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**Remarks by Mark Carney**  
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**to the Canada - United Kingdom Chamber of Commerce**  
**London, England**  
**19 November 2008**

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### **Building Continuous Markets**

It is a pleasure to be back in the City. Twenty years ago, I started my first proper job here, as a credit analyst – remember that quaint role? at an investment bank – remember those archaic institutions? I came to London then because it appeared poised to realize the promise of market-based finance and to reassume its role at the centre of global finance. Today, I come to London, when so many are burying markets, to praise them and set out some thoughts on how to make them more robust.

Throughout the years, Canada has been a major beneficiary of London's innovation. Companies of adventurers, conceived and funded in London, opened up large swathes of Canada to international trade. Global capital, channelled through London, financed our infrastructure and commodities booms at the turn of the twentieth century. Our governments leaned heavily on the Euromarkets to finance their borrowings in the 1980s and early 1990s. More recently, we have looked to London for an array of new financial products.

We have also given back. Canada helped to finance Britain's World War II efforts, and we were pleased to receive the final repayment, on schedule, in 2006. The Bank of Canada's pioneering of inflation targeting was undoubtedly of some assistance to the Bank of England's thinking in its adoption of this successful framework. We now may have something to contribute amidst the current maelstrom: a dispassionate and ultimately optimistic perspective on how to build sustainable markets in the age of global capital.

The simple fact is that, while Canadian markets have been under strain, they have remained open. Our banks have not sought public capital. They continue to expand lending to both the business and household sectors without the kind of prodding seen in other jurisdictions. While we are not immune to the impact of a potentially serious global recession, we have a financial system that affords us the means, and gives us the prospect, of investing for the inevitable global recovery. For that recovery to reach its full potential, we all need a financial system with continuously open markets at its core. It is on this theme that I would like to concentrate my remarks today.

### **Markets and Banks**

The current crisis marks the reversal of a decades-long transition of the global financial system from being primarily relationship-oriented and dominated by banks to being primarily transactions-oriented and dominated by financial markets. This model had the

potential to price risk and to allocate capital more efficiently. In some cases, however, the development of markets ran well ahead of the supporting infrastructure. Moreover, lulled by early successes, participants became increasingly reliant on opaque securitization, dependent on excessive leverage, and complacent about market liquidity. A system that appeared resilient (and enormously profitable) in times of low volatility proved brittle in the face of shocks.

With the breakdown of many markets, the pendulum is swinging away from market-based finance back towards bank-based finance. This shift carries with it a number of costs and associated risks. First, the sudden re-emphasis on bank-based intermediation has led to an urgent need for banks to raise very large amounts of capital. If not managed properly, this threatens to exacerbate the global economic slowdown. Second, the crisis has shaken a number of articles of faith among market participants: that one could always borrow against “good” collateral, that market-based liquidity would always be available, and that ratings were efficient substitutes for due diligence and judgment. With these assumptions now in doubt, certain markets are now frozen and could take a long time to return, if they do at all. Third, in recent weeks, we have seen evidence of a “home bias” re-emerging in global financial markets as banks and investors furiously repatriate capital. This reflects both the desire of banks to concentrate their limited resources on geographically close relationships, and the need for funds to liquidate assets in preparation for large redemptions. This development has the potential to significantly slow growth in some emerging markets.

All of these risks are the consequence of relying on markets built on sand. To find the bedrock on which to rebuild open continuous markets, all of us – market participants and policy-makers alike – must learn the lessons of this crisis.

### **Lessons of the Crisis**

The crisis has its roots in macroeconomic imbalances and microeconomic failures. On the macro side, we are experiencing the inevitable correction of a period of global imbalances, characterized by excess savings and under-consumption in major emerging markets, and by negative savings, rapid credit expansion, and asset-price booms in many western economies. These trends were encouraged by policies including, in Asia, inflexible exchange rates and an overreliance on export-led growth, and in the United States, the response to the bursting of the tech bubble. These measures collectively contributed to a low and stable interest rate environment that fed enormous risk taking and leverage across markets and currencies. With the cavalier “search for yield” now replaced by a desperate “rush for shelter,” leverage is being viciously unwound across markets.

One clear lesson is that price stability alone is not sufficient to prevent the buildup of macroeconomic imbalances. Indeed, asset bubbles frequently emerge during periods of low and stable consumer price inflation. It does not follow, however, that monetary policy should target asset prices. Monetary policy is a blunt instrument, poorly suited to addressing financial imbalances. Instead, it is increasingly recognized that macrofinancial stability should be one of the core objectives of financial regulation.

The current crisis has made it crystal clear that, as designed, the form and conduct of financial regulation is not fit for purpose. It will not be enough for prudential regulators to adopt new measures within their current frameworks. There needs to be oversight of the system as a whole – including both systemically important institutions and systemically important markets. This oversight may be best housed in those public institutions with a macroeconomic orientation. At a minimum, there must be close coordination between regulators, the central bank, and the finance ministry.

As part of a new macroprudential approach, regulation must address three significant flaws in market structure – a lack of transparency, misaligned incentives, and inadequate liquidity. I will say a few words about each of these.

The first priority is to improve transparency. Many highly structured products at the centre of the turmoil were far from transparent, and the disclosure by their originators was often wanting. The substitution of credit ratings for adequate transparency promoted herding upon downgrades and common valuation errors across a range of asset classes. It also eliminated investor pressure for better disclosure, contributing to today's broken markets. Progress has been made, including the Financial Stability Forum's bank disclosure template and the Bank of Canada's disclosure requirements for asset-backed commercial paper pledged as collateral. Ultimately, if investors are truly doing their credit homework, they will demand better disclosure. Otherwise, they will again pay the price.

The second priority is to address a series of misaligned incentives. It has been belatedly recognized that the severing of the long-term relationship between originator and borrower contributed to a decline in credit quality. Further, within several global financial institutions, there were also inappropriate incentives created by the funding of trading desks at risk-free rates and poorly designed compensation structures. There are now prominent calls for increased regulation to better align incentives within institutions. These matters require judgment, not slogans. I firmly believe that regulation of compensation is not appropriate, even though it is in vogue. Rather, regulators should consider carefully compensation incentives within a broader assessment of the robustness of risk-management and internal-control systems. Regulators also need to address misaligned incentives created by regulation itself, such as the current state of capital requirements.

It goes without saying that liquidity management across a broad range of financial institutions must be improved. Confidence that markets would remain liquid had encouraged the rapid growth of the "originate-to-distribute" credit model. The current illiquidity is hastening its demise. Liquidity problems have spread across markets, reflecting both fundamental concerns about the solvency of counterparties and the procyclicality of collateral margins.

Core money markets have broken down as a result of these three failures, thereby worsening the crisis. Had these core markets continued functioning, we would likely be experiencing a credit crunch – where the cost of credit would have been sharply higher – instead of a full-blown credit crisis – where credit is unavailable at any price across a

range of core markets. While the provision of extraordinary liquidity by central banks is limiting the damage from the crisis, it has long been apparent that official liquidity, irrespective of size, cannot re-open markets on its own.

### **How to Build Continuous Markets**

The current situation is unacceptable. The financial system should have a number of core markets – including interbank lending, commercial paper, and repo markets for high-quality securities – that are continuously open even under stress. Achieving this will require a combination of the microeconomic measures just described and the pursuit of two strategies.

The G-7 Action Plan announced last month provides the conventional roadmap. This strategy centres on shoring up systemically important institutions so that they can be more resilient and resume their market-making role. To this end, the G-7 has made it clear that no systemically important institution will be allowed to fail and that sufficient capital – public and private – will be provided to restore confidence. In recent weeks, G-7 governments have acted with bold plans to honour these principles. In tandem, central banks have fulfilled their commitments under the plan to “ensure that banks and other financial institutions have broad access to liquidity and funding.” In providing liquidity to the core of the system, we expect that key markets will resume functioning as this liquidity cascades through the system to other market participants and, ultimately, through private credit creation, to the real economy. While it will take time for capital and confidence to return, this strategy will be successful.

The second strategy requires central banks to act as market-maker of last resort. That is, central banks would ensure that market transactions continue in times of crisis by becoming a counterparty to major market participants. This would address directly the current fear of non-bank participants in many global money markets that they will not be able to continuously access liquidity. It should be acknowledged that the exit of money market funds from non-government money markets may be as damaging as counterparty risk concerns and the liquidity hoarding of core financial institutions.

In some jurisdictions, central banks are already acting as a de facto central counterparty by taking in deposits from institutions with excess liquidity and providing it to those with deficient liquidity. The issue is how widely to expand the participants. When central banks act as market-makers, markets become more systemic and institutions less so.

Irrespective of which strategy is adopted to rebuild continuous markets, there are additional measures that policy-makers should consider to reduce risks and make individual institutions less systemic. For example, current efforts to create a clearing house for credit default swaps would both reduce counterparty risk and help keep this market open in stressful times. Without underestimating the complexity of this initiative and the potential costs of margining, policy-makers can be expected to look for other

markets that could be moved onto exchanges or into clearing houses, as well as working to risk-proof custodial banks.<sup>1</sup>

Regulations and standards could reinforce these initiatives. For example, consideration should be given to establishing higher capital requirements for securities that trade outside continuously open markets, as well as limiting the application of fair-value accounting to those securities that trade on exchanges or in continuously open markets. Policy-makers should also seek to reduce the procyclicality of value-at-risk margining, perhaps by maintaining margin requirements at fixed rates throughout the economic cycle. If the central bank were the market-maker of last resort, it could reinforce such standards.

Having outlined these strategies, I would now like to use the Canadian situation to illustrate a few points about how they may be applied.

### **The Canadian Perspective**

Canada's experience is instructive. While Canada's financial system has been affected by the crisis in global financial markets, the impact has been significantly less than in many other major economies, not least because Canada is further along than others in implementing the G-7 Action Plan. Canada starts with financial institutions that are healthier than their international peers. Not merely have losses on structured products of Canadian banks been modest, but more importantly, their absolute leverage is markedly lower. As a simple illustration, major Canadian banks have an average asset-to-capital multiple of 18 on a consolidated basis, which is slightly below the regulatory maximum of 20. The comparable figure for U.S. investment banks is over 25. For European banks, it is in the 30s, and for some major global banks, it is over 40. While foreign banks are in the process of moving towards Canadian levels, our banks obviously face no such pressures. In addition, the quality of Tier 1 capital of Canadian banks is among the strongest in the world.

Canada's conservative banking culture clearly helped our institutions avoid some the most egregious lending practices seen elsewhere. So, too, has the nature of securitization in Canada. Only about 20 per cent of Canadian mortgages are securitized. With more of this lending remaining on balance sheets, underwriting standards have remained high. Further, since Canada requires insurance on high-loan-to-value mortgages and Canada Mortgage Bonds are explicitly guaranteed by the sovereign, there is no negative feedback loop between the housing market and the financial sector as has been all too apparent in other major economies.

Our experience demonstrates that the G-7 strategy will work. Given the combination of strong core institutions, the provision of exceptional term liquidity by the Bank of Canada, and the now material term funding from the Government of Canada, we expect that our major financial institutions will cascade that liquidity through the system by supporting continuous markets and extending credit.

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<sup>1</sup> For example, in Canada, policy-makers have been encouraging greater use of the CLS Bank, which facilitates the settlement of foreign exchange in an environment without counterparty risk.

Unfortunately, in other jurisdictions, this is not yet the case. The weaker the starting point of regulated institutions and the greater the importance of the shadow banking sector, the longer the healing process could take. Indeed, in a range of countries, this process must be carefully managed to avoid worsening their recessions. In particular, the overhang of large capital requirements could be compounded by concerns that overall capital levels themselves will rise. This could lead banks to hoard any new capital rather than deploy it. Doing so would worsen the economic outlook, which would then increase loan losses and further strain capital levels.

The explicit G-7 commitment to systemic institutions and the various guarantee programs should be used to help spread over time the necessary capital increases. Moreover, policy-makers should have the courage of their (new-found) macroprudential convictions. With G-20 leaders calling for regulators to develop measures to mitigate procyclicality in capital, regulators should be careful about pushing capital standards up too high, too soon in the teeth of an economic slowdown. Through-the-cycle capital means that ratios should fall in a downturn. Finally, some policy-makers should give greater consideration to the central bank acting as market-maker of last resort to maximize the likelihood that core money markets remain open.

Notwithstanding the advantages of its financial sector, as one of the most open economies in the world, Canada has been importantly affected by global events. The intensification of the global financial crisis has led in Canada to an increase in credit spreads and a tightening in credit conditions generally. The global recession is deepening, with demand slowing sharply across all major regions in recent weeks. As a consequence, there have been further declines in the prices of many commodities and a deterioration in Canada's terms of trade, which reduces Canadian incomes. The nature of the U.S. slowdown, with its acute weakness in the housing and auto sectors, is also particularly problematic for our exporters. Thus, while domestic demand in Canada remains relatively healthy and the depreciation of the Canadian dollar will offset some of the declines in external demand, the risks to growth and inflation in Canada identified in the October *Monetary Policy Report* appear to have shifted to the downside. Despite having already cut official interest rates in half over the past year and having a financial sector that is still functioning effectively, some further monetary stimulus will likely be required to achieve the inflation target over the medium term.

### **Act Locally, Think Globally**

This leads to the final lesson from Canada's experience. As G-20 leaders agreed this past weekend, effective regulation begins at home. To meet this responsibility, Canada has a formal coordination mechanism that brings together institutions with a macroeconomic focus – the central bank and Department of Finance – with the prudential regulator and the deposit insurer. Given the pace of change in financial markets, we subject our regulatory regime to regular scrutiny. We have a legislated requirement to review the legislative and regulatory framework for the financial system every five years. We have also twice subjected our system to rigorous examination under the Financial Sector Assessment Program conducted by the International Monetary Fund.

While it is undeniable that good financial regulation begins at home, it is equally clear that it cannot end there. Even if the domestic system is sound, there is no guarantee that core financial markets will always be available. Given the high degree of integration in the world financial system, and since individual countries may still underinvest in the global social good of domestic financial stability, there is a pressing need for international institutions that effectively monitor systemic risk and coordinate macroprudential and financial policy reform. There was no effective international surveillance that identified either the nature or the scale of the financial crisis, because no international organization had yet integrated effectively macroeconomic and macrofinancial analysis. Progress on these imperatives was also made this past weekend in Washington, and they will remain a focus over the coming weeks.

### **Conclusion**

Allow me to conclude.

The turmoil of the past year and a half and the crisis of the past two months have been momentous. This episode will take its place as one of the most important in economic history. Ultimately, however, our response to these events will be more important than the events themselves. We can never eliminate financial crises, but we can reduce their likelihood and severity. In my opinion, the key to success in this regard is to seek to build continuously open markets. The pendulum is currently swinging back from market-dominated financing towards bank-dominated financing. We should not want the pendulum to swing too far. The capital requirements at the extreme are enormous. More fundamentally, market forces should be left to determine the relative size and boundaries of the banking and markets sectors. They will only do so if markets are built on solid foundations. We can construct a global financial system that will lead to the type of sustained and mutually beneficial prosperity that Canada and the United Kingdom have enjoyed over the centuries.