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MACROPRUDENTIAL POLICY: A SUMMARY*

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SUMMARY

The 2007 global financial crisis brought sharply into focus the need for macroprudential policy as a means of controlling systemic financial stability. This has become a focal point for policy-makers and numerous central banks, including the Bank of Canada, but it has its drawbacks, particularly here in Canada.

As a counterbalance to microprudential policy, the idea of a macroprudential outlook reaches beyond the notion that as long as every banking institution is healthy, financial stability is assured. Macroprudential policy recognizes that all those financial institutions are linked, and that stability at the individual level may translate to fragility and uncertainty at the macro level.

There are two approaches to macroprudential policy, and both come with downsides. One approach examines the network factor, in which banks are linked through their inter-connected financial transactions. A domino effect can thus be created; when one bank defaults, it causes a chain reaction down the line, creating instability in other banks in the network. The extent of this contagion of instability can be clearly observed through this model; unfortunately, it requires the use of detailed information typically available only to a limited circle of bank supervisors.

The second approach gleans information from bank stock prices in a poorly performing market. This information is easily available and accessed, but

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the downside is the lack of clear understanding on how exactly these shocks travel through the complex links of the global banking system.

Canada's banking system is small and has only six major banks. However, it is important to understand how they are interconnected and how each individual bank can contribute to overall risk. Not only do banks need to be sufficiently capitalized in the normal business cycle, but it may be worthwhile for the sake of overall financial stability to create mechanisms, as regulators in some countries are doing, that require banks to hold more capital in good economic times so that they can use it as a buffer in case of a downturn.

Another important macroprudential tool is to identify how much each bank contributes to systemic risk. This would entail identifying the banks that pose a greater threat to stability and having them hold extra capital. Assigning proper capital requirements is, however, not as straightforward as it may seem as the risk of the banking system changes when capital requirements change. One study has shown that when properly done such a requirement can reduce by one-quarter the probability of a financial crisis.

Implementing macroprudential policy in Canada faces some challenges. With both housing prices and the level of Canadians' personal debt high, sudden corrections to the financial system can create problems. Also, the interconnections between Canadian and foreign banks could result in the former being much more greatly influenced by financial-crisis spillover from the latter, something Canada generally avoided during the 2007 economic meltdown.

There's no consensus as yet on the objectives of macroprudential policy. However, it is a necessary complement to microprudential policy and provides a means of managing systemic risk with the goal of greater global financial stability.

Banks, as institutions whose operations consist of granting loans and receiving deposits from the public, play a crucial role in the allocation of capital and financial intermediation in the economy. Significant failures in the financial sector create a severe scarcity in the credit supply, and raise the cost of intermediation, which consequently causes unpleasant economic fluctuations. The 2007 global financial crisis highlighted some shortcomings of the regulatory framework at the time, specifically its inability to address the stability of the financial system as a whole. Macroprudential policy, as an attempt to address this concern, has become a mandate for policy-makers and central banks, from the Central Bank of Japan and Thailand to the U.S. Federal Reserve and Bank of Canada.

The origin of the term “macroprudential” can be traced back to the late 1970s. One of the major concerns at that time in financial regulatory circles was the rapid growth of loans to developing countries and their potentially negative impact on financial stability. Macroprudential policy is a complement to microprudential policy for safeguarding financial stability. The logic behind a pure microprudential orientation suffers from severe fallacies of composition. One of the main assumptions of the microprudential framework is that financial stability is ensured as long as every institution is sound. However, due to the interconnection of financial institutions, what may look stable at the individual level can be fragile and unstable at the macro level.

Policy-makers and academics have not yet achieved universal consensus on the objectives of macroprudential policy. However, three growing crucial concerns should be addressed through macroprudential policies: financial stability, systemic risk and procyclicality of the financial sector.

Systemic risk as one of the main factors in assessing financial stability is a fairly new concept in the central banks’ and policy-makers’ circles. However, the attempt to define and evaluate systemic risk in the financial system can be traced back to the mid-1990s. Some of the early definitions of systemic risk focus on a substantial disruption of confidence and information in the banking sector and consequently, in the financial sector. The most recent approaches define systemic risk as the risk of a correlated and simultaneous failure of a significant portion of the banking sector. Today, there are two main approaches of measuring systemic risk:

NETWORK-BASED APPROACH:

In this class of models, banks are seen as nodes in a network that are linked by inter-bank obligations such as loans or derivatives. When one bank defaults, it cannot honour the obligations to its counterparties in full and some of the linked banks might default as a consequence. The benefit of this class of models is that the extent of contagion as default spreads through the network can be precisely modelled. On the downside, these models require detailed information on the individual banks’ risks and exposures to each other. Such detailed information is usually only available to bank supervisors.

STOCK-BASED APPROACH:

This approach infers information from stock prices, for example, by examining bank stock returns on days when the whole market performs very poorly. The upside of this approach is the availability of stock price information, and the information and views of all market participants that are priced into the stocks. Its downside is the lack of detailed understanding of how shocks propagate through the system.

The Canadian banking system differs from that of the United States because of its concentration. Almost all assets are concentrated among the big six banks, making them all system-relevant. Nevertheless, in the authors' opinion, some effort should be made to see the Canadian system as a whole and identify the contributions that each of the banks makes to the overall risk.

Macroprudential regulation has to address two dimensions. On the time dimension, regulators have to ensure that banks are adequately capitalized throughout the business cycle. In its 2009 annual report, the Bank for International Settlements defines procyclicality as “the fact that, over time, the dynamics of the financial system and of the real economy reinforce each other, increasing the amplitude of booms and busts and undermining stability in both the financial sector and the real economy.” Banks tend to engage in riskier investments and provide excessive loans in good times, due to under-estimation of risk in the market. By contrast, in bad times they tend to shrink lending, due to over-estimation of risk. In several countries, regulators are experimenting with mechanisms that require banks to hold more capital in boom times that can serve as an extra buffer in a downturn.

In the cross-sectional dimension of macroprudential regulations, capital has to be allocated across the banking system, such that the banks that pose a greater threat to financial stability hold more capital. Identifying system-relevant banks and forcing them to hold more capital than other banks is one mechanism to mitigate systemic risk. One important consideration in this context is that the risk of the system changes once capital gets reallocated in the banking system. When system-relevant banks are forced to hold more capital, systemic risk changes and the risk contributions of individual banks change. New banks might consequently emerge as being system-relevant. In a 2012 study for the large Canadian banks, Gauthier, Lehar and Souissi found that such macroprudential capital requirements can differ substantially from a simpler one-shot identification of system-relevant banks. They also document that macroprudential capital requirements can differ as much as 25 per cent from observed capital levels and have the potential to reduce the probability of a financial crisis by about one-quarter.

We see two challenges for macroprudential stability in Canada. First, housing prices and Canadians' personal debt levels are high. Any sudden corrections might pose a challenge for the financial system. In our opinion, policy-makers should continue to address this time-series aspect of systemic risk. Second, we believe that spillovers from outside of Canada can pose a threat to the banking system. While the Canadian banking system was not severely implicated in the recent financial crisis, stronger linkages may pose a larger threat to Canadian financial stability in the future.



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