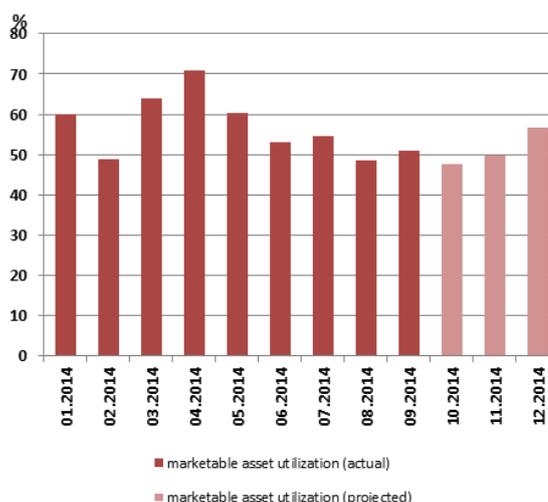
## 2.2. Marketable asset encumbrance and collateral risk

In the third quarter of 2014, credit institutions increased their debt only marginally due to their higher demand for liquidity (see Section 1.1), while the structure of their debt continued to change. The value of loans secured by non-marketable assets and guarantees increased during the quarter, while the repo debt to the Bank of Russia contracted. FX swaps with the Bank of Russia saw little appetite from the market in the third quarter amid short supply of FX liquidity in the financial system (see Section 1.3). Consequently, by the end of the third quarter, the larger part of the bank debt was secured by non-marketable assets and guarantees (2.9 trillion rubles), while repo transactions accounted for less than a half of their debt to the Bank of Russia (2.3 trillion rubles).

**Chart 11. Bank debt to the Bank of Russia and marketable asset utilization ratio**



**Chart 12. Marketable asset utilization ratio**



The expansion in loans secured by non-marketable assets and guarantees improved the availability of unencumbered marketable collateral. In the third quarter, the utilization of marketable assets declined from 53% to 51%, mitigating marketable collateral risk. If the current structure of bank debt to the Bank of Russia remains unchanged, short-term risk of marketable collateral may be estimated as low. The utilization ratio for marketable collateral is not expected to exceed 60% by the end of 2014 (with the ratio peaking at 70% in April 2014).

## 2.3. Liquidity risk and monitoring the liquidity coverage ratio of Russian banks

The global financial crisis of 2008–2009 evidenced the need to strengthen bank resilience to liquidity shocks. In this context, the international banking community developed approaches to regulate liquidity risk.

In January 2013, the Basel Committee on Banking Supervision (BCBS) published a revised document introducing the liquidity coverage ratio (LCR) as part of the Basel III framework. The LCR is defined as a ratio of high-quality liquid assets to net cash outflows over a 30 day horizon under

a liquidity stress scenario materializing for a bank or the financial market as a whole. This BCBS document allows a phased-in implementation of the LCR standard as a regulatory requirement. The minimum requirement will begin at 60% in 2015, rising in equal annual steps of 10 percentage points to reach 100% in 2019.

Regulators in some advanced economies have implemented the LCR requirement ahead of the deadline. The 100% threshold is now a minimum requirement in Sweden and Switzerland. On 1 January 2015, Australia and Canada will follow suit, while the United Kingdom and the USA will introduce an 80% threshold.

Implementation of liquidity ratios in advanced economies is supported by large volumes of high-quality liquid assets (government bonds in most cases) held by the banking sector (especially in the USA and Canada), in contrast to emerging economies. Some Asia Pacific and Middle East countries have not yet drafted regulation rules for the LCR.

In case of the shortage of high-quality liquid assets, the LCR requirement may be met by using a contractual committed liquidity facility, a special central banking tool. According to Basel III, this tool does not include regular credit lines.

A contractual committed liquidity facility is a special contract compliant with the following conditions:

- 1) The commitment period should exceed 30 days;
- 2) The contract should be irrevocable;
- 3) The facility should be subject to a commitment fee on the total (drawn and undrawn) facility amount, while the size of the fee should meet BCBS requirements to prevent arbitrage.

At present, contractual committed liquidity facilities have been implemented in Australia and South Africa, which have small domestic government bond markets.

Russia plans to phase in the liquidity coverage ratio. On 1 July 2014, Bank of Russia Regulation No. 421-P of 30 May 2014, 'On the Procedure for Calculating the Liquidity Coverage Ratio (Basel III)' (hereinafter Bank of Russia Regulation No. 421-P) came into effect. The Regulation sets forth methods to calculate the liquidity coverage ratio that would help to monitor bank liquidity.

According to the BCBS document, the LCR minimum requirements will be introduced on 1 January 2015. The Bank of Russia proposes implementation of the LCR as a prudential requirement since 1 July 2015, to give the banking community time to prepare for the new liquidity risk management approach. The Bank of Russia is now selecting banks that will be subject to this requirement. It is suggested that in the first stage this requirement will apply only to Russia's largest banks of systemic importance.

At present, the Bank of Russia is designing such contracted committed liquidity facilities, to be completed in 2015. The regulator continues to monitor the LCR. Subsequently, it plans to make respective amendments to Regulation No. 421-P, which would prescribe the LCR as a required ratio.

## **2.4. International payment system risk and risk of SWIFT disconnection**

The sanctions against Russia, including restrictions for selected banks on operations using international payment systems (IPS) Visa and MasterCard, and calls from some EU and US politicians and institutions to disconnect Russian banks from the SWIFT system, have revealed risks arising from the functioning of international providers of payment services within a national payment system.

At present, the Bank of Russia has 30 payment systems on its register, with 11 payment systems processing operations with the use of payment cards. The largest payment systems that transfer funds in payment card transactions are Visa and MasterCard subsidiaries, which account for the bulk of over 200 million cards issued by Russian banks.

This situation, as well as the absence of a single national operational payment clearing center (OPCC), which could independently from IPS process card transactions made in Russia (including cards issued by IPS), have created the risk of suspending operational services and payment clearing services for Russian participants of IPS.

These events prompted Federal Law No.112-FZ of 5 May 2014, 'On Amending the Federal Law on the National Payment System and Some Russian Laws', developed with the direct involvement of the Bank of Russia. This law aims to ensure uninterrupted provision of payment services by the payment systems operating in Russia.

This Federal Law stipulates the development of a national system of payment cards (NSPC), obliges operators of payment infrastructure services to be located and to perform all their functions in the Russian territory, and makes payment system operators liable for unilateral suspension (termination) of service provision to a payment system participant (participants) and its (their) clients in the form of a fine.

Under its mandate to put in place the NSPC, the Bank of Russia has registered OJSC NSPC to act as the operator of the cognominal payment system, approved a road map to build it and a strategy for its development, made preliminary agreements on cooperation with card market participants, and is now working to put in place a technological platform for the system. Market participants will be able to get processing services for their card transactions from the OPCC, the NSPC will issue its own payment card, and a multifunctional product line of NSPC payment products and services will be developed to ensure its competitiveness against IPS.

At present, calls to disconnect Russian credit institution from the SWIFT system are resisted by a number of factors. SWIFT is an international interbank system of secure financial messaging, and it has a representative office in Russia. Over 10 thousand banks and financial institutions, including almost 600 Russian ones, are connected to SWIFT. According to SWIFT data, Russian domestic traffic amounted to about 50 million messages by 2013, with the bulk of it related to cash transfers among Russian banks. The traffic between Russian and foreign SWIFT network participants

exceeded 35 million messages. The Bank of Russia is a user of SWIFT (SWIFT network participant). Electronic messaging between the Bank of Russia and CLS Bank International, and also between CLS member credit institutions will be done via SWIFT communication channels.

The Russian domestic payment traffic between Russian banks via SWIFT accounts for less than 1% of the total messages in the Bank of Russia payment system (about 1,340 million payments in 2013). Therefore, if SWIFT is no longer available for domestic ruble transfers, these transfers could be made via the Bank of Russia payment system. To make internal transfers in foreign currency, Russian banks could use back-up technologies, and, in addition, they could use existing messaging technologies in the Bank of Russia toolkit. Currently, various versions of developing a financial messaging system are explored. When the process is over, a road map will be drafted.

Given the significance of the SWIFT network for international transactions, including its use in the technical part of the project to implement the Russian ruble as a CLS currency, Russia finds it important to consistently strengthen respective international relations. In this context, in 2012 the Bank of Russia joined the cooperative SWIFT Oversight Forum (brings together financial regulators of its network member countries), with the National Bank of Belgium as its lead overseer.

SWIFT-related risks for cross-border transactions by Russian participants are also mitigated by SWIFT's statement that the European Parliament Resolution proposing Russia's disconnection from the SWIFT system contravenes the fundamental principles of European law enshrined in the EU Charter of Fundamental Rights. It also interferes with SWIFT's right to conduct business and creates damage to the company's reputation. SWIFT's statement emphasizes again that the company's mission is to be a global and neutral service provider to the financial industry.

However, the issue of cross-border payments remains outstanding. It cannot be resolved entirely by Russia's efforts, it requires consultation with other countries.

**Box 5. Financial messaging systems analogous to SWIFT**

Given the risk that Russian credit institutions may be cut off from SWIFT, the Bank of Russia in cooperation with national systemically important banks and infrastructures has started exploring potential use of analogous to SWIFT financial messaging systems for cross-border transactions.

One possible similar messaging channel for credit institutions may be the **Bank-Client** system, which has been established and operates vis-à-vis major foreign correspondent banks for settlements. The Bank-Client information system includes hardware and software installed at bank counterparties to support preparation, encoding, sending, receiving, verification, and processing of electronic documents.

However, it may be difficult to migrate to the Bank-Client system because most correspondent banks do not actually use it or its use is restricted to corporate clients. And yet, a number of foreign correspondent banks have expressed willingness to connect to it.

Currently, some credit institutions are checking the Bank-Client system for required improvements of internal procedures so that should the need arise this channel could be put in operation.

Another channel to transmit payment messages is **fax**, which is a telecommunication technology for transmitting images through electrical signals. However, foreign correspondent banks report that the facsimile technology has long fallen out of use because it is suitable only for small bodies of data. However, the use of fax as a stand-by channel of transmission of payment messages is possible and may be launched after entering into supplementary agreements with foreign correspondent banks providing for the verification of a remitter.

Still another means to make payments may be **telex**, which is based on the international telegraphy network. This channel is close to fax in terms of speed and scope of data transmission, therefore it is not utilized in the international financial messaging system either. And still this system is considered by the Bank of Russia as one of the back-up options to make internal payments in foreign currency between Russian banks. Moreover, several Chinese correspondent banks supported the use of telex.

Summing up, some credit institutions are currently exploring all the available correspondent relations to support an automatic export and import of payment documents under cross-border transactions.

## 3. DEVELOPMENT OF MONEY MARKET INFRASTRUCTURE AND INSTRUMENTS

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### 3.1. Financial Derivatives Committee: progress report

In the third quarter of 2014, the Financial Derivatives Committee (hereinafter the Committee) was launched on the basis of the self-regulating organization The National Securities Market Association (hereinafter SRO NSMA). As it was mentioned in the Money Market Review for the second quarter of 2014, the key objective of the Committee is to create an environment for the development of a market for standardized OTC financial derivatives in Russia and to improve the legal and regulatory framework for this market. Ultimately, it will insure integration of the Russian market into the global financial system and will promote its stability.

In the third quarter, the Committee met several times, to discuss a strategy for reforming the OTC financial derivatives market in Russia, and also to address the immediate task of making a list of financial instruments to be standardized and centrally cleared. Further on, to implement central clearing of standardized financial instruments, an appropriate CCP platform should be put in place. Therefore, the Committee also discussed Russian CCP operations.

To transfer the clearing of a part of the OTC financial instruments market to the Russian systemically important CCP, the National Clearing Centre (hereinafter the NCC), a number of conditions should be met. First, concentration of clearing of large OTC trade volumes in one financial institution would necessitate tighter financial soundness requirements. Meanwhile, the existing banking regulation does not provide for fully taking account of a CCP in the form of a bank functioning as a market infrastructure. In this context, the Bank of Russia is currently considering adaptation of selected banking regulation provisions so that they take into account unusual for conventional banking aspects of CCP operations.

Second, operations of the Russian CCP and its key parameters should be harmonized with foreign CCPs and recognized by foreign regulators, given that the OTC financial derivatives market is largely cross-border. This means that in most transactions Russian participants have non-resident entities for their counterparties, who are obliged to comply with national regulatory requirements in respective jurisdictions. In this context, to ensure the clearing of cross-border OTC transactions in Russia, the Russian CCP should be recognized by foreign regulators (European Securities Market Authority, ESMA). And vice versa, clearing by a foreign CCP requires its recognition by the Bank of Russia (for Russian banks to be able to apply reduced risk weights). In this context, the Bank of Russia is currently negotiating mutual recognition of the CCPs with foreign regulators.

Third, after the CCPs are mutually recognized by national regulators, market participants would face a choice: to clear their operations in Russia or abroad. Therefore, the Russian CCP will need to insure its competitiveness against foreign CCPs, i.e. be attractive in terms of the price and quality of its services on the one hand and reliable on the other. The quality of its services will largely depend on the chosen model of clearing. One of the possible options is to clear OTC standardized

derivatives separately from other financial instruments. Another option is to pool clearing with the existing clearing pools within financial market segments. In the latter case, market participants would be able to do cross-margining across a wide range of transactions. This, however, would require a more robust risk management system of the CCP.

The CCP reliability depends on its risk management models, and this issue is now most heatedly discussed. The Committee in its meetings discussed the risk model currently employed by the NCC in terms of its compliance with European regulatory requirements (EMIR). At the same time, the robustness of the risk model is important not only for the CCP, but also for market participants, because determines the degree of trust and the size of limits to the CCP, and also if non-residents would be able to clear their trade in Russia. The Euroclear experience shows that there is a practice to certify CCP risk management models.

To ensure competitiveness of the Russian CCP, the regulator should also consider what financial products will be available to market participants for centralized clearing. International best practice suggests that mandatory centralized clearing should cover only selected classes of OTC financial instruments featuring certain parameters. Specifically, in jurisdictions where mandatory centralized clearing requirements are effective (USA, Japan, China), these requirements apply only to interest rate derivatives (swaps, FRA, OIS) and credit derivatives (CDS). There are also restrictions as regards the parameters of instruments to be centrally cleared (for more detail see Box 6).

The ESMA says that mandatory clearing in Europe will be implemented on a phased-in basis to be completed in 2016. At present, consultations are under way to move interest rate and credit derivatives to centralized clearing. These consultations are expected to result in finalized ESMA technical standards at the end of 2014.

The Committee in its meetings in the third quarter of 2014 proposed a range of OTC instruments to be subsequently subject to centralized clearing. Overall, the agreed decisions on these issues are consistent with the European initiatives. Specifically, in the first stage, centralized clearing is proposed only for interest rate derivatives (OIS, IRS), to be later joined by XCCY, FX swaps and FX forwards. In the final stage, it is recommended to include FX options and equity options.

Apart from the gradual inclusion of various classes of financial instruments, the phased-in approach to centralized clearing implementation in the OTC derivatives market in Russia will also mean a gradual approach in requirements for market participants. The Committee proposed that until the Russian CCP is recognized by foreign regulators, the centralized clearing regime should be encouraged by easing capital requirements for participants. Following external recognition, centralized clearing of OTC standardized instruments should become mandatory.

**Box 6. Centralized clearing of financial derivatives in foreign jurisdictions**

At present, mandatory requirements for OTC derivatives centralized clearing have been implemented only in three jurisdictions: the USA, China and Japan.

In the **USA**, mandatory centralized clearing, pursuant to Commodity Futures Trading Commission (CFTC) requirements, is applied to interest rate derivatives: fix-to-floating swap, basis swap, forward rate agreement, overnight index swap, and also to credit derivatives, specifically, credit default swaps. Interest rate derivatives use LIBOR indices as underlying assets (for the US dollar, pound sterling and Japanese yen) and EURIBOR (for the euro). The maturity of contracts ranges from 28 days to 50 years for fix-to-floating swaps and basis swaps, from 3 days to 3 years for forward rate agreements, and from 7 days to 2 years for overnight index swaps. CDS contracts for their underlying asset can have only the CDX.NA.IG index for 3, 5, 7 and 10 years or the CDX.NA.HY index for 5 years. Cross-currency swaps are not subject to mandatory centralized clearing.

It should be noted that pursuant to CFTC requirements, some of OTC transactions that meet the above criteria are excluded from mandatory centralized clearing. These transactions include the following:

1. Swaps if one of the counterparties:
  - is a non-financial organization;
  - uses swaps to mitigate or hedge commercial risks;
  - keeps the CFTC informed about its performance of obligations under non-centrally cleared swaps.
2. Swaps between affiliated companies in a group.
3. Swaps made by cooperatives whose members are non-financial organizations and swaps made in connection with issuing loans to cooperative members or with mitigating or hedging risks associated with loans to cooperative members.

In China, mandatory centralized clearing under People's Bank of China requirements applies to interest rate derivatives with Chinese yuan as the underlying currency. Contracts should be made for 5 days to 3 years using the SHIBOR\_O/N index or for 5 days to 5 years using FR007 and SHIBOR\_3M indices. Centralized clearing is mandatory only for interbank bond market participants.

In **Japan**, mandatory centralized clearing, in compliance with Agency for Financial Services requirements, applies to interest rate derivatives, with the Japanese yen as the underlying currency (3M LIBOR as the underlying asset) or the euroyen<sup>1</sup> (with 3M TIBOR and 6M TIBOR as the underlying asset). Contracts should be made for the maturity of up to 30 years for the Japanese yen, for up to 5 years for the euroyen (for 3M TIBOR) and for up to 10 years (for 6M TIBOR).

According to the 7th Report by the Financial Stability Board on the progress in the OTC derivatives market reform (published in April 2014), it is planned that requirements to certain instruments will also come in effect in **South Korea, Singapore and India**.

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<sup>1</sup> The term used to denote the Japanese yen in the offshore market.

### 3.2. Regulatory changes in the operations of Russian trade repositories

To enhance the transparency of the financial derivatives market, some changes were initiated to the repositories' procedures for maintaining registers of contracts and for reporting repository information to the Bank of Russia. On 1 October 2014, Ordinance No. 3382-U, dated 17 September 2014, 'On Amending Bank of Russia Ordinance No. 3253-U of 30 April 2014 on the Procedure for Maintaining the Register of Contracts Made as General Agreement Contracts (Single Contracts), Deadlines to Provide Data Required for this Register, and Data from this Register, and also to Submit this Register to the Central Bank of the Russian Federation (Bank of Russia)' (hereinafter Bank of Russia Ordinance No. 3382-U and Ordinance No. 3253-U) came into effect. The most important changes include the following.

**Drawing a specific list of legal entities obliged to report to the repository.** This obligation shall apply to the following legal entities established in accordance with Russian legislation: credit institutions, brokers, dealers, managers, depositories, registrars, non-government pension funds, the management companies of an investment fund, unit investment fund and a non-government pension fund, joint-stock investment funds, trade organizers, clearing houses and insurers. Legal entities registered in foreign jurisdictions, individuals, and legal entities established under Russian legislation, but excluded from the list (predominately non-financial organizations) may but are not obliged to report to the repository.

**Extension of a list of contracts to be reported to the repository.** Effective from 1 April 2015, the legal entities listed above, in addition to their obligation to report repo and FX swap contracts, shall be also obliged to report financial derivatives contracts to the repository. Moreover, for close-out netting purposes, the repository will be authorized to maintain a register of other general agreement contracts.

**Specifying international legal entity identifier (LEI) codes.** The obligation to specify LEI codes in repository service contracts will apply not only to the parties to the general agreement contract, but to their clients if the contract is made on their behalf, and to reporting entities. For new repository service contracts, this obligation will become effective since 1 January 2015, while for the existing contracts from 1 July 2015. The National Settlement Depository is the only Russian entity authorized by the Regulatory Oversight Committee established under the Financial Stability Board to oversee the global system of legal entity identification to assign LEI codes.

**Increasing deadlines for quarterly reporting and for protesting information recorded in the register of contracts.** Contracts to be executed in under four business days should be reported to the repository at any one time within ten days following the end of the quarter. To object to the information recorded in the register of contracts, the reporting person will have three days after getting a notification from the repository that respective information was recorded in the register of contracts.

**Extension of a list of data to be provided by the repository.** Alongside the statement from the register of contracts, Ordinance No. 3382-U also provides for the parties to the contract, reporting entities, receivers and the Bank of Russia to get a statement from the repository's message log.

**Elaboration of the procedure to select the reporting entity.** While selecting the reporting entity preference shall be given to the party of the general agreement contract, obliged to provide information to the repository.

**Specification of inadmissibility of recording incomplete data in the register.** The change relates to information that is obligatory for recording in the repository's register of contracts.

In addition, Ordinance No. 3382-U specifies formats for the register of contracts and message log of the repository.

It is expected in the near future that apart from Ordinance No. 3382-U, annexes to Ordinance No. 3253-U will be agreed and become effective, to specify data obligatory for inclusion in the register of general agreement contracts, as well as amendments to Federal Law No. 39-Φ3 of 22 April 1996, 'On the Securities Market' as regards repository operations.

### **3.3. Results of FSB Feasibility Study on Aggregation of OTC Derivatives Trade Repository Data**

One element of the OTC derivatives market reform agreed by the G20 Pittsburgh Summit is reporting of all OTC derivatives contracts to trade repositories (TR), seeking to enhance transparency, mitigate systemic risk and strengthen protection against market abuse. At present, a total of 25 TRs operate in 11 member jurisdictions of the Financial Stability Board (FSB). Data held in various TRs are fragmented, stored in different formats, subject to different regulatory access and data exchange rules.

To ensure regulatory access to complete information about the situation in the global derivatives market and to make it possible to estimate total positions of its participants a mechanism to aggregate contract data held in different TRs is needed. In 2014, the FSB conducted a feasibility study on approaches to such aggregation. The results were published on the FSB website in September 2014.

The study assessed three options for aggregating TR data.

1. A physically centralized aggregation mechanism. In this option, TR data are regularly entered into a special centralized database to be later downloaded by end users (regulators) upon respective inquiries. The aggregation mechanism checks data quality, identifies duplicating entries and deletes them, and anonymizes data if necessary.

2. A logically centralized aggregation mechanism. In this option, a central index is put in place (using pointers to local TR databases), with the trade data stored in TRs and received only when needed (i.e. upon request from end users).

3. Collection of raw data from individual TR databases by individual regulators that then aggregate the data themselves.

In addition, physical and logical aggregation may have various modifications depending on the level of detail of collected and stored data.

The study finds that the options of physically and logically centralized aggregation mechanism meet the G20 goals in the best possible way. However, the option to collect raw data from TR databases is the only one of these options that is currently available for use, because it requires minimum legislative changes and does not imply establishing a new international body for data aggregation. The authors of the report have not agreed on which of the first two options is more preferable, with each of them having their own advantages and weaknesses. However, even if the physical and logical aggregation options are implemented, the raw data collection option will always be additionally available for individual regulators.

The report does not assess implementation costs for this or that option, but only gives some approximate qualitative conclusions about potential spending. Proceeding from these estimates, the two centralized aggregation options will cost roughly the same, while the raw data collection option will be ultimately the most expensive though it does not require a global aggregation mechanism, if all the costs borne by individual regulators and TRs are added up.

The FSB report identifies important obstacles to the implementation of these data aggregation models. Thus, data collection and storage formats differ significantly across TRs, there are no uniform identifiers of transactions and products (UTI and UPI), and the use of the uniform LEI is not yet mandatory for all the TRs. Some countries have legislation preventing TRs from providing information to foreign regulators. Most of these countries have regulation in place authorizing TRs to disclose confidential information only to certain organizations (mostly regulators). In such cases, information to foreign regulators can be provided only upon the conclusion of appropriate memoranda of understanding.

If centralized aggregation options are selected for implementation at the international level it would be necessary to decide what entity will manage the aggregation mechanism and how supervision and regulation of this mechanism will be done. It would be necessary to define rules of getting access to these data (depending on various regulators' purposes). Data provision principles should also be prescribed.

A management system for the aggregation mechanism may be established in the form of a private-public partnership (similar to the LEI global management system) or, otherwise, the aggregation mechanism and the central database may be managed by government authorities.

The FSB is expected to continue working in the following areas:

1. Further development and implementation of global UTIs and UPIs.
2. The development of global guidance on the harmonization of data elements that are reported to trade repositories.

3. A more detailed study of legal and regulatory changes that would be needed to implement a global aggregation mechanism.
4. A further study of the appropriate governance structure for such a mechanism.
5. A further study of technological requirements for an aggregation mechanism option.
6. A more detailed assessment of potential costs to implement the selected data aggregation option.