

1. Global, U.S., and Canadian Outlook

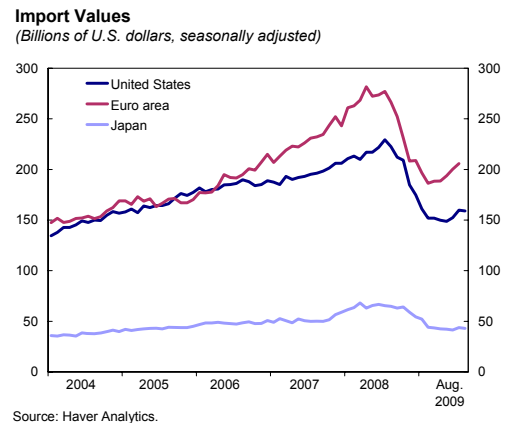
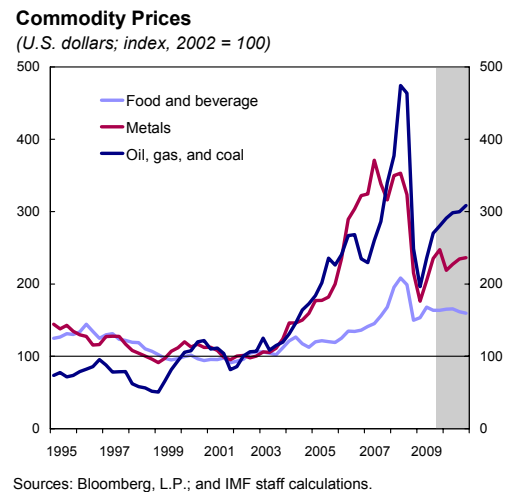
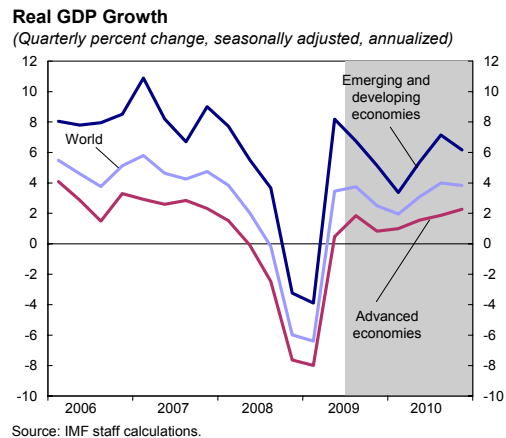
The global economy is emerging from recession, but the recovery is expected to be sluggish. While financial conditions have continued to improve, many markets remain highly dependent on public support, and downside risks prevail. In the United States and many advanced economies, growth and employment will remain weak in coming years. In turn, Canada has shown comparative resilience despite sizable shocks. A permanent loss in potential output, weak private consumption, and much higher debt levels in the United States will be negative legacies of the crisis that could adversely affect the Latin America and Caribbean region.

The Global Backdrop: Recovery Emerges

Following the severe recession, signs of renewed global growth are appearing, but underlying economic activity remains weak (Figure 1.1). A concerted policy response in many countries—comprising aggressive monetary policies, sizable fiscal stimulus, and efforts to stabilize financial systems—has bolstered confidence, supported demand, and reduced systemic risks. In tandem, commodity prices have recovered, and global trade has stabilized after the severe decline in the first part of 2009. Still, world growth remains tepid and employment in advanced economies continues to contract, albeit at a moderating pace. Moreover, financial conditions, while significantly improved from severely stressed levels, remain strained as key markets continue to depend heavily on policy support. Meanwhile, substantial economic slack, along with the lagged effects of the past drop in commodity prices, is restraining inflation.

Note: This chapter was prepared by Marcello Estevão, Charlie Kramer, Koshy Mathai, and Evridiki Tsounta.

Figure 1.1. Global growth is restarting, commodity prices are recovering, and trade is picking up.



Looking ahead, the situation portends a muted recovery in global growth. International evidence—including that presented in the October 2009 *World Economic Outlook*—suggests that economic recoveries from recessions brought on by financial crashes tend to be slow and prolonged. And indeed, especially in advanced industrial economies, the process of rebuilding household and financial intermediaries' balance sheets and the relatively feeble labor market conditions will pose headwinds to demand for some time. Still, a substantial rebound in emerging markets—to some extent reflecting policy stimulus—should buoy trade and commodity prices, the latter being considerably stronger already. Overall, global growth should recover from -1.1 percent in 2009 to 3.1 percent in 2010, compared with average growth of more than 4 percent in 2002–07.

The key near-term policy requirements are to maintain macroeconomic stimulus until recovery is firmly under way, while completing the process of repairing financial sector balance sheets. While it is too early to implement exit strategies, developing and communicating those strategies, with appropriate international coordination, can underpin confidence in smooth exits. Looking beyond the near term, the challenges are to secure fiscal stability and, globally, to rebalance demand—given that U.S. growth is likely to remain subdued by historical standards, with the U.S. household no longer expected to be the global “consumer of last resort.”

United States: Policy Support Bolstering Activity

The U.S. economy appears to have hit bottom in the second quarter of 2009 and is showing signs of recovery after a sharp contraction. Following significant declines

during the last quarter of 2008 and the first quarter of 2009, the fall in U.S. GDP eased to 0.7 percent (seasonally adjusted annualized rate—SAAR) in the second quarter. Recent sharp inventory drawdowns could portend a boost from inventory adjustment and industrial production during the second half of the year. Meanwhile, the housing market is stabilizing, with prices bottoming out and starts, permits, and sales picking up, but from low levels. That said, labor markets continue to deteriorate. While the pace of job losses has sharply eased, the unemployment rate (at 9.8 percent) is at a 26-year high.

Stabilization in U.S. economic activity importantly reflects an increasingly strong macroeconomic policy response to the crisis. The Federal Reserve lowered the policy rate to the 0 – 25 basis point range in December 2008, and in January 2009 indicated that conditions were likely to warrant an exceptionally low rate for an extended period. It also successively expanded its range of “credit easing” measures (including term lending, lending to new counterparties, and financing for asset purchases as well as outright asset purchases). A fiscal stimulus of some 5 percent of GDP over fiscal years 2009–11 is lending increasing support to demand. IMF staff estimates that it would boost the level of real GDP by 1.1 percent in 2009, 1.3 percent in 2010, and 0.7 percent in 2011, relative to a no-stimulus scenario.

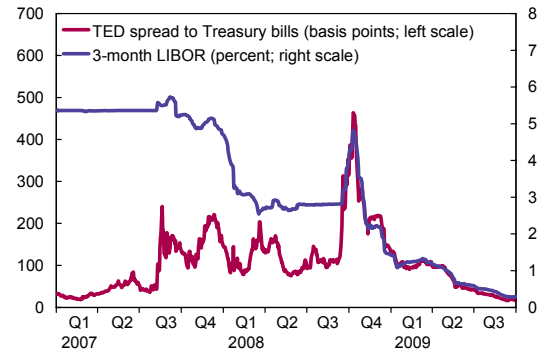
In parallel, efforts to stabilize the financial system have contributed to a substantial improvement in financial conditions, largely easing the post-Lehman credit crunch, although overall conditions remain on the tight side. Besides measures from the Federal Reserve, public capital injections under the Troubled Asset Relief Program have helped to bolster financial institution balance sheets amid rising credit losses and ongoing financial market strains. More important, results of stress tests

under the Supervisory Capital Assessment Program—which gauged potential capital needs under a scenario of adverse economic and financial conditions—significantly strengthened confidence in the stability of the financial system after they were released in May of this year. In the wake of these programs, as well as of the Federal Reserve’s “unconventional monetary policy easing” measures, indicators of financial system stress—credit default swap spreads, eurodollar-Treasury spreads, and the LIBOR-OIS spread—have come down substantially (Figure 1.2). In addition, the Federal Reserve has been able to reduce the size of some of its liquidity facilities, on the back of reduced demand. However, credit conditions as measured in the Senior Loan Officer Survey continue to tighten, although at a decreasing rate.

Nevertheless, the near-term outlook still calls for a gradual recovery, slower than the typical recovery in previous cycles, with growth returning to a lower trend only in mid-2010 (Figure 1.3). Unemployment is expected to continue rising, cresting at more than 10 percent in 2010. Consumer spending (and therefore imports) will be dampened by high unemployment, the crisis-driven hit to households’ net worth (which fell by some \$11 trillion during 2008), and tight financial conditions. Banks face continued pressure from a challenging credit cycle, and financial conditions are likely to weigh on the housing market in particular, given stringent lending standards, while the sustained strong rate of foreclosures poses downside risks. On the positive side, the recent rapid pace of destocking portends some upside to production, although the strength of both domestic and foreign demand remains in question. IMF staff forecasts a contraction of 2.7 percent in 2009 followed by growth of 1.5 percent in 2010.

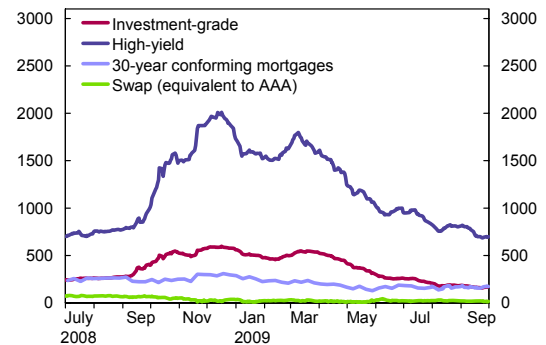
Figure 1.2. Indicators of financial system stress have come down substantially.

Money Market Spreads



Corporate and Other Spreads

(Spread to 10-year Treasury bills; basis points)



Equity Prices

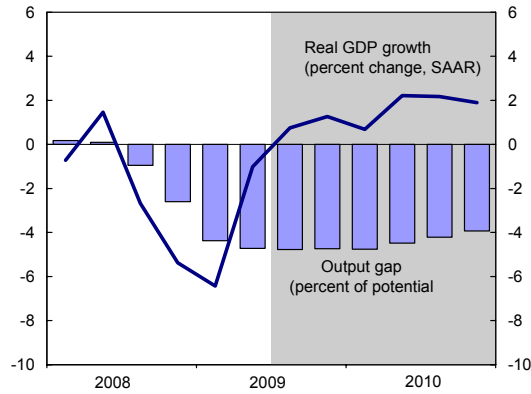
(July 1, 2008 = 100)



Sources: Bloomberg, L.P.; and IMF staff calculations.

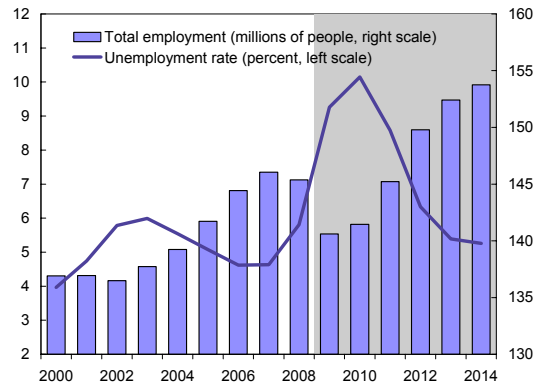
Figure 1.3. The outlook is for a gradual recovery of U.S. growth, with weak employment and imports.

United States: Real GDP and Output Gap



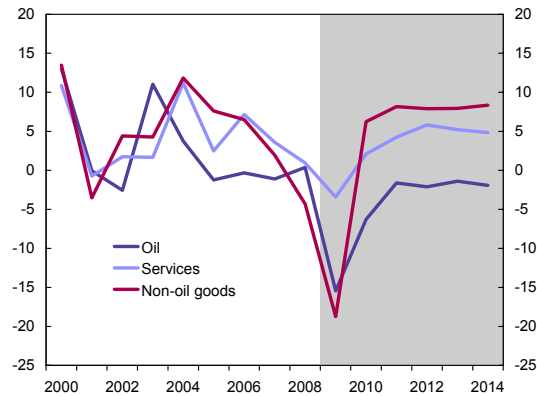
Sources: U.S. Bureau of Economic Analysis; U.S. Bureau of Labor Statistics; Haver Analytics; and IMF staff calculations.

United States: Employment Outlook



Source: IMF staff calculations.

United States: Import Volumes (Percent change)



Source: IMF staff calculations.

Looking to the medium term, three legacies of the crisis are apt to restrain U.S. growth:

- Financial conditions are likely to remain more stringent than normal for some time, as banks work to repair their balance sheets. In addition, the welcome and needed steps to enhance regulation, including capital and liquidity requirements, will moderate credit growth and limit the extent of procyclical credit conditions in the upswing of the cycle (Box 1.1). Finally, private securitization markets remain moribund, notwithstanding some progress in related policies, with implications for the segments (such as consumer and housing demand) traditionally supported by those markets (see Chapter 2 of the October 2009 *Global Financial Stability Report*).
- A sizable underlying fiscal imbalance, along with growing entitlement costs in the absence of reforms, will boost the federal public debt (IMF staff projects a debt ratio of about 100 percent of GDP by 2020 under current policies—Figure 1.4). In the near term, higher private savings may help contain the impact on interest rates. But over the medium term, Treasury interest rates are likely to go up.
- Households will face a prolonged process of rebuilding balance sheets, given the size of the crisis-related damage. Accordingly, private consumption—the main component of aggregate demand, at about 70 percent of GDP—will likely be sluggish, as the saving rate is apt to rise further, beyond its recent jump. Over the medium term, this will support a reduction in the current account deficit.

IMF staff research also suggests that the postcrisis trend rate of U.S. growth will be significantly lower than the precrisis trend (Box 1.2). The protracted recession and tighter financial conditions will crimp investment (and

Box 1.1. Anatomy of the Crisis and Financial Regulation Challenges

The 2007–09 financial crisis revealed major flaws in the securitization model and the attendant risks posed by the dramatic growth in increasingly complex securitization. More fundamentally, the crisis unveiled the shortcomings of a fragmented and inadequate regulatory and supervisory framework.

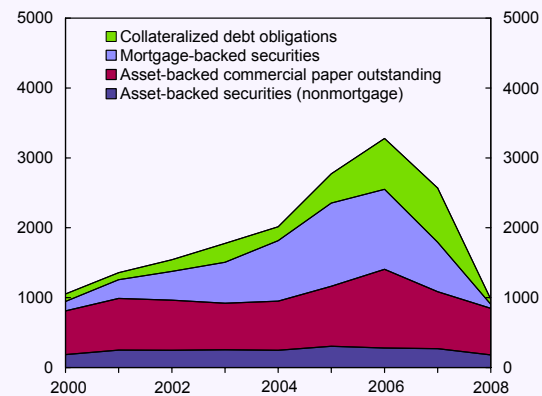
Between 2002 and 2006, issuance of asset-backed securities more than doubled to US\$840 billion—roughly the size of bank credit flows—financed by domestic and foreign investors. While greatly facilitating the expansion of credit, securitization activity also reduced transparency regarding the distribution of risks, increased reliance on ratings (which bred complacency regarding risks in high-rated securities), and moved risk outside the core banking system.

As securitization burgeoned, prudential supervision and regulation focused heavily on the core banking system, although its share of financial intermediation was shrinking rapidly. Prudential supervision was shared among a large number of agencies, further exacerbating regulatory gaps and other inconsistencies that in turn contributed to the buildup of systemic risk. At the same time, falling market volatility seemed to validate the view that financial innovation was enhancing efficiency and successfully spreading risk to peripheral (and presumably, nonsystemic) institutions. As a result, lending and monitoring standards were allowed to deteriorate sharply. Meanwhile, the improved access to credit fueled rising house prices and home ownership, creating a seemingly virtuous cycle at the macroeconomic level, with housing wealth feeding household consumption.

Over 2006 and 2007, cracks began to appear in both financial markets and the broad economy. Real estate prices and residential investment peaked, and as the housing downturn gathered pace, default rates on subprime mortgages rose and then surged. Off-balance-sheet vehicles, which were meant to keep risks at arm's length, deteriorated sharply, putting banks' own balance sheets at risk, as they provided funding to stem reputational risks. Despite sizable liquidity injections, market strains remained high through the first half of 2008 and housing market stress continued to have an impact on financial institutions. The two housing government-sponsored enterprises (GSEs), Fannie Mae and Freddie Mac, were placed into conservatorship; two troubled investment banks, Merrill Lynch and Bear Stearns, were sold; and AIG, a global insurer with huge derivatives positions, was given emergency Federal Reserve funding.

Note: This box was prepared by Andrea Maechler.

United States: Securitization Annual Issuance Volumes 1/
(Billions of U.S. dollars)



Sources: Merrill Lynch; JPMorgan Chase & Co.; and IMF staff calculations.
1/ Excludes government-sponsored enterprises.

Box 1.1 (concluded)

But in September 2008 another investment bank, Lehman Brothers, came under extreme stress, and with no orderly resolution framework for systemic nonbank financial institutions, no private buyer forthcoming, and the Federal Reserve assessing Lehman's collateral as insufficient to back emergency lending, the bank entered bankruptcy, triggering the worst bout of financial instability since the Great Depression. Interbank transactions virtually disappeared beyond overnight maturities, and there was a run on money market funds, causing in turn the commercial paper market to dry up and the issuance of asset-backed securities to plummet; equity markets collapsed and equity volatility spiked, with severe repercussions both abroad and at home.

The crisis underscored the need for a major overhaul of the U.S. financial system. Broadly in line with G-20 recommendations, the Obama administration outlined a comprehensive package of proposals in mid-June 2009. These proposals broke new ground, particularly in reforming the architecture of financial supervision and regulation and restarting a healthy and sustainable model of securitization.

On the architecture of financial supervision and regulation, these proposals include

- Establishing a two-pillar structure, with the Federal Reserve regulating and supervising all systemic financial institutions and a new Financial Services Oversight Council (FSOC), chaired by the Treasury, facilitating interagency discussions and identifying emerging risks.
- Subjecting all institutions to tighter supervision and regulation, with even higher standards for large, interconnected firms (to internalize systemic costs), complemented by a broadened resolution framework for systemically important firms.
- Consolidating two bank regulators, while creating a new consumer regulatory agency.
- Strengthening international regulatory standards and cooperation, with higher capital standards and enhanced oversight of global financial institutions and markets (including over-the-counter derivatives), and reforming crisis prevention and management arrangements.

Key details of implementation will need to be addressed as the proposals make their way through Congress: notably, whether regulation of systemic firms would *penalize* them for their size and complexity, whether the FSOC would be more effective than a single institution such as the Federal Reserve in identifying and reporting on emerging systemic risks, whether the still-complex regulatory structure would bridge remaining gaps effectively, and whether the new framework would be conducive to mitigating procyclicality and other macrofinancial linkages.

To restart private securitization markets, U.S. authorities launched the Term Asset-Backed Lending Facility to encourage the issuance of new high-quality securities. Other key steps include

- Improving disclosure about the ratings process and the underlying credits for securitized products, and differentiating ratings.
- Strengthening the liability of bundlers (e.g., through risk retention) to increase their accountability.
- Encouraging more-standardized and simpler securitizations through market codes of conduct.
- Establishing, after review, an appropriate role for the housing GSEs, making clear whether the housing agencies' liabilities are explicitly guaranteed and subjecting them to strict oversight and regulation.

Box 1.2. U.S. Potential Growth in the Aftermath of the Crisis

Shocks to financial conditions have been closely related to variations in real activity. That was likely the case in the United States between the mid-1990s and the mid-2000s, when a surge in securitization seems to have contributed to the simultaneous economic boom. Similarly, economic activity first slowed, and then cratered after the Lehman bankruptcy in September 2008 amid the ensuing overall tightening in financial conditions.

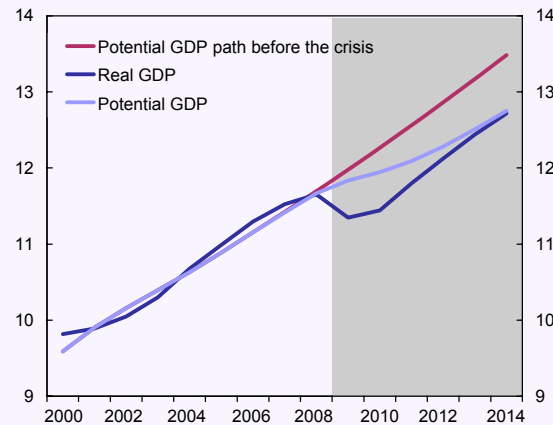
By the same token, tighter financial conditions, together with the economic restructuring caused by the crisis, will slow U.S. potential growth.¹ The protracted recession and tighter financial conditions will continue to hurt investment after the collapse observed in the past several quarters, thus keeping capital accumulation well below the rates seen in precrisis years. The resulting high and more-persistent-than-usual unemployment rates will also affect equilibrium rates of unemployment—both lowering potential growth. On the positive side, the negative trend in labor force participation (driven mostly by demographics) expected by many observers will probably be less steep as individuals remain more attached to the labor force to rebuild lost savings. The other

determinants of potential output growth—average hours worked per employee, which has been declining according to a long-term trend line, and increases in the working-age population, which have been slowing as the population ages—should continue to evolve independently of the crisis.

Taking all into consideration, IMF staff estimates that U.S. potential output will grow between 1 and 2 percent in the next five years, averaging about 1½ percent a year. This represents a deceleration vis-à-vis an estimated 2 percent average potential growth (incorporating negative demographic effects) for these years in the absence of the crisis. Despite slower growth in potential output, the estimated output gap reaches its widest point in 2010 at levels similar to those in the recession of the early 1980s. Ultimate losses in potential output are in the ballpark of those determined by previous research. By 2014, potential output is expected to be about 6 percent below the counterfactual level that would be produced by assuming potential output growth from 2009 to 2014 at the same average rate observed in 2005–08.

Slower potential growth will impose constraints on economic policy. In particular, public debt-to-GDP ratios will trend up faster in the United States than otherwise in the following years, although the exact path will depend on the behavior of interest rates in this lower-growth (but high-debt-accumulation) environment. Going beyond the medium term, there is even larger uncertainty about key determinants of potential output, but demographic forces will likely limit economic growth in outer years, raising the stakes for fiscal consolidation in the United States.

United States: Potential GDP
(Trillions of chained 2000 U.S. dollars)



Source: IMF staff calculations.

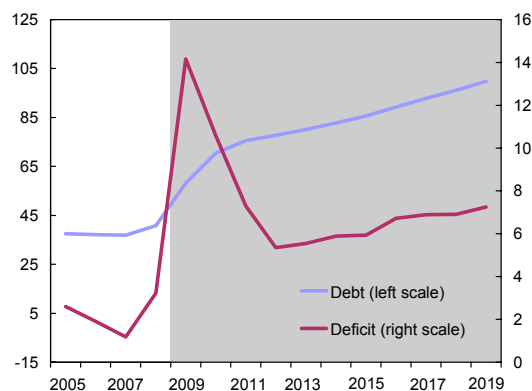
Note: This box was prepared by Marcello Estevão, based on Barrera, Estevão, and Keim (2009).

¹ Potential growth is defined here as the level of output that can be produced without undue strains on productive resources, that is, without inflationary impact.

thus capital accumulation), while high and persistent unemployment will affect equilibrium unemployment—both lowering potential growth. These factors will add to the downward pressure on potential growth from demographic trends in labor force participation and the secular decline in hours worked per employee. Overall, trend growth could register about 1.5 percent in the next five years, compared with a recent historical average of about 2.4 percent.

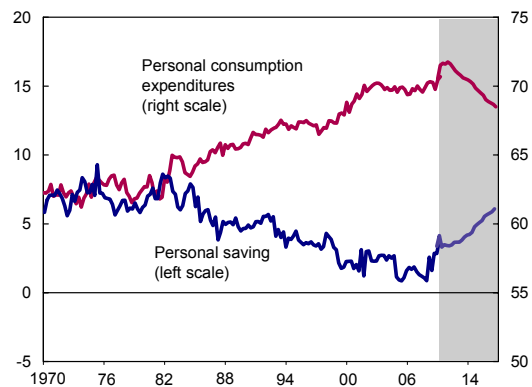
Figure 1.4. Rising public debt and weak private consumption will be negative legacies from the crisis.

United States: Federal Government Deficit and Debt Held by the Public
(Percent of GDP)



Sources: U.S. Office of Management and Budget; and IMF staff calculations.

United States: Personal Consumption and Saving
(Percent of GDP)



Sources: Haver Analytics; and IMF staff calculations.

Canada: Resilience amid Turmoil

The crisis has brought on a serious recession in Canada, reflecting its tight linkages with the U.S. economy and financial system (about three-fourths of Canadian exports are bound for the United States, and about one-fourth of Canadian corporate finance is sourced there). Hit by triple shocks—contracting global demand, financial volatility, and collapsing commodity export prices—economic activity declined significantly in late 2008 and continued to shrink in the first half of 2009. IMF staff forecasts a contraction of 2.5 percent in 2009—the worst since 1982—while the unemployment rate has already reached an 11-year high, and motor vehicle production in 2009 is shaping up to be the weakest in more than 30 years.

However, the contraction is expected to be short lived (Figure 1.5). Economic activity is already rebounding, with signs of life in retail spending and housing markets, and financial conditions continue to normalize. Given these positive developments, IMF staff expects that the Canadian economy will grow by about 2 percent in 2010, as the full effects of monetary and fiscal stimulus are felt and the drag from external shocks fades away. Meanwhile, the Bank of Canada’s (BoC’s) core inflation shows considerable resilience, at about 1.6 percent. That said, downside risks remain. In addition to potential new global headwinds, a stronger Canadian dollar and difficulties in the ongoing restructuring of key industrial sectors could act as a significant drag on growth and weigh on inflation.

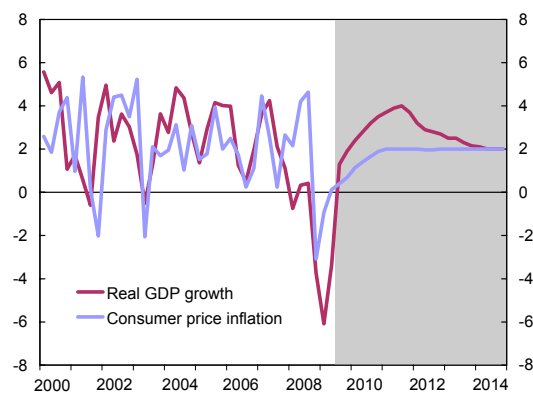
Overall, the impression is one of comparative resilience, given the size of the shocks. This resilience reflects several factors. Canada enjoys a sound macroeconomic framework with decade-long fiscal surpluses and low debt levels, which left room for a large fiscal stimulus.

Similarly, Canada's inflation-targeting framework has provided price stability, and the BoC's aggressive cuts in policy rates and other extraordinary liquidity measures have provided needed monetary support. In addition, the Canadian housing market did not experience the large overvaluation experienced elsewhere. More important, Canada's strong regulatory framework, along with conservative banking practices, has preserved financial stability, with no banks receiving public capital injections or public guarantees—although Canadian banks are facing a challenging credit cycle given rising unemployment. Accordingly, the authorities have proactively refined their toolkit for dealing with financial instability, though most of the toolkit remains untapped.

Canada's potential growth would also suffer, at least temporarily, for similar reasons to that of the United States. Moreover, the already comparatively subdued labor productivity performance in Canada vis-à-vis the United States in the past decade will add to the downward pressure on potential growth from population aging.

Figure 1.5. The contraction in Canada's output is expected to be short lived.

Canada: GDP Growth and Inflation
(Quarterly percent change, annualized)



Sources: Haver Analytics; and IMF staff calculations.

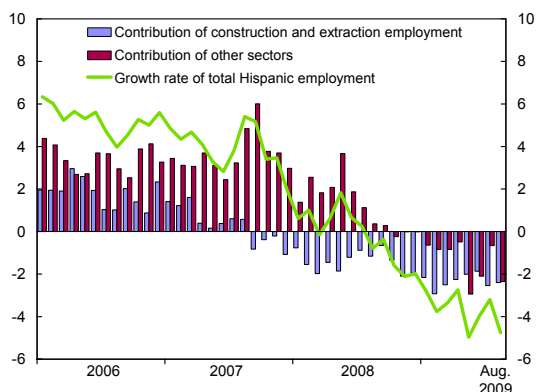
Sizable Implications for the Latin America and Caribbean Region

Beyond its effect on commodity prices and third countries' growth, the U.S. downturn directly and significantly affected key variables for the Latin America and Caribbean (LAC) region (Figure 1.6). High unemployment and the housing market crash have impinged on workers from the LAC region, with unemployment in construction at over 16 percent and among Hispanic workers at about 13 percent, both increasing more than 7 percentage points from the average in 2007. The pronounced drop in construction activity has accompanied a parallel fall in remittances to Mexico in particular, while weak employment conditions more broadly have pulled down remittances to other LAC countries. In addition, personal consumption expenditures continued to decline in the second quarter on an annual basis, weighing down on U.S. imports from the LAC region. For example, in June 2009, the value of imports from the major LAC countries was down by about 30 percent on an annual basis, although recent months are showing an improvement. Tourist arrivals from the United States have also contracted markedly, especially in the Caribbean, with no signs of a quick turnaround.

Though more modest, regional spillovers from Canada have also been significant for a number of LAC countries. Canadians represent 10 percent of Caribbean tourism flows—and are growing in importance—with implications for the region's growth and foreign direct investment outlook. Similarly, remittances from Canada are an important source of income for some Caribbean economies, notably Grenada, Guyana, Haiti, and Jamaica. The region has also felt the collapse in Canadian import demand, down 20 percent from May 2008, though imports have since recovered.

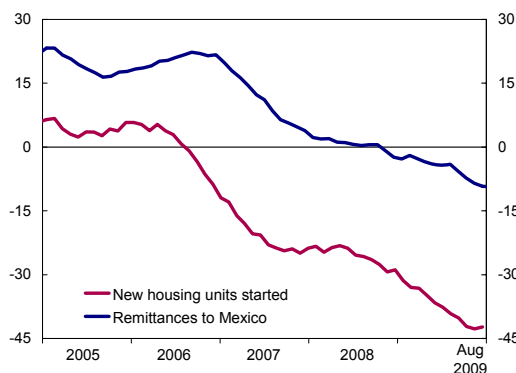
Figure 1.6. The U.S. crisis has significantly affected key variables for the LAC region.

United States: Construction and Hispanic Employment
(Percentage points)



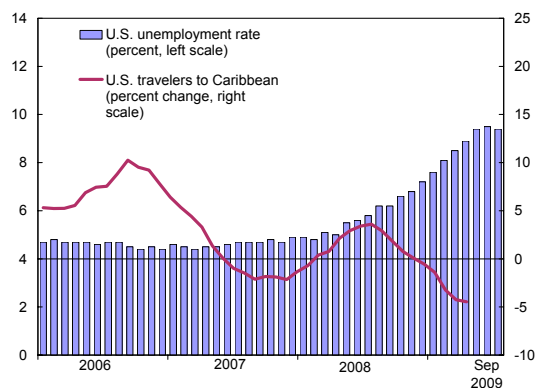
Sources: Haver Analytics; and IMF staff calculations.

Remittances to Mexico and U.S. Housing Starts
(Percent change; year average on previous year average)



Sources: Haver Analytics; and U.S. Bureau of Labor Statistics.

U.S. Travelers to the Caribbean and U.S. Unemployment



Sources: Haver Analytics; and national authorities.

Beyond these immediate effects, there will be important implications for the LAC region over the medium term.

The crisis is leaving consumers in the United States and other advanced economies with lower financial wealth, uncertainty about job security, and a higher public debt burden. To sustain the global recovery, lower domestic demand in advanced economies will need to be offset by higher domestic demand in countries that have primarily relied on export-led growth, especially in Asia. But this is likely to be a drawn-out process, with subdued global demand in the coming years.

The resulting lower external demand will impact LAC output in two distinct ways. It will directly reduce aggregate demand in the region, contributing to an output gap that may be persistent over the medium term. There may also be an indirect effect, since a persistent output gap could temporarily weigh on potential output in the region. In addition, the rebalancing of global demand may influence the sectoral composition of the region's exports.

Moreover, bleak employment conditions and a protracted process of households' balance sheet repair will weigh down on the outlook for remittances and tourism in the LAC region, especially affecting countries in the Caribbean and Central America.

There will also be a significant legacy for the financial sector. Tighter financial conditions in the United States will translate into tighter conditions for countries that borrow from U.S. financial institutions, with bank credit growth subdued in the coming years. And while Canadian financial institutions have shown remarkable resilience, spillovers could occur in a downside scenario, especially in the Caribbean, where Canadian banks have a sizable presence (reaching 75 percent of the foreign banking market in some cases).

More broadly, the LAC region's financial landscape will be affected by ongoing financial sector reforms in advanced economies. These reforms aim to strengthen financial regulation to prevent another meltdown of global credit markets. The global agenda has identified five priority areas: (1) expanding the perimeter of prudential regulation by reevaluating what constitutes a systemic institution, which would be subject to rigorous prudential regulation, supervision, and oversight; (2) making consolidated supervision more effective; (3) adapting existing regulatory and institutional practices to reduce procyclicality; (4) strengthening public disclosure practices for systemic financial institutions and markets; and (5) giving central banks a broader mandate for financial stability. These reforms may moderate the expansion of the credit cycle in the coming years.

Finally, the fiscal legacy of the crisis, with rising public debt levels in the United States and other major economies, may put upward pressure on borrowing costs for emerging market countries over the medium run, particularly government securities that may be closer substitutes for U.S. public debt. Until global private demand picks up, however, the risk of crowding out appears low. But there is more uncertainty about what will happen once the global recovery takes hold. IMF staff analysis suggests that large U.S. Treasury debt issuance usually is associated with both higher benchmark Treasury rates and larger spreads on emerging markets sovereign debt, other things equal (Box 1.3). At the same time, lower private returns in advanced economies could lead to large capital inflows to emerging markets. In addition to the customary high-carry destinations, economies with larger domestic markets could become particularly attractive if global trade remains sluggish.

Box 1.3. Spillovers from U.S. Federal Debt Issuance: The Case of Emerging Market Sovereign Borrowing

How will emerging market (EM) economies be affected by the recession and growing U.S. public debt? One view is that weak U.S. growth may fuel strong capital inflows to emerging markets.¹ Another is that large Treasury debt issuance may crowd out EM borrowing. IMF staff research in the 2009 U.S. Article IV consultation assesses the degree to which debt issuance affects EM debt spreads (the empirical literature suggests that an increase in publicly held U.S. federal debt of 1 percent of GDP raises long-term real U.S. Treasury debt yields by 3–4 basis points).² The analysis controls for a number of factors such as growth and financial conditions in both the United States and EM countries, although the standard caveats about identification still apply.

The estimated effect of U.S. debt on EM spreads is statistically and economically significant. The estimates imply that an increase in the debt ratio of 20 percentage points of GDP (starting from an initial level of 40 percentage points) would be associated with a spread increase of about 30 basis points (which would come on top of the roughly 60-basis-point increase in Treasury yields).

Evidence on how prospective U.S. economic performance affects EM sovereign spreads is mixed. Near-term indicators such as growth expectations for the current year and the changes in real stock prices over the past year possibly capture current global investor sentiment and are associated with lower spreads. By contrast, two-year-ahead U.S. growth expectations or the term premium on 10-year Treasury bonds are weakly related to higher EM spreads, suggesting that demand for EM sovereign debt may be higher when expectations of medium-term U.S. growth are relatively weak.

Taken together, the results suggest that a large increase in U.S. federal public debt has the potential to put upward pressure on EM spreads. The effect of U.S. debt issuance could be moderated by stronger growth expectations in EMs relative to the United States or actions that would lower EM sovereign risk, such as reducing external public debt. The findings reinforce the importance of implementing fiscal reforms and stabilizing federal public debt in the United States given its potential global spillover effects.

Estimated Economic Effects of Selected Explanatory Variables

	Increase in the Explanatory Variable (Percentage points)	Change in EM Spread	
		In percent	In basis points
U.S. debt/GDP	1	0.4	1.5
U.S. debt/GDP	20	7.9	31.5
EM real growth	1	-0.7	-2.6
EM real growth	4	-2.6	-10.4
EM external debt/GDP	1	0.3	1.4
EM external debt/GDP	16	5.6	22.3
EM expected growth	1	-1.6	-6.3
EM expected growth	4	-6.2	-24.7

Source: IMF staff calculations.

Note: All variables except U.S. debt were calculated using the sample means as initial values. The means were about 4 percent of GDP for actual and expected real growth and 27 percent of GDP for external public debt in EMs.

Note: This box was prepared by Oya Celasun, based on Celasun (2009).

¹ See, for instance, Calvo, Leiderman, and Reinhart (1996).

² Laubach (2009) identifies the relationship by estimating the effect of long-horizon forward rates (the five-year-ahead 5- or 10-year forward rates) and future deficits projected by the U.S. Congressional Budget Office (under the assumption of unchanged laws and policies). Laubach finds an effect of 3–4 basis points per 1 percentage point increase in the debt/GDP ratio. Engen and Hubbard (2004) test an array of specifications and conclude that the effect is about 3 basis points.