



MONTENEGRO

FINANCIAL SYSTEM STABILITY ASSESSMENT

March 2016

This paper on Montenegro was prepared by a staff team of the International Monetary. It is based on the information available at the time it was completed on February 8, 2016.

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FINANCIAL SYSTEM STABILITY ASSESSMENT

February 8, 2016

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**Peter Löhmus
and Atilla Arda**

This report is based on the work of the Financial Sector Assessment Program (FSAP) mission that visited Montenegro in September 2015. The FSAP findings were discussed with the authorities during the Article IV consultation mission in November 2015.

- The FSAP team was led by Peter Löhmus, IMF, and Alexander Pankov, World Bank, and included from the IMF: Atilla Arda (deputy mission chief), Chris Faircloth, Johannes Forss Sandahl, Runchana Pongsaparn, and Claudio Visconti (staff); and Michael Deasy, Mimi Ho, and David Scott (consultants); and from the World Bank: Teymour Abdel Aziz (deputy mission chief), Johanna Jaeger, Damodaran Krishnamurti, Jan Nolte, Adolfo Rouillon, Gynedi Srinivas, and Kalina Sukarova.
- The mission met with Governor Milojica Dakic and Vice Governors Velibor Milosevic and Nikola Fabris, Central Bank of Montenegro, (CBM); Deputy Minister Nikola Vukicevic and Assistant Minister Bojana Bošković, Ministry of Finance (MOF); Director General Predrag Markovic, Deposit Protection Fund (DPF); President Branko Vujovic, Insurance Supervisory Agency (ISA); and with their respective senior staff; as well as with representatives of other relevant government agencies and private sector entities.
- The previous FSAP was conducted in 2006. The status of implementation of its Key Recommendations can be found in Appendix II.
- FSAPs assess the stability of the financial system as a whole and not that of individual institutions. They are intended to help countries identify key sources of systemic risk in the financial sector and implement policies to enhance its resilience to shocks and contagion. Certain categories of risk affecting financial institutions, such as operational or legal risk, or risk related to fraud, are not covered in FSAPs.

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Glossary

AML	Anti-Money Laundering
AQR	Asset Quality Review
ATM	Automated Teller Machine
BCP	Basel Core Principles for Effective Banking Supervision
BIS	Bank for International Settlements
BRRD	Bank Recovery and Resolution Directive
CAR	Capital Adequacy Ratio
CBM	Central Bank of Montenegro
CDD	Customer Due Diligence
CFT	Combating the Financing of Terrorism
DNS	Deferred Net Settlement
LF	Deposit Protection Fund
DPL	Deposit Protection Law
EBA	European Banking Association
EC	European Commission
ELA	Emergency Liquidity Assistance
ESRB	European Systemic Risk Board
EU	European Union
EUR	Euro
FDI	Foreign Direct Investment
FMI	Financial Market Infrastructure
FSA	Financial Sector Assessment
FSAP	Financial Sector Assessment Program
FSC	Financial Stability Council
FSSA	Financial System Stability Assessment
GDP	Gross Domestic Product
HQLA	High-Quality Liquid Assets
IA	Interim Administrator
IMF	International Monetary Fund
ISA	Insurance Supervision Agency
LCR	Liquidity Coverage Ratio
LOLR	Lender of Last Resort
LTD	Loans to Deposits
MaPP	Macroprudential Policy
MCI	Micro-Credit Institution
ML	Money Laundering
MOF	Ministry of Finance
MOU	Memorandum of Understanding
NCP	National Contingency Plan
NPC	National Payments Council
NPL	Nonperforming Loan

NSFR	Net Stable Funding Ratio
OMO	Open Market Operation
P&A	Purchase and Assumption
PoS	Point-of-Sale
ROA	Return on Assets
RR	Reserve Requirement
RTGS	Real-Time Gross Settlement
RWA	Risk-Weighted Assets
SPV	Special Purpose Vehicle
TF	Terrorism Financing
USD	United States Dollar
WB	World Bank

EXECUTIVE SUMMARY

The Montenegro economy is still dealing with the aftermath of the collapse of the lending boom in 2008. The financial crisis hit asset quality, weakening banks' portfolios. The legacy of pre-crisis rapid increase in indebtedness is adding to banking sector vulnerability. The crisis triggered a prolonged period of balance sheet deleveraging, which has translated into a near uninterrupted credit contraction. Slow economic growth and gaps in the legal framework have hampered banks' efforts to reduce the overhang of nonperforming loans (NPLs).

Economic momentum has accelerated in 2015, but there are numerous downside risks. The investment-led boost in economic activity, including from the costly highway project, increases growth prospects but exacerbates already sizable public debt-related vulnerabilities. While lending to the private sector has recently shown signs of recovery, credit growth remains subdued.

System-wide solvency and liquidity indicators appear broadly sound, but significant pockets of vulnerabilities exist among domestically owned banks. The financial system is dominated by banks and, in particular, by foreign subsidiaries. Several domestically owned banks have very high NPLs and/or very low provisioning levels; some have received qualified audited reports in recent years. Stress tests indicate that those banks are also vulnerable to shocks, such as protracted economic slowdown, even under the moderate stress scenario. Notable cross-border exposures remain. Increasing competition and the slow economic recovery are weighing on banking sector profitability. Strong competition in the banking sector is compressing interest rate spreads to levels that are threatening the survival of some smaller banks, with higher funding and operating costs.

Decisive action to deal with weak banks is critical for preserving financial stability. An independent Asset Quality Review (AQR) of all banks is recommended to review loan classification and provisioning practices. The authorities are advised to develop, with high priority, time-bound supervisory action plans, including capital injections by shareholders. In parallel, the Central Bank of Montenegro (CBM) should start preparing bank-specific resolution planning to maintain financial system stability, protect insured depositors, and minimize costs to taxpayers.

While the legal, regulatory, and supervisory frameworks for the banking and insurance sector have markedly improved since the 2006 FSAP, further progress is required. The main areas for strengthening banking oversight include identifying, measuring, and managing nonperforming assets; focusing on operational risks; and introducing effective consolidated supervision. A number of key shortcomings should be remedied to complement improvements in the framework for NPL resolution. The oversight agencies should bolster cross-border arrangements with home supervisory and resolution authorities. The recent Law on Consumer Bankruptcy needs to be amended, as it could negatively affect the collection of existing loans and the issuance of new loans secured with mortgages. In insurance oversight, the key policy priorities are moving to a risk-based supervisory approach and gradual introduction of Solvency II.

The financial safety net should be strengthened. The CBM should be confirmed as the resolution authority for the institutions under its supervision. A number of essential resolution powers, such as establishing a bridge bank, should be made available to the CBM. The Deposit Protection Fund (DPF) should be authorized to fund resolution measures and needs to be more closely integrated into crisis preparedness mechanisms. A credible and transparent public backstop is needed to deal with systemic cases in the absence of private sector-funded resolution. Emergency liquidity assistance should be brought under a single framework and follow best international practice.

The macroprudential framework and systemic liquidity management should be enhanced.

Euroization is limiting the CBM's options to manage liquidity and provide liquidity support. In preparation for Basel III, sound liquidity risk management standards should be prioritized as the first line of defense against liquidity pressures. A macro prudential framework should be established and, over time, made fully operational, and underpinned by broader and more focused cooperation among the relevant agencies under the auspices of the Financial Stability Council (FSC) with expanded powers to issue recommendations on macroprudential policy. The macroprudential mandate should be vested in the CBM.

The CBM-managed payment and settlement systems are generally efficient. Some adjustments are needed to minimize any residual liquidity risks, such as facilitating the automatic transfer of balances from the reserves account to the settlement account. The CBM oversight function should be strengthened through the formulation of an oversight policy framework, along with improvements to interdepartmental communication and exchange of information.

Table 1. Montenegro: FSAP Key Recommendations

Recommendations and Authority Responsible for Implementation	Term 1/
Prepare and implement time-bound supervisory action plans for vulnerable banks (CBM; ¶17).	I
Conduct an Asset Quality Review for all banks to determine adequacy of provisions (CBM; ¶18).	I
Introduce a macroprudential mandate taking into account the institutional setup, and establish pertinent policies and a toolkit consistent with EU/ESRB framework (MOF/CBM/FSC; ¶138).	MT
Introduce effective consolidated supervision (CBM; ¶144).	NT
Improve the regulatory and supervisory framework for liquidity and credit risks (CBM; ¶140, ¶145).	I
Tighten prudential norms for identification, classification, and reclassification of nonperforming assets (CBM; ¶146).	NT
Adopt risk-based supervision (ISA; ¶150).	I
Incrementally implement Solvency II (ISA; ¶151).	NT
Strengthen the CBM's oversight function over FMI (CBM; ¶152).	NT
Implement risk mitigation measures to minimize liquidity risks in the RTGS system and to eliminate the possibility of partial unwinding in the DNS system (CBM; ¶154).	I
Finalize national risk assessment and ensuing action plan, and ensure that high money laundering /terrorist financing risks are adequately mitigated (CBM; ¶155).	NT
Strengthen the voluntary debt-restructuring framework (MOF; ¶161).	I
Amend the personal bankruptcy regime to clarify creditors' rights regarding existing and future loans secured by mortgages (MOF; ¶162).	I
Set strict and objective criteria for determining the systemic importance of banks to determine eligibility for capital support (CBM/MOF; ¶172).	NT
Strengthen resolution-funding options (MOF; ¶171).	NT
Organize a dedicated resolution unit within the CBM, and initiate bank-specific resolution planning, prioritizing the weakest CAMEL-rated banks (CBM; ¶165, ¶170).	I
Implement risk-based contributions and shorten the payout term for DPF (DPF/MOF; ¶174).	NT
Streamline ELA policies and strengthen safeguards to protect the CBM's financial autonomy (CBM/MOF; ¶176, ¶177, ¶178).	NT
Strengthen the FSC's focus on its crisis preparedness and management mandate complementing its financial stability mandate (FSC; ¶164).	I
1/ "I-Immediate" is within one year; "NT-near-term" is 1–3 years; "MT-medium-term" is 3–5 years.	

MACROFINANCIAL SETTING

A. Crisis Legacy and Macroeconomic Outlook

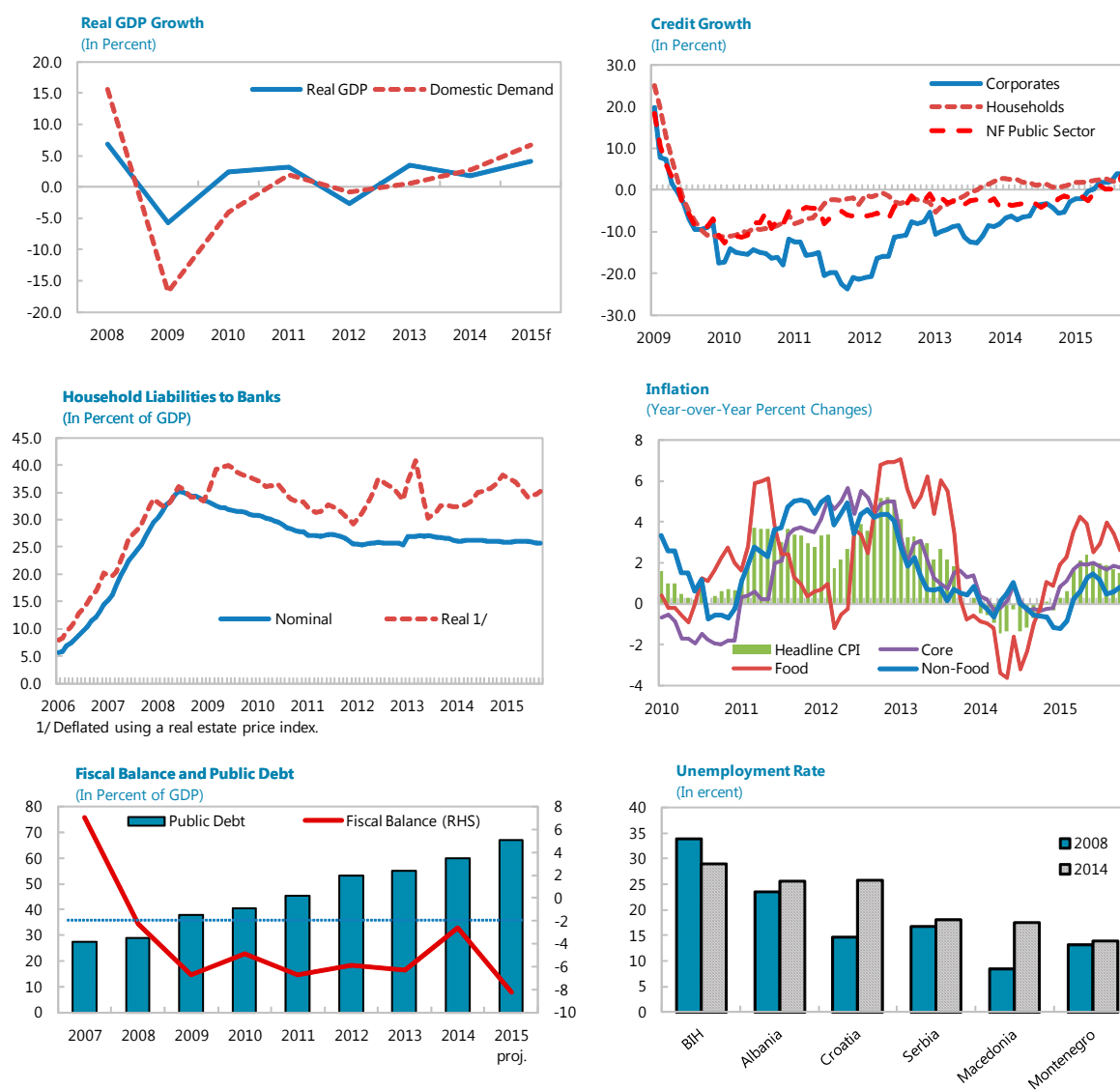
1. The economy has yet to fully recover from the collapse of the lending boom, as balance sheet weaknesses and bank deleveraging have hampered economic growth. In the run-up to the 2008 crisis, sizable capital inflows fueled a demand boom and imbalances, including reckless bank lending, a housing bubble, and rapid increase in public and private debt. The bursting of the asset bubble resulted in a large stock of NPLs, deteriorating bank profitability, and significant debt overhang that has contributed to a sustained contraction in credit and weak investment.

2. In the run-up to the crisis, policy actions to address the lending boom had limited results. By late 2007, the CBM introduced stricter rules for asset classification and provisioning—which were relaxed during the crisis—and increased the capital adequacy ratio (CAR) by 2 percentage points to 10 percent. In early 2008, temporary bank-specific ceilings on credit growth were introduced and the RR rates on certain deposits were increased. In late 2008, the government guaranteed all bank private deposits to dampen deposit outflows.

3. Since the crisis, slow credit growth has been a drag on economic growth. Reliance on foreign direct financing of investment has increased, but empirical work suggests that increased bank lending can provide an important boost to medium-term growth. After almost seven years of near uninterrupted contraction,¹ lending to the private sector has showed signs of recovery, and lending to the private sector increased by 2.3 percent (households and the corporate sector expanded by 2.7 percent and 2.2 percent, respectively) in 2015. Credit is expected to expand as aggregate demand increases, but the overall high degree of private-sector leverage makes a credit-led recovery unlikely.

4. Economic activity accelerated in 2015 as large infrastructure projects moved ahead, but risks weigh on the downside (Figure 1). The capital-intensive growth agenda, including the highway project (23.5 percent of 2014 GDP), should boost growth in the near and medium terms; but it comes at the expense of exacerbating already pronounced public debt-related vulnerabilities. Large, general government financing needs (averaging nearly 10 percent of GDP during 2016–20) are an important source of macroeconomic risk. The narrow production base and rigid labor market reduce the capacity to absorb external shocks, and rapidly rising public debt constrains policy space. Lax fiscal discipline could ultimately increase funding costs and lending premiums.

¹ Gross loans to households and the corporate sector have contracted by 10.5 percent and 34 percent of GDP, respectively, since their pre-crisis peak in 2008.

Figure 1. Montenegro: Selected Economic Indicators

Sources: Montenegro authorities and IMF staff estimates.

FINANCIAL SYSTEM RESILIENCE

A. Financial Sector Structure

5. Banks dominate the fully euroized financial system and account for about 90 percent of system assets, equivalent to about 93 percent of GDP as of June 2015. The Euro is used as legal tender, but Montenegro is not part of the euro area; 14 banks operate in Montenegro, which is up from 11 in 2013. Foreign subsidiaries hold 79 percent of the sector's assets. Most of the lending is to the trade sector and households (mostly mortgages), each representing about 38 percent of total loans. Loans to nonresidents represent 18 percent of the total.

6. The insurance sector grew steadily at an average annual rate of 3 percent in the past five years. Total premium has kept pace with the growth of the economy and remains at 2 percent of GDP. The life insurance sector is very small: 6 life insurers collected EUR 12 million in premiums in 2014, insuring less than 10 percent of the population. The non-life insurance sector is predominantly compulsory motor third-party liability insurance. Nine of the 11 insurers are foreign subsidiaries, writing 95 percent of total premiums.

7. The rest of the nonbanking financial system plays a minor role. While the nascent stock exchange's market capitalization is significant, the turnover is very low and the bond market is thin. The total asset size of the five micro-credit institutions (MCIs) is 2 percent of GDP. The leasing market is small and declining since the crisis.

B. Financial Soundness

8. The financial crisis hit asset quality (Figure 2). The crisis triggered a prolonged period of balance sheet deleveraging in banks, which translated into a nearly uninterrupted credit contraction. High NPLs, low profitability, and high private sector indebtedness continue to render banks vulnerable.

9. Progress to address the debt overhang has been slow, partly owing to a weak market for real estate, banks' unwillingness to recognize further losses, and gaps in the debt-resolution framework. Sector NPLs were still high at 14.7 percent of total loans in September 2015, down from 25.3 percent in mid-2011.^{2,3} NPL ratios vary widely among banks from 5.5 percent to 35 percent. Regulatory provisions, in turn, were slightly above 70 percent of reported NPLs—increasing slowly since 2010–11. Significant variations exist across banks, reflecting potential regulatory forbearance as well as an apparent reluctance on the part of some banks to create adequate provisions due to low profits.

² Excluding special purpose vehicles (SPVs) established by some foreign-owned banks in Montenegro. The SPVs are owned, consolidated, and supervised by the parent banks.

³ The NPL ratio had declined to 14.75 percent as of end-September 2015.

10. Corporate balance sheets remain weak and limited progress has been made in cleaning household balance sheets, although the size of bank debt is comparable to the region (Figure 3).

Corporate sector indebtedness has decreased from 2008 only by 11.2 percentage points of GDP to 114.5 percent as of 2014.⁴ While household domestic liabilities have declined by about 15 percent relative to the pre-crisis peak, banks have been increasing lending activities in the retail segment. High structural unemployment, declining real wages, and limited pension incomes threaten the sustainability of this lending model, absent a sustained robust boost in growth.

11. Overall lending conditions remain tight. Credit growth has been sluggish despite declining lending rates. As balance sheet repair has been modest, existing vulnerabilities cast doubt on prospects for a credit-led recovery. High NPL levels are an indication of significant rigidities in the NPL resolution framework and tightened credit risk management in many banks. Weak credit demand appears to be another important factor.

12. Banks' reported capitalization appears adequate overall, though with significant variations. The aggregate tier I capital ratio is about 14 percent, with the CAR at close to 16 percent, compared to the regulatory minimum of 10 percent, albeit with wide differences (the highest CAR being 33 percent and the lowest 10 percent). Nevertheless, some banks could have CARs close to or below the regulatory minimum after provisioning adjustments, as assumed in the stress test.

13. Banks' profitability continues to be very weak, with an aggregate return on assets (ROA) of 0.5 percent and return on equity (ROE) of 3.4 percent in June 2015. Interest rate spreads on new loans⁵ have declined significantly, putting additional pressure on bank profitability. The small market and increasing competition partly explain the high overhead expenses-to-core income ratio, which, in June 2015, was 76 percent for the sector, with five banks above 100 percent.

14. Bank liquidity is ample. Banks have reduced the loan-to-deposit (LTD) ratio since the crisis to just above 100 percent, albeit with wide heterogeneity across banks. The share of liquidity held with the CBM above the required reserves is high, reflecting possibly higher precautionary balances, sluggish credit demand, and increased risk aversion in lending, combined with limited new bankable projects.

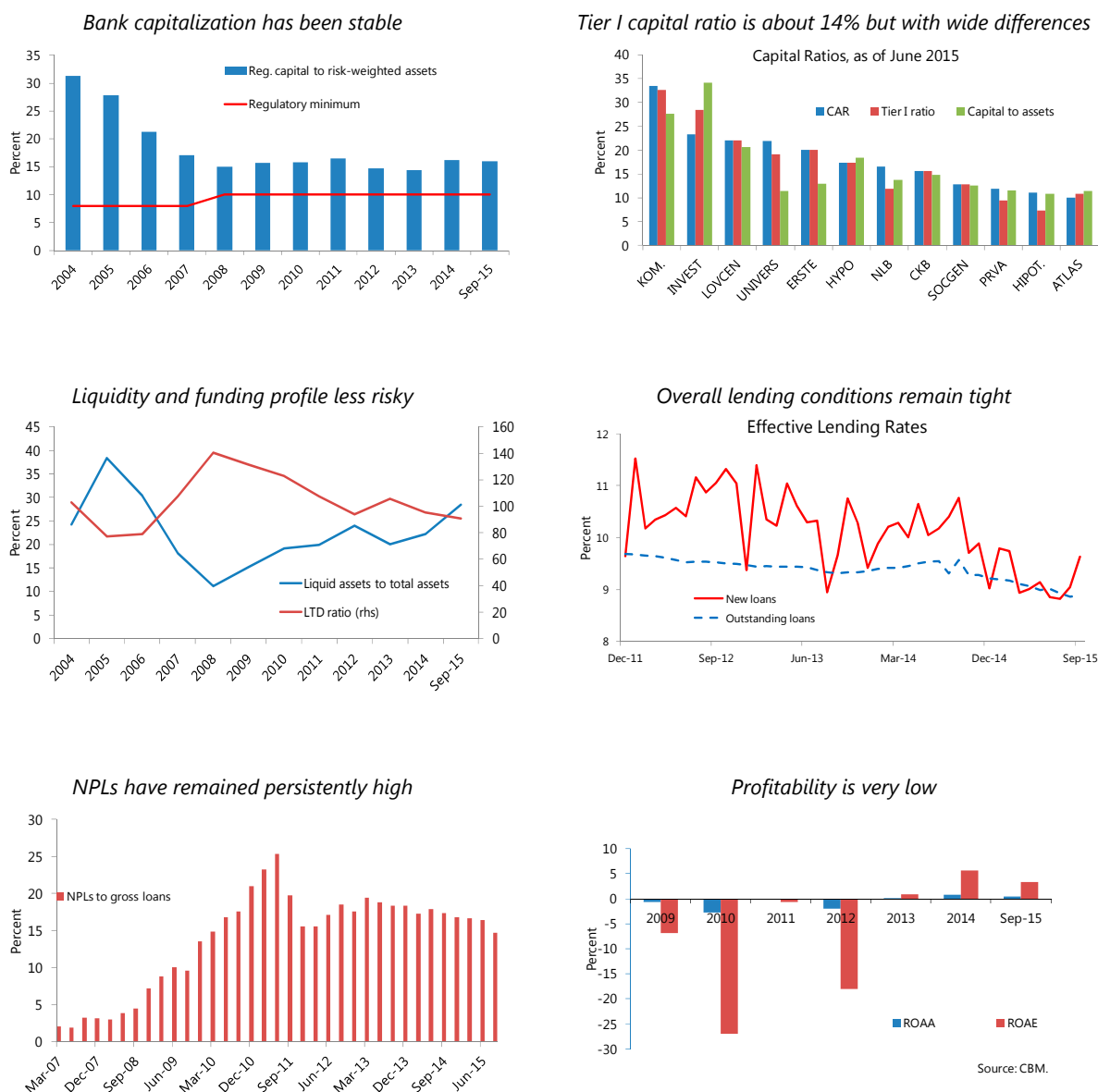
15. Foreign exchange loan exposure is modest as the economy is euroized. As of June 2015, loans in foreign currencies amounted to EUR 171 million (7.6 percent of total loans), while deposits amounted to EUR 152 million (6.3 percent of total deposits). However, the recently adopted law on

⁴ Assuming long-term NPLs that are fully provisioned are extended to entities that are no longer operational, the level of indebtedness would decrease by 6.5 percent of GDP to 108 percent.

⁵ Interest rate spread is defined as the difference between the weighted average effective lending and deposit interest rates.

the conversion of Swiss franc into euro-denominated loans imposes significant costs on one foreign-owned bank subsidiary.⁶

Figure 2. Montenegro: Main Banking Sector Indicators

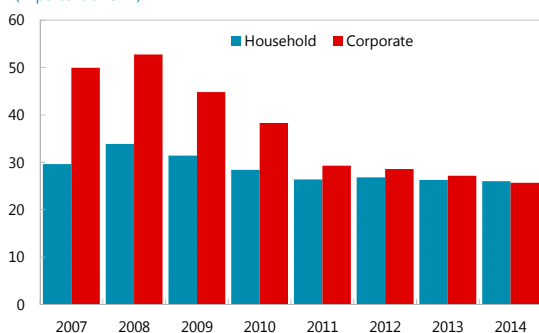


⁶ Only one bank with a foreign owner was affected, with a total cost of about EUR 9 million (28 percent of its capital).

16. Some domestically owned banks face challenges. As a group, they have weaker profitability and higher operating and funding costs than foreign-owned banks.⁷ In some banks, the amount of loans past due by more than 90 days disproportionately exceeds the amount of NPLs as classified by the CBM. Intensified competition for a limited number of good-quality borrowers increases pressures on interest rate spreads and banks' earnings.

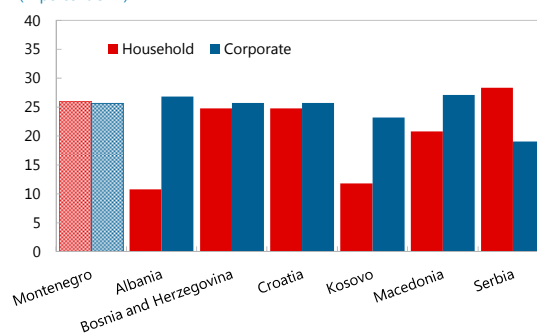
Figure 3. Montenegro: Corporate and Household Indebtedness

Gross Loans from Domestic Banks by Sector
(in percent of GDP)



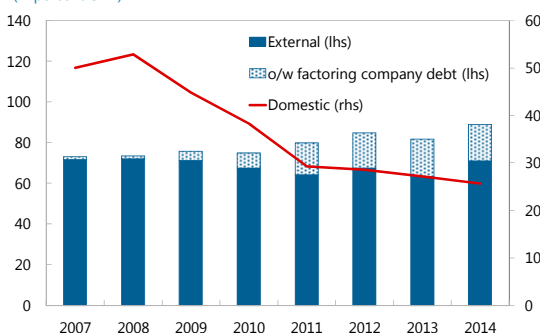
Sources: CBM and IMF staff estimates.

Household and Corporate Indebtedness to Banks
(in percent GDP)



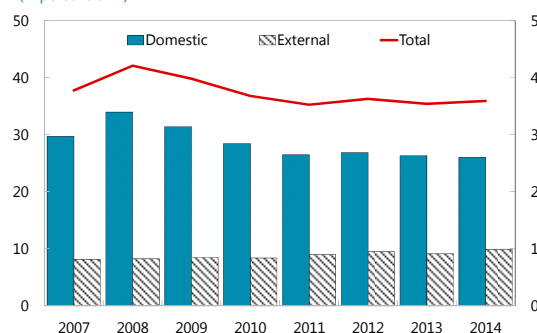
Sources: National Central Banks, IMF WEO, and IMF staff calculations.

Corporate Indebtedness
(in percent GDP)



Sources: CBCG, MONSTAT, and IMF staff estimates.

Household Indebtedness
(in percent GDP)



Sources: CBCG, MONSTAT, and IMF staff estimates.

17. The viability of weaker banks should be carefully assessed. While the CBM has imposed higher capital requirements on one bank, weaker banks should be subject to more intensive supervision and not be allowed to expand by collecting costly deposits. The CBM should adopt bank-specific, time-bound supervisory action plans, including requiring additional capital to cover

⁷ For instance, at end-2014, aggregate ROA was 0.8 percent broken down by about zero for domestically owned banks and about 1.1 percent for foreign-owned banks; the overhead costs-to-core income ratio (net interest and fees) was about 75 percent for the banking sector, with over 90 percent for domestically owned banks and about 70 percent for others.

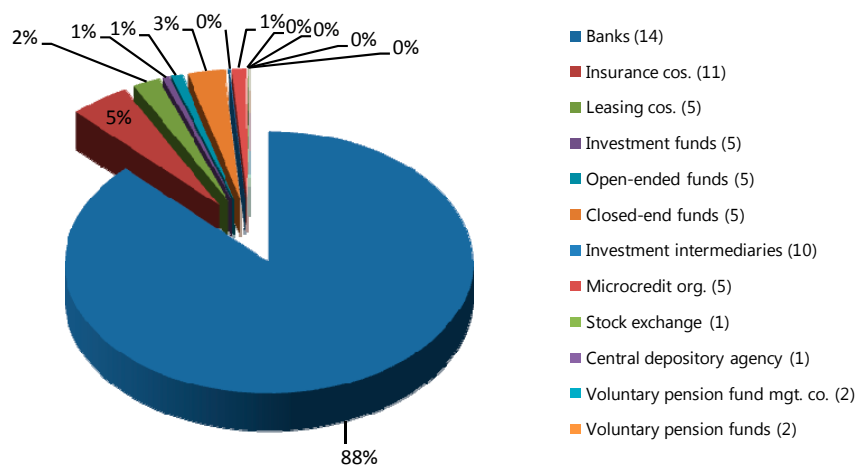
the actual and anticipated losses. In the absence of timely compliance, banks should be resolved on a least-cost basis. Delays in enforcement may distort the banking market and increase resolution costs significantly.

18. High NPLs, indications of inadequate provisioning in some banks, and an overall reliance on real estate collateral call for AQRs. External auditors have issued qualified opinions related to inadequate provisioning for several banks in 2013 and 2014, which have not been addressed. The supervisors also lack proper tools to challenge banks' real estate collateral valuations. An independent AQR of banks is therefore needed to estimate the extent of inadequate provisioning and to inform subsequent supervisory action.

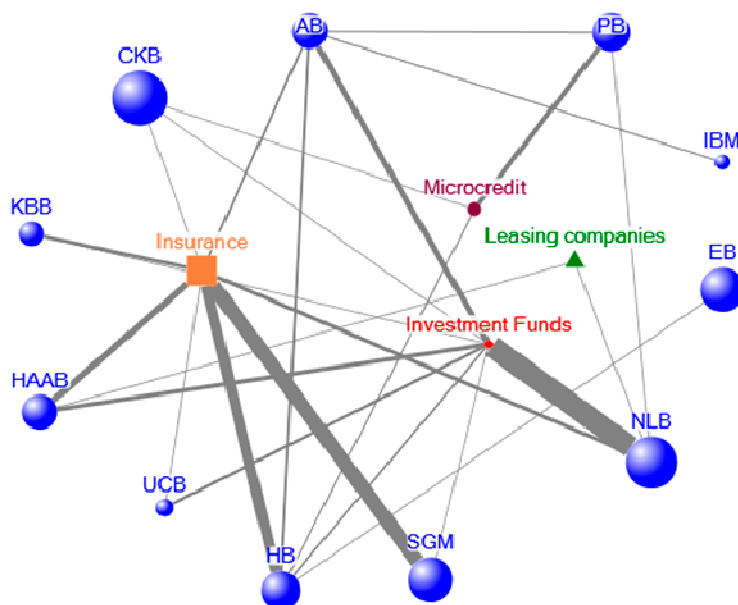
19. Domestic interconnectedness among banks is limited (Figure 4). While there are some cross-exposures between commercial banks, insurance companies, and investment funds, gross claims and liabilities of the banking sector to nonbanks averaged only about 2 percent of total assets. The domestic interbank transaction volume is small: only 0.2 percent of the banking sector's total assets.

20. The banking sector's high cross-border exposures reflect the ownership structure, investment and hedging strategies, and search for investment opportunities. Banks' foreign claims and liabilities account for over 115 percent and 50 percent of total regulatory capital, respectively, as of end-2014. Without viable and safe domestic alternatives, Montenegro banks invest in foreign-government securities and place part of their excess liquidity in EU banks. Some banks have invested in higher yield sovereign bonds in the region, although these exposures are limited. On average, about 20 percent of deposits belong to nonresidents, with a few banks having somewhat higher shares. Nonresident deposits, over a quarter of which are from Russia, have stayed relatively stable (Figure 5).

21. The insurance sector returned to profitability in 2011, although some insurers still suffer operating losses. While the CAR stood at 735 percent for life and 170 percent for non-life insurers at end-2014, the solvency margins were calculated on a Solvency I type of fixed factors, without taking into account the risk profiles of the assets or liabilities, underestimating risks, and overstating capital.

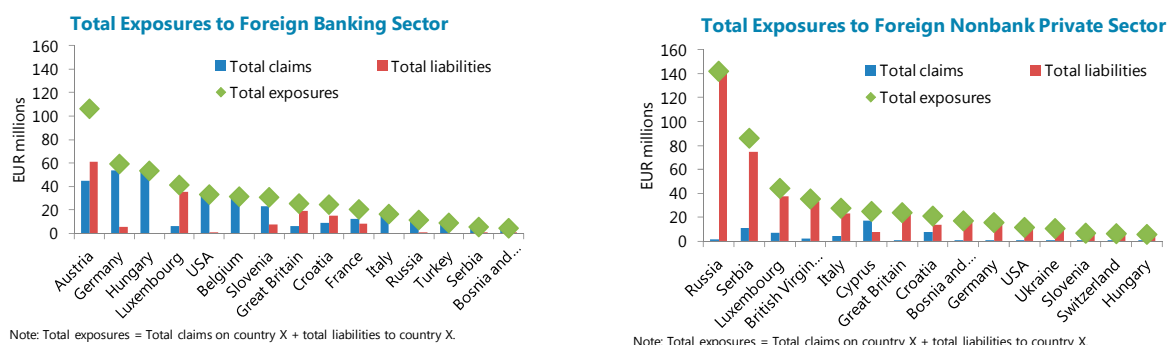
Figure 4. Montenegro: Financial System Structure and Linkages 1/

Source: CBM.

Linkages between Banking and Nonbanking Sectors

Source: IMF staff calculations.

1/ The size of each node reflects the total assets of each institution. Linkages (edges) are bilateral claims and liabilities, and the thickness of each linkage reflects the magnitude of bilateral linkages. The data is as of December 2014.

Figure 5. Montenegro: External Exposures of the Banking Sector, end-2014

Sources: CBM, IMF staff

C. Stress Tests and Tail Risks

22. Top-down solvency, liquidity, and contagion risk stress tests were conducted for the 12 banks that were active at end-2014. The tests were carried out in close cooperation between the mission and the CBM staff, using supervisory data and data submitted by banks. The tests show that capital shortfalls in the banking system could be significant in adverse scenarios.⁸ The banking system exhibits short-term liquidity resilience, while longer-term liquidity is less resilient and vulnerabilities to elevated funding costs are high.

23. Solvency stress tests accounted for potentially inadequate loan-loss provisioning. Strong indications of inadequate NPL provisioning were found in four banks; for three banks, the external auditors issued qualified opinions for end-2014 financial statements. Consequently, parallel solvency stress tests were conducted based on adjusted capital adequacy levels,⁹ rendering one of the banks insolvent before any stress was applied and would require a capital injection of 0.7 percent of GDP to reach the minimum regulatory capital requirement.

24. Three one-year macroeconomic scenarios were applied. In addition to a baseline scenario based on IMF staff projections as of August 2015, two alternative scenarios were designed

⁸ Top-down stress tests suggest that potential system-wide capital shortfalls could be 1.0 percent of GDP in adverse scenario 1 and 3.5 percent of GDP in adverse scenario 2 after provisioning adjustments (Appendix Table 10).

⁹ Loan-loss provisions, equity, regulatory capital, and risk-weighted assets were adjusted to reflect increased provisioning in four banks.

to assess banking system stability under stressed conditions (see projections in Appendix Tables 8 and 9).¹⁰

- *Adverse scenario 1:* A moderate scenario with an economic contraction driven by a reduction of external demand caused by a protracted euro area economic slowdown, combined with economic deterioration in Russia. The moderate scenario growth projection of -2.5 percent mimics the growth in 2012 (the EU contracted by -0.5 percent). This was combined with a significant drop of output growth in a number of sectors.
- *Adverse scenario 2:* A severe scenario with significant financial market deterioration combined with the moderate scenario shocks. Montenegro suffers from reduced investments and faces elevated funding costs due to increased risk aversion. GDP is projected to fall by 5.2 percent (equal to two standard deviations from the historical mean), reflecting reduced external and internal demand. These developments are partially caused by an assumed reduced confidence in sovereign finances, causing increased funding costs for the economy.

25. Credit risk losses had the largest impact on capital adequacy (Figure 6). Due to short data history and a lack of through-the-cycle data on quarterly GDP, top-down stress tests found insufficient statistical significance in the relation between NPLs and macroeconomic variables. Stress tests relied on broad evidence of sensitivities of credit losses to real GDP growth estimated for emerging markets.^{11, 12} Potential loan losses due to credit risk were estimated to range from 1.2 percent to 4.8 percent of GDP in the moderate and severe adverse scenarios, respectively (Appendix Tables 10 and 11).

26. Funding risk is sizable in an environment of increasing deposit competition and low profit margins. Low profitability renders banks vulnerable to increased funding costs. Under the adverse scenarios, while banks would largely be able to cover the deposit outflow using cash and liquid assets, profitability would be impaired even by relatively small deposit rate increases. With a high aggregate ratio of nonresident to total deposits, the vulnerabilities to funding cost increases may prove material.

27. Market risks are significant in a number of banks. While banks' total holdings of fixed income, equities, and real estate on average amount to 3 percent of total assets, the distribution among banks is uneven, as some banks' total holdings of such assets amount to above 15 percent.

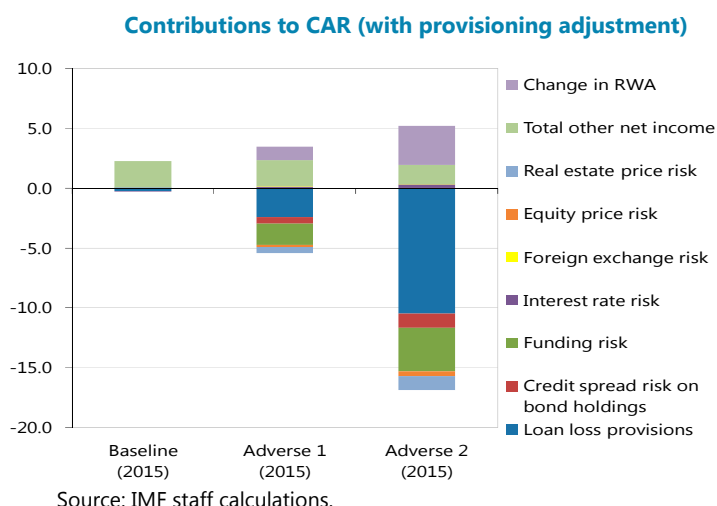
¹⁰ The Technical Note on Banking Sector Stress Testing elaborates on the risks and vulnerabilities in the Montenegro banking system as well as on the macrofinancial transmission of the scenarios into banking system instability.

¹¹ Hardy, D.C., and Schneider, C. *Rules of Thumb for Bank Solvency Stress Testing*. IMF Working Paper. November 2013.

¹² A peer group analysis of the projected NPL ratios implied by the rules-of-thumb was conducted based on a comparison to results of FSAP stress tests in neighboring countries and to results of internal CBM stress testing models. The analysis showed that adverse scenario 1 projections are comparable to the results of internal CBM models, while adverse scenario 2 projections are comparable to stress test results of FSAPs in neighboring countries.

This causes vulnerabilities to market risk, and in particular to volatility in credit spreads on domestic sovereign and corporate bonds, as well as in equity and real estate prices. However, banks exhibit little vulnerability to foreign exchange risk.

Figure 6. Montenegro: Contribution to the Capital Adequacy Ratio of the Banking System (In percentage points)



28. Loan concentration is high in several banks. While the average largest exposure in the system remains below 25 percent of regulatory capital, some banks have exposures to single debtors above the threshold.¹³ The total capital shortfall resulting from the default of the largest net exposures would amount to 0.3 percent of GDP, while the default of the five largest exposures would cause capital shortfalls of 3.2 percent of GDP (Appendix Table 12).

29. Banks exhibit high short-term liquidity resilience but longer-term vulnerabilities. With an aggregate liquidity coverage ratio (LCR) of 863 percent, banks have ample and, possibly, excess liquidity. The short-term resilience remains even when deposit outflows under the severe adverse scenario are assumed and sovereign bonds and required reserves are excluded from the pool of high-quality liquid assets (Figure 7).¹⁴ However, with an aggregate net stable funding ratio (NSFR) of 124 percent and two banks below 100 percent, long-term liquidity resilience is lower. When deposit outflows are assumed, as many as seven banks fall below the 100 percent NSFR threshold, which is caused by relatively low asset quality and the use of funding deemed as unstable.

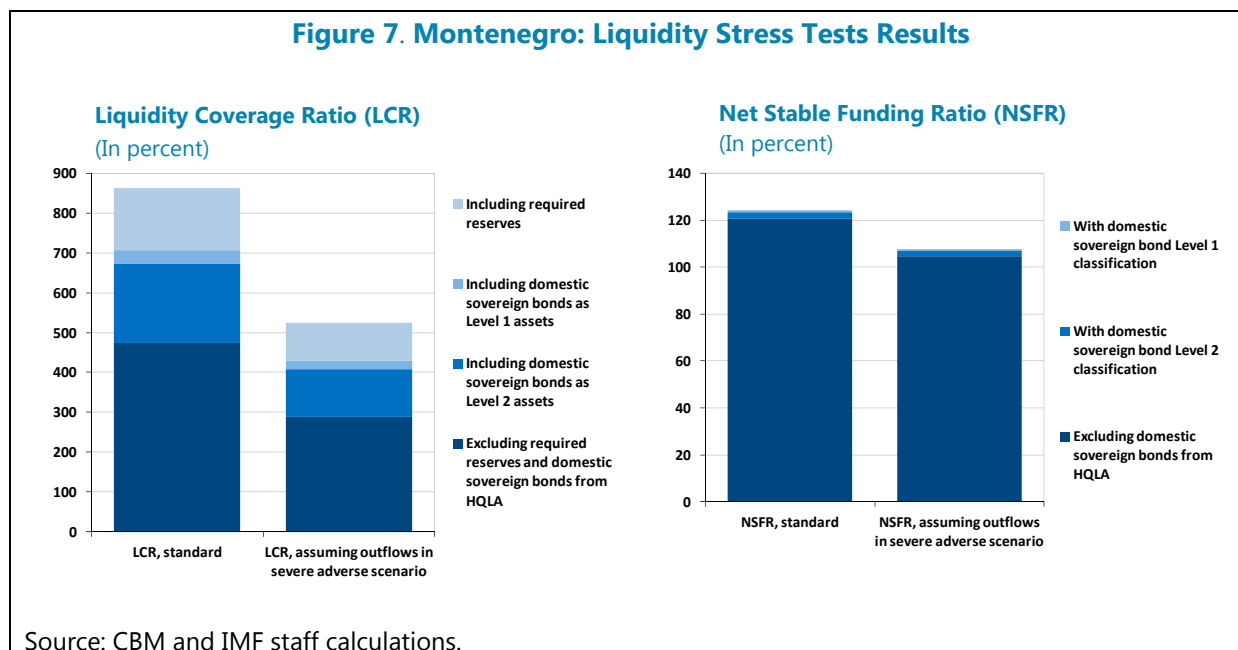
30. A large shock to a country to which Montenegro banks have significant exposures could have both direct and indirect spillover effects on the banking system (Figure 8).

¹³ Large exposures are defined as the net exposure after “credit mitigation,” including collateral and guarantees. No adjustments to provisioning have been to net large exposures in the stress test.

¹⁴ The standard Basel III LCR and NSFR were used for the stress test.

Although banks' direct exposures were relatively small, their indirect impact was large, due to the interconnectedness with countries that have direct exposures to Montenegro. The potential impact of geopolitical events in Ukraine appeared manageable.¹⁵

Figure 7. Montenegro: Liquidity Stress Tests Results



D. Structural Challenges

31. The authorities suggested that weak credit growth and high lending rates are due to banks' excessive risk aversion and to insufficient competition in the banking sector.

Attempting to redress this situation, the CBM has looked favorably at applications for new bank licenses, and the authorities are also considering imposing lending rate caps to spur credit growth.

32. The mission found the competition in the banking sector not weak, evidenced partly by low concentration and persistent weak profitability.

In terms of concentration and market power, there seems to be no evidence of dominance in the market. The Herfindahl–Hirschman Index (HHI) was about 0.12 for assets, deposits, and loans at end-2014. The share of the five largest banks has declined from 85 percent at end-2008 to 68 percent.

33. Staff analysis suggests banks' high interest rate spreads are mainly driven by costs.

A decomposition of interest rates spreads for the period 2007–14 shows that spreads on outstanding loans are driven predominantly by overheads and provisions, while profit margins are mostly negative (Figure 9). Furthermore, competition has compressed spreads on new lending to levels threatening the survival of some smaller banks with higher funding and operating costs and a weaker client base. Anecdotal evidence suggests that cost pressures on the funding side, coupled

¹⁵ The analytical framework is based on the methodology proposed by Espinosa Vega and Solé (2010).

with declining lending rates in the fight for a few good clients, are driving some banks into a high-danger zone.

Figure 8. Montenegro: Cross-Border Spillovers to Montenegro Banks: Credit and Funding Shocks



Sources: CBM, BIS Locational Statistics Databases, IMF Financial Soundness Indicators Database and IMF staff calculations.

1/ Bank failure is defined as the capital-to-RWA ratio falling below the CAR requirement.

34. The authorities were discouraged from introducing caps on lending rates and from increasing the number of banks without a sound business plan and robust capital base.

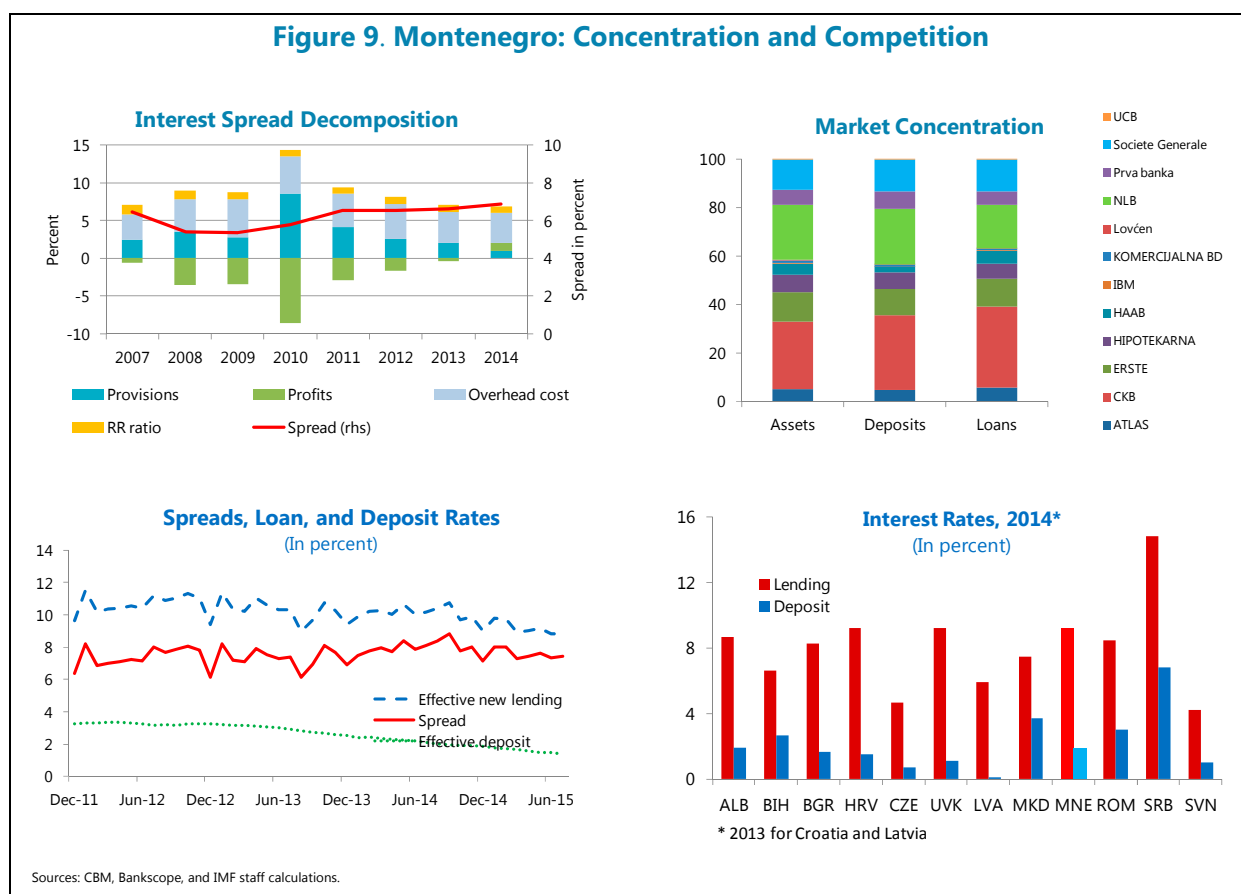
Introducing caps may further restrict credit to small- and medium-size enterprises and consumers, as well as lead to an undesirable mispricing of risks. International experience suggests that interest rate caps have a limited effect on supporting lending while having a negative impact on financial access.¹⁶ The increase of number of banks, particularly without solid business plans and strong capital, may lead to costly market disruptions.

35. There are no easy solutions to address the high lending rates that are relatively common in the region. In particular, the high cost of long-term funding (reflected in high sovereign yields), a sluggish economy, and overall high indebtedness and associated high credit risks, as well as the low rate of recovery on NPLs and other structural rigidities in the economy, are all likely to contribute to elevated lending rates and higher risk aversion (Figure 9).¹⁷

¹⁶ Maimbo, S., and Henriquez Gallego, C.A. "Interest Rate Caps around the World—Still Popular, but a Blunt Instrument," World Bank Group, October 2014.

¹⁷ Banks will also continue to confront significant competition from foreign intermediaries that directly finance investment and challenges in terms of limited bankable investment opportunities. Addressing these issues requires a broader structural reform agenda aimed at improving economic flexibility, including in labor markets, and promoting diversification through strengthened competitiveness.

Figure 9. Montenegro: Concentration and Competition



FINANCIAL OVERSIGHT

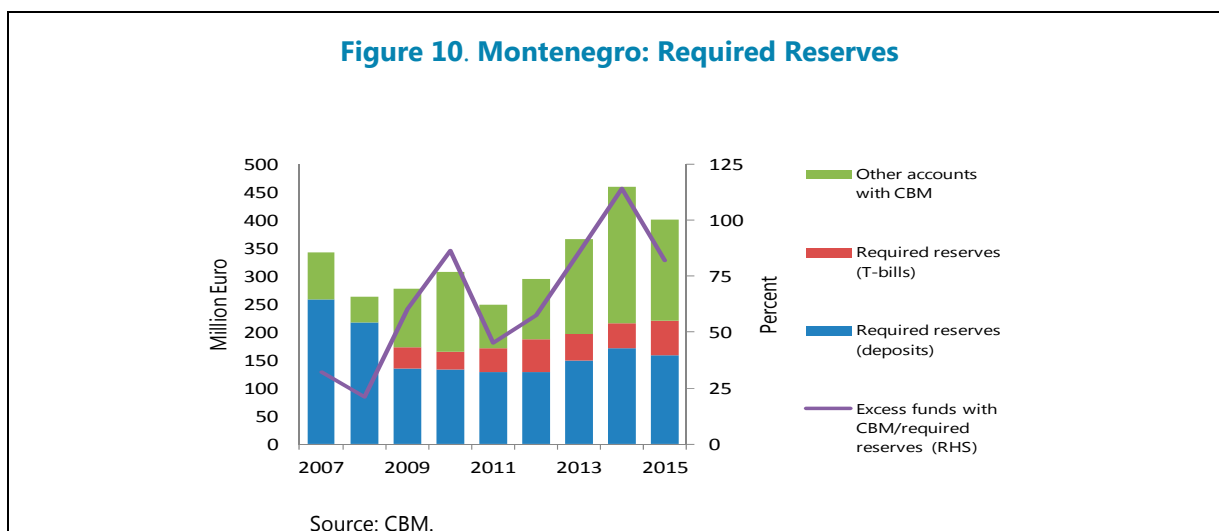
A. Macroprudential Framework

36. While responsibilities for financial stability have been assigned, macroprudential policies or instruments are missing. The CBM has a financial stability objective, but lacks the toolkit for mitigating systemic imbalances. Similarly, the FSC aims to monitor, identify, prevent, and mitigate systemic risks in the financial system, but lacks a macroprudential toolkit or enabling clause to authorizing the CBM to introduce macroprudential tools.

37. Within the current institutional framework, the macroprudential mandate should be vested in the CBM. This mandate should build on the existing regulatory and supervisory powers of the CBM, expanding them toward a macroprudential framework, and include powers over macroprudential instruments as part of their ability to act. The identification of instruments (such as loan-to-value, debt-service-to-income, debt-to-income ratios, and capital buffers) is particularly relevant, even if not immediately activated. The FSC, in turn, should retain its mandate over financial stability, expanded with additional powers to issue recommendations on macroprudential policy. To ensure accountability and the willingness to act, these recommendations should be made public. The CBM should continue to chair the FSC and perform technical operations.

B. Systemic Liquidity Management

38. Systemic liquidity management is constrained by euroization. Without the ability to create money, the CBM's options to manage liquidity and provide liquidity support are limited. Therefore, high liquidity buffers and strong bank supervision are essential for reducing vulnerabilities that may emerge because of those limitations.



39. Surplus liquidity in the system reflects both the banks' need to maintain liquidity buffers in a euroized economy, with very limited capacity for official liquidity support,¹⁸ and sluggish credit demand. Since 2012, banks' transactional non-interest-bearing balances¹⁹ (Figure 10) have increased from 60 percent of required reserves to 80 percent.²⁰ Furthermore, a low euro interest environment and sluggish credit demand have increased idle balances with the CBM, weighing on banks' profitability.

40. Ensuring sound liquidity risk management standards is important. The work on Basel III should be complemented by regulatory liquidity ratios to strengthen banks' short-term resilience. The current design of regulatory liquidity ratios has several shortcomings: the government bond market is shallow and illiquid; high-quality liquid assets (HQLA) are limited; and it is difficult to assess stressed outflows due to limited data series. This puts a bigger onus on the regulator to ensure that the liquidity ratios are dynamic and that they rely on frequent calibration and

¹⁸ Liquidity support is available in the form of intraday, overnight, and short-term liquidity loans. However, it is the funding envelope for liquidity support rather than availability of facilities that is a constraint.

¹⁹ These are Giro accounts, which are separate accounts from those of reserve requirements. Giro accounts bear no interest and are used only for transactional purposes.

²⁰ During the financial crisis, deposit outflows led to tightened liquidity, and anecdotal evidence suggested that parent banks provided liquidity assistance to their subsidiaries in Montenegro. Such support helped in part to shield Montenegro from global financial crisis spillovers.

quantitative impact studies. The CBM should strengthen liquidity risk supervision by focusing on significant currencies, dynamic and structural maturity mismatches, and feasibility of contingency plans, particularly for domestically owned banks. The CBM could also take this opportunity to remove treasury bills from the list of eligible securities to meet RRs as the market for government securities is illiquid.

C. Banking Oversight

41. Laws, regulations, and supervision have improved significantly since the 2006 FSAP to align more closely with Basel and EU requirements. The CBM adopts a risk-based approach to banking supervision. While the approach is conservative in some elements, several important areas for improvement are identified.

42. A more conservative approach by the CBM to the evaluation of business plans and issuance of new licenses is warranted. Three new banks were established in the past year. Each bank submitted detailed three-year business plans that, *prima facie*, appeared feasible. Nonetheless, in the current business climate, questions must arise about some banks' viability to survive.

43. While legislation provides for consolidated supervision, the concept is defined narrowly and the application is limited. At present, consolidated supervision focuses narrowly on accounting and reporting issues; supervisors do not focus sufficiently on understanding and assessing group-wide risks, including reputational and contagion risks. Prudential ratios are not calculated on a consolidated basis. The company law does not recognize the concept of a 'holding company'; if introduced, this would facilitate consolidated supervision.

44. Weaknesses in the broader operating environment are diluting the effectiveness of credit risk management and the CBM's ability to supervise this risk. These weaknesses include the unavailability or unreliability of borrowers' audited financial statements and inability to independently verify or establish connectedness among counterparties. There is also scope for excluding or discounting certain exposures while measuring credit risk, and difficulty in quality evaluation and timely disposal of collateral. The need for enhanced supervision in some banks may strain the CBM's capacity and call for an increase in resources for banking supervision.

45. The prudential framework for identification and measurement of problem assets is conservative in some respects, but has significant gaps. These result in inaccurate presentation of the level and quality of nonperforming assets; enforcement should also be strengthened. This arises mainly because the prudential framework allows banks to reclassify assets on the basis of types of collateral, irrespective of the borrowers' ability to repay, and lacks adequate clarity and consistency for restructuring or rescheduling loans and their prudential treatment.

46. The implementation of the CBM's prudential limits for related-party transactions and large exposures is weak. The CBM's measurement of exposures is at variance with Basel norms and diverts banks' and supervisors' attention from the gross exposures that reflect the maximum exposure to loss. The aggregate limit for all related-party exposures is too high at 200 percent of

own funds, compared to a level of 25 percent under the Basel Core Principles (BCP). There are also significant gaps in the definitions of “related party” and “related-party transactions.” The CBM should also expand the scope of supervision to address concentration risks, including sector concentration and concentration through collateral.

47. While the legal, regulatory, and supervisory frameworks for risk management are well established, there is scope for improvement. Banks should be required to improve the governance framework for risk management and the CBM should address the concentration of outsourcing activities at the system level to limited service providers; provide additional guidance to banks on monitoring and management of operational risk, concentration risk, funding risk, and interest rate risk in the banking book; and develop appropriate methodologies to supervise these risks.

48. While the CBM has adopted a conservative approach to Basel II implementation by requiring higher minimum capital ratios and higher capital for operational risk and for country risk, gaps in the measurement of capital and risk-weighted assets (RWA) exist. The current framework (1) does not require banks to deduct deferred tax assets and significant investment in the equity of restructured borrowers, (2) allows fixed asset revaluation reserve at full value without being discounted, and (3) assigns a lower risk weight to nonperforming assets and exposures secured by commercial real estate.

D. Insurance Oversight

49. The Insurance Supervision Agency (ISA) should transition from compliance-based supervision to risk-based supervision. While the ISA has made substantial progress in developing the regulatory framework since its establishment in 2008, a risk-based supervisory framework needs to be adopted before implementing the Solvency II regime. At a minimum, the ISA should introduce guidelines on corporate governance and requirements on risk management and internal controls. Offsite supervision must include assessments of the risks of the insurer’s business, the effectiveness of the insurer’s risk management policy, and the adequacy of its capital.

50. The ISA should develop a transition strategy to gradually introduce Solvency II. To help the industry make this transition smoothly, the ISA should develop a phased approach. Before adopting Solvency II, the ISA should improve the existing solvency regime with the following:

- Establish asset valuation rules for solvency purposes, including the treatment of intangible assets, encumbered assets, and provisions for long-outstanding receivables and doubtful debts. An aggregate limit on investments in and loans to related entities for solvency purposes is important in light of the market dominance of foreign participants.
- Adopt scenario testing to analyze the financial resilience of the insurer in predetermined scenarios. In the absence of more sophisticated capital adequacy requirements under Solvency II, scenario testing is a good way to identify vulnerabilities.

E. Financial Market Infrastructure Oversight

51. Steps taken since the 2006 FSAP are generally conducive to operations and further development of payment and settlement systems, but more improvements are needed.

- The CBM oversight function could be further strengthened with an oversight policy framework that is consistent with the newly enacted Payment System Law and international standards, including public policy objectives, the CBM's standards, the scope, activities, and tools for oversight, and the mechanisms for cooperation with other regulatory authorities.
- Risk-mitigation measures are required to minimize any residual liquidity risk and any consequential credit risk in the CBM payment system (with RTGS and DNS modules): (1) defining priorities for payment orders that could lead to their immediate rejection in the event of a lack of balances, (2) facilitating the automatic transfer of balances from the reserves account to the settlement account for settling any pending transactions, and (3) automating the intraday liquidity facility on a collateralized basis. Furthermore, the partial unwinding of transactions (especially in the final settlement cycle) in the DNS system should be eliminated.

F. Anti-Money Laundering and Combating the Financing of Terrorism

52. Montenegro is taking active steps to enhance its AML/CFT framework and to reach a better understanding of its money laundering and terrorist financing risks (ML/TF). The most recent assessment in 2014 found significant deficiencies.²¹ Some progress has since been made, in particular through the AML/CFT law rescinding the previous versions of the law. The new law notably strengthened customer due diligence (CDD) obligations by requiring the reporting entities to verify the identity of a person purporting to act on behalf of a corporate customer, and by allowing the application of simplified CDD in instances of "insignificant" ML/TF risk and no suspicion of ML/TF. Practical steps were also taken to improve the reporting of suspicious transactions (by expanding the indicators of suspicious transactions and conducting training events for reporting entities) and to initiate a national assessment of Montenegro's ML/TF risks.

53. Significant deficiencies nevertheless remain. The scope of the reporting requirements remains narrow, as it refers to the reporting of "transactions" (rather than "funds") and of "suspicion of ML/TF" (rather than "suspicions of funds that are the proceeds of a criminal activity"). Information on the beneficial ownership of legal persons created in Montenegro does not appear to be accessible to competent authorities in a timely manner. While reporting entities collect some beneficial ownership information, it does not appear adequate. Enhanced due-diligence measures are insufficient, notably because reporting entities are not required to establish on a risk basis the source of wealth of beneficial owners identified as domestic politically exposed persons (PEPs). In

²¹ Montenegro's AML/CFT framework was last assessed in 2008 and partially re-assessed against the previous standard (the FATF 2003 Recommendations) in 2014. Both assessments were conducted by MONEYVAL, the FATF-style regional body of which Montenegro is a member. The report of the 2014 assessment is available at [http://www.coe.int/t/dghl/monitoring/moneyval/Evaluations/round4/MNE4_REP_\(2015\)12_en.pdf](http://www.coe.int/t/dghl/monitoring/moneyval/Evaluations/round4/MNE4_REP_(2015)12_en.pdf)

addition, there are no provisions to prevent criminals or their associates from holding or being the beneficial owners of a significant or controlling interest, or from holding senior management functions in certain financial sector institutions. These deficiencies and other significant vulnerabilities identified in the national risk assessment should be addressed as a matter of priority.

RESOLUTION OF NONPERFORMING LOANS

A. Nonperforming Loans

54. NPLs remain a difficult legacy reflecting the impact of the global financial crisis and subsequent economic slowdown as well as lax pre-crisis lending standards. If not reduced, NPLs will continue to burden banks' balance sheets, undermine profits and capital, and suppress banks' appetite for new lending. Because the bulk of NPLs are backed by real estate collateral, the state of the real estate market—in combination with some banks' inability and unwillingness to absorb losses—is one of the key impediments to reducing NPLs. The absence of sound estimates for the shortfall in provisions relative to actual losses that would be incurred in more rapid NPL resolution impedes effective policy formulation.

55. Regulatory standards have been loosened over the past several years. This should be reversed in accordance with the recently strengthened supervisory requirements. The CBM has introduced a requirement for banks to prepare a multi-year NPL resolution strategy, including annual operational targets and quarterly reporting against those targets. In addition, the CBM should strengthen regulatory standards and enforcement to establish loss provisions that better reflect expected losses. Where appropriate, banks should be required to raise additional capital to support these provisions and to create headroom to absorb the losses that would be associated with future NPL workouts and write-offs. To ensure compliance with tightened regulatory standards, the CBM should establish a specialized team within the Supervision Department to be a resource to the relationship managers and their teams, and to support the supervision of NPL management practices in all banks. (This team would be distinct from staff responsible for individual bank relationship management and for supervising the credit risk management function.)

56. The CBM should also consider requiring banks to separate certain NPLs into specialized workout subsidiaries. This could improve the management of the transferred NPLs by enabling managers to focus on value recovery and to institute independent governance to support that objective.

57. In order to analyze, regulate, and monitor the NPL problem in its entirety, it is recommended to strengthen reporting requirements for nonbank credit institutions and asset management vehicles. In addition to the EUR 397 million NPLs on banks' books, about EUR 720 million has been sold predominantly to parent banks and affiliated SPVs. Reporting these exposures to the credit registry should be made mandatory in order to enhance the CBM's monitoring of NPL dynamics comprehensively.

B. Insolvency and Creditor Rights

58. A number of legal and institutional reforms to improve the framework for insolvency and creditor rights have been undertaken in recent years, but gaps remain. The legal framework governing bankruptcy is comprehensive and security rights are adequately protected in liquidation. Nonetheless, there is substantial variability in the speed and quality of enforcing some legal provisions by the courts. A business rescue culture is not developed. Reorganization “workouts” are not common, and so most bankruptcy cases end up in liquidation. Land titling procedures and cadastral information have been improving, but gaps remain, especially in rural areas.

59. The recently enacted Law on Voluntary Restructuring of Debts should be amended. In particular, eligibility for using the law should be broadened to loans that encompass debtors in serious financial distress or insolvency. Also, the out-of-court debt-restructuring mechanism would be well complemented by a fast-track procedure to confirm workout plans previously approved by a legally defined majority of creditors, making such plans obligatory with respect to all creditors. This would encourage creditors to participate in out-of-court negotiations and limit threatening attitudes from minority creditors who hold out.

60. The recent Law on Consumer Bankruptcy raises several concerns and should be amended or clarified through regulations. The current text does not contemplate adequate safeguards to protect the secured creditors’ rights. For example, the law establishes—depending on interpretation—a radical exemption in favor of a bankrupt debtor’s house, which cannot be sold in bankruptcy, provided that this is “commensurate with the basic housing needs of the consumer.”²² If the exemption is applied to loans that were secured by mortgages created before the law was entered into force, most of the loans would be considered unsecured and their collection hampered.

FINANCIAL SAFETY NET

A. Institutional Arrangements

61. While the establishment of the FSC and its activities is welcome, there is scope for improvement. The FSC was established to maintain financial system stability and avoid financial distress. However, several inter-agency Memoranda of Understanding (MOUs) have not been updated since the FSC’s establishment, and overlapping scopes with the FSC Law and the absence of MOUs between several institutions raise questions about the efficiency of the framework. The DPF should be an FSC member; currently, the DPF does not get invited to FSC meetings, while the FSC Law does permit this. The FSC members should have the formal authority to send representatives to

²² The authorities should clarify through regulation that the law excludes the debtor’s house from sale upon insolvency if the house is not subject to a mortgage or other security right.

the meetings as the functioning of the FSC in the current framework could be hampered in the case of the temporary absence of a member.

62. There is scope for improving the agencies' contingency plans and the national contingency plan (NCP). The FSC has adopted the NCP to complement institution-specific contingency plans. However, the FSC does not always focus on crisis preparedness and its management mandate; it focuses on its systemic risk-monitoring mandate. Progress toward the NCP's implementation is rarely discussed by the FSC and it has yet to organize a system-wide crisis simulation exercise involving all FSC members and the DPF.²³ Moreover, none of the oversight agencies have formal cross-border arrangements with home resolution authorities, nor is a cross-border crisis management framework in place.

63. The CBM should be confirmed as the resolution authority for the institutions under its supervision. The CBM is the de facto resolution authority for banks. In light of the size of the banking sector, there is no need to establish a new resolution authority. If the CBM becomes the supervisor of other financial institutions, under new legislation that is under development, the CBM should also be the resolution authority for them. To increase the CBM's effectiveness, a dedicated full-time, small Resolution Unit should be established, and the unit should have ready access to resources throughout the CBM. Its reporting line to the CBM Board should be separate from the department responsible for emergency liquidity assistance and also from the Supervision Department.

B. Failure Mitigation Regime

64. The CBM is authorized to impose a wide variety of early intervention measures under a range of circumstances, including if, in its assessment, a bank's financial viability could be threatened. These measures include scaling down or ceasing certain operations, establishing adequate reserves for losses, selling assets, restricting or ceasing dividends, increasing capital, and removing executive directors or board members, among others.

65. The CBM requires banks to undertake contingency planning, including for purposes of restoring capital and liquidity in times of stress. Although full recovery plans, as envisioned under the EU Bank Resolution and Recovery Directive (BRRD) and related European Banking Association (EBA) guidance, are not yet necessary, the banks are required to prepare contingency plans for managing their liquidity in crisis situations. The CBM has issued a detailed document outlining its expectations for the plans. Banks' liquidity contingency plans are evaluated as part of individual bank supervision. Similarly, as part of its regular supervisory processes, the CBM requires banks to prepare capital plans that must be updated annually.

²³ In 2013, a crisis-simulation exercise was held with support from the World Bank Vienna Financial Sector Advisory Center. Only the CBM and the MOF participated in this exercise.

C. Failure Resolution Regime²⁴

66. The CBM can appoint an Interim Administrator (IA) who has the power to resolve a potentially failing bank. The IA assumes the powers of the shareholders, the Board, and the Executive Directors; he has wide authorities, including to sell assets and to transfer assets and liabilities to another bank. The CBM directs and supports the IA. The outcome is either resolution via recapitalization, the transfer of some or all assets and liabilities to another bank, or bankruptcy.

67. Certain desirable resolution powers are not available. These include establishing a bridge bank and—as a last resort—the power to recapitalize and temporarily fund a systemically important bank (including via the use of a bridge bank) in the absence of a private sector-funded resolution. Some powers are envisioned, however, in draft special legislation that would be introduced in a systemic crisis (the so-called “*lex specialis*”). The lack of certainty as to whether these legal powers would actually be available when needed complicates resolution planning.

68. The CBM, as the de facto resolution authority, has yet to initiate bank-specific resolution planning. While this is envisioned for the transposition of the BRRD, the CBM can immediately start bank-specific resolution planning, including conducting resolvability assessments to determine the impediments to the resolution of specific banks. This work should be executed by the Resolution Unit, prioritized based on banks’ CAMEL ratings, and coordinated with home authorities—without being dependent on these authorities. If structural impediments to resolvability are identified, the CBM should consider using its powers under the Banking Law to cause the bank to remedy those impediments.

69. Existing resolution funding powers and arrangements are limited and should be strengthened. The liquidity and capital support provisions are insufficient. Although the *lex specialis*, if adopted, should provide some useful tools to support the effective resolution of a systemically important bank (for example, the ability to establish a bridge bank), and strong liquidity and capital support provisions and related safeguards. The DPF should be able to finance the transfer of insured deposits to another bank through purchase and assumption (P&A).²⁵ The MOF should be given the statutory authority in the *lex specialis* to borrow and/or use budgetary means up to a specified limit without requiring ex ante parliamentary approval, though with ex post parliamentary accountability.²⁶ The MOF could establish a fee-paid (committed) contingent credit line with a reputable foreign bank or an international financial institution.

²⁴ Given the authorities’ plans to transpose the BRRD by 2017, this section describes how CBM and the MOF could strengthen the existing resolution framework in the interim period.

²⁵ The amount of its assistance should be restricted to the costs DPF would otherwise have incurred in a payout of insured deposits in liquidation, net of recoveries. DPF should sign an MOU with the MOF to address the issues of backup finance from the budget as foreseen in the DPL and guarantees from the MOF for DPF borrowing, in both cases to cover any shortfall of the fund.

²⁶ The MOF has the authority to establish contingent lines of credit with two local banks, but does not have them in place and, in any case, these could be unavailable in a crisis.

70. The rules for the use of public funding in a crisis situation should be clearly defined.

Shareholders and hybrid capital and subordinated debt holders should fully absorb losses, and shareholders should be fully written off prior to receiving any government capital support. The objective to follow a least-cost resolution method should be explicitly introduced into the law. To guide the potential provision of such support, the CBM and the MOF should adopt explicit policies that set strict, objective, quantifiable, and measurable criteria for determining whether a bank is so systemically important that its failure would have severe repercussions for the financial system. Any loss incurred in the provision of public funds should be recovered from the banking industry. The provision of public funds should be contingent on, or followed by, formulation of a restructuring plan that ensures long-term viability.

D. Deposit Insurance

71. The deposit insurance system is relatively well developed but some operational improvements are needed.

The DPF operates under the narrow mandate of a pay box. The level of funding by banks is sufficient to cover all insured deposits in all small banks; a standby credit line with the European Bank for Reconstruction and Development (EBRD) and a statutory provision for backup funding from the government are available. The Deposit Protection Law (DPL) should be amended, enabling the DPF to finance the transfer of insured deposits to another bank through P&A. In addition, the DPF should be allowed to use other options for payout, including making payments electronically to deposit accounts established by depositors in other banks or using interim or advanced payments in the case of prolonged delays. Furthermore, the payout timeframe should be shortened from 15 working days to 7, and risk-based premiums should be introduced.

E. Liquidity Support

72. Limited resources to finance ELA constrain the CBM's lender-of-last-resort (LOLR) ability.

Due to its inability to create money, the CBM would need to provide financial assistance from its capital. With limited resources, the CBM cannot be expected to act effectively as the LOLR in case of a system-wide liquidity shock. Although in 2009, during the global financial crisis, foreign banks facing liquidity outflows obtained financial assistance from their parents, there is no guarantee that such credit lines would be readily available again.

73. ELA provisions under the CBM Law and the *lex specialis* should be brought under a single framework.

A formalized emergency liquidity support framework is in place under the CBM Law and also laid out in the *lex specialis*. The new single framework should include only the components of the existing and draft legislation that reflect best international practices (for example, prescription of eligible collateral, pricing, and haircuts) and should include certain essential safeguards such as the prohibition of financial transactions by the receiving banks with their related parties.

74. To avoid delays in providing ELA and to limit its risk exposure, the CBM should have available a list of acceptable collateral with pricing and haircut methodologies.

While it is

difficult to prepare for all possible scenarios and types of collateral, the CBM should develop a list of what would constitute “other collateral deemed acceptable,” along with pricing and haircut methodologies, as well as develop its capacity to administer such assets. The list—for internal use only—might include, for example, residential mortgages and corporate loans. To safeguard the CBM’s financial autonomy, alternative sources of funds and additional conditions and restrictions for the CBM ELA should be considered. There could be alternative options—based on international experiences—to expand the envelope of ELA funding. These could include a dedicated MOF subaccount at the CBM for ELA that the CBM could use at its discretion in addition to its own limited resources. Arrangements should be put in place for the MOF to reimburse the CBM for losses stemming from ELA.²⁷

75. Banks requesting access to the CBM ELA must first exhaust all existent sources of liquidity. Further safeguards could include (1) requiring an objective, predetermined solvency test both at the start and the duration of ELA, (2) capping the use of the CBM’s fund for ELA and implementing measures to reimburse the CBM for its ELA-related losses, (3) requiring foreign-owned banks’ parents to present a letter of comfort to provide liquidity in times of stress, (4) prescribing appropriate safeguards for the use of ELA by the receiving bank and enhancing monitoring to minimize moral hazard,²⁸ and (5) allowing banks to draw down the required reserves at the CBM below the minimum requirement for a short period.²⁹

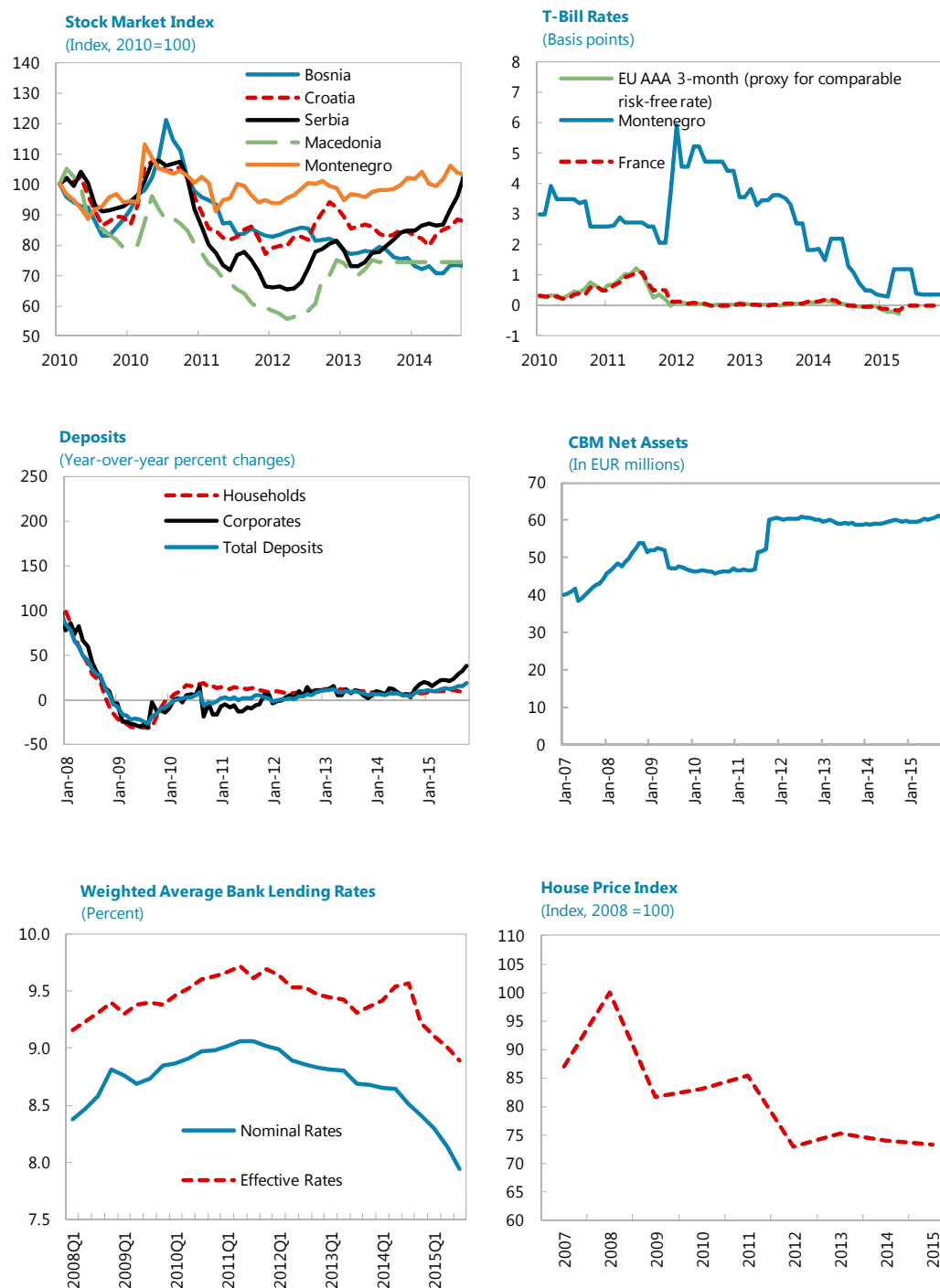
²⁷ If a dedicated MOF subaccount for ELA were to be established, funds from this account could be used first, before the CBM’s funds, to avoid jeopardizing the CBM’s financial position.

²⁸ For instance, the regulation should prohibit the upstreaming of funds from foreign subsidiaries/branches to their parents during the period of financial assistance. While receiving financial assistance, banks may also be subject to more intensive supervision.

²⁹ Currently, the CBM allows banks to draw down up to 50 percent of reserve requirement on an intraday basis. Reserve requirements have to be met by the end of the day. This recommendation refers to a temporary, but beyond intraday, drawdown of reserve requirements—applicable only in the case of illiquid but solvent banks seeking ELA. In doing so, this could help relieve pressure on banks’ liquidity and reduce the need to resort to CBM funding.

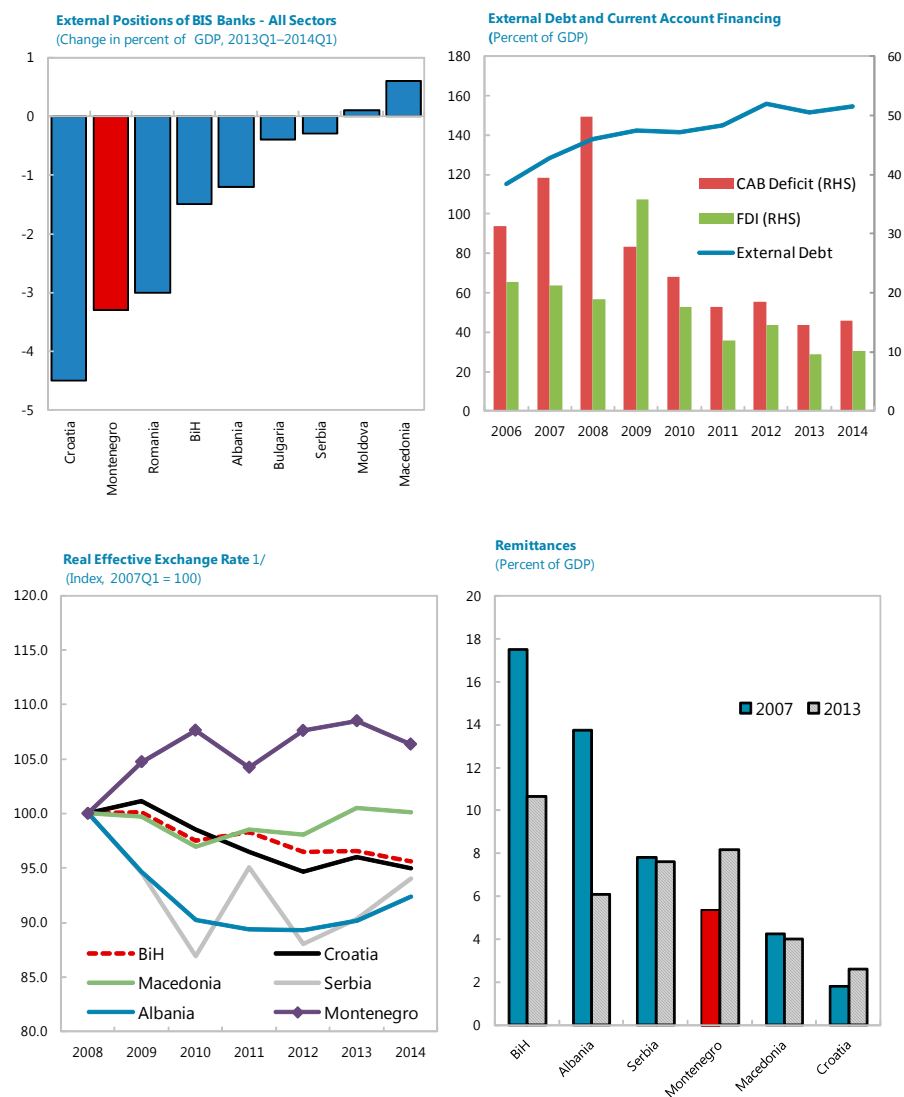
Appendix I. Economic and Financial Soundness Indicators

Appendix Figure 1. Montenegro: Monetary and Capital Market Developments



Sources: Montenegro authorities, Bloomberg

Appendix Figure 2. Montenegro: External Sector Developments

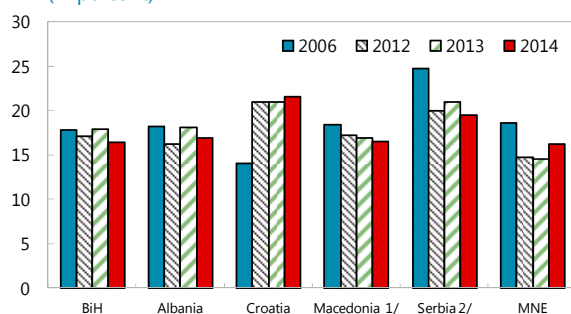


Sources: Montenegro authorities, WB, BIS, WEO, and IMF staff calculations.

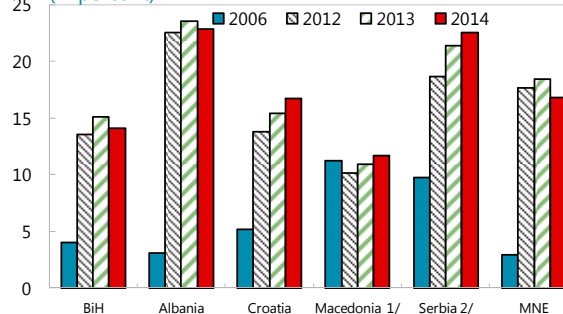
1/ Real effective exchange rates are trade-weighted and CPI-based.

Appendix Figure 3. Montenegro: Key Financial Soundness Indicators: Cross-Country Comparisons

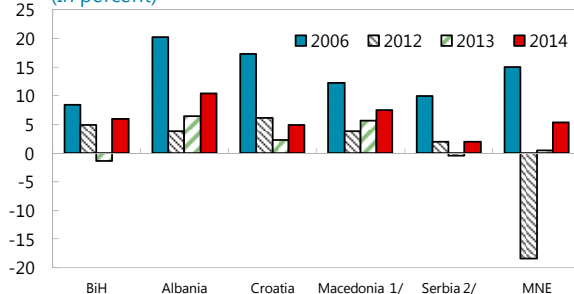
Capital Adequacy Ratio
(In percent)



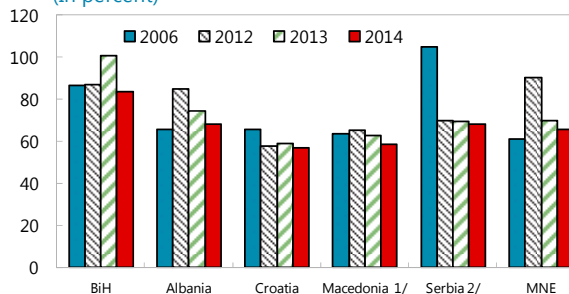
NPLs to Total Gross Loans
(In percent)



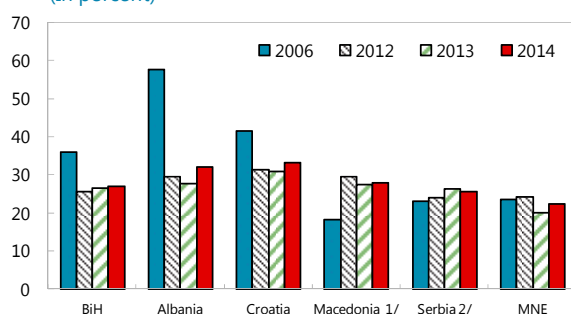
Returns on Equity
(In percent)



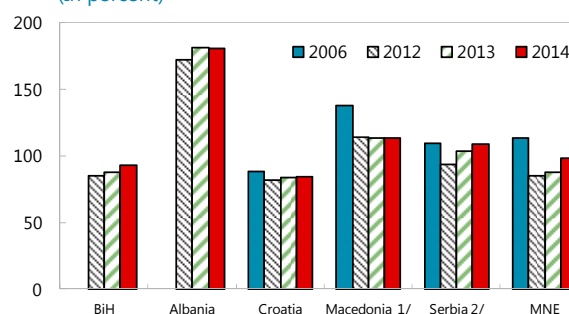
Non-Interest Expenses to Gross Income
(In percent)



Liquidity Assets to Total Assets
(In percent)



Customer Deposits to (Non-interbank) Loans
(In percent)



Sources: IMF Financial Soundness Indicators Database; Bank of Albania; and National Bank of Serbia.

1/ The red bars represent data for 2014Q3.

2/ The red bars represent data for November 2014.

Appendix Table 1. Montenegro: Selected Economic Indicators, 2010–20
(Under current policies)

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
						Projections					
Real economy											
Nominal GDP (millions of euro)	3,125	3,265	3,181	3,362	3,458	3,635	3,839	3,988	4,151	4,312	4,549
Gross national saving (percent of GDP)	-1.0	1.8	2.1	5.1	4.6	9.7	8.5	8.4	5.1	6.7	8.5
Gross investment (percent of GDP)	21.8	19.3	20.6	19.6	19.8	25.4	28.0	28.2	24.4	22.0	21.3
						(percent change)					
Real GDP	2.5	3.2	-2.7	3.5	1.8	3.9	4.6	2.5	2.5	2.2	3.8
Industrial production	17.5	-10.3	-7.1	10.6	...	...	...	...	...	...	...
Tourism											
Arrivals	4.6	8.7	4.8	3.7	...	...	...	...	...	...	...
Nights	5.5	10.2	4.3	2.8	...	...	...	...	...	...	...
Consumer prices (period average)	0.7	3.1	3.6	2.2	-0.7	1.6	1.0	1.3	1.6	1.7	1.7
Consumer prices (end of period)	0.7	2.8	5.1	0.3	-0.3	1.2	1.4	1.4	1.6	1.7	1.7
GDP deflator (percent change)	2.3	1.2	0.2	2.1	1.0	1.2	0.9	1.3	1.5	1.7	1.7
Average net wage (12-month) 1/	3.5	1.0	0.6	-1.6	...	...	...	...	...	...	...
Money and credit (end of period)											
Bank credit to private sector 2/	-8.9	-13.0	-3.1	2.1	-0.4	0.7	1.9	2.4	2.9	3.3	4.4
Enterprises	-11.2	-20.3	-4.9	0.1	...	...	...	...	...	...	...
Households	-5.7	-3.2	-1.1	3.7	...	...	...	...	...	...	...
Private sector deposits	5.9	1.2	7.2	5.4	...	...	...	...	...	...	...
						(as percent of GDP)					
General government finances 3/											
Revenue and grants	41.8	38.5	39.9	41.3	43.5	41.7	41.8	41.8	41.8	42.0	41.8
Expenditure	46.6	45.3	45.7	47.6	46.1	49.9	50.4	50.0	45.9	43.5	42.5
Overall balance	-4.9	-6.7	-5.8	-6.3	-2.6	-8.2	-8.5	-8.2	-4.2	-1.5	-0.7
Primary balance	-3.9	-5.3	-4.0	-4.2	-0.3	-5.5	-6.2	-5.7	-1.4	1.4	2.2
Domestic financing (net)	-0.4	2.5	-0.6	1.4	-0.6	-1.6	1.6	-0.4	0.0	-0.2	-0.1
Privatization receipts	0.2	0.2	0.2	0.8	0.3	0.3	0.3	0.3	0.2	0.0	0.0
General government gross debt	40.7	45.6	53.4	55.2	59.9	67.3	70.4	76.0	77.4	76.4	73.4
General government debt, including loan guarantees	52.2	57.2	65.4	64.2	69.0	81.6	84.0	89.1	90.0	88.5	84.9
Balance of payments											
Current account balance	-22.7	-17.6	-18.5	-14.5	-15.2	-15.8	-19.5	-19.9	-19.3	-15.3	-12.8
Foreign direct investment	17.7	11.9	14.5	9.6	10.2	11.3	11.7	12.0	12.2	12.2	12.2
External debt (end of period, stock)	141.6	145.0	155.9	151.5	154.8	161.5	164.8	172.2	174.6	175.0	171.9
Of which: Private sector 4/	112.5	112.4	115.2	111.3	109.6	109.0	108.4	109.6	110.5	111.6	111.0
REER (CPI-based; annual average change, in percent)											
(- indicates depreciation)	2.8	-3.2	3.3	-1.1	...	...	...	...	...	...	...
Memorandum:											
Nominal GDP Growth (in percent)	4.8	4.5	-2.6	5.7	2.8	5.1	5.6	3.9	4.1	3.9	5.5
Overall balance excluding Highway Project (in percent GDP)	-4.9	-6.7	-5.8	-6.3	-2.6	-1.9	-0.8	-0.8	-0.8	-0.7	-0.7
Aluminum price (€ per tonne)	1,644	1,822	1,542	1,348	1,514	1,514	1,441	1,479	1,524	1,555	1,574

Source: Ministry of Finance, Central Bank of Montenegro, Statistical Office of Montenegro, and IMF staff estimates and projections.

1/ Reflects a change in the methodology by Monstat starting January 1, 2010.

2/ A change in classification in off-balance sheet items has resulted in a structural break in 2012; the annual changes for credit growth in 2013 are distorted by the change in methodology.

3/ Includes extra-budgetary funds and local governments, but not public enterprises.

4/ Estimates, as private debt statistics are not officially published.

Appendix Table 2. Montenegro: Financial System Structure, 2010–2015

	2010	2011	2012	2013	2014	2015 1/
Number of Institutions						
Banks	11	11	11	11	12	14
Domestic-majority owned	2	2	2	2	5	5
Domestic private banks	2	2	2	2	5	5
Domestic state-owned banks	-	-	-	-	-	-
Foreign-majority owned	9	9	9	9	7	7
Subsidiaries of foreign banks	6	6	6	6	6	6
Branches of foreign banks	-	-	-	-	-	-
Insurance companies					11	
Life					6	
Non-life					5	
Leasing companies	4	5	5	5	5	5
Investment funds (asset management companies)					5	
Open-ended funds					5	
Closed-end funds					5	
Investment intermediaries					10	
Microcredit organizations	5	6	6	6	5	5
Stock exchanges					1	
Central depository agency					1	
Voluntary pension fund management companies					2	
Voluntary pension funds					2	
Financial system assets (in millions of euro)						
Banks	2,943.7	2,810	2,808	2,959	3,136	3,139
Domestic-majority owned	341.4	289	280	289	643	653
Domestic private banks	341.4	289	280	289	643	653
Domestic state-owned banks	-	0	0	0	0	0
Foreign-majority owned	2,602.3	2,520	2,528	2,670	2,494	2,486
Subsidiaries of foreign banks	2,271.7	2,163	2,127	2,180	2,201	2,164
Branches of foreign banks	-	0		0	0	0
5 largest banks	2,262.7	2,073	2,030	2,082	2,139	2,132
Insurance companies					169	
Life					55	
Non-life					114	
Leasing companies	203.3	171	143	118	76	73
Investment funds (asset management companies)					19	
Open-ended funds					30	
Closed-end funds					105	
Investment intermediaries					2	
Microcredit organizations	58.7	44	36	35	38	41
Stock exchanges					2	2
Central depository agency					1	
Voluntary pension fund management companies					1	
Voluntary pension funds					0	
Total assets					3,580	

Source: CBM

1/ Latest available.

Appendix Table 3. Montenegro: Financial Soundness Indicators, 2009–2015**(In percent)**

	2009	2010	2011	2012	2013	2014	Sep-15
Capital Adequacy							
Total capital to risk-weighted assets	15.8	15.9	16.5	14.7	14.4	16.2	16.0
Tier I capital to risk-weighted assets	15.5	15.5	15.1	15.8	13.0	14.4	-
Total capital to total assets	11.0	10.6	10.9	10.3	13.4	14.2	13.3
Asset Quality							
NPL to total loans	13.5	21.0	15.5	17.6	18.4	16.8	14.7
Provisions to NPL 1/	46.3	30.7	32.8	40.2	44.7	45.6	46.2
NPL net of provisions to Tier I capital	59.5	115.8	71.8	77.1	101.9	77.9	-
NPL net of provisions to capital	52.5	102.8	66.9	68.0	62.4	49.3	43.7
Top 10 borrowers to Tier I capital	97.9	130.0	116.2	227.5	180.6	156.3	-
10 largest credit to net credits	15.5	17.1	18.0	17.3	21.9	21.7	-
Earnings and Profitability							
Return on assets	-0.7	-2.8	-0.1	-2.0	0.1	0.8	0.4
Return on equity	-7.8	-27.3	-1.1	-18.3	0.5	5.4	2.9
Net interest margin	4.9	4.9	4.8	5.0	4.2	4.5	3.4
Non-interest expenses to gross income	67.1	93.0	73.6	90.3	69.9	65.9	-
Liquidity Ratios							
Liquid assets to total assets	15.3	19.1	19.9	24.0	20.0	22.2	28.5
Liquid assets to short-term liabilities	25.8	32.9	32.8	40.1	32.2	35.7	44.3
Foreign currency loans to total loans	4.0	4.1	2.3	1.9	3.9	3.9	-
Foreign currency liabilities to total liabilities	6.4	6.9	4.9	4.8	4.3	4.7	-
Sensitivity to Market Risk							
Net long position in foreign exchange to Tier I capital	0.7	0.8	1.0	-0.8	0.6	0.7	-

Source: CBM.

1/ Provisions reflect IFRS impairments. The ratios based on CBM regulatory provisions are higher; the respective ratio was 72.6 percent as of end-June 2015.

Appendix Table 4. Montenegro: Banking System Assets, End-September 2015

	Assets	
	EUR million	% total
Atlas Banka AD	271.5	8.4
Crnogorska Komercijalna Banka AD	599.2	18.6
Erste Bank AD Podgorica	361.7	11.2
Hipotekarna Banka AD	416.7	13.0
Hypo Alpe-Adria Bank AD	238.6	7.4
Invest Banka Montenegro AD Podgorica	46.6	1.4
Komercijalna Banka AD Budva	124.8	3.9
Lovcen Banka AD	44.3	1.4
NLB Montenegrobanka AD	493.3	15.3
Prva Banka CG AD Podgorica	310.3	9.6
Societe Generale Banka Montenegro AD	437.2	13.6
Universal Capital Bank AD Podgorica	97.9	3.0
Zapad Banka AD Podgorica	34.9	1.1
Ziraat Bank Montenegro AD	10.2	0.3
 Total	 3,487.2	 100.0
 Memo items:		
Assets Domestic-Majority Owned Banks	770.5	22.1
o/w Public Participation	356.9	10.2
Assets Foreign-Majority Owned Banks	2,716.6	77.9

Source: CBM.

Appendix Table 5. Montenegro: Summary of Banking System Loan Portfolio, End-2014

	Gross loans	% of total loans	Non- performing loans	% of total loans
Household loans, residents	880	36.7	92	3.8
Corporate loans, residents	989	41.3	284	11.9
Agriculture, forestry and fishing	28	1.2	2	0.1
Manufacturing	109	4.5	54	2.2
Wholesale and retail trade, repair of motor vehicles and motorcycles	407	17.0	120	5.0
Construction	111	4.6	43	1.8
Transport and warehousing	49	2.1	19	0.8
Accommodation, food, arts, recreation and other services	73	3.1	15	0.6
Public administration and defense	131	5.5	12	0.5
Real estate	24	1.0	5	0.2
Financial and insurance sector	16	0.7	2	0.1
Professional, scientific and technical activities	40	1.7	12	0.5
Loans to non-residents	434	18.1	12	0.5
Other loans	94	3.9	14	0.6
Total	2,396	100.0	402	16.8

Source: CBM.

Appendix Table 6. Montenegro: Risk Assessment Matrix

	Overall Level of Concern	
	Likelihood of Severe Realization of Threat in the Next 1–3 Years (High, medium, or low)	Expected Impact on Financial Stability if Threat is Realized (High, medium, or low)
1. Protracted growth slowdown in the euro area and neighboring countries	Staff assessment: High (G-RAM, June 2015)	Staff assessment: High <ul style="list-style-type: none"> Adverse impact on external demand and internal demand combined with further “lowflation” imported from the euro area. Credit contraction due to low demand and tightened supply resulting from banks’ risk aversion and foreign subsidiaries’ reduced presence in the Montenegro market. Reduced income among banks’ borrowers, leading to further credit quality deterioration.
2. Spillovers from a deterioration of global financial market conditions	Staff assessment: High (G-RAM, June 2015)	Staff assessment: High <ul style="list-style-type: none"> The government has large external financing needs, averaging around 9 percent of GDP over 2016–2020. The stock of debt is large (nearly 70 percent of GDP) and expected to increase, absent policy measures. A sharp increase in international risk premiums and/or a loss of market access would have significant negative economic and financial sector spillovers. Triggers could include a loss of confidence in the authorities’ economic reform program, a tightening of U.S. monetary policy, and a general reassessment of risk amid the increase in risk aversion affecting emerging markets. Banks raise deposit rates to avoid deposit outflows, further reducing their profitability. Banks suffer deposit outflows from withdrawals by external creditors such as nonresident depositors and by domestic depositors to repay external creditors and to avoid exposure to the domestic banking system. Besides the use of liquid assets, banks completely rely on market and foreign-parent bank funding at elevated interest rates, due to the lack of an LOLR mechanism. The combination of a reduction in external and internal demand and increased funding costs causes a significant reduction in banks’ borrowers’ credit quality.
3. Geopolitical and macroeconomic events associated with Russia/Ukraine tensions and Greece’s negotiations with creditors	Staff assessment: Medium (G-RAM, June 2015)	Staff assessment: Medium <ul style="list-style-type: none"> Reduction in FDI inflows and growth prospects cause a reduction in the credit quality among banks’ borrowers. Real estate prices decline due to reduced demand from Russia and Ukraine, causing direct losses due to asset revaluation and indirect losses due to a reduction of credit quality. Direct financial links to Greece are negligible, but fallout through secondary channels could undermine banks’ borrowers’ credit quality.

Appendix Table 7. Montenegro: Stress Test Matrix (STeM) for the Banking Sector: Solvency, Liquidity, and Contagion Risks

Domain		Assumptions		
		Bottom-Up by Banks	Top-Down by Authorities	Top-Down by FSAP Team
BANKING SECTOR: SOLVENCY RISK				
1. Institutional perimeter	Institutions included	N/A	N/A	<ul style="list-style-type: none"> All banks (12 banks) as of end-2014.
	Market share	N/A	N/A	<ul style="list-style-type: none"> 100 percent of total banking sector assets by end-2014. 99.7 percent of total banking sector assets by mid-2015.
	Data and baseline date	N/A	N/A	<ul style="list-style-type: none"> Bank-by-bank supervisory data as of end-2014. Data requested from banks.
	Consolidation	N/A	N/A	<ul style="list-style-type: none"> Consolidated basis stress test of domestic-owned banks and foreign-owned bank subsidiaries active in Montenegro.
2. Channels of risk propagation	Methodology	N/A	N/A	<ul style="list-style-type: none"> IMF solvency stress testing balance sheet framework.
	Satellite models for Macrofinancial linkages	N/A	N/A	<ul style="list-style-type: none"> Panel model (fixed effects) estimation of logit-transformed bank-specific NPL ratios as a function of macroeconomic variables using up to eight quarterly lags. Given the finding of an insufficient statistical significance of the relation between NPL ratios and macroeconomic variables, global rules-of-thumb sensitivities of credit losses to GDP growth were used to estimate credit losses and project NPL ratios.³⁰ A peer group analysis of the projected NPL ratios implied by the rules-of-thumb credit loss sensitivities was conducted based on a comparison to results of FSAP stress tests in neighboring countries and to results of internal CBM stress testing models. The analysis showed that adverse scenario 1 projections are comparable to internal CBM model outcomes, while adverse scenario 2 projections

³⁰ Hardy, D.C., and Schmieder, C. *Rules of Thumb for Bank Solvency Stress Testing*. IMF Working Paper. November 2013.

Domain		Assumptions		
		Bottom-Up by Banks	Top-Down by Authorities	Top-Down by FSAP Team
				<p>are comparable to stress test results of recent FSAPs in neighboring countries.</p> <ul style="list-style-type: none"> Expert judgment to estimate pre-impairment income sensitivities to macroeconomic events.
	Stress test horizon	N/A	N/A	<ul style="list-style-type: none"> 1-year horizon was chosen because of (1) the significant uncertainty around macroeconomic projections in Montenegro, (2) the lack of historical time series of macro variables, and (3) the low reliability of some historical data.
3. Tail shocks	Scenario analysis	N/A	N/A	<ul style="list-style-type: none"> Baseline scenario. IMF's macroeconomic projections as of August 2015. Moderate adverse scenario. A protracted slowdown in the euro area causing a reduction in external demand and FDI. Projections were generally estimated as one standard deviation from the historical mean, with expert judgment adjustments for consistency purposes (real GDP growth of -2.5 percent; gross credit growth of -3 percentage points of GDP; funding cost of banks rise by 1.6 percent; general interest rates decrease by 60 basis points; domestic-sovereign bond, foreign-sovereign bond, and corporate bond credit spreads increase by 4.4, 1.3, and 4.7 percentage points, respectively; stock prices fall by 22 percent, real estate prices fall by 10 percent.

Domain		Assumptions		
		Bottom-Up by Banks	Top-Down by Authorities	Top-Down by FSAP Team
				<ul style="list-style-type: none"> • Severe adverse scenario. Developments of the moderate scenario are complemented by elevated uncertainty and risk aversion in global financial markets. Projections were generally estimated as two standard deviations from the historical mean, with expert judgment adjustments for consistency purposes (real GDP growth of -5.2 percent; gross credit growth of -6 percentage points of GDP; funding cost of banks rises by 3.1 percent; general interest rates decrease by 120 basis points; domestic-sovereign bond, foreign-sovereign bond, and corporate bond credit spreads increase by 8.7, 2.6, and 9.5 percentage points, respectively; stock prices fall by 43 percent, real estate prices fall by 20 percent.
	Sensitivity analysis	N/A	N/A	<ul style="list-style-type: none"> • Single-factor shocks: haircut on public sector loans and sovereign securities, interest rate hike; exchange rate, equity price decline, real estate price decline. • Credit concentration risk based on local regulatory standards.
4. Risks and buffers	Risks/factors assessed	N/A	N/A	<ul style="list-style-type: none"> • Credit risk: household, corporate, and public sector loan exposures, as well as domestic-sovereign, foreign-sovereign, and corporate bond exposures. • Market risk: interest rate risk impact on net interest income due to risk-free interest rate shock; credit spread risk impact due to increased risk premiums on bond holdings; FX risk impact due to exchange rate depreciation; equity price risk impact due to adverse price shock; real estate price impact due to adverse price shock.

Domain		Assumptions		
		Bottom-Up by Banks	Top-Down by Authorities	Top-Down by FSAP Team
				<ul style="list-style-type: none"> • Funding risk: Impact on net interest income due to increased funding cost. Net deposit outflows of 6 percent of domestic deposits and 12 percent of non-resident deposits were assumed in the moderate scenario, while net outflows of 12 percent of domestic deposits and 23 percent of non-resident deposits were assumed in the severe scenario. To cover the outflows, banks were assumed to use their cash balances and sell liquid assets at haircuts of 15 percent and 25 percent in the moderate and adverse scenarios, respectively. In the event that liquid assets did not cover all deposit outflows, domestic banks were assumed to meet an increased funding cost of 2 and 4 percentage points above the current cost in the two scenarios, respectively (approximately a 50 percent and 100 percent increase of the country risk premium). Foreign-owned banks were assumed to fund uncovered outflows at half the cost using parent bank funding • Operational risk: Losses due to operational risk were set at twice and three times the 2014 level in the moderate and severe scenarios, respectively. The shocks were determined after an analysis of historical bank-specific operational risk losses.
	Behavioral adjustments	N/A	N/A	<ul style="list-style-type: none"> • Evolution of total assets and liabilities reflected behavioral assumptions made to counter deposit outflows as described earlier. • Evolution of risk-weighted assets based on constant balance sheet assumption, that is, adjusting projected RWA by loan loss provisions at a 100 percent risk weight. • No other management actions considered. • Other net income items, dividends, and taxes, based on predetermined rule of evolution in line with economic activity measured as gross credit growth.

Domain		Assumptions		
		Bottom-Up by Banks	Top-Down by Authorities	Top-Down by FSAP Team
5. Regulatory and market-based standards and parameters	Calibration of risk parameters	N/A	N/A	<ul style="list-style-type: none"> Estimation of expected credit losses using global rules of thumb, as described above.
	Regulatory/accounting and market-based standards	N/A	N/A	<ul style="list-style-type: none"> Basel II regulatory standard. Hurdle rates based on local regulatory minimum capital adequacy ratio (CAR) of 10 percent.
6. Reporting format for results	Output presentation	N/A	N/A	<ul style="list-style-type: none"> CAR and capital shortfall under the 10 percent and a 12 percent hurdle rate. System-wide sum of gross capital shortfall, that is, without offsetting. Contribution of each source of losses to aggregate capital shortfall.
BANKING SECTOR: LIQUIDITY RISK				
1. Institutional perimeter	Institutions included	<ul style="list-style-type: none"> All banks (12 banks) as of end-2014. 		
	Market share	<ul style="list-style-type: none"> 100 percent of total banking sector assets by end-2014. 99.7 percent of total banking sector assets by mid-2015. 		
	Data and baseline date	<ul style="list-style-type: none"> Supervisory data. Data especially requested from banks. 		
2. Channels of risk propagation	Methodology	<ul style="list-style-type: none"> Short-term measure informed by the Basel III LCR setup. Long-term measure informed by the Basel III NSFR setup. 		
3. Risks and buffers	Risks	<ul style="list-style-type: none"> Deposit outflows. Market liquidity. Maturity mismatches. 		
	Buffers	<ul style="list-style-type: none"> Counterbalancing capacity (HQLA, ASF). 		

Domain		Assumptions		
		Bottom-Up by Banks	Top-Down by Authorities	Top-Down by FSAP Team
4. Tail shocks	Size of the shock	<ul style="list-style-type: none">• Haircuts and runoff rates as defined in Basel III for LCR and NSFR.• Additional deposit outflows as assumed in the severe adverse scenario, as described earlier.• Exclusion of required central bank reserves.• Exclusion of government bonds from HQLA.		
5. Regulatory and market-based standards and parameters	Regulatory standards	<ul style="list-style-type: none">• LCR proxy should exceed 100 percent (not a legal/regulatory requirement).• NFSR proxy should exceed 100 percent (not a legal/regulatory requirement).		
6. Reporting format for results	Output presentation	<ul style="list-style-type: none">• Aggregate LCR and NSFR proxies.• Aggregate gross liquidity shortfalls, that is, without offsetting.• Number of banks that fail.		
BANKING SECTOR: CONTAGION RISK				
1.Institutional perimeter	Institutions included	N/A	N/A	<ul style="list-style-type: none">• All banks (12)• 4 insurance companies.• 6 investment funds.• 1 microcredit institution.• 46 other financial institutions.
	Market share	N/A	N/A	<ul style="list-style-type: none">• Percentage of total sector assets: 100 percent.
	Data and baseline date	N/A	N/A	<ul style="list-style-type: none">• Supervisory data.• Banks’ own data.• Publicly available data. Baseline date: Dec 31, 2014.

Domain		Assumptions		
		Bottom-Up by Banks	Top-Down by Authorities	Top-Down by FSAP Team
2. Channels of risk propagation	Methodology	N/A	N/A	<ul style="list-style-type: none"> • Network analysis, using Espinosa-Vega and Solé (2010) methodology.
3. Tail shocks	Size of the shock	N/A	N/A	<ul style="list-style-type: none"> • Stress scenario with a credit shock: a severe stress in a bank or a banking system, causing a default on all of its liabilities to domestic institutions or foreign banks. • Stress scenario with a joint credit and funding shock when the default of a bank or a banking system also leads to a liquidity squeeze for those institutions funded by the defaulting bank or banking system.
4. Reporting format for results	Output presentation	N/A	N/A	<ul style="list-style-type: none"> • Capital impairment to domestic banking system, number of failed banks, and remaining buffers (at both banking-system level and bank level). • Capital impairment to domestic insurance sector, number of failed insurance companies, and remaining buffers (at both sector-wide level and company level).

Appendix II. Progress on 2006 FSAP Recommendations

2006 Main Recommendations	2015 Status Update
Managing Growing Credit Risk	
Study and evaluate banks' risk management systems and practices, with a view to identifying best practices and weaknesses.	Partially implemented. As a part of the supervision system, the supervisors perform periodic evaluations of banks' credit risk management system and practices. The supervisory findings are yet to be utilized for disseminating best practices.
Tailor remedial actions on a bank-by-bank basis.	Implemented. The measures against banks are determined depending on the specifics and the risk profile of each individual bank.
Periodically review the prudential framework to determine potential weaknesses and identify appropriate responses, including bank-specific supplementary capital adequacy levels, provisioning requirements, and assets' risk weights.	Partially implemented. A periodic review of the prudential framework is performed, and the determined weaknesses were corrected through the amendments to the regulation, especially through the adoption of the new Decision on Capital Adequacy of Banks (2010) and the Decision on Minimum Standards for Credit Risk Management at the Banks. CBCG is yet to establish bank-specific prudential requirements, other than for minimum capital adequacy.
Public Role in Financial Sector	
Public sector to operate on an arm's-length basis with financial institutions to improve governance and risk management.	Partially implemented. Some banks still have a large share of deposits from state-owned enterprises.
Liquidity Management Framework	
Use a single required reserve ratio (LT). Use liquidity ratio regulations for prudential purposes while reducing the reserve requirement gradually over time (LT). Remove the option of holding required reserves in treasury bills (ST). Gradually remove the limit of 50 percent on maximum usable reserves (MT).	Partially implemented. The liquidity ratios are used for prudential purposes and the reserve requirements were reduced. The Treasury bills were removed as an option to meet the reserve requirements after the FSAP, but were reinstated during the global financial crisis.
Reference the interest rate on liquidity maintenance credits to the relevant ECB rate (ST). Abolish interest charges for intraday credit and use automatic collateral system (MT).	Not implemented. The T-bill rate is benchmark for reference interest rate due to the fact that the CBM does not have one. Collateral system procedure is simplified meanwhile.

2006 Main Recommendations	2015 Status Update
Emergency Liquidity Support	
Establish a systemic crisis management framework and a strategy for emergency liquidity provision.	Partially implemented. Law on Financial Stability Council was adopted in 2010 and Contingency Plan has been adopted. Refinements are needed.
Insurance Regulation and Supervision	
Further study supervisory architecture, taking into account the size of the Montenegro economy and financial sector trends.	Implemented. The Insurance Supervision Agency (ISA) has been established as an independent legal person, directly responsible to the parliament.
Payment Systems	
Prepare and enact a Law on Payment and Settlement Systems. Include the following topics: (1) irrevocability and timing of settlement finality for all types of payment instruments; (2) legal recognition and protection of netting arrangements (in the context of insolvency); (3) the use of collateral pledges and clear provisions on the legal admissibility in a court of payment instructions, messages, and transfers through electronic systems; and (4) e-based payment instruments.	Implemented. The Payment System Law was passed by the parliament in December 2013 and is harmonized with relevant European directives covering the areas outlined in the 2006 FSAP.
Start oversight of settlement and clearing systems for electronic payment instruments.	Partially implemented. An oversight division has been recently established in the CBM. However, the scope of the oversight function, including oversight over electronic payment instruments, is yet to be established.
Provide leadership to develop national infrastructure for the electronic payment instruments. Technical parameters to enable sharing of the e-payments related infrastructure, such as the automated teller machines (ATMs) and the point-of-sale (PoS) devices, should be established.	Partially implemented. The retail payment infrastructure includes a network of interoperable ATMs and PoS terminals, owned by the banks, which are used for both credit and debit card transactions. There have been no CBM-led activities for developing any technical parameters for an interoperable infrastructure, as the existing infrastructure is already interoperable.
Registries	
Broaden access to credit registry (ST). Include additional information in credit registry to better appraise payment discipline (MT). Include statistics and information needed to implement credit models and scoring systems necessary for Basel II implementation (MT).	Partially implemented. The Credit Registry has been significantly improved. However, additional improvements could be made to expand the coverage, granularity, and timeliness of information collected and distributed.
Take credit registry out of offsite supervision and place it in a separate department in the CBM.	Implemented. The Credit Registry has been moved from offsite division to a special organizational unit.

2006 Main Recommendations	2015 Status Update
Charge on cost recovery basis for provision of information and services. Broaden the range of services according to market needs.	Partially implemented. Services are charged pursuant to the "Decision on Determining Tariffs for Calculating Fees Charged for the CBM Services." Despite initiatives to expand the range of services with other interested parties, these initiatives have not yet been implemented due to limitations on accessing personal information stemming from legislation (Law on Protection of Personal Data, etc.).
Study options to establish a centralized registry agency, which would include all existing registries.	Partially implemented. Discussions are ongoing to improve the exchange of information between different registries (register of commerce, tax authorities, etc.).
Capital Markets	
Evaluate consequences and needed changes in legislation, regulation, and infrastructure moving from: (1) a "closed/domestic" market to an open market allowing cross-border membership, etc.; (2) an "all on exchange" regime to allowing off-exchange/OTC trading.	Partially implemented. The draft Law on Capital Market contains provisions relating to the establishment of OTC trading, and will be followed by the adoption of bylaws to regulate this area in detail. Adoption of the draft law is scheduled for the fourth quarter of 2015.
Move both stock exchanges to one common trading platform. Reorganize market/listing structure.	Implemented. As of January 1, 2011, Montenegro Stock Exchange Podgorica began operating as a single stock exchange by merging Nex Stock Exchange Podgorica with Montenegro Stock Exchange ad Podgorica.
EU Convergence	
Establish a catalogue for adapting financial sector legislation and market practices and develop action plans in each area.	Implemented. The Government of Montenegro adopted "The Montenegro Accession Program 2014–2018," a strategic document for the process of Montenegro's accession to the EU. The program includes a plan for the harmonization of national legislation with the EU acquis, including on the financial sector.
Legal Framework	
Provide legal protection for the CBM, its officers, staff, and agents against liability for damages caused by such persons in the good faith performance of their duties.	Partially implemented. Protection is provided for any liability incurred by staff while carrying out their functions in good faith and in the absence of negligence. However, the legislation is silent on coverage for any omission made by staff while discharging their duties in good faith. Also, the legislation is silent on coverage for the CBM itself.

2006 Main Recommendations	2015 Status Update
Empower supervisors to impose appropriate remedial measures in individual situations.	Implemented. The Banking Act provides the CBM with a wide range of powers, ranging from the issue of written warning notices to the revocation of the banking license. In-between measures include requiring the bank to address the irregularities, increase own funds, desist from certain activities, remove a director or member of senior management, and sell part of its assets and appoint an interim administrator if so ordered.
Authorize the supervisors to impose monetary penalties directly without having to first obtain court approval.	Not implemented. The CBM does not have the power to impose monetary fines for misdemeanors (for example, submitting inaccurate reports). If it wishes to impose a monetary fine, it must go through the Court of Misdemeanors.
Creating precedent in judicial handling of criminal cases, including regarding insider trading and other market abuses.	Not implemented. Abuse of privileged information and manipulation of the securities market and other financial instruments are defined as criminal offenses by the Criminal Procedure Code of Montenegro. No precedents have been created.

Appendix Table 8. Montenegro: Macroeconomic Projections for Stress Test

	2010	2011	2012	2013	2014	Baseline 2015	Adverse scenario 1 2015	Adverse scenario 2 2015
						Proj.	Proj.	Proj.
Real GDP growth (%)	2.5	3.2	-2.5	3.3	1.5	3.2	-2.5	-5.2
CPI inflation (%)	0.7	2.8	5.1	0.3	-0.3	1.7	-0.3	-0.6
Risk-free interest rate	1.0	1.4	0.2	0.3	0.1	0.1	-0.5	-1.1
Exchange rate 1/	0.90	0.93	0.94	0.91	0.98	1.11	1.13	1.16
Stock price index	100	64	68	68	78	78	61	44
Real estate price index	100	105	91	97	81	82	73	65

Source: IMF staff estimates.

1/ Exchange rate is expressed in EUR as the equally weighted average price of USD, GBP, and CHF.

**Appendix Table 9. Montenegro: Financial Projections for Stress Test
(In percent)**

	2010	2011	2012	2013	2014	Baseline 2015	Adverse scenario 1 2015	Adverse scenario 2 2015
						Proj.	Proj.	Proj.
Non-performing loans, percent of gross loans	21.0	15.5	17.6	18.4	16.8	16.5	19.9	27.4
Credit losses, percent of net loans	-0.4	-2.3	1.9	3.1	-0.8	0.3	2.0	7.8
Interest-bearing assets, percent of GDP	76.3	69.8	70.1	66.9	64.1	61.9	61.1	58.1
Growth rate of non-interest bearing assets, percent	-	-	-	-	-	16.0	-28.7	-56.7
Growth rate of open position in equity, percent	-	-	-	-	-	0.0	-2.5	-5.1
Growth rate of open position in commodity, percent	-	-	-	-	-	0.0	-2.5	-5.1
Growth rate of open positions in foreign currency, percent	-	-	-	-	-	0.0	-2.5	-5.1
Funding cost, spread above Euribor 3M, percent	2.3	1.9	3.0	2.3	1.8	0.0	1.6	3.1
Net outflows of deposits, percent of initial total deposits	-	-	-	-	-	0.0	7.3	14.7
<i>Net outflows of non-resident deposits, percent of initial deposits</i>	-	-	-	-	-	0.0	11.5	23.0
Haircut on liquid assets sold to cover deposit outflows, percent	-	-	-	-	-	0.0	15.0	25.0
Spread of domestic sovereign bonds above Euribor 3M, percent	0.4	0.5	3.4	0.2	-0.8	-0.8	3.6	7.9
Spread of foreign sovereign bonds above Euribor 3M, percent	4.0	4.8	3.9	3.4	2.0	2.0	3.3	4.6
Spread of corporate bonds above Euribor 3M, percent	-	-	-	-	43.9	43.9	48.6	53.4
Net fee and commission income, annual change, percent /1	5.0	-11.9	-16.0	32.4	4.1	0.0	-6.0	-11.9
Other non-interest income, percent /1	13.8	649.5	-46.6	-68.1	-48.2	0.0	-16.0	-32.0
Non-interest expense, annual change, percent /1	2.4	3.3	6.2	-102.6	-1.4	0.0	8.3	16.4
<i>Operational risk losses, annual change</i>	-	17.2	-70.0	1501.3	-72.6	0.0	105.2	207.8
Tax rate, percent	9.0	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Dividends paid/shares issued, percent of net profits	-	-	-	-	-	0.0	0.0	0.0

Source: IMF staff calculations

Appendix Table 10. Results of the Solvency Stress Test without Provisioning Adjustments
(All amounts in millions of euro)

	Baseline scenario	in % of GDP	Adverse scenario	in % of GDP	Adverse scenario	in % of GDP
Before stress, 12/31/2014						
Regulatory capital	315	9.2	315	9.2	315	9.2
Tier 1 capital	270	7.9	270	7.9	270	7.9
Tier 2 capital	45	1.3	45	1.3	45	1.3
Risk-weighted assets (RWAs)	1,947	56.9	1,947	56.9	1,947	56.9
Total assets	3,136	91.6	3,136	91.6	3,136	91.6
Capital Adequacy Ratio (CAR), percent	16.2		16.2		16.2	
Capital shortfall to meet 12 percent CAR	4	0.1	4	0.1	4	0.1
Capital shortfall to meet 10 percent CAR	0	0.0	0	0.0	0	0.0
Capital shortfall to meet 0 percent CAR	0	0.0	0	0.0	0	0.0
Stress test losses						
Credit risk	-4	0.1	-53	1.5	-185	5.4
Loan loss provisions	-4	0.1	-43	1.3	-166	4.8
Credit spread risk on bond holdings	0	0.0	-10	0.3	-19	0.6
Market and liquidity risk	1	0.0	-41	1.2	-75	2.2
Funding risk	0	0.0	-32	0.9	-56	1.6
of which caused by deposit outflows	0	0.0	0	0.0	1	0.0
Interest rate risk	0	0.0	2	0.1	5	0.1
Foreign exchange risk	0	0.0	0	0.0	0	0.0
Equity price risk	0	0.0	-3	0.1	-6	0.2
Real estate price risk	1	0.0	-9	0.3	-18	0.5
Commodity price risk			0		0	
Other net income	42	1.2	39	1.1	25	0.7
Total other net income	42	1.2	39	1.1	25	0.7
of which are operational risk losses	-2	0.1	-4	0.1	-6	0.2
After stress, 12/31/2015						
Regulatory capital	354	10.3	260	7.6	80	2.3
Tier 1 capital	309	9.0	214	6.3	34	1.0
Tier 2 capital	45	1.3	45	1.3	45	1.3
Risk-weighted assets (RWAs)	1,957	57.1	1,808	52.8	1,590	46.4
Total assets	3,157	92.2	2,755	80.4	2,290	66.9
Capital Adequacy Ratio (CAR), percent	18.1		14.4		5.0	
Capital shortfall to meet 12 percent CAR	3	0.1	17	0.5	122	3.6
Capital shortfall to meet 10 percent CAR	0	0.0	5	0.2	95	2.8
Capital shortfall to meet 0 percent CAR	0	0.0	0	0.0	10	0.3

Source: IMF staff calculations

Appendix Table 11. Montenegro: Results of the Solvency Stress Test with Provisioning Adjustments
(All amounts in millions of euro)

	Baseline scenario	in % of GDP	Adverse scenario 1	in % of GDP	Adverse scenario 2	in % of GDP
Before stress, 12/31/2014						
Regulatory capital	280	8.2	280	8.2	280	8.2
Tier 1 capital	235	6.9	235	6.9	235	6.9
Tier 2 capital	45	1.3	45	1.3	45	1.3
Risk-weighted assets (RWAs)	1,913	55.8	1,913	55.8	1,913	55.8
Total assets	3,136	91.6	3,136	91.6	3,136	91.6
Capital Adequacy Ratio (CAR), percent	14.7		14.7		14.7	
Capital shortfall to meet 12 percent CAR	28	0.8	28	0.8	28	0.8
Capital shortfall to meet 10 percent CAR	24	0.7	24	0.7	24	0.7
Capital shortfall to meet 0 percent CAR	8	0.2	8	0.2	8	0.2
Stress test losses						
Credit risk	-4	0.1	-52	1.5	-182	5.3
Loan loss provisions	-4	0.1	-43	1.2	-163	4.8
Credit spread risk on bond holdings	0	0.0	-10	0.3	-19	0.6
Market and liquidity risk	1	0.0	-41	1.2	-76	2.2
Funding risk	0	0.0	-32	0.9	-57	1.7
<i>of which caused by deposit outflows</i>	0	0.0	0	0.0	1	0.0
Interest rate risk	0	0.0	2	0.1	5	0.1
Foreign exchange risk	0	0.0	0	0.0	0	0.0
Equity price risk	0	0.0	-3	0.1	-6	0.2
Real estate price risk	1	0.0	-9	0.3	-18	0.5
Commodity price risk	0					
Other net income	42	1.2	39	1.1	25	0.7
Total other net income	42	1.2	39	1.1	25	0.7
<i>of which are operational risk losses</i>	-2	0.1	-4	0.1	-6	0.2
After stress, 12/31/2015						
Regulatory capital	320	9.3	225	6.6	47	1.4
Tier 1 capital	274	8.0	180	5.3	2	0.1
Tier 2 capital	45	1.3	45	1.3	45	1.3
Risk-weighted assets (RWAs)	1,922	56.1	1,776	51.9	1,562	45.6
Total assets	3,121	91.1	2,728	79.6	2,269	66.3
Capital Adequacy Ratio (CAR), percent	16.6		12.7		3.0	
Capital shortfall to meet 12 percent CAR	27	0.8	43	1.2	149	4.3
Capital shortfall to meet 10 percent CAR	24	0.7	33	1.0	122	3.5
Capital shortfall to meet 0 percent CAR	7	0.2	15	0.4	37	1.1

Source: IMF staff calculations

Appendix Table 12. Montenegro: Stress Test Results on Credit Concentration Risk

	Default of the largest borrower	Default of the largest 5 borrowers	Default of the largest 10 borrowers
Before losses			
Regulatory capital ratio (CAR), percent	16.2	16.2	16.2
Capital shortfall to meet 12 percent CAR	4	4	4
Capital shortfall to meet 10 percent CAR	0	0	0
Capital shortfall to meet 0 percent CAR	0	0	0
Assumed recovery rate of 70 percent			
Capital Adequacy Ratio (CAR), percent	15.3	13.2	11.6
Capital shortfall to meet 12 percent CAR	5	19	43
Capital shortfall to meet 10 percent CAR	1	7	20
Capital shortfall to meet 0 percent CAR	0	0	0
Assumed recovery rate of 35 percent			
Capital Adequacy Ratio (CAR), percent	14.3	9.4	5.7
Capital shortfall to meet 12 percent CAR	13	75	137
Capital shortfall to meet 10 percent CAR	4	46	108
Capital shortfall to meet 0 percent CAR	0	0	15
Assumed recovery rate of 0 percent			
Capital Adequacy Ratio (CAR), percent	13.2	5.3	-1.1
Capital shortfall to meet 12 percent CAR	21	140	236
Capital shortfall to meet 10 percent CAR	10	110	208
Capital shortfall to meet 0 percent CAR	0	10	86

Source: CBM and IMF staff calculations.

Note: Large exposure data was only received for 11 out of 12 banks. For three of the banks, fewer than 10 large exposures were reported.

Appendix Table 13. Montenegro: Liquidity Stress Test Summary

	Total	With domestic sovereign bond Level 2 classification	Excluding domestic sovereign bonds	Excluding domestic sovereign bonds and required reserves
LCR, standard	863	828	629	474
Implied liquidity shortfall /1	0	0	0	0
Number of banks below 100 percent	0	0	0	0
LCR, assuming outflows in severe adverse scenario	525	503	382	288
Implied liquidity shortfall /1	0	0	0	0
Number of banks below 100 percent	0	0	0	0
NSFR, standard	124	123	121	-
Implied liquidity shortfall	10	10	10	-
Number of banks below 100 percent	2	2	2	-
NSFR, assuming outflows of deposits in severe adverse scenario	108	107	105	-
Implied liquidity shortfall	95	98	109	-
Number of banks below 100 percent	7	7	7	-

Sources: CBM and IMF staff calculations.

1/ The LCR "implied liquidity shortfall" is the amount of system-wide liquidity needs (in terms of HQLA) so that the LCR of each bank is at least 100 percent.

2/ The NSFR "implied liquidity shortfall" is the amount of system-wide liquidity needs (in terms of ASF) so that the NSFR of each bank is at least 100 percent.