INTERNATIONAL MONETARY FUND

RUSSIAN FEDERATION

FINANCIAL SECTOR ASSESSMENT PROGRAM

September 2016

TECHNICAL NOTE

MACROPRUDENTIAL POLICY

Monetary and Capital Markets Department

This Technical Note was prepared by IMF staff in the context of the IMF Financial Sector Assessment Program (FSAP) mission in the Russian Federation led by Karl Habermeier. It contains technical analysis and detailed information underpinning the FSAP's findings and recommendations. Further information on the FSAP can be found at http://www.imf.org/external/np/fsap/fssa.aspx

CONTENTS

Glossary

CBR	Central Bank of Russia
CCB	Countercyclical capital buffer
CCP	Central counterparty
CLF	Committed liquidity facility
DIA	Deposit Insurance Agency
DSC	Debt service coverage
DSTI	Debt service-to-income
DTI	Debt-to-income
FMI	Financial market infrastructure
FSAP	Financial Sector Assessment Program
FSC	National Council on Ensuring Financial Stability
FSCom	Financial Stability Committee (of CBR)
FSFM	Federal Service for Financial Markets
FPC	Financial Policy Committee
ICAAP	Internal capital adequacy assessment process
ICR	Interest coverage ratio
IMF	International Monetary Fund
LCR	Liquidity coverage ratio
LTV	Loan-to-value
MCM	Monetary and Capital Markets Department
MREL	Minimum requirement for own funds and eligible liabilities
MOED	Ministry of Economic Development
MOF	Ministry of Finance
NBFI	Nonbank financial institution
NSFR	Net stable funding ratio
NPL	Nonperforming loan
SIB	Systemically important bank
SIFI	Systemically important financial institution
TLAC	Total loss absorbing capacity

EXECUTIVE SUMMARY[1]

Financial stability oversight responsibilities are currently shared between the Central Bank of Russia (CBR) and a high-level inter-agency National Council on Ensuring Financial Stability (FSC). Given its role as the single financial regulator and supervisor since September 2013, CBR has naturally become a macroprudential authority. Following the creation of the Financial Stability Department in March 2011, CBR established an internal Financial Stability Committee (FSCom) in November 2014 to play a key coordinating role in macroprudential oversight, crisis management, and other financial stability issues, with policy decisions still being made by CBR's Board of Directors (CBR Board). The government created the FSC in July 2013 as an advisory body that can make recommendations on measures to restore financial stability based on an assessment of systemic risk. In February 2015, the FSC was strengthened and has served as an effective platform for inter-agency coordination.

In recent years, CBR has used a number of macroprudential tools to deal with risks, mainly those stemming from retail lending. CBR has tightened provisioning requirements and increased capital risk weights to curb excessive growth of unsecured consumer lending, usefully helping to increase banks' ability to handle materialized credit risk. For mortgage lending, CBR has preemptively adopted differentiated capital risk weights based on loans' risk characteristics, with a view to containing risks associated with lending while supporting the extension of mortgage loans to creditworthy borrowers. More recently, in an attempt to reduce dollarization, CBR has imposed a stricter reserve requirement on nonretail foreign-currency deposits and higher capital risk weights on certain foreign-currency exposures.

An expanded use of macroprudential tools to establish adequate buffers could help safeguard financial stability in the medium term. The economy is highly exposed to swings in oil prices, which in turn may significantly affect financial conditions and amplify business cycles through macrofinancial linkages. In the medium term, greater volatility driven by oil price movements may warrant a larger buildup of buffers to protect banks against solvency risk. Furthermore, liquidity requirements might be strengthened to improve banks' funding structure. Macroprudential tools could support de-dollarization, but their use should be motivated primarily by systemic risk mitigation. Adequate attention should be paid to unintended consequences, as policy leakages could be acute, making it more difficult to monitor risks.

The CBR Law should be amended to provide for a more comprehensive set of macroprudential tools. Currently, the law does not provide a legal foundation for CBR to use the full set of recognized macroprudential tools, such as limits on loan-to-value (LTV) and debt service-to-income (DSTI) ratios, as well as on growth of certain credit. The law should thus be amended to provide an adequate legal foundation for the development and use of the full range of

[1] This Technical Note was prepared by Phakawa Jeasakul (MCM).

macroprudential tools on an ex-ante basis. An expanded toolkit is essential to support a more efficient and effective use of macroprudential measures to contain systemic risk.

The current institutional arrangements appear to be functioning well, but some additional steps could be taken to support timely macroprudential actions in the future. Effective coordination within CBR has been instrumental to identifying and mitigating systemic risk. However, it will be important to ensure that institutional arrangements will work effectively when strong and decisive macroprudential actions are called for. Going forward, CBR needs to develop further its framework for financial stability, also as an underpinning for sustained price stability. Enhanced governance and accountability could be helpful, supported by a fuller prescription of the macroprudential policy framework in the CBR Law. The FSC, in its current setup, should continue to serve as an advisory body. The scope of its responsibilities should be clarified to ensure CBR's autonomy in conducting macroprudential policy.

CBR has the necessary technical capacity for systemic risk monitoring and assessment, but additional work is needed. CBR regularly publishes *Financial Stability Review*, which is indicative of strong analytical capacity. However, it would be useful to (i) conduct an early warning exercise to detect underlying vulnerabilities, (ii) carry out macroprudential stress testing that accounts for second-round effects, solvency-liquidity links, and cross-sectoral interconnectedness, and (iii) focus on "connecting the dots." *Financial Stability Review* could also benefit from a clearer presentation of systemic risks and vulnerabilities, propagation of risks through relevant macrofinancial linkages, and resilience of the banking system to shocks, facilitating more effective communication with the general public.

Table 1. Recommendations on Strengthening the Macroprudential Policy Framework

Recommendations and Authority Responsible for Implementation	Timeframe
Main recommendations	
Amend the CBR Law to provide CBR with a comprehensive macroprudential policy toolkit (CBR, MOF)	Short term
Expand use of macroprudential tools to establish adequate buffers to safeguard financial stability in the medium term (CBR)	Medium term
Further develop macrofinancial and systemic risk analysis (CBR)	Medium term
Other recommendations	
Employ macroprudential tools to support de-dollarization, though primarily motivated by systemic risk mitigation (CBR)	Short term
Adjust the calibration of the countercyclical capital buffer, using a wider set of indicators to properly evaluate the credit cycle (CBR)	Short term
Clarify the scope of the FSC's responsibilities, in line with its role as an advisory body (Government)	Short term
Formalize arrangements for regular CBR Board meetings to discuss systemic risk issues, along with publication of the assessment (CBR)	Short term
Enhance CBR's accountability for the conduct of macroprudential policy through greater transparency (CBR)	Short term
Enhance *Financial Stability Review* to better communicate CBR's overall view of financial stability risks and the financial system's resilience (CBR)	Short term
Strengthen the prudential liquidity requirement to improve banks' funding structure (CBR)	Medium term
Consider amending the CBR Law to more fully prescribe the financial stability framework (CBR, MOF)	Medium term
Establish a dedicated policymaking committee ("Financial Policy Committee") within CBR, supported by appropriate objectives, functions and powers, to conduct macroprudential policy (CBR, MOF)	Medium term
Increase the capacity to obtain more corporate and household balance sheet information (CBR)	Medium term

OVERALL POLICY FRAMEWORK

1. Financial stability oversight responsibilities are currently shared between the Central Bank of Russia (CBR) and a high-level inter-agency National Council on Ensuring Financial Stability (FSC). Given its role as the single financial regulator and supervisor since September 2013, CBR has naturally become a macroprudential authority. Following the creation of the Financial Stability Department in March 2011, CBR established an internal Financial Stability Committee (FSCom) in November 2014 to play a key coordinating role in macroprudential oversight, crisis management, and other financial stability issues, with policy decisions still being made by CBR's Board of Directors (CBR Board). The government created the FSC in July 2013 as an advisory body that can make recommendations on measures to restore financial stability based on its systemic risk assessment. In February 2015, the FSC was strengthened and has served as an effective platform for inter-agency coordination. Overall progress on strengthening the institutional arrangements for macroprudential policy is documented in Appendix Table 1.

2. Only CBR has a financial stability mandate anchored in law. The CBR has a legal responsibility to support the development and ensure the stability of the banking system, payment systems, and financial markets. Even though the CBR Law does not prescribe all elements of the financial stability architecture, CBR has developed a macroprudential policy framework that appears to be effective, with systemic risk oversight covering the entire financial system. Meanwhile, the FSC was established with a financial stability mandate by government decree (July 2013). More recently, the Ministry of Economic Development (MOED) and the Ministry of Finance (MOF) were also designated as government bodies responsible for ensuring financial stability by another government decree (February 2015), although their precise functions and powers were not specified.

3. CBR has put in place an effective framework to perform its macroprudential oversight function. In CBR's view, macroprudential policy is the use of primarily prudential tools (largely, microprudential and monetary operations tools) to limit systemic risk, which is the risk that the financial system becomes dysfunctional, with potentially serious negative consequences for the real economy. CBR also considers that liquidity provision is an important element of its policy toolkit for maintaining financial stability. The Financial Stability Department plays a leading role in carrying out macroprudential surveillance, including risk assessments of nonbank financial institutions (NBFIs) and nonfinancial corporates. The Financial Stability Department also has oversight responsibility for central counterparties (CCPs). CBR started publishing *Financial Stability Review* in 2003.[2]

[2] An upgraded *Financial Stability Review* has been published on a biannual basis since 2012.

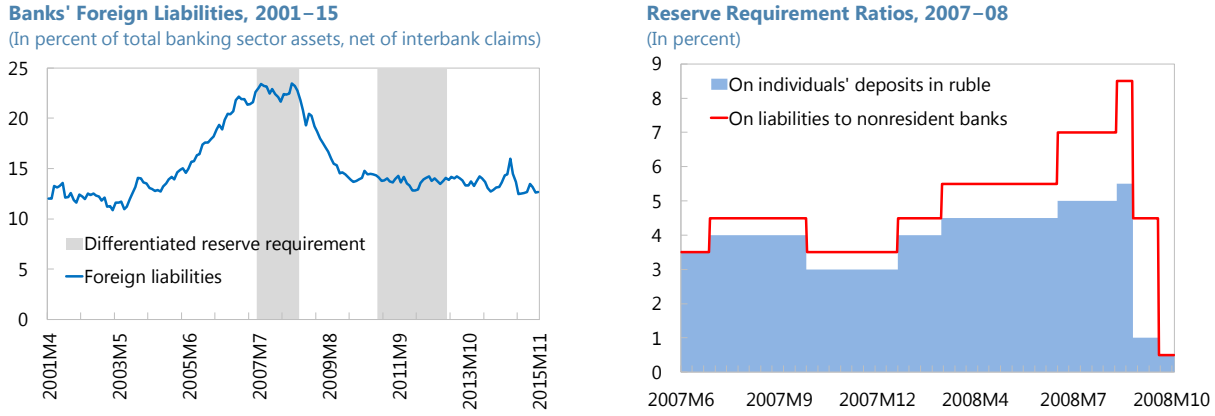
USE OF MACROPRUDENTIAL TOOLS

A. Experiences

4. CBR has in recent years made innovative use of macroprudential tools to mitigate identified systemic risks. Since 2007, CBR has dealt with four broad types of risks related to banks' reliance on foreign funding, excessive growth of unsecured consumer loans, mortgage lending to relatively risky borrowers, and banks' exposure to exchange rate risks (see Appendix Table 2).

5. Differentiated reserve requirements were implemented to contain banks' increasing reliance on foreign funding between 2004 and 2008. The amount of foreign liabilities relative to total banking sector assets (net of interbank claims) had steadily risen from 12.7 percent in August 2004 to 23.4 percent in August 2007 (Figure 1). In an attempt to mitigate risks associated with potential reversals of capital inflows, CBR introduced a percent reserve requirement on banks' liabilities to nonresident banks in August 2006, a level below the reserve requirement on deposits. Between July 2007 and September 2008, CBR used differentiated reserve requirements by imposing a higher rate on banks' liabilities to nonresident banks, and raised this particular rate from 3.5 to 8.5 percent over time.[3] As a result of tightening global financial conditions after the collapse of Lehman Brothers, the reserve requirements were unified and had been eased on a number of occasions to ensure appropriate liquidity conditions in the banking system. In February 2011, differentiated reserve requirements were re-introduced as a precautionary measure, with a higher reserve requirement rate on banks' liabilities on nonresident legal entities. With no sign of systemic risk, the reserve requirements were applied uniformly again in February 2013.

Figure 1. Russia: Banks' Foreign Liabilities and Reserve Requirements

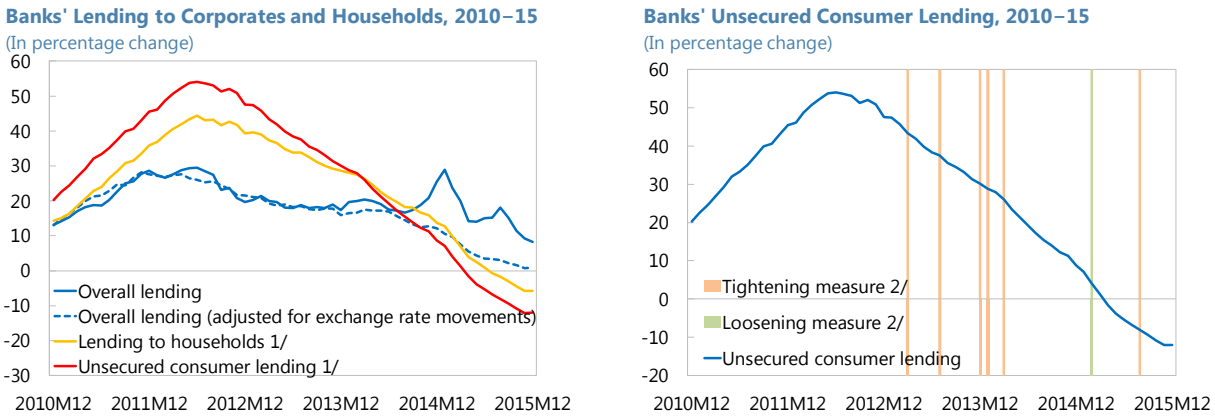


Sources: CBR; IMF, International Financial Statistics; and IMF staff estimates.

[3] The reserve requirements on individual deposits in local currency and on other deposits were increased to 5.5 and 6 percent, respectively (both from 3.5 percent).

6. Additional provisioning requirements and higher capital risk weights have been used to curb excessive growth of unsecured consumer lending during 2011–13. The annual growth rate of unsecured consumer lending exceeded 50 percent by mid-2012, well above the overall lending growth rate (below 30 percent) (Figure 2). The excessive growth of unsecured consumer lending led to a significant buildup of credit risk that materialized following the economic downturn in 2015. At the same time, effective interest rates for unsecured consumer lending exceeded 50 percent when inflation was around 7 percent, creating distortions in other loan market segments. In particular, banks specializing in mortgage and corporate lending faced growing challenges in attracting deposits to finance their lower margin lending activities. In response to these adverse developments, CBR tightened provisioning requirements and raised capital risk weights for unsecured consumer loans during January 2013–January 2014. The capital risk weights were differentiated based on the level of effective lending rates on loans. In July 2014, caps on effective lending rates were also imposed on various loan types with the adoption of the Consumer Credit Law in December 2013.[4]

Figure 2. Russia: Banks' Unsecured Consumer Lending



Sources: CBR; Haver Analytics; and IMF staff estimates.

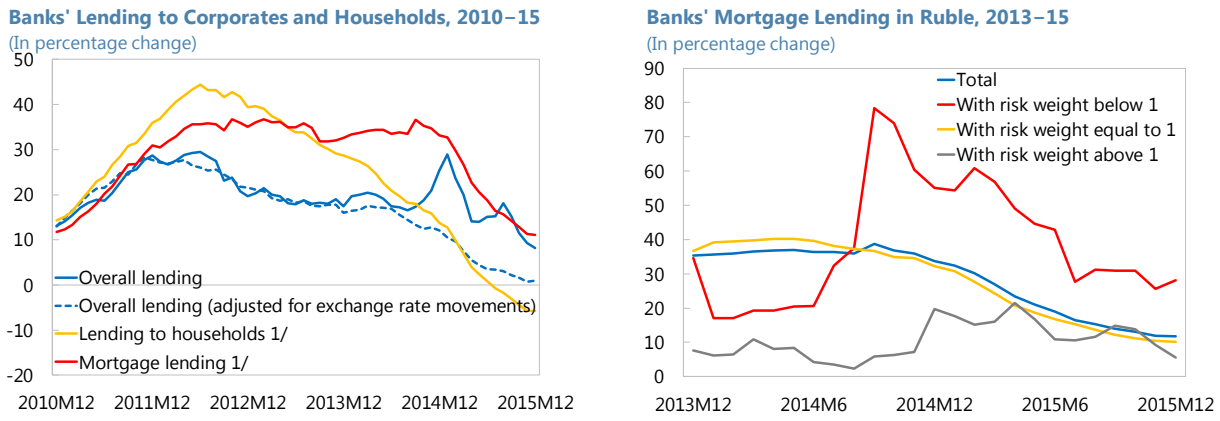
1/ Lending to households is mostly denominated in ruble.
2/ See Appendix Table 2 for the detail of the measures. The introduction of caps on effective lending rates is also considered a tightening action.

7. Differentiated capital risk weights have been used to mitigate risks associated with high-risk borrowers during the robust growth of mortgage lending in 2012–14. Mortgage lending had been growing around 30 percent year-on-year between late-2011 and early-2015, underpinned by strong overall credit growth and looser capital requirements for mortgage lending to creditworthy borrowers (Figure 3). In May 2009, CBR reduced the capital risk weight from 1.0 to 0.7 for mortgage loans in ruble of less than RUB 50 million, with a loan-to-value (LTV) ratio below

[4] There is a cap on the spread between the effective lending rate and the market average rate for a given type of loan. CBR is responsible for calculating the market average rates and authorized to temporarily suspend these caps.

70 percent, and a debt service-to-income (DSTI) ratio below 33⅓ percent.[5] The loosening of capital requirements aimed at promoting financial access, with creditworthy borrowers able to obtain financing needed for their home purchases. In October 2011, in order to safeguard financial stability, CBR raised the capital risk weight from 1.0 to 1.5 for mortgage loans of more than RUB 50 million and an LTV ratio above 80 percent. Based on stress testing of banks' mortgage lending portfolios and their risk profiles, CBR has on several occasions tightened or loosened capital risk weights.[6,7] The extensive use of differentiated capital risk weights for mortgage loans reflects the fact that CBR lacks legal power to impose limits on LTV and DSTI ratios.

Figure 3. Russia: Banks' Mortgage Lending



Sources: CBR; Haver Analytics; and IMF staff estimates.

1/ Lending to households is mostly denominated in ruble.

8. Macroprudential tools have been used to support the effort to de-dollarize the economy, starting in April 2016. The banking system is exposed to foreign-currency related risks, owing to a generally high level of dollarization in the economy. As of January 2016, foreign-currency loans accounted for 31 percent of total banks loans, while foreign-currency deposits amounted to 41 percent of total deposits (Figure 4). In an attempt to reduce dollarization, CBR has implemented macroprudential measures in addition to the existing limit on banks' net open foreign-exchange position, which has helped protect banks from sizeable exchange rate fluctuations. In April 2016, CBR started adopting the differentiated reserve requirements approach by applying a higher reserve

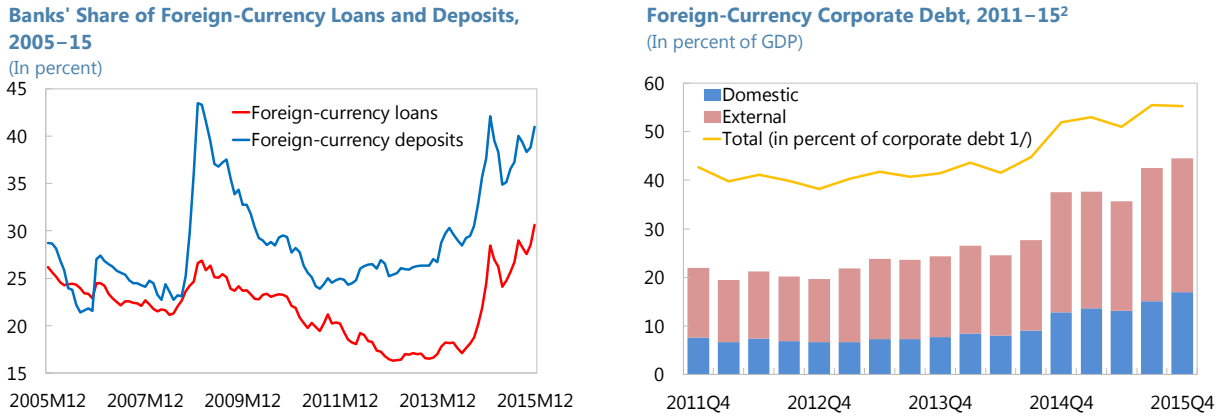
[5] The corresponding limit of the DSTI ratio was increased to 50 percent in May 2014.

[6] In December 2014, the capital risk weight for mortgage loans of less than RUB 50 million, an LTV ratio below 50 percent, and a DSTI ratio below 40 percent was further reduced to 0.5. In January 2016, the capital risk weight for mortgage loans of less than RUB 50 million, an LTV ratio below 50 percent, and a DSTI ratio below 33⅓ percent was further reduced to 0.35.

[7] In January 2015, the capital risk weight of 1.5 was also applied to mortgage loans with an LTV ratio above 90 percent, regardless of the loan size and the DSTI ratio. In April 2015, the capital risk weight for mortgage loans in foreign currency was increased to 3.

requirement rate on foreign-currency liabilities to mitigate foreign-currency liquidity risk.[8] In May 2016, CBR imposed higher capital risk weights for certain foreign-currency exposures to reflect the greater risk of these exposures owing to exchange rate volatility.

Figure 4. Russia: Dollarization



Sources: BIS, Debt Securities Statistics; Haver Analytics; IMF, World Economic Outlook database; and IMF staff estimates.

1/ Based on domestic financial institutions' claims, external debt excluding debt securities, and outstanding debt securities issued domestically and internationally.
2/ Assumes that all debt securities issued internationally are denominated in foreign currency.

B. Toolkit

9. CBR's macroprudential toolkit is based on microprudential instruments. Capital-based tools include sectoral capital risk weights, countercyclical capital buffers (CCBs), capital surcharges on systemically important banks (SIBs), and leverage ratios. Liquidity-based tools[9] include liquidity coverage ratios (LCRs), net stable funding ratios (NSFRs), and reserve requirements (available in the context of monetary operations).[10] In addition, CBR has the power to set provisioning rules and

[8] In April 2016, the reserve requirement rate for banks' foreign-currency liabilities except individual deposits is 1 percentage point higher than the regular reserve requirement rate, which remains unchanged at 4.25 percent. In August 2016, all banks' foreign-currency liabilities will be subject to the higher requirement rates by 1 percentage point for individual deposits and 2 percentage points for other liabilities.

[9] The CBR Law provides for liquidity ratios based on two broad metrics. One is the ratio between assets and liabilities, taking into accounts characteristics of assets and liabilities. Another is the ratio between liquid assets and total assets. Currently, all banks must meet three distinct liquidity requirements (known as the N2, N3, and N4 ratios) on a daily basis. In particular, banks need to hold liquid assets to cover 15 percent of immediate liquidity needs over the next day, keep a ratio of liquid assets to short-term liabilities at 50 percent over the one-month horizon, and maintain an expected stream of liquidity inflows relative to liquidity outflows over the one-year horizon at 120 percent.

[10] The CBR Law also allows additional liquidity requirements on SIBs, giving CBR the option to apply the LCR only to SIBs.

limits on the open position in foreign currencies, interest rates, and other financial risks. The CBR Law also sets limits on concentration risks.[11]

10. The CCB, the capital surcharge on SIBs, and the LCR were implemented at the beginning of 2016.

- **CCB.** In CBR's view, the CCB is currently the main countercyclical macroprudential tool. Hence, an inter-departmental Working Group for Monitoring the Credit Cycle and Controlling the Amount of CCB, chaired by a First Deputy Governor, was established to calibrate the appropriate level of the CCB. It makes a recommendation to the FSCom on a quarterly basis, and the FSCom in turn makes a recommendation to the CBR Board, which takes the final decision. The calibration of the CCB is based on a set of indicators such as credit-to-GDP gaps, credit growth rates, and nonperforming loan (NPL) ratios.

- **Capital surcharge on SIBs.** CBR has published the list of SIBs, which includes 10 banks accounting for about 60 percent of banking system assets. SIBs are identified based on quantitative criteria such as size, interconnectedness, systemic impact (market share of household deposits), and complexity (scope of cross-border activities). The capital surcharge will be imposed at 0.15 percent of risk weighted assets from the beginning of 2016, with gradual increases to 1 percent by the beginning of 2019.

- **LCR.** The LCR is only applied to SIBs, with a minimum rate of 70 percent from the beginning of 2016. The phase-in will follow the internationally agreed schedule. There is no plan to impose the LCR requirement by currencies, but SIBs are required to report LCRs in ruble and all significant foreign currencies on a monthly basis. Given the shortage of domestic high-quality liquid assets such as domestic government bonds, CBR has established the committed liquidity facility (CLF) (option I). The use of high-quality liquid assets in major foreign currencies to cover ruble liquidity needs is also allowed (option II). In addition to the LCR requirement, all banks must fulfill three distinct liquidity requirements on a daily basis (see Footnote 8).

C. Assessment

11. Financial stability has been maintained even in the face of two large shocks—low oil prices and western sanctions. A multi-pronged policy response has helped to keep the financial system stable (as described in the Financial System Stability Assessment report). Macroprudential policies contributed by helping to contain systemic risk related to unsecured consumer lending and proactively monitoring corporate sector vulnerabilities. Overall, the impact of external shocks on the financial system seems to be contained, with some qualifications (Figures 5 and 6).

[11] Lending to a party or a group of related borrowers may not exceed 25 percent of regulatory capital. Total high-concentration risk exposures are limited to 800 percent of regulatory capital, where a high-concentration risk exposure is an exposure to a party that exceeds 5 percent of regulatory capital.

- **The oil and gas sector remains profitable due to the cost structure and the tax system.** Exchange rate depreciation has helped cushion the revenues of energy companies from lower oil prices. The cost structure is primarily in ruble and the tax system exacts less per barrel as oil prices fall. Russian oil and gas companies are also among the lowest-cost producers globally.

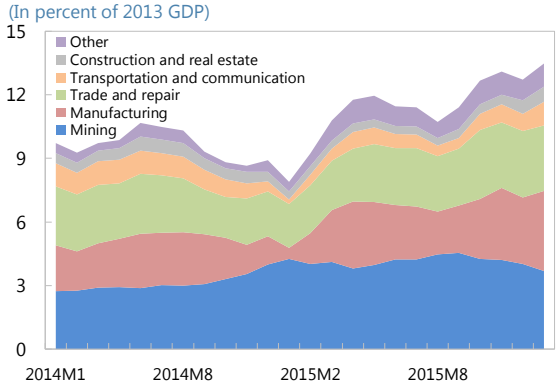
- **Corporate debt servicing capacity has deteriorated, and NPLs have risen.** Among the larger corporates, the debt of companies with low debt servicing capacity increased sharply in early 2015. Furthermore, smaller corporates, which largely rely on financing from the domestic banking system, appeared to be in a weak financial position even before the economic downturn. Corporate NPLs have thus increased, particularly with the deterioration in the construction and real estate sector.

- **The credit quality of exposures to households has also worsened, mainly due to increasing NPLs from consumer lending.** Excessive unsecured consumer lending in earlier years led to significant materialization of credit risk following the economic downturn. While banks have already seen a sharp increase in NPLs in their consumer lending portfolios, the overall impact remains manageable despite unfavorable macroeconomic conditions. In contrast, there are no signs of material credit risk associated with mortgage lending.

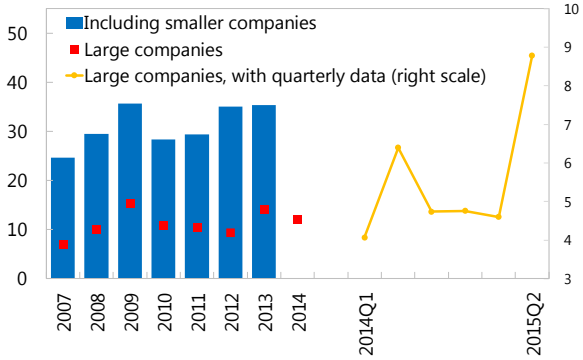
- **Overall, exchange rate risks appear manageable.** Despite substantial corporate foreign-currency debt, the impact of large exchange rate depreciation appears manageable. In aggregate, the corporate sector has a small net foreign-currency position vis-à-vis the domestic banking system (about 4 percent of GDP), thanks to large foreign-currency deposits. In addition, forthcoming payments related to external corporate debt (excluding intra-group payments that are typically rolled over) are sufficiently covered by liquid foreign-currency assets held by corporates.

Figure 5. Russia: Developments in Corporate and Household Sectors

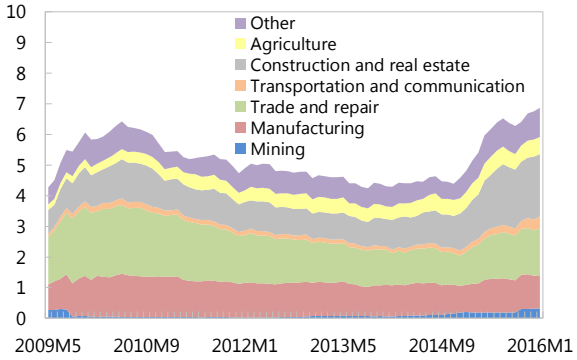
Corporate Profits, 2014–16
(In percent of 2013 GDP)



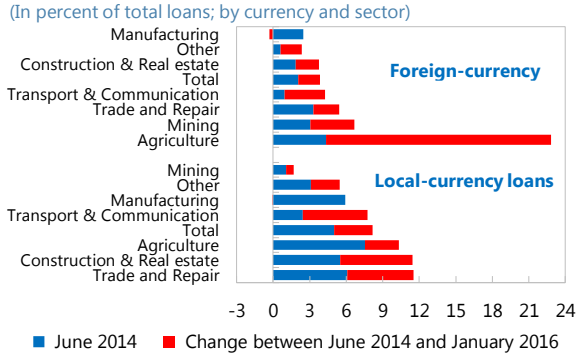
Corporate Debt Servicing Capacity, 2007–15 [1]
Debt of companies with low debt servicing capacity[2] (in percent of total debt)



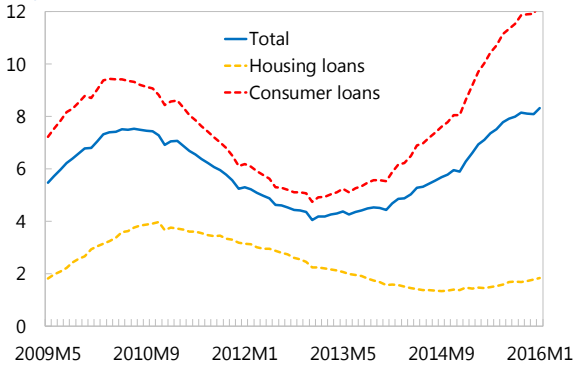
Corporate Nonperforming Loans, 2009–16
(In percent of total loans)



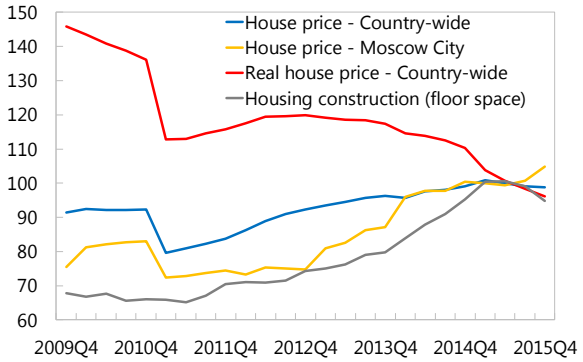
Domestic Credit Institutions: Overdue Corporate Loans, 2014–16
(In percent of total loans; by currency and sector)



Domestic Credit Institutions: Overdue Household Loans, 2009–16
(In percent of total household loans)



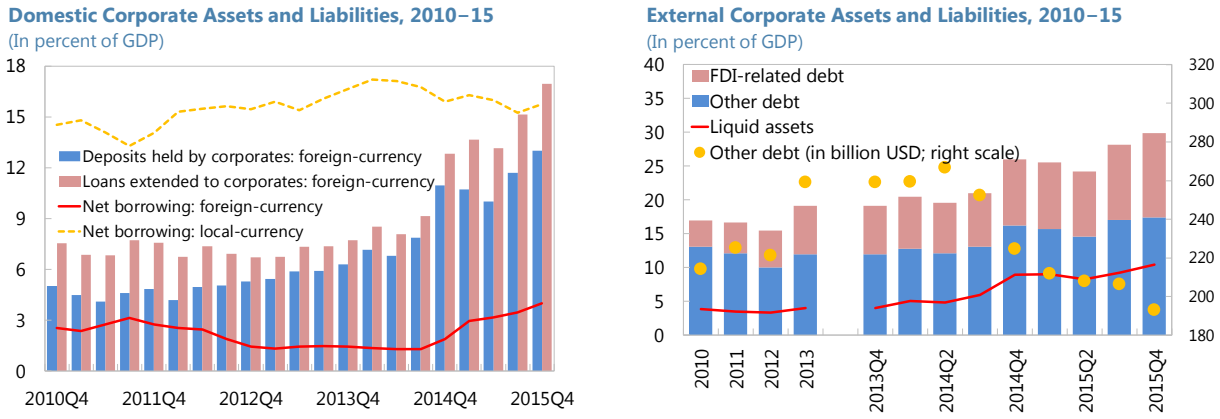
House Price and Construction Activity, 2009–15 [3]
(2015=100)



Sources: CBR; Haver Analytics; Orbis; and IMF staff estimates.

1/ Large companies include all listed companies and non-listed companies with total assets and turnover of at least US$1 million. Smaller companies cover entities with total assets and turnover of at least 0.2 million U.S. dollars.
2/ A company is considered to have a low debt servicing capacity if its interest coverage ratio (ICR) is below 1, where the ICR is defined as earnings before interest and taxes (EBIT) over interest expenses.
3/ Based on prices of new houses.

Figure 6. Russia: Corporate Sector's Exposure to Exchange Rate Risks



Sources: CBR; Haver Analytics; Orbis; and IMF staff estimates.

1/ Large companies include all listed companies and non-listed companies with total assets and turnover of at least US$1 million. Smaller companies cover entities with total assets and turnover of at least US$0.2 million

2/ A company is considered to have a low debt servicing capacity if its interest coverage ratio (ICR) is below 1, where the ICR is defined as earnings before interest and taxes (EBIT) over interest expenses.

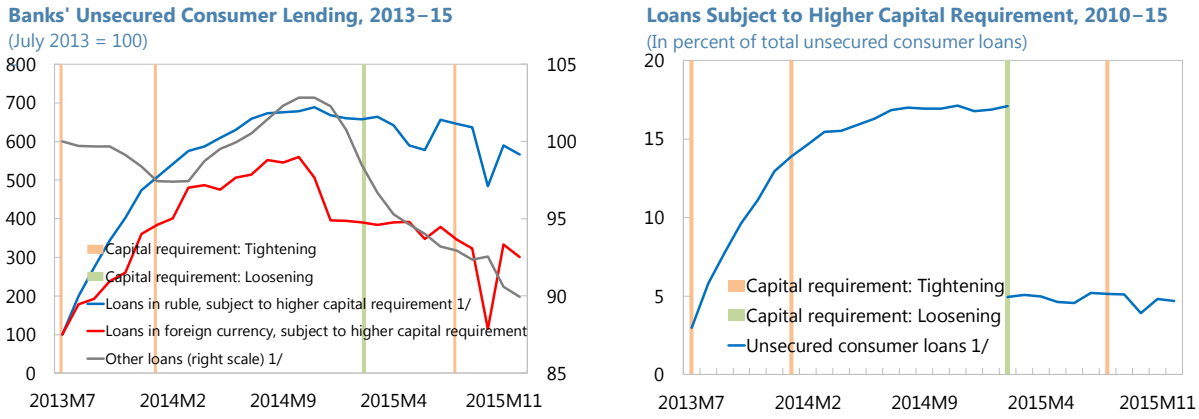
3/ Based on prices of new houses.

12. Systemic risk related to unsecured consumer lending has been mitigated by macroprudential measures implemented by CBR in recent years. The tightening of provisioning requirements and capital risk weights helped avert a full-blown banking crisis. In CBR's view, the excessive growth of unsecured consumer lending was the main systemic risk after the global financial crisis. In response, CBR continually tightened provisioning requirements and increased capital risk weights to curb such lending and improve banks' resilience. These macroprudential measures appear to have been broadly effective, usefully containing the impact of the ongoing materialization of credit risk. In particular, the banking system was in a stronger position to absorb losses as a result of the buffers being built by additional provisions. The slowdown in overall unsecured consumer lending, however, seems to be driven by multiple factors—stricter macroprudential requirements (with some lag), higher than expected credit losses, and caps on effective lending rates. It is noteworthy that loans subjected to higher capital risk weights continued to increase more strongly than loans not affected by the measures (Figure 7).[12] Notwithstanding their effects on strengthening banks' resilience, there is a lack of conclusive evidence that stricter bank capital risk weights or provisioning requirements effectively moderated credit growth. This points to a need for more effective tools, such as limits on the growth of certain lending,[13] or the simultaneous application of multiple tools.

[12] An increase in capital risk weights may not have a sufficiently strong effect on banks' incentives. A back-on-the-envelope calculation suggests that an increase in the capital risk weight by 1 (for example, from 1 to 2) would be equivalent to an increase in funding costs by 1.5 percentage points, assuming a regulatory capital requirement at 10 percent and a return on equity of 15 percent.

[13] Though apparently less restrictive, caps on effective lending rates imposed following the adoption of the Consumer Credit Law broadly share similar features.

Figure 7. Russia: Banks' Unsecured Consumer Lending



Sources: CBR; Haver Analytics; and IMF staff estimates.

1/ Adjusted for the break in February 2015 due to the loosening of the capital requirement of unsecured consumer loans in ruble with effective lending rates of 25–5 percent. The capital risk weight for these loans was reduced to 1, the floor level for unsecured consumer lending.

13. Other macroprudential tools used by CBR since 2007 have also helped to mitigate systemic risks.

- **Reserve requirements on banks' external funding.** Even before the macroprudential policy framework was put in place, CBR had imposed higher reserve requirements on banks' liabilities to nonresident banks during 2007–08. These measures effectively curbed the banking system's growing reliance on external funding, although an earlier introduction could have helped alleviate the negative impact of the sudden stop of foreign funds during the global financial crisis.

- **Capital risk weights for mortgage lending.** Differentiated capital risk weights based on loans' risk characteristics since 2009 have preemptively contained risks associated with risky lending while supporting the extension of mortgage loans to creditworthy borrowers. This approach reflects CBR's desire to strike the right balance between development and stability objectives while adhering to the international standards.[14] The use of macroprudential tools to deal with risks associated with mortgage lending seems useful, with a minimal increase in NPLs in this lending segment following the economic downturn.

- **Measures to support de-dollarization.** CBR's recent efforts to employ macroprudential tools to support de-dollarization also seem broadly appropriate, as the measures largely aim

[14] The lowest capital risk weight for mortgage loans is at 0.35—the level used by the Basel standardized approach.

at reducing banks' foreign-currency liquidity risk and inducing banks to internalize exchange rate volatility risk associated with their foreign-currency exposures.

14. Notwithstanding these successful efforts to mitigate systemic risks, certain vulnerabilities remain to be addressed. In retrospect, increased banking system vulnerabilities, with declining capital buffers, increasing leverage and deteriorating liquidity conditions, arose concurrently with strong overall credit growth (about 20 percent annually) during 2011–14 (Figure 8). Banks' ability to obtain funding from CBR may also be supporting balance sheet growth. Inadequate capital buffers led to the reliance on regulatory forbearance (asset classification and loss provisioning, in particular) to help banks withstand the severe shocks. Looking forward, the challenge that banks will face in meeting the LCR requirement on their own may entail a structural mismatch between high-quality liquid assets and potential funding outflows, in part owing to the lack of government debt securities. In addition, the banking system is facing structural vulnerabilities, such as a heavy reliance on short-term funding and large exposures.[15]

15. The economy's significant dependence on oil makes the financial system vulnerable to large oil price movements. The exposure of the economy to oil prices may significantly affect financial conditions and amplify business cycles. For instance, during the current down-cycle of oil prices, the economy has faced a broad-based materialization of credit risk as a result of the economic downturn. Hence, the indirect impact seems significant, even though the direct impact of low oil prices on the oil and gas industry and the banking system is limited.

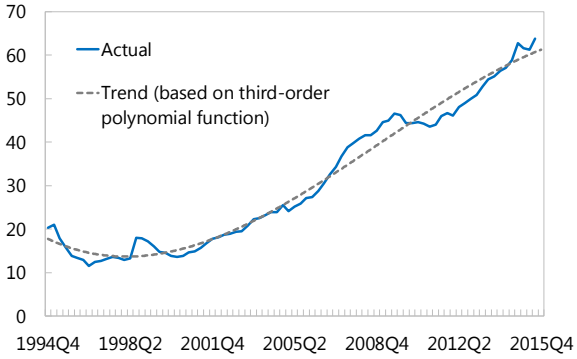
16. CBR currently does not have a comprehensive set of macroprudential tools. Russian legal practice requires that provisions for prudential tools (mostly, microprudential in nature) need to be rather explicit, with sufficient details in the CBR Law.[16] The CBR Law currently only prescribes a limited number of macroprudential tools (see Appendix Table 3), and does not provide a legal foundation for CBR to use the full set of commonly recognized macroprudential tools, such as limits on LTV and DSTI ratios, as well as limits on the growth of particular credit segments. Moreover, while some prudential tools in the context of Basel III are available (such as leverage ratios and NSFR), they have not yet been implemented.

[15] Term deposits feature minimal breakage fees.

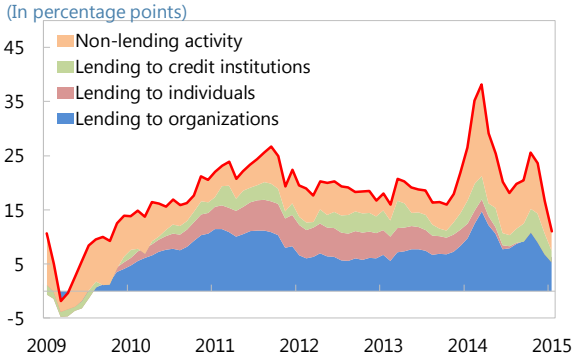
[16] Essentially, prudential requirements must be prescribed explicitly in law. The power to set rules for the conduct of banking businesses (Article 4 of the CBR Law) does not allow CBR to freely implement all prudential rules. However, provisions regarding prudential requirements can be quite flexible, as illustrated by the case of liquidity requirements (see Footnote 8).

Figure 8. Russia: Banking Sector Performance and Credit Developments

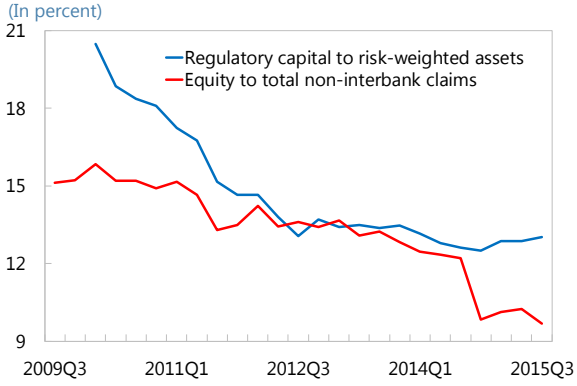
Private Sector Domestic Credit, 1994–2015
(Credit extended by domestic banks in percent of GDP)



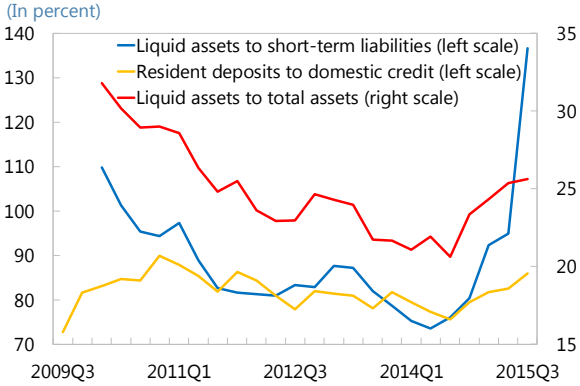
Domestic Banks: Contribution to Total Assets Growth, 2009–15
(In percentage points)



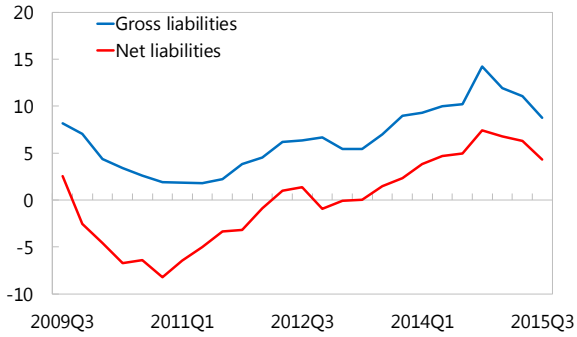
Domestic Banks: Leverage, 2009–15
(In percent)



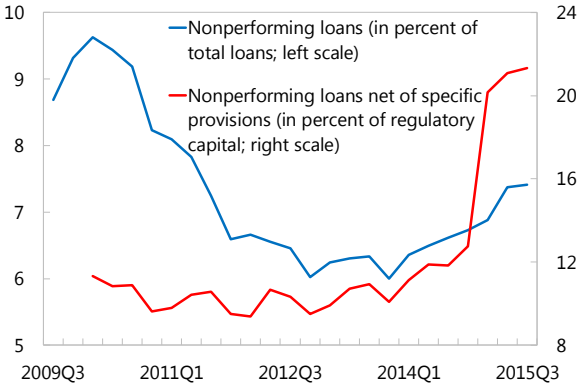
Domestic Banks: Liquidity and Funding, 2009–15
(In percent)



Domestic Banks: Reliance on Central Bank's Funding, 2009–15
(In percent of total non-interbank claims)



Domestic Banks: Asset Quality and Buffers, 2009–15



Sources: Haver Analytics; IMF, International Financial Statistics, Financial Soundness Indicators database, and World Economic Outlook database; and IMF staff estimates.

D. Recommendations

17. Using macroprudential tools to establish adequate buffers could help safeguard financial stability in the medium term. Greater volatility driven by oil price movements may warrant a larger buildup of capital buffers to protect banks against solvency risk as a result of a broad-based materialization of credit risk during the oil price down-cycle following a robust credit expansion during the up-cycle. These capital buffers could be implemented in the context of the CCB or the Pillar 2 under the Basel capital framework, the latter potentially in the context of the internal capital adequacy assessment process (ICAAP). Stress testing could be used to determine the capital buffers needed to withstand a sharp decline in oil prices and its macrofinancial consequences. Furthermore, liquidity tools could be employed to help contain excessive credit growth by ensuring that banks are able to raise their own funds to sustainably support their balance sheet expansion.

18. Calibration of the CCB would benefit from a wider set of relevant indicators to properly evaluate the credit cycle. The credit-to-GDP gap analysis for Russia is generally challenging given ongoing financial deepening and the sensitivity of the economy and the financial sector to oil prices. Additional indicators of overall leverage and liquidity (for example, private sector indebtedness and leverage; LTV and DSTI ratios associated with mortgage and commercial real estate lending; and banks' reliance on noncore funding) could be useful.[17] In addition, the credit cycle analysis should account for the role of oil prices, which could significantly influence potential output and procyclically drive domestic demand and credit.

19. Prudential liquidity requirements could be strengthened to improve banks' funding structure over time. There seems to be a scope to tighten liquidity ratios (that is, the N2, N3 and N4 ratios) to encourage banks to maintain adequate high-quality liquid assets to meet potential funding outflows and to strengthen their funding structure to rely less on short-term funds. While CBR's liquidity facilities can effectively backstop banks' liquidity shortages, adjustments in CBR's operations framework should be made to ensure appropriate risk pricing. Furthermore, the structure of the CLF should be changed to incentivize banks to manage liquidity risk on their own.

20. Macroprudential tools could support de-dollarization, but their use should be motivated primarily by systemic risk mitigation. Country experiences suggest that de-dollarization process is more successful when the appropriate incentives and preconditions are in place, with two-way exchange rate flexibility among the most important.[18] As good progress has been made on this front, macroprudential tools could be used to address foreign-currency liquidity risk and ensure appropriate risk pricing for foreign-currency exposures, while also supporting the effort to de-dollarize the economy. However, adequate attention should be paid to unintended

[17] See IMF (2014) for further details.

[18] Exchange rate flexibility in turn requires a strong monetary policy framework that establishes a credible alternative nominal anchor in a more flexible exchange rate environment. Furthermore, the development of the local bond market and the foreign exchange market is needed to support local-currency financing and hedging instruments.

consequences, as policy leakages could be acute, making it more difficult to monitor risks.[19] In addition, given that the corporate sector appears to have natural hedges against exchange rate risk, provision of foreign-currency loans should not be prohibited outright. Instead, CBR should opt for a microprudential approach that fosters banks' underwriting standards (that is, to lend only to individuals and entities with foreign-currency revenues).

21. CBR needs to be equipped with a more comprehensive set of macroprudential tools. The CBR Law should be amended to provide an adequate legal foundation for the development and use of the full range of macroprudential tools on an ex-ante basis (Appendix Table 3 provides a list). An expanded toolkit is necessary as there is no conclusive evidence that stricter bank capital risk weights or provisioning requirements are sufficient on their own. The ability to more effectively constrain the growth of risky lending would help CBR better contain systemic risk. It would be useful to explore whether a fairly flexible provision in the CBR Law would be consistent with the Russian legal tradition, as this would enable CBR to respond more nimbly to various types of emerging systemic risk.[20]

INSTITUTIONAL ARRANGEMENTS

A. Current Situation

22. Financial stability oversight responsibilities are shared between CBR and the FSC, with CBR in charge of conducting macroprudential policy. The FSC has served as an advisory body that is (i) responsible for conducting systemic risk monitoring and assessment and (ii) able to make recommendations to government bodies and CBR to take measures to restore financial stability. At the same time, CBR, as the single financial regulator and supervisor, has naturally become a macroprudential authority, with complete responsibilities and powers deriving from its regulatory and supervisory functions for all regulated aspects of the financial system (that is, institutions, markets and infrastructures).[21] A general consensus also exists among member agencies of the FSC that the conduct of macroprudential policy should be CBR's responsibility.

23. The FSC was primarily created as an advisory body for inter-agency coordination of financial stability matters. In July 2013, the government issued a decree to create the FSC, replacing the earlier Working Group to Monitor Financial Market Conditions. The FSC is responsible for conducting systemic risk monitoring and assessment, reviewing the identification methodology and the list of systemically important financial institutions (SIFIs), and developing measures to

[19] For example, banks may extend loans based on a foreign exchange index (for example, FX-linked loans) rather than foreign-currency loans. Corporates may seek external borrowing instead. See IMF (2014) for further details.

[20] One possibility is to outline broad characteristics of a tool together with its purposes. For example, CBR could regulate the "liquidity buffer requirement" to ensure that banks hold adequate liquid assets to cover potential funding outflows. Such a requirement would enable CBR to prescribe the amount of liquid assets in relation to banks' balance sheet structure in implementation regulations.

[21] However, certain financial institutions such as leasing companies are not regulated.

restore financial stability. The committee was at that time chaired by the Minister of Finance. Notable characteristics of the FSC are/were:

- **Membership was broad and diverse, while members act in a personal capacity.** The FSC consisted of 17 members (including the chair), including representatives from CBR, the Deposit Insurance Agency (DIA), the First Deputy Prime Minister's Office, the MOED, and the MOF.[22] Membership was not based on designated positions or levels of seniority within the respective institutions. Hence, members' views (particularly, of those at the technical level) did not necessarily reflect their institutions' views.

- **The FSC functions mainly as an advisory body that facilitates inter-agency information exchange.** The FSC has the power to request necessary information from government bodies, CBR, and other organizations. However, the FSC had neither permanent committee structures nor a supporting secretariat. Decisions are taken by consensus and recorded in protocols signed by the chair, but these protocols are not publically communicated and the FSC does not report to any authority. The FSC was entitled to make non-binding recommendations, albeit not disclosed publicly, to government bodies and CBR on systemic risk issues and mitigating measures.

- **Discussion at the FSC covers a wide range of macrofinancial issues that may affect financial stability, while recommendations on mitigating measures do not typically constitute macroprudential policy.** At a typical meeting, MOF and CBR representatives would give presentations on macroeconomic developments and systemic risk assessments, respectively. Issues discussed at the FSC are fairly broad, such as external corporate debt and associated refinancing risks, volatility of capital flows, and legislative initiatives regarding oversight of CCPs and the bankruptcy regime. Similarly, mitigating measures elaborated by the FSC could be outside the scope of financial sector policies. For instance, one recommendation was that the MOF should allocate its funds at banks more proactively to smooth banks' refinancing needs.

24. The FSC was recently strengthened, especially in terms of membership, in light of the FSB Peer Review recommendations.[23] In February 2015, the government issued a revised decree that effectively enhanced the status and functioning of the FSC. In particular, the FSC has become a high-level inter-agency committee, chaired by the First Deputy Prime Minister and comprising the CBR Governor, Minister of Economic Development, Minister of Finance, and DIA General Director, as well as senior officials from these agencies.[24] The FSC now also has the power to make recommendations on a comply-or-explain basis (not disclosed publicly) to government bodies and

[22] Other members include a member of the Federation Council (Senate) Committee for Budget and Financial Markets, and an official from the Presidential Executive Office.

[23] See Appendix Table 4 for progress in meeting the FSB Peer Review recommendations.

[24] These other FSC members include the Deputy Minister of Economic Development, Deputy Minister of Finance, four CBR First Deputy Governors (responsible for financial stability, monetary policy, banking oversight, and NBFI and market oversight), and Assistant to the President (for economic affairs). The FSC thus comprises 12 members (including the chair).

CBR. This mechanism primarily serves as a means to monitor progress on actions that have been taken by the relevant agencies. The secretariat, led by staff from CBR, the First Deputy Prime Minister's Office, and the MOF, was created to support the FSC's work.

25. CBR, as the single financial regulatory and supervisor, has naturally become the macroprudential authority. In September 2013, the Federal Service for Financial Markets (FSFM) was merged into CBR, with the latter taking complete oversight responsibilities for banks, NBFIs, and financial markets. CBR has continually strengthened its macroprudential oversight function, including the establishment of the Financial Stability Department in 2011, the publication of upgraded *Financial Stability Review* biannually since 2012, and the creation of the FSCom—a high-level internal committee in CBR in 2014.

26. CBR has no exclusive decision-making body for macroprudential policy and uses the FSCom as the main internal coordination platform. Based on the CBR Law, the CBR Board is responsible for all key decisions, including those on monetary policy and financial regulation. The CBR Law also establishes two specialized committees—the Banking Supervision Committee and the Financial Supervision Committee—to carry out day-to-day regulatory and supervisory functions.[25] Within the current decision-making structure, the FSCom was created by a CBR regulation to facilitate internal coordination given that financial stability involves several departments. The FSCom is responsible for conducting systemic risk monitoring and assessment, evaluating systemically important financial market infrastructures (FMIs), assessing the financial soundness of significant nonfinancial corporates, and reviewing the draft *Financial Stability Review*. Additional notable characteristics of the FSCom include the following:

- **The FSCom can make recommendations on matters related to financial stability to the CBR Board, as well as other relevant specialized committees within CBR** (that is, the Banking Supervision Committee, the Financial Supervision Committee and the Monetary Policy Committee).[26] Essentially, the FSCom can discuss any issues related to financial stability. When a macroprudential measure is needed, the FSCom would first take a strategic decision, initiating an inter-departmental consultation to prepare draft regulations and make other necessary arrangements. The relevant specialized committee would then discuss and finalize how to implement the measure, with a recommendation (including draft regulation) for consideration by the CBR Board. The CBR Board is responsible for the final approval of the measure. In the event that a disagreement emerges at the CBR Board (this has not happened so far), the FSCom would be a platform for resolving conflicting positions of different parties before the CBR Board's reconsideration of the issue.

[25] The Banking Supervision Committee performs regulatory and supervisory functions related to banks, while the Financial Supervision Committee carries out those related to NBFIs and financial markets. In particular, the two specialized committees would be in charge of enforcing regulatory compliance, taking supervisory actions, and drafting financial regulations, while the CBR Board would be responsible for approving financial regulations.

[26] The Monetary Policy Committee was established internally by a CBR regulation to carry out day-to-day monetary operations.

- **The FSCom is chaired by the CBR Governor to ensure adequate internal coordination.**[27] This is particularly important given that prudential tools come under the responsibility of various departments and also in view of the link between monetary and macroprudential policies. Four First Deputy Governors, responsible for financial stability, monetary policy, banking oversight, and NBFI and market oversight, are also members of the FSCom. In addition, inter-departmental working groups are formed to support the design, calibration, and implementation of macroprudential tools.[28] The Director of the Financial Stability Department is a member of the Banking Supervision Committee, the Financial Supervision Committee, and the Monetary Policy Committee.

27. CBR has successfully put in place a macroprudential policy framework. CBR has developed the macroprudential policy framework based on its collective responsibilities for ensuring stability of the banking system, payment systems, and financial markets (Article 3 of the CBR Law), supported by its assigned functions in the areas of monetary operations, financial sector regulation and supervision, and liquidity provision to the banking system (Article 4 of the CBR Law). Notwithstanding the lack of a fully prescribed financial stability architecture in the CBR Law,[29] CBR has conducted macroprudential policy with a view to maintaining the stability of the entire financial system.

28. CBR has broad powers to obtain data for macroprudential oversight. In addition to the power to collect data from regulated financial entities, CBR is responsible for compiling banking and monetary statistics, balance of payments statistics, and the financial account component of the national account statistics. CBR is the competent authority responsible for exchanging information with foreign counterparts. In addition, CBR has set up a special arrangement to obtain financial information from significant nonfinancial corporates, on a confidential basis.

B. Assessment

29. The current institutional arrangements appear to function well (the main strengths and weaknesses are summarized in Table 2).[30] CBR is well-placed to perform the macroprudential oversight function in Russia and has already built a track record in this area. The current institutional

[27] The other specialized committees within CBR are chaired by First Deputy Governors in charge of the respective areas.

[28] For example, the Financial Stability Department, along with the Banking Regulation Department and the Banking Supervision Department, is involved in calibrating and implementing capital risk weights. In cases of adjusting differentiated reserve requirements, the working group comprises the Financial Stability Department, the General Economic Department and the Monetary Policy Department.

[29] Article 45 of the CBR Law also provides a financial stability mandate, but with a focus on the financial market and interpretable as covering all activities of non-credit financial entities (Article 76 of the CBR Law). This article requires CBR to publish *Financial Stability Review* at least twice a year, monitor the state of the financial market, and elaborate on measures aimed at reducing threats to financial stability.

[30] IMF (2013a) suggests that institutional arrangements for the conduct of macroprudential policy need to consider four important aspects: inter-agency coordination, autonomy, governance, and accountability and transparency.

arrangements seem to strike a good balance between CBR's prominent role in macroprudential policy and high level inter-agency coordination. In particular:

- **Effective coordination within CBR has been instrumental in identifying and mitigating systemic risk.** The FSCom has played the central role in coordinating macroprudential oversight within CBR especially at the top management level. Cross-departmental coordination at the technical level also appears to be a common practice.

- **The FSC has served as a useful platform for inter-agency coordination.** With its current membership (after being strengthened in February 2015), the FSC has become a forum that gives high level policymakers opportunities to exchange views on a wide range of issues related to financial stability, helps expedite the process of legislative changes needed to maintain financial stability,[31] and enables CBR to take account of external views.

30. There is some room for further improvement in CBR's macroprudential policy framework. The current institutional arrangements, though functioning well at the moment, have not yet been fully tested, especially in a situation that calls for strong macroprudential actions. The CBR Board may face difficult choices in pursuing multiple policy objectives.[32] In particular, the trade-off between price stability and financial stability remains to be more clearly defined in order to ensure the proper coordination of macroprudential and monetary policy tools. The interactions with other policies also remains to be further elucidated, with appropriate governance structures.[33] Regarding accountability, CBR communicates with the public through *Financial Stability Review* and press releases, including those on changes in macroprudential measures. Consideration could be given to better documenting and more fully disclosing the decision-making process.[34]

31. The FSC, in its current setup, is performing its intended role as an advisory body. Decision-making based on consensus seems suitable given that the FSC is primarily a forum to exchange views. Moreover, potential interference with CBR's autonomy seems limited. The strong representation of CBR (Governor and four First Deputy Governors) allows fruitful discussion of all relevant aspects of financial stability, while the participation of the First Deputy Prime Minister (as the chair) and of an Assistant to the President helps to ensure that top policymakers are well-informed, all the more so as the FSC does not have a formal reporting requirement.

[31] As an example, the Consumer Credit Law was enacted in December 2013 to impose a ceiling on effective lending rates on consumer loans, supporting CBR's efforts to curb rapid unsecured consumer lending through macroprudential measures.

[32] The CBR Law assigns five separate objectives to CBR, which can be grouped into three categories: maintaining stability of the currency, safeguarding financial stability, and developing the financial system.

[33] IMF (2013b) discusses interaction between macroprudential and other policies (for example, competition, crisis management, fiscal, microprudential, and monetary policies).

[34] In contrast, when the CBR Board makes decisions related to monetary policy, opinions of Board members in a minority would be recorded in meeting minutes (still not publicly disclosed).

Table 2. Main Strengths and Weaknesses of the Current Institutional Arrangements for Conducting Macroprudential Policy	
Key Aspects	**Russian Characteristics**
Inter-agency coordination	• Adequate and effective coordination is achieved through the FSC.
Autonomy	• CBR is solely responsible for conducting macroprudential policy (general consensus). • CBR's autonomy is ensured given the FSC's consensus-based decision-making approach.
Governance	• CBR has multiple policy objectives, with the CBR Board responsible for making all key decisions. • Complicated policy tradeoffs could arise, with the relationship between the price stability and financial stability objectives not clearly defined.
Accountability	• Accountability could be complicated by the need to achieve multiple policy objectives. • Publication of *Financial Stability Review* is the main communication channel, providing a certain degree of policy transparency.

C. Recommendations

32. The FSC should continue to serve as an advisory body, but the scope of its responsibilities should be clarified to ensure CBR's autonomy. While a general consensus exists that CBR should be responsible for conducting macroprudential policy, it would be important to explicitly establish that the FSC does not have the authority to override CBR decisions on the use of macroprudential tools. The FSC's mandate to review the identification methodology and the list of SIFIs also appears to overlap with CBR's responsibilities. In principle, CBR could be responsible for identifying SIFIs, but a formal consultation process with the government is needed in light of potential government financial support to SIFIs. The current membership of the FSC seems appropriate for systemic risk monitoring and assessment, but may be less suited to performing the crisis management function.

33. CBR should continue to be in charge of conducting macroprudential policy, but further improvements could help to ensure timely macroprudential actions in the future. Going forward, in parallel to achieving the inflation target, CBR will also need to strike the right balance with safeguarding financial stability. In the near term, regular CBR Board meetings to discuss systemic risk issues, along with the publication of assessments, could take place under a more

formalized arrangement, similar to the conduct of monetary policy.[35] In the medium term, enhanced governance and accountability of policymaking could be helpful. One potential option is to establish a dedicated macroprudential policymaking body within CBR, supported by a fuller prescription of the macroprudential policy framework in the CBR Law. Changes for consideration include the following:

- **Amend the CBR Law to provide a well-prescribed financial stability framework.** It could be useful to provide CBR with an explicit mandate to maintain stability of the entire financial system (institutions, markets and infrastructures).

- **Establish a dedicated policymaking committee within CBR to conduct macroprudential policy.[36]** This could take the form of a "Financial Policy Committee" (FPC) with appropriate objectives, functions, and powers.[37] Such an arrangement could help strengthen governance and accountability of macroprudential policymaking. The FPC would be responsible for systemic risk monitoring and assessment and for decisions on policy measures needed to safeguard financial stability, which authority over tools that are commonly used to mitigate systemic risk.[38] The committee could also be assigned the power to make recommendations to other CBR committees to undertake necessary actions, including adjustments of other prudential tools that are microprudential in nature.

- **Enhance accountability through greater transparency.** In addition to publication of *Financial Stability Review*, which has served as the main channel for communicating CBR's views on systemic risk, records of the committee's meetings could be published to enhance policymaking transparency. Such records of the meetings would summarize key decisions in the areas of risk assessment and policy. Warnings and recommendations issued by the committee should be made public.[39] Views of committee members in a minority could also

[35] Such meetings would be held at least every quarter, some of which could coincide with the publication cycle of *Financial Stability Review* and/or calibration of the CCB. The approval of macroprudential measures could still be made in other CBR Board meetings, similar to the current practice.

[36] This structure thus envisages two separate committees: one to conduct monetary policy to maintain price stability, and another to conduct macroprudential policy to maintain financial stability. The Banking Supervision Committee and the Financial Supervision Committee would remain in charge of financial sector oversight from the microprudential and market conduct perspectives. The CBR Board would remain responsible for all other matters (including financial regulatory minima from the microprudential perspective) besides monetary and macroprudential policies, and would play a critical role in ensuring proper coordination across various policies.

[37] The FPC would replace the existing FSCom. Essentially, the FPC would be an upgraded FSCom with policymaking responsibility, with associated governance and accountability provisions.

[38] A broader scope of responsibilities could be considered. Such responsibilities could include liquidity provision (beyond normal monetary operations) and oversight of payment systems.

[39] Warnings constitute soft powers enabling the committee to express its opinion (for example, about systemic risk) to the public. Recommendations constitute semi-hard power enabling the committee to advise other competent authorities to take certain actions, possibly through a comply-or-explain mechanism. See IMF (2013b) for further details.

be recorded, in line with the current practice for the CBR Board regarding decisions on monetary policy.

TECHNICAL CAPACITY FOR SYSTEMIC RISK MONITORING AND ASSESSMENT

A. Overview

34. Macroprudential surveillance at CBR is primarily the responsibility of the Financial Stability Department. The scope of systemic risk monitoring and assessment covers overall financial soundness of banks, NBFIs and significant nonfinancial corporates, financial market developments, and credit and liquidity risks of the banking system.[40] More recently, CBR has developed a systemic risk dashboard to help identify and prioritize risks to support decision-making. Other departments also contribute to macroprudential surveillance. In particular, stress testing of the banking system is carried out by the Banking Supervision Department. With a fairly decent stress testing framework for banks, CBR has regularly conducted solvency and liquidity stress tests to assess banks' resilience to macroeconomic scenarios and liquidity pressures.

B. Assessment

35. CBR has the necessary technical capacity for systemic risk monitoring and assessment, but additional development is desirable. The analysis presented in *Financial Stability Review* reflects CBR's strong analytical capacity. However, it would be useful to expand analytical capacity in the following areas:

- **An early warning system to detect underlying vulnerabilities.** While the systemic risk dashboard has served as an effective tool for monitoring risks in financial markets and the banking system, the development of an early warning system would help enhance the capacity to detect underlying vulnerabilities that may lead to a crisis over the medium term. Such an early warning system should aim at assessing vulnerabilities in nonfinancial sectors (for example, corporate, household, fiscal, and external) and conditions in financial and real estate markets (for example, price misalignments).

- **Integrated stress testing capacity to assess the financial system's resilience.** Stress testing could be a useful analytical tool to identify systemic vulnerabilities and assess the adequacy of buffers. An integrated stress testing system should aim to account for second-round effects, solvency-liquidity links and cross-sectoral interconnectedness. Furthermore, the design of stress scenarios would benefit from the development of a macrofinancial model that can account for external sector developments (for example, global financial conditions, commodity prices, and developments in main trading partners) as well as

[40] More specifically, CBR closely monitors potential deposit runs and collateral adequacy, and also assesses credit risk associated with mortgage and consumer lending using granular information.

domestic macrofinancial linkages (for example, dollarization, real estate market, and oil-related spillovers).

- **A focus on "connecting the dots" to make an assessment from the system perspective.** This entails identifying and linking a number of cross-cutting issues. First, how large do capital buffers need to be to deal with systemic risk while taking banks' asset quality (asset classification and large exposures) and lending capacity (to support growth) into consideration? Second, how might monetary policy and operations affect the assessment of banking system vulnerabilities, particularly in view of the 2011–14 experience? Third, how should overall liquidity risk be assessed to ensure banks' proper risk management, especially in view of banks' reliance on short-term funding, CBR's liquidity provision, and interbank market fragmentation?

36. CBR generally has access to the data needed for macroprudential surveillance, but certain useful information is currently unavailable. As the financial regulator and supervisor, CBR can readily obtain standard financial soundness indicators and supervisory data from any regulated financial institution. In addition, CBR receives detailed financial information from significant nonfinancial corporates on a confidential basis, which is particularly useful for monitoring foreign-currency liquidity risk. CBR also has access to granular information on mortgage and consumer lending. However, CBR lacks the information needed to form a complete view on the indebtedness and leverage of different sectors and to conduct a comprehensive assessment of corporate and household balance sheets. CBR may also not have complete data on certain shadow banking activities, such as leasing, part of which could lie outside CBR's regulatory perimeter.[41]

37. *Financial Stability Review* could seek to convey key messages more clearly to the general public. *Financial Stability Review* presents systemic risk assessment by sectors in a forward-looking manner. However, it is at times difficult to understand the relative importance of the many stability concerns raised in the report, and draw appropriate conclusions. The report would also benefit from discussing propagation of risks through relevant macrofinancial linkages and assessing resilience of the banking system to the identified shocks.

C. Recommendations

38. CBR can continue to strengthen its technical capacity for systemic risk monitoring and assessment. Priorities include:

- **Early warning exercise.**[42] An early warning exercise could help in forming a comprehensive view on financial stability risks. The exercise should also incorporate underlying weaknesses

[41] Leasing does not require licensing under the CBR Law. However, major players in the leasing industry are parts of banking groups. See CBR (2016) for more detailed discussion about leasing activities in Russia.

[42] See IMF (2010) for how the IMF and FSB jointly conduct biannual early warning exercises.

flagged by the early warning system. Furthermore, the analysis of sectoral vulnerabilities could help calibrate macroprudential measures targeted at particular segments.

- **Macroprudential stress testing.**[43] Stress testing could be conducted for macroprudential surveillance purposes, with no supervisory actions necessarily being adopted based on stress test results. An integrated macrofinancial stress testing framework that accounts for second-round effects, solvency-liquidity links, and cross-sectoral interconnectedness should be developed.

- **"Connecting the dots."** As discussed above, this would aim to ensure that all relevant macrofinancial linkages, including feedback loops between the real and financial sectors, are captured.

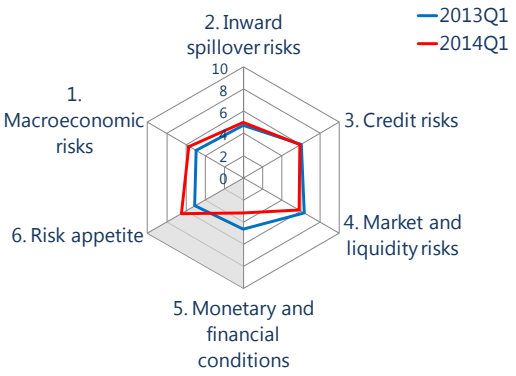
39. It would be useful to expand the available information on corporate and household balance sheets. CBR could develop a capacity to compile flow of funds statistics, make an arrangement to receive corporate financial statements for a broader set of companies, and conduct a survey on household finance. In light of the weaker performance of smaller entities, access to corporate financial data with a broader coverage would be important for ensuring effective systemic risk monitoring (see Appendix Figure 2). Going forward, CBR needs to monitor and close data gaps, especially those arising from unregulated financial activities (such as leasing), as well as cross-sectoral and cross-border financial operations.

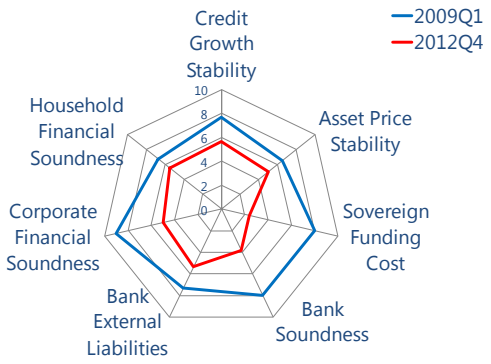
40. *Financial Stability Review* could include a clearer overall view of financial stability risks and financial system resilience. To this end, it could highlight the main systemic risks and vulnerabilities up front based on an early warning exercise,[44] possibly using a risk assessment matrix of the kind that has figured IMF country surveillance reports. A financial stability map could also help depict changes in multifaceted risks and vulnerabilities (see Figure 9 for examples of financial stability maps). The subsequent discussion could focus more on how risks may be amplified by existing vulnerabilities and propagate through various macrofinancial linkages. and whether the financial system has adequate buffers to withstand the envisaged risks (drawing on stress testing as needed). Finally, *Financial Stability Review* could discuss policies for safeguarding financial stability.

[43] See IMF (2012) for how macroprudential stress testing should be conducted.

[44] Good examples are financial stability reports produced by Bank of Canada, Bank of England, and Sveriges Riksbank.

Figure 9. Examples of Financial Stability Maps[1]



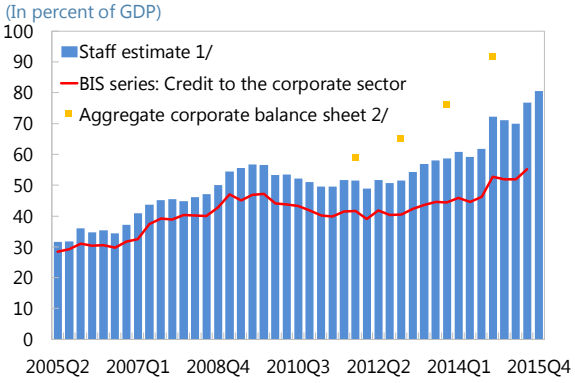


Source: IMF staff estimates.

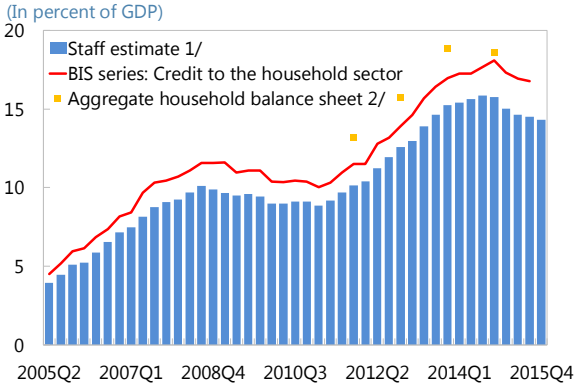
1/ Not based on Russia.

Appendix Figure 1. Russia: Corporate and Household Debt

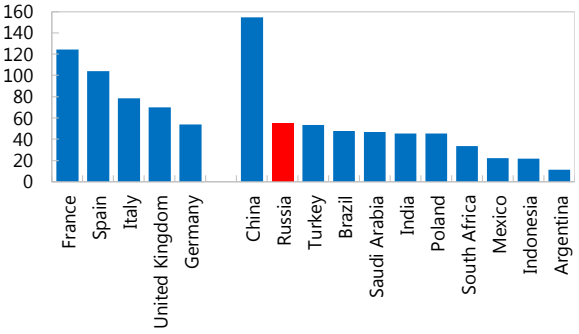
Corporate Debt, 2005–15
(In percent of GDP)



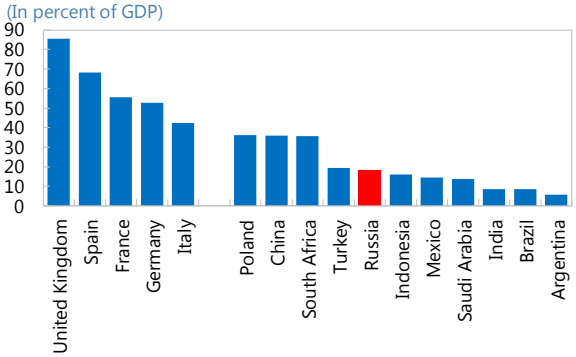
Household Debt, 2005–15
(In percent of GDP)



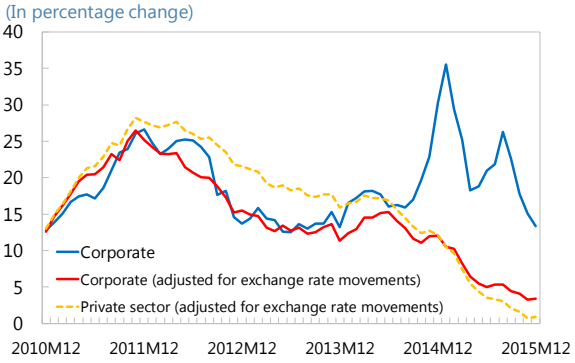
Selected Economies: Credit to the Corporate Sector, 2015H1
(In percent of GDP)



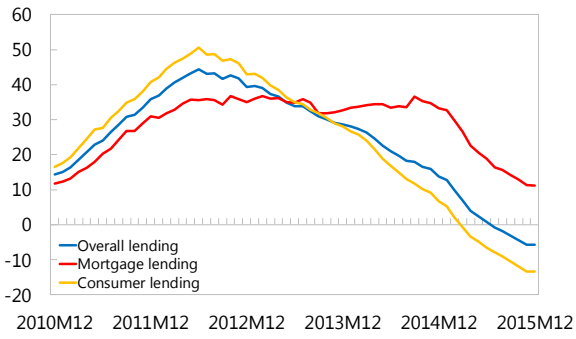
Selected Economies: Credit to the Household Sector, 2015H1
(In percent of GDP)



Domestic Credit Institutions's Lending to Corporates, 2010–15
(In percentage change)



Domestic Credit Institutions' Lending to Households, 2010–15
(In percentage change)

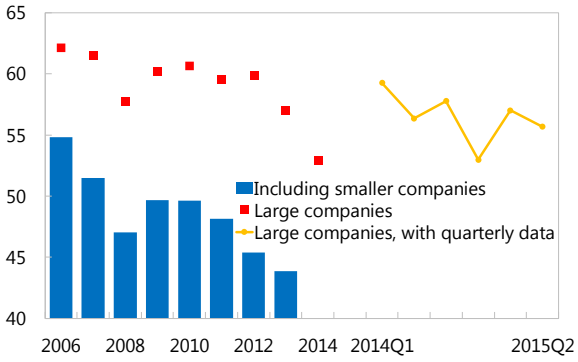


Sources: BIS, Debt Securities Statistics; CBR; Haver Analytics; IMF, International Financial Statistics and World Economic Outlook database; and IMF staff estimates.

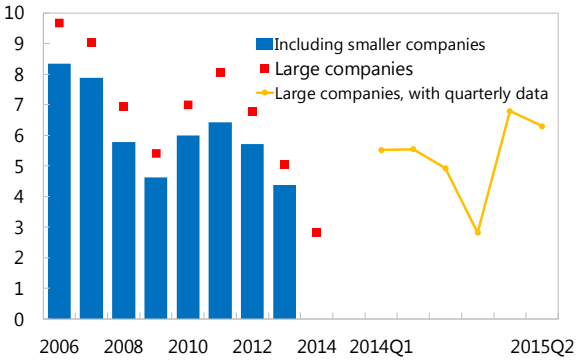
1/ Based on domestic financial institutions' claims.
2/ Based on debt liabilities and net accounts payable recorded in financial balance sheets of the national accounts statistics.

Appendix Figure 2. Russia: Corporate Sector Performance[1]

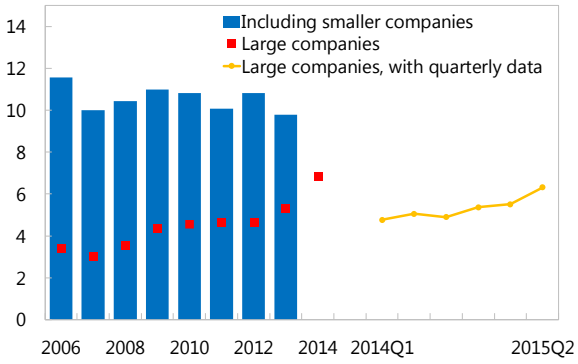
Corporate Leverage, 2006–15
Total equity to total assets (in percent)



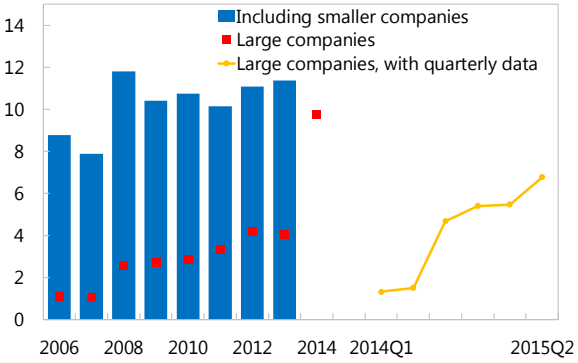
Corporate Profitability, 2006–15
Return on assets (in percent)



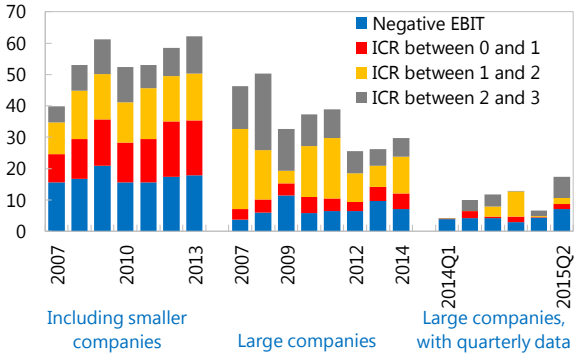
Corporate With Negative Equity, 2006–15
Share of companies with negative equity (in percent)



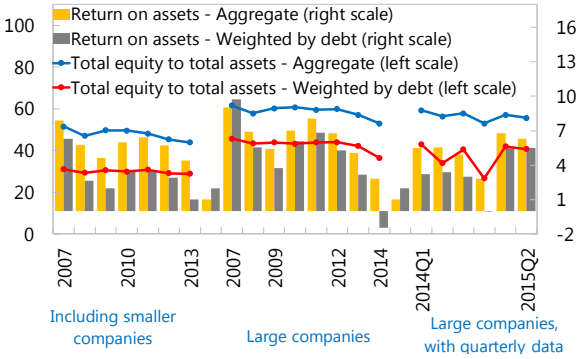
Corporate With Negative Equity, 2006–15
Debt of companies with negative equity (in percent of total debt)



Corporate Debt by Debt Servicing Capacity, 2007–15[2]
(In percent of total debt)



Corporate Leverage and Profitability, 2007–15
(In percent)



Sources: Orbis; and IMF staff estimates.

1/ Large companies include all listed companies and non-listed companies with total assets and turnover of at least US$1 million. Smaller companies cover entities with total assets and turnover of at least US$0.2 million.
2/ The interest coverage ratio (ICR) is defined as earnings before interest and taxes (EBIT) over interest expenses.

Appendix Table 1. Progress on Strengthening Macroprudential Policy Institutional Arrangements Since the Last FSAP

Timeline	Development
December 2010	**The Working Group to Monitor Financial Market Conditions, an inter-agency working group under the Presidential Council, was created.** Its mandates are to (i) identify mechanisms to monitor the state of the financial market and SIFIs, and (ii) propose the legal amendments needed for the establishment of these mechanisms. The Working Group is chaired by a Deputy Minister of Finance and comprises representatives from CBR, the FSFM, the MOED and the MOF, among few other agencies.
March 2011	**The Financial Stability Department was established in CBR.**
July 2013	**The FSC was created**, replacing the Working Group to Monitor Financial Market Conditions. The FSC is responsible for (i) conducting systemic risk monitoring and assessment, (ii) reviewing the methodology for identifying SIFIs and the list of SIFIs, and (iii) proposing measures to maintain financial stability. The FSC can make recommendations to government bodies and CBR. The FSC is chaired by the Minister of Finance, with broad and diverse membership.
September 2013	**CBR became an integrated financial oversight authority**, with oversight responsibilities for banks, NBFIs and financial markets, after the merger of the FSFM into CBR.
November 2014	**The FSCom, a high-level internal committee, was established within CBR.** The FSCom is responsible for (i) conducting systemic risk monitoring and assessment, (ii) evaluating sustainability of systemically important FMIs, (iii) assessing financial soundness of significant nonfinancial corporates and their risks, and (iv) reviewing draft *Financial Stability Review*. The FSCom can make recommendations to the CBR Board, as well as the Banking Supervision Committee, the Financial Supervision Committee and the Monetary Policy Committee of CBR. The FSCom is chaired by the CBR Governor.
February 2015	**The FSC was strengthened, especially in terms of membership.** The FSC is chaired by the First Deputy Prime Minister and comprises the CBR Governor, Minister of Economic Development, Minister of Finance and DIA General Director, as well as senior officials from these agencies. The FSC can make (non-public) recommendations on a comply-or-explain basis to government bodies and CBR. The secretariat was established, comprising staff from CBR, the First Deputy Prime Minister's Office, and the MOF.
February 2015	**The MOED and the MOF were designated as the government bodies responsible for ensuring financial stability.**

Appendix Table 2. Timeline of Macroprudential Measures Since 2006

Timeline	Development
Differentiated Reserve Requirement	
October 2006	The reserve requirement on liabilities to nonresident banks in all currencies was increased to 3.5 percent (from 2 percent). This particular reserve requirement was introduced at 2 percent in August 2004. At that time, the reserve requirements on individual deposits in local currency and on other deposits (for example, corporate deposits in all currencies and individual deposits in foreign currency) were at 3.5 percent (since July 2004).
July 2007	The reserve requirement on liabilities to nonresident banks in all currencies was increased to 4.5 percent. The reserve requirements on individual deposits in local currency and on other deposits were raised to 4 and 4.5 percent, respectively.
October 2007	The reserve requirement on liabilities to nonresident banks in all currencies was decreased to 3.5 percent. The reserve requirements on individual deposits in local currency and on other deposits were lowered to 3 and 3.5 percent, respectively.
January 2008	The reserve requirement on liabilities to nonresident banks in all currencies was increased to 4.5 percent. The reserve requirements on individual deposits in local currency and on other deposits were raised to 4 and 4.5 percent, respectively.
March 2008	The reserve requirement on liabilities to nonresident banks in all currencies was increased to 5.5 percent. The reserve requirements on individual deposits in local currency and on other deposits were raised to 4.5 and 5 percent, respectively.
July 2008	The reserve requirement on liabilities to nonresident banks in all currencies was increased to 7 percent. The reserve requirements on individual deposits in local currency and on other deposits were raised to 5 and 5.5 percent, respectively.
September 2008 (From 1st)	The reserve requirement on liabilities to nonresident banks in all currencies was increased to 8.5 percent. The reserve requirements on individual deposits in local currency and on other deposits were raised to 5.5 and 6 percent, respectively.
September 2008 (From 18th)	The reserve requirement on liabilities to nonresident banks in all currencies was decreased to 4.5 percent. The reserve requirements on individual deposits in local currency and on other deposits were lowered to 1.5 and 2 percent, respectively.
October 2008	The reserve requirements were uniformly reduced to 0.5 percent. The reserve requirement was subsequently raised to 1 percent in May 2009, to 1.5 percent in June 2009, to 2 percent in July 2009, and to 2.5 percent in August 2009.

Timeline	Development
February 2011	The reserve requirement on liabilities to nonresident legal entities in all currencies was increased to 3.5 percent. The reserve requirement on deposits was raised to 3 percent.
March 2011	The reserve requirement on liabilities to nonresident legal entities in all currencies was increased to 4.5 percent. The reserve requirement on deposits was raised to 3.5 percent.
April 2011	The reserve requirement on liabilities to nonresident legal entities in all currencies was increased to 5.5 percent. The reserve requirement on deposits was raised to 4 percent.
March 2013	The reserve requirements were uniformly imposed at 4.25 percent.
April 2016	The reserve requirement on liabilities in foreign currency, except individual deposits, was increased to 5.25 percent. The reserve requirement on other liabilities remained at 4.25 percent.
August 2016	The reserve requirement on liabilities in foreign currency was increased to 6 percent for individual deposits and 7 percent for other liabilities. The reserve requirement on liabilities in ruble was raised to 5 percent.
Provisioning	
June 2009	The loan classification and the provisioning requirement were eased (in response to a banking crisis). Restructured loans were allowed to remain in the original classification.
March 2013	The minimum provisions for newly extended unsecured consumer loans were increased to 2 percent for loans without overdue payments (from 1 percent) and to 6 percent for loans with overdue payments for no more than 30 days (from 3 percent). The tighter provision requirements were only applicable in the case that borrowers did not have deposit accounts with the banks. Unsecured consumer loans with overdue payments for more than 360 days must be fully provisioned (that is, 100 percent).
January 2014	The minimum provisions for newly extended unsecured consumer loans were increased to 3 percent for loans without overdue payments and to 8 percent for loans with overdue payments for no more than 30 days. The tighter provision requirements were only applicable in the case that borrowers did not have deposit accounts with the banks.
December 2014	The loan classification and the provisioning requirement were eased (to increase flexibility in the management of credit risk).

Timeline	Development
Sectoral Capital Risk Weights	
May 2009	The risk weight for relatively low-risk newly extended mortgage loans in ruble was reduced to 0.7 (from 1). These mortgage loans meet the following requirements: - The size of loans is less than RUB 50 million. - The LTV ratio is less than 70 percent; the DSTI ratio is less than 33⅓ percent.[1] - The property used as collateral must be insured for an amount of at least the size of loans.
October 2011	The risk weight for relatively high-risk newly extended mortgage loans in ruble was increased to 1.5 (from 1). These mortgage loans meet the following requirements: - The size of loans is more than RUB 50 million. - The LTV ratio is more than 80 percent.
July 2013	The risk weights for newly extended unsecured consumer loans increased based on risk profiles: ▪ Loans in local currency - Risk weight of 1.1 for loans with effective lending rates of 25–35 percent - Risk weight of 1.4 for loans with effective lending rates of 35–45 percent - Risk weight of 1.7 for loans with effective lending rates of 45–60 percent - Risk weight of 2 for loans with effective lending rates of more than 60 percent. ▪ Loans in foreign currency - Risk weight of 1.7 for loans with effective lending rates of 20–25 percent - Risk weight of 2 for loans with effective lending rates of more than 25 percent.
January 2014	The risk weights for newly extended unsecured consumer loans were increased based on risk profiles: ▪ Loans in local currency - Risk weight of 3 for loans with effective lending rates of 45–60 percent - Risk weight of 6 for loans with effective lending rates of more than 60 percent. ▪ Loans in foreign currency - Risk weight of 3 for loans with effective lending rates of 20–25 percent - Risk weight of 6 for loans with effective lending rates of more than 25 percent.
May 2014	The criteria for mortgage loans subject to the risk weight of 0.7 changed: - The DSTI ratio is less than 50percent (previously, 33⅓ percent); other criteria remain unchanged.
December 2014	The risk weight for relative low-risk newly extended mortgage loans in ruble was further reduced to 0.5. These mortgage loans meet the following requirements: - The size of loans is less than RUB 50 million. - The LTV ratio is less than 50 percent; the DSTI ratio is less than 40 percent. - The property used as collateral must be insured for an amount of at least the size of loans.

Timeline	Development
January 2015	The risk weight for relatively high-risk newly extended mortgage loans in ruble was increased to 1.5 (from 1). These mortgage loans meet the following requirements: - The LTV ratio is more than 90 percent.
February 2015	The risk weight for newly extended unsecured consumer loans was reduced to 1. Loans must have the following risk profiles: - In local currency - With effective lending rates of 25–35 percent.
April 2015	The risk weight for newly extended mortgage loans in foreign currency was increased to 3 (from 1).
August 2015	The risk weight for newly extended unsecured consumer loans was increased to 3. Loans must have the following risk profiles: - In foreign currency - With effective lending rates of less than 20 percent.
January 2016	The risk weight for relatively low-risk newly extended mortgage loans in ruble was further reduced to 0.35. These mortgage loans meet the following requirements: - The size of loans is less than RUB 50 million. - The LTV ratio is less than 50 percent; the DSTI ratio is less than 33⅓ percent. - The property used as collateral must be insured for an amount of at least the size of loans.
May 2016	The risk weights for new exposures to legal entities in foreign currency were increased to 1.1-1.5 (from 1), depending on transaction types and investment purposes. Main features are: - The risk weight for abovementioned foreign-currency exposures (both loans and debt securities) would be at least 1.1, except for exposures to corporates with sufficient foreign-currency earnings for debt servicing and exposures that are guaranteed by the government. - The risk weight for foreign-currency lending for purchasing commercial real estate would be 1.3. - The risk weight for foreign-currency debt securities held in certain securities depositories would be 1.5.

[1] For calculating the DSTI ratio, income of spouse and children is also included.

Appendix Table 3. Macroprudential Tools Available to CBR[2,3]

Tool	Availability	Additional Information
Tools dealing with broad-based credit risk		
Countercyclical capital buffer	√	
Leverage ratio	√	
Dynamic/general provisioning requirement	√	
Limit on growth of overall credit	×	• Could be a cap on lenders' exposures (hard) or on the share of lenders' exposures (soft)
Tools dealing with credit risk from the household sector		
Sectoral capital requirement	√	• Higher capital requirements for unsecured consumer (since July 2013) • Differentiated capital requirement for mortgage lending (since October 2013) • Higher capital requirement for certain foreign-currency exposures (forthcoming)
Sectoral provisioning requirement	√	• Higher provisioning requirement for unsecured consumer lending (since March 2013)
Limit on growth of certain credit	×	• Could be a cap on lenders' exposures (hard) or on the share of lenders' exposures (soft)
Limit on LTV ratio, DSTI ratio, or debt-to-income (DTI) ratio	×	• Could be a cap on lenders' exposures (hard) or on the share of lenders' exposures (soft) • Commonly used for collateralized lending • Limit on DTI ratio is also applicable for unsecured lending.
Amortization requirement	×	
Tools dealing with credit risk from the corporate sector		
Sectoral capital requirement	√	• Higher capital requirement for certain foreign-currency exposures (forthcoming)
Sectoral provisioning requirement	√	
Limit on growth of certain credit	×	• Could be a cap on lenders' exposures (hard) or on the share of lenders' exposures (soft)
Limit on LTV ratio or debt service coverage (DSC) ratio	×	• Commonly used for collateralized lending (for example, commercial real estate)

[2] The list of commonly used macroprudential tools is based on IMF (2014).

[3] The symbol √ indicates existence of the legal basis, while the symbol × indicates no legal basis.

Tool	Availability	Additional Information
Tools dealing with liquidity risk		
Liquidity buffer requirement	√	• To ensure adequate holding of liquid assets to cover potential funding outflows (for example, LCR requirement) • Broad legal basis seems to exist; N2 ratio, N3 ratio, and LCR in place
Stable funding requirement	√	• To ensure adequate use of stable liabilities to fund illiquid assets (for example, NSFR requirement and limit on loan-to-deposit ratio) • Broad legal basis seems to exist; N4 ratio and NSFR in place
Liquidity levy	×	• To reduce reliance on non-core funding (potentially differentiated by maturity, currency and source)
Reserve requirement	√	• To reduce reliance on some funding types such as nonresident or foreign-currency funding • Higher reserve requirement on certain foreign-currency liabilities (since April 2016)
Limit on open foreign-exchange position	√	• To contain foreign exchange risk
Outright limit on foreign-currency funding	×	• To reduce reliance on certain foreign-currency funding • For example, caps on foreign-currency liabilities, external borrowing, or FX derivative position
Tools for managing market liquidity risk	×	• For example, margin requirement for securities lending transactions and restriction on redemptions
Tools dealing with structural risk		
Capital surcharge on SIFIs	√	
Higher loss absorbency requirement	×	• For example, total loss absorbing capacity (TLAC) requirement for global SIBs and minimum requirement for own funds and eligible liabilities (MREL) for banks in the European Union • Could be implemented in the bail-in context
Limit on certain exposures	√/×	• To limit concentration risk, which may involve large exposures of a particular lender and common exposures of lenders in the system • Limit on large exposures in place
Structural limit on certain activities	×	• For example, Liikanen, Vickers and Volcker rules

Appendix Table 4. Progress in Meeting the FSB Peer Review Recommendations on Strengthening the Macroprudential Policy Framework

Recommendation	Progress
The authorities should clarify the role and responsibilities of the FSC in the macroprudential policy framework in order to eliminate potential overlaps in mandates and responsibilities with CBR.	None.
In order to enhance the effectiveness of the FSC, the authorities should consider: (1) upgrading the role of CBR in the FSC, given its financial stability mandate and technical expertise on prudential matters; (2) developing formal structures to carry out its mandated tasks; (3) providing the FSC with the power to issue recommendations to public sector authorities on a comply-or-explain basis; (4) adopting a majority voting system for its decisions; and (5) exploring options to publicly communicate its deliberations and decisions.	Membership of the FSC was strengthened, including participation of the CBR Governor. The FSC can make recommendations on a comply-or-explain basis to government bodies and CBR. The secretariat was established, comprising staff from CBR, the First Deputy Prime Minister's Office, and the MOF.
CBR should review the mandate of its FSCom to ensure that it addresses all aspects of macroprudential policy decision making, including coordination on policy measures for systemically important financial institutions and the development of proposals on the use of tools for macroprudential purposes.	None.
CBR should enhance its systemic risk analysis to identify and prioritize risks so that it becomes more policy-oriented and can support decision-making for macroprudential purposes.	CBR has developed a systemic risk dashboard and is working on identifying early warning indicators.
The authorities should consider amending the CBR Law to provide an adequate legal foundation for the development and use of a comprehensive macroprudential toolkit on an ex-ante basis.	None.

REFERENCES

Central Bank of Russia, 2016. *Financial Stability Review, 2015 Q2–Q3*, Moscow.

International Monetary Fund, 2010, "The IMF–FSB Early Warning Exercise—Design and Methodological Toolkit," Washington.

_____. 2012, "Macrofinancial Stress Testing—Principles and Practices," IMF Policy Paper, Washington.

_____. 2013a, "Implementing Macroprudential Policy—Selected Legal Issues," IMF Policy Paper, Washington.

_____. 2013b, "Key Aspects of Macroprudential Policy", IMF Policy Paper, Washington.

_____. 2014, "Staff Guidance Note on Macroprudential Policy—Detailed Guidance on Instruments, IMF Policy Paper, Washington.

Nier, Erlend, Jacek Osiński, Luis Jácome, and Pamela Madrid, 2011, "Institutional Models for Macroprudential Policy," IMF Staff Discussion Note 11/18, Washington.