



## MONTENEGRO

### TECHNICAL ASSISTANCE REPORT— MACROPRUDENTIAL POLICY FRAMEWORK

October 2017

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# **INTERNATIONAL MONETARY FUND**

Monetary and Capital Markets Department



## **MONTE NEGRO**

### **MACROPRUDENTIAL POLICY FRAMEWORK**

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**February 2017**

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## GLOSSARY

BIS	Bank of International Settlements
BoP	Balance of Payments
CBM	Central Bank of Montenegro
CCyB	Countercyclical Capital Buffer
CRR/CRD IV	Capital Requirements Regulation and Directive
DPF	Deposit Protection Fund
DSTI	Debt Service-to-Income
ESRB	European Systemic Risk Board
EU	European Union
FDI	Foreign Direct Investment
FSB	Financial Stability Board
FSC	Financial Stability Council
FSI	Financial Soundness Indicator
FSR	Financial Stability Report
FX	Foreign Exchange
HR	Human Resources
IMF	International Monetary Fund
ISA	Insurance Supervision Agency
LTV	Loan-to-Value
MCM	Monetary and Capital Markets Department
MoF	Ministry of Finance
Monstat	Statistical Office of Montenegro
NPL	Nonperforming Loan
SEC	Securities and Exchange Commission
TA	Technical Assistance

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## **PREFACE**

At the request of the Central Bank of Montenegro (CBM), a Monetary and Capital Markets (MCM) technical assistance (TA) mission visited Podgorica, Montenegro, during

October 24–November 4, 2016, to provide advice on the establishment of a macroprudential policy framework.<sup>1</sup> Specifically, the mission worked with the CBM to identify gaps in the role and function of the Financial Stability Council (FSC), macroprudential policy mandate of the CBM, data required for effective risk monitoring, and the CBM's capacity and organizational framework to conduct effective systemic risk analysis; and discussed with the authorities a road map to build on the existing mechanisms and close gaps.

In carrying out this work, the mission met with CBM senior management, including the Vice Governor and advisors to the Governor, as well as with officials at the Department for Financial Stability, Research and Statistics, and the Department for Banking Supervision at the CBM; the Insurance Supervision Agency (ISA); the Securities and Exchange Commission (SEC); the Deposit Protection Fund (DPF); the Ministry of Finance (MoF); the Parliamentary Committee on Economy, Finance and Budget; and commercial banks. The mission also met with the World Bank.

The mission would like to express its gratitude to Vice Governor Nicola Fabris, Advisor to the Governor Irena Radović, and other senior and line officials at the CBM, ISA, SEC, DPF, and MoF, as well as all its other counterparts for the excellent cooperation extended to it. The mission would also like to express its deepest appreciation for their kind hospitality, the outstanding arrangements made to facilitate its work, and for the time and attention provided.

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<sup>1</sup> The mission consisted of Ann-Margret Westin (Mission Chief), Keith Hall (IMF Expert, former Reserve Bank of Australia), Remco van der Molen (IMF Expert, De Nederlandsche Bank), and Sumiko Ogawa (MCM).

## EXECUTIVE SUMMARY

**Montenegro faces a number of important country-specific factors in its work towards establishing a macroprudential policy framework.** First, its small size and short history as a sovereign state limit the availability of resources, including human capital. For example, there are many information gaps around financial soundness indicators (FSIs) that will take a long time to close. Second, the principal policy objective of the central bank is financial stability given the euroization, implying no independent monetary policy. Third, Montenegro is in the process of aligning its policies and practices with those of the European Union (EU), with the aim of achieving EU accession by 2020. This will extend to the implementation of a macroprudential policy framework in line with EU and European Systemic Risk Board (ESRB) standards and regulations.

**The macroprudential policy mandate should reside with the CBM, with enhanced accountability, given its financial stability mandate and systemic risk analytical capacity.** The mandate should be explicitly spelled out in a single published document that sets out a policy framework with clear objectives and specific indicators and instruments. The CBM is already equipped with all of the key microprudential powers that could be used for macroprudential purposes. It is in the process of expanding the regulatory perimeter to capture all credit institutions, including factoring and leasing companies that currently play an important role in the resolution of nonperforming loan (NPLs). The accountability for the macroprudential policy decisions should be strengthened. This could be achieved by having the Parliamentary Committee on Economy, Finance and Budget convene special sessions solely devoted to financial stability and so provide the CBM with an annual opportunity to testify on the outlook for the financial system and on the use of macroprudential powers.

**The CBM should ensure that its organizational structure is supportive of a macroprudential mandate.** The implementation of a macroprudential policy framework requires a significant lift in analytical and research competencies. It should be accompanied by human resources (HR) strategy that identifies and facilitates the training needs of staff. In addition, existing publications by the CBM and the FSC should be streamlined and better focused on forward-looking financial stability issues to make better use of scarce resources.

**The selection of macroprudential indicators should focus more on the potential sources of systemic risk, supported by better use of existing data.** Given the data limitations, existing credit gap analysis should be complemented by more focused indicators of credit growth, lending standards and leverage, where possible at a more disaggregated level. In this regard, the credit registry is a valuable source of information. The monitoring of credit developments in the nonfinancial sector could be further enhanced through more granular analysis of capital flows and integration of credit registry data with information on household income and wages and corporate financial statements.

**Data monitoring and analysis should be complemented by regular discussions with bank supervisors and the financial sector.** This would strengthen the coordination of

micro- and macroprudential policy within the CBM and provide useful information on developments in the banking sector, bringing together relevant expertise.

**There is scope to significantly enhance scenario design and stress testing.** The CBM already has some experience in stress testing, conducted jointly by the Financial Stability and the Banking Supervision departments. Better identification of vulnerabilities through strengthened data monitoring and analysis, improvements in reflecting these vulnerabilities in the scenario design, and closer coordination between the two departments would help sharpen the forward-looking assessment of the potential impact from the identified risks.

**Closing data gaps is a medium-term priority, requiring strong coordination with other relevant authorities.** Systemic risk monitoring would benefit greatly from reliable and comprehensive real estate price indices, and detailed information on capital flows, and on financial accounts of corporate and household sectors (flow of funds). Closing data gaps will require substantial time and resources, and will need to be coordinated with ongoing projects, including at other agencies; an interagency work plan could foster efficient cooperation.

**With the implementation of European regulation, the CBM will have adequate powers to address both structural and cyclical systemic risks.** As part of its financial stability mandate, the CBM can use both supervisory tools (e.g., capital surcharges and concentration limits) and monetary policy tools (e.g., reserve requirement) for macroprudential purposes. In addition, the toolkit would be further strengthened by the implementation of European regulation, in which the CBM should be the national designated authority in terms of Capital Requirements Regulation and Directive (CRR/CRD IV). The CBM should detail in a macroprudential policy strategy how systemic risk assessment relates to policy decisions, including the use of limits on loan-to-value (LTV) and debt-service-to-income (DSTI) ratios to maintain sound lending standards.

**The FSC's role in crisis preparedness and management should be strengthened.** While the DPF may be invited to attend meetings when needed, there is a considerable merit in including the DPF as a regular member to enhance the FSC's role in contingency planning. The FSC is also well positioned to provide recommendations on broader issues that surround financial stability, such as corporate governance, insolvency, creditor protection and accounting and auditing standards.

**Lastly, over the medium term, the authorities may consider the benefits of further consolidating financial oversight responsibilities in Montenegro.** The small size of Montenegro means that human capital must be used very wisely. Consolidation of financial sector regulation and oversight in the CBM may be appropriate from a cost-benefit perspective.

**Table 1. Key Recommendations**

	<b>Recommendations</b>	<b>Timeframe<sup>1</sup></b>	<b>Possible TA</b>
<b>Governance</b>			
1	Assign the macroprudential policy mandate to the CBM. <i>No changes in the Central Bank Law are required. The high level financial stability objectives and microprudential powers already existing in the Law are sufficient to support a macroprudential policy mandate.</i>	I	
2	Start work within the CBM on a macroprudential policy strategy that relates a set of objectives to indicators and specific policy instrument <i>Setting out clear policy objectives and relating them to policy tools can help foster the ability and willingness to act. CBM's macroprudential policy strategy should align with the policies and practices of the ESRB, wherever practicable, but should be tailored to Montenegro's specific national circumstances.</i>	I	MCM Desk Review
3	Integrate the macroprudential policy strategy of the CBM into a single, publicly available document. <i>Bringing together the different components of a macroprudential policy framework into a single published document will promote transparency around the CBM's role and mandate for financial stability.</i>	I	
4	Streamline and condense the Financial Stability Report (FSR) so that key messages about the condition and outlook for the financial system are more prominent. <i>The CBM currently publishes an annual FSR, which provides extensive coverage of international, regional and domestic macro-economic and financial conditions. More focused reporting would convey financial stability assessments that are clearer and more forward-looking and help link them to any policy actions.</i>	NT	MCM Desk Review
5	Strengthen accountability by providing the CBM with an opportunity to testify annually to the 'Parliamentary Committee of Economy, Finance and Budget' in a session that is devoted to financial stability. <i>Past practice has been for the Parliamentary Committee to devote special sessions to financial stability. As part of a strengthened macroprudential functions these sessions should occur annually to supplement the existing sessions devoted to the CBM's annual reports.</i>	I	i

<sup>2</sup> “I-Immediate” is within one year; “NT-near-term” is 1–3 years; “MT-medium-term” is 3–5 years.

**Table 1. Key Recommendations (Continued)**

	<b>Recommendations</b>	<b>Timeframe</b>	<b>Possible TA</b>
<b><i>Interagency Cooperation Arrangements</i></b>			
6	<p>Reduce the overlap in content between the FSC's Annual Report and the CBM's FSR. The Annual Report should provide a record of the FSC's deliberations over the year with broader financial stability analysis confined to the FSR.</p> <p><i>The FSC produces an annual report that provides limited added-value beyond that published by the CBM. Since the CBM provides secretariat support to the FSC this provides additional demands on a small staff.</i></p>	I	
7	<p>Enhance the role of the FSC in crisis management and contingency planning by making the DPF a permanent member of the FSC.</p> <p><i>The DPF may be invited to attend FSC meetings on an “as needed” basis, but would benefit from regular participation at FSCs meetings so that it is better briefed on changes to the risk environment.</i></p>	NT	
8	<p>Consider further the benefits of consolidating financial oversight responsibilities in Montenegro.</p> <p><i>The small size of Montenegro means that resources must be used very wisely. It is not evident that efforts to replicate the regulatory architecture found in larger financial systems—with separate regulatory agencies for each sector—is in Montenegro’s national interest. Consolidation of financial sector regulation and oversight in the CBM may be appropriate from a cost/benefit perspective.</i></p>	MT	
<b><i>Resourcing</i></b>			
9	<p>Assign more resources to and invest further in the CBM staff working on financial stability.</p> <p><i>The mission believes the current allocation of staff is insufficient and further investment in staff is needed for the CBM to successfully implement a macroprudential policy strategy and provide the ongoing research and analysis needed to support the new framework.</i></p>	NT	<b>IMF Training</b>
<b><i>Risk Monitoring and Analysis</i></b>			
10	<p>Focus the risk monitoring on key macroprudential indicators and make it more forward looking.</p> <p><i>Monitoring should be based on the core Financial Soundness Indicators combined with indicators that can signal the build-up of systemic risks at an early stage.</i></p>	I	<b>MCM TA</b>

**Table 1. Key Recommendations (Continued)**

	<b>Recommendations</b>	<b>Timeframe</b>	<b>Possible TA</b>
11	Dedicate more resources to monitoring and analyzing developments in credit and the indebtedness of the nonfinancial sectors. <i>Assessing systemic risks in Montenegro first and foremost requires detailed knowledge of developments in credit and financing conditions, which can be obtained by making better use of the available data, in particular from the credit registry, and through launching a bank lending survey.</i>	I	
12	Further strengthen the technical expertise available for stress-testing. <i>The CBM already has some experience in stress testing, but there is scope to significantly enhance this competency, in particular by drawing on the data available in the credit registry.</i>	NT	<b>MCM TA</b>
13	Develop a work plan to close data gaps related to real estate prices, capital flows and flow of funds data, in cooperation with the statistical Office of Montenegro (Monstat) and other relevant administrative bodies. <i>Data gaps are large, and closing them will take time and require substantial resources from the CBM as well as the statistical agency. A work plan could foster efficient cooperation. Priority should be given to the development of real estate price indices.</i>	I	<b>STA TA</b>
14	Organize regular discussions on developments in systemic risk by staff working on financial stability with banking supervisors and the financial sector. <i>Assessing systemic risk requires good understanding of developments in the financial sector as a whole. In this respect, bank supervisors and financial sector representatives can provide valuable (qualitative) information that cannot be acquired from macroprudential indicators.</i>	I	
<b>Prudential Policy Tools</b>			
15	Vest the CBM with the power to use the prudential tools in the CRR/CRD IV. <i>The CBM is the bank supervisor and the only agency with the analytical capacity required to prepare policy decisions on the use of these tools.</i>	NT	
16	Use the powers of the CBM to maintain sound lending standards. <i>Given the degree of competition in the banking sector, the CBM should play a more active role in maintaining sound lending standards. For example, it could issue guidelines or set regulatory limits on the levels of LTV and DSTI ratios for housing loans.</i>	I	<b>MCM TA</b>

## I. INTRODUCTION

1. **Experience with macroprudential policy is growing.** A large number of countries have put in place dedicated institutional arrangements and steady progress is being made with the design and implementation of prudential tools. But as emphasized in the recent review of this experience by the IMF, Financial Stability Board (FSB) and the Bank of International Settlements (BIS),<sup>2</sup> this is not a policy area for a “one-size-fits-all” approach. Institutional arrangements vary from country to country depending on specific national circumstances, in particular on how microprudential responsibilities are currently organized within the country. Importantly, macroprudential policies are also just one component of a broader financial stability framework for identifying, mitigating and managing a potential financial crisis. However, there is a consensus that for a macroprudential policy framework to be effective a number of common elements should be in place. These include:

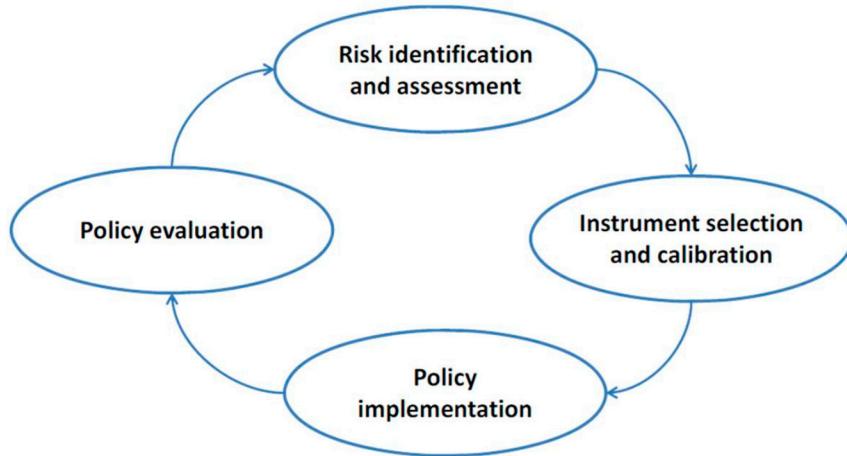
- A governance framework that incorporates a clear, unambiguous mandate for the use of macroprudential policies, together with well-defined objectives and adequate powers matched with strong accountability;
- explicit mechanisms for cooperation and information-sharing between regulatory authorities; and
- strong analytical capacity so that decision-makers are well briefed on the outlook for financial stability and provided with policy recommendations, based on thorough analysis, on how to respond to threats and vulnerabilities.

2. **Operationalizing macroprudential policy involves several steps that can usefully be thought of as a policy cycle (Figure 1).** Based on a comprehensive assessment of systemic risk using a set of key macroprudential indicators, the authorities decide on which macroprudential instruments to use and how to calibrate them. In doing so, the authorities take into account the underlying sources of risk and the likely costs and benefits of the measures. The basis for these policy judgments is communicated to the public. After the measures have been implemented, the authorities monitor their impact, both intended and unintended, and update their risk assessment accordingly.

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<sup>3</sup> IMF-FSB-BIS (2016), “Elements of Effective Macroprudential Policies: Lessons from International Experience,” <http://www.imf.org/en/News/Articles/2016/08/30/PR16386-IMF-FSB-BIS-publish-Elements-of-Effective-Macroprudential-Policies>.

**Figure 1. Macroprudential Policy Cycle**



**3. Macroprudential policy is just one part of a broader financial stability framework.** Reflecting this, the macroprudential authority must work closely with those authorities involved in crisis management. There is a tacit recognition that no matter how much progress is made in terms of surveillance and prevention, it is neither possible, nor desirable, to eliminate altogether the prospect of failures among financial institutions. But whenever failures do occur, they must be handled in an orderly manner with no, or limited, impact on the public purse. Needless to say, macroprudential policy cannot replace other appropriate policies, including fiscal discipline and strong microprudential oversight.

## **II. BACKGROUND**

**4. Montenegro is a small euroized economy, with limited capacity to absorb external shocks.** The economic activities are concentrated in tourism, energy and commodities, which are heavily exposed to external market and terms-of-trade developments. Real GDP growth is projected at approximately 3 percent in 2016—broadly unchanged from 2015 as a large highway project is experiencing delays. At the same time, efforts to boost growth pose sizable risks by increasing fiscal imbalances and public debt vulnerabilities. Bank lending remains slow, increasing by 6 percent year-on-year in the first nine months of 2016. Strong growth in new loans is in large part related to refinancing of existing loans at lower lending rates and on easier lending terms.

**5. The financial sector is dominated by banks, with limited linkages among banks and between banks and other financial institutions.** Commercial banks account for around 90 percent of financial system assets. They are predominantly majority-owned by foreign capital (about 80 percent of banking sector assets). Fifteen banks currently operate in the country, including four newly licensed banks in the last three years. The insurance sector is small and consists of mostly foreign subsidiaries, with total premiums of about 2 percent of GDP. Turnover on the stock exchange has declined significantly since the pre-crisis period and the bond market is thin. Interconnectedness within the domestic financial system is

limited, but the banking sector's cross-border exposures are high, reflecting ownership structures.

**6. The Montenegrin financial system is still weighed down by the legacy from the collapse of the lending boom in 2008.** NPLs are declining but were still high at 10.2 percent of total loans in September 2016, with significant variation among banks. Moreover, the reduction has been achieved in part by the transfer of NPLs to special purpose vehicles, making the resolution of bad debts very opaque. Downward pressures on interest margins, in addition to high overhead costs and scale inefficiencies, are putting pressures on bank profitability, which is already weak. Capital buffers appear adequate, with the aggregate capital adequacy ratio at 16.3 percent (end-September 2016). Liquidity remains ample, reflecting risk aversion and limited lending opportunities.

**7. Notwithstanding some improvements in the health of the banking sector, considerable risks continue to attach to asset quality.** The increased competition among banks has resulted in compressed interest margins, and could have an unintended negative consequence of inducing looser lending standards. Given the lack of reliable price data, the valuation of collateral and provision remain a challenge.

### **III. INSTITUTIONAL ARRANGEMENTS**

**8. An effective macroprudential policy framework is underpinned by robust institutional arrangements.** These must cover important principles of good governance for the macroprudential authority; a sensible and appropriate distribution of policy responsibilities among regulatory authorities; and assured resourcing.

#### **A. Governance Frameworks in Support of Macroprudential Policy**

##### **Mandates**

**9. Mandates matter a great deal from a financial stability perspective.** Making it clear where the responsibility and accountability for macroprudential policy resides helps reinforce the “ability” and “willingness” to act. This is important because the outlook for financial stability is closely tied to changes in systemic risk, which are both difficult to define and quantify. As a result, the objective of financial stability is rarely defined as an operational target and an inaction bias can easily creep into the policy framework. Yet, actions need to be taken when risks are building up and not only when they have materialized.

**10. Strong mandates help safeguard against political pressures.** The use of macroprudential policies in support of financial stability can be unpopular. This reflects the fact that policy actions to reduce systemic risk are often required when there is a general sense of well-being in the community, propagated by an extended period of economic growth and expansion—the very conditions most closely associated with a build-up of systemic risk. And what is unpopular with the general public can easily convert to political pressures on the

macroprudential authority to delay their response. The best defense against such pressure is making sure that the mandate and objectives of the macroprudential authority are clear and well understood.

**11. A key challenge in designing a macroprudential policy framework is ensuring that the mandate is assigned to the appropriate authority.** This can be done in a number of ways but the choice is usually between assigning the mandate to the central bank, which is likely to have an existing responsibility for the promotion and maintenance of financial stability, or to an interagency committee, including the MoF. Such a committee may or may not be chaired by the central bank. While there is no “right way,” the choice of institutional arrangements is usually influenced by the scope of the central bank’s existing regulatory responsibilities. Where the central bank already has extensive regulatory powers, particularly for banks, its claim on the mandate is strengthened by the fact that it already “owns” most of the key policy instruments. But in taking on this responsibility, a central bank must take care to avoid the risks of policy confusion that can arise from having monetary and macroprudential policies “under one roof.” One way of doing so is by establishing within the central bank a separate financial stability committee. By contrast, “non-regulatory central banks” can only frame any macroprudential policies in close collaboration with the prudential regulator, something that is usually achieved by way of a dedicated interagency committee or council outside the central bank. Further details on the pros and cons of various institutional arrangements are provided in Appendix 1.

## Objectives

**12. The ultimate objective of macroprudential policy is to safeguard the stability of the financial system.** As noted above, financial stability is not an objective that can be easily characterized as an operational target. Hence the approach taken in some countries, to render the high-level objective more tangible from an implementation perspective by specifying intermediate objectives, which in turn have specific policy instruments attached to them. In the case of the ESRB, for example, the focus is on:

- **Excessive credit growth and leverage.** Excessive credit growth has been identified as a key driver of financial crises, with leverage acting as an amplifying channel;
- **Excessive maturity mismatches and market illiquidity.** Reliance on short-term and unstable funding may lead to fire sales, market illiquidity, and contagion;
- **Direct and indirect exposure concentrations.** Exposure concentrations make a financial system vulnerable to common shocks, either directly through balance sheet effects or indirectly through asset fire sales and contagion; and
- **Misaligned incentives with a view to reducing moral hazard.** This involves strengthening the resilience of systemically important financial institutions.

These intermediate objectives can be varied periodically according to the perception of the risk environment. To preserve this flexibility, intermediate objectives and the associated policies are rarely embedded in legislation but are usually outlined in publically available reports and explanatory notes. Setting out well-defined objectives may also help counter pressures to use macroprudential policies as a substitute for policy actions in other areas.

## **Powers**

13. **A macroprudential authority must have an adequate range of powers.** These should ensure that it can obtain all the necessary information from other agencies and is able to close data gaps; influence the activation and calibration of regulatory constraints; influence the designation of individual institutions as systemically important; and initiate changes to the regulatory perimeter to capture financial institutions whose activities may give rise to financial stability risks.

14. **The strength of these macroprudential powers can vary.** They can be “hard (direct),” giving policymakers direct control over prudential policy tools or the ability to direct other authorities; “semi-hard,” enabling policymakers to make formal recommendations to other regulatory authorities coupled with a “comply or explain” mechanism; or “soft,” enabling policymakers to express an opinion, or warning or recommendation that is not subject to “comply or explain” obligations.

## **Accountability**

15. **Transparency and accountability for decision-making play an important role in establishing the legitimacy of macroprudential policy.** Accountability is typically both to the legislature and to the public at large. A range of communication tools (such as FSRs, policy statements and meeting records) can help explain exactly why actions have been taken and how they can be reconciled with the mandate and objectives of the macroprudential authority. The aim of macroprudential policy communication strategies is to convey financial stability assessments clearly, link them logically to any policy action and to manage public expectations about what can be achieved by those policies. In doing so, an important objective is not to “cloud” publications such as the FSR with excessive macro-economic detail that belongs more properly in the economic reports. There is a risk otherwise that the key assessments on the outlook for financial stability will be blunted. It is common practice for the key messages to be reinforced at press conferences convened on release of FSRs.

16. **A macroprudential authority with independence of action must be accountable to Parliament for its assessments and actions.** The constitutional arrangements for this vary from country to country but often involve some form of regular testimony by the chair of the authority, frequently the central bank governor, supported by an opportunity for a question and answer session.

## B. Interagency Cooperation

17. **An effective macroprudential policy framework is built on a collegiate and collaborative relationship among the relevant financial authorities.** This is usually achieved by formalizing an interagency committee composed of the central bank, other regulatory agencies and the MoF. At a minimum, this committee must provide for a regular exchange of views and information on potential risks and vulnerabilities in the financial system. It should also provide an opportunity for the sharing of views on macroprudential policies even when the committee is not a policymaking body. In forming any views, great care must be taken to preserve the operational autonomy of the separate policy agencies.

18. **The free flow of information between agencies will enable them to build up a systemic perspective on risks that may not be apparent at the agency level.** Aggregate level data should flow routinely between agencies, and arrangements should also be in place for the exchange of prudential information on individual institutions, where this can be justified and where it is consistent with any legal provisions around confidentiality and privacy.

19. **In general, it is recommended that the interagency committee take the lead in developing national financial crisis management plans.** These require a high degree of cooperation among the government, the central bank, financial regulators, and also the deposit insurance agency. Each will have a specific role and each will need to have well-documented contingency arrangements so that they know how to respond promptly to emerging problems. Protocol and procedures for the speedy resolution of problems must be developed in advance of a crisis. Experience suggests that this work is best conducted under the auspices of a high-level committee with an explicit mandate for the development of crisis-management arrangements.

## C. Resourcing

20. **The development of an effective macroprudential policy framework is demanding in terms of resourcing.** Adequate resourcing requires that there be sufficient staff in the right locations with suitable experience and expertise to undertake the following tasks:

- ***Monitoring and analysis*** of all relevant FSIs so that the authorities are provided with the earliest possible warning of potential threats to financial stability. This analysis must extend beyond the financial sector itself, to identify the build-up of risks on nonfinancial sector balance sheets, in particular on household and corporate sector balance sheets.
- ***The provision of timely and appropriate policy advice*** on the measures required to mitigate or contain threats. There are several important interlocking aspects to this work. The first is about providing advice on measures to improve the overall resilience of the financial system so that it can better absorb shocks, including by

ensuring adequate capital and liquidity buffers, and by reducing structural vulnerabilities that arise from inter-linkages within the financial system, particularly those involving the largest financial institutions. The second aspect is more preemptive in nature and concerns the use of primarily prudential tools to tackle unsustainable run-ups in asset prices and leverage.

**21. The organizational structure of a macroprudential authority must ensure that resources are deployed to the best possible effect.** The key issue is whether the macroprudential policy mandate is best supported by having staff and expertise brought together in a single place; or whether a more distributed organizational structure can be equally effective—one in which there is a small number of dedicated financial stability staff with ready access to the analytical resources available elsewhere in the agency. The global financial crisis prompted many central banks to carefully review their organizational structures in support of financial stability to ensure that they could accommodate the introduction of macroprudential policy frameworks. As a generalization, this has usually been achieved by expanding the numbers of staff in dedicated financial stability departments, through new hiring or by redeploying staff from other policy functions. However, experience with macroprudential policy remains quite limited and many central banks are still in the process of operationalizing their frameworks. So there is as yet no consensus on what constitutes best practice in terms of staff numbers or organizational structures.

**22. Resourcing is not just about staff numbers, but also about expertise and experience.** Capacity building in support of a macroprudential policy mandate is critical and there should be an HR strategy in place to help identify and meet the training needs of staff. This is particularly true for some of the core competencies such as stress testing. It is also common practice to recruit some staff from the financial sector with risk management experience, but this is only feasible if the remuneration of the macroprudential agency is sufficiently competitive.

#### **IV. INSTITUTIONAL ARRANGEMENTS IN MONTENEGRO**

**23. In considering the institutional arrangements that will best meet the needs of Montenegro, a number of very important country-specific factors must be taken into account.**

- Montenegro is a very small, sovereign state at a developmental stage, which needs to husband its resources, including its human capital, very wisely in order to maximize economic efficiency.
- The policy flexibility of the Montenegrin authorities is constrained by the “euroization” of the economy, implying that the CBM has no monetary policy role from either a formulation or implementation perspective. As a result, the principle policy objective of the CBM is financial stability, rather than price stability.

- Montenegro aspires to EU accession by 2020 and this puts a very high premium on aligning Montenegrin policies and practices, wherever practicable, with those of the EU.

#### **A. Governance Framework for Montenegro**

**24. In the Mission’s view there is a very strong case for having the macroprudential policy mandate reside with the central bank.** The issue of where the macroprudential policy mandate should reside is perhaps more easily resolved in Montenegro than most other countries on the grounds that:

- In the absence of any monetary policy function, financial stability is arguably the “raison d’être” of the CBM;
- The only systemic risk into the foreseeable future resides in the banking sector and the CBM is the bank supervisor. As noted earlier, Montenegro is a bank-centric financial system, with non-bank financial intermediation at a very nascent stage of development; and
- The CBM is the only agency with any meaningful analytical capacity at a systemic risk level. The other regulatory agencies are grappling with developmental and enforcement issues and face significant resource constraints. The MoF very largely defers to the CBM on financial sector issues.

**25. The Central Bank of Montenegro Law requires that the CBM “oversee the maintenance of stability of the financial system as a whole and pass pertinent regulations and measures.”** But there is no explicit reference to the use of these regulations and measures for macroprudential purposes. This prompts the question as to whether the policy mandate of the CBM might be usefully enhanced by embedding some macroprudential policy objectives in the law. The Mission sees no obvious reason for doing so, providing efforts are made elsewhere in publications and statements to expand on the objectives of macroprudential policy, possibly referencing the approach of the ESRB and adapting them to Montenegrin circumstances. In essence, the CBM should set out its macroprudential policy strategy in a single, published document. This should specify the policy objectives and tie them to specific indicators and instruments.

**26. There appear to be adequate macroprudential powers in place.** The Central Bank Act provides the CBM with all necessary microprudential powers over banks; and there appears to be no constraint in the law on the use of these powers for macroprudential purposes. Legislative amendments are in train that will extend the regulatory perimeter so that the CBM has oversight of all credit institutions, including factoring and leasing companies, which play an important role in NPL resolution in Montenegro.

**27. The transparency around macroprudential policy is supported by an annual FSR.** Care must be taken, however, to ensure that this doesn’t resemble a general

macro-economic report on global, regional and domestic developments. A more concise, focused report would help bring through more clearly the CBM's assessment of the outlook for financial stability. It would also help concentrate the efforts of the staff on key messages. These messages could be reinforced by scheduling press conferences on the release of the FSR so that the Governor, Vice Governor and senior staff have an opportunity to expand on issues and concerns.

**28. An effective macroprudential policy framework will expand and reinforce the CBM's financial stability mandate and powers.** This raises important questions about accountability, in particular whether there are sufficient existing accountability arrangements that will operate effectively in support of a broader mandate. This matters because the use and timing of macroprudential powers will not always be well understood by Parliament, or the public more generally, and the CBM may need to regularly explain and justify its actions. In the past, the Parliamentary Commission on Economy, Budget and Finance has convened special sessions on financial stability, in addition to regular sessions held to discuss the CBM's annual reports. There would be considerable merit in having sessions on financial stability at least annually so that the CBM can regularly testify on the outlook for the financial system and the use of its macroprudential powers to promote stability.

## **B. Interagency Cooperation in Montenegro**

**29. Strong interagency cooperation increases the effectiveness and efficiency of macroprudential surveillance.** This cooperation is facilitated in Montenegro by a FSC, which was established in 2010. It is composed of the Governor, the Minister of Finance and the Presidents of the Council of the ISA and of SEC. The FSC provides a vital forum for the CBM to share its analyses of systemic risk with other agencies on a regular basis. The CBM acts as secretariat for the FSC and is charged with the responsibility for collecting, collating and analyzing the data provided to it by the other regulatory agencies. The FSC also publishes an extensive Annual Report, whose content overlaps substantially with that of the CBM's FSR. Rather, the FSC Annual Report could usefully focus on the key issues discussed during the quarterly meetings, as well as any follow-up on recommendations made.

**30. The FSC Law underwrites a role for the FSC in financial system oversight.** The Law states that the FSC "is established with a view to monitoring, identifying, preventing and mitigating potential systemic risks in the financial system of Montenegro as a whole." At the same time, the Law is explicit that the operations of the FSC must not infringe on the policy autonomy of the individual agencies. This is tantamount to providing the FSC with "soft" powers, enabling it to express opinions, views and warnings about the risk environment but without the "comply or explain" obligation.

**31. In practice, the ability of the FSC to enhance systemic risk oversight and provide independent assessments of threats and vulnerabilities is very constrained.** The FSC has no staff of its own, with CBM providing the secretariat. In addition, the ISA and the SEC make no claim to broader systemic expertise. They are very resource constrained and

pre-occupied with microprudential regulation and enforcement issues. The MoF is content to leave financial sector issues to the CBM.

**32. The FSC is well placed to provide recommendations on broader financial stability policy initiatives.** This is important because international experience tells us that progress regarding issues such as corporate governance, insolvency, creditor protection and implementation of suitable accounting and auditing standards also plays a vital role in promoting financial stability. Whenever deficiencies are identified in corporate standards, codes, and in the compliance environment more generally, the FSC should use its authority to draw them to the attention of government and the standard-setting bodies.

**33. The FSC has a key role to play in crisis management.** The FSC Law specifies that the FSC must determine the national crisis management plan and organize related stress testing and financial system crisis simulation exercises. The 2016 Financial Sector Assessment Program highlighted that there was considerable scope to enhance the role of the FSC in contingency planning; and noted that there would be considerable merit in having the DPF participating in the FSC as a fully-fledged member. The Mission concurs.

### C. Resourcing

**34. As noted earlier, the issue of resourcing matters greatly in Montenegro.** Under the existing organizational structure there is a Department for Financial Stability, Research and Statistics with 52 staff, which reports directly to the Vice Governor on Financial Stability and Payment System. However, the workload of the Department ranges well beyond financial stability issues and has a strong emphasis on the compilation of statistics to meet EU standards. It has a heavy workload in preparing monthly, quarterly and annual reports on financial stability for the Governing Board. The staff also compiles briefing for the FSC and drafts the FSC's minutes, statements and annual report. There is a risk that this reporting may come at the expense of time available for analysis and research.

**35. In common with other central banks, the CBM should satisfy itself that the current organizational structure is fully supportive of a macroprudential policy mandate.** This is important because the design and implementation of a macroprudential policy strategy, which elaborates on objectives, indicators and policy instruments, has the potential to be very resource intensive. There needs to be an HR strategy in place that helps identify and meet the training needs of the staff that will be charged with this responsibility.

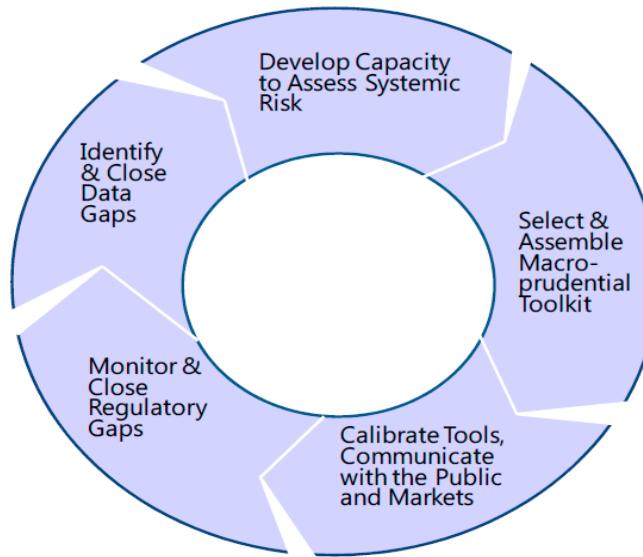
**36. There is also a far broader question relating to resourcing and whether Montenegro is using its human capital most efficiently in the pursuit of effective financial regulation and oversight.** The CBM is in the process of extending the regulatory perimeter to capture the activities of all credit institutions, including non-bank factoring and leasing companies. A far larger issue is whether Montenegro should go much further than this and follow the lead of other small countries such as Ireland in consolidating into the central bank the responsibility for all financial sector oversight. Absent such a decision, the ISA, the SEC and the DPF will each need to further expand their staff numbers and

overheads, including IT, to meet their national and international compliance obligations. It is not clear that replicating the regulatory architecture found in much larger financial systems is in Montenegro's national interest.

## V. OPERATIONALIZING THE MACROPRUDENTIAL POLICY FRAMEWORK

37. **Having agreed on the appropriate institutional arrangements there is much work to be done if the macroprudential policy framework is to be successfully operationalized.** Data gaps must be closed, and the appropriate tools selected, assembled and applied. This will not be a “one-off” exercise but, as illustrated below, will be a dynamic process so that macroprudential policy is continuously adapting to changes in the macroeconomic and risk environment (Figure 2).

Figure 2. Operationalizing Macroprudential Policy



### A. Risk Monitoring and Analysis

38. **The goal of macroprudential surveillance is to monitor and assess the build-up of potential risks and vulnerabilities that may threaten the financial system.** This implies that the surveillance should be forward looking in nature and should try to detect the build-up of risks at an early stage. Moreover, given the linkages between the financial sector and the real economy, developments in both the financial sector and nonfinancial sectors must be monitored. Monitoring the condition of the financial sector is necessary to assess the resilience of this sector to adverse economic and financial shocks. However, these shocks are likely to be more severe in the presence of vulnerabilities in nonfinancial sector balance sheets. Therefore, assessing these potential vulnerabilities is a second key component of macroprudential surveillance.

**39. Macroprudential surveillance should focus on the areas where systemic risks are most likely to build up.** Selecting a targeted set of key indicators helps monitor and assess systemic risks. The challenge is to identify the indicators that are most likely to provide the authorities with an early warning of systemic risks. A natural starting point for selecting the indicators are the intermediate objectives mentioned in paragraph 12, which correspond to potential sources of systemic risk. Selecting key indicators for each of these objectives provides the authorities with a powerful monitoring tool that can guide more detailed risk analysis and policy measures. The list of indicators can vary from country to country, depending on the relative importance of the different risk channels and the availability of data.

**40. Financial stability monitoring by the CBM currently is based on a broad set of financial and economic indicators.** The CBM monitors not only developments in the financial sector, but also in the international environment, the domestic economy and public finances. These developments are described in the monthly, quarterly and annual reports that the Department for Financial Stability, Research and Statistics compiles for the CBM Council and the FSC. For the FSC, the broad set of indicators is summarized in an aggregate financial stability indicator and a cobweb, which are published in the FSC Annual Report. In general, the reports are statistical and descriptive in nature and mainly provide an overview of the indicators.

**41. In monitoring risks in the financial sector, the CBM relies mainly on core FSIs of the banking sector.** As the financial sector is bank dominated, these indicators are a natural starting point for monitoring systemic risks. The CBM has adequate information about the solvency and liquidity of the individual banks, which are used to calculate the core FSIs. Data quality is expected to further improve through the implementation of EU regulation and the harmonization of key definitions (e.g., of capital and NPLs).

**42. The ability of the CBM to monitor and assess systemic risk is limited by substantial data gaps.** In general, many financial and economic data have only short time-series or contain several structural breaks. This hampers the ability to identify indicators with good early warning properties for Montenegro, and limits the usefulness of indicators that strongly rely on the availability of long time-series, such as the credit gap. In addition, there are a number of specific data gaps that are relevant for systemic risk monitoring. First, the available information on developments in property prices is limited and fragmented. A transactions-based indicator of house prices is only available for newly built apartments. There is no information on transactions in commercial real estate. Second, official flow of funds data are not produced, which limits the ability to assess vulnerabilities in nonfinancial sector balance sheets. Third, information on capital flows is only reported at an aggregate level. A breakdown of capital inflows and external debt by industrial sectors and currency is not available.

**43. The selection of macroprudential indicators should focus more on the potential sources of systemic risk.** The current set of indicators presented in the CBM FSR is very

extensive, and it is not always clear how the individual indicators affect systemic risk. Understanding the implications for systemic risk can be even more difficult when averaging individual indicators into a sectoral or aggregate index. With respect to indicators related to the banking sector, the core FSIs are good measures of the resilience of banks to financial stress but have only limited value as early warning indicators. Focusing on a smaller set of indicators that are more directly related to the build-up of systemic risk, such as (sectoral) credit growth and bank lending standards, would not only improve the quality of risk monitoring, but would also enable a more effective communication of the risk assessment to the CBM Council, the FSC and the public.

**44. Given the data limitations, the identification of systemic risk by the CBM should rely to a large extent on monitoring and analyzing developments in credit and leverage.** The CBM uses the credit gap as an indicator of credit developments. As already mentioned, calculation of this indicator is hampered by data limitations, which reduces its value as an early warning indicator for Montenegro. The credit gap should therefore be complemented by other indicators of aggregate and sectoral credit developments, such as the growth rate of credit to GDP, and of credit to different sectors, industries and for real estate. Credit to households could be decomposed into cash loans and housing loans. Besides indicators of credit growth, developments in lending standards deserve close monitoring, as a deterioration in lending standards can provide an early indication of an increase in systemic risk. In view of this, the Mission strongly supports the intended launch of a bank lending survey by the CBM. Table 2 lists potential macroprudential indicators.

**45. The credit registry is a potentially very valuable source of information for monitoring and analyzing developments in credit.** Because banks have to report all their lending activities to the registry on a regular basis, the registry covers the large majority of credit provided to the nonfinancial sectors. For each loan, the registry contains information on various characteristics such as principal amount, interest rate, maturity, credit quality and the value of collateral. The registry is maintained by the CBM, and the information from the registry can in principle be used by the CBM to fulfill its mandate. The Mission sees the

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**Table 2. Intermediate Objectives, Potential Macroprudential Indicators, and CBM Policy Tools**

Intermediate objectives	Potential macroprudential indicators	Potential CBM policy tools	
		Currently available	Available from CRR/CRD IV
<b>Excessive credit growth and leverage</b>			
Aggregate	Credit to GDP gap Credit growth Growth in credit to GDP	Capital requirements (Sectoral) risk weights (Sectoral) limits on credit growth Limits on DSTI and LTV ratios for new lending	Countercyclical capital buffer Leverage ratio
Households	Growth in household credit (cash loans, housing loans) <sup>a</sup> Debt to income <sup>b</sup> Lending standards <sup>c</sup> Debt service to income (new lending) <sup>d</sup> Loan to value ratio (new housing loans) <sup>a</sup>		
Nonfinancial corporates	Growth in corporate credit (total and by industry) <sup>e</sup> Share of Foreign Exchange (FX) loans Lending standards <sup>c</sup> Debt service ratio <sup>f</sup>		
Financial sector	Bank capital ratios Bank leverage ratio		
Real estate	Growth in real estate lending <sup>a</sup> House price growth Price to income <sup>b</sup> Commercial property price growth		
<b>Excessive maturity mismatch and market illiquidity</b>	Loan to deposit ratio Share of non-deposit funding Share of FX funding	Minimum liquid assets ratio Stable funding requirement Reserve requirements Constraints on FX funding	Liquidity coverage ratio Net stable funding ratio

**Table 2. Intermediate Objectives, Potential Macroprudential Indicators, and CBM Policy Tools (Continued)**

<b>Direct and indirect exposure concentration</b>	Exposures of banking sector to different sectors Assets of G5 banks as percent of total banking sector assets	Large exposure limits (Sectoral) limits on credit growth	Systemic risk buffer
<b>Systemically important financial institutions</b>	Bank assets as percent of total banking sector assets Bank assets as percent of GDP	Intensified supervision Limits on interbank exposures Capital surcharges	Other systemically important institution buffer Systemic risk buffer

a. Data is available in the credit registry. For some indicators, loan or borrower characteristics may have to be added to the credit registry reporting template (e.g., borrower income).

b. Income data is available from Monstat.

c. Data is available in the credit registry and the (forthcoming) bank lending survey.

d. Data is available in the credit registry. Borrower income could be added as an extra attribute to the credit registry reporting template, alternatively income data from Monstat can be used.

e. This should include foreign lending and could be based on the information that the CBM uses to compile the BoP statistics.

f. Debt servicing costs can be obtained from the credit registry. Information on corporate profits could be obtained from financial statements.

credit registry as an important asset of the CBM and a highly valuable source of information. Although information from the credit registry is used to some extent in banking supervision, it should play a much more central role in systemic risk monitoring and analysis. Key macroprudential indicators could already be constructed based on the registry: it allows for the calculation of national and sectoral credit aggregates, as well as close monitoring of lending standards.

**46. The monitoring of credit developments in the nonfinancial sectors could be further enhanced by using more detailed information on capital flows.** Capital inflows can have a profound impact on corporate leverage and asset price appreciation, and thereby contribute to systemic risks. In fact, capital inflows played an important role in the credit boom in Montenegro in the 2006–08 period. An assessment of developments in credit and leverage in the nonfinancial sectors should therefore also take into account cross-border lending and other capital inflows that may impact asset prices, such as investments in real estate. Although the FSR contains some aggregate information on the amount and composition of foreign direct investments (FDI) and portfolio investments, this information does not seem to be part of an integral assessment of credit developments. For example, a sectoral decomposition of FDI and information on the amount of non-Euro denominated lending would be useful in assessing systemic risk. As the CBM compiles the official balance of payments (BoP) statistics, it should be able to make this information available for the purpose of systemic risk monitoring.

**47. Developments in the leverage and debt servicing capacity of the nonfinancial sectors can be monitored in a meaningful way even without flow of funds statistics.** Ideally, one would use flow of funds statistics to track changes in nonfinancial sector leverage and debt servicing capacity. In the absence of such statistics, using more fragmented information on the income and assets of households and nonfinancial corporates may still be worthwhile. For example, to assess the risk that household are overstretching themselves, one could compare developments in household borrowing and debt servicing costs to developments in household income and wages. This can be done based on information from the credit registry and income data collected by Monstat. For nonfinancial corporates, the credit registry could be used to identify strong increases in debt servicing costs. Additionally, corporate financial statements could be used to collect information about corporate sector leverage and to construct debt service ratios.

**48. Data monitoring and analysis should be combined with regular discussions with bank supervisors and the financial sector.** Financial stability in Montenegro depends to a large extent on the resilience and lending standards of the banking sector. By extension, macroprudential surveillance requires a good understanding of developments in the banking sector. Regular discussions between macroprudential experts and bank supervisors can strengthen the coordination of micro- and macroprudential policy within the CBM, facilitate the flow of information and bring together relevant expertise, exploiting complementarities between top-down and bottom-up risk analyses. In addition, regular exchanges of views with

the financial sector can provide (qualitative) information about developments in the banking sector that may help interpret the information obtained from macroprudential indicators.

**49. Scenario analysis and stress tests are key analytical tools for assessing the potential impact of identified vulnerabilities.** Having identified potential vulnerabilities based on macroprudential indicators, the next step would be to use scenario analysis and stress testing to assess the impact of materialization of these risks on financial sector solvency and liquidity positions. As such, these analytical tools are instrumental in making the systemic risk analysis more forward looking. The CBM already has some experience in stress testing, which currently is a joint responsibility of the Departments for Financial Stability, Research and Statistics, and for Banking Supervision. However, there is scope to significantly enhance this competence, in particular by drawing on the data available in the credit registry. Moreover, the identified vulnerabilities should be reflected in the scenario design.

**50. Closing data gaps is a priority for the medium term, and requires strong coordination with other relevant authorities.** As mentioned before, data gaps are large. The quality of systemic risk monitoring would benefit greatly from access to reliable and comprehensive price indices for real estate, detailed information on capital flows and flow of funds statistics. However, closing these data gaps will take time and require substantial resources from the CBM as well as Monstat. Given the scarcity of resources, initiatives to close the data gaps that are most relevant for macroprudential policy will need to be coordinated with ongoing projects to improve national accounts and other statistics. An interagency work plan—Involving the CBM, Monstat and possibly other relevant administrative bodies—could help set priorities and foster efficient cooperation.

## B. Prudential Policy Tools

**51. As part of its financial stability mandate, the CBM can in principle use all its powers to address systemic risks.** The primary objective of the CBM is to foster and maintain the stability of the financial system. In principle, this enables the CBM to use both supervisory tools, such as capital surcharges and concentration limits, and monetary policy tools (reserve requirements, in the case of Montenegro), for macroprudential purposes. In fact, the CBM adopted measures such as reserve requirements, limits on credit growth and higher risk weights during the credit boom in 2006–07, albeit at a late stage in the cycle.

**52. As part of its macroprudential policy framework, the CBM should consider how it will use its powers to maintain sound lending standards.** As noted earlier, monitoring lending standards is an important element of macroprudential surveillance. If a deterioration in lending standards, possibly driven by the high degree of competition in the banking sector, were to become a real concern, this would require the CBM to step in. For example, it may consider issuing guidelines or setting regulatory limits on LTV and DSTI ratios for housing loans, or on the amounts and maturities of cash loans. Spelling out how the CBM intends to

use its powers to address a deterioration in lending standards is a key ingredient of the macroprudential policy framework.

**53. The implementation of European regulation is expected to further strengthen the macroprudential toolkit of the CBM.** Although the relevant laws have yet to be approved, it is proposed that the CBM will be the national designated authority in terms of the CRD IV. As such, the CBM will have the power to use the prudential tools that are part of the CRR/CRD IV. Among other things, this gives the CBM the power to set the countercyclical capital buffer (CCyB) and the capital buffers for systemic banks, which have an explicit macroprudential objective.

**54. As a result, the CBM will have adequate powers to address systemic risks—both structural and cyclical.** The toolkit of macroprudential authorities should enable them to effectively respond to identified systemic risks, either by increasing the resilience of the financial system to an adverse shock or by directly addressing the source of the risk. In line with the ESRB framework, the powers of the CBM enable it to achieve the intermediate objectives mentioned above (see Table 2). As noted earlier, the effective use of this toolkit requires an explicit policy framework that describes how systemic risk assessments are related to policy decisions.

## Appendix I. Institutional Models for Macroprudential Policymaking<sup>4</sup>

Institutional arrangements adopted by a country are shaped by country-specific circumstances, such as political and legal traditions, as well as prior choices on the regulatory architecture. While there can therefore be no “one size fits all” approach, in practice there has been an increasing prevalence of models that assign the main macroprudential mandate to a well-identified authority, committee, or interagency body, generally with an important role for the central bank. An illustrative, non-exhaustive typology of models is presented below (Table).<sup>5</sup> While each of these models has pros and cons, any one model can be buttressed with additional safeguards and mechanisms ([IMF 2011b](#)).

- **Model 1:** The main macroprudential mandate is assigned to the central bank, with its Board or Governor making macroprudential decisions (as in the Czech Republic, Ireland, New Zealand, and Singapore). This model is the prevalent choice where the central bank already concentrates the relevant regulatory and supervisory powers. Where regulatory and supervisory authorities are established outside the central bank, the assignment of the mandate to the central bank can be complemented by coordination mechanisms, such as a committee chaired by the central bank (as in Estonia and Portugal), information sharing agreements, or explicit powers assigned to the central bank to make recommendations to other bodies (as in Norway and Switzerland).
- **Model 2:** The main macroprudential mandate is assigned to a dedicated committee within the central bank structure (as in Malaysia and the United Kingdom). This setup creates dedicated objectives and decision-making structures for monetary and macroprudential policy where both policy functions are under the roof of the central bank, and can help counter the potential risks of dual mandates for the central bank (see further [IMF 2013a](#)).<sup>6</sup> It also allows for separate regulatory and supervisory authorities and external experts to participate in the decision-making committee. This can foster an open discussion of trade-offs that brings to bear a range of perspectives and helps discipline the powers assigned to the central bank.
- **Model 3:** The main macroprudential mandate is assigned to an interagency committee outside the central bank in order to coordinate policy action and facilitate information sharing and discussion of system-wide risk, with the central bank

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<sup>4</sup> IMF-FSB-BIS (2016), “Elements of Effective Macroprudential Policies: Lesson from International Experience,” Appendix 1.

<sup>5</sup> While not included here as separate models, some other jurisdictions have opted for a setup under which the central bank plays a more limited role (e.g. Sweden), the mandate is distributed across several authorities (e.g., Canada), or the prudential authority has the main macroprudential responsibility (e.g., Australia, Japan).

<sup>6</sup> The potential for policy confusion does not arise in Montenegro which is “euroized” and hence has effectively outsourced its monetary policy to the ECB.

participating on the committee (as in France, Germany, Mexico, and the United States). This model can accommodate a stronger role for the MoF. Participation of the MoF can be useful to create political legitimacy and enable decision makers to consider policy choices in other fields, e.g., when cooperation of the fiscal authority is needed to mitigate systemic risk.

**Appendix Table 1. Illustrative Macroprudential Policy Institutional Framework Models**

(Selected Country Examples)

	<b>Central Bank Model</b>		<b>Separate Committee Model</b>
	<b>Model 1 (Board or Governor)<sup>1</sup></b>	<b>Model 2 (Internal Committee)</b>	<b>Model 3 (Committee outside the central bank)<sup>3</sup></b>
Countries	Argentina, Belgium, Brazil*, Cyprus, Czech Republic, Estonia*, Hong Kong (SAR)*, Hungary, Indonesia, Ireland, Israel, Italy*, Lebanon, Lithuania, Netherlands*, New Zealand, Norway <sup>2</sup> , Portugal*, Russia, Singapore, Slovakia and Switzerland <sup>2</sup> .	Algeria, Malaysia*, Morocco, Saudi Arabia, South Africa, Thailand, and the United Kingdom.	Austria (M), Chile (M), Denmark (C), France (M), Germany (M), Iceland (M), India (M), Korea (M), Malta (C), Mexico (M), Poland (C), Romania (C), Turkey (M), and the United States (M).

<sup>1</sup> Jurisdictions with an “\*\*” have an additional council including other supervisors (e.g., insurance supervisory authorities and financial market authorities) that plays a coordinating role.

<sup>2</sup> In Norway and Switzerland, the central bank is mandated to issue recommendations on the CCyB, with ultimate decisions on the buffer rate made by the MoF and the Swiss Federal Council, respectively.

<sup>3</sup> “(C)” or “(M)” indicates whether the council is chaired by the central bank or by a government minister (usually the Minister of Finance), respectively.