

## David Longworth: Credit markets, financial stability and monetary policy

Remarks by Mr David Longworth, Deputy Governor of the Bank of Canada, to the Global Investment Conference, Lake Louise, Alberta, 10 April 2008.

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Good afternoon, ladies and gentlemen. It's good to be here in my home province of Alberta to discuss with you some interesting topics at a very interesting time. I remember back in January thinking that the previous five months had been the busiest of my career at the Bank of Canada. However, I believe I can now say that the past eight months have definitely been the most active – and most interesting – in my Bank of Canada career.

Today, I'd like to discuss some of the crucial issues that we have been dealing with during this period. I'll begin with a brief overview of some key events that have led to the turbulence that continues to upset financial markets and that greatly contributed to the remarkably wide credit spreads that we now witness. I'll discuss some of the ongoing analysis of these credit spreads that we are conducting at the Bank of Canada. I will then turn to the policy issues around financial stability that the turbulence has highlighted and describe some of the work that we are doing to promote financial stability throughout this period of uncertainty. Finally, I'll describe how we take financial market developments into account as we conduct monetary policy and the important role that this policy plays in promoting economic and financial stability for Canadians.

### How did this happen?

What were some of the root causes of the current market turbulence? We know that for a number of years, desired world savings exceeded desired world investment. As a result, long-term real interest rates decreased around the world. This led investors to search for yield, and they became willing to take on risk at lower premiums than they had demanded in the past. Part of this search for yield led to rapid growth in the demand for, and development of, more complex structured financial products, such as collateralized debt obligations (CDOs) backed by asset-backed securities or by other CDOs, and asset-backed commercial paper (ABCP) backed by CDOs, some of which (after 2000) were based on U.S. subprime mortgages.<sup>1</sup>

These complex instruments were rated by credit-rating agencies using the same scale that they had used in the past for plain-vanilla corporate debt. Some sellers of these complex financial instruments emphasized that these products were highly rated – many were AAA – but placed little emphasis on their other features. A number of investors failed to perform their own research or due diligence and instead relied too much on credit ratings as a measure of the ultimate risk in holding these complex debt instruments. In doing so, they failed to take into account other risks such as liquidity risk. The complexity of these instruments frequently made them opaque, and too often investors put their money and confidence into investments that they did not fully understand.

At the same time, U.S. policy interest rates rose, and the basic loan quality of U.S. subprime mortgages worsened through 2005 and 2006, although this worsening did not become broadly apparent until the first half of 2007. The belated realization by the rating agencies of the poor quality of these loans resulted in downgrades of structured products with exposure to subprime mortgages, often by multiple notches. These instruments were held by a variety

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<sup>1</sup> For a further discussion of these financial market events, please see the most recent issue of the *Financial System Review* (Ottawa: Bank of Canada, December 2007).

of investment funds, including many sponsored by banks. Indeed, some products were directly held by banks themselves. Investors in Canada, as well as those in the United States, soon came to realize that highly rated structured debt instruments could fall substantially in value and were subject to severe downgrades. As a result, they began to shun almost any type of structured product, partly because the complexity of such products made it difficult for many market participants to understand these instruments and, therefore, to accurately price the risk that these products posed to financial institutions. In Canada, this included instruments such as ABCP. Almost immediately, non-bank-sponsored ABCP stopped rolling over in Canada, which led to the standstill under the Montreal Accord.

As market players observed the downgrades of structured products based on U.S. subprime mortgages and the drying up of ABCP markets, two additional concerns emerged. First, there was a concern about the financial health of counterparties, particularly banks. Second, there was a concern that securitization would proceed at a much slower pace than in the past, thus requiring re-intermediation that would result in a more rapid expansion of bank balance sheets and an associated need for capital. These two concerns led to a significant increase in the interest rate spreads of bank debt over government benchmarks.

### **Widening of credit spreads**

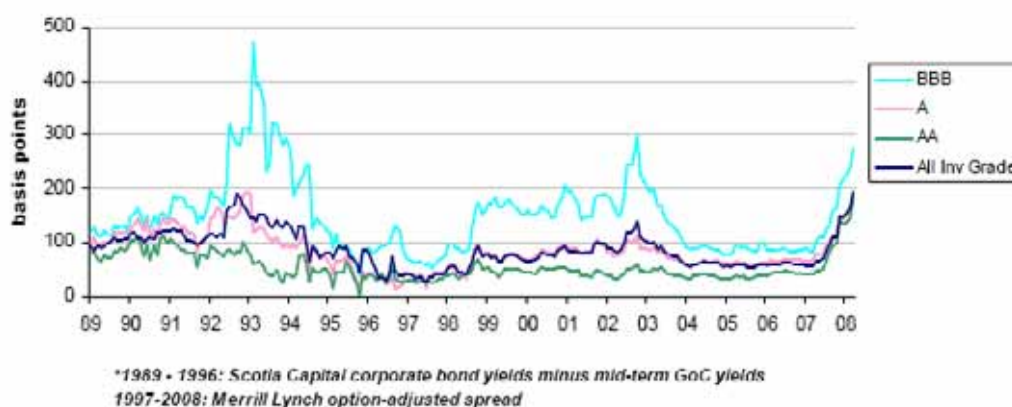
As time has passed, it has not been only bank credit spreads that have widened. We know from past experience that variations in credit spreads can be driven by several different factors. One basic component of credit spreads is expected loss from default, while a second relates to risk premiums, of which there are two main types: a credit-risk premium and an illiquidity premium.<sup>2</sup> The credit-risk premium is related to the variability of underlying expected loss, and both this premium and the expected loss from default itself are affected by changes in macroeconomic activity. The illiquidity premium relates to a lack of general market liquidity. The credit and illiquidity premiums, like other risk premiums, can vary with any change in the risk appetite of investors.

Now, let me look specifically at the Canadian situation. From early 2004 to mid-2007, spreads on Canadian corporate investment-grade and high-yield bonds were fairly stable and narrow relative to historical norms, as were those in most other industrialized countries. (This can be seen in Chart 1.) But these spreads began to widen last summer as the crisis in the subprime-mortgage market started to take hold. Some of this widening can be explained by rising concerns about Canada's economic outlook due to the impact here of a possible recession in the United States. However, credit spreads – while not all at historic peaks – are now far wider than one would have predicted, based on past experience with economic downturns, and given the fact that Canada's economy is in a healthier position than the U.S. economy. (Chart 2 shows spreads on investment-grade bonds in both Canada and the United States.)

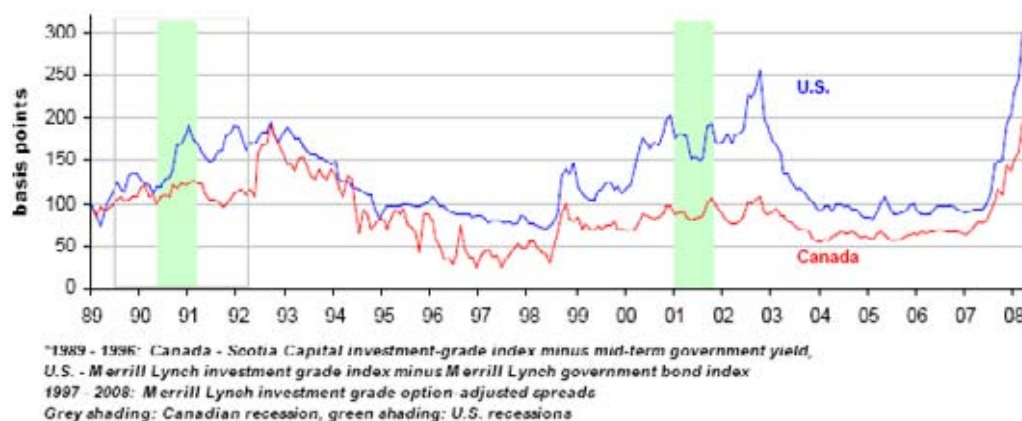
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<sup>2</sup> T. Gravelle and A. Garcia, "Decomposing Canadian Corporate Spreads: What Are the Drivers of the Current Widening?" *Financial System Review* (Ottawa: Bank of Canada, forthcoming, June 2008).

**Chart 1: Canadian Corporate Spreads\*  
(Mid-term)**



**Chart 2: Investment Grade Corporate Bond Spreads\*  
(Mid-Term)**



One partial explanation for the current wide credit spreads – globally, not just in Canada – relates to an unusual rise in factors not related to credit risk, such as the systemic drying up of market liquidity for debt issued by corporations, particularly for debt issued by investment-grade companies like financial institutions. Another partial explanation is that the current wide credit spreads are being driven by what appears to be excessive pessimism about expected default rates. We can see evidence of this in the very high cost of default protection in many markets, despite some improvement recently.<sup>3</sup> (Chart 3 shows the evolution of credit default spreads in North America and Europe, for both investment-grade and "crossover" companies, that is, those with lower-quality but still investment-grade ratings or slightly below.)

<sup>3</sup> For example, in recent weeks, the default rates implied by the levels of the ITRAXX crossover index have reached almost twice the cumulative default rate experienced by comparably rated companies during the last two recessions.

**Chart 3: iTraxx and CDX Spreads  
(Credit Default Swap Index Spreads)**

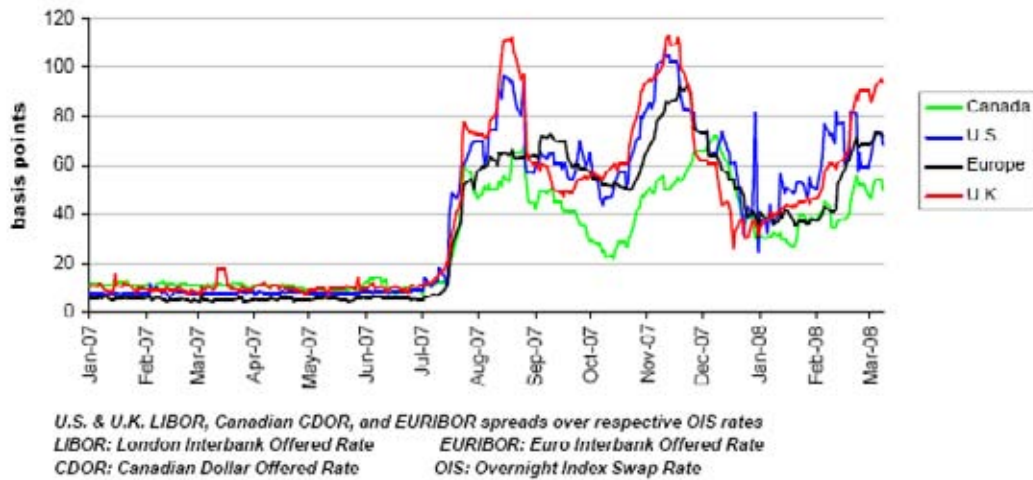


As we work to better understand the forces behind these particularly wide credit spreads, we do realize that as difficult as it can be to price risk, the current situation demonstrates how much more difficult it is to price uncertainty.<sup>4</sup> Market participants are facing issues and questions that are unfamiliar and that cannot be easily answered, which is creating this uncertainty. The first source of this uncertainty is the unique nature of the U.S. experience with the kind of housing crisis that the U.S. economy is facing. This is the first time in more than a half-century that we have seen such a fall in nominal U.S. house prices.

A second source of uncertainty in markets relates to questions about the solvency of financial institutions. When market participants lose confidence in their ability to assess the solvency of their counterparties, which are often other financial institutions, they become reluctant to lend to one another. In the current example, when firms did agree to loan to each other, they often demanded unusually high short-term interest rates, which contributed to the wide credit spreads that we have been witnessing. Most recently, we've seen a powerful example of this uncertainty playing out in the situation involving Bear Stearns. The positive news is that financial institutions have revealed more of their losses and exposures, and have taken steps to rebuild capital. These actions have tended to settle markets. As I alluded to earlier, market uncertainty has been global in nature. Most industrialized countries have seen sharp and often unprecedented widening in the spreads between rates in short-term credit markets, such as the 3-month London Interbank Offered Rate (LIBOR) or Canadian Dollar Offered Rate (CDOR), and expected overnight interest rates. (Chart 4 shows how short-term spreads have widened significantly since last August. Canadian spreads are now significantly below their peaks, but remain elevated relative to historical norms.)

<sup>4</sup> The uncertainty we speak of is the so-called Knightian uncertainty, in which probabilities cannot be attached to individual events and, as such, risk (or the variance) cannot be measured.

**Chart 4: 3-month LIBOR - OIS Spreads**



A third source of market uncertainty relates to the degree of de-leveraging of hedge funds, proprietary desks, and other highly leveraged institutions. With some prime brokers facing capital constraints and with the volatility of asset prices having risen, certain institutions – including hedge funds – are seeing their lines of credit cut and their margin requirements raised. This typically forces them to sell assets, which has exacerbated the illiquidity in markets, making it extremely difficult for market participants to price these assets or, at times, to find a market for them. One might assume that this situation could create an excellent buying opportunity for sizable, unleveraged institutional investors, the so-called "real money funds." Yet most have remained largely on the sidelines. They may be held back by the continued uncertainty, perhaps waiting to see if the market has further to fall, thus creating even better buying opportunities. Again, the increased provision of information by financial institutions on their losses and exposures should be very helpful in easing uncertainties.

### Financial stability policies

Now, let me turn to issues regarding financial stability policies that have arisen out of this period of turbulence. I will touch briefly on three issues: first, policies related to transparency and information; second, policies regarding the regulation of financial institutions; and third, central bank financial stability policies.<sup>5</sup>

We know that markets work best when relevant information is available to all. One result of the recent turmoil is that concerns have been raised regarding the transparency of complex financial instruments and the role of the information supplied by credit-rating agencies. In Canada, issues regarding the transparency of instruments have been most pronounced with respect to ABCP – particularly the non-bank-sponsored ABCP covered by the Montreal Accord. There has already been some movement towards greater transparency in the bank-sponsored segments of this market.<sup>6</sup> But greater transparency of financial instruments isn't

<sup>5</sup> A more detailed discussion of these and other issues can be found in M. Carney, "Addressing Financial Turbulence" (speech to the Toronto Board of Trade, Toronto, ON, 13 March 2008).

<sup>6</sup> For example, we have seen the adoption of global-style liquidity facilities; institutions seeking more than one credit rating; and the Bank of Canada announcing it will accept ABCP securities that meet certain criteria, including transparency criteria. The latter point is discussed later in this speech.

enough – investors also need to know how to interpret the information. Although credit-rating agencies have helped with interpretation in the past, they have recently come under scrutiny for their role in the financial market turbulence. However, because rating agencies rely on their reputations, they have strong incentives to improve the information content of their ratings for complex financial instruments, to ensure that all material facts are disclosed in a concise and timely manner, and to address inherent conflicts of interest in the ratings process. They have shown an ability and willingness to learn from their mistakes, and they are regularly refining their rating processes.<sup>7</sup> This does not mean, though, that investors can rely exclusively on the judgment of others. In the end, investors must accept responsibility for understanding and managing the credit risk in their portfolios.

I'll turn now to some issues regarding financial institutions and their regulation. I'll focus on a few issues related to the models of operations in these institutions, the management of risks, and the management and regulation of liquidity. We can now see that one of the key problems with securitized U.S. subprime mortgages rested with the so-called "originate and distribute" model in which mortgage originators, many of whom did not face the same regulations as banks, entered into mortgage contracts with homeowners, and then laid off these assets as they were securitized. In principle, there is nothing wrong with having a model based on "originate and distribute," but in practice, a number of major things went wrong, as we saw in the recent U.S. example. For example, some originators did not have sufficient incentives to conduct appropriate credit checks on clients. This model is now being closely examined by regulators in the United States and around the world, to ensure that the right incentives for originators and distributors are in place and are appropriately aligned.

Risk management within banks themselves is also facing scrutiny. In many cases, their risk-management practices did not prepare banks for the recent market turbulence, and so these market practices need to be addressed.

While the Basel Committee on Banking Supervision has devoted most of its time over the past several years to completing its work on capital adequacy, it is now devoting more time and resources to the analysis of risk-management processes in banks and to the principles of liquidity management for banks.<sup>8</sup>

Let me turn now to the financial stability policies of central banks. When there is a clear market failure and a major disruption to financial stability, a central bank – depending on circumstances – may wish to relieve liquidity pressures on the financial system by doing one or more of the following. It may choose to extend the maturity of its market operations; it may coordinate closely with other central banks when there is an international dimension to the problem; it may choose to widen the range of securities in its market operations or loan facilities; or, it may choose to increase the frequency of its market operations.<sup>9</sup>

We opted for the first three of these with the term purchase and resale operations announced on 12 December and 11 March. Although we typically carry out purchase and resale operations with an overnight maturity, the two operations announced in March were for a much longer maturity (the two March operations were both for 28 days). Both of these announcements were coordinated with the actions of four other central banks and were supported by two other central banks. In all of these operations, the range of eligible securities was essentially the widest allowed under the Bank of Canada Act.

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<sup>7</sup> For a full discussion, see M. Zelmer, "Reforming the Credit-Rating Process," *Financial System Review* (Ottawa: Bank of Canada, December 2007): 51-57.

<sup>8</sup> For a full discussion, see *Liquidity Risk: Management and Supervisory Challenges*, (Basel: Basel Committee on Banking Supervision, February 2008).

<sup>9</sup> A central bank may also choose to increase the range of participants in its operations and facilities.

Recently announced amendments, which will modernize the Act, would allow for a further widening in eligible instruments for such operations. As required by these proposed amendments, the Bank will publish its policy governing the use of these powers.<sup>10</sup> The Bank will carefully consider the circumstances under which these powers would be used.

In terms of its lending operations, the Bank of Canada is not legally constrained by its Act in the type of financial instruments that it can accept as collateral under its Standing Liquidity Facility (SLF), a facility that can be used in both normal and in turbulent times. On 31 March, we announced that, in the future, we will take ABCP securities that meet certain criteria – including transparency criteria – as collateral under our SLF. We had two broad policy objectives in making this announcement: first, that the eligibility criteria should mitigate any risks to the Bank that might be associated with accepting ABCP securities as collateral for the SLF. And second, we stated that the eligibility criteria should facilitate the development of a well-functioning market for ABCP by promoting more transparency for investors and by encouraging an active secondary market for these securities. The Bank has also announced that it will take U.S. Treasuries as collateral under the SLF by mid-year.

In addition to the above, the Bank continues to work on examining policies related to the use of term operations and term lending facilities at times of major disruption to financial stability. This work is benefiting from the experiences and analysis of other central banks.

### **Monetary policy in times of financial turbulence**

Earlier, I mentioned that when there is a major disruption to financial stability, a central bank may have to increase the frequency of its operations. Well, for monetary policy reasons – to keep our key overnight interest rate close to its target – we have often had to carry out special purchase and resale agreements (at times, more than once per day).<sup>11</sup>

That leads naturally into the topic of monetary policy in times of financial turbulence. It's very clear that at a time of great uncertainty, it is more important than ever that monetary policy act as a stabilizing force. This underscores the importance of keeping inflation low, stable, and predictable and requires us at the Bank to continue to watch developments in the real economy for their impact on inflation. We are certainly aware of the continuing developments in the financial sector. But from a monetary policy perspective, these are important only to the extent that they are expected to influence developments in the real economy and, therefore, inflation. I do not mean to downplay the current financial turbulence – it has clearly been a factor affecting the real economy in the United States and, to a lesser extent, in Canada as well. At the Bank of Canada, we will continue to monitor these effects, while aiming neither to favour particular market segments nor to insulate market participants from the consequences of their decisions.

In terms of the financial turbulence, credit spreads in particular – and the credit conditions faced by businesses and households more generally – have an influence on aggregate demand and thus, potentially, on inflation. This needs to be taken into account in setting policy interest rates. (Chart 5 and 6 give an indication of the cost, in level terms, of short- and longer-term borrowing, respectively.) In our October Monetary Policy Report, we estimated that the tightening of credit conditions was worth about 25 basis points relative to our overnight interest rate target. Then, in the January Update to the Report, we noted that the tightening in credit conditions could be greater and more protracted than previously

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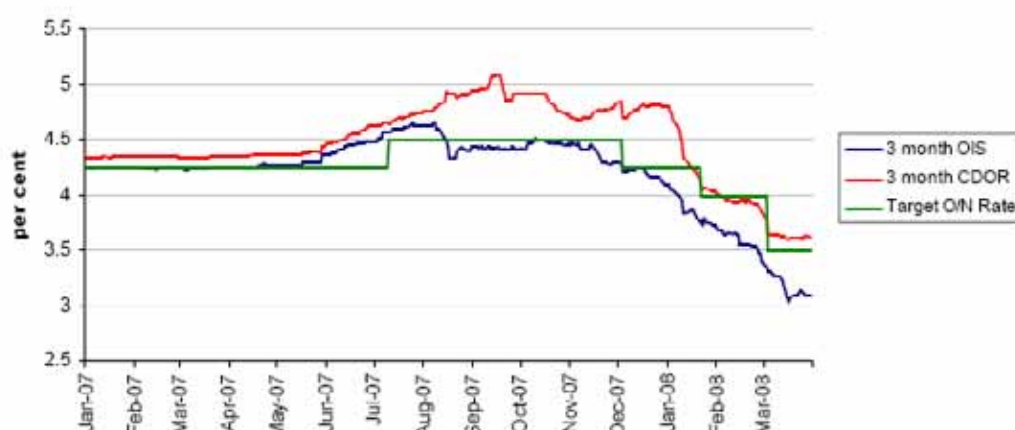
<sup>10</sup> This policy would allow the Bank to widen the range of eligible instruments for its market operations. Furthermore, this widening could occur without necessarily invoking the pre-existing power to do so in circumstances where the Governor declares a situation of severe and unusual stress on a financial market or financial system.

<sup>11</sup> At times, the Bank also carried out sale and repurchase agreements.

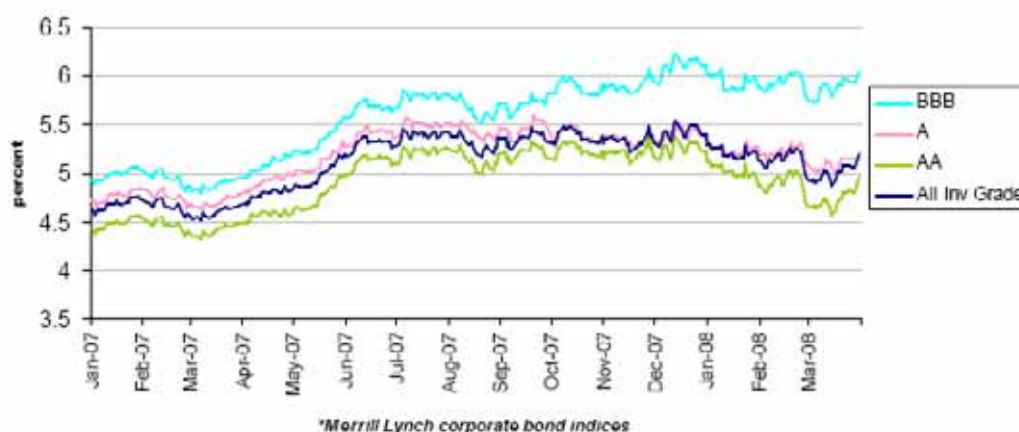


assumed. As well, we stated that there could be a more prolonged slowdown in the U.S. economy. Given the situation, we lowered our policy rate by 25 basis points. In our 4 March policy rate announcement, we indicated that deterioration in economic and financial conditions in the United States could be expected to have significant spillover effects on the global economy. We also said that those developments suggested that important downside risks to Canada's economic outlook, which were identified in the January Update, were materializing and, in some respects, intensifying. In response, we lowered our policy rate by 50 basis points to 3.50 per cent, and said that further monetary stimulus is likely to be required in the near term to keep aggregate supply and demand in balance and to achieve the 2 per cent inflation target over the medium term.

**Chart 5: Money Market Yields**



**Chart 6: Canadian Corporate Yield Levels\***



\*Merrill Lynch corporate bond indices

## Conclusion

I've talked about some of the causes of, and the lessons learned from, the recent financial market turbulence. In particular, as I mentioned at the outset of my remarks, we at the Bank



of Canada are continuing our analysis of the unusually wide credit spreads that we've been seeing and what these mean for the stability of the financial system and, potentially, for the economy, inflation, and monetary policy. It's very clear that these unusual spreads, and the financial market upheaval that exacerbated these spreads, will continue to have an impact for some time to come. We do not know just when or how this turmoil will ultimately be resolved. You can be confident, however, that our focus at the Bank of Canada will remain on our core functions of supporting financial stability, and maintaining consumer price inflation at our 2 per cent target. In this way, we will continue to maintain an anchor for the economy through what will continue to be very interesting times.

Thank you very much for your attention, and now I'll be happy to take your questions.