



BANK OF CANADA  
BANQUE DU CANADA

# Monetary Policy Report

January 2012



# Canada's Inflation-Control Strategy<sup>1</sup>

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## Inflation targeting and the economy

- The Bank's mandate is to conduct monetary policy to promote the economic and financial well-being of Canadians.
- Canada's experience with inflation targeting since 1991 has shown that the best way to foster confidence in the value of money and to contribute to sustained economic growth, employment gains and improved living standards is by keeping inflation low, stable and predictable.
- In 2011, the Government and the Bank of Canada renewed Canada's inflation-control target for a further five-year period, ending 31 December 2016. The target, as measured by the total consumer price index (CPI), remains at the 2 per cent midpoint of the control range of 1 to 3 per cent.

## The monetary policy instrument

- The Bank carries out monetary policy through changes in the target overnight rate of interest.<sup>2</sup> These changes are transmitted to the economy through their influence on market interest rates, domestic asset prices and the exchange rate, which affect total demand for Canadian goods and services. The balance between this demand and the economy's production capacity is, over time, the primary determinant of inflation pressures in the economy.
- Monetary policy actions take time—usually from six to eight quarters—to work their way through the economy and have their full effect on inflation. For this reason, monetary policy must be forward looking.
- Consistent with its commitment to clear, transparent communications, the Bank regularly reports its perspective on the forces at work on the economy and their

implications for inflation. The *Monetary Policy Report* (MPR) is a key element of this approach. Policy decisions are typically announced on eight pre-set days during the year, and full updates of the Bank's outlook, including risks to the projection, are published four times per year in the MPR.

## Inflation targeting is *symmetric* and *flexible*

- Canada's inflation-targeting approach is *symmetric*, which means that the Bank is equally concerned about inflation rising above or falling below the 2 per cent target.
- Canada's inflation-targeting framework is *flexible*. Typically, the Bank seeks to return inflation to target over a horizon of six to eight quarters. However, the most appropriate horizon for returning inflation to target will vary depending on the nature and persistence of the shocks buffeting the economy.

## Monitoring inflation

- In the short run, a good deal of movement in the CPI is caused by fluctuations in the prices of certain volatile components (e.g., fruit and gasoline) and by changes in indirect taxes. For this reason, the Bank also monitors a set of "core" inflation measures, most importantly the CPI-X, which strips out eight of the most volatile CPI components and the effect of indirect taxes on the remaining components. These "core" measures allow the Bank to "look through" temporary price movements and focus on the underlying trend of inflation. In this sense, core inflation is monitored as an *operational guide* to help the Bank achieve the total CPI inflation target. It is not a replacement for it.

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1 See *Joint Statement of the Government of Canada and the Bank of Canada on the Renewal of the Inflation-Control Target* (8 November 2011) and *Renewal of the Inflation-Control Target: Background Information—November 2011*, which are both available on the Bank's website.

2 When interest rates are at the zero lower bound, additional monetary easing to achieve the inflation target can be provided through three unconventional instruments: (i) a *conditional* statement on the future path of the policy rate; (ii) quantitative easing; and (iii) credit easing. These instruments and the principles guiding their use are described in the Annex to the April 2009 *Monetary Policy Report*.

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234 Wellington Street  
Ottawa, Ontario K1A 0G9

Phone: 613 782-8111 or 1 800 303-1282

[info@bankofcanada.ca](mailto:info@bankofcanada.ca)  
[bankofcanada.ca](http://bankofcanada.ca)

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# Monetary Policy Report

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January 2012

This is a report of the Governing Council of the Bank of Canada:  
Mark Carney, Tiff Macklem, John Murray, Timothy Lane, Jean Boivin and Agathe Côté.

This report includes data received up to 13 January 2012.

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Today, our demographics have turned, our productivity growth has slowed and the world is undergoing a competitive deleveraging. We might appear to prosper for a while by consuming beyond our means. Markets may let us do so for longer than we should. But if we yield to this temptation, eventually we, too, will face painful adjustments. It is better to rebalance now from a position of strength; to build the competitiveness and prosperity worthy of our nation.

—Mark Carney

*Governor, Bank of Canada  
12 December 2011  
Toronto, Ontario*

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# Overview

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The outlook for the global economy has deteriorated and uncertainty has increased since October. The sovereign debt crisis in Europe has intensified, conditions in international financial markets have tightened and risk aversion has risen. The recession in Europe is now expected to be deeper and longer than the Bank had anticipated. The Bank continues to assume that European authorities will implement sufficient measures to contain the crisis, although this assumption is clearly subject to downside risks. In the United States, while the rebound in real GDP during the second half of 2011 was stronger than anticipated, the Bank expects the recovery will proceed at a more modest pace going forward, owing to ongoing household deleveraging, fiscal consolidation and the spillovers from Europe. Chinese growth is decelerating, as expected, toward a more sustainable pace. Commodity prices—with the exception of oil—are expected to be below the levels anticipated in October through 2013.

The Bank's overall outlook for the Canadian economy is little changed from October. While the economy had more momentum than anticipated in the second half of 2011, the pace of growth going forward is expected to be more modest than previously envisaged, largely due to the external environment. Prolonged uncertainty about the global economic and financial environment is likely to dampen the rate of growth of business investment, albeit to a still-solid pace. Net exports are expected to contribute little to growth, reflecting moderate foreign demand and ongoing competitiveness challenges, including the persistent strength of the Canadian dollar. In contrast, very favourable financing conditions are expected to buttress consumer spending and housing activity. Household expenditures are expected to remain high relative to GDP and the ratio of household debt to income is projected to rise further.

The Bank estimates that the economy grew by 2.4 per cent in 2011 and projects that it will grow by 2.0 per cent in 2012 and 2.8 per cent in 2013. While the economy appears to be operating with less slack than previously assumed, given the more modest growth profile, the economy is only anticipated to return to full capacity by the third quarter of 2013, one quarter earlier than was expected in October.

The dynamics for inflation are similar to those anticipated in October, although the profile for inflation is marginally firmer. Both total and core inflation are expected to moderate in 2012 and subsequently rise, reaching 2 per cent by the third quarter of 2013 as excess supply is slowly absorbed,

labour compensation grows modestly and inflation expectations remain well-anchored.

Several significant upside and downside risks are present in the inflation outlook for Canada.

The three main upside risks to inflation in Canada relate to the possibility of stronger-than-expected inflationary pressures in the global economy, stronger-than-expected growth in the U.S. economy and stronger momentum in Canadian household spending.

The two main downside risks to inflation in Canada relate to sovereign debt and banking concerns in Europe and the possibility that growth in Canadian household spending could be weaker than projected.

Overall, the Bank judges that these risks are roughly balanced over the projection horizon.

Reflecting all of these factors, on 17 January, the Bank maintained the target for the overnight rate at 1 per cent. With the target interest rate near historic lows and the financial system functioning well, there is considerable monetary policy stimulus in Canada. The Bank will continue to monitor carefully economic and financial developments in the Canadian and global economies, together with the evolution of risks, and set monetary policy consistent with achieving the 2 per cent inflation target over the medium term.



# The Global Economy

The outlook for the global economy has deteriorated and uncertainty has increased since the October *Monetary Policy Report* (**Table 1**). The sovereign debt crisis in Europe and the associated pressures on the banking sector have intensified, and the global ramifications through financial, trade and confidence effects are expanding. Conditions in international financial markets have tightened and risk aversion has increased, weighing on the prospects for global economic growth. Limited progress in rebalancing world demand is also contributing to the global slowdown as deficient demand in the major advanced economies is not being sufficiently offset by increased demand from emerging-market economies. Overall, global economic growth is projected to average roughly 3 per cent per year through 2013.

*Since October, the outlook for the global economy has deteriorated and uncertainty has increased*

**Table 1: Projection for global economic growth**

	Share of real global GDP <sup>a</sup> (per cent)	Projected growth (per cent) <sup>b</sup>			
		2010	2011	2012	2013
United States	21	3.0 (3.0)	1.8 (1.7)	2.0 (1.7)	2.2 (3.3)
Euro area	16	1.8 (1.7)	1.5 (1.5)	-1.0 (0.2)	0.9 (1.5)
Japan	6	4.5 (4.0)	-0.8 (-0.6)	1.9 (2.0)	1.7 (2.5)
China	11	10.4 (10.4)	9.1 (9.1)	8.2 (8.2)	8.0 (8.2)
Rest of the world	46	5.8 (5.7)	4.2 (4.3)	3.1 (3.3)	3.2 (3.4)
<b>World</b>	<b>100</b>	<b>5.2 (5.1)</b>	<b>3.7 (3.8)</b>	<b>2.9 (3.1)</b>	<b>3.3 (3.7)</b>

a. GDP shares are based on IMF estimates of the purchasing-power-parity (PPP) valuation of country GDPs for 2010. Source: IMF, WEO, September 2011

b. Numbers in parentheses are projections used for the October 2011 *Monetary Policy Report*.

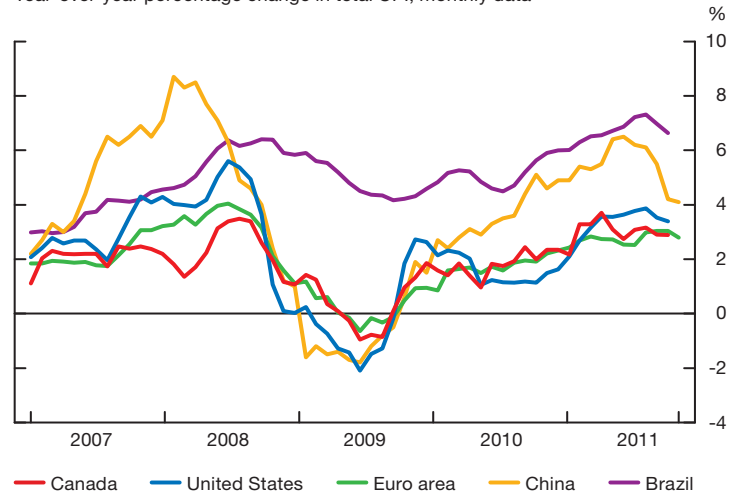
Source: Bank of Canada

The recession in the euro area is now expected to last longer and to be somewhat deeper than anticipated in the October *Report*, owing to tighter credit conditions, additional fiscal austerity measures and more negative confidence effects. The Bank's base-case scenario assumes that European authorities will implement the measures required to contain the crisis, thus supporting a gradual recovery in economic growth beginning in late 2012. In the United States, economic conditions have improved in recent months, with better-than-anticipated growth in real GDP in the second half of 2011 and some recovery in consumer confidence. Nonetheless, growth in U.S. economic activity is expected to be relatively modest through 2013, owing to ongoing household deleveraging, fiscal consolidation and negative spillover effects from the European crisis. Growth in emerging-market economies has slowed,

*The recession in the euro area is now expected to last longer and to be somewhat deeper*

### Chart 1: Global inflation pressures have begun to moderate

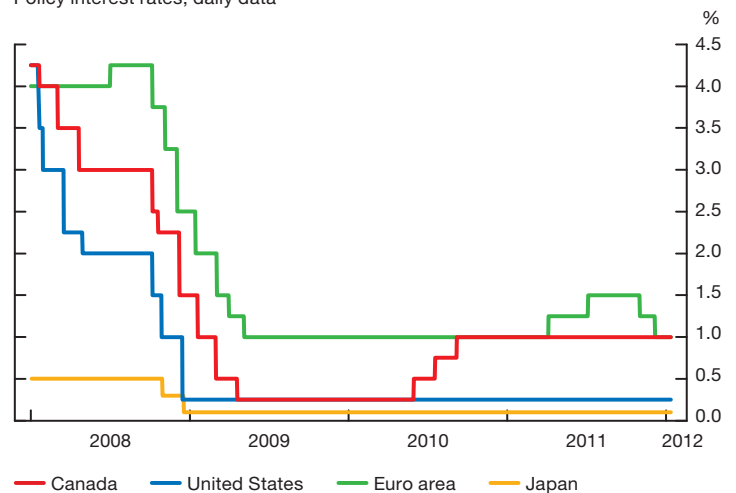
Year-over-year percentage change in total CPI, monthly data



Sources: Statistics Canada, U.S. Bureau of Labor Statistics, Eurostat, National Bureau of Statistics of China and Instituto Brasileiro de Geografia e Estatística Last observations: November and December 2011

### Chart 2: Central banks in some advanced economies have provided further monetary stimulus

Policy interest rates, daily data



Note: On 5 October 2010, the Bank of Japan changed the target for its policy rate from 0.1 per cent to a range of 0.0 to 0.1 per cent. The U.S. Federal Reserve has been maintaining a target range for its policy rate of 0.0 to 0.25 per cent since 16 December 2008.

Sources: Bank of Canada, U.S. Federal Reserve, European Central Bank and Bank of Japan

Last observation: 13 January 2012

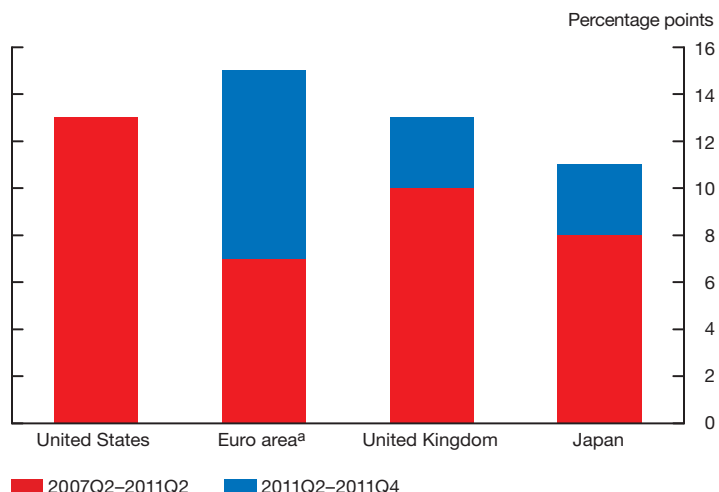
*In the United States, economic conditions have improved in recent months*

as expected, and is projected to moderate further toward a more sustainable—yet still robust—pace, in response to past tightening in domestic monetary policy and weaker global demand. Declines in commodity prices in the second half of last year and decreasing momentum in the global economy have begun to dampen inflation pressures (**Chart 1**).

Faced with subdued prospects for growth and diminishing inflation pressures, central banks in some advanced economies have provided additional monetary stimulus by lowering policy interest rates or engaging in further quantitative easing (**Chart 2** and **Chart 3**). They have also adopted additional measures to provide liquidity support to the financial system. Central banks in a number of emerging-market economies have also begun to loosen monetary policy, reversing earlier policy tightening.

**Chart 3: Some central banks have expanded their balance sheets further**

Change in total central bank assets relative to GDP



a. The bar for the euro area represents balance-sheet changes of the European Central Bank and national central banks of those European member states whose currency is the euro.

Sources: U.S. Bureau of Economic Analysis; U.S. Federal Reserve; Eurostat; European Central Bank; U.K. Office for National Statistics; Bank of England; Cabinet Office, Government of Japan; and Bank of Japan

Last observation: 2011Q4

## Global Financial Conditions

Conditions in global financial markets have tightened in recent months as the sovereign debt crisis in the euro area has deepened and banking sector stress has remained elevated. Tensions in euro-area government debt markets have escalated since the *October Report*. Bond spreads in some of the region's largest economies have risen, and yields for most of the peripheral sovereigns have reached post-euro record highs (**Chart 4** and **Chart 5**). In contrast, yields on government bonds in the United States, Germany and a number of other developed economies have continued to fall as investors shift toward safer and more-liquid assets (**Chart 6**).

Conditions in global short-term bank funding markets have generally deteriorated because of developments in Europe.<sup>1</sup> In particular, most European banks have been shut out of unsecured term-funding markets (**Technical Box 1**) in light of their significant exposure to euro-area sovereign debt, large recapitalization needs and major funding requirements. As a result, the European Central Bank (ECB) has provided increased liquidity to the European banking system against an expanded range of eligible collateral for periods of up to three years. European banks have also experienced severe difficulty accessing U.S.-dollar funds to finance their foreign-denominated assets. To alleviate these funding pressures, existing arrangements for temporary U.S.-dollar liquidity swaps between the U.S. Federal Reserve and five major central banks have been extended, and the rate on these arrangements has been reduced.<sup>2</sup> As a contingency measure, these central banks have also agreed to establish a network of temporary bilateral liquidity swap arrangements so that liquidity can be provided in each jurisdiction, in any of their currencies, should market conditions warrant.

*Conditions in global financial markets have tightened in recent months*

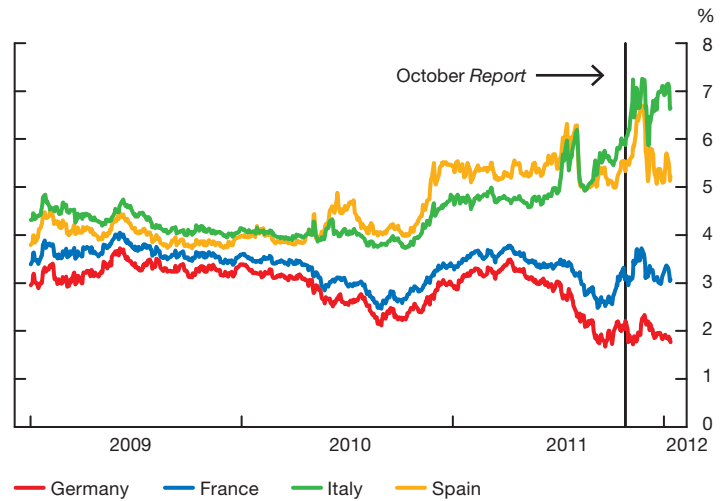
*Investors have shifted toward safer and more-liquid assets*

<sup>1</sup> The difference between interbank offered rates and their respective overnight index swap rates has reached its highest level since July 2009 in both the United States and Europe.

<sup>2</sup> The five major central banks are the European Central Bank and the central banks of the United Kingdom, Japan, Switzerland and Canada. The swap arrangements between these banks and the U.S. Federal Reserve were extended through 1 February 2013, and the rate on any drawing was reduced by 50 basis points.

#### Chart 4: Tensions have escalated in funding markets for some larger euro-area sovereigns ...

Yields on 10-year sovereign bonds, daily data

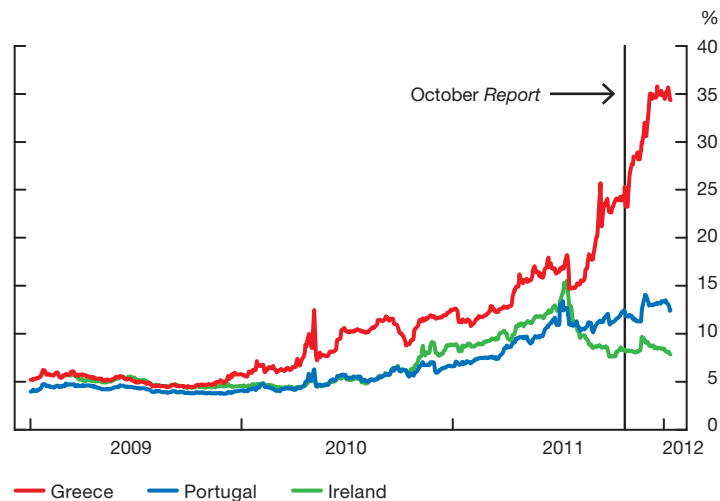


Source: Bloomberg

Last observation: 13 January 2012

#### Chart 5: ... while bond yields for most euro-area peripheral sovereigns have reached record highs

Yields on 10-year sovereign bonds, daily data



Note: Due to data limitations, yields on 9-year sovereign bonds are used for Ireland.

Source: Bloomberg

Last observation: 13 January 2012

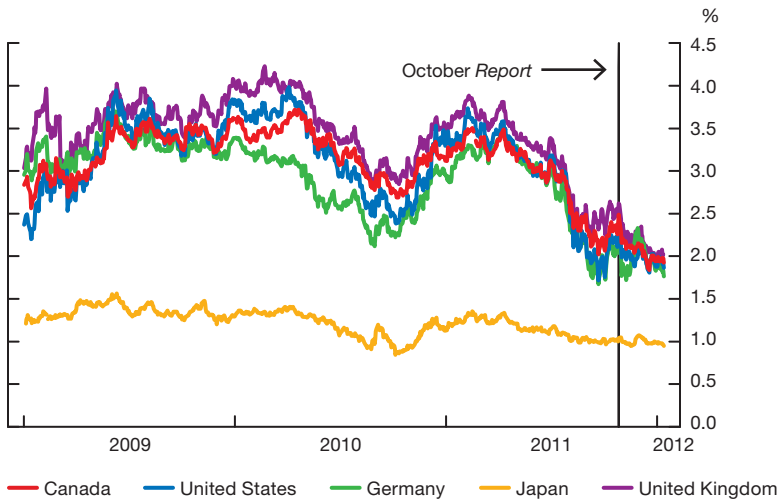
Rising investor anxiety has also affected other asset classes, albeit to a lesser extent. Issuance of U.S. corporate debt has rebounded since the *October Report*, although credit spreads have remained at wider levels than in the first half of 2011. Global equity indexes are generally unchanged since late October but have shown considerable volatility (**Chart 7**), while European financial subindexes have declined significantly.

The deterioration in financial conditions is projected to persist for some time and to be increasingly transmitted to households and businesses through tighter borrowing conditions. Financial conditions are expected to improve in 2013, supported by a rebound in global economic activity.

*The deterioration in financial conditions is projected to persist for some time*

**Chart 6: Government bond yields in major economies have declined since the last Report**

Yields on 10-year government bonds, daily data

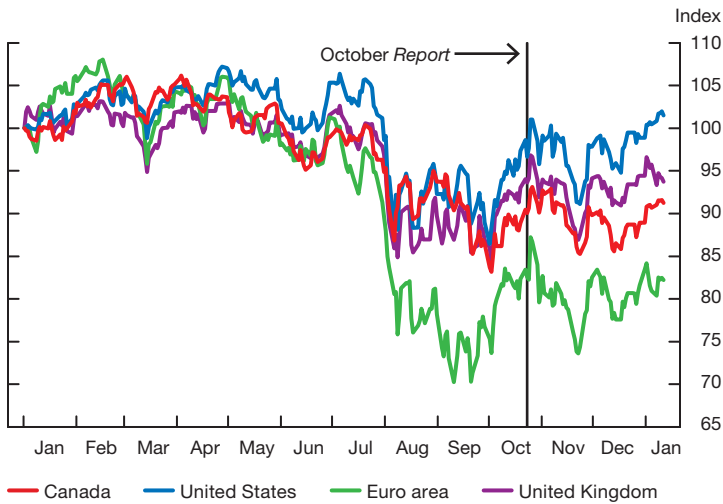


Source: Bloomberg

Last observation: 13 January 2012

**Chart 7: Equity indexes have shown considerable volatility since October**

Indexes (1 January 2011 = 100), daily data



Source: Bloomberg

Last observation: 13 January 2012

## Euro-Area Financial Conditions and Spillover Effects

Concerns about the impact of the sovereign debt crisis on European banks have escalated. Banks from crisis countries have relied heavily on borrowing from the European Central Bank (ECB), since many of them cannot access unsecured funding markets (**Chart 1-A**). Moreover, the strong response to the ECB's three-year liquidity operation in December suggests that an increasing number of European banks face funding strains. They also continue to experience severe U.S.-dollar funding pressures, as evidenced by the rising cost of borrowing U.S. dollars on the foreign exchange swap market (**Chart 1-B**).

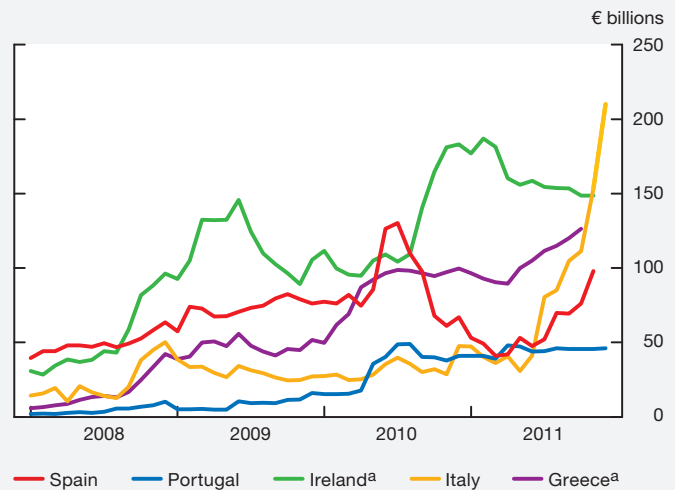
The spillovers into North American bank funding markets have thus far been relatively contained. Nevertheless, there is evidence of credit tiering for U.S. banks in unsecured term-funding markets. Moreover, the timing and pricing of new debt issues have been heavily influenced by shifting sentiments in global markets. Canadian banks continue to have solid access to term-funding markets, both in Canadian and U.S. dollars.

Thus far, the impact on global financial conditions from the strains in Europe has consisted mostly of a general retrenchment from risk-taking. Over the projection period, the impact is expected to become more widespread, however, and to take the form of increased funding pressures, adverse confidence effects and reduced availability of credit. In particular, deteriorating funding conditions are projected to push banks to restrict access to credit for households and businesses in Europe and the United States, adding to the drag on economic growth.<sup>1</sup>

To alleviate concerns over bank solvency, European authorities have required banks to increase their core Tier 1 capital ratios to 9 per cent by the end of June 2012. To improve their capital positions in a difficult environment for raising capital from private sources, a number of European banks have announced plans to sell assets, notably in their "non-core" business lines (e.g., capital market activities, investment banking and lending in "non-core" markets).<sup>2</sup> Balance-sheet deleveraging by European banks is projected to affect financial and economic conditions, both in the euro area and globally. Eastern European countries are particularly vulnerable to a decline in credit supply, since Western European

banks provide close to 40 per cent of their total credit (**Table 1-A**). With European banks accounting for a noticeable share of total lending in the United States, especially for business credit, the U.S. supply of credit is also expected to decline. This drop, in combination with confidence effects

**Chart 1-A: Banks from euro-area crisis countries have relied heavily on borrowing from the European Central Bank**

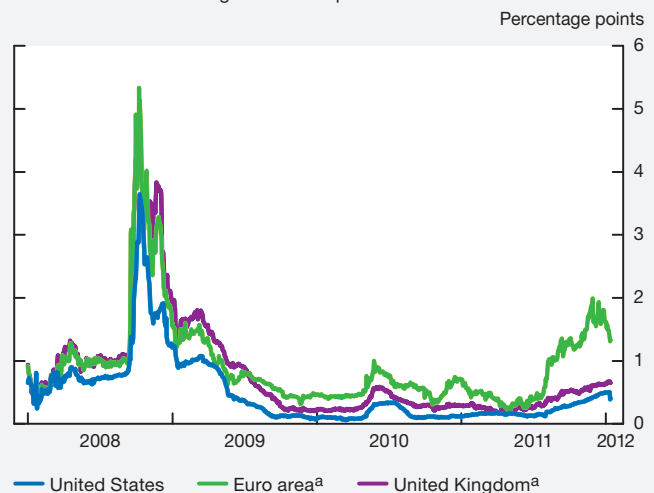


a. For Ireland and Greece, the figures include both liquidity provided through refinancing operations and liquidity provided by national central banks through their Emergency Liquidity Assistance programs.

Sources: Banco de España, Banco de Portugal, Central Bank of Ireland, Bank of Greece and Banca d'Italia  
 Last observations: December 2011 for Italy and Portugal, November 2011 for Spain and Ireland, October 2011 for Greece

**Chart 1-B: U.S.-dollar funding markets for European banks are experiencing acute tensions**

Spreads between 3-month U.S.-dollar bank borrowing rates and U.S. 3-month overnight index swaps



a. Implied borrowing rates  
 Source: Bloomberg  
 Last observation: 13 January 2012

**1** The October 2011 euro-area Bank Lending Survey indicates that euro-area banks have tightened their lending standards.  
**2** The European Banking Authority estimates that European banks face a total capital shortfall of €114.7 billion to achieve the 9 per cent target for their core Tier 1 capital ratios. This new figure is slightly higher than the €106 billion estimate released at the end of October, with German banks experiencing the largest increase. In an extreme scenario where banks would aim to achieve this target only by selling assets (i.e., without raising equity or using retained earnings to boost their capital positions), they could sell up to €2.8 trillion of assets.

## Technical Box 1 (continued)

and weaker economic prospects, is projected to constrain growth in business investment.<sup>3</sup>

Overall, the crisis in the euro area is projected to dampen global economic growth considerably, reducing the level of

<sup>3</sup> The Federal Reserve's 2011Q3 Senior Loan Officer Opinion Survey suggests that, to date, signs of tightening have been observed for foreign banks only (for lending standards on commercial and industrial loans).

world GDP by somewhat more than 1 per cent by the end of 2012, including reductions of 0.8 per cent in the United States and 0.6 per cent in Canada. These estimates include both direct trade effects and indirect spillovers owing to increased funding pressures, lower confidence and reduced availability of credit.

**Table 1-A: Foreign claims of European banks on selected countries or groups of countries (2011Q2)**

Aggregate foreign claims of European banks	Eastern European emerging-market economies <sup>a</sup>			Brazil, Russia, India and China			United States		
	Total	On banks	On non-bank private sector	Total	On banks	On non-bank private sector	Total	On banks	On non-bank private sector
As a percentage of total credit <sup>b</sup>	38.0	4.6	23.3	6.4	1.6	3.4	17.6	3.3	10.7
US\$ millions	654,552	79,992	400,443	999,222	247,728	525,846	3,782,796	705,590	2,303,319

a. Czech Republic, Poland and Turkey

b. Total credit is calculated as the sum of domestic credit (IMF data) and the total foreign claims of the 24 reporting countries (BIS data).

Sources: International Monetary Fund *International Financial Statistics* and Bank for International Settlements

## Euro Area

Recent economic indicators suggest that the euro area entered a recession in the fourth quarter of 2011. Purchasing managers indexes have fallen below the threshold that divides growth from contraction (**Chart 8**), and confidence indicators have declined to levels typically seen during recessions. Unemployment rates have started to rise (particularly in the periphery) from already-elevated levels. Worsening economic conditions and increased borrowing costs have further weakened public finances and heightened concerns about bank balance sheets, even though a number of countries, including France, Italy and Spain, have adopted additional fiscal austerity and structural reform measures (**Technical Box 2**). Faced with higher funding costs, European banks are restricting access to credit and charging higher interest rates on loans to businesses and households (**Chart 9**). The adverse feedback loop between economic weakness, sovereign debt vulnerabilities and financial sector strains has thus become more entrenched. Growing excess supply and declines in commodity prices are expected to dampen inflation pressures throughout most of the region.

In addition to measures aimed at supporting the financial system, the ECB has reduced its policy interest rate by 50 basis points, given the recent deterioration in economic activity. In an effort to restore financial stability and confidence, European policy-makers have announced a number of initiatives, including increased private sector debt relief for Greece, a higher requirement for core Tier 1 capital ratios for banks, an earlier starting date for the European Stability Mechanism and a new Fiscal Compact to enhance fiscal discipline.<sup>3</sup>

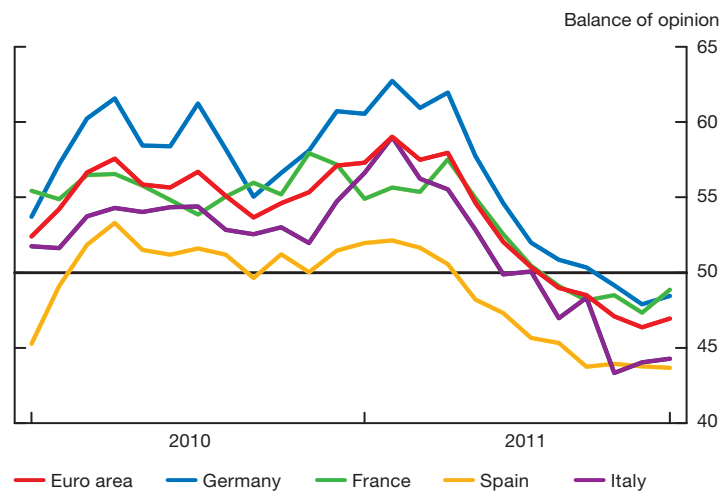
Economic prospects in the euro area have diminished further since the *October Report* and continue to be subject to a high degree of uncertainty. The Bank's base-case projection assumes that European authorities will

*Recent economic indicators suggest that the euro area has entered a recession*

<sup>3</sup> Annual structural deficits of euro-area member states would be constrained to a maximum of 0.5 per cent of GDP. This rule has not yet been ratified at the individual country level.

**Chart 8: In the euro area, purchasing managers indexes point to a contraction in activity**

Manufacturing purchasing managers indexes, monthly data



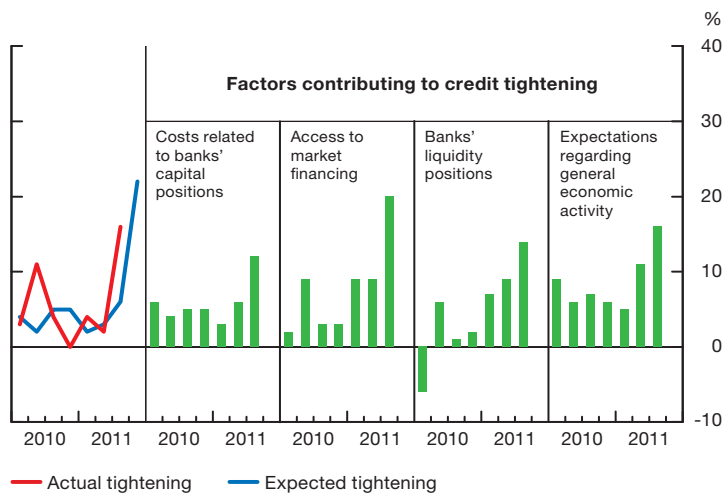
Note: The purchasing managers index (PMI) is a composite diffusion index of manufacturing conditions. A reading above (below) 50 indicates an improvement (a deterioration) in overall business conditions in the manufacturing sector compared with the previous month.

Source: Markit

Last observation: December 2011

**Chart 9: Euro-area banks are restricting access to credit**

Net percentages of banks contributing to credit tightening for enterprises



Note: Data reflect responses to the euro-area Bank Lending Survey. "Actual tightening" refers to the tightening that has already occurred, while "expected tightening" refers to the additional tightening anticipated by banks.

Source: European Central Bank

Last observation: 2011Q3

implement sufficient measures to contain the crisis, although this assumption is clearly subject to downside risks. The ongoing recession is expected to last four quarters, resulting in a peak-to-trough decline in economic activity of close to 1.5 per cent. Deteriorating financial conditions, bank deleveraging, fiscal consolidation and large negative confidence effects are expected to lead to a contraction in domestic demand in 2012, and growth in exports is projected to slow notably, owing to weaker global demand. Economic outcomes are expected to vary widely across countries, however, with subdued growth in the core economies and a significant contraction in the periphery. A modest recovery is expected to begin in the euro area in late 2012 as financing conditions begin to improve and confidence gradually



## Fiscal Austerity in the Euro Area

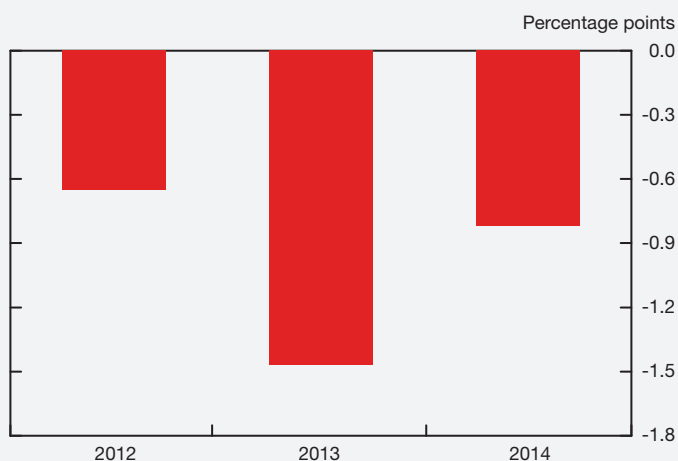
From an aggregate perspective, the euro area's public debt burden is lower than that of the United States and Japan. However, many individual countries have high public deficits and public debt levels well above 90 per cent of GDP.<sup>1</sup> Similarly, while the aggregate current account deficit for the whole euro area is about 0.5 per cent of GDP, with a small net negative international investment position, there are significant variations at the country level (**Table 2-A**). Notably, some of the peripheral countries have had large negative net international investment positions of more than 20 per cent of GDP and sizable current account deficits, often in excess of 5 per cent of GDP, although these current account deficits have decreased markedly in recent months.

Elevated debt levels, lack of competitiveness, prospects of sluggish growth and deteriorating fiscal positions (owing in part to upcoming age-related pressures) have led to substantial increases in sovereign borrowing costs and, consequently, to banking sector stress in many euro-area countries. To restore fiscal balance, most euro-area countries are introducing additional measures to promote fiscal austerity and structural reforms to generate growth and ensure a sustainable debt path.<sup>2</sup> Announced austerity plans include a mix of pension reforms, tax increases and reductions in government spending, including lower public sector employment. Government spending cuts account for most of the planned fiscal adjustment, but sizable tax

- 1 C. Reinhart and K. Rogoff find that debt starts to have adverse effects on growth when it exceeds 90 per cent of GDP ("Growth in a Time of Debt," *American Economic Review* 100, no. 2 (2010): 573–78.)
- 2 Moreover, increased fiscal discipline is being considered for the whole European Union, with the most recent EU summit calling for additional fiscal rules with greater centralized oversight of national budgets.

**Chart 2-A: Fiscal austerity measures are expected to reduce euro-area GDP growth in coming years**

Contribution to real GDP growth in percentage points, annual data



Source: Bank of Canada calculations and projections

increases are being enacted in several countries as well. Structural reforms, announced or planned, generally focus on improving competition in product markets and flexibility in labour markets.

Fiscal and structural reform policies will ultimately enhance euro-area growth by reducing borrowing costs, increasing the flexibility of the economy and improving productivity. In the near term, however, the prospects for economic growth in the euro area are already weak, and tightening fiscal policy will result in even slower growth. As **Chart 2-A** shows, fiscal austerity creates a significant drag on GDP growth in

(continued)

**Table 2-A: Euro-area internal imbalances have led to sizable fiscal-adjustment programs**

Country	General government deficit, 2010 (% of GDP)	Gross debt, 2010 (% of GDP)	Average current account surplus/deficit, 2005–10 (% of GDP)	10-year bond spread relative to Germany (basis points) <sup>a</sup>	Change in 10-year bond spread since 3 January 2011 (basis points) <sup>a</sup>	Total size of announced fiscal adjustment, 2012–14 (% of GDP) <sup>b</sup>
Italy	4.5	119	-2	486	305	7
Ireland <sup>c</sup>	32.0	95	-3	476	-89	8
Spain	9.2	60	-8	343	94	4 <sup>d</sup>
Greece	10.4	143	-12	2,957	1,997	12
Portugal	9.1	93	-11	1,016	646	8
Germany	3.3	84	6	--	--	3
France	7.1	82	-1	130	88	4

a. As of 13 January 2012

b. Figures for fiscal adjustments as a share of GDP are Bank of Canada calculations based on national government announcements, as well as IMF and OECD sources.

c. Due to data limitations, yields on 9-year sovereign bonds are used for Ireland.

d. Note that more recent announcements are not included in this figure, as details have not been provided.

Sources: IMF World Economic Outlook database, September 2011, and Eurostat

the Bank's outlook, removing about 0.7 percentage points from euro-area growth in 2012, 1.5 percentage points in 2013 and 0.8 percentage points in 2014.<sup>3</sup> In light of this deficiency in demand, the global rotation of demand (and hence greater demand for European exports) will be critical to support growth in the euro area during this period.

The negative effects from austerity are not necessarily limited to their immediate impact on GDP—there is a risk that a negative feedback loop between weak economic growth, declining tax revenues, stress in the banking sector and rising borrowing costs could become more severe. Negative shocks

<sup>3</sup> Note that fiscal austerity will have a net negative effect on growth relative to a scenario where delayed fiscal consolidation does not negatively affect growth.

to growth will lower tax revenues and may raise borrowing costs, exacerbating government deficits and increasing pressures on euro-area banks (since they have large exposures to sovereign debt). This in turn could create a need for greater austerity, which would further reduce GDP growth.

Conversely, if too little fiscal consolidation is implemented, the outcome could be much worse. Insufficient or non-credible commitments to fiscal and structural reforms risk loss of investor confidence and a rapid escalation of borrowing costs. Such a scenario would likely entail an even deeper recession and, ultimately, the need for more severe fiscal tightening and even debt writedowns.

This dilemma underscores the importance of structural reforms to boost growth.

recovers in response to the implementation of required policy measures and structural reforms. Overall, relative to expectations in the *October Report*, the level of real GDP in the euro area is projected to be about 1 per cent lower at the end of 2013.

## United States

Recent economic activity in the United States has been stronger than anticipated. Boosted by higher consumer spending and business investment, growth in real GDP rebounded to approximately 2.5 per cent in the second half of 2011. Despite this positive surprise, the U.S. recovery is expected to proceed at a more modest pace through 2012–13, with GDP growth averaging roughly 2 per cent per year, owing to headwinds from household deleveraging, fiscal consolidation and spillover effects from the European crisis.

U.S. inflation pressures are projected to decrease in response to lower commodity prices and significant excess capacity. As a result, the Federal Reserve is expected to maintain very accommodative monetary conditions. Average annual GDP growth in the United States is projected to be slightly stronger in 2012 than anticipated in the *October Report*, mainly reflecting the rebound in growth in the second half of 2011 and reduced fiscal tightening. Growth in 2013 is, however, expected to be significantly weaker.

Fiscal consolidation is projected to exert a drag on U.S. real GDP growth amounting to about 0.8 percentage points in 2012 and about 2.5 percentage points in 2013 (**Chart 10**). The estimated impact in 2012 is smaller than was anticipated in the *October Report*, given improved prospects for the extension of the payroll tax cuts and unemployment insurance benefits that were scheduled to expire at the end of 2011.<sup>4</sup> The estimated drag in 2013 is larger,

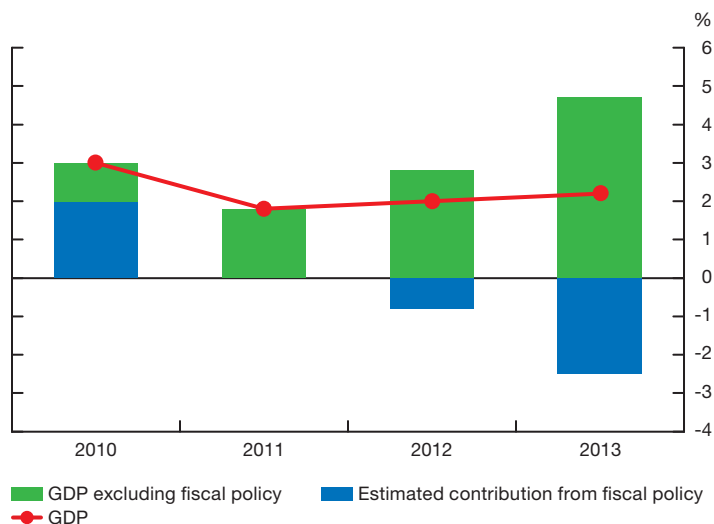
*Growth in U.S. real GDP rebounded in the second half of 2011, but is expected to proceed at a more modest pace*

*Fiscal consolidation is projected to exert a drag on U.S. real GDP growth*

<sup>4</sup> Although these measures have been renewed for two months, the Bank's base-case scenario now assumes that they will be extended to the end of 2012.

**Chart 10: Fiscal consolidation is projected to exert a drag on U.S. real GDP growth**

Annual data



Note: The contribution of fiscal policy to growth includes both direct government expenditures and the indirect effects on other components of aggregate demand.

Sources: U.S. Bureau of Economic Analysis and Bank of Canada calculations and projections

however, reflecting the impact of spending cuts that are assumed to take place during 2013.<sup>5</sup>

Consumption growth has been supported in recent months by declines in commodity prices from the peaks observed a year ago, as well as by an improvement in consumer confidence and the increased availability of motor vehicles at U.S. dealerships following the restoration of Japanese supply chains. Growth in personal disposable income has remained weak, however, and the savings rate has fallen below the 5 per cent to 6 per cent range that the Bank expects will be needed to rebuild household balance sheets over the medium term (**Chart 11**). U.S. consumption is therefore expected to grow more modestly through 2013, as households renew efforts to repair their balance sheets in an environment of slowly improving labour market conditions and a persistent drag on incomes due to fiscal consolidation (**Chart 12**). In addition, U.S. banks are projected to tighten lending standards for consumers and businesses in reaction to increased funding costs related to the European crisis.

Restricted access to mortgage credit, together with an elevated inventory of foreclosed properties, is expected to keep the construction of new homes at a low level during most of 2012. Tighter financial conditions and high vacancy rates should also limit growth in the construction of non-residential structures over this period. A modest recovery is projected in both residential and non-residential construction toward the end of 2012, when financial conditions are expected to improve.

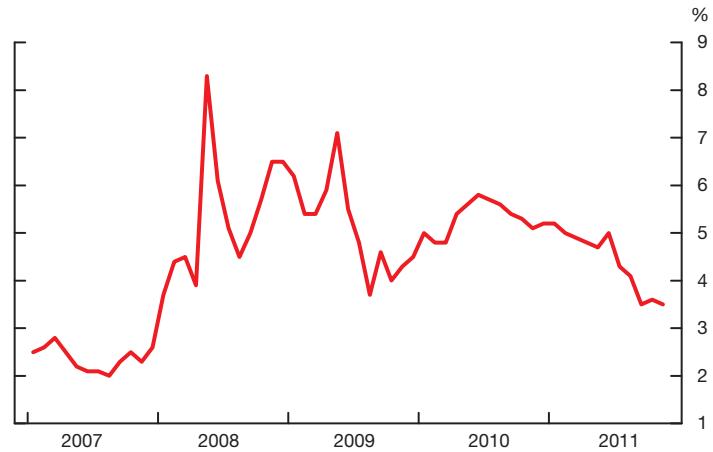
Exports and business investment in equipment and software are expected to continue to be important drivers of U.S. economic growth over the projection horizon, although their contribution is projected to decrease somewhat in 2012. Indeed, despite support from healthy corporate balance sheets, growth in

*Exports and business investment in equipment and software are expected to continue to be important drivers of U.S. economic growth*

<sup>5</sup> In November 2011, the Joint Select Committee on Deficit Reduction announced that it had failed to agree on measures to lower the U.S. budget deficit by a minimum of US\$1.2 trillion over the next nine years. As a result, sequestration of this amount has been triggered. According to the Budget Control Act of 2011, these cuts are to be implemented evenly between 2013 and 2021.

**Chart 11: The U.S. savings rate has fallen below the level consistent with rebuilding household balance sheets<sup>a</sup>**

Personal savings as a percentage of personal disposable income, monthly data



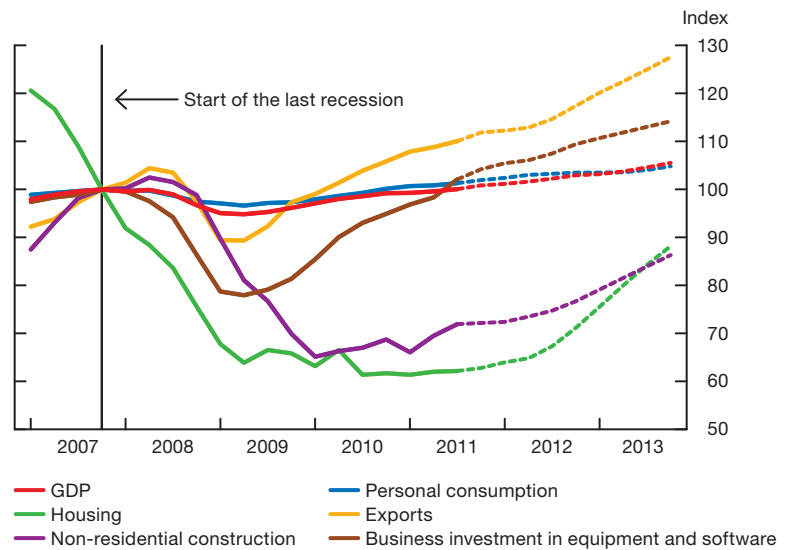
a. A savings rate of 5 per cent to 6 per cent is considered by the Bank to be consistent with the repair of U.S. household balance sheets over time.

Source: U.S. Bureau of Economic Analysis

Last observation: November 2011

**Chart 12: U.S. consumption is expected to grow modestly through 2013**

Index: 2007Q4 = 100, chained 2005 U.S. dollars, quarterly data



Note: Dotted lines indicate projections.

Sources: U.S. Bureau of Economic Analysis and Bank of Canada calculations and projections

business investment is expected to be constrained during the year by uncertainty over prospects for future growth, tightening financial conditions and low rates of resource utilization. The pace of expansion in business investment is projected to improve in 2013 once these effects begin to dissipate.

Growth in exports is expected to slow in 2012, owing to weaker growth in global demand as well as the recent appreciation of the U.S. dollar, which partly reflected international investor demand for the safety and liquidity of U.S. Treasury securities. Exports are projected to recover somewhat in 2013, however, in response to a gradual strengthening in external demand.

## Other Advanced Economies

In Japan, activity related to reconstruction helped boost the growth of real GDP to 5.6 per cent in the third quarter of 2011. Real GDP growth moderated sharply in the fourth quarter of last year, however, and is projected to average less than 2.0 per cent per year through 2013 as the impetus from the rebuilding of infrastructure wanes. At the same time, slowing external demand and the recent sharp appreciation of the yen are expected to weigh on export growth. In reaction to the deceleration in economic activity, the Bank of Japan has further expanded the size of its asset-purchase program. The central bank also intervened in foreign exchange markets at the end of October to limit the rise of the yen.

Real GDP growth in other advanced economies has slowed recently and is expected to be subdued in coming quarters, reflecting a weakening in external demand, declining household and business confidence, and continued drag from fiscal consolidation. To counter the deterioration in economic conditions, monetary authorities in a number of countries, including Australia, Norway and Sweden, have lowered their policy interest rates. Some economies with significant trade and financial links with the euro area could experience a recession. Economic activity is expected to gather momentum toward the end of 2012, supported by a modest recovery in global growth and an improvement in confidence.

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*Real GDP growth in Japan is projected to average less than 2.0 per cent per year through 2013 as the impetus from the rebuilding of infrastructure wanes*

## Emerging-Market Economies

Economic growth in China decelerated to 9.1 per cent in the third quarter of 2011 in response to the past tightening in monetary policy and slowing external demand, especially from Europe, its most important trading partner. Measures undertaken by the authorities to cool activity in the real estate sector have led to a softening in housing demand and a fall in property prices. Moderating food prices contributed to a marked decline in the overall inflation rate to 4.1 per cent in December from a recent peak of 6.5 per cent in July. With inflation pressures easing, Chinese authorities have shifted toward a more accommodative monetary policy stance and in December lowered the reserve requirement ratio for financial institutions by 50 basis points. Growth in real GDP is nevertheless projected to moderate to around 8 per cent over 2012–13. Structural reforms and a modest appreciation of the Chinese real exchange rate are expected to support a gradual rotation of demand away from investment and exports and toward consumption.

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*Economic growth in China decelerated to 9.1 per cent in the third quarter*

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*With inflation pressures easing, Chinese authorities have shifted toward a more accommodative monetary policy stance*

Despite some slowing due to a moderation in global demand, real GDP growth in other emerging-market economies is expected to remain relatively strong, supported by an easing in monetary policy. This generally positive outlook is tempered, however, by the effects of increased risk aversion in global financial markets, which has led to capital outflows from some emerging-market economies, implying some tightening in credit conditions. Growth is projected to slow particularly rapidly in the countries of Central and Eastern Europe, since their exports are directed principally toward Europe and their financial systems are heavily dominated by Western European banks.

## Commodity Prices

Prices for non-energy commodities are essentially unchanged since the October *Report*. While the prices of base metals and agricultural commodities have recovered somewhat in recent weeks following declines in late 2011, the prices of non-energy commodities are projected to fall in 2012 in

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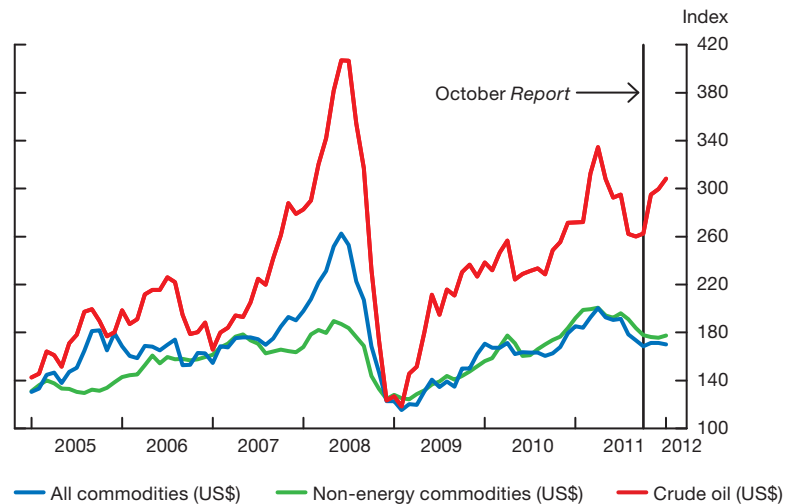
*Prices of non-energy commodities are projected to fall in 2012*

reaction to diminished prospects for global economic growth, before partially recovering in 2013 when global demand conditions begin to improve (**Chart 13**). This profile is lower over the projection horizon than had been anticipated in October.

Prices for energy commodities have been mixed in recent months. Prices for West Texas Intermediate (WTI) crude oil have rebounded to roughly US\$100 per barrel, reflecting low global inventories and geopolitical tensions.

**Chart 13: Prices for non-energy commodities have changed little since the October Report, but oil prices have increased**

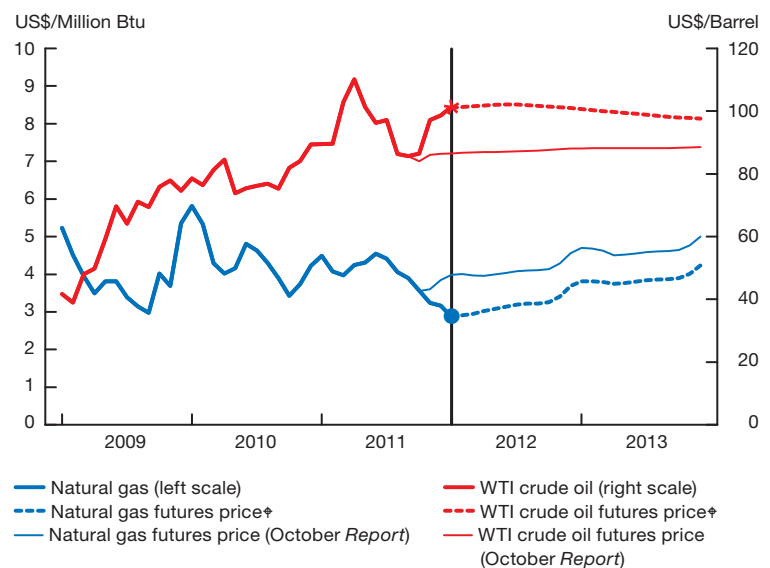
Bank of Canada commodity price index (rebased to January 2003 = 100), monthly data



Note: Values in January 2012 are estimates based on the average daily spot prices up to 13 January 2012.  
Source: Bank of Canada Last observation: January 2012

**Chart 14: Prices for natural gas are projected to rise through 2013, but WTI oil prices are expected to decline**

Monthly data



\* Spot price for crude oil (13 January 2012)  
● Spot price for natural gas (13 January 2012)  
‡ Based on an average of futures contracts over the two weeks ending 13 January 2012  
Note: Values for crude oil and natural gas prices in January 2012 are estimates based on the average daily spot prices up to 13 January 2012.  
Source: NYMEX

In addition, improved prospects for alleviating the inventory overhang in Cushing have led to a narrowing in the WTI-Brent spread to around US\$10 per barrel from US\$24 per barrel in October. The latest futures curve suggests that WTI crude prices are projected to ease modestly through the end of 2013, although prices are expected to remain above the levels anticipated at the time of the *October Report* (**Chart 14**). In contrast, natural gas prices in North America have fallen sharply in response to unseasonably warm weather, in an environment of persistent excess supply. While prices are projected to recover through 2013 based on the latest futures curve, the level of natural gas prices is expected to remain lower through 2013 than anticipated in the *October Report*.

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*Natural gas prices in North America have fallen sharply*

## Implications for the Canadian Economy

Despite the relatively subdued outlook for global economic growth, external demand for Canada's exports, as indicated by the foreign activity measure, is projected to grow moderately in 2012 and to pick up further in 2013 in response to an improvement in U.S. residential construction and a rebound in the growth in U.S. business investment (**Chart 15**). Deteriorating economic conditions in Europe have a relatively modest impact on the foreign activity measure, given Canada's limited direct trade links with Europe, and will affect Canadian exports primarily through their spillover effects on U.S. private domestic demand. Nonetheless, the crisis in Europe is expected to have an indirect impact on the Canadian economy through its implications for financial conditions, confidence and global commodity prices.

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*External demand for Canada's exports is projected to grow moderately in 2012*

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*Deteriorating economic conditions in Europe have a relatively modest impact on the foreign activity measure*

The Bank of Canada's commodity price index (BCPI) has declined since the *October Report*, owing mainly to the impact of lower natural gas prices, which has more than offset the effect of the higher price of WTI oil. Over the projection horizon, the BCPI is projected to increase as natural gas prices rise, despite expected declines in the prices of non-energy commodities and crude oil, but to remain somewhat below the levels anticipated in the *October Report*.

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*The BCPI is projected to increase as natural gas prices rise but to remain somewhat below the levels anticipated in the October Report*

**Chart 15: The recovery in foreign activity is projected to continue**

Index: 2002 = 100, quarterly data

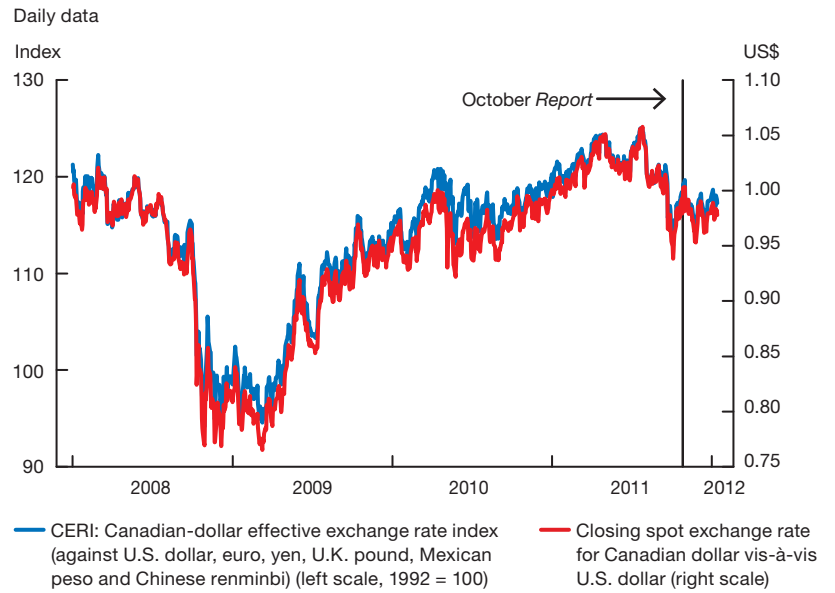


Note: Dotted line indicates projection.

The foreign activity measure captures the composition of foreign demand for Canadian exports by including components of U.S. private final domestic demand and economic activity in Canada's other trading partners.

Source: Bank of Canada calculations and projections

**Chart 16: The Canadian dollar is relatively unchanged since the October Report**



Note: A rise in either series indicates an appreciation of the Canadian dollar.

Source: Bank of Canada

Last observation: 13 January 2012

The Canadian dollar has averaged close to 98 cents U.S. since the December fixed announcement date and is assumed to remain at this level over the projection horizon (**Chart 16**). This is very close to the 99 cents U.S. level assumed in the *October Report*.



# The Canadian Economy

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The Bank's outlook for the Canadian economy is little changed relative to the *October Report*. Although growth in the second half of 2011 was stronger than anticipated, the weaker external outlook is expected to affect the Canadian economy through confidence, financial and trade channels. The Bank continues to expect that these headwinds will limit economic growth in Canada in 2012 to a modest pace, after which growth is projected to pick up as the global environment improves. Private domestic demand is anticipated to remain the primary driver of growth in Canada throughout the projection horizon, with relatively weak global economic growth and competitiveness challenges, including the persistent strength of the Canadian dollar, continuing to restrain net exports.

Consistent with this outlook, the Bank continues to expect that the output gap will persist well into 2013. Excess supply in the economy, together with moderate growth in labour compensation and dissipating pressures from commodity prices, is anticipated to result in a moderation in both total and core CPI inflation to below 2 per cent around mid-2012. This moderation is projected to be slightly less pronounced than in the *October Report*, partly reflecting some expected persistence in the slightly firmer prices seen recently for a few goods, as well as a slightly higher assumed path for oil prices. Nonetheless, the broad profile for inflation in Canada is little changed, with the Bank projecting both total and core inflation to return gradually to 2 per cent over the latter part of the projection horizon as slack in the economy is slowly absorbed and inflation expectations remain well anchored.

## Financial Conditions

Despite the deterioration in global financial conditions, the aggregate supply and price of credit to businesses and households in Canada remain very stimulative (**Chart 17**), providing important ongoing support to the economic expansion. Both the Bank's *Senior Loan Officer Survey* (available on the Bank's website under Publications and Research > Periodicals > SLOS 2011Q4) and the *Business Outlook Survey* (available on the Bank's website under Publications and Research > Periodicals > BOS Winter 2011) suggested that business-lending conditions were little changed in the fourth quarter, after several quarters of sustained easing (**Chart 18**). Household credit remains readily available at very low rates.

Canadian financial markets have been resilient in recent months. The S&P/TSX Composite Index is roughly unchanged since the *October Report*, as are the relative prices of Canadian bank equities (**Chart 19**). Canadian

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*The Bank's outlook for the Canadian economy is little changed relative to the October Report*

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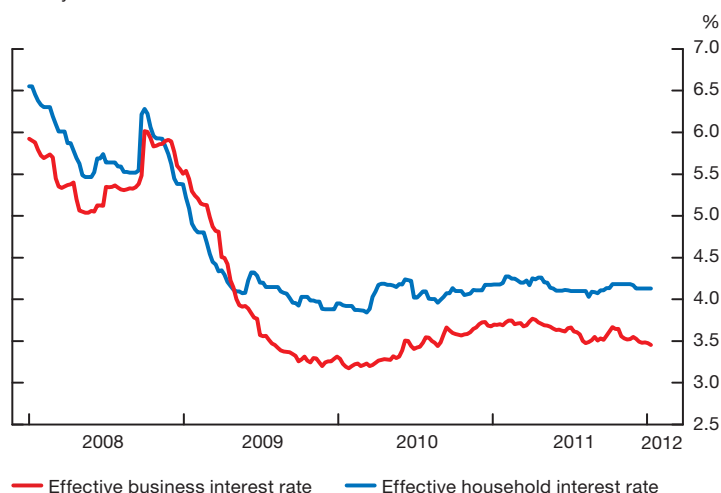
*Total and core CPI inflation are expected to moderate to below 2 per cent around mid-2012 ... before returning gradually to 2 per cent over the latter part of the projection horizon*

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*The aggregate supply and price of credit to businesses and households in Canada remain very stimulative*

**Chart 17: Borrowing costs for households and businesses remain at exceptionally low levels**

Weekly data



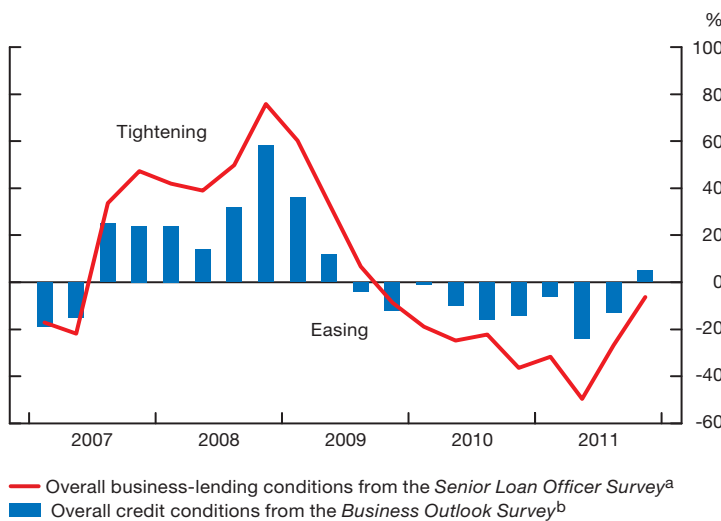
Note: For more information on these series, see <http://credit.bankofcanada.ca/financialconditions>.

Source: Bank of Canada calculations

Last observation: 13 January 2012

**Chart 18: Survey results suggest that credit conditions for Canadian firms were little changed in 2011Q4**

Balance of opinion



a. Weighted percentage of surveyed financial institutions reporting tightened credit conditions minus the weighted percentage reporting eased credit conditions

b. Percentage of firms reporting tightened credit conditions minus percentage reporting eased credit conditions

Source: Bank of Canada

Last observation: 2011Q4

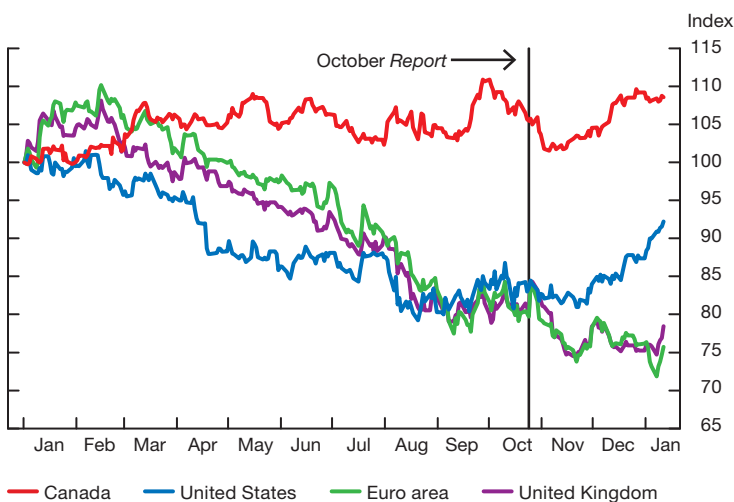
corporate spreads have narrowed marginally and issuance has been reasonably healthy, while government bond yields have declined sharply, with the 10-year nominal yield falling below 2 per cent for the first time. This is partly due to sustained international demand for the debt of Canadian governments, banks and corporations, a sign that their credit quality is perceived to be high by global standards.

*Canadian banks remain well positioned to lend*

In this context, Canadian banks remain well positioned to lend, with ready access to relatively low-cost funding across the term structure. This strong position has facilitated further declines in residential mortgage rates in

**Chart 19: Canadian bank equity indexes have outperformed foreign bank equity indexes on a relative basis**

Bank equity index/broad equity index (1 January 2011 = 100), daily data

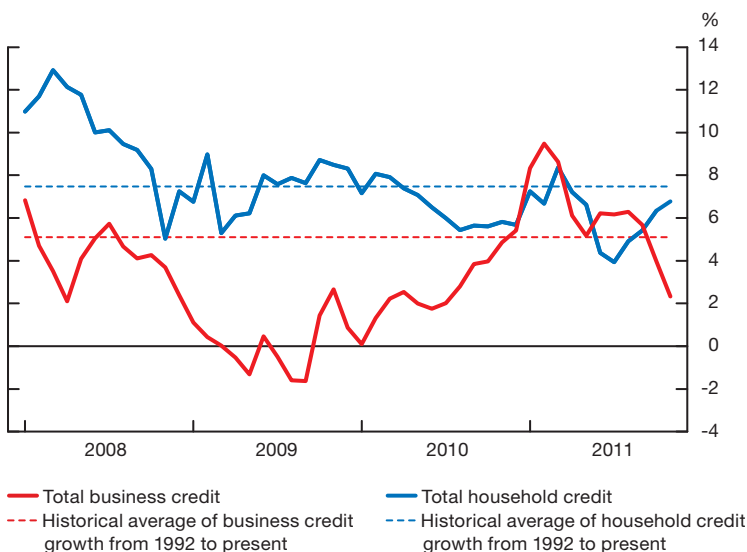


Source: Bloomberg

Last observation: 13 January 2012

**Chart 20: Household credit growth has firmed while business credit growth has slowed**

3-month percentage change (at annual rates)



Source: Bank of Canada

Last observation: November 2011

recent weeks, potentially adding to the recent momentum in the growth of household credit, which picked up through the autumn as resale housing market activity strengthened (**Chart 20**). In contrast, the growth of business credit slowed in recent months despite the persistence of historically low borrowing costs, consistent with a slowing in the growth of business investment amid heightened economic and financial uncertainty.

*The growth of household credit picked up through the autumn*

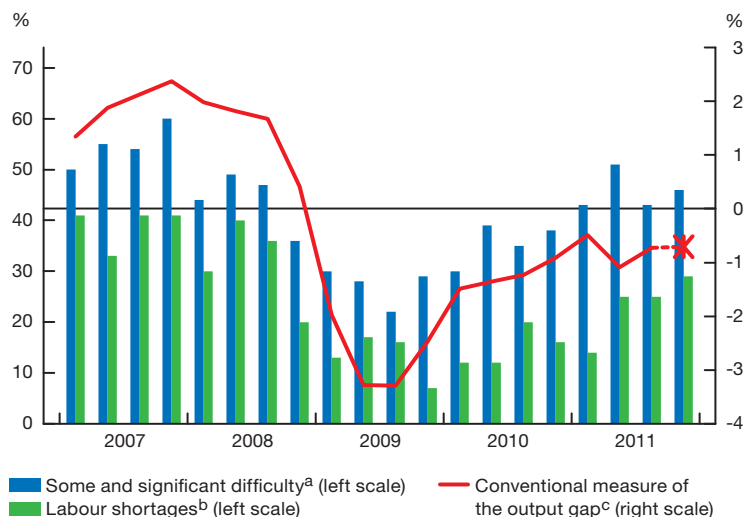
Growth in the narrow monetary aggregates continued to rebound in the fourth quarter, reflecting some increase in liquidity preference, with heightened uncertainty and low alternative rates of return likely playing a role. Growth in the broad monetary aggregates has also picked up, albeit to a lesser extent, remaining consistent with relatively subdued inflation pressures ahead.

## Estimated Pressures on Capacity

*The higher level of activity in Canada implies less slack in the economy*

The level of real GDP in the fourth quarter of 2011 was 0.6 percentage points higher than the Bank had projected in the *October Report*. Real GDP grew by 3.5 per cent in the third quarter of 2011 and is estimated to have risen by 2.0 per cent in the fourth quarter, above expectations in the *October Report*. These stronger results reflect a larger rebound from the temporary factors that had restrained growth earlier in the year, as well as greater momentum in household expenditures in Canada and stronger-than-anticipated activity in the United States. The resulting higher level of activity in Canada implies less slack in the economy than previously expected. The Bank's conventional

**Chart 21: Excess supply persists in the Canadian economy**

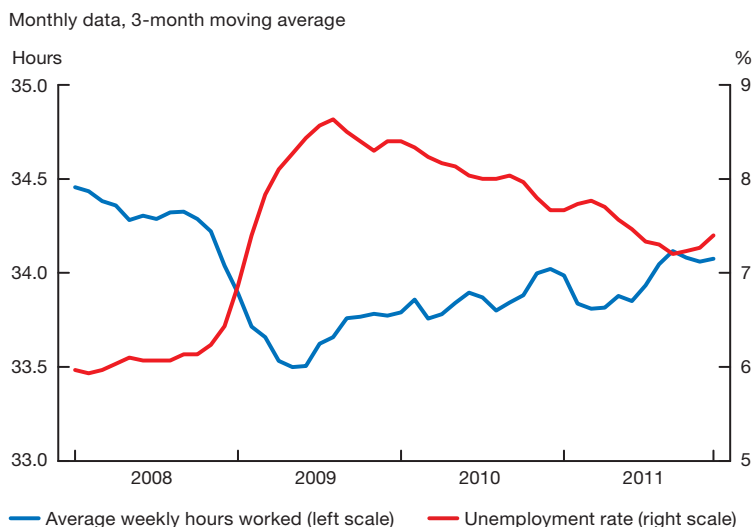


- Response to *Business Outlook Survey* question on capacity pressures. Percentage of firms indicating that they would have either some or significant difficulty meeting an unanticipated increase in demand/sales.
- Response to *Business Outlook Survey* question on labour shortages. Percentage of firms reporting labour shortages that restrict their ability to meet demand.
- Difference between actual output and estimated potential output from the Bank of Canada's conventional measure. The estimate for the fourth quarter of 2011 (indicated by \*) is based on a projected increase in output of 2.0 per cent (at annual rates) for the quarter.

Source: Bank of Canada

Last observation: 2011Q4

**Chart 22: Labour market indicators have softened in recent months**



Source: Statistics Canada

Last observation: December 2011

measure of the output gap has shown similar dynamics, narrowing to -0.7 per cent in the fourth quarter of 2011 (**Chart 21**). The Bank's winter *Business Outlook Survey* also showed that the proportion of firms that would have difficulty responding to an unexpected increase in demand edged up relative to the previous survey, remaining at a level close to its historical average.

In contrast, conditions in the labour market have softened in recent months. The unemployment rate rose through the fourth quarter to reach 7.5 per cent in December, reflecting a decline in private sector employment, and average weekly hours worked have fallen (**Chart 22**). While responses to the Bank's winter *Business Outlook Survey* showed an increase in the proportion of firms reporting labour shortages, this proportion remains below its historical average.

On balance, the Bank judges that the economy was operating at roughly three-quarters of a per cent below its production capacity in the fourth quarter of 2011, a smaller degree of slack than the Bank had anticipated in the *October Report*.

*Conditions in the labour market have softened in recent months*

*The Bank judges that the economy was operating at roughly three-quarters of a per cent below its production capacity in the fourth quarter of 2011*

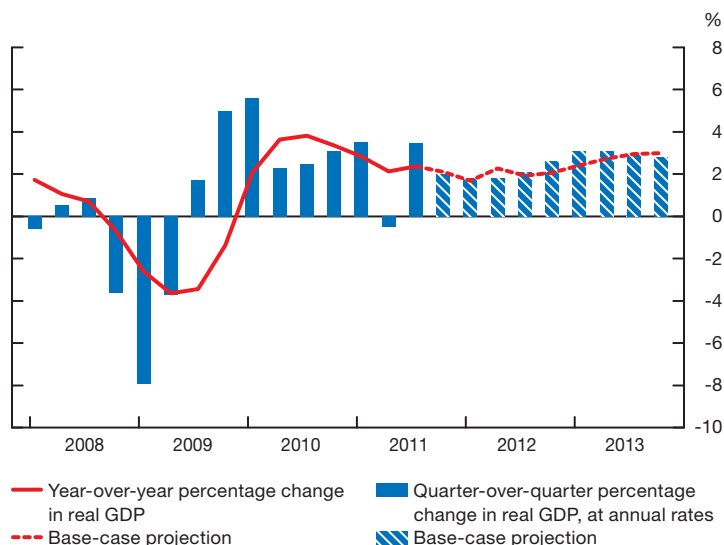
## Economic Activity

The Bank expects modest growth in the Canadian economy in the first half of 2012, after which growth is projected to improve (**Chart 23**). As in the *October Report*, this projection assumes that the crisis in Europe will be contained, eventually leading to reduced uncertainty and a gradual return of confidence. On an average annual basis, growth in real GDP is projected to moderate from 2.4 per cent in 2011 to 2.0 per cent in 2012, before picking up temporarily above the rate of the economy's production potential to 2.8 per cent in 2013 (**Table 2**). Private domestic demand, supported by accommodative domestic financial conditions, is expected to account for almost all of Canada's economic growth over the projection horizon (**Chart 24**).

*The Bank expects modest growth in the Canadian economy in the first half of 2012, after which growth is projected to improve*

This outlook for the Canadian economy is little changed from the *October Report*. While the economy had more momentum in the second half of 2011 than anticipated, the projected pace of growth through 2012 is more modest than previously envisaged (**Table 3**). The weaker quarterly profile through 2012 reflects more persistent uncertainty about the global economic and

**Chart 23: Real GDP growth is expected to pick up in the second half of 2012, resulting in a gradual absorption of excess supply**



Sources: Statistics Canada and Bank of Canada calculations and projections

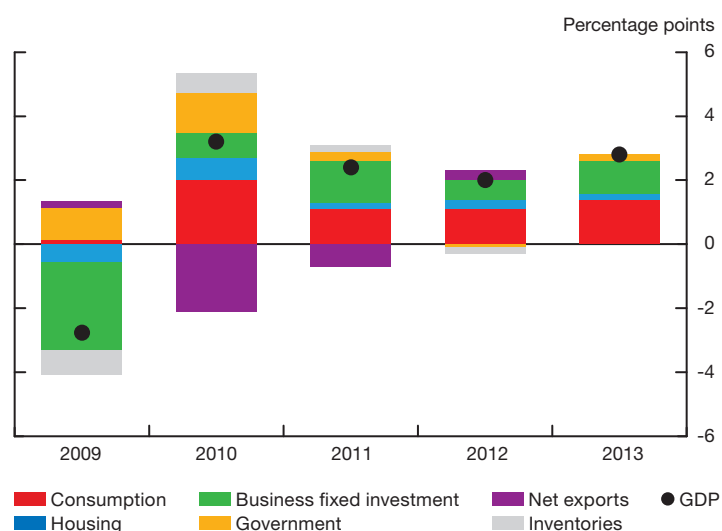
**Table 2: Contributions to average annual real GDP growth**Percentage points<sup>a</sup>

	2010	2011	2012	2013
<b>Consumption</b>	2.0 (2.0)	1.1 (1.0)	1.1 (1.2)	1.4 (1.4)
<b>Housing</b>	0.7 (0.7)	0.2 (0.1)	0.3 (0.0)	0.2 (0.1)
<b>Government</b>	1.2 (1.2)	0.3 (0.3)	-0.1 (-0.1)	0.2 (0.3)
<b>Business fixed investment</b>	0.8 (0.8)	1.3 (1.4)	0.6 (0.7)	1.0 (1.0)
<b>Subtotal: Final domestic demand</b>	4.7 (4.7)	2.9 (2.8)	1.9 (1.8)	2.8 (2.8)
<b>Exports</b>	1.8 (1.8)	1.3 (1.2)	1.1 (0.9)	1.0 (1.1)
<b>Imports</b>	-4.0 (-4.0)	-2.0 (-2.1)	-0.8 (-0.7)	-1.0 (-1.0)
<b>Subtotal: Net exports</b>	-2.1 (-2.1)	-0.7 (-0.9)	0.3 (0.2)	0.0 (0.1)
<b>Inventories</b>	0.6 (0.6)	0.2 (0.2)	-0.2 (-0.1)	0.0 (0.0)
<b>GDP</b>	<b>3.2 (3.2)</b>	<b>2.4 (2.1)</b>	<b>2.0 (1.9)</b>	<b>2.8 (2.9)</b>
<b>Memo items:</b>				
Potential output	1.6 (1.6)	1.6 (1.6)	2.0 (2.0)	2.1 (2.1)
Real gross domestic income (GDI)	5.0 (5.0)	3.4 (2.8)	1.9 (1.1)	3.0 (3.6)

a. Figures in parentheses are from the base-case projection in the October 2011 *Monetary Policy Report*. Those for potential output are from Technical Box 2 in the October 2011 *Monetary Policy Report*.

**Chart 24: Private domestic demand is projected to account for most of the economic growth in Canada**

Contributions to real GDP growth



Sources: Statistics Canada and Bank of Canada calculations and projections

financial outlook, which dampens private domestic demand through confidence and financial channels, and weaker projected growth in foreign activity, which depresses Canadian exports.

*This outlook for household expenditures is stronger than in the October Report*

Household expenditures—the combination of consumer spending and residential investment—are now projected to grow at a steady pace through 2013, which is a stronger outlook than in the *October Report*. The Bank continues to expect that consumption will grow at a rate slightly below the projected moderate growth in personal disposable income (**Chart 25**), resulting in a modest rise in the savings rate. Residential investment is, however, now expected to remain strong, owing to its greater-than-anticipated momentum in the second half of last year and favourable mortgage financing conditions.

**Table 3: Summary of the base-case projection for Canada<sup>a</sup>**

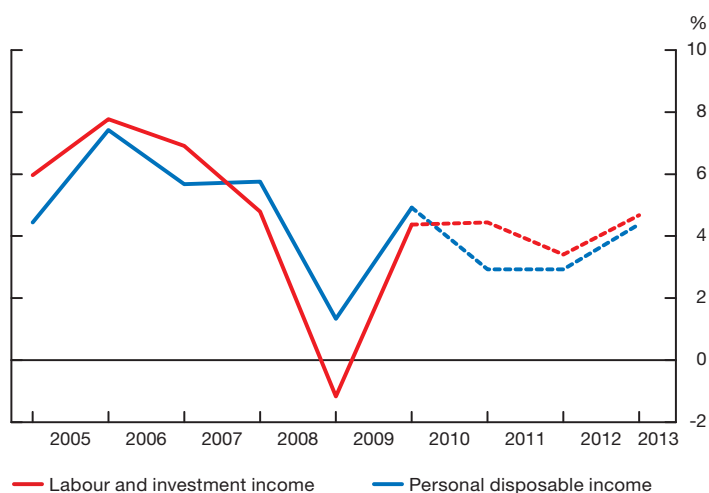
	2010	2011				2012				2013			
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Real GDP (quarter-over-quarter percentage change at annual rates)	3.1 (3.1)	3.5 (3.6)	-0.5 (-0.4)	3.5 (2.0)	2.0 (0.8)	1.8 (1.9)	1.8 (2.5)	2.1 (3.0)	2.6 (3.0)	3.1 (3.0)	3.1 (3.0)	3.0 (3.0)	2.8 (3.0)
Real GDP (year-over-year percentage change)	3.3 (3.3)	2.8 (2.9)	2.1 (2.2)	2.4 (2.1)	2.1 (1.5)	1.7 (1.1)	2.3 (1.8)	1.9 (2.1)	2.1 (2.6)	2.4 (2.9)	2.7 (3.0)	2.9 (3.0)	3.0 (2.9)
Core inflation (year-over-year percentage change)	1.6 (1.6)	1.3 (1.3)	1.6 (1.6)	1.9 (1.9)	2.2 (2.0)	2.1 (1.8)	2.0 (1.7)	1.9 (1.7)	1.7 (1.6)	1.9 (1.8)	1.9 (1.9)	2.0 (1.9)	2.0 (2.0)
Total CPI (year-over-year percentage change)	2.3 (2.3)	2.6 (2.6)	3.4 (3.4)	3.0 (3.0)	2.8 (2.7)	2.2 (1.9)	1.5 (1.0)	1.7 (1.2)	1.7 (1.5)	1.8 (1.8)	1.9 (1.9)	2.0 (1.9)	2.0 (2.0)
Total CPI excluding the effect of the HST and changes in other indirect taxes (year-over-year percentage change)	1.9 (1.9)	2.1 (2.1)	2.9 (2.9)	3.0 (3.0)	2.7 (2.6)	2.1 (1.9)	1.4 (1.0)	1.6 (1.2)	1.6 (1.5)	1.8 (1.8)	1.9 (1.9)	2.0 (1.9)	2.0 (2.0)
WTI <sup>b</sup> (level)	85 (85)	94 (94)	103 (103)	90 (90)	94 (85)	101 (87)	102 (87)	102 (87)	101 (88)	100 (88)	99 (88)	98 (88)	98 (88)

a. Figures in parentheses are from the base-case projection in the October 2011 *Monetary Policy Report*.

b. Assumptions for the price of West Texas Intermediate crude oil (US\$ per barrel), based on an average of futures contracts over the two weeks ending 13 January 2012.

**Chart 25: Growth in personal disposable income is projected to be moderate**

Percentage change, annual data



Sources: Statistics Canada and Bank of Canada calculations and projections

Confidence effects stemming from the weaker and more uncertain global outlook are projected to exert only a modest dampening effect on Canadian household spending (**Chart 26**). Reflecting the upwardly revised profile for residential investment, household expenditures are now expected to remain high relative to GDP over the projection horizon (**Chart 27**) and the ratio of household debt to income is projected to rise further.

The underlying pace of growth in business fixed investment has moderated in recent quarters from the robust rate seen through 2010 and early 2011, consistent with the adverse impact of heightened uncertainty on business confidence. While this headwind is expected to persist in coming quarters, other fundamentals supporting business investment in Canada remain extremely favourable, particularly very stimulative financial conditions, solid Canadian corporate balance sheets (**Chart 28**), heightened competitive pressures and relatively high commodity prices. Moreover, significant scope remains to make up for the unusually sharp decline in investment

*Fundamentals supporting business investment in Canada remain favourable*

### Chart 26: Consumer confidence in Canada has declined in recent months

All respondents; index: 2002 = 100, monthly data

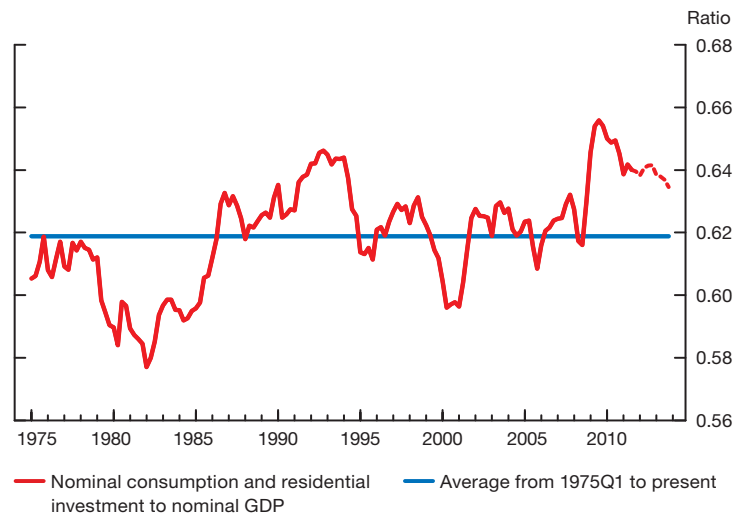


Source: Conference Board of Canada

Last observation: December 2011

### Chart 27: The share of household expenditures in GDP is now expected to remain elevated

Quarterly data



Sources: Statistics Canada and Bank of Canada calculations and projections

experienced during the recession. As a result, the Bank expects relatively solid growth in business fixed investment through 2012, with some further strengthening in 2013 as confidence recovers (**Chart 29**). This projection is consistent with the Bank's winter *Business Outlook Survey*, which showed that investment intentions remain strongly positive despite indications from a number of firms that ongoing financial market volatility and global economic uncertainty had affected their investment plans.

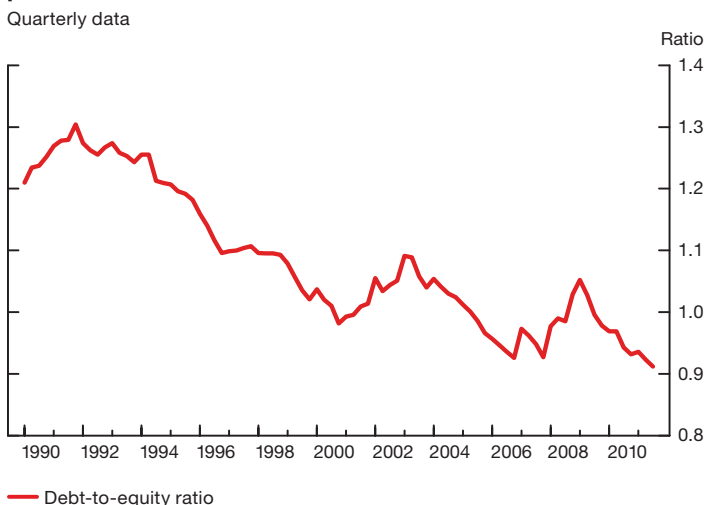
The contribution of government spending to real GDP growth is assumed to be very modest over the projection horizon, in line with fiscal plans of federal and provincial governments to consolidate spending.

Foreign activity has been stronger in recent months than the Bank had previously expected, particularly in the United States, contributing to a more favourable outcome for Canadian exports. Going forward, however, foreign activity is projected to grow slightly more slowly than anticipated in the

*Foreign activity has been stronger in recent months than the Bank had previously expected*



**Chart 28: With leverage at historic lows, non-financial firms are well positioned to invest**

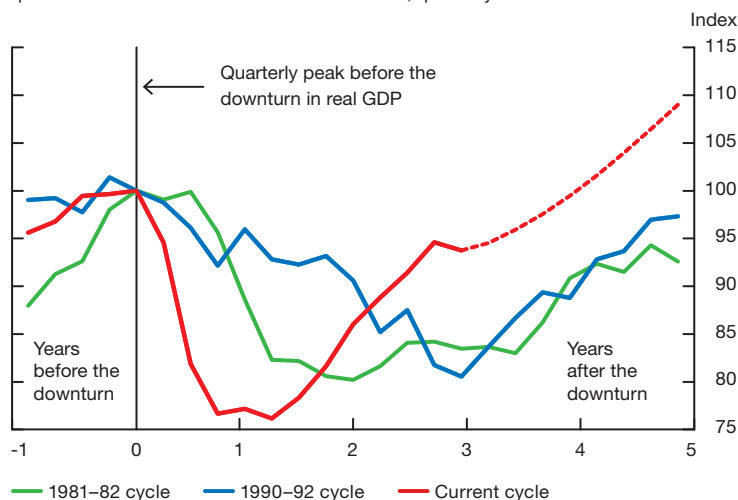


Source: Statistics Canada

Last observation: 2011Q3

**Chart 29: Business fixed investment is projected to grow faster once some of the heightened uncertainty starts to dissipate**

Comparison of real business fixed investment across economic cycles; quarter before the downturn in real GDP = 100, quarterly data



Sources: Statistics Canada and Bank of Canada calculations and projections

October Report. In addition, competitiveness remains a challenge for Canadian firms. Unit labour costs in Canada have continued to increase relative to those in the United States over the past year, resulting in a cumulative gap of almost 40 per cent between the beginning of 2005 and the third quarter of 2011 (**Chart 30**). While the appreciation of the Canadian dollar accounts for most of this deterioration in competitiveness, about one-quarter of it is due to the productivity underperformance of Canadian firms. Reflecting these competitiveness challenges and the moderate projected growth in foreign activity, the Bank expects relatively modest growth in Canadian exports through 2013. With imports anticipated to grow at nearly the same pace, net exports contribute little to real GDP growth in Canada over the projection horizon, and the current account deficit remains significant at around 3 per cent of GDP (**Chart 31**).

*Competitiveness remains a challenge for Canadian firms*

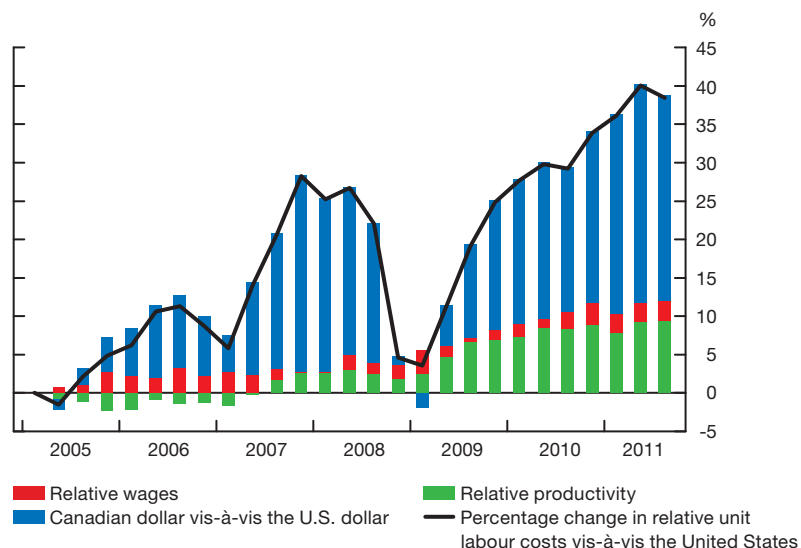
*Net exports contribute little to real GDP growth in Canada over the projection horizon*

The economy is anticipated to return gradually to full capacity by the third quarter of 2013

Overall real GDP in Canada is projected to grow at a pace close to the estimated growth rate of potential output in 2012, leaving the current degree of economic slack to persist in coming quarters.<sup>6</sup> With the pace of real GDP growth subsequently picking up to a rate somewhat above potential, the economy is anticipated to return gradually to full capacity by the third quarter of 2013, one quarter earlier than expected in the *October Report*. In this regard, the Canadian economy is projected to operate with slightly less slack throughout the projection horizon than indicated in the October base-case scenario, reflecting the slightly higher level of economic activity seen recently.

### Chart 30: Canadian firms are losing competitiveness

Contribution of various factors to the change in Canada's relative unit labour costs vis-à-vis those in the United States, quarterly data

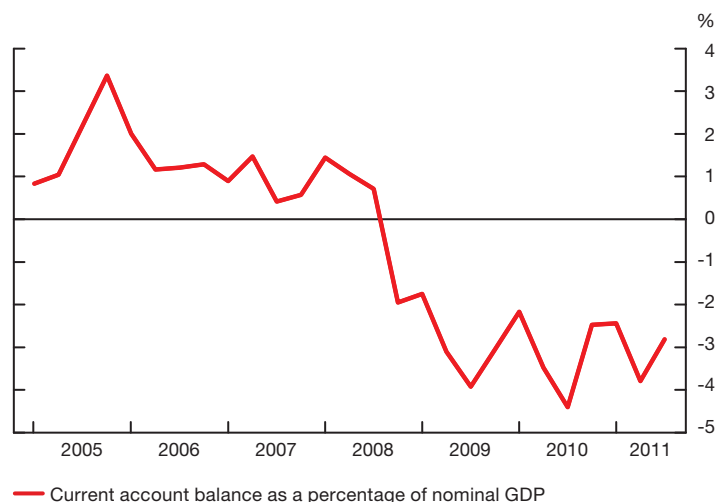


Sources: Statistics Canada, U.S. Bureau of Economic Analysis and Bank of Canada calculations

Last observation: 2011Q3

### Chart 31: Canada's current account balance has declined substantially in recent years

Quarterly data



Sources: Statistics Canada and Bank of Canada calculations

Last observation: 2011Q3

<sup>6</sup> As discussed in Technical Box 2 of the *October Report*, the base case assumes that Canada's potential output will grow by 2.0 per cent in 2012 and by 2.1 per cent in 2013.

# Inflation

Core CPI inflation was 2.1 per cent in October and November, up from 1.9 per cent in the third quarter and 1.5 per cent in the first half of 2011. As anticipated, this increase partly reflected the dissipation of the effect of the HST on year-over-year core inflation,<sup>7</sup> as well as the lagged effects of higher world prices for agricultural products on the prices of food and clothing. Despite higher core inflation, total CPI inflation has come down from its peak of 3.4 per cent in the second quarter of 2011, as anticipated, reflecting some moderation in gasoline prices together with the unwinding of the direct effects on year-over-year inflation of the introduction of the HST in the third quarter of 2010.

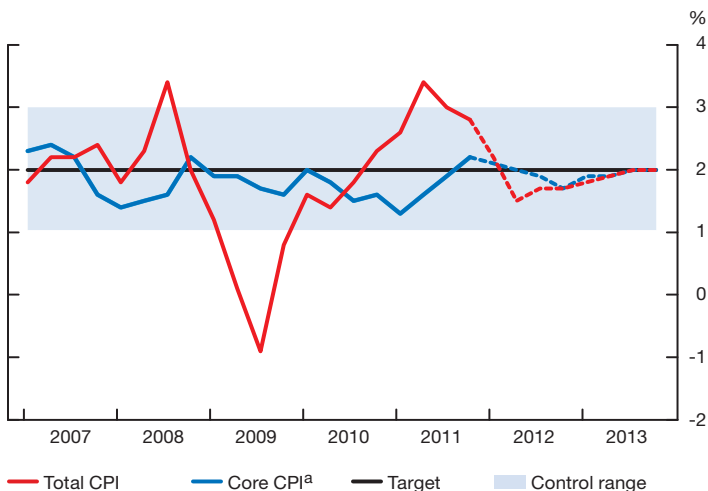
Inflation expectations have remained well anchored. The January Consensus Economics forecast for total CPI inflation in 2012 and 2013 was 2.0 per cent. As reported in the Bank's winter *Business Outlook Survey*, 92 per cent of firms expect average inflation over the next two years to remain within the 1 to 3 per cent inflation-control range. Market-based measures of longer-term inflation expectations also remain consistent with the 2 per cent inflation-control target.

Core inflation is projected to moderate through 2012 to a level somewhat below 2 per cent (**Chart 32**), as excess supply persists and the effects of higher prices for food and clothing on year-over-year inflation unwind. Total CPI inflation is projected to continue to decline to around 1.5 per cent by mid-2012, reflecting lower core inflation as well as the gradual impact on gasoline prices of the decline in world oil prices from their peak in the second quarter of 2011. Both total and core inflation are expected to start to rise gradually by the end of 2012, reaching 2 per cent by the third quarter of 2013 as excess supply in the economy is slowly absorbed, the growth of labour compensation increases modestly and inflation expectations remain well anchored.

*Core inflation is projected to moderate through 2012 ... while total CPI inflation is projected to continue to decline to around 1.5 per cent by mid-2012*

**Chart 32: Total and core CPI inflation in Canada are projected to fall temporarily below 2 per cent in 2012**

Year-over-year percentage change, quarterly data



Note: Dotted lines indicate projections.

a. CPI excluding eight of the most volatile components and the effect of changes in indirect taxes on the remaining components

Sources: Statistics Canada and Bank of Canada calculations and projections

**7** The introduction of the HST in Ontario and British Columbia in July 2010 had a dampening effect, amounting to 0.3 percentage points, on core inflation through tax refunds passed on by businesses. This effect was smaller than the direct positive effect of the introduction of the HST, which was reflected in total CPI inflation, and resulted in a boost to total inflation between the third quarter of 2010 and the second quarter of 2011. Both of these temporary effects have since unwound, pushing core inflation up and total inflation down.

Both total and core inflation are expected to reach 2 per cent by the third quarter of 2013

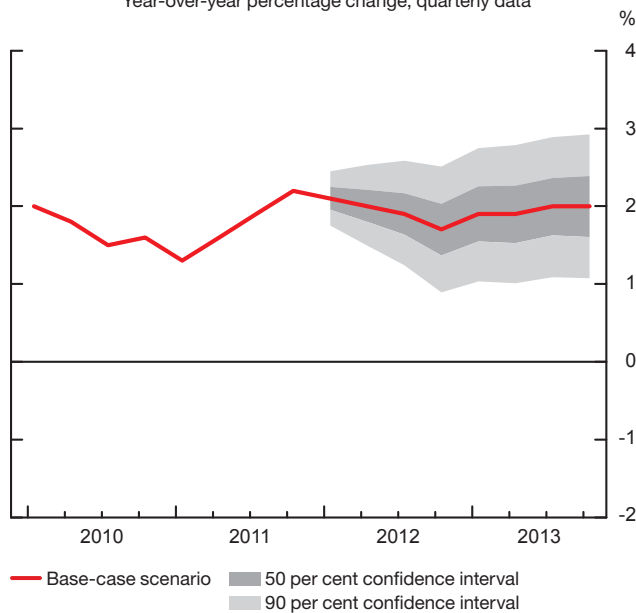
These inflation dynamics are similar to those anticipated in the October Report, although the overall inflation profile is marginally firmer in this projection, partly reflecting some expected persistence in the slightly higher-than-anticipated prices observed recently for motor vehicles and electricity. These upside surprises have resulted in slightly higher-than-expected core inflation in recent months, the persistence of which is consistent with an economy estimated to be operating with somewhat less economic slack since mid-2011 than previously anticipated. A slightly higher profile for oil prices than previously assumed is also incorporated, as is the estimated impact of the increase in the Quebec Sales Tax.<sup>8</sup>

This projection includes a gradual reduction in monetary stimulus over the projection horizon, consistent with achieving the inflation target.

The uncertainty surrounding the Bank's inflation projection is illustrated using fan charts. Chart 33 and Chart 34 depict the 50 per cent and 90 per cent confidence bands for year-over-year core inflation and total CPI inflation from the first quarter of 2012 to the end of 2013.<sup>9</sup>

**Chart 33: Projection for core CPI inflation**

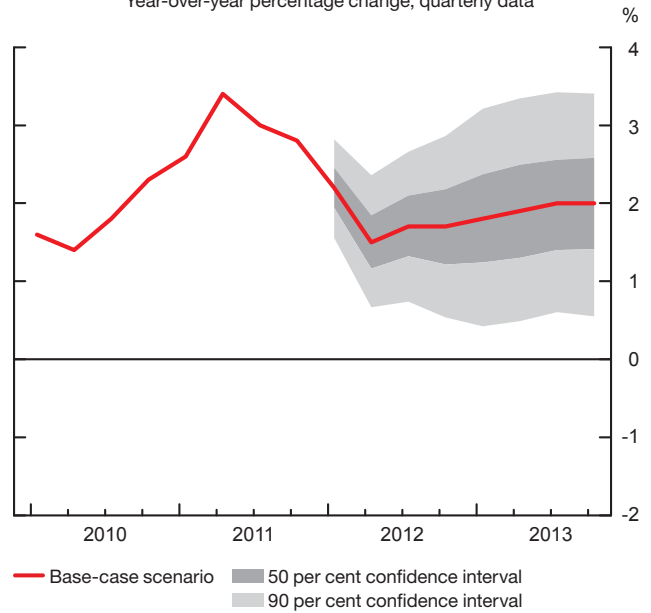
Year-over-year percentage change, quarterly data



Source: Bank of Canada

**Chart 34: Projection for total CPI inflation**

Year-over-year percentage change, quarterly data



Source: Bank of Canada

<sup>8</sup> The increase in the Quebec Sales Tax in January 2012, from 8.5 per cent to 9.5 per cent, will boost total CPI inflation by an estimated 0.1 percentage point in 2012.

<sup>9</sup> Technical details on the construction of the fan charts are available on the Bank's website; key word search: fan charts.

# Risks to the Outlook

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The inflation outlook in Canada is subject to significant risks. In particular, the Bank's projection assumes that authorities in Europe are able to contain the ongoing crisis, although this assumption is clearly subject to downside risks.

The three main upside risks to inflation in Canada relate to the possibility of stronger-than-expected inflationary pressures in the global economy, stronger-than-expected growth in the U.S. economy and stronger momentum in Canadian household spending.

- Global inflationary pressures could be more persistent than currently projected if growth in emerging-market economies does not decelerate to more sustainable levels or if potential output in advanced economies is lower than projected.
- Recently observed strength in U.S. consumption could be more persistent than anticipated and fiscal policy could exert a smaller-than-anticipated drag on growth in the latter part of the projection.
- Residential investment in Canada has been stronger than expected and household expenditures could have more momentum than currently projected.

The two main downside risks to inflation in Canada relate to sovereign debt and banking concerns in Europe and the possibility that growth in Canadian household spending could be weaker than projected.

- Failure to contain the crisis in Europe is the most serious risk facing the global and Canadian economies. The effects on Canada through financial, confidence and trade channels would be substantial, given the size and importance of the euro area to the global economy.
- High household debt levels in Canada could lead to a sharper-than-expected deceleration in household spending. Relatedly, if there were a sudden weakening in the Canadian housing sector, it could have sizable spillover effects on other areas of the economy.

Overall, the Bank judges that the risks to the inflation outlook in Canada are roughly balanced over the projection horizon.