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Reducing the Potential for Future Financial Crises: A Framework for Macro-Prudential Policy in Canada

The recent financial crisis underlined the importance of addressing systemic risks, which arose across institutions, markets and even countries. To reduce the potential for future crises, Canada should join other countries in putting in place formal arrangements to deal with such risks.

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The Study In Brief

The global financial crisis vividly demonstrated the importance of addressing risks to the financial system as a whole, with a view to protecting the real economy from severe disruptions in the provision of financial services. As a consequence, G20 Leaders, in April 2009 at the London Summit, committed to putting in place so-called macro-prudential policies that are designed to deal with systemic risks and reduce the occurrence of financial crises in the future. Such policies include improvements to the effectiveness of the infrastructure of the financial sector, capital and liquidity policies aimed at making financial institutions more stable and resilient, and policies aimed at curbing too rapid expansions of credit to individuals and businesses.

When putting in place these policies, a sound policy framework is needed that provides for expert analysis and prompt action within a governance structure that lays out responsibilities and accountabilities. Such a framework would minimize the likelihood of making poor assessments and choosing the wrong policy tool, as well as recognize that macro-prudential polices are geared to longer-term outcomes but have shorter-term costs and other implications that can be unpopular.

While Canada's system of regulating and supervising financial institutions has been held up as a model of good performance, changes can and should be made. The Bank of Canada already monitors potential systemic risks, and comments on them in its semi-annual Financial System Review. As well, the federal government sometimes uses macro-prudential tools to respond to potential build-ups of systemic risk in the expansion of residential mortgage credit in Canada. Hence, a process of monitoring and responding to potential systemic risk with macro-prudential policy tools is already in place, but the formal assignment of responsibility for macro-prudential policy and a framework in which to carry out that responsibility is still lacking.

In this *Commentary*, we examine different potential arrangements for macro-prudential policy in Canada. Our conclusion is that a formal committee that takes responsibility for macro-prudential policy should be established. The committee should be made up of the governor of the Bank of Canada, the deputy minister of finance, the Superintendent of Financial Institutions, someone representing the arrangements that should be set up to monitor and respond to systemic risk in securities markets, and perhaps the president of the CDIC. In our view, the governor of the Bank of Canada would be the most appropriate chair of the committee.

Other major countries have already put in place formal macro-prudential arrangements. Canada needs to act soon.

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The global financial crisis vividly exposed the multifaceted way in which financial and economic shocks can be propagated within and across countries. Moreover, the financial linkages and interdependencies that the crisis revealed have brought to light new complexities in our understanding of the transmission of shocks and the scale of those shocks.

The G20 Leaders' Summit in Washington, which took place in November 2008, shortly after the financial market meltdown, issued an Action Plan to deal with the fallout from the crisis. Among the many concerns addressed in the Plan was systemic risk in financial systems: "Authorities should monitor substantial changes in asset prices and their implications for the macro-economy and the financial system" (G20 2008, 3). Subsequent summits have elaborated on the concern and the needed response,[1] and each has included further commitments to macro-prudential regulation to deal with the potential build-up of systemic risk.

Why was there this degree of concern by the G20 leaders about systemic risk?

As assessments were taking place of the sources of the financial crisis, it became clear that, while many individual financial institutions had taken excessive and imprudent risks, these actions did not account fully for the depth and global spread of the crisis. Rather, it was the extent to which financial institutions and markets across countries had exposures to similar risks leading up to the crisis, and responded in a similar manner to the crisis, that contributed to system-wide problems that exacerbated the severity of the crisis. Macro-prudential regulation and supervision focuses on risks to the financial system as a whole, with a view to protecting the real economy from severe disruptions in the provision of financial services. This is in contrast to micro-prudential regulation and supervision, which focuses on strengthening individual financial institutions with a view to protecting their creditors.

Considerable effort has been put into defining what constitutes macro-prudential policy and designing tools to address systemic risks, but this work is far from complete. One of the most challenging issues is the governance arrangements for macro-prudential policy – the focus of this *Commentary*, in which we consider an effective macro-prudential policy framework for the Canadian context and the governance arrangements that would be necessary to support such a framework.

We would like to thank John Crow, Fred Gorbet, Doug Hyndman, Dave Longworth, Angelo Melino, Chris Ragan and Walter Shea, as well as the participants in a C.D. Howe Policy Seminar, for their helpful comments. Needless to say, they did not all agree with everything we propose in this *Commentary*.

1 The Action Plan issued at the London Summit in April 2009, for example, said "[w]e will amend our regulatory systems to ensure that authorities are able to identify and take account of macro-prudential risks across the financial system to limit the build up of systemic risk. We call on the [Financial Stability Board] to work with the [Bank for International Settlements] and international standard setters to help develop macro-prudential tools and provide a report by autumn 2009" (G20 2009a, 3).

Our conclusion is twofold. First, Canada needs a formal macro-prudential policy framework. Second, a committee of heads of existing agencies should be set up to act as a single body with a clear mandate and authority to carry out macro-prudential regulation and supervision. The main driver that led us to this conclusion is the need to have strong incentives to provide for expert analysis and prompt action within a sound governance framework that lays out responsibilities and accountabilities.

What Is Macro-Prudential Policy?

There is now a burgeoning literature on systemic financial risks and potential macro-prudential policy responses (Borio, 2010, and Longworth, 2011a). But there is not as yet complete agreement on how financial stability should be defined, what constitutes systemic risk, and what sort of framework for macro-prudential policy should be put in place.

A useful definition of financial stability is "the ability of the financial system to withstand stresses and strains and continue to provide financial services."[2] But we should not expect, or indeed want, to eliminate all fluctuations in the financial system: they are part of the process of financial and economic adjustment to shocks. Just as the term "price stability" is used to indicate the broad objective of monetary policy, we would not expect the Bank of Canada to try to eliminate all fluctuations in the price level in Canada.

"Systemic risks" are those risks that cumulate across institutions, markets, and even countries to levels that could have serious effects on the real economy. Financial sector risks may cumulate to become systemic for a couple of reasons. First, global interconnectedness among financial institutions and markets generally means that problems that threaten the viability of major individual institutions can contribute to severe contagion across the financial sector. Similarly, the exposure of financial institutions to common shocks in today's globally integrated markets can also cause risks to cumulate to systemic levels.

Second, financial institutions and markets have an inherent tendency to procyclical behaviour. During economic upswings, when asset prices are rising, capital and margin requirements become less onerous, further encouraging rapid credit expansion and contributing to unsustainable booms. When economic conditions become more pessimistic and asset prices come down, the whole process is reversed, exacerbating the downturn. The interaction of capital standards with accounting standards as well as financial market practices with respect to so-called haircuts,[3] margins, and loan-to-value ratios on mortgages all contribute to this procyclical behaviour. The stronger these procyclical tendencies are at a given time, the more likely they will lead to systemic levels of risk.

Broadly then, one can distinguish two types of systemic risks. "Resiliency risks" are those that reflect a concentration of risk that can arise at a point in time because the interconnectedness and similar exposures of financial institutions and markets reduce the resiliency of the financial system to shocks and stresses. "Procyclical risks," in contrast, are those that cumulate over time and reflect the tendency of the financial system to procyclical behaviour that exacerbates economic booms and busts.[4]

2 This definition is similar to that suggested by, for example, the Bank of England (2009, 9) and Galate and Moessner (2011, 6).

3 In the financial industry, a "haircut" is a percentage discount applied to the market price of a financial asset in calculating its value as collateral for a loan. The size of the haircut reflects the potential risk of a decline in the market price of that asset. Also see Longworth (2010).

4 See Clark and Large (2011).

Macro-prudential policies are designed to deal with both types of systemic risk. They include policies aimed at increasing the resilience of the financial system to both internal and external shocks and contagion, typically by carefully monitoring and making improvements to the effectiveness of the infrastructure of the financial sector. They also include capital and liquidity policies aimed at risks to resiliency associated with the highly interconnected nature of financial institutions. Policies to deal with the second type of systemic risk, procylical behaviour, include those that involve responses to rapid expansions of credit to prevent them from leading to systemic problems.

Why Macro-Prudential Policy Is Important

In financial markets over the past four to five years, we have witnessed an increasingly complex set of interrelationships involving credit, market, and funding risks. This has been the case both domestically and internationally. These interrelationships have had significant consequences for economies worldwide, including, of course, Canada's. The latest manifestation of these interdependencies has centered on the sovereign debt problems in the euro zone and the United States. The integrated nature of financial markets means that the transmission of shocks and contagion has become much faster and more powerful, increasing the risk of financial volatility and macroeconomic instability. No country is immune.

Canada has coped better than most other countries in response to these pressures: its system of regulating and supervising financial institutions has been held up as a model of good performance. But this focus at the institutional, or micro-prudential, level is not enough. We saw vividly how systemic risks can arise from the collective actions of institutions and market participants (whether regulated or not) that, at the individual level, might appear to mitigate risk, but that, collectively—because of interconnectedness and common exposure—contribute to the instability of the system. The off-loading of assets in illiquid markets at the peak of the financial crisis is an example of the problems with which Canada had to contend.

Future crises, however, undoubtedly will have different antecedents than the last one, and we need to be sure that Canada's financial system will be equal to the task of dealing with them as they arise. Indeed, the logic of global markets together with the Financial Stability Board's (FSB)[5] coordination of financial regulation internationally would require that all major countries put in place arrangements for macro-prudential regulation,[6] allowing for regular information exchange and cooperation among the relevant authorities to deal with cross-border systemic risks.[7] The Institute of International Finance, an association of major international banks, recently underlined the importance of the FSB in providing facilities to coordinate the activities of these macro-prudential authorities (2011, 18).

5 The FSB was formed by the G20 Leaders at their April 2009 Summit in London to deal with issues of international regulatory coordination.

6 G20 (2009b, 3). In the United Kingdom, the government has created a Financial Policy Committee in the Bank of England, chaired by the bank governor. In the United States, a new Financial Stability Oversight Council is chaired by the secretary of the treasury. In Europe, the European Systemic Risk Board has been established, chaired by the president of the European Central Bank.

7 As a joint paper by the BIS, FSB and IMF notes (2011, 8), "[f]inally, it is vital that national authorities work together closely and effectively to assess the potential for cross-border spillovers and contagion of shadow banking risks, including by regularly exchanging information and assessments."

Like most other major central banks, the Bank of Canada already monitors potential systemic risks, and comments on them in its semi-annual Financial System Review. As well, the federal government on three occasions so far has used macro-prudential tools to respond to a potential build-up of systemic risk in the expansion of residential mortgage credit in Canada.[8] In other words, in Canada, the process of monitoring and responding to potential systemic risk with macro-prudential policy tools is already established, but what is lacking is the formal assignment of responsibility for macro-prudential policy and a framework in which to carry out that responsibility.

The Importance of Policy Frameworks

Significantly, references to macro-prudential policy in recent G20 communiqués always use the term "macro-prudential policy frameworks."[9] There is no doubt that, when setting out to engage in policy intervention in a new area with what, in some cases, are untested policy instruments, a sound policy framework is needed to minimize the likelihood of making poor assessments of the problem and choosing inappropriate policy instruments and settings. A clear policy framework is particularly important where decisions must be geared to longer-term outcomes but have shorter-term costs and other implications that can be unpopular.

What constitutes a good framework for public policy in implementing macro-prudential policy? We use four criteria:[10]

- The policy should have clear and achievable objectives.
- It should have effective tools capable of meeting the policy goals.
- The agency responsible for policy implementation should have the authority to take the measures needed to achieve the objectives; this is primarily legal authority, but in reality a successful public policy typically has a credible implementing agency with broad public acceptance of its role.
- There should be a well-defined process of accountability for the responsible agency, a particularly important issue if the responsible agency – such as an autonomous central bank – has a degree of independence from government and thus is separated from the accountability that occurs directly through the political process.

In the rest of this *Commentary*, we examine potential arrangements for macro-prudential policy in Canada against these four criteria for a sound policy framework.

1. The Policy Must Have Clear and Achievable Objectives

A classic example of a clear and achievable public policy objective is the inflation target of the Bank of Canada, which commits "to conduct monetary policy aimed at keeping total [consumer price index] inflation at 2 percent, with a control range of 1 to 3 percent around the target," (Bank of Canada 2011a). Indeed, around the world, inflation targeting has been successful partially because the objective has been clear, simple, and has been achieved.

As for macro-prudential policy, the broad objective should be to contribute to financial stability in Canada by monitoring system-wide financial developments and responding to any

8 Since 2008, Ottawa has introduced a series of changes to the rules for government-backed insured mortgages, reducing maximum amortization periods and loan-to-value ratios and withdrawing government-backed insurance on lines of credit secured by houses. See Bank of Canada (2011c, 21) for a summary of these changes.

9 For example, the 2011 Cannes Summit declared: "We are developing macro-prudential policy frameworks and tools to limit the build-up of risks in the financial sector" (G20 2011, 7).

10 See Laidler (1999, 1–2). Our criteria are somewhat more generic than those Laidler uses in describing a coherent monetary policy order.

potential systemic risks. The problem, however, is that this broad goal cannot be translated readily into specific objectives where desired outcomes can be identified and success measured. Thus, at this early stage of the development of macro-prudential policy, Canada likely will have to live with objectives that are not as clear or as focused on measurable outcomes as would be consistent with a strong policy framework. What we suggest be done instead is to identify key activities that should be part of a sound macro-prudential policy. Using processes and inputs as a substitute for traditional objectives is by no means ideal, but it would provide a basis for policy that is both workable and understandable to the public.

The distinction between resiliency risks and procyclical systemic risks that we have identified is significant: both the measurement of these two risks and the policy response to them are quite different. Accordingly, for both types of risk, we suggest two key activities as objectives for macro-prudential policy.[11]

For resiliency risks,

- monitor the resilience of the infrastructure of the Canadian financial system to systemic risk and improve where needed the adequacy of that infrastructure; and
- monitor both the ability of the Canadian financial system to withstand common shocks and the interconnectedness of financial institutions and shadow banking entities that could lead to systemic risk. Do so by regular assessments of the effectiveness of regulatory standards in mitigating potential system-wide financial institution risks, and by making improvements as necessary.

For procyclical risks,

- identify and modify, where possible, any arrangements in Canadian institutions and markets, such as regulatory and accounting requirements and market customs, that encourage procyclical behaviour and contribute to systemic risk; and
- monitor cycles in credit and liquidity in Canada and respond with countercyclical macro-prudential tools to mitigate them where there is a potential build-up of systemic risk.

2. Policy Tools Must Be Effective

With respect to resiliency risk, to oversee and improve financial system infrastructure, tools would include analysis of potential shocks and regular stress testing of the risk-containment features of payments, clearing, and settlement systems[12] and of exchanges and counterparty arrangements in securities, derivatives,[13] and related markets. The purpose would be to assess, and reinforce as necessary, the ability of the infrastructure to withstand such shocks.[14] Similarly, to oversee the effectiveness of financial institution prudential standards, such as capital, liquidity, and core funding requirements, the main tools would be again the analysis of system-wide stresses and tests to determine if any of these standards need an additional macro-prudential buffer in the face of interconnections and common exposures.

To address procyclical behaviour, measures would include through-the-cycle loan loss provisions and collateral margins and "haircuts" (see BIS 2010 and 2010a) and adjustments to reduce procyclical elements in capital and accounting requirements

11 These activities relate to both financial intermediaries and those conducted primarily via markets. Such market-based financing, often called the shadow-banking system, is subject to many of the same systemic risks and vulnerabilities as traditional banking intermediation.

12 In Canada, these systems are operated by the Canadian Payments Association and the Canadian Depository for Securities.

13 The Canadian Derivatives Clearing Corporation provides central counterparty services for derivative contracts.

14 For a discussion of recent activities in Canada to reform over-the-counter derivatives markets, see Bank of Canada (2010, 35).

where possible. Measures to respond to procyclical pressures at a given time, where the growth of credit constitutes a potential systemic risk, include:

- the application of countercyclical capital buffers;
- restrictions on access to mortgage credit – in particular, through changes to loan-to-value and debt-service-to-income ratios;
- temporary increases in core funding ratio requirements; and
- countercyclical adjustments to minimum haircut and margin requirements.

With respect to the effectiveness of these tools, it is apparent that some of them are untried. This is particularly true of the tools to address pro-cyclical behaviour. Apart from recent restrictions on access to mortgage credit, these tools have not been used in Canada before. At this stage, for example, we cannot be sure how rapidly and to what extent adjustments could be made to countercyclical capital buffers or core funding ratios in order to offset a serious upswing in credit growth. Accordingly, we would add a third set of policy tools: communication and moral suasion.

The more that financial institutions and markets are aware of macro-prudential risks because of good communications – in the form of, for example, the Bank of Canada's *Financial System Review* – and are thus cognizant of the probability that macro-prudential tools will be used, the more likely the response to these tools will be efficient and effective.

There is general consensus that the macro-prudential tools we have just described represent the first line of defence against the build-up of systemic risks. The global financial crisis demonstrated, however, that economic stability and financial stability are linked. This has raised the question of the potential role of monetary policy in addressing financial imbalances and systemic risks. We agree with the view that sees this potential role as complementary, but only in those occasional situations where the build-up of systemic risk is unusually broad based across the economy, since monetary policy is a blunt instrument whose effects are economy-wide and its paramount goal is price stability.[15]

3. The Agency Responsible for Macro-Prudential Policy Should Have the Authority to Implement It

The agency given responsibility for macro-prudential policy must have the legal authority – provided through legislation – to use the necessary tools and take the necessary actions to achieve macro-prudential goals. Such explicit responsibility and authority to respond to systemic risk was typically lacking in most countries during the 2008/09 financial crisis.

In addition to legal authority, we recommend attention be paid to the agency's credibility. This is important because of the long-term nature of macro-prudential risks and goals and the short-term effect of some of the tools available to respond to those goals. Only a credible authority is likely to be able to persuade the public that the long-term benefits justify the short-term costs. Moreover, if as we suggest above, communication and moral suasion are important macro-prudential tools, they will be effective only in the hands of an agency that is credible. Public institutions typically earn credibility over time by achieving their policy goals effectively and by being accountable in a transparent fashion. Thus, as we argue below, it is important that governance arrangements for macro-prudential policy in Canada provide incentives and support for these elements that contribute to credibility (see also Longworth 2011b).

15 See Boivin, Lane, and Meh (2010); and Bank of Canada (2011b). For another recent discussion of the interaction of monetary and macro-prudential policies, see Ragan (2012).

4. The Macro-Prudential Policy Agency Must Be Accountable

The accountability arrangements for central banks, such as the Bank of Canada, that operate under an inflation target framework provide an example of the benefits of good accountability and of good governance more generally. With a clear and simple target, the Bank can be held readily to account as to whether or not it has achieved its objective. But sometimes there are good reasons why the target has not been met, and accountability arrangements are needed that provide both the opportunity and the necessity for the central bank to explain the problems and what it will do about them. Accountability for monetary policy involves regular communication by the Bank in monetary policy reports, appearances before Parliament, and meetings with the press and the public. These arrangements provide a good basic model for macro-prudential policy accountability.

In Canada, monetary policy accountability also gives the minister of finance a legislated directive power to override monetary policy decisions of the Bank of Canada in the case of serious unresolved disagreements. We discuss later whether a similarly structured override would be appropriate for macro-prudential policy. More generally, the minister of finance has broad responsibility and ultimate accountability for the oversight of the financial system in Canada that would have to be recognized in accountability arrangements for macro-prudential policy.

Some issues specific to macro-prudential policy, however, complicate accountability. We outlined above the difficulty of defining clear objectives with easily monitored results. Using key activities, as we have suggested, would not provide completely satisfactory accountability. There are also issues related to ensuring there are appropriate incentives to act promptly, since macro-prudential objectives are long term and the impact of the tools is relatively short term. Moreover, taking macro-prudential actions early might avoid the need for more dramatic and disruptive actions later. And since it can be difficult to gain public support for action when the problem does not yet seem all that serious or if it is likely to become so only well into the future, incentives to act would be an important part of the institutional arrangements for macro-prudential policy.

Possible Alternative Governance Arrangements

Governance arrangements for macro-prudential policy in Canada need to start with a legislated mandate to spell out the goals of the policy, the tools to be devoted to achieving those goals, and the powers to be vested in the agency given the responsibility for the new policy. From our point of view, this part of the legislation is reasonably straightforward along the lines we have described above. What may be more contentious are the institutional choices with respect to the agency or agencies that should be given responsibility for the policy and its implementation.

A number of issues and concerns with respect to macro-prudential policy need to be taken into account in assessing alternative governance arrangements. These include incentives for prompt action; independent control over macro-prudential tools and the expertise to use them; appropriate accountability through transparency; and access to the existing specialized knowledge and skills of the different regulatory authorities in Canada. We believe that particular weight needs to be given to two of these issues. One is the fact, as noted earlier, that the benefits of macro-prudential policies typically become apparent only in the long term, while the costs are often visible and felt immediately. This provides a strong incentive for inaction, which might be further exacerbated by financial sector lobbying and political pressures. The other crucial issue is to ensure that macro-prudential decisions are taken on the basis of the best analysis and carried out in the most effective fashion.

We focus our assessments, therefore, on which institutional arrangements provide the strongest incentive to act promptly and which make the best use of the accumulated knowledge and expertise on macro-prudential questions in Canada. This latter point is especially important at the initial stage of macro-prudential policy.

We assess four alternatives:[16]

1. The minister of finance is given responsibility for macro-prudential policy, with the current regulatory and supervisory agencies acting as an advisory committee.
2. The Bank of Canada, on its own, is given responsibility for macro-prudential policy, with independent powers to take action.
3. The existing regulatory and supervisory agencies are individually given macro-prudential responsibility in the areas that are already part of their mandate. A committee made up of these agencies is established to exchange information and coordinate actions.
4. A committee made up of the current regulatory and supervisory agencies is given the responsibility and independence to function as a single body to implement macro-prudential policy.

Alternative 1: The Minister of Finance Is Given Responsibility

One alternative is to make macro-prudential policy another responsibility of the minister of finance and his department. However, to ensure that all the expert information and advice is brought to bear on macro-prudential issues, we suggest that this alternative should include a committee made up of the Bank of Canada, the Office of the Superintendent of Financial Institutions (OSFI), and perhaps the Canada Deposit Insurance Corporation (CDIC) to advise the minister and his department. Under the current institutional structure, the Senior Advisory Committee (SAC), which is chaired by the deputy minister of finance and includes the Bank of Canada, OSFI, CDIC, and the Financial Consumer Agency of Canada, comes closest to this proposed grouping.

In addition, under this option, as well as the other options we consider, some arrangement would be required to ensure there is expertise to monitor and devise macro-prudential responses to potential systemic risks arising in securities markets. Securities regulation is an area of current uncertainty in Canada, which makes it difficult for us to be more specific about how macro-prudential issues in this area should be handled.[17] The critical point, however, is that the absence of attention to system-wide risks in securities markets (and their interconnections to other parts of the financial system) would represent a serious shortcoming in any framework for macro-prudential policy in Canada.

An advantage of governance alternative 1 is that the normal political process would provide for full accountability for macro-prudential policy to Parliament and the public. These political processes, however, are also one of the shortcomings of this alternative, as they are likely to provide disincentives to act promptly when systemic risks may be building up. We know from experience

16 It is important to remember in assessing institutional arrangements for macro-prudential policy that we are by definition talking about preventive actions to deal with potential systemic risks, not about managing crises once systemic risk is out of hand. Crisis management, where taxpayers' funds may be required, would be the responsibility of the minister of finance.

17 The Supreme Court recently ruled that draft legislation prepared by the federal government to create a national securities regulator was not valid under the Constitution. However, the Court did comment that the issue of managing systemic risk could justify a limited federal role in securities regulation. At this time, the federal government has not decided what measures it may take in response to the Supreme Court ruling. See Supreme Court of Canada, Reference Re *Securities Act* 2011 SCC 66, para. 128.

that policy actions that have immediate costs and long-term benefits do not work as successfully in the normal political process. The difficulty lies in getting the political process to be forward looking and to submit to criticism for actions taken now that have benefits well into the future. This is one reason monetary policy in most countries has been delegated to an autonomous central bank. Another shortcoming is that the Department of Finance is largely a policy agency with limited capacity for implementation. If responsibility for policy levers, such as the monitoring of macro-prudential risks and the implementation of policy tools, had to be delegated to the Bank of Canada and OSFI to make this alternative work, the process of assigning accountability would be complex and perhaps unsatisfactory.

Alternative 2: The Bank of Canada Is Given Full Responsibility

Some countries, such as the United Kingdom, have chosen to vest responsibility for macro-prudential policy in an autonomous central bank – indeed, in most countries, the central bank is already closely involved in monitoring financial stability and putting out financial stability reports. Of all the alternatives, this would have the strongest incentive for action since it would not be hampered by either political or committee impediments.

Accountability, in principle, is more straightforward for a single organization than for any body that involves a committee. But the lack of a clear and simple objective would remain a problem here as with the other alternatives. Given the autonomy of the central bank, a formal ministerial override in extreme circumstances, similar to that which exists with respect to monetary policy, would also be required for macro-prudential policy. However, in Canada, unlike in the United Kingdom, the central bank is not responsible for financial sector regulation and supervision.[18] Thus, a weakness of this alternative is that it would not take advantage of the existing expertise of the current regulatory agencies. Presumably, the Bank of Canada could hire experts from existing agencies, but staffing would probably be a challenge. As in Alternative 1, it could try to get better access to the expertise in other agencies by having an advisory committee made up of those agencies. But some of the implementation responsibilities of other agencies would likely have to be shifted to the Bank to make this work.[19]

The enlarged responsibilities and accountability for the Bank of Canada in this alternative, however, would present worrisome risks for monetary policy. The credibility the Bank has built up through its success in implementing inflation targeting has been important to the ongoing ability of monetary policy to deal with some challenging times in recent years. As we have noted, macro-prudential policy does not have clear and simple objectives that can be easily monitored, and the policy tools available are in some cases untried

18 Under the *Payment Clearing and Settlement Act*, the Bank of Canada is responsible for the oversight of clearing and settlement systems designated as systemically important. These systems include: the Large Value Transfer System (LVTS), which clears and settles large-value Canadian-dollar payments; CDSX, which clears and settles securities transactions; the Canadian dollar leg of CLS Bank, a global system for settlement of foreign exchange transactions; and most recently, the Canadian Derivatives Clearing Service (CDCS), which provides central counterparty services for derivative contracts. The Bank has no regulatory or supervisory responsibility for individual financial institutions.

19 Another distinction between procyclical and resiliency risk is important here. The Bank of Canada's intrinsic comparative advantage is in addressing procyclical system risks, where timeliness and judgment over the economic cycle are critical, including where monetary policy might play a complementary role. In this alternative, the Bank would require expertise from other agencies, especially OSFI, in dealing with resiliency-type systemic risks.

and might not be completely effective. Moreover, the goals of macro-prudential policy are even more long term than those of monetary policy, and are thus subject to the problem of short-term pain for long-term gain. Our concern is that the challenges of macro-prudential policy could undermine the Bank's credibility on monetary policy and public support for its autonomy. As well, to the extent that monetary policy is seen as playing a potential complementary macro-prudential policy role, this governance structure could place too much pressure on the Bank to use monetary policy to address systemic risks in the absence, at least initially, of much experience in the successful use of the macro-prudential tools that should represent the first line of defence. As well, the Bank might lack the authority to use the full range of macro-prudential tools.

Alternative 3: Responsibility Is Allocated among Existing Agencies

A third alternative is to give each agency that now plays a role in the regulation and supervision of the financial sector formal legislative responsibility for macro-prudential issues, including the use of macro-prudential tools, in the area of its existing mandate. These agencies would include OSFI, the Bank of Canada, the Department of Finance (in a policy role, most directly for ensuring that the operations of the Canada Mortgage and Housing Corporation (CMHC) are consistent with macro-prudential policy objectives and responsive to the setting of macro-prudential policy tools),[20] and perhaps CDIC, plus some arrangement to monitor and respond to systemic risk in securities markets, as explained above. The assignment of responsibility to individual agencies in their area of expertise would overcome one of the critical shortcomings of both alternatives 1 and 2 in that it would take advantage of the expertise and experience of these agencies in both the policy and implementation of macro-prudential regulation.

This alternative probably would be the simplest and least disruptive way of implementing macro-prudential policy. Decision-making would be sufficiently removed from the political process to minimize disincentives for prompt macro-prudential action. However, since the Department of Finance would be involved and would report to the minister, the separation from the political process would not be complete.

The implementing legislation should also require a coordinating committee of these agencies to ensure the exchange of information and advice and to provide support and encourage coherence as they take macro-prudential action in the area of their mandate. There would remain, however, the complication of ensuring the willingness of each agency to take advice from its committee colleagues and to act and be held accountable within its own mandate. Current accountability arrangements for each of the regulatory and supervisory agencies would need to be extended to their macro-prudential responsibilities. In principle, the coordinating committee should help to keep the assessments of, and responses to, systemic risk timely, coordinated, and coherent through peer pressure.

In practice, however, the diffusion of responsibility and accountability among a number of agencies would make this alternative complex and difficult to coordinate. One concern is that macro-prudential policy actions in response to the build-up of systemic risks, such as the imposition of countercyclical capital and liquidity buffers and funding restrictions, would be disproportionately the responsibility of a single agency – in this case,

20 The recent government initiative to expand OSFI's supervisory responsibilities to include CMHC relate to the micro-prudential oversight of CMHC operations and not potential macro-prudential requirements that might lead CMHC to adjust its policies.

the banking supervisor, OSFI. At the same time, OSFI would have to rely, to some extent at least, on the assessments of systemic risks by others – the Bank of Canada in particular – but the brunt of any public criticism for such actions would fall on OSFI. Thus, the skewed accountability in this governance alternative is not a desirable public policy arrangement.

Alternative 4: Responsibility Is Given to a Committee of Heads of Existing Agencies

A fourth alternative is to establish a committee in legislation that would be formally responsible for macro-prudential policy and given the necessary powers to take action. Members of the committee would be the heads of the Bank of Canada, OSFI, the Department of Finance, and perhaps CDIC, plus someone representing whatever arrangements are put in place to deal with systemic issues in securities markets.

In this alternative, with its joint responsibility, the incentive to act promptly and decisively would be stronger than in alternatives 1 and 3. As in alternative 3, there would be some separation from the political process to encourage timely action. This alternative should provide the strongest incentive to make full use of all the knowledge and expertise of committee members, given their direct involvement in all decisions and their collective responsibility for them.

The accountability of a committee with formal legal responsibility is, in principle, more straightforward than in alternative 3, although translating that joint accountability into accountability for the individual agencies that make up the committee would not be straightforward. Given the broad responsibility of the minister of finance for the financial system, we would see accountability flowing in the first instance from the committee to the minister. The legislation would require the committee to report to the minister on a specified basis.[21]

We also believe that, in the implementing legislation, accountability arrangements should include an ultimate ministerial override power. As in other areas of financial legislation, we would see this power applying only in extreme circumstances of serious irresolvable disagreement. Such an override should be limited to allowing the minister to require specific action for a specified time with appropriate parliamentary approval. A challenge would be to strike the right balance in the legislation between the need to provide for this override, while not compromising the ability of committee members to exercise independence in carrying out their main responsibilities outside those specific to the committee itself – for example, monetary policy and micro-prudential regulation. The override, therefore, would need to be directed to the committee to act jointly.[22]

We see the committee working in the following way. Legislation would set out its mandate, the menu of macro-prudential tools at its disposal, the powers to use them, membership, and accountability arrangements. The committee

21 Accountability to the minister could be augmented by requiring committee members to appear before Parliament once a year.

22 We do not see that this type of situation should lead to any expectation that the committee or its individual members should resign in response to a ministerial override. This differs from the tradition with respect to the directive power on monetary policy, where the expectation has been that the governor of the Bank of Canada would resign if a directive were issued due to disagreement between the governor and the government as to the objective and direction of monetary policy. However, the significant differences between macro-prudential policy and monetary policy make that tradition inappropriate. For example, macro-prudential policy involves less frequent policy interventions, less market sensitivity, and less impact on economic expectations, in contrast to the continuous nature of monetary policy. As well, in this alternative, the delegation of macro-prudential policy would be to a committee of agencies, rather than to an individual agency with decisions formally assigned in legislation to the agency head.

would be transparent about the tools it might use and under what types of circumstances, and might solicit public commentary on these issues. Undoubtedly, the frequency of use of these tools would vary considerably depending on the nature of the build-up of systemic risk. The operating process we envisage would also involve ongoing public commentary on potential systemic risks, so that a good deal of discussion would take place before any decision were made to use macro-prudential tools.[23]

We recognize that this committee structure would put the deputy minister of finance in an unconventional role, since in government departments the minister is the formal decision-maker and the deputy acts as his or her adviser, while in our committee the deputy minister would be a decision-maker. But our committee arrangement is designed to bring all the available expertise to macro-prudential policy decision-making, and we strongly believe that it would have to include the deputy minister if that person's expert knowledge, experience, and judgment are to be gained.[24] The committee's transparent operating process that we envisage normally should help to avoid tensions between the deputy minister's macro-prudential decision-making responsibilities and his responsibilities as the minister's adviser. Moreover, by encouraging public commentary and discussion, most macro-prudential decisions under this alternative would be relatively predictable and would reflect a broad consensus.

Our Preferred Governance Model

All four alternatives have their strengths and weaknesses. As explained above, we are inclined, however, to give particular weight to the incentives in each alternative that encourage prompt action and that take full advantage of the policy and implementation expertise of the existing regulatory agencies. That leads us to recommend the fourth alternative, the responsible committee, as the preferred governance arrangement for macro-prudential policy.

We believe that placing macro-prudential policy in the hands of the minister of finance would not provide prompt action in response to potential systemic risks. Giving the Bank of Canada full responsibility would address concerns about the need for prompt action, but would risk undermining the credibility of the Bank in its monetary policy mandate. Neither of these two alternatives would take full advantage of the existing expertise and implementation skills of the other regulatory agencies. The third alternative, where each regulatory agency would have individual responsibility for macro-prudential policy in its area, would increase the risk of uncoordinated actions and uncertain accountability. Our choice of a committee that is jointly responsible for macro-prudential policy still has the challenge of committee decision-making; thus, choosing the right chair for the committee is particularly important.

Who should chair the Committee?: Decisions elsewhere on this question are mixed. In the

23 We would expect the committee to operate mostly on the basis of consensus, but the possibility of fundamental disagreements on occasion cannot be ruled out, in which case the nature of the disagreement and the dissenting member should be made public. It would certainly be inappropriate for any one member to have a veto on decisions supported by a majority of members. This process typically should provide a strong incentive to reach agreement.

24 In alternative 3, we suggest that the Department of Finance, through the deputy minister, would have the responsibility for ensuring CMHC operations were consistent with macro-prudential policy. In this alternative, we see the committee being given power in legislation to change loan-to-value ratios on government-insured mortgage loans. In these circumstances, potential systemic risks from CMHC mortgage insurance operations would already be covered.

United Kingdom, the governor of the Bank of England chairs the Financial Policy Committee, but the Bank is responsible for both systemic risk monitoring and banking supervision. In the United States, by contrast, the secretary of the treasury is the chair of the Financial Stability Oversight Committee, although the Federal Reserve is involved in both macro- and micro-prudential supervision. The European Systemic Risk Board, which may be closer to our suggested model than the other two, is chaired by the president of the European Central Bank, even though the ECB is not responsible for banking supervision.

On balance, we feel that the governor of the Bank of Canada would be the most appropriate chair for a macro-prudential policy committee in Canada. That is primarily because of the broad perspective provided by the governor's existing responsibilities for dealing with system-wide issues of monetary policy and the monitoring of financial stability. This arrangement should also provide the most effective way to identify and coordinate those occasional situations when monetary policy could complement the use of macro-prudential tools, as well as when the use of macro-prudential tools could have implications for the setting of monetary policy.

Despite the challenges inherent in this governance arrangement, we feel that the strong incentives it would provide for expert analysis, prompt action, and experienced implementation argue in its favour.

Conclusion

One of the dramatic lessons of the recent financial crisis is the importance of systemic risks in aggravating and spreading crises. In response, the leaders of the G20 countries promptly committed to developing a policy framework for identifying and dealing with such risks, and the Financial Stability Board has been tasked to carry out that commitment.

In Canada, the Bank of Canada has been monitoring and commenting on systemic risks in its *Financial System Review* for some years now, and the minister of finance has made use of macro-prudential tools on three occasions to limit the potential build-up of systemic risk in rapid expansions of residential mortgage credit. But it is necessary to do more if we are to reduce the risk of future crises. What has been lacking is a formal assignment of responsibility for macro-prudential policy and a legislated framework that sets out the policy's objectives, tools, and accountability.

Our conclusion is that the legislation required to implement this framework should establish a committee that takes responsibility for macro-prudential policy. The committee should be made up of the governor of the Bank of Canada, the deputy minister of finance, the Superintendent of Financial Institutions, someone representing the arrangements that should be set up to monitor and respond to systemic risk in securities markets, and perhaps the president of the CDIC. The recent Supreme Court of Canada judgment on a national securities regulator, while ruling against the draft federal legislation, did see a role for the federal government in managing systemic risks. In our view, the governor of the Bank of Canada would be the most appropriate chair of the committee.

The strength of this governance arrangement is that the members of the committee and their agencies would bring the most complete knowledge available in Canada to the task of identifying potential systemic risks and the expertise to use the available tools to counter those risks. Moreover, the joint accountability they would share as a committee should provide the appropriate incentive to act promptly before risks have built up to serious levels that require crisis measures.

Other major countries have already put in place formal macro-prudential arrangements. Canada needs to act soon.

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