The Evolving Financial System and Public Policy: Conference Highlights and Lessons

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The Bank of Canada hosted its 12th Annual Economic Conference in Ottawa on 4 and 5 December 2003. Representatives from various public and private organizations joined Bank of Canada staff to discuss three key issues affecting the financial system: financial contagion, implications of bank diversification, and financial sector regulation. This article presents highlights of the conference and directions for future research.[1]

Financial Contagion

The Bank of Canada works to promote a sound and stable financial system, one in which problems in one part do not trigger instability elsewhere. Financial markets and financial infrastructure arrangements are becoming increasingly interrelated and globalized. It is therefore important to understand the channels through which financial crises spread across institutions, sectors, and countries so that policymakers can understand how to better safeguard systems against contagion.

Three conference papers attempted to gain insight into the nature of contagion. **Santor** studies the extent to which Canadian banks have become globalized and how Canadian foreign-asset exposures have adjusted to crisis events. Using firm-level panel data from 1984 to 2003, the author finds that Canadian banks are very active globally, although the composition of exposures has changed over the past two decades. In particular, Canadian banks now have lower foreign exposures in terms of deposits and loans but higher exposures in terms of foreign securities. The author finds that banks do not adjust their portfolios of foreign securities immediately in the presence of a crisis, and that a banking crisis in one country does not appear to influence the decision of banks to continue doing business with countries that have similar characteristics to the country in crisis.

Gobert et al. study the lending market under decentralized and centralized systems. The authors develop a model of a competitive interfirm lending market in which firms can borrow or lend. They identify a source of inefficiency in this market that may lead to financial fragility. For instance, a liquidity shock can have a persistent component and can lead to firm failures that are inefficient. In this model, the authorities can help to eliminate this inefficient equilibrium by ensuring that there is sufficient liquidity in the system. Conference panellists were of the view that these types of theoretical models represent a good start but are too highly stylized to have direct implications for real-world policy.

Gropp and Vesala take this field of study a step further by using market-based indicators to determine the probability that a European bank faces financial difficulty, given that other European banks are also facing difficulty. They find significant evidence of contagion both domestically and across borders. This contagion appears to be typically generated by particularly concentrated interbank exposures. Their empirical model also indicates that larger banks are the main sources and the main victims of cross-border contagion. The discussant of this paper underscored a caveat to these conclusions that the authors' approach is of the reduced-form

1. A more detailed discussion of this conference will be presented in the autumn 2004 issue of the *Bank of Canada Review*. Conference papers and discussions are available on the Bank of Canada's Web site at: <www.bankofcanada.ca/en/economic_conference 2003/index.htm>. Proceedings of this conference will be published in 2004.

type, which complicates the interpretation of their results. Nonetheless, their study provides a useful starting point for future research on this topic.

Bank Diversification

Central banks rely on the financial system to transmit the effects of monetary policy actions to the real economy. For this reason, it is very important to understand the implications of new business lines and changing strategies for pricing and diversifying risk. Two conference papers contributed to our understanding of the links between the changing behaviour of financial institutions and risk-return trade-offs. These papers suggest that diversification, encouraged to some extent by regulatory changes, has not always had beneficial implications for the risk-return trade-off.

Stiroh studies the implications for risk-adjusted profits of the shift in the activities of U.S. bank holding companies (BHCs) towards a wider range of financial services. This shift was encouraged by many factors, including regulatory changes, such as the Gramm-Leach-Bliley Act of 1999. This act explicitly allowed bank holding companies and their subsidiaries to engage in a host of new activities, such as brokerage, portfolio advice, and underwriting. The authors find evidence of diversification benefits in terms of higher risk-adjusted profits across BHCs, but these benefits are offset by increased exposure to activities that are associated with lower risk-adjusted profits.

In a related paper, **D'Souza and Lai** study how the efficiency of Canadian banks is affected by regional and industrial diversification in portfolios, as well as by diversification in business lines and financing sources. They construct a measure of efficiency using a portfolio-allocation approach. The authors find that bank efficiency is increased by diversification of business lines and financing sources; reduced by regional diversification; and unaffected by industrial diversification. The discussant of the paper found this approach to be an improvement over the existing literature because it explicitly takes into account the risk-return trade-off facing banks and, hence, the overall welfare of banks and depositors. The discussant also noted that, in future work, it may be useful to look at some of the model's assumptions, which appear to be overly simplistic. For example, the model does not explicitly account for informational frictions or for non-pecuniary elements in bank returns that are not captured in price and market-return data (e.g., credit rationing and the use of collateral).

These papers highlight the importance of studying diversification using measures that explicitly account for the risk-return trade-off. If it is true that diversification does not always raise the risk-adjusted returns to banks, future work should concentrate on determining the reasons why banks are not making more profitable portfolio choices. At the same time, discussion by conference participants revealed many deficiencies in the data used (e.g., short sample periods, combining book and market value data, the omission of some activities such as off-balance-sheet activities), pointing to a major challenge in this type of analysis.

Financial Sector Regulation

The Bank of Canada is very interested in how the regulatory environment, including the regulations themselves, supervision, or regulatory governance (the governance arrangements of the regulatory agencies themselves), can best promote macrofinancial stability. The regulatory environment is defined by the rules and incentives that influence the decisions of regulators, financial institutions, and non-financial agents. Getting the incentives right is important for sound economic performance, and these incentives must adapt to a changing financial landscape. Several aspects of this issue were addressed at the conference, including the relationship between governance and financial sector soundness, the theoretical basis of bank regulations for capital requirements, and the implications of bank capital requirements for the transmission of monetary policy.

Das et al. study the relationship between regulatory governance and the soundness of the banking sector. They construct indexes of banking sector soundness, regulatory governance, and public sector governance for a large number of countries. They then test whether these indexes are related to the capacity of the banking sector to withstand shocks. Their regression results indicate that good regulatory governance has a statistically significant, positive influence on banking sector soundness. The results also indicate that macroeconomic conditions, as well as the quality of political institutions and public sector governance also contribute to banking system soundness. The main lesson from this paper for policy-makers is that good regulatory governance will pay off in terms of soundness in the domestic financial system. The authors suggest that future work could extend these tests beyond the banking sector to the entire financial system.

Dionne's analysis of the optimal design of regulation for the banking sector is based on an extensive review of the literature. He argues that bank regulation can be justified in principle by the possibility that bank runs could prevent banks from playing their crucial role as the main provider of liquidity to the economy. The author views deposit insurance as one type of regulation capable of mitigating that risk. That said, Dionne thinks that national authorities should continue to improve deposit insurance by better aligning its pricing with individual bank risk. Authorities should also explore the possibility of using other regulatory tools such as subordinated debt and should work on improving bank governance. With respect to minimum capital-adequacy requirements, Dionne argues that there is little evidence that this approach reduces bank risk and some evidence that it may be the source of costly distortions.

Gale voices similar concerns about capital-adequacy requirements. He builds a simple model of an economy with a financial sector in which banks play a pivotal role. The main conclusion from this model is that imposing constraints on capital adequacy does not improve overall welfare. This is because market forces ensure that banks choose the right capital structure in equilibrium. Extensions of the basic model generate cases where the allocation of resources determined by the market is not necessarily optimal, but minimum capital requirements still do not seem to be welfare improving. While this work raises important questions, the applicability of its findings for policy may be limited by the simplicity of the model.

Changes in capital requirements can, in principle, affect how banks price risk and change the cyclical properties of bank capital. **Van den Heuvel** examines how capital-adequacy requirements alter the role of bank lending in the transmission of monetary policy. He constructs a dynamic model of bank asset and liability management that incorporates risk-based capital requirements. This model shows that monetary policy effects on bank lending depend on the capital adequacy of the banking sector and that shocks to bank profits can have a persistent effect on lending. Bank capital affects bank lending even when the regulatory constraints on bank capital are not binding. Given new capital requirements under Basel II and their potential to change the dynamics of bank capital, more research in the area of the interaction between bank-capital standards and monetary policy is very important.

Chant focuses on the governance of Canadian banks, investigating whether linkages between bank boards and the boards of non-financial corporations influence the pattern and performance of bank lending. Based on a preliminary exploration of Canadian data on bank loans, board linkages, and credit ratings, he reaches four main conclusions: i) Canadian banks are more likely to lend to corporations with which they share board linkages than to corporations linked with other banks; ii) the tendency to lend to linked corporations is stronger where the link involves a corporate officer than where it consists of shared directors; iii) there is weak evidence that corporations that receive loans from banks linked by officers have a higher probability of experiencing a downgraded credit rating than corporate borrowers in general; and iv) there is no evidence that the credit-rating experience of borrowers linked to the lending bank through directors differs from that of other borrowers. The author points out that more work is needed to test the robustness of these results, particularly given the short sample period used in the analysis. Future research could also focus on the factors that may be driving these results, including the possibility that there may be informational advantages to banks from corporate links.

Conclusions

The conference papers highlight the important interaction between financial governance and financial and economic activity. For example, there is compelling evidence that good regulatory governance is key to the sound functioning of the financial system. Also, there is evidence that regulation of bank capital can have important implications for the portfolio choices of banks and for the monetary policy transmission mechanism.

As the conference panellists noted, however, the conference raised more good questions for future research than it provided clear policy recommendations. For instance, the papers presented by Dionne and Gale underscore the need for further research on the appropriate design and effects of bank-capital requirements. More work in the area of contagion is also needed to fully understand how shocks are propagated through the financial system.

In pursuing this work, it will be important to emphasize the development of theoretical and empirical models that include key real-world characteristics and that could be used to guide policy-makers.

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