Public Policy for the Canadian Financial System: From Porter to the Present and Beyond

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Introduction

OVER THE LAST 40 YEARS THE ROLE OF FINANCE and the importance of the financial sector in the Canadian and other advanced economies have grown substantially. For instance, financial liabilities have risen sharply relative to GDP and trading volumes have surged. Finance operates through a complex system of interconnected institutions (banks, dealers, insurers), markets (equities, fixed income, futures, derivatives), infrastructures (monetary system, payments and settlements) and interventions by governments as issuers, regulators and participants. The financial system plays a vital role in supporting and promoting economic activity by facilitating payments, transforming the maturities of assets and liabilities to suit the needs of households and

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businesses, and transferring funds from savers to borrowers and investors. But it is vulnerable to contagion and subject to occasional turbulence and even crisis, which in turn may greatly harm the economy. Thus, in national jurisdictions including Canada, policy regarding the financial system should simultaneously promote two goals:

- Efficiency: facilitate the allocation of savings to the most productive uses by borrowers at low risk-adjusted intermediation costs (long-term growth and economic development); and
- Stability: at the macro level, minimize the contribution of the financial system to the inherent cycles of optimism/pessimism in the real economy (leaning against the wind); at the institutional level, minimize the risk of failure that could have systemic consequences; at the market level, assure continuous markets

At the broadest level, policy should facilitate the development of markets and institutions which enhance efficiency and innovation while at the same time assuring the macro stability of the system. These are often complementary objectives. Well-designed rules promoting financial stability bolster an efficient allocation of resources in general. Financial instability increases risk premiums and deters investment. In some instances, however, efficiency and stability can be conflicting objectives. Financial innovation can become a source of instability if regulation and risk management in the financial institutions fall behind the curve, as they did in at least two major episodes over the last century. Indeed, the global record seems to be one in which policy tends to focus on efficiency until evidence of financial fragility and stress emerges, and sometimes a financial crisis erupts. Hence, in the 1930s and late 2000s emphasis squarely shifted to stability amid financial crises that followed bouts of financial exuberance during which efficiency retained the attention of policy-makers more than stability.

As a legacy of the financial crisis of the 1930s, financial systems in Canada and elsewhere in the world in the decades after the Second World War were highly constrained by regulation operating largely through detailed controls. Monetary policy made heavy use of quantitative controls. In Canada then came the Porter Report in the mid-60s, which emphasized the importance of competition among financial institutions, liberalized markets, and a regula-

tory framework conducive to greater efficiency, including with respect to securities markets. This provided the impetus for a set of policies that put much greater emphasis on promoting efficiency from the late 1960s to the early 1980s. Then for 25 years or so thereafter, policy pursued stability along with efficiency. The catalyst for renewed emphasis on stability was the failure of two small domestic banks in the mid-1980s. More recently, the global financial crisis has squarely directed the attention of Canadian policy-makers on stability, although not because of troubles with weak bank balance sheets but as part of an international effort to bolster liquidity and stability in a world of interconnected financial institutions and markets.

Until the recent crisis, the growing scale and complexity of finance were widely believed to enhance both efficiency and stability, although such an assumption was less strong in Canada than in some other countries, notably the United States. Canadian financial institutions took a more cautious approach to financial innovation at some cost to their short-term growth and profits relative to more leveraged foreign competitors, relied relatively less on wholesale funding and kept relatively more liquidity. In part, this stemmed from more stringent, coordinated and effective regulation and supervision in Canada, which provided the right incentives to financial institutions. Moreover, the domestic mortgage market was not a source of instability in the Canadian financial system, in part because mortgage lending standards remained relatively high, mortgage securitization relatively low, and the generation of complex, risky products quite limited. If there was a problem to fix in Canada, it was with respect to improving the regulation and supervision of the issuance of complex securities to inadequately informed investors, as the the asset-backed commercial paper (ABCP) episode illustrates. On a broader front, authorities in Canada as in other jurisdictions felt the need to increase the transparency of transactions in derivative and complex products through changes in market infrastructure. Moreover the funding pressures that Canadian financial institutions episodically experienced during the financial crisis reminded everyone of the importance of continuous markets. All this being said, the "boring" Canadian financial system remained robust during the crisis and Canadian taxpayers were spared the burden of bailing out troubled financial institutions.

Besides concerns for financial stability, concerns about the cost and quality of the financial services provided to Canadians have held in check potential gains of efficiency in the Canadian financial system. Indeed in part such concerns led the federal government to reject proposals for bank mergers in the late 1990s. At the same time, the long-standing resistance of provincial governments to abandon a decentralized system of provincial securities regulation in favour of a single national securities regulator has likely reduced the country's capacity to oversee effectively the functioning and evolution of securities markets and establish effective forms of cooperation with other financial system regulators in Canada and capital market regulators in other countries.

The above constraints on potential gains in efficiency, which are unrelated to stability considerations, can be seen as pertaining to a third set of goals comprising access to quality financial services at reasonable costs and development of national financial institutions and markets. The latter goal was pursued through regulatory and policy efforts to encourage the development of local or regional financial institutions and through measures to preserve the domestic markets for Canadian financial institutions. Since my objective in this paper is to examine the Canadian financial system in light of the evolving balance of efficiency and stability over time, for all intents and purposes I will refrain from effectively dealing in any detail with access to services and promotion of national financial institutions and markets.

That still leaves many instructive lessons to take from how Canada has managed its financial system over the last 40 years or so. This paper therefore aims to trace the development of Canadian financial market policy from the Porter Commission to the present; first, to assess its successes and shortcomings in meeting the twin objectives of efficiency and stability and dealing with their inherent conflicts; and, to examine the challenges ahead in light of what we have learned from the current financial crisis.

Canadian Financial Market Policy

Canada has shown an uncommon propensity for bold initiatives regarding the financial system in the immediate decades following the second world war. The move to a flexible exchange rate in the 1950s was a daring, successful experiment. The progressive "liberalization" of the Canadian financial system

in the wake of the Porter Commission recommendations in the mid-1960s was an even more profound transformation, ahead of its time.

The evolution of the Canadian financial system in the last 40 years or so has been the product of both regulatory and market-driven changes. Initially guided by the Porter Commission, amendments to the *Bank Act* from 1967 onwards have been key vehicles of regulatory changes. One of their main goals has been to stimulate competition in, and the competitiveness of, the financial sector by allowing its various institutions to respond to technological changes, the globalization of financial services, and demographic developments as they shape the desired asset-liability structure of household portfolios (Freedman, 1998). It is also worth noting that the 5-year sunset clause introduced with the 1992 amendments (in replacement of the previous 10-year sunset clause) ensures a frequent review of the effectiveness of federal financial institutions legislation respecting the objectives of stability, efficiency and innovation. It also enables the government to respond to changes requested by the federal financial institutions. The importance of this clause can hardly be exaggerated because it has imposed a continuous adaptation of laws and regulations to changes in financial instruments and markets rather than infrequent but massive overhauls. This adaptive process has more chance to bring and preserve the right balance of efficiency and stability.

The 1964 report of the Porter Commission set an important goal for future *Bank Act* revisions by promoting competition both within the banking system and between banks and other financial institutions as a way to achieve a safe, efficient, equitable and adaptable financial system. It also recommended that "government securities regulation should be further strengthened and a federal regulatory agency established" to give leadership in the development of high and uniform standards of securities regulation and legislation and to work in cooperation with provincial authorities." While its impact on the regulation of financial institutions has been considerable, securities regulation has remained firmly in the hands of provincial governments.

The 1967 *Bank Act* revisions removed interest rate ceilings on bank loans, introduced federal deposit insurance, permitted banks to invest in non-insured mortgages and to borrow by selling debentures, and imposed individual and aggregate (for non-residents) ownership limits on the shares of banks.

Subsequent amendments, especially those of 1987 and 1992, largely eroded the former segmentation of the financial system across its five pillars (chartered banks, trust and loan companies, co-operative credit movement, life insurance companies and securities dealers). An amendment in 1980 allowed banks to have subsidiaries operating in various financial areas (e.g. venture capital, mortgage loans) and foreign banks to establish subsidiaries in Canada; then in 1987 banks were allowed to acquire securities dealers; and, finally, in 1992 various regulated financial institutions were allowed to enter each other's business directly, through subsidiaries or as agents. Thus, by the early 1990s, financial institutions could develop into financial conglomerates, and indeed Canadian chartered banks did quickly become universal banks (except for limitations on investments in non-financial business and prohibition of retailing of life insurance), partly through mergers with or acquisitions of trust companies and investment dealers. In part, the resulting breakdown of segmentation reflects an adaptive response to the intensifying concerns about the future profitability and competitiveness of Canadian banks in a world of increasing market funding for corporations, securitization, globalization, and integration of financial functions. One important consequence of being universal banks that provide one-stop service for the (almost) full range of household investment vehicles has been a high ratio of depository funding to total assets, which in turn was a key factor behind the relative resilience of Canadian banks during the financial crisis (Ratnovski and Huang, 2009). As a complement to the breakdown of domestic segmentation, foreign banks were allowed in 1999 to establish branches in Canada, as opposed to subsidiaries only, thereby fostering competition and providing greater flexibility for foreign banks operating in Canada.

Efficiency gains in intermediating between savers and borrowers/investors were considerable, the range of products on offer to savers and borrowers at affordable costs expanded enormously, and transactions in foreign currencies and with non-residents increased vigorously. Regulatory and market-driven developments have led to upward trends in the bank shares of consumer loans and mortgage loans, and to a lesser extent business loans, from the late 1970's onwards (Freedman, 1998; Calmès, 2004). At the same time, the share of loans in non-financial business credit rose to a peak in the early 1980s and has since

been on a downward trend as issuance of stocks, bonds and, from the mid-1990s, commercial paper has grown much faster. For banks, which have become heavily involved in the flotation of corporate securities, this has contributed to the observed shift in the sources of revenues from interest income on loans to non-interest income from fees and off-balance-sheet activities. On the funding side for banks, reliance on wholesale markets tended to grow somewhat faster than retail deposits, but has diminished substantially as a proportion of total funding since late 2008.

Along with changes to the *Bank Act*, a few important steps were taken to strengthen the infrastructure and regulatory framework of the financial system. In 1980, Parliament created by legislation a new Canadian Payments Association (CPA), which comprises both banks and non-bank deposit-taking institutions, to take over responsibility for running the cheque-clearing system from the Canadian Bankers Association and to assume responsibility for planning the future evolution of the Canadian payments system. One signal achievement of the CPA together with the Bank of Canada has been the building and implementation from 1999 onwards of Canada's large-value transfer system (LVTS) which provides clearing and settlement services to financial, corporate and government entities via chartered banks and other large deposit-taking institutions. Among other things, this contributed to a more predictable cost of overnight funding for financial institutions. LVTS exceeds world standards for risk control, and at a low cost (Longworth, 2006). This system continued to function well throughout the financial crisis, thereby supporting markets and financial institutions.

The increasing importance of electronic and mobile banking and unregulated e-payment systems (e.g. PayPal), and more generally incessant technological advances, raises the question of how the current payment arrangements need to evolve to be effective and efficient in the decades ahead. Quite appropriately, the Minister of Finance is engaged in a review of the payments system. Here again, achieving the right balance between efficiency and stability will be important.

Since 1987, the regulatory and supervisory framework has improved substantially, but only after the failure of Canadian Commercial Bank (CCB) and Northland Bank in the mid-1980s exposed severe deficiencies in the supervi-

sion of deposit-taking institutions.[2] The financial stress caused by the extraordinary surge of interest rates in the early 1980s to tame inflation contributed to the ultimate demise of these two small banks. Up to the late 1980s, the supervision of deposit-taking institutions "had been compromised by ambiguity about the role and mandate of supervision and by weak incentives to respond effectively to troubled institutions" (Engert, 2005). This was evident not only in the failures of the two Canadian banks but also in the increased deposit insurance liability and losses of the Canada Deposit Insurance Corporation (CDIC). This episode heightened the perceived need to reinforce the incentives and ability of supervisory institutions to deal effectively with failing financial institutions.

In the wake of the Estey Commission recommendations, important reforms took place in 1987 to strengthen the "financial safety net." First, a newly-created Office of the Superintendent of Financial Institutions (OSFI) replaced the Department of Insurance and the Office of the Inspector General of Banks, with the mandate to supervise all federally-chartered depository institutions and insurance companies. Second, CDIC was given more supervisory scope to mitigate the moral hazard and insurance loss associated with deposit insurance. And third, very importantly, a newly-created multi-agency Financial Institutions Supervisory Committee (FISC), comprising the Superintendent of Financial Institutions, the Chair of CDIC, the Governor of the Bank of Canada and the Deputy Minister of Finance, was charged with regularly discussing issues concerning the supervision of financial institutions,[3] including the development of strategies to deal with troubled financial institutions. FISC increased the ability of the various agents to influence supervisory decision-making and to provide support when confronted with problem institutions. The legislation also gave the Bank of Canada and CDIC the authority to require OSFI to investigate a financial institution. Another benefit of FISC is that it insures accountability in the system through the requirement to minute

2 This episode illustrates the potential conflict that can arise between the goal of access to regional institutions and that of stability.

3 It was only in 2001 that FISC's mandate was enlarged to include bank holding companies and insurance holding companies.

the discussions of the regulators/supervisors and to transmit these minutes to the Minister of Finance.

Since the late 1980s, the supervisory regime has evolved towards clearer goals, improved incentives, more accountability and greater and more flexible authority to act with regard to troubled institutions. In turn, this has strengthened the incentives for financial institutions to avoid excessive risks. The regime was importantly clarified and reinforced in the mid-1990s, not coincidentally following the *Bank Act* revisions of 1992 which led to major structural changes and efficiency gains in the financial system. In 1996, OSFI's mandate with respect to protecting the rights and interests of depositors, policyholders, and creditors was clarified while allowing financial institutions to compete effectively and take reasonable risks. This involved not only supervising financial institutions for soundness and legal compliance, but also promptly signaling and advising a financial institution that fails these criteria, promoting the adoption of policies and procedures to control and manage risk, and prudential surveillance of events that may have a negative impact on financial institutions. CDIC and OSFI jointly established a policy of early intervention with regard to a troubled institution according to four stages of increasing seriousness leading to insolvency. OSFI was also given the power to take control of an institution's assets, or of the institution itself, and through a court order close the institution. Leading to the early intervention legislation of 1996 were the heightened concerns about financial stability arising from the recent failures of Standard Trust Company, Sovereign Life Insurance Company, Confederation Life Insurance company, and Bank of Credit and Commerce International (BCCI). In 1999, OSFI started applying a framework for evaluating an institution's risks and the quality of its risk-management practices, and providing the supervised institutions with its assessment.

Partly in response to the rapid advance and diffusion of information technology in the 1990s and its perceived transformative role in the provision and consumption of financial services, the MacKay Task Force on the future of the Canadian financial services sector provided in 1998 recommendations on how to enhance competition among, and the competitiveness of, financial institutions, including recommendations on ownership and entry; how to empower consumers through transparency and disclosure; how to insure their access to

basic financial services in their community; and how to improve the regulatory framework. The review process ultimately led to the adoption of Bill C-8 in 2001.

One offshoot of the Bill C-8 was the creation of the Financial Consumer Agency of Canada (FCAC) to strengthen oversight of consumer issues and expand consumer education in the financial sector. In July 2010, FCAC was also tasked with the oversight of payment card network operators and their commercial practices. For these purposes, it monitors banks, federally incorporated or registered insurance, trust and loan companies, federally incorporated credit unions, retail associations and payment card network operators.

It is interesting to note that while the MacKay Task Force was at work in 1998, large Canadian banks had their eyes on two mergers between themselves, which would reduce their number from five to three. Banks claimed that such mergers would generate economies of scale and boost their international competitiveness. The government turned down the proposed mergers and their potential stimuli to efficiency because of its concern that the Canadian marketplace might not be as well served by a more concentrated oligopoly. Thus, concerns about the cost and quality of the financial services provided to Canadians held in check potential gains in efficiency. Several years later, Allen and Liu (2005) reached the following conclusions from their research:

> Our findings suggest that, all else held constant, Canadian banks could enjoy cost savings from becoming larger. This does not necessarily imply that the same cost savings would arise from bank mergers, because the business mix and input prices are likely to change after a merger. Even if cost savings can be achieved by joining two banks, those savings may not be passed on to consumers. Whether savings are passed on depends on the market structure and contestability in banks, topics that merit further research. (p.81)

Developments on several other fronts have affected the financial system.

Money and capital markets have expanded enormously, with the issuance of paper, stocks and bonds accounting for an increasing share of corporate sector funding. Importantly, early stimuli to financial market development were the

removal of interest rate ceilings on bank lending in the 1967 revisions to the *Bank Act* followed by a reduction in the chartered banks' secondary reserve ratio. This contributed to a sharp expansion of the treasury bill market, which in turn buttressed the expansion of private capital markets. Since the mid-1990s, markets for futures and derivatives have experienced considerable growth and the repo market has become a core funding source for banks and market makers. Securitization as a source of funding and investment opportunities through fixed-income markets has also grown substantially in importance until the recent financial crisis. The restructuring of the Canadian stock exchanges in the late 1990s allowed specialization and enhanced the expansion of the Montreal and Toronto stock exchanges. While the size, complexity and inter-connectedness of the financial markets have been increasing markedly over the last decades, provincial governments have resisted abandoning a decentralized system of provincial securities regulation in favour of a single national securities regulator, which likely offers a greater capacity to oversee effectively the functioning and evolution of securities markets and to establish effective forms of cooperation with capital market regulators in other countries.

Another factor contributing to the stability of the Canadian financial system relates to housing. Not only was the housing price cycle relatively subdued in Canada over the last decade, but the negative impacts that a fall in housing price could have had on mortgage defaults, lenders' losses and the value of mortgage-backed securities were bound to be much smaller than in the United States. Mortgage lending standards remained relatively high in Canada until the mid-2000s. Unfortunately, late in the cycle, the government raised the allowable loan-to-value ratio and increased the maximum amortization period despite clear evidence of excess demand and rising housing prices. Nevertheless, because this was done so late in the housing cycle, it did not do serious damage and the size of the sub-prime market was relatively small at the outset of the financial crisis. Moreover, the quality of verification and documentation remained relatively high.

Two other factors prompted financial prudence from Canadian borrowers. In Canada, the homeowner is personally liable for any deficiency that remains after the foreclosure and sale of his/her home, which is often not the case in

the United States.[4] In addition, partly because mortgage interest is not tax deductible in Canada, in contrast with the United States, Canadians have tended to buy smaller, more affordable homes relative to their income than Americans would. In the 2000s, greater leverage in the mortgage market through no money down and extended amortization mortgages were allowed, but in 2008 the Central Mortgage and Housing Corporation (CMHC) ceased insuring non-prime mortgages and more recently the federal government tightened macro-prudential rules in regard to mortgages in response to high household indebtedness. These changes included *inter alia* shortening of the amortization period to 30 years (after shortening it from 40 to 35 years in October 2008), withdrawing CMHC insurance of home equity lines of credit, a reduction in the maximum refinance percentage from 90 per cent loan-to-value to 85 percent (after reducing it from 95 to 90 per cent in April 2010), and requiring a minimum down payment of 20 per cent on non-owner-occupied properties purchased for speculation.

The housing sector is particularly sensitive to interest rates and the business cycle: in periods of high real interest rates, for instance, it contracts more than the rest of the economy while in periods of low rates, it is prone to excessive expansion. Not surprisingly, housing price cycles have much larger amplitude than those of consumer prices. In this light, the CMHC can have a significant impact on economic stabilization and financial stability through the mortgage qualification rules they set and the mortgage bonds they buy. As I write, the Minister of Finance is engaged in an important and timely review of the mandate of CMHC. Such a review should take into account both the financial stability and economic stabilization impacts that CMHC policies can have.

Monetary policy experienced regime shifts over the last 40 years, which eventually led to better macroeconomic outcomes and more efficient financial markets. Monetary targets prevailed in the late 1970s, followed by a search for a nominal anchor over much of the 1980s and a shift to inflation-targeting in the early 1990s (Thiessen, 2001). Inflation-targeting anchored inflation expectations and contributed to reduced economic volatility and long-term

4 In reference to home foreclosures, lenders can pursue deficiency judgments in more than 30 states. This includes states such as Florida, New York and Texas. Many thanks to Mark Jewett for signaling this point.

interest rates. The publication of the *Monetary Policy Report* starting in 1995, the introduction of fixed action dates in December 2000 and the regular release of the *Financial System Review* from 2002 onwards buttressed the Bank of Canada's credibility by increasing transparency and accountability in policy-making. Fixed action dates also led to improvements in the efficiency of the Canadian money market.

The Financial Crisis

Canadian banks fared quite well compared with international competitors during the financial crisis. They held less toxic assets, had strong capital ratios, had higher levels of liquid assets as a share of total assets, and had a relatively high ratio of depository funding (Ratnovski and Huang, 2009). In the background, rates of mortgage delinquencies and defaults remained low in Canada. Some Canadian life insurers, on the other hand, suffered large losses from reserve increases on their variable-annuity and segregated fund guarantees during the crisis. These insurers continue to face substantial market risk. While the capital positions of insurers have exceeded the target level imposed by OSFI, one issue is whether existing capital requirements for segregated-fund guarantees are high enough. OSFI has released a draft advisory on this.

Canadian financial institutions did not escape financing pressures as funding markets became quite illiquid for a while. The importance of having continuous markets became stark, as well as the crucial liquidity supply role of the central bank and the federal government in helping institutions to obtain funding without having to engage in fire sales of less liquid assets in illiquid markets.

Canadian financial institutions started experiencing funding pressures in the summer of 2007. These pressures intensified in the fall of that year and then again in the fall of 2008 as counterparty concerns became very serious following the failure of large financial institutions in foreign markets. Liquidity premia in funding markets for government securities and financial institutions experienced spikes at that time. Funding markets, which include those for Government of Canada securities, repo, securities lending, unsecured private money markets, and foreign exchange provide essential liquidity to, and connect major players in, the financial system (Fontaine, Selody and Wilkins,

2009). If they dry up, financial institutions and non-financial corporations can incur very serious liquidity problems as the experiences not only of Lehman Brothers but also of AAA-rated General Electric in the United States vividly illustrate. That is where the role of a central bank as lender of last resort comes into play, and it did in a big way in the advanced economies, including in Canada. The Bank of Canada deployed a range of tools and facilities to provide liquidity in the system, starting in the summer of 2007 with traditional instruments (overnight special purchase and resale agreements and excess settlement balances) and by the fall of 2007 gradually expanding its framework with respect to terms to maturity, amounts, counterparties and eligible securities as the situation deteriorated (Zorn, Wilkins and Engert, 2009). In addition, the federal government, through CMHC, purchased securitized bundles of insured mortgages to provide liquidity to the banking system. By the summer and fall of 2009, financial market conditions had sufficiently improved that the Bank of Canada withdrew several extraordinary liquidity measures.

The non-bank asset-based commercial paper (ABC)P crisis that erupted in August 2007 in Canada demonstrated the inherent fragility of the ABCP market and the fact that the risks embedded in very complex and opaque financial products are often not properly communicated to and understood by investors (Chant, 2008). Issues of non-bank ABCP were exempt from prospectuses so investors were in the dark concerning the composition and nature of the assets underlying the ABCP programs. Since the crisis, progress has been made towards increasing the transparency and disclosure of ABCP programs. These include "measures undertaken by the Bank of Canada to introduce transparency requirements and minimum quality standards for ABCP accepted as collateral in its liquidity facilities, increased transparency on the part of bank sponsors, and enhanced transparency and disclosure measures for both ABCP and term asset backed securities (ABS) introduced by credit-rating agencies" (Selody and Woodman, 2009). The failure of authorities to properly assess the risk associated with exposure to U.S. toxic assets and take remedial action beforehand suggests that there was a hole in the supervisory net. In the wake of the ABCP crisis, OSFI emphasized that its mandate focuses on the solvency of Canadian financial institutions and moreover that many of the firms that sold the non-bank ABCP notes were not federally supervised and regulated

and therefore not subject to the OSFI B-5 guideline with respect to capital charges for loans by Canadian banks to ABCP conduits (OSFI, 2008).

The financial crisis raises several issues for the conduct of monetary policy in Canada and other advanced countries in view of the limitations and potential of policy interest rates. Besides the problem of the zero lower bound, and whether price level targeting might help deal with this, there remains the question of whether the policy rate should be adjusted to supplement the coordinated use of prudential tools when imbalances in a specific market can spill over to the entire economy. Boivin, Lane and Meh (2010) reckon that this may be appropriate but that the resulting greater flexibility required in an inflation-targeting regime could be challenging in practice. In their view, more work is needed to bring understanding of these issues to the level required to clarify the implications for the monetary policy framework. This being said, and as I mentioned before, it is important to examine the complementary stabilization role that CMHC might play by adjusting rules for mortgage insurance. Other monetary policy issues of little direct concern to Canada but high concern elsewhere in the world relate to the use of quantitative easing and quantitative instruments (e.g. bank reserve requirements, capital controls) as complements to the policy interest rate. The former has been used by the United States and the United Kingdom and the latter by emerging market economies. The end of monetary policy history has not yet arrived.

Financial Reform

What lies ahead in Canada is essentially an agenda spearheaded by public authorities to buttress financial stability in conformity with the G-20 reform blueprint. This agenda aims at improving the resiliency of financial institutions, building robust financial markets and reducing the interconnectedness between institutions and markets (Carney, 2010).

At the core of decreasing the vulnerability of financial institutions to booms and busts are the provisions of the Basel III agreement to create global standards for liquidity, raise the quantity and quality of Tier 1 capital, and introduce a leverage ratio and a capital conservation buffer, to be complemented by a countercyclical buffer which would vary over time. As an economist I would make an argument for the use of countercyclical buffers. In the old days of

non-transparency the governor would negotiate the amount of hidden reserves that banks would have to hold, in effect activating countercyclical buffers. Nowadays, regulators must be totally transparent and follow rules rather than judgment. An effective mechanism of countercyclical buffer, however, is difficult to design. Nevertheless, in the more principles-based system we have in Canada, I believe it is worth exploring further whether such mechanism cannot be implemented. The timetable for full implementation of Basel III extends to 2019. It should be noted that Canada has had a tier one capital target of 7 per cent going back to 1999, that 75 per cent of that tier one capital has had to be in common shares, and that a maximum leverage ratio, of 20 to 1, has been in force throughout that time.

As a complement to capital and liquidity rules for banks, introducing counter-cyclically variable rules for allowable loan-to-value ratio and maximum amortization period for government-insured mortgages would be an effective way to deal with the inherent swings between exuberance and excessive pessimism in the housing market. While this would be politically difficult, a clear assignment of a stabilization rule to CMHC would certainly contribute to greater stability in both the housing market and financial markets generally.

As a further complement, an OSFI draft advisory has proposed implementing capital standards with regard to the segregated-fund guarantees of Canadian life insurers, which would better cover all risks associated with equity holdings.

The key initiative for making financial markets more robust is reforming Canadian markets for over-the-counter (OTC) derivatives as per a G-20 commitment. This calls for standardized OTC derivatives to be traded on exchanges or electronic platforms and cleared through central counterparties (CCPs) by end-2012. An inter-agency working group, chaired by the Bank of Canada, issued a discussion paper in October 2010 and the Canadian Securities Administrators, gathering provincial regulators, issued a consultation paper in November 2010. In parallel, the Canadian Derivatives Clearing Corporation is working on developing a CCP for the Canadian repo markets to make these markets more efficient in good times and less vulnerable in difficult times (they experienced significant illiquidity in the fall of 2008). Stan-

dardization and CCPs will reduce counterparty risk, increase transparency and help prevent spillover effects of an institution's failure.

Many possible measures have been proposed for dealing with bank resolution – the risks posed by large, interconnected institutions. These include *inter alia* capital surcharges, systemic risk levies and living wills. The U.S. *Dodd-Frank Wall Street Reform and Consumer Protection Act*, which was signed into law in July 2010, advocates that "no bank or financial institution that contains a bank will own, invest in or sponsor a hedge fund or a private equity fund, or proprietary trading operations unrelated to serving customers for its own profit." The preliminary report of the Vickers Commission in the United Kingdom does not go as far as recommending a separation of the commercial from the investment banking operations of banks, but advocates ring-fencing their retail arms and imposing a 10 per cent equity tier one capital ratio on systemically important lenders. For Canada, contingent capital, which has been the object of proposals by OSFI and the Basel Committee on Banking Supervision (BCBS), seems the preferred tool for dealing with bank resolution. They would improve the capacity of the private sector to contribute to the resolution of failing banks while reducing risks to the public sector and improving incentives to limit risk-taking. One important measure to clarify in order to promote investors' interest in contingent convertibles is the conversion criteria.

The new capital and liquidity rules will impose transitory economic costs over the medium term. The OECD has recently estimated that the higher capital requirements of Basel III effective as of 2019 would increase bank lending spreads by about 50 basis points over about five years, thereby cutting GDP growth in the United States, Europe and Japan by an average 0.15 percentage points per annum over this period (Slovik and Cournède, 2011). In my view, these estimates are likely to be somewhat too low. A significantly greater impact was estimated by the Institute of International Finance. The right answer probably lies somewhere in between.

Over and above the warranted costs of higher capital requirements, the precise and detailed rules proposed will add to operational and compliance costs for banks and financial intermediaries. In principle, higher capital and liquidity ratios are warranted but the detailed application rules seen so far would add

greatly to the deadweight cost of regulation. Canadian financial institutions understand the need for better risk management and would benefit from the greater confidence that higher ratios would bring to markets. But compliance with the excessively detailed and intrusive operational controls implied by the proposed international rules would increase the cost of financial intermediation in Canada. Canada should avoid slavish adherence to the details of Basel III. Our system of principles-based regulation should continue to serve us well, even more so in a context where most national regulators elsewhere will not conform to the detailed, uniform international standards. What is required here in Canada is a high degree of cooperation between regulators and financial institutions to achieve stability goals. In the past, such cooperation in designing principles-based regulation has strengthened the Canadian system. We should not lose that advantage as we move forward. The long run stability benefits flowing from greater capital and liquidity requirements should outweigh transition costs provided that the new principles are applied in a way that minimizes the deadweight loss of operational inefficiency.

Balancing Efficiency And Stability

The experience of the last half century suggests that the solid, consistent performance of the Canadian financial system benefitted considerably from the reasonable balance between efficiency and stability that has prevailed in the Canadian financial system. Financial institutions have grown profitably and financial markets have expanded in scope and depth, but excessive leverage and risk-taking have been held in check, at least in part by well coordinated regulation and supervision and macro-prudential rules. The financial sector has provided a greatly expanded array of financial services and products to Canadian households and firms. Moreover, efficiency gains in the provision of such services have been passed on at least in part to customers, reflecting competition in the sector and market contestability through the potential entry of new firms.

Barring extraordinary shocks, global financial stability should be buttressed in the years to come as financial systems are repaired and reformed. The associated adjustment costs should be significantly lower in Canada than in most advanced countries in view of its already high prudential standards and strong

regulatory framework. But of course we need to proceed in a way that minimizes the deadweight cost of regulation. Canada will nonetheless remain vulnerable to contagion from financial troubles elsewhere in the world and their collateral damage in terms of external demand. It therefore stands to benefit a lot not only from more resilient financial institutions and markets in Canada but also, and perhaps even more, from financial reform elsewhere in the world even if it entails transitory collateral damage for Canada in terms of slower growth in external demand.

Efficiency remains of paramount importance for economic prosperity, perhaps even more so than before given the need to mitigate the expected (transitory) rise in the cost of capital to firms and households as a result of more stringent capital and liquidity requirements for financial institutions in the years ahead. Preserving, if not enhancing, competition and market contestability may be the best way to promote efficiency gains and the transmission of the resulting cost reductions to Canadian households and firms. This traditional concern of Canadian policy makers since at least the Porter Commission is well worth preserving.

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