

# Regional Economic Outlook

## Western Hemisphere

Crisis Averted—What's Next?

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OCT 09

# World Economic and Financial Surveys

## Regional Economic Outlook

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Crisis Averted—What's Next?



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## Preface

This October 2009 issue of the *Regional Economic Outlook: Western Hemisphere* (REO) was prepared by a team led by Steven Phillips and Ana Corbacho under the direction of Rodrigo Valdés and Nicolás Eyzaguirre. This report reflects developments as of October 1, 2009. The team included Jorge Iván Canales-Kriljenko, Gabriel Di Bella, Herman Kamil, Rafael Romeu, Carolina Saizar, and Bennett Sutton. Specific contributions were made by Pelin Berkmen, Oya Celasun, Marcello Estevão, Gastón Gelos, Kornelia Krajnyak, Charles Kramer, Andrea Maechler, Koshy Mathai, Robert Rennhack, Miguel Savastano, Andrew Swiston, Evridiki Tsounta, Ivana Vladkova-Hollar, and James Walsh. The report benefited from comments by many people. Special thanks go to Miguel A. Kiguel, Miguel Savastano, and participants at the 2009 LACEA conference. Patricia Attix, Mauricio Bourdin, María S. Gutiérrez, Leandro Medina, Breno Oliveira, Fernanda Rossi, Carolina Saizar, Bennett Sutton, and Joy Villacorte provided research and production assistance. Martha Bonilla and Sean Culhane of the External Relations Department edited the manuscript and coordinated the production.



# Executive Summary

*The global economy is emerging from recession, but its recovery will be gradual, with only modest growth in coming years.* Financial stabilization has greatly reduced the possibility of a systemic collapse, though there are still downside risks. So far, the recovery in advanced economies is dependent on massive policy stimulus. Growth in the United States and most advanced economies will remain sluggish, and employment conditions will likely get worse before they start to improve. 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 (LAC) region.

*The impact of the crisis on the LAC region was substantial, but the worst is over for most countries.* The crisis shocked the region with more expensive external financing and lower exports, workers' remittances, and tourism receipts. A wave of uncertainty dented confidence, and the private sector cut back spending. But following a sizable contraction through the first half of 2009, the LAC region is recovering and moderate growth is expected for 2010.

*Still, the outlook varies considerably within the region.* Recovery prospects are stronger for countries that had the most room for policy maneuver, which are also benefiting in 2009 from much improved financial conditions and commodity export prices. Countries more reliant on tourism and remittances were not hit as forcefully on impact, but their recovery will be slower because their outlook depends significantly on lagging employment and consumption in the United States. Some of these countries also have less room for policy stimulus.

*Policies will have to strike difficult balances, according to country circumstances.* For better-prepared countries, which were able to apply monetary and fiscal stimulus, the issue will be when to begin, and how fast to proceed with, the withdrawal of stimulus. In general, it will be appropriate to begin the withdrawal on the fiscal before the monetary side. There are risks from removing stimulus too quickly, given that the global recovery is still not well entrenched, but also to withdrawing too slowly. A few countries may soon be facing strong capital inflows, and at some point could experience stronger currencies and even overheating—this would speed up the need to remove stimulus and is another reason for reversing fiscal easing earlier than monetary easing. For other countries, the room for stimulus has been almost depleted and should prudently be saved for downside risk scenarios. Countries with the least fiscal room will need stronger efforts to rebalance expenditure to protect vulnerable groups.

*In the medium term, policies will need to adjust to a new global environment of lower growth.* A return to precrisis rates of growth of output, and of commodity export prices, is unlikely. With government revenue therefore growing more slowly, public spending will need to be more focused, particularly in countries with higher debt. More broadly, policies will need to work

harder to provide conditions for growth and poverty alleviation. Finally, financial supervision and regulatory policies will need to continually develop to ensure stability, with broad coverage of systemic financial institutions and risks.

*A further policy agenda relates to building the region's resilience, and developing room for policy maneuver, in preparation for future shocks.* The recent experience has proven the value of steps taken in this direction by many countries during this decade. Against severe global shocks, the region avoided falling into its own financial and balance of payments crisis. In fact, in terms of maintaining economic activity, the region did as well as, or better than, many other countries, and much better than in the past. Countries with stronger policies prior to the crisis were most able to respond to cushion the blow. Other countries' crisis responses were constrained, and will benefit from developing policy frameworks to improve predictability and limit existing procyclical biases.

*This Regional Economic Outlook explores the consequences and policy implications of the recent global crisis and recession for the LAC region.* Chapter 1 sets the global stage, emphasizing how developments in the United States and advanced economies will affect recovery in the region. Chapter 2 reviews the current state of regional economies and their outlook for 2009–10 and through the medium term, setting out key policy issues and general recommendations. Chapter 3 then steps back to evaluate how well the region performed recently, from an international perspective, and compared with its performance in past episodes of global turmoil: together, these experiences point to an agenda for the region to further develop its policy frameworks and resilience to external shocks. Finally, Chapter 4 focuses on fiscal policy responses of LAC countries to the recent crisis, linking these to their precrisis conditions and policies and identifying priorities for developing fiscal policy frameworks in the years ahead.

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

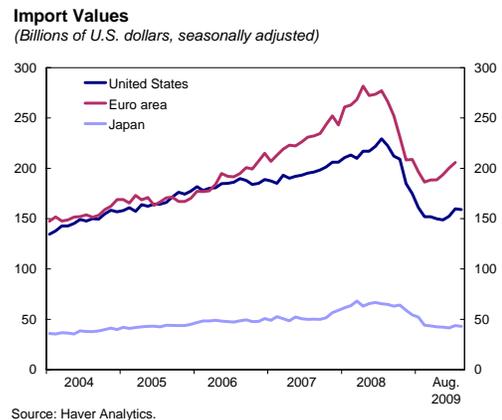
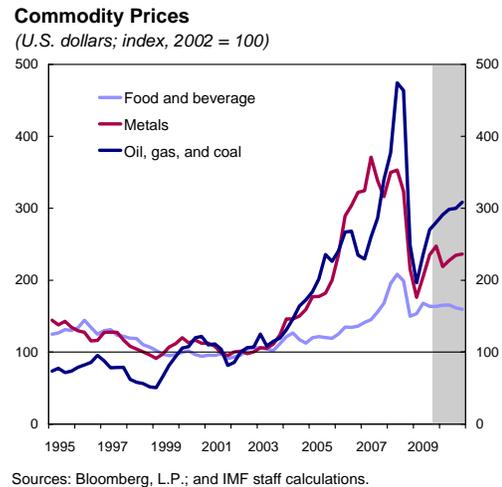
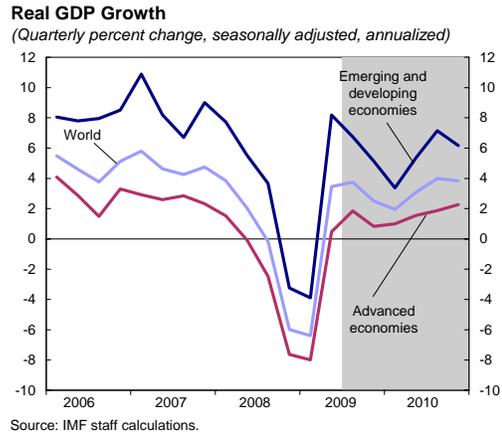
*The global economy is emerging from recession, but the recovery is expected to be sluggish. While financial conditions have continued to improve, many markets remain highly dependent on public support, and downside risks prevail. In the United States and many advanced economies, growth and employment 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.

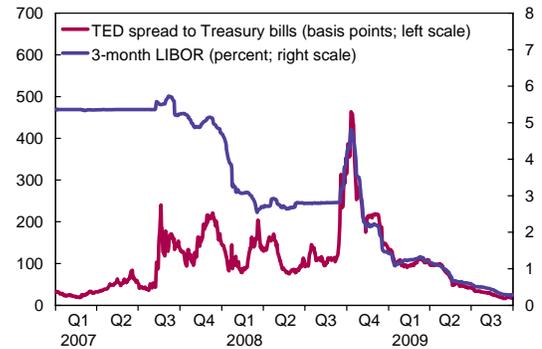
In parallel, efforts to stabilize the financial system have contributed to a substantial improvement in financial conditions, largely easing the post-Lehman credit crunch, although overall conditions remain on the tight side. Besides measures from the Federal Reserve, public capital injections under 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.

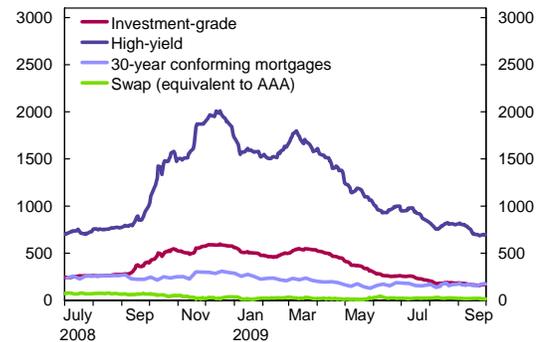
Figure 1.2. Indicators of financial system stress have come down substantially.

**Money Market Spreads**



**Corporate and Other Spreads**

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



**Equity Prices**

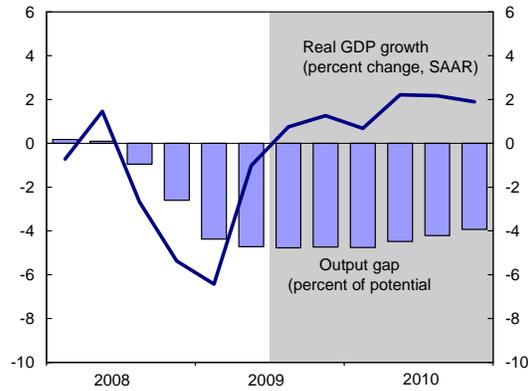
(July 1, 2008 = 100)



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

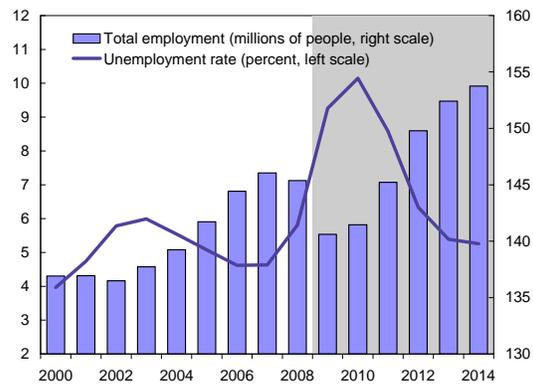
Figure 1.3. The outlook is for a gradual recovery of U.S. growth, with weak employment and imports.

**United States: Real GDP and Output Gap**



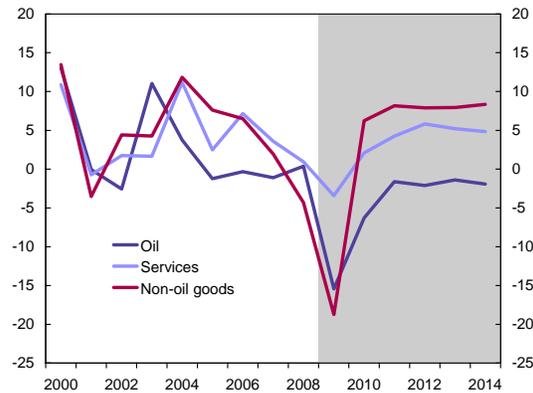
Sources: U.S. Bureau of Economic Analysis; U.S. Bureau of Labor Statistics; Haver Analytics; and IMF staff calculations.

**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.

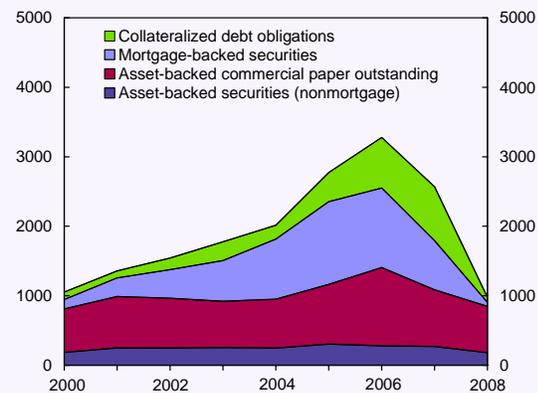
**Between 2002 and 2006, issuance of asset-backed securities more than doubled to US\$840 billion—roughly the size of bank credit flows—financed by domestic and foreign investors.** While greatly facilitating the expansion of credit, securitization activity also reduced transparency regarding the distribution 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.

**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.

Note: This box was prepared by Andrea Maechler.

**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.**<sup>1</sup> 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.

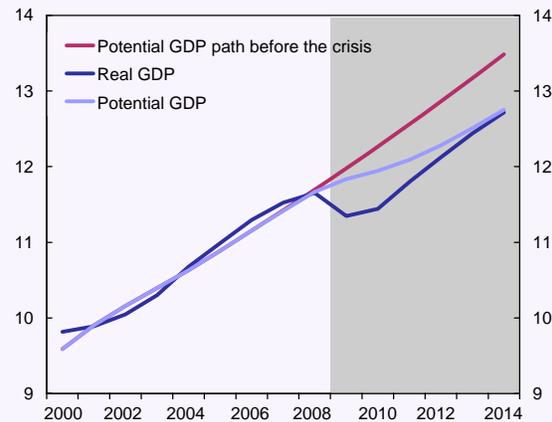
On the positive side, the negative trend in labor force participation (driven mostly by demographics) expected by many observers will probably be less steep as individuals remain more attached to the labor force to rebuild lost savings. The other

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.

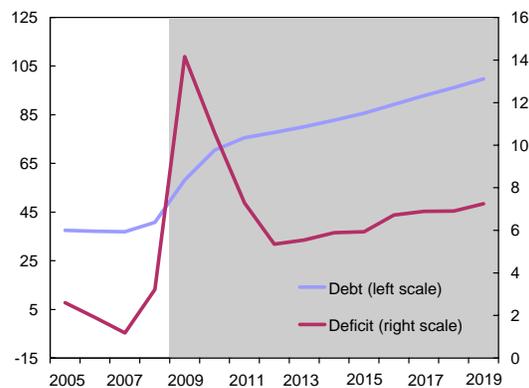
Note: This box was prepared by Marcello Estevão, based on Barrera, Estevão, and Keim (2009).

<sup>1</sup> 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.

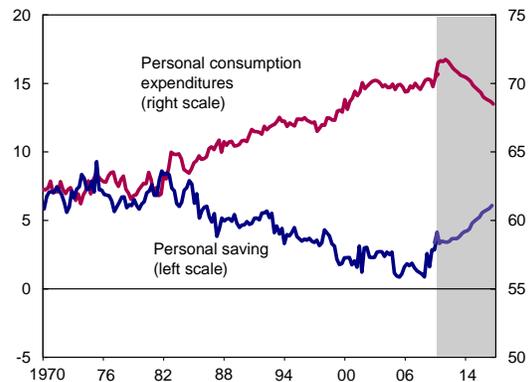
*Figure 1.4. Rising public debt and weak private consumption will be negative legacies from the crisis.*

**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.

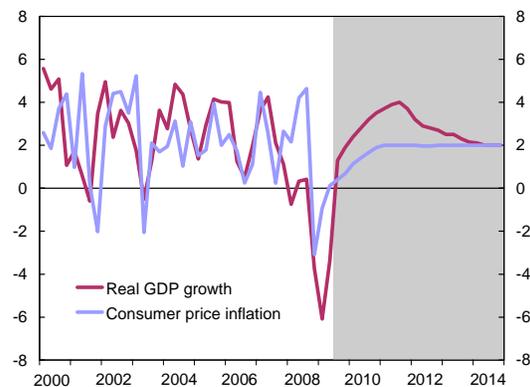
Overall, the impression is one of comparative resilience, given the size of the shocks. This resilience reflects several factors. Canada enjoys a sound macroeconomic framework with decade-long fiscal surpluses and low debt levels, which left room for a large fiscal stimulus.

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.

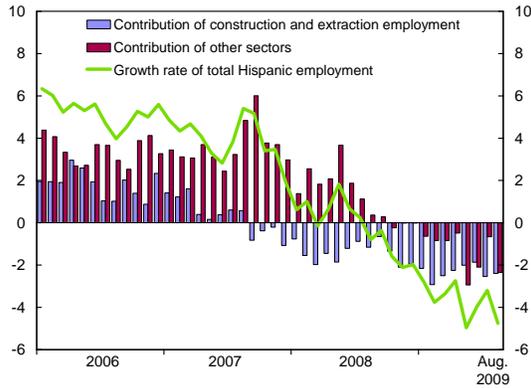
## Sizable Implications for the Latin America and Caribbean Region

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.

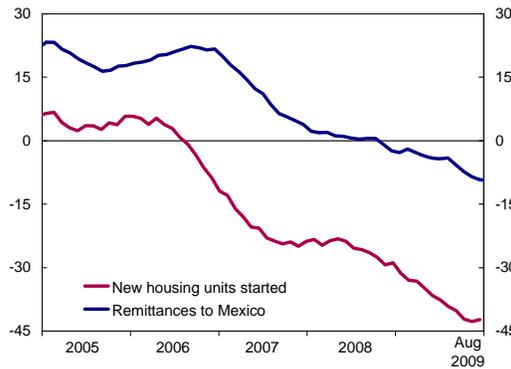
Figure 1.6. The U.S. crisis has significantly affected key variables for the LAC region.

**United States: Construction and Hispanic Employment**  
(Percentage points)



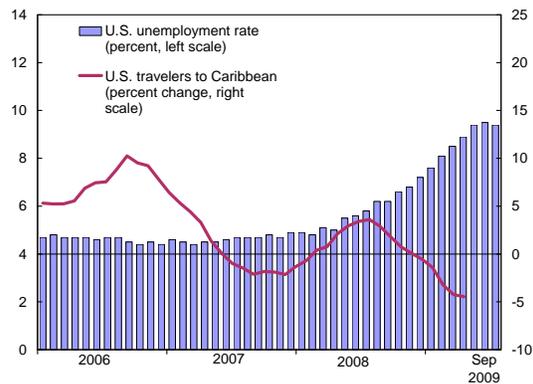
Sources: Haver Analytics; and IMF staff calculations.

**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.<sup>1</sup> 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).<sup>2</sup> 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).

<sup>1</sup> See, for instance, Calvo, Leiderman, and Reinhart (1996).

<sup>2</sup> 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.

## 2. Latin America and the Caribbean: Developments and Outlook

The LAC region is doing considerably better than in past crises, but there is growing heterogeneity within the region. External shocks to remittances and tourism are still playing out and will continue to affect countries in Central America and the Caribbean. In contrast, some of the larger economies have already bottomed out. These varying output dynamics, coupled with differing room for policy maneuver, are shaping policy challenges in the near term. In addition, long-lasting legacies from the global crisis will have significant implications for the region.

### External Shocks Fading at Different Speeds

As documented in the May 2009 *Regional Economic Outlook*, starting in the last quarter of 2008 the LAC region was hit by severe and wide-ranging external shocks.<sup>1</sup> The cost of external borrowing spiked and capital flows turned negative. Exports collapsed owing to a combination of lower commodity prices and plunging volumes on other exports. Remittances and tourism receipts fell. Remittances and tourism receipts fell. Uncertainty mounted.

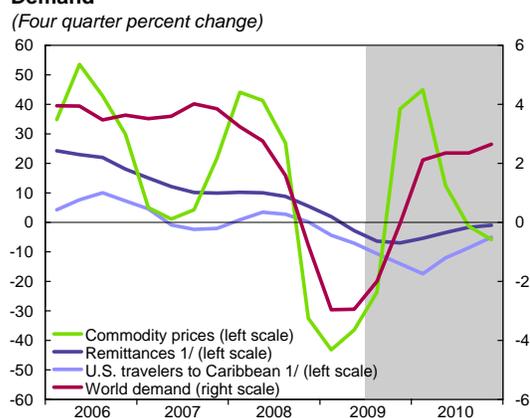
In the past six months, as fears of a 1930s-style scenario subsided, conditions have generally improved (Chapter 1). Financial markets stabilized, and asset and commodity prices recovered sharply in the second quarter of 2009. More recently, demand for noncommodity exports seems to be picking up, albeit slowly. But tourism and remittances, more dependent on consumption

Note: This chapter was prepared by Jorge Iván Canales-Kriljenko with significant contributions from Ana Corbacho, Gabriel Di Bella, Herman Kamil, Steve Phillips, Rafael Romeu, Carolina Saizar, and Bennett Sutton.

<sup>1</sup> Some economies were also hit by weather-related shocks, such as the drought that affected output of Southern Cone countries, especially Paraguay.

Figure 2.1. External demand for goods is likely to recover sooner than that for tourism and remittances, given weak employment and private consumption in advanced economies.

### Commodities, Remittances, Tourism, and External Demand



Source: IMF staff calculations.

1/ Remittances and tourism are four quarter moving averages.

and employment conditions in advanced countries, are lagging (Figure 2.1).

This mixed external environment will have different implications for countries across the LAC region. To illustrate these differences, we divide the region into four country groups (Box 2.1). These groups aim to capture the countries' varying exposures to external shocks.

With low volatility in financial indicators, the region's financial heat map has returned to mostly green by now (Figure 2.2). But there are differences across countries. The hike in corporate and sovereign spreads and yields has been completely reversed for the better-rated countries. But for a number of countries with lower credit ratings, sovereign and corporate interest rates are still significantly higher than before the spike in September 2008.

### Box 2.1. LAC Country Analytical Groupings

**In analyzing the outlook, we split LAC countries into four groups designed to capture their different exposures to key external shocks.** To reflect the greatly varying impact of external terms of trade shocks, a first distinction is made between net commodity exporters and net commodity importers. Among the net commodity exporters, we further distinguish between countries that have full access to international financial markets and those that are relatively less financially integrated. Among the net commodity importers, we further distinguish countries with predominant tourism sectors from the rest.

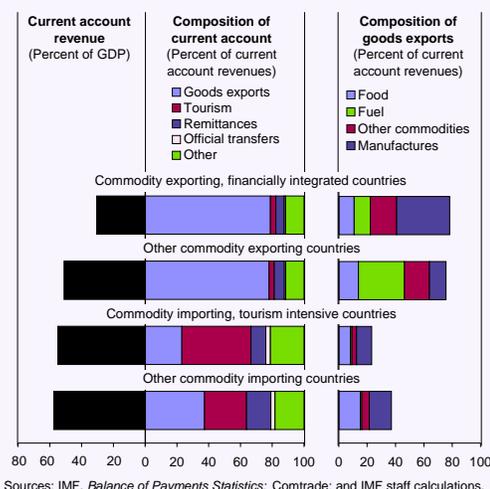
- Net commodity exporting countries with full access to international financial markets.** For brevity, these are called *commodity exporting, financially integrated countries*. This group includes five countries that account for two-thirds of the region's GDP (Brazil, Chile, Colombia, Mexico, and Peru). They are the most linked to global financial markets and have access to those markets on relatively favorable terms, with investment grade credit ratings. They also tend to have more-developed domestic capital markets. These countries share other characteristics. They are inflation targeters, with the highest degree of exchange rate flexibility, and more generally follow rules-based macroeconomic policies. Terms of trade for these countries have usually moved with world commodity prices.

- Other net commodity exporting countries.** This group includes Argentina, Bolivia, Ecuador, Paraguay, Suriname, Trinidad and Tobago, and Venezuela. In general, these countries are less integrated with global financial markets. On average, they have experienced the most significant terms of trade gains.

- Net commodity importing countries with large tourism sectors.** For simplicity, these will be referred to as *commodity importing, tourism intensive countries*. This group includes Antigua and Barbuda, The Bahamas, Barbados, Belize, Dominica, Grenada, Jamaica, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines. These countries depend primarily on tourism for their current account revenues. In general, they have high external debt burdens but otherwise are not closely integrated with external financial markets. They experienced sizable terms of trade losses during 2000–08, given their limited goods exports base and their reliance on imported fuels.

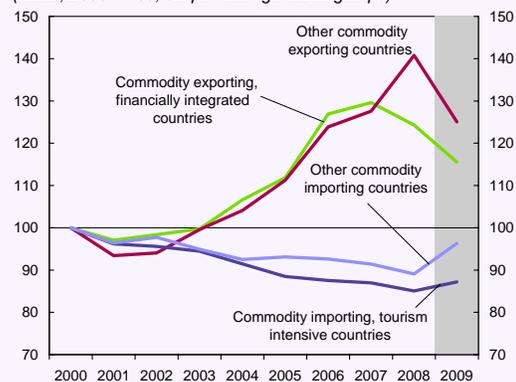
- Other commodity importing countries.** This group includes Costa Rica, Dominican Republic, El Salvador, Guatemala, Guyana, Haiti, Honduras, Nicaragua, Panama, and Uruguay. Many of these countries rely heavily on remittances. Some of these countries have sizable commodity exports but still experienced terms of trade losses in 2000–08 given their large fuel imports.

Current Account Revenue Structure



Terms of Trade

(Index, 2000 = 100; simple average within groups)



Note: This box was prepared by Jorge Iván Canales-Kriljenko and Ana Corbacho.

Similarly, access to debt markets has been improving. By the second quarter of 2009, bond and loan issuances had returned to close to precrisis levels and were well above levels prevailing during 2003–06, just before the surge in capital inflows to emerging markets. Still, although access for sovereigns and quasi-sovereign entities seems to have fully recovered, corporate issuance remains below precrisis levels, particularly for high yield firms. This could reflect a market that has become more discriminating but also firms' lower financing requirements given the slowdown in investment.

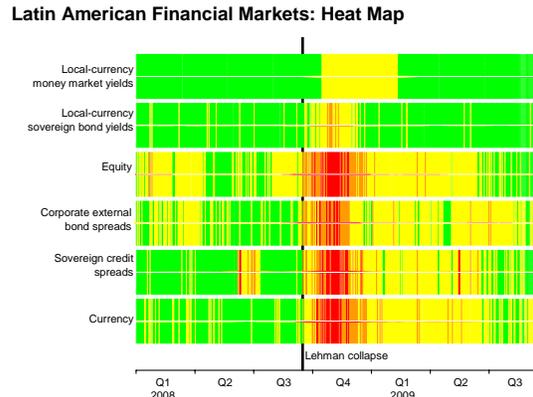
Within the context of reduced market access, the IMF has supported the LAC region with renewed intensity. It has provided support in policy discussions through surveillance and timely technical assistance. Together with other multilateral organizations, the IMF also has provided external liquidity support to bolster the authorities' efforts to stabilize the economy, in some cases using newly established mechanisms.<sup>2</sup> Most countries have treated the IMF arrangements as precautionary (Box 2.2).

The lower external demand was felt by all LAC countries but differed fundamentally in its effects on commodity and manufactured exports (Figure 2.3). The decline in external demand for manufactures materialized primarily through lower volumes, affecting especially Mexico and the Central American countries that are members of the Dominican Republic–Central America Free Trade Agreement with the United States. The decline in external demand for commodity exports, which dominate the export structure of the other commodity exporting, financially integrated countries, was reflected mostly in lower commodity prices.<sup>3</sup> The decline in export volumes was much lower for the other exporting countries,

<sup>2</sup> A U.S. dollar swap facility with the United States also bolstered the external liquidity of Brazil and Mexico.

<sup>3</sup> Because the supply of commodities tends to be price inelastic in the short run, fluctuations in demand tend to be reflected more in prices than in volumes.

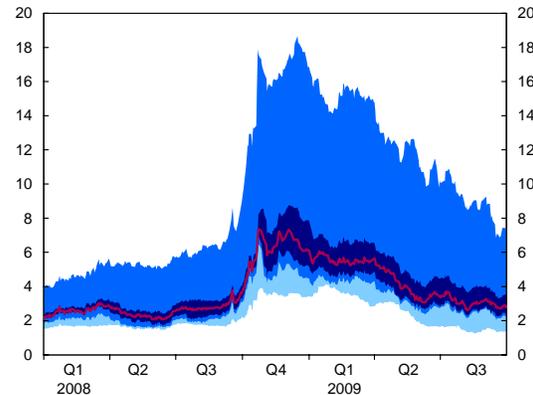
Figure 2.2. Sovereign yields declined, and market access recovered considerably. This has reduced financial volatility, turning the financial heat map mostly green.



Sources: Bloomberg, LLP; Credit Suisse; Deutsche Bank; and IMF staff calculations.

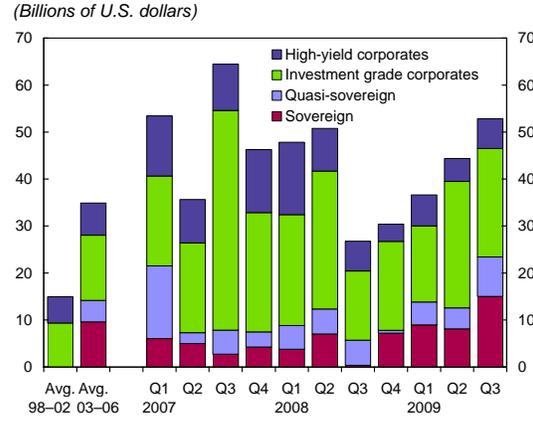
Note: The heat map identifies degrees of financial market stress by comparing daily price changes and their 30-day volatility with those during a normal period, subjectively set to 2004–06. The four degrees of stress are low (green), low-moderate (yellow), moderate-high (orange), and high (red).

LAC: Sovereign Yield Distribution 1/ (Percent)



Source: JPMorgan Chase & Co.  
1/ Distribution of EMBIG sovereign bond yields for Latin America and the Caribbean. Excludes the highest 20 percent of the distribution.

Total Financing: Bond and Loan Issuance by Issuer Type (Billions of U.S. dollars)



Sources: Dealogic; and IMF staff calculations.

**Box 2.2. The IMF's Support to the Region during the Crisis**

**As part of its response to the global economic crisis, the IMF beefed up its lending capacity and undertook a major reform of its lending instruments.** Through bilateral borrowing arrangements with some members with strong reserve positions, in the first half of 2009, the IMF secured SDR 67 billion (US\$99 billion) in additional resources, increasing its lending capacity to SDR 213 billion (US\$316 billion). At the same time, the IMF approved a major overhaul of its lending toolkit, adding flexibility to the terms and size of its loans and further streamlining conditionality. Two key innovations were the creation of a Flexible Credit Line (FCL), to provide large and up-front financing without ex post conditions to members with very strong fundamentals and policies, and the enhancement of Stand-By Arrangements (SBAs), by increasing their “normal” size and allowing up-front disbursements of a large fraction of the funds under the arrangement.

**Latin America was the region that first benefited from these changes in the IMF's lending toolkit**

On January 16, 2009, before the instruments had been completely overhauled, the IMF approved an SDR 514 million (US\$763 million) SBA to El Salvador under which two-thirds of the total resources became available on approval. Three months later, on April 17, Mexico became the first country to receive an FCL (for the equivalent of 10 times Mexico's quota in the IMF—SDR 31.5 billion, US\$46.7 billion). So far this year, the IMF Board has approved arrangements with 11 LAC countries, most of these in Central America and the Caribbean. By end-June 2009, the IMF's total loan commitments to the Western Hemisphere countries had reached SDR 40.2 billion (US\$59.6 billion), up from SDR 333 million (US\$494 million) one year earlier. This represented more than 50 percent of IMF loan commitments to all its members (see table). Notably, however, more than 99 percent of all IMF loan commitments to the region during 2009 have been of a precautionary nature (i.e., countries have obtained access to IMF resources but have chosen not to draw on them). In contrast, in regions more severely affected by the global crisis (e.g., central and eastern Europe), countries with IMF arrangements have chosen to draw on their IMF loans to alleviate their balance of payments difficulties.

**IMF Loans, 2008–09**

(Total resources committed; millions of SDRs)

	End-June 2008		End-June 2009	
	Western Hemisphere	World	Western Hemisphere	World
	Total	333	1,320	40,208
Stand-By Arrangements	241	837	1,637	25,600
Flexible Credit Line	...	...	38,494	52,184
PRGF/ESF 1/	92	483	77	1,776

Source: IMF Finance Department.

1/ Facilities for low-income country members.

**The distribution of SDR 160 billion (US\$237 billion) in newly created SDRs was another significant IMF initiative to help mitigate the effects of the global crisis.**

The new SDRs were distributed on August 28 among all members in proportion to their IMF quotas and had the immediate effect of strengthening members' reserve positions. Over time, the SDR allocation will facilitate access to “hard currencies” for members that may encounter difficulties securing foreign exchange in global markets. Altogether, Western Hemisphere countries, excluding Canada and the United States, have received SDR 13.5 billion (US\$20 billion) in new SDRs. Owing to their relatively strong external positions, however, most LAC countries seem to have opted to keep the SDR allocation as reserves rather than for making international payments.

Note: This box was prepared by Miguel Savastano.

particularly the energy exporters. With commodity prices having recovered substantially, external shocks to commodity exporters are easing, while noncommodity exports are recovering more slowly.

The fall in tourism receipts has not yet been as large as that in exports but should be more persistent, weighing down on prospects for the tourism intensive economies. A sharp reduction in tourist arrivals led to price discounts in many Caribbean countries. Even after the eventual recovery of employment in the United States and other tourism-source countries, tourism receipts will continue to be affected by higher private saving rates envisaged in the United States and other advanced economies (Box 2.3).

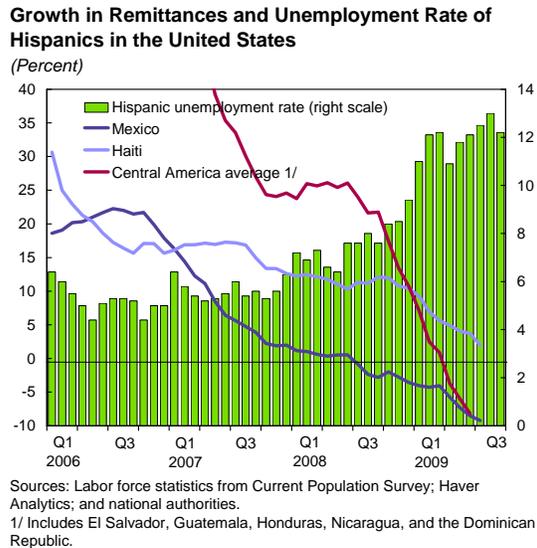
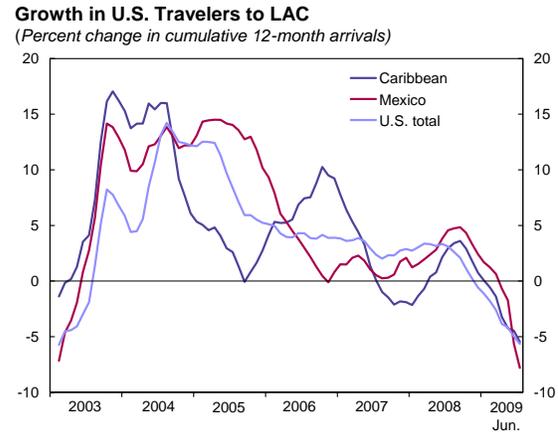
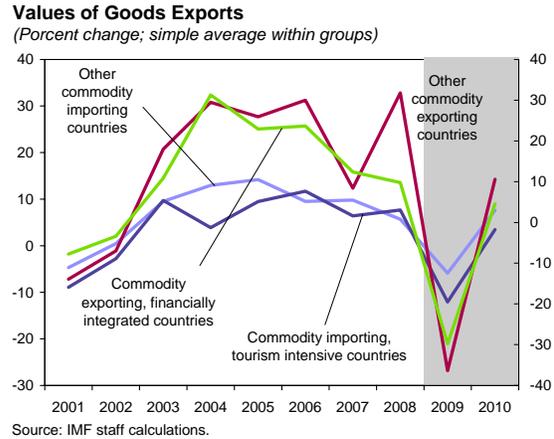
The outlook for remittances is not favorable either because they also depend on employment conditions in advanced economies. Remittances have continued falling, affecting especially commodity importing countries, notably in Central America. Sluggish construction activity and a continued increase in the unemployment of Hispanics in the United States have been the key drivers of this decline.

### Severe Economic Impact, but Green Shoots Visible . . .

How did the global recession and financial stress get transmitted to lower activity in the LAC region? Export volumes did contract in many cases, but a fast and sizable drop in domestic demand played a dominant role (Figure 2.4).

The general story is that the private sector reacted quickly to the external shocks and extreme real and financial uncertainty of late 2008, consuming fewer durable goods, postponing investment plans, and running down inventories. The reduction in domestic demand reflected primarily lower investment (including inventory adjustments), although in some countries it also entailed lower consumption.

Figure 2.3. While exports are recovering for all country groups, remittances and tourism continue to lag.



### Box 2.3. A Less-Crowded Caribbean Next Year? Tourism Trends

**The global financial crisis has affected tourism-dependent economies profoundly, with large declines in arrivals leading to sharp discounts.** As the crisis unfolded in the United States, destinations closer to the epicenter (Mexico and the Caribbean) felt its impact sooner. As the downturn spread to continental Europe, arrivals declined in destinations less dependent on U.S. travel, such as Barbados, Cuba, the Dominican Republic, and some countries in South America. In response, many tourist destinations have attempted to slow collapsing arrivals by cutting prices. Although the hotel price data are limited, by the end of 2008 hotel rates had declined by 7 percent in both the Caribbean and Latin America, with even greater cuts observed in 2009. These price cuts underscore the potential for steep revenue declines and consequent reductions in foreign exchange earnings in the coming months.

**The effects of the financial crisis on the Caribbean will likely persist into 2010 because tourism depends on employment conditions in advanced economies, which typically lag output recoveries.<sup>1</sup>** In the 2001 recession, for example, declines in tourist arrivals to Mexico and the Caribbean followed increases in unemployment rates, which did not improve until 2003 despite an output recovery in 2002. Econometric estimates of tourist arrivals to the region factoring in increasing unemployment rates suggest a regional decline of between 10 percent and 15 percent because of this crisis. U.S. unemployment rates are currently projected to enter double digits—for the first time in more than 60 years—and remain there until the last quarter of 2010.

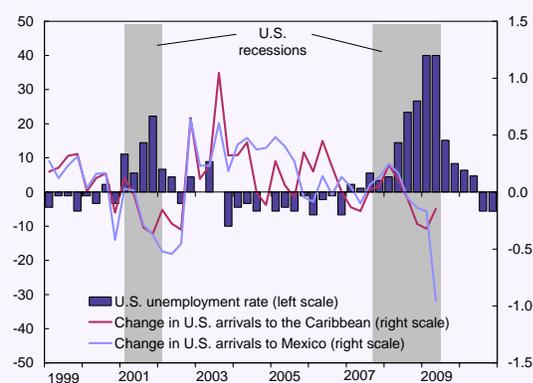
**The outlook for tourism in 2010 could be further affected by spillovers from increasing U.S. openness toward Cuba and a potentially sharp recovery in Mexico.** In April 2009, the United States lifted travel restrictions on its residents with family members in Cuba, boosting their arrivals to Cuba by 11 percent and overall arrivals by 6 percent. Although the impact on the Caribbean of this change is likely to be small, further near-term opening of U.S. travel to Cuba would increase regional competition significantly.<sup>2</sup> In addition, since 2003, increases (and declines) in U.S. travel to Mexico have been offset by U.S. arrivals to the Caribbean. The sharp reductions in arrivals to Mexico this year resulting from the H1N1 virus and other shocks have slowed the rate of decline in the Caribbean. Should Mexico recover quickly in 2010, this would put further pressure on the Caribbean.

#### Percent Change in Tourist Arrivals, 2009

	April-June Percent Change	Cumulative Percent Change (to month)	
Antigua & Barbuda	-13.8	-12.8	Jul
Bahamas, The	...	-14.1	May
Barbados	-12.5	-10.7	Jul
Belize	-6.0	-8.3	Jun
Dominican Republic	-0.5	-2.4	Jul
Jamaica	6.7	3.4	Jun
St. Lucia	-5.2	-9.4	Jul
St. Vincent & Gren.	-24.1	-17.4	Jun
St. Kitts and Nevis	-25.5	-27.0	Jun
Argentina	-9.1	-13.1	Jun
Brazil	2.4	-3.8	Jul
Chile	-8.4	-8.5	Jun
Colombia	13.2	10.1	Jul
Mexico	-27.6	-16.8	Jul
Peru	-0.3	-0.9	Jun
<b>Memorandum:</b>			
Cuba	3.8	3.1	Jul

Sources: CTO; country authorities; and IMF staff calculations.

#### Change in U.S. Unemployment Rate and Tourist Arrivals (Percent)



Sources: Haver Analytics; and IMF staff calculations.

Note: This box was prepared by Rafael Romeu, with insights from Roberto Perrelli and Laure Redifer.

<sup>1</sup> See Romeu and Wolfe (forthcoming) on the link between tourism and employment.

<sup>2</sup> Romeu (2008) estimates the regional impact of unrestricted U.S. travel to Cuba.

The reduction in domestic demand led to a sharp deceleration in economic activity, but the pace of deceleration has not been uniform. Indeed, the evidence shows that the external shocks were felt more rapidly by countries that are most financially integrated and linked internationally through exports of goods, rather than through income from tourism and remittances.

As noted in the May 2009 *Regional Economic Outlook*, exchange rates played a crucial role in absorbing the external shocks in the most financially integrated economies (Figure 2.5). Following the Lehman collapse, the real exchange rates of these countries depreciated considerably but bounced back in 2009, mainly reflecting their currencies' movements against the U.S. dollar. In other countries, real effective (trade-weighted) exchange rates moved in the opposite direction: this pattern was primarily explained by changes in nominal effective exchange rates, in particular the appreciation of the U.S. dollar relative to other major currencies, rather than differences in inflation rates. Indeed, with activity declining and output gaps widening in all countries, inflation fell across the board.

Financial systems have been resilient to these shocks, but credit growth has decelerated. Across the region, credit expansion virtually stopped because firms and households tended to reduce their credit exposure, and banks became more cautious. During 2009, nonperforming loans have increased from low levels and profitability has generally declined, but risk-weighted capital adequacy ratios have improved. Procyclical provisioning may have played a role. This suggests that banks acted to increase their risk-adjusted capital cushions by taking relatively less credit risk (Figure 2.6).

Many factors have helped keep the LAC domestic financial systems afloat: larger and better capital and liquidity cushions, systematic upgrading of the legal, regulatory, and supervisory framework over more than a decade, and better risk management by financial institutions.

Figure 2.4. Domestic demand decelerated amid a sudden stop in credit, lower imports, and narrower external balances.

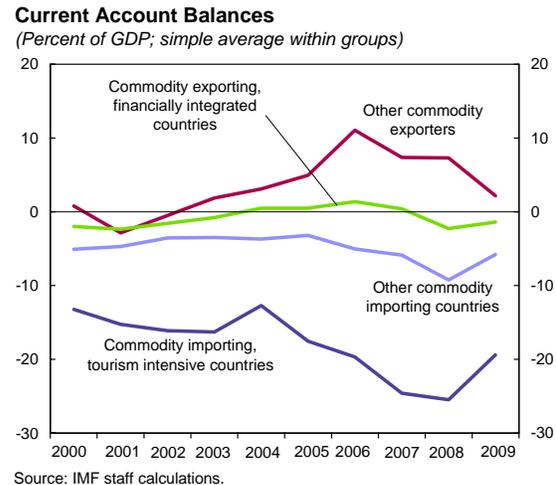
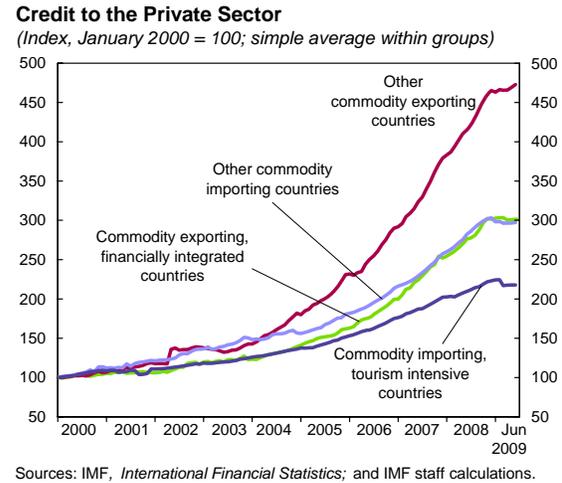
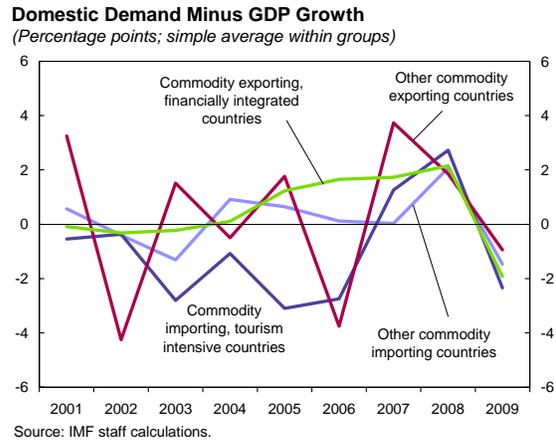
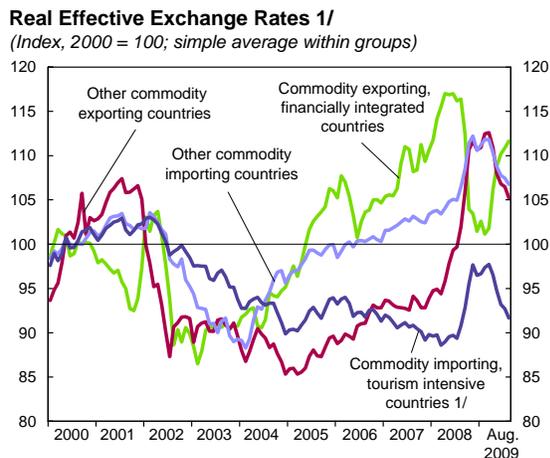
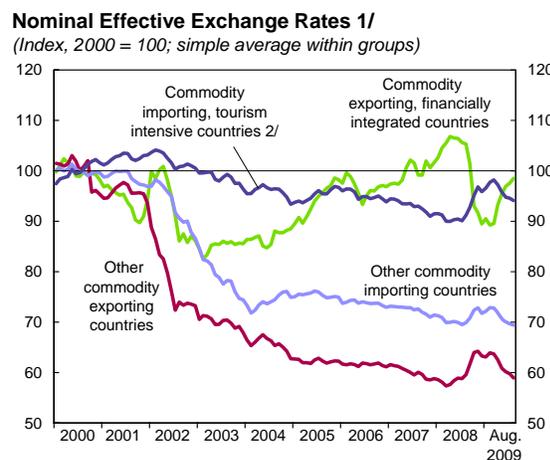


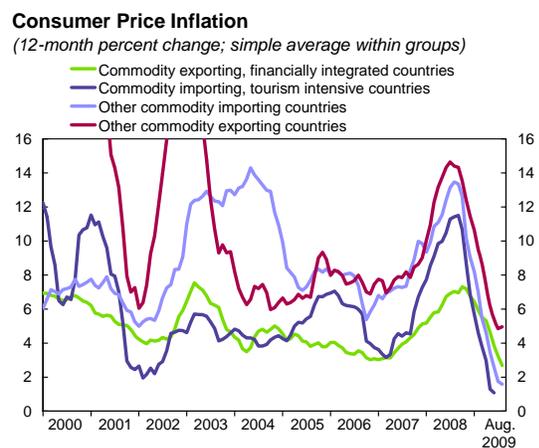
Figure 2.5. Real exchange rates are returning to pre-Lehman levels, reflecting mainly action from nominal effective rates.



Source: IMF staff calculations.  
1/ An increase (decrease) represents an appreciation (depreciation).  
2/ Excludes Jamaica.

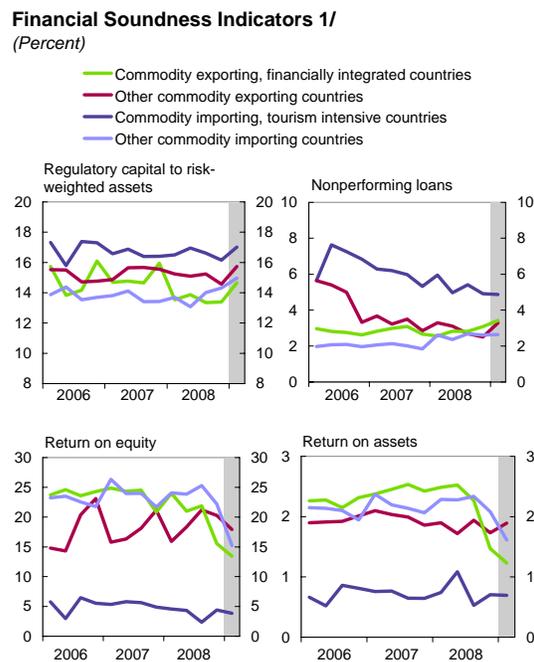


Source: IMF staff calculations.  
1/ An increase (decrease) represents an appreciation (depreciation).  
2/ Excludes Jamaica.



Sources: Haver Analytics; national authorities; and IMF staff calculations.

Figure 2.6. Nonperforming loans have increased and profitability has declined, but risk-weighted capital adequacy ratios have improved.



Sources: National authorities; and IMF staff calculations.  
1/ Official definitions for financial soundness indicators vary by country. Lines in figure indicate the median for each country group.

As discussed in the May 2009 *Regional Economic Outlook*, financial stress was felt in the Caribbean with the Clico and Stanford debacles, which have had significant regional repercussions that are still unfolding. Despite significant improvements in prudential regulation throughout the LAC region, these events illustrate some of the pending regulatory challenges that still need to be addressed.

With receding external shocks and uncertainty reduced (because tail risks have become smaller), a rebound of economic activity is starting. Indeed, recent indicators suggest a turnaround, especially among the financially integrated commodity exporters. For instance, Colombia had started to grow already in Q1 and Q2, while Brazil rebounded strongly in Q2. Other commodity exporting countries should post positive growth in the second half of the year. In contrast, commodity importers are lagging behind, affected still by headwinds from the external environment, although there are some green shoots in these countries as well (e.g., Costa Rica).

Across country groups the median current account balances declined in absolute terms. The sharp reduction in domestic demand led to lower imports across the board, which fell more than exports in real terms. In effect, net exports made a positive contribution to GDP.

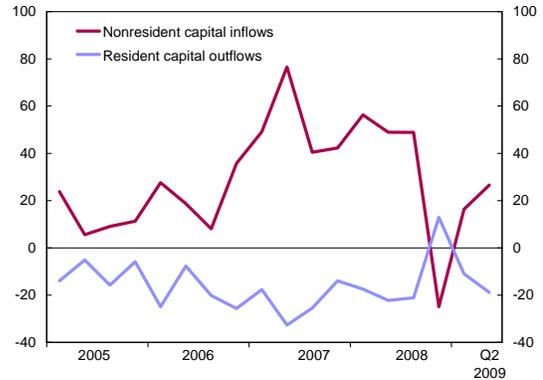
In the financial account of the balance of payments, large nonresident portfolio outflows turned out to be short lived, with foreign inflows returning to the larger countries already in the first part of 2009 (Figure 2.7). In some countries, the private sector and the government drew down their foreign assets to smooth the reversal in capital inflows. The bulk of the financial account reversal occurred through portfolio flows, as foreign investors scrambling for liquidity sold their domestic financial holdings. As in past episodes of capital account reversals, foreign direct investment flows remained much more stable than other flows (Box 2.4). The financial adjustment made by the private sector, including the drawdown of foreign assets, mitigated the shock to the balance of payments and sharply reduced the need for official action. In fact, official international reserves declined only moderately, and generally remained above their end-2007 levels.

The initial pullback of global banks, in the months following the Lehman event, was essentially reversed by March of this year. Total claims of BIS-reporting banks on the LAC region, measured at constant exchange rates, did contract in the last quarter of 2008, but much less than in other parts of the world. This greater stability relates to the fact that most loans and other claims by global banks on the LAC region had been disbursed by their local affiliates and financed with local deposits (see also Chapter 4 of the May 2009 *Regional Economic Outlook*).

The impact on labor markets in LAC countries has not been as severe as in the United States. Unemployment rates have tended to increase, though in many cases this has reflected rising labor force participation rates rather than declining

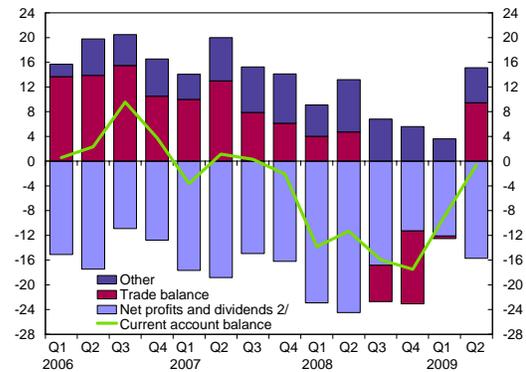
Figure 2.7. Portfolio inflows have returned. Foreign direct investment has remained relatively stable.

LA5: International Investment Flows 1/ (Billions of U.S. dollars)



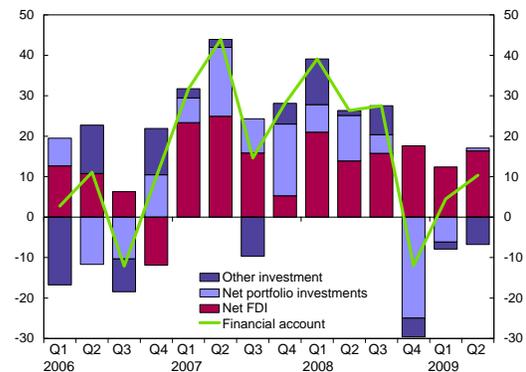
Sources: Haver Analytics; and EMED. 1/ Countries included are Brazil, Chile, Colombia, Mexico, and Peru. For 2009:Q2, data include Brazil, Chile, Colombia, and Mexico only.

Aggregate Current Account Components 1/ (Billions of U.S. dollars)



Source: IMF staff calculations. 1/ Countries included are Brazil, Chile, Colombia, Mexico, and Peru. 2/ Includes reinvested earnings as well as repatriated amounts.

Aggregate Financial Account Components 1/ (Billions of U.S. dollars)



Source: IMF staff calculations. 1/ Countries included are Brazil, Chile, Colombia, Mexico, and Peru, except for 2009:Q2, for which data are not available for Peru.

### Box 2.4. FDI during the Recent Crisis: Resistant but Not Immune

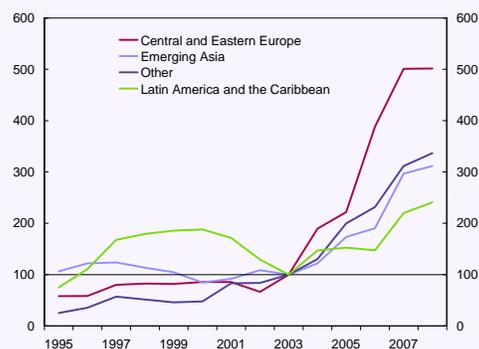
*In line with what occurred in previous episodes of turbulence, foreign direct investment (FDI) has been more stable than other external financing inflows in the past year. However, FDI has not been totally immune to the effects of the global crisis and will likely remain below peak levels for some time, especially in Caribbean countries where it increased rapidly during the boom years.*

**FDI to Latin America and the Caribbean was quite buoyant in recent years, but not to the extent seen in other regions.**<sup>1</sup> From 2003 through 2008, FDI to the LAC region as a whole more than doubled in real-dollar terms. Other regions, however, saw even more rapid growth of FDI: flows to emerging Asia and to the Middle East and Africa more than tripled, and flows to central and eastern Europe increased by a factor of five. Thus, the share of Latin America and the Caribbean in global FDI flows to emerging and developing economies fell to 25 percent in 2003 from more than 40 percent during the late 1990s and to less than 20 percent in 2008.

**Viewed in relation to the recipient country's economic size, FDI has increased significantly in many Central American and Caribbean countries but by much less in other countries of the LAC region.** For the largest economies, the LA7, the FDI-to-GDP ratio has generally been stable at about 3 percent of GDP.<sup>2</sup> For other countries of South America, FDI on average has increased only moderately as a share of GDP in the past five years.<sup>3</sup> In contrast, FDI to Central America—which had already been increasing in the early part of the decade owing to increased global integration—has grown at a much higher rate in recent years.<sup>4</sup> FDI to the Caribbean has also risen during the past few years, reaching an average of more than 15 percent of GDP during 2006–08, owing to large real estate and tourism investments.<sup>5</sup>

**Net Inward FDI Flows**

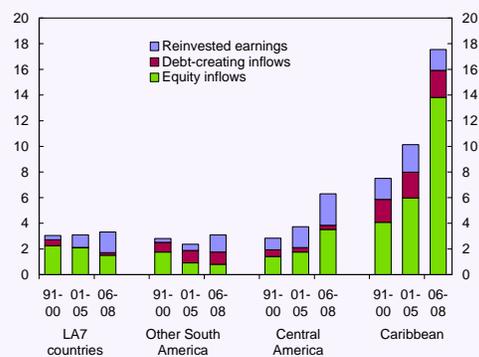
(Index, 2003 = 100; U.S. dollars deflated by U.S. CPI)



Source: IMF staff calculations.

**Composition of Net Inward FDI Flows**

(Percent of GDP)



Sources: IMF, *Balance of Payments Statistics*; and IMF staff calculations.

Note: This box was prepared by Herman Kamil, Ben Sutton, and Andrew Swiston.

<sup>1</sup> Throughout this box, the terms *FDI* and *FDI flows* both refer to net inward FDI flows (defined as gross inflows by foreigners net of redemptions).

<sup>2</sup> Throughout this box, ratios to GDP refer to the average (mean) ratio within each country grouping. Using the median ratio does not appreciably change the findings.

<sup>3</sup> Movements in ratios to GDP in current dollars can be affected by changes in a country's real exchange rate against the dollar. In particular, real appreciation in countries such as Argentina, Brazil, Chile, and Colombia during the period 2004–08 pulled down FDI-to-GDP ratios, other things constant.

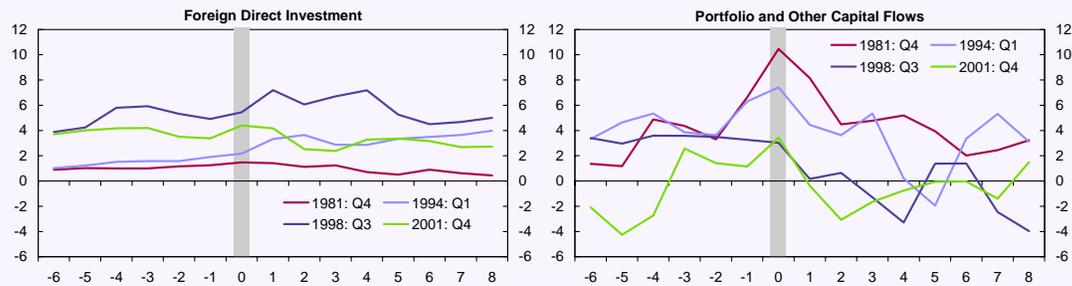
<sup>4</sup> The breakdown of FDI by component for Central America and the Caribbean includes only data through 2007, because they are not available for 2008 for most countries in these groups.

<sup>5</sup> The composition of FDI flows varies greatly across regions. In LA7 and other South American countries, reinvested earnings have become a more significant source of FDI, substituting for equity capital inflows, which have declined. Because a large part of the FDI to these regions has been directed to commodity-producing sectors, the surge in commodity prices until 2008 increased profitability for those companies and contributed to higher reinvested earnings of foreign affiliates. On the other hand, the recent surge in FDI inflows to the Caribbean is attributable almost entirely to equity capital inflows, whereas flows to Central America are more balanced between equity flows and reinvested earnings.

**Over the years, FDI has not displayed the boom-and-bust behavior typical of other capital flows.**

The various types of flows have behaved very differently during previous crisis episodes: FDI remained remarkably stable, while portfolio flows, bank loans, and trade credit experienced sudden reversals and severe drops. Indeed, FDI flows to the LAC region have tended to remain positive even during periods when portfolio investment and other investment have registered substantial net redemptions.<sup>6</sup> Underlying this fact are the notions that FDI is driven by positive evaluations of longer-term business conditions in the recipient country or implies an investment that is more difficult to reverse than other capital flows.<sup>7</sup>

**Previous Crisis Episodes: Net Inward Capital Inflows 1/**  
(Percent of GDP at  $t = -6$ )



Sources: Haver Analytics; and IMF staff calculations.

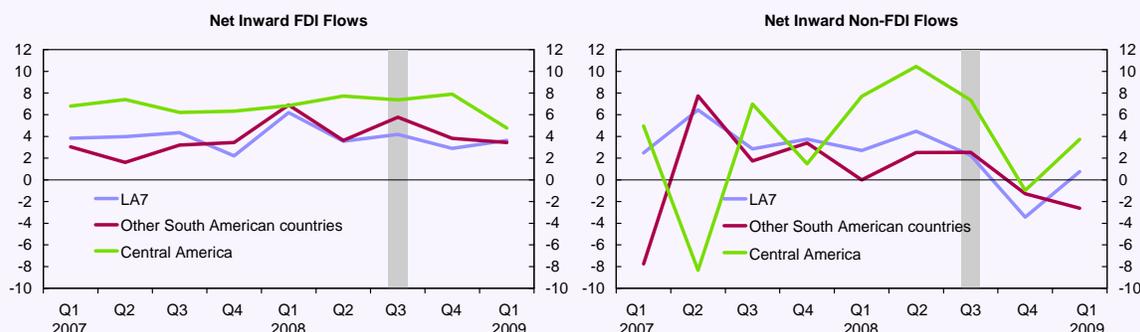
1/ Two-quarter moving average of annualized gross foreign direct investment, portfolio, and other inflows in percent of GDP six quarters before financing peak. Each line is a simple average of the capital inflows-to-GDP ratio for all LAC countries for which quarterly data are available.

**Although it is still early to judge the present episode, data available for some countries suggest that even though FDI has not been completely immune to the global financial turmoil, it has once again been the most stable source of financing.** Compared with what might be expected from the intensity of the global crisis, FDI flows to many LAC economies have been remarkably resilient in the most recent period. Data through the first quarter of 2009, where available, show that, on the one hand, FDI flows as a share of preturmoil GDP remained steady in the LA7 and other South American countries and dipped moderately in Central America.<sup>8</sup> Portfolio and other capital inflows, on the other hand, dropped in the second half of 2008, turning negative in the fourth quarter in all regions, before rebounding partially in the first quarter of 2009. This preliminary evidence suggests that FDI has been a source of capital account stability during the recent financial distress.

<sup>6</sup> Thus, the stylized facts for the LAC region are consistent with the empirical evidence broadly supporting the view that FDI flows are more stable than all other forms of capital (see Levchenko and Mauro, 2006). FDI payments also have, in principle, desirable cyclical properties: payments associated with equity finance tend to be lower when economic performance is worse. Yet the flip side to this increased risk sharing with the rest of the world is that FDI investment is typically “more expensive”; that is, there is a higher required return on these foreign investments.

<sup>7</sup> Hausmann and Fernández-Arias (2000) maintain that it is only the accounting choices of firms that drive the distinction between FDI and other capital flows. However, this view fails to explain the continued positive FDI inflows seen during crisis episodes. One possible explanation for this phenomenon is that FDI-related subsidiaries can more easily obtain intrafirm financing from their parent company than nonrelated lending from abroad during sharp reversals of capital inflows.

<sup>8</sup> Quarterly data for the Caribbean countries were not sufficiently available to construct a regional aggregate. Annual data show a decline in FDI to 14 percent of GDP in 2008 from 16 percent of GDP in 2007.

**Box 2.4 (concluded)****Behavior of FDI and Non-FDI Inflows during the Recent Crisis by LAC Region 1/***(Annualized quarterly inflows; percent of year 2007 GDP)*Sources: IMF, *Balance of Payments Statistics*; and IMF staff calculations.

1/ To control for country size while abstracting from exchange rate effects, capital flows for each period for all countries with quarterly balance of payment data are divided by national GDP for 2007. The aggregate is the simple average of the resulting ratios.

**The drop in FDI inflows has been less dramatic than that for other financial flows, but FDI inflows are still projected to decline significantly and remain below precrisis levels for some time.**

The forecast for the region is for net inward FDI flows of US\$72 billion in 2009, down from US\$125 billion in 2008. This contrasts with a fall in other financial inflows (excluding reserves) to US\$32 billion in 2008 from US\$113 billion in 2007. The forecast decline in FDI is in line with developments in the first quarter of 2009 and, for countries with data, the second quarter. However, the typical persistence of shocks in regard to FDI suggests that flows will remain below 2006–08 levels for some time. Another factor limiting FDI in the present circumstances may be financing constraints on companies that typically serve as the funding sources of intrafirm FDI or initiate mergers and acquisitions. The most vulnerable countries are those in the Caribbean and Central America that experienced the largest precrisis buildup, especially where flows relied on industries such as tourism and finance that will likely lag the recovery. For much of the region, though, because the run-up in FDI during the boom years was less dramatic, coupled with solid macroeconomic fundamentals, it could temper the extent of the decline relative to some other regions.

employment. In some countries (e.g., Brazil), unemployment has already started to decline.

### ... Helped in Some Cases by Active Policy Responses

Breaking from historical patterns, the better-prepared LAC countries were able to implement countercyclical macroeconomic policies in response to this crisis. As stressed in the May 2009 *Regional Economic Outlook*, this was the payoff from significant efforts made over the past decade to reduce vulnerabilities and strengthen policy frameworks. This preparedness made a difference, and preliminary estimates suggest that output losses will be significantly lower than they would have been otherwise (Chapter 3).

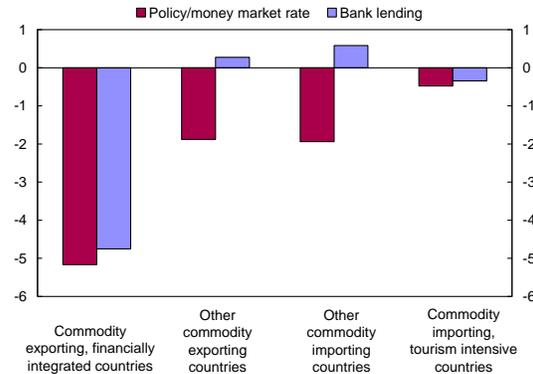
The most financially-integrated commodity exporters reacted by easing monetary conditions (Figure 2.8). They sharply lowered policy interest rates and allowed the exchange rate to depreciate, while also using a portion of their international reserves (through direct foreign exchange sales, foreign exchange lending, or foreign exchange swaps). This move helped firms and some financial institutions meet their immediate external obligations. A few lowered the reserve requirements on bank deposits to support their overall strategy. The transmission to bank interest rates worked well, with deposit and lending rates falling significantly.

Most other countries were constrained in their monetary policy response. Countries with less flexible exchange rate regimes did benefit in part from lower interest rates in advanced economies. Yet many suffered from an increase in interest rate spreads. In a few countries, bank rates increased despite a lowering of money market interest rates because of ineffective transmission mechanisms or increased risk perceptions. With falling inflation, real interest rates increased in many of these countries.

Public banks stepped in to support credit conditions in several countries. To compensate for tightening credit conditions, public banks in some countries adopted lending policies that increased

Figure 2.8. Some countries effectively eased monetary conditions and allowed the exchange rate to absorb part of the external shock. Reserves were broadly stable.

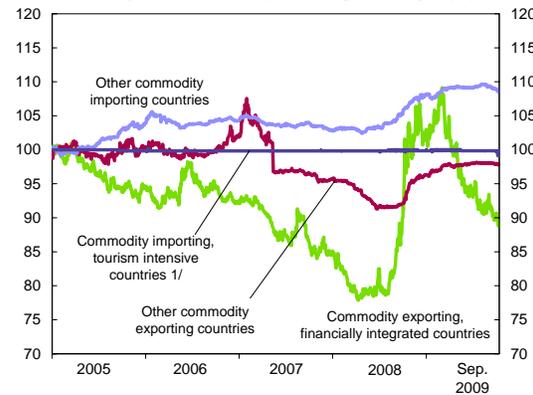
Change in Bank Lending and Policy/Money Market Rate (Difference between September 2008 and latest data available)



Sources: IMF, *International Financial Statistics*; and IMF staff calculations.

U.S. Dollar/Nominal Currency Exchange Rates

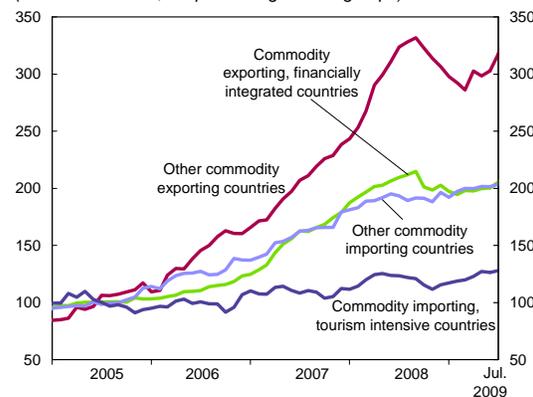
(Index, January 2005 = 100; simple average within groups)



Source: Datastream.  
1/ Excludes Jamaica.

Gross International Reserves

(Index 2005 = 100; simple average within groups)



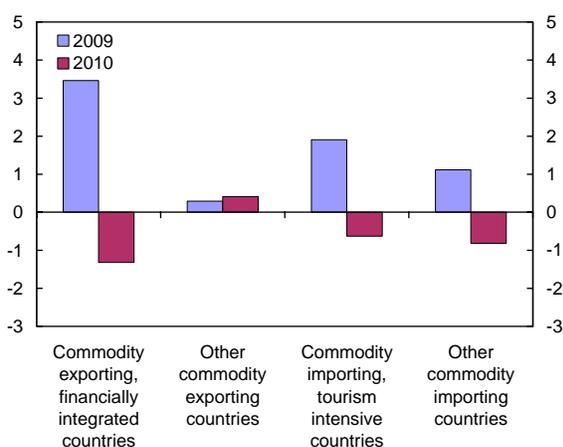
Sources: IMF, *International Financial Statistics*; and IMF staff calculations.

their market share and allowed these to play a countercyclical role (e.g., Argentina, Brazil, Chile, and the Dominican Republic).<sup>4</sup> In some countries, domestic capital markets also provided alternative financing opportunities (e.g., Chile and Peru).

Fiscal policy also played a role in buffering the impact of the crisis, but to varying degrees, according to countries' fiscal space (Figure 2.9). As discussed in detail in Chapter 4, fiscal authorities in the commodity exporting, financially integrated countries were able to provide the most support to domestic demand among all LAC countries in 2009. The buildup of buffers and policy credibility during the upswing of the cycle in these countries enabled the adoption of countercyclical fiscal policy responses. In other commodity exporting countries and commodity importing groups, fiscal policy also was generally supportive, but much less than in the commodity exporting, financially integrated countries.

Figure 2.9. Support from fiscal policy varied across country groups.

**Change in Domestic Primary Deficits 1/**  
(Percent of GDP)



Source: IMF staff calculations.

1/ Simple average of change in primary deficits excluding commodity related revenues and foreign grants in percent of GDP.

<sup>4</sup> Such public lending can in some cases bring quasi-fiscal losses, the extent of which will become clear only with time.

## A Phased Recovery Ahead . . .

Taking account of developments since the May 2009 *Regional Economic Outlook*, we have revised our baseline forecast for the LAC region. We now expect the LAC region to resume growth in the current semester (2009:H2) and pick up moderately in 2010 (Figure 2.10). As discussed in Chapter 1, the external environment will not favor a quick return to previous growth rates.

Our weighted LAC regional growth forecast for 2009 is  $-2.6$  percent, weaker than at the time of the May 2009 *Regional Economic Outlook*. This revision reflects a weaker than projected outturn for activity in 2009:H1, particularly in the case of Mexico (see Box 3.3).

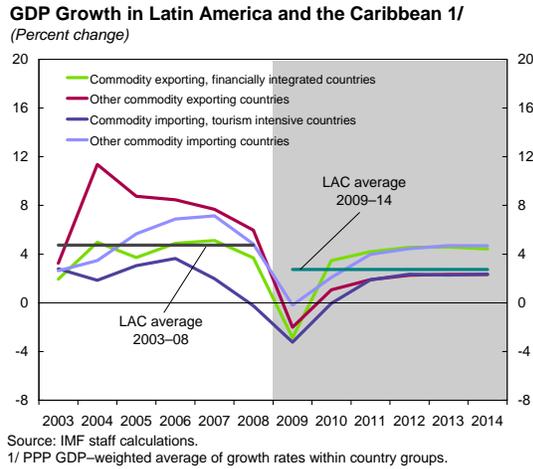
For 2010, LAC overall growth is projected to recover to slightly below 3 percent. As for the United States and other regions, we do not anticipate a rapid bounceback, so output gaps will not narrow quickly. In fact, notwithstanding the uncertainties in estimating output gaps, we expect that slack will remain large and inflation pressure muted in most LAC countries.

Within the LAC region, we expect the fastest recovery in commodity exporting countries, with a median growth of about 3.5 percent. Commodity importing countries can expect to have slower recoveries given their strong links to U.S. unemployment dynamics and their limited room for additional policy stimulus in most cases.

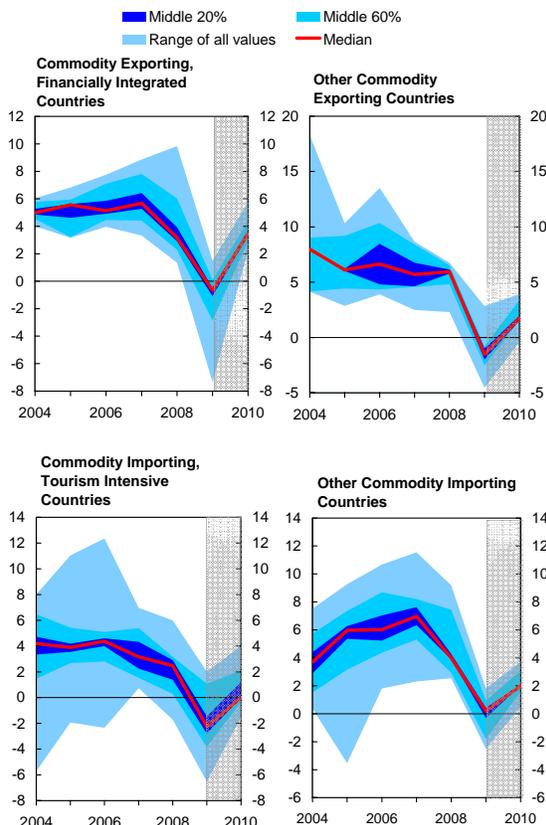
The projected recovery will hinge primarily on a recovery of domestic demand. A portion of this rise in domestic demand naturally will fall on imported goods. LAC export volumes also should expand moderately, in line with world trade developments. Overall, however, the projected recovery is not based on an expected strong contribution of net exports.

We see average growth in the region resuming gradually during 2011–13. However, we do not expect growth to return to the boom levels of 2004–07. In our forecast, the process of closing output

Figure 2.10. LAC growth should resume in 2010, but at lower rates than in the recent past. The recovery will lag in many commodity importers, which depend on labor conditions abroad.



Real GDP Growth (Percent change)



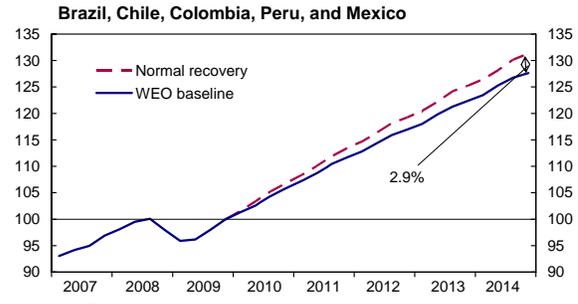
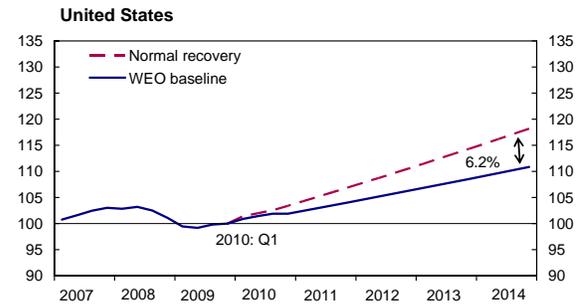
gaps will not involve a period of rapid, catch-up growth.<sup>5</sup>

In summary, our new baseline assumes that the growth of *potential* output in the LAC region in the next five years will be somewhat lower than in the years before the crisis. Potential output growth is lower in the near term because capital accumulation is low.

The downward revision in potential output growth of course affects the level of GDP implied by our revised growth projections. In our revised baseline, the level of real GDP for the region will be on average 3 percent below the level anticipated before the crisis by 2014 (Figure 2.11). This calculation, however, is subject to forecast uncertainty and will need to be reviewed in the future.

Figure 2.11. The global crisis will have a long-lasting impact on U.S. and LAC output.

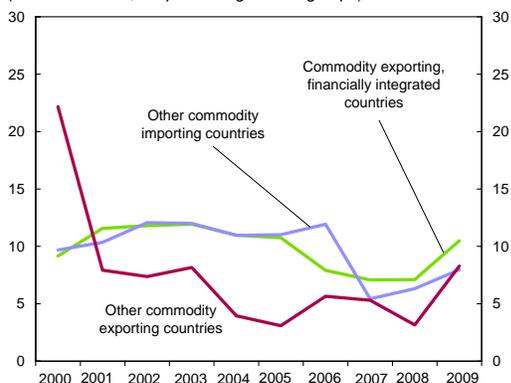
Impact of Crisis on Output (Real GDP indices, 2009:Q4 = 100)



<sup>5</sup> In the past, some LAC countries that faced financial crises could catch up with previous trends in potential output thanks to fast export growth. However, this took place during good times for the world economy and is not likely to happen when the global economy is weak.

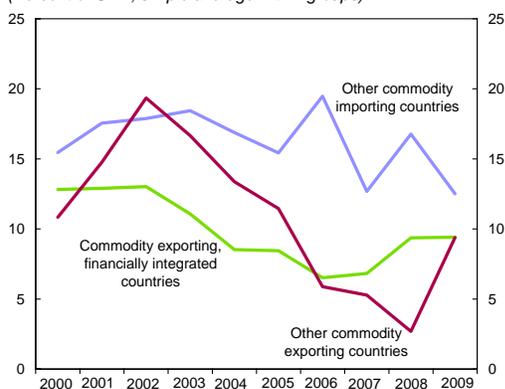
Figure 2.12. Public sector borrowing requirements have increased across the board, while external financing requirements and reserve adequacy varied by groups.

**Public Sector Borrowing Requirements 1/**  
(Percent of GDP; simple average within groups)



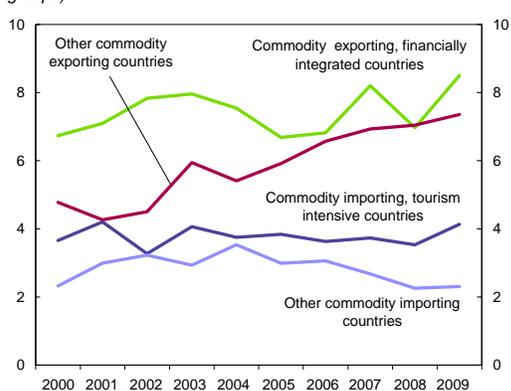
Source: IMF staff calculations.  
1/ Sufficient data are not available to construct meaningful averages for the group "Commodity importing, tourism intensive countries."

**External Financing Requirements 1/**  
(Percent of GDP; simple average within groups)



Source: IMF staff calculations.  
1/ Sufficient data are not available to construct meaningful averages for the group "Commodity importing, tourism intensive countries."

**International Reserve Adequacy**  
(Months of imports of goods and services; simple average within groups)



Source: IMF staff calculations.

*A downside scenario*

Among alternatives to the baseline path outlined here, we would highlight in particular the risk of a less favorable near-term scenario for the advanced economies, as discussed in Chapter 1. Such a double downturn in advanced economies would likely trigger a second deceleration or even a contraction in the LAC region and the rest of the world.

**... Shaping Policy Decisions**

**Near-Term Policy Challenges**

What are the policy challenges that authorities will face if the recovery proceeds as envisaged in our baseline forecast? These will naturally vary across the LAC region with the stage in the economic cycle, the amount of stimulus applied already, and the remaining room for policy maneuver given existing vulnerabilities (Figure 2.12).

*Managing flexibly, where possible . . .*

For countries able to implement stimulus in 2009, and where growth has resumed, the key macroeconomic-policy theme will be the eventual timing and sequencing of the stimulus withdrawal (the "exit strategy").

Regarding timing, the high degree of uncertainty about the speed of recovery, including at the global level, will make it difficult to get the timing completely right. Errors in both directions will have consequences. Generally, it would be appropriate to begin withdrawing discretionary stimulus when private sector domestic demand recovery is well entrenched. Yet the consequences of removing stimulus too early in the LAC region may not be as severe as they would be for the United States and other advanced economies. Because LAC financial systems have not been put under severe stress and the recovery in LAC economies does not depend exclusively on the existing monetary and fiscal policy stimulus (as could be the case in some advanced economies), tightening would not be as serious an impediment to demand recovery in the LAC region.

Regarding the sequencing of stimulus withdrawal, it seems best to begin early on closing down and unwinding special financial facilities, because they are no longer needed. This could prevent possible buildup of contingent liabilities. In general, fiscal stimulus should be withdrawn before monetary stimulus. The general recommendation is that fiscal policy should return to a neutral, or passive, role in demand cycle management (as discussed further in Chapter 4). Central bankers will need to take these fiscal developments into account as they formulate monetary policy, so coordination of policies will be important. Removing the fiscal stimulus in time will facilitate the job of monetary policy.

Where output gaps remain large and the economy is not on a firm footing, there is no imminent need for monetary policy to quickly return to a neutral mode. That said, policy stances are highly stimulative in a number of cases and given lags in monetary policy transmission, the authorities will need to begin the process of unwinding interest rate cuts well before output gaps appear to be nearly closed. Countries where output gaps are smaller will need to be more alert than others to the risk of being too slow to tighten.

Within our baseline scenario, there is the possibility that significant amounts of foreign capital may soon flow to countries where risks are relatively low and the recovery is better established, with implications for the macroeconomic policy mix. With low returns on savings in advanced economies, those searching for higher but reasonably safe yields could well rediscover several LAC countries. Rising commodity export prices could add to confidence and become another “pull factor.” Although greater availability of foreign capital on easier terms in general would be welcome, a sudden large inflow could create overly strong currencies or other tensions, especially if there were concerns that the new inflows could be suddenly reversed. This possibility is another reason to withdraw fiscal stimulus ahead of monetary stimulus (and another reason for exchange rate flexibility, to avoid creating one-sided bets on the domestic currency). If capital inflows were to persist on an undesirably large scale,

the situation could call for revisiting the fiscal stance.

In a downside scenario, in which the recovery of advanced economies slows, LAC countries with strong policy frameworks and balance sheets would generally be in a position to renew monetary stimulus. If necessary, delayed withdrawal of discretionary fiscal stimulus could be considered also, along with steps to ensure that this stimulus is removed at a later point.

*. . . and managing with fewer options*

Policy options are more constrained for other LAC countries, in varying degrees.

For a number of countries, including some in Central America, recovery will be slow, but it is not clear whether new fiscal stimulus would be feasible or advisable. Indeed, stimulus implemented in 2009 may need to be reversed sooner than would be desirable from a demand-management perspective, simply because the “room” for stimulus is running low (buffers have been substantially depleted). In some cases, it would be prudent to conserve remaining buffers in the baseline scenario—to have them ready if needed for the more challenging double-dip scenario.

In other cases, including many in the Caribbean, policy choices are even more limited. The global crisis has increased public debt levels that were already very high—a development that severely constrains new financing, even as government revenues continue to decline. Maintaining stability during this period will require prudent policy actions and well-designed plans developed with maximum social consensus. The focus should be on measures that ease hardship on the poor.

Finally, the commodity exporters that generally have followed procyclical fiscal policy would seem to be at a crossroads. For some, the plunge a year ago in commodity prices forced undesirably rapid cuts in public spending and sudden reliance on financing sources that could not be sustained. The bounceback of commodity prices has eased their situation, at the same time fueling pressures to

restore rapid spending growth. Although such spending might help support output in the short term, uncertainty and the potential for economic volatility will remain high in the absence of clearer policies for smoothing public spending owing to wide revenue swings. The recent experience underscores the value of developing such frameworks, as discussed in Chapter 4.

### Medium-Term Policy Challenges

For the medium term, three broad areas of policy challenges for the LAC region are identified.

*1. Fiscal policy will need to adapt to a less favorable environment and better prepare countries for future shocks.*

The new medium-term outlook includes the possibility of higher global interest rates (particularly for government debt), as well as slower growth of output and therefore tax revenue. Other things constant, these prospects would leave less room for increasing public spending, and it will need to be factored into medium-term fiscal planning. Countries should consider developing more robust frameworks that systematically commit them to saving during favorable times so that they can weaken fiscal balances during difficult times.

A challenge for many LAC countries is to bring public debt down toward levels that are more consistent with stability and growth—and that allow

countries some room for maneuver during troubled times. This applies especially to countries that already had very high debt levels before the crisis. But it is also relevant to others with debt levels that rose significantly during the crisis. More broadly, all countries that engaged in discretionary fiscal stimulus this year will need to resist pressures to allow a permanently weaker fiscal balance.

*2. Financial sector policies will need to address the new lessons learned from the advanced economies' financial crisis and to continue to address weaknesses that were known before the crisis.*

Among others, (1) the perimeter of regulation needs to encompass all systemically important institutions, (2) capital charges should cover risks in contingent off-balance-sheet positions, and (3) dynamic countercyclical provisioning can play a role in aggregate demand management (see Chapter 3).

*3. Promoting faster economic growth and reducing poverty is now even more important.*

Not everything has changed since the onset of the global crisis. Before the crisis, and even in the good years of 2004–07, the LAC region in general did not keep up with the per capita income growth of other countries. Moreover, poverty rates, despite some improvement, remained high. Now, with a postcrisis environment less favorable to growth, the case for acting on deep reforms to accelerate growth and reduce poverty is stronger than ever.



**Latin America and the Caribbean**  
**Main Fiscal Indicators 1/**

	Public Sector Revenue (Percent of GDP)						Public Sector Primary Expenditure (Percent of GDP)						Public Sector Overall Balance (Percent of GDP)						Public Sector Primary Balance (Percent of GDP)					
	2005	2006	2007	2008	2009	2010	2005	2006	2007	2008	2009	2010	2005	2006	2007	2008	2009	2010	2005	2006	2007	2008	2009	2010
					Proj.	Proj.					Proj.	Proj.					Proj.	Proj.					Proj.	Proj.
<b>Latin America and the Caribbean</b>																								
<i>PPP GDP-weighted average</i>	27.9	28.5	28.7	29.7	28.2	28.7	24.7	25.4	26.0	27.2	28.8	28.0	-1.4	-1.1	-1.2	-0.9	-4.2	-2.5	3.2	3.1	2.8	2.5	-0.6	0.7
<i>Simple average</i>	25.7	26.8	27.2	27.1	25.6	26.2	23.3	23.9	24.6	25.6	26.9	26.6	-1.5	-0.6	-0.5	-1.1	-4.1	-3.2	2.0	2.6	2.4	1.4	-1.3	-0.4
<b>Commodity exporting, financially integrated countries</b>	26.3	27.3	27.8	28.2	26.0	26.3	23.1	23.1	23.3	24.6	26.9	26.0	-0.1	1.0	1.5	0.8	-3.6	-2.2	3.2	4.2	4.6	3.5	-0.9	0.3
<b>Other commodity exporting countries</b>	30.8	32.6	32.2	33.4	30.0	31.5	26.1	27.6	29.3	31.0	31.8	31.4	1.4	2.2	0.4	0.5	-4.1	-2.2	4.7	5.0	2.9	2.4	-1.8	0.0
<b>Commodity importing, tourism intensive countries</b>	30.6	31.6	32.9	32.3	32.1	32.4	27.2	27.6	30.2	30.8	32.5	31.8	-4.2	-3.1	-4.1	-4.2	-6.7	-6.0	2.5	2.8	1.7	1.4	-0.2	0.4
<b>Other commodity importing countries</b>	23.4	24.4	24.7	23.9	23.2	23.8	22.8	23.4	23.2	23.8	24.9	25.0	-2.8	-1.9	-0.6	-1.7	-3.8	-3.4	0.1	0.7	1.6	0.1	-1.8	-1.3
<b>North America</b>																								
Mexico	20.8	21.4	21.4	22.9	21.5	22.0	19.2	19.2	20.2	22.2	23.7	23.0	-1.3	-0.6	-1.4	-1.8	-4.9	-3.7	1.6	2.2	1.2	0.8	-2.2	-1.0
<b>Central America</b>																								
Belize	22.8	23.9	26.3	26.2	26.5	26.7	21.3	21.5	23.5	24.6	26.1	25.9	-5.4	-2.0	-1.1	0.8	-1.0	-2.6	2.1	3.8	3.9	4.7	2.6	1.4
Costa Rica	20.9	21.2	22.8	23.3	22.2	23.3	18.4	18.2	18.7	21.2	24.6	25.6	-1.2	0.5	1.9	0.3	-4.0	-4.1	2.5	2.9	4.1	2.1	-2.4	-2.2
El Salvador	16.3	17.2	17.1	16.9	15.7	17.0	17.1	17.6	16.6	17.6	18.4	18.3	-3.0	-2.9	-1.9	-3.1	-5.1	-4.3	-0.8	-0.5	0.5	-0.7	-2.7	-1.3
Guatemala	12.0	12.7	12.9	12.0	10.6	10.9	11.8	12.6	11.7	11.4	12.1	11.9	-1.2	-1.2	-0.3	-0.7	-3.0	-2.6	0.2	0.1	1.2	0.6	-1.5	-0.9
Honduras	24.2	24.1	24.4	25.5	23.7	23.5	25.7	26.4	26.5	28.1	26.8	26.8	-1.4	-1.9	-1.6	-1.7	-2.7	-2.9	-1.5	-2.3	-2.2	-2.6	-3.1	-3.3
Nicaragua	26.9	28.8	29.0	29.1	28.3	30.2	25.9	25.9	30.3	31.8	33.3	33.6	-1.3	0.8	0.9	-1.5	-4.6	-3.2	0.9	2.8	2.4	-0.3	-3.2	-1.8
Panama	22.3	24.9	28.2	26.0	23.5	23.4	20.5	20.1	21.2	22.5	22.3	22.8	-2.6	0.5	3.5	0.4	-2.0	-2.5	1.8	4.8	7.0	3.5	1.2	0.6
<b>South America</b>																								
Argentina	29.4	29.9	31.6	33.2	34.8	35.0	25.0	25.9	29.1	30.4	34.3	34.3	-1.8	-1.1	-2.1	-0.1	-3.9	-2.4	4.4	4.0	2.5	2.9	0.5	0.6
Bolivia	30.9	34.3	34.5	38.9	33.9	35.5	30.2	27.3	30.4	34.5	33.5	33.2	-2.2	4.5	1.6	2.8	-1.4	0.1	0.8	7.0	4.2	4.7	0.4	2.3
Brazil	34.6	34.7	35.1	36.6	35.3	35.8	30.7	31.5	31.5	32.5	33.8	32.5	-3.4	-3.5	-2.8	-1.5	-3.8	-1.2	3.9	3.3	3.6	4.1	1.5	3.3
Chile	25.9	27.7	29.5	28.6	23.8	24.7	20.4	19.2	19.9	22.7	27.6	25.6	4.7	7.9	9.0	5.4	-4.2	-1.2	5.6	8.5	9.6	5.9	-3.8	-0.8
Colombia	26.1	27.3	27.1	26.6	26.4	25.6	22.8	24.3	24.1	23.0	25.9	25.1	0.0	-0.7	-0.7	-0.1	-3.1	-3.0	3.4	2.9	3.2	3.2	0.5	0.5
Ecuador	24.2	27.4	28.8	32.6	29.7	31.7	21.4	21.6	24.8	32.4	32.3	32.0	0.7	3.7	2.2	-1.1	-3.5	-1.2	2.9	5.8	4.1	0.3	-2.6	-0.3
Guyana	44.1	46.7	44.7	42.4	45.6	45.2	53.3	54.4	49.4	48.4	50.8	49.0	-13.6	-11.5	-7.6	-7.9	-8.0	-6.6	-9.2	-7.7	-4.7	-6.0	-5.2	-3.8
Paraguay	23.3	24.6	23.1	22.9	22.1	22.6	20.8	22.2	20.1	19.0	23.3	23.4	0.9	0.8	1.5	2.7	-2.1	-1.6	2.5	2.4	3.0	3.9	-1.3	-0.8
Peru	24.2	25.4	26.1	26.6	23.1	23.5	22.4	21.3	20.8	22.9	23.7	23.9	-0.3	2.2	3.5	2.1	-1.9	-1.7	1.6	4.1	5.3	3.7	-0.6	-0.4
Uruguay	28.0	27.7	27.6	25.4	26.3	27.3	19.9	20.3	21.0	21.5	23.3	23.8	-1.4	-0.6	0.0	-1.4	-2.6	-2.1	3.8	3.5	3.4	1.4	0.4	0.8
Venezuela	37.6	37.4	33.0	30.8	24.4	27.1	30.6	36.9	34.2	31.9	29.3	29.7	4.1	-1.6	-2.8	-2.6	-7.0	-5.4	7.1	0.5	-1.2	-1.2	-4.9	-2.6
<b>The Caribbean</b>																								
The Bahamas	30.9	32.4	32.5	33.2	31.9	32.5	29.6	31.2	33.8	34.6	36.0	35.7	-0.9	-0.7	-3.3	-3.4	-6.7	-6.1	1.2	1.3	-1.2	-1.3	-4.0	-3.1
Barbados	42.6	44.1	45.5	43.2	41.2	42.8	41.7	39.5	43.9	43.0	44.4	43.8	-6.9	-5.3	-8.0	-7.6	-8.4	-7.1	-3.2	-1.5	-3.4	-3.4	-4.6	-2.4
Dominican Republic	15.6	16.2	17.3	15.7	14.0	14.4	14.5	15.8	16.5	17.0	14.5	14.4	-3.0	-3.1	-2.2	-4.6	-4.1	-3.7	1.1	0.4	1.3	-1.3	-0.5	0.0
Jamaica	26.3	26.1	27.1	26.5	28.8	27.5	16.3	18.4	19.4	21.1	23.6	21.8	-3.6	-4.5	-4.0	-6.5	-10.6	-8.3	10.0	7.7	7.7	5.4	5.2	5.7
Trinidad and Tobago	31.7	33.8	33.2	31.3	27.3	28.0	23.2	26.2	28.0	26.1	29.6	28.0	6.0	5.5	3.2	3.4	-4.8	-2.3	8.5	7.7	5.3	5.3	-2.3	0.1
ECCU 2/	30.1	31.3	30.7	31.7	29.7	30.3	30.3	32.4	31.0	32.8	31.5	30.2	-4.0	-5.0	-3.9	-4.6	-6.8	-5.1	-0.2	-1.1	-0.4	-1.2	-1.8	0.1

Source: IMF staff calculations.

1/ Figures for overall public sector, including general government and public enterprises. Definitions of public sector accounts vary by country, depending on country-specific institutional differences, including on what constitutes the appropriate coverage for a fiscal policy perspective, as defined by IMF staff.

2/ Eastern Caribbean Currency Union includes Anguilla, Antigua and Barbuda, Dominica, Grenada, Montserrat, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines.

# 3. Why Has Latin America and the Caribbean Fared Better This Time? The Value of Being Prepared

*Although it has faced larger external shocks this time, the Latin America and Caribbean (LAC) region has fared noticeably better than in the earlier three global downturns since the 1980s. It has also fared better than other emerging markets. This better performance can be attributed to stronger and more credible policy frameworks, which led to lower banking, external, and fiscal vulnerabilities and allowed some LAC countries to react with monetary or fiscal policy easing.*

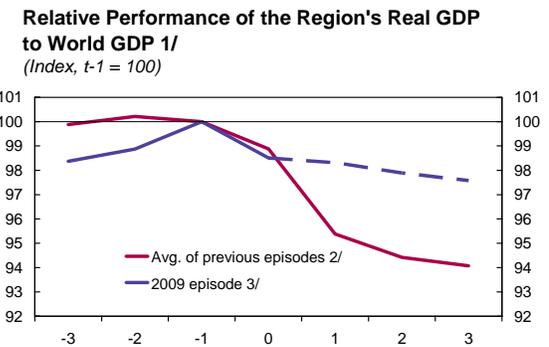
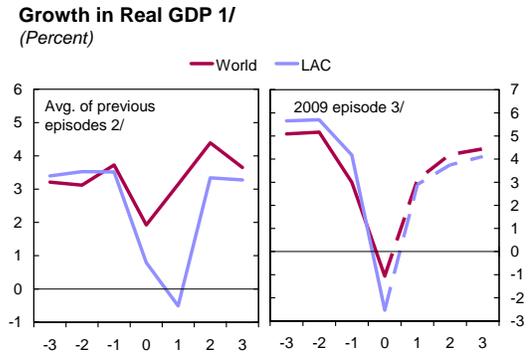
## Better Output Performance

The impact of the global crisis has no doubt been large. But the region has not experienced the large-scale banking or balance of payments crises that besieged it in the past. Why has Latin America and the Caribbean fared so differently, and what do we learn from this?

## Better than in Past Crises

In the past 30 years, there have been three global recessions (1982, 1998, and 2001), which severely affected LAC countries. These earlier recessions were less severe than the current one but were large enough to trigger major output losses in the region (Figure 3.1). Moreover, on each occasion, LAC output fell more than world GDP. It took the region many years to fully recover from the fall of 1982; output performance was notably weak in both 1998 and 2002, partly owing to homegrown “amplifiers.” A year after the onset of those global crises, the LAC region’s output was on average about 4 percentage points lower than

Figure 3.1. The LAC region is faring relatively better this time, with regional output expected to recover in tandem with the world.



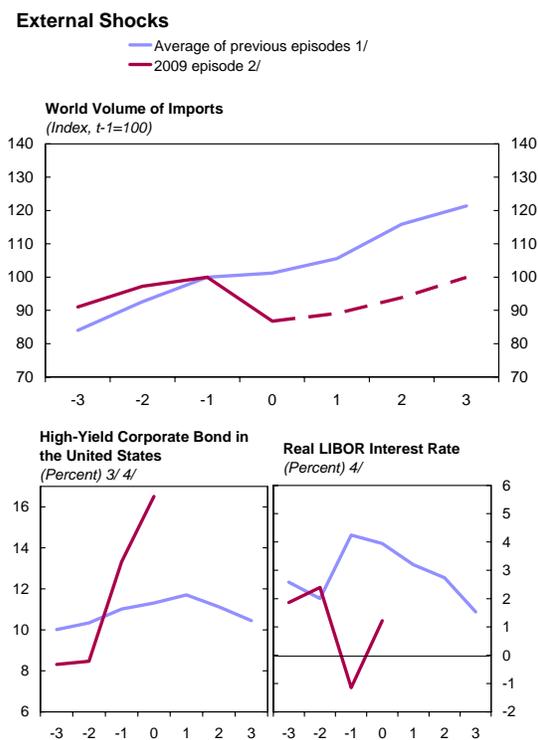
Source: IMF staff calculations.  
1/ GDP-PPP weighted average.  
2/ The data show the average evolution 3 years before and after the previous crisis episodes (t=0 corresponds to the episodes of years 1982, 1998, and 2001).  
3/ The data show the evolution 3 years before and after the 2009 crisis episode (t=0). Dotted lines correspond to projections.

would have been the case if the region had grown at the world rate. This gap persisted and indeed widened in consecutive years.

In the current global recession, Latin America and the Caribbean is not expected to repeat this poor performance. GDP data, available through the second quarter, show the LAC region moving broadly in line with the world economy. And considering what we expect for 2009, the region’s output will have moved much closer to the global economy than

Note: This chapter was prepared by Jorge Iván Canales-Kriljenko, Herman Kamil, and Carolina Saizar.

Figure 3.2. Latin America and Caribbean's better performance is expected despite more severe global shocks.



Sources: IMF, *International Financial Statistics*; Merrill Lynch; and IMF staff calculations.

1/ The data show the average evolution 3 years before and after the previous crisis episodes (t=0 corresponds to the episodes of years 1982, 1998 and 2001).

2/ The data show the evolution 3 years before and after the 2009 crisis episode (t=0). Dotted lines indicate projections.

3/ In this case, the previous crisis episodes considered are 1998 and 2001.

4/ Data for 2009 is the average of the latest data available for 2009.

in the past. Private sector Consensus Forecasts suggest a similar relative picture, which is somewhat more positive for both Latin America and the Caribbean and global growth than is the IMF staff forecast.

This better performance is expected despite external shocks during the current crisis being larger than in earlier global recessions (Figure 3.2):

- World output contraction was much larger, dampening external demand. Reduced external demand for LAC exports worldwide arguably hurts the region more this time than in earlier recessions because the region has become more open and integrated with the world economy.

Moreover, trade fell more significantly this time, albeit from historically high levels.

- On the financial side, the external shock was strong. While U.S. interest rates were at an all-time low, LAC spreads widened substantially following the Lehman collapse, sharply increasing total borrowing cost.

## Better than Other Regions

Latin America and the Caribbean's performance during this crisis is also considerably stronger than that of other emerging markets. A comparison of the (downward) revisions to forecasts of 2009 growth among a set of almost 40 emerging market economies from around the world illustrates this point.

The 12 Latin American countries in the sample were not among those experiencing the largest output shocks in 2009. In fact, their median growth revision was about 3 percentage points smaller than that of the other emerging countries (Figure 3.3).

## Improved Resilience?

Given that it was facing larger shocks, does Latin America and the Caribbean's better *relative* performance this time reflect higher vulnerabilities in other regions or improved resilience in LAC?

Preliminary evidence suggests that some LAC countries really have changed, that they are now better able to cope with external shocks of any given size. In particular, if the LA5 (Brazil, Chile, Colombia, Mexico, and Peru) had shown the same sensitivity to external shocks as they did in 1994–2002, their output would have been far weaker during the first half of 2009 relative to their actual performance (Figure 3.4). Model-based estimates considering the behavior of such external variables during the current crisis suggest that these countries “saved” about 4 percentage points of GDP (see Box 3.1).

### Box 3.1. Did Latin America Show Greater Resilience during the Current Global Crisis? A Counterfactual Exercise

#### External shocks played a dominant role in slowing and stopping GDP growth during the recent crisis.

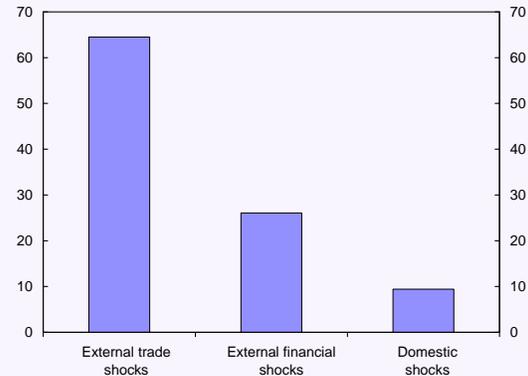
Model-based estimates suggest that shocks to external trade and financing explain between 80 percent and 90 percent of the sudden drop in average GDP in LA5 countries (Brazil, Chile, Colombia, Mexico, and Peru) seen in the three quarters following the onset of the crisis in September 2008.<sup>1</sup> Of these, negative foreign trade shocks (the combined effect of world GDP slowdown and lower commodity export prices) accounted for more than two-thirds of the contribution of external shocks during this period.

**Given the large size of the recent external shocks, the resulting fall in LAC output growth was much less than it would have been if the region's countries had not achieved fundamental improvements in the credibility of their policy frameworks and reduced financial vulnerabilities.** To illustrate this point, IMF staff calculated how these countries would have reacted in the 1990s and early 2000s (a period of weaker fundamentals, greater dollarization of liabilities, and banking systems that were often poorly regulated and capitalized) to a global downturn similar to that in recent quarters. For these purposes, IMF staff used the coefficients of the BVAR model estimated over the period 1994:Q2–2002:Q4 and the actual changes in world demand, commodity prices, and financial variables observed during the period 2008:Q4–2009:Q2.<sup>2</sup>

**According to model-based estimates, the payoff for stronger fundamentals has been very large, suggesting that Latin American saved about 4 percentage points of GDP during the current crisis.**

If Latin America had responded to external shocks in the same way as during the 1990s and early 2000s, the model predicts that the level of GDP in these countries would have fallen by 7.9 percent between end-2008:Q3 and end-2009:Q2. The observed drop in output induced by these external factors, however, was only about half as large as this, at 4 percent. This strongly suggests that reduced financial vulnerabilities, war chests, and the ability to use countercyclical policies prevented the magnification of external shocks that prevailed in previous world downturns.

Contribution of Shocks to the Reduction in LA5 GDP between 2008:Q3 and 2009:Q2  
(Percent of total output loss)



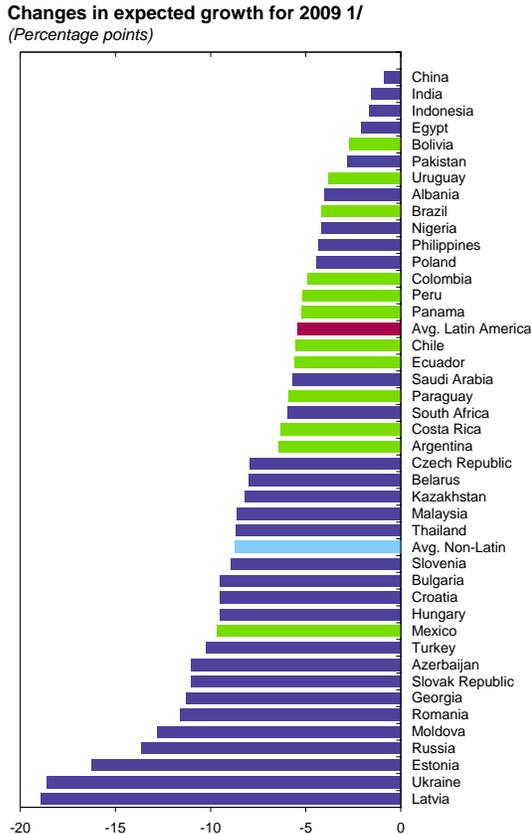
Source: IMF staff calculations.

Note: This box was prepared by Herman Kamil. The author thanks Pär Österholm for his generous help in estimating the model.

<sup>1</sup> For a description of the model used, see Österholm and Zettelmeyer (2007). Historically, 55 to 60 percent of the variation in Latin American GDP growth between 1994 and 2007—a quieter time, on average—has been accounted for by external trade and financial shocks.

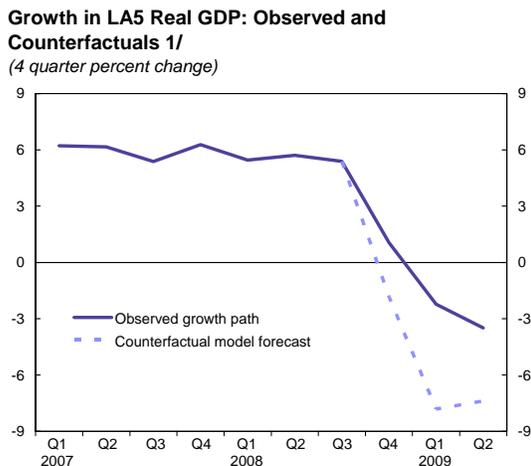
<sup>2</sup> A caveat to this exercise is that initial conditions in 2002:Q4 and 2008:Q3 could have been different also, making the process of comparison somewhat more complex than illustrated here.

Figure 3.3. Revisions in growth forecasts have been smaller in Latin America than in other emerging markets.



Sources: Consensus Economics; and IMF staff calculations.  
1/ 2009 growth rate expected in August 2009 minus 2009 growth rate expected in August 2008.

Figure 3.4. Improved resilience in the LA5 helped mitigate the decline in growth.



Sources: IMF staff calculations.  
1/ Simple average of 4 quarter percent changes in growth rates among the LA5 countries (Brazil, Chile, Colombia, Mexico, and Peru).

## Lower Vulnerabilities

As noted earlier, the region faced the crisis with much stronger external positions (Figure 3.5). Many countries reduced external current account deficits and external debt in recent years. Some had substantial surpluses, particularly commodity exporters that benefited from the boom in commodity prices. International reserves were also at much more comfortable levels.

Fiscal vulnerabilities also were lower. The current crisis met the region with much lower public sector borrowing requirements than in the past, because public sector balances had been significantly improved. Lower financing needs resulted from lower debt levels and also from less reliance on very short-term debt. In addition, many countries had increased domestic financing opportunities through the development of domestic capital markets.

The composition of debt was safer. In past global recessions, highly dollarized public debt increased on impact owing to the large depreciation of the currency. Market access was interrupted for some time, and entrenched inflation expectation kept borrowing costs high, resulting in an onerous debt service. Public sector borrowing requirements were larger also because more debt was indexed to international interest rates. This time, the impact on the debt stock was smaller, market access was not interrupted for long, and the increase in interest rates for new borrowing generally did not significantly increase public sector borrowing requirements and external interest rate payments.

On the banking side, the rapid credit expansion observed in many LAC countries before the global crisis did not turn out to be a major vulnerability. Credit growth was being financed mostly from domestic deposits and authorities had put in place prudential measures that limit excessive risk taking (see May 2009 *Regional Economic Outlook*). Moreover, capital

adequacy levels were comfortable this time, notwithstanding rising nonperforming loans in response to the downturn (see Chapter 2). As a result, the region did not suffer a banking crisis—unlike earlier global financial crises.<sup>6</sup>

Altogether, these lower vulnerabilities made a difference. Our analysis suggests that because of these changes, output losses in LAC countries were lower than elsewhere. Countries with more leveraged financial systems and faster credit growth experienced the largest output losses (Figure 3.6). In all these areas, the LAC region also did better than other emerging market countries (Box 3.2).

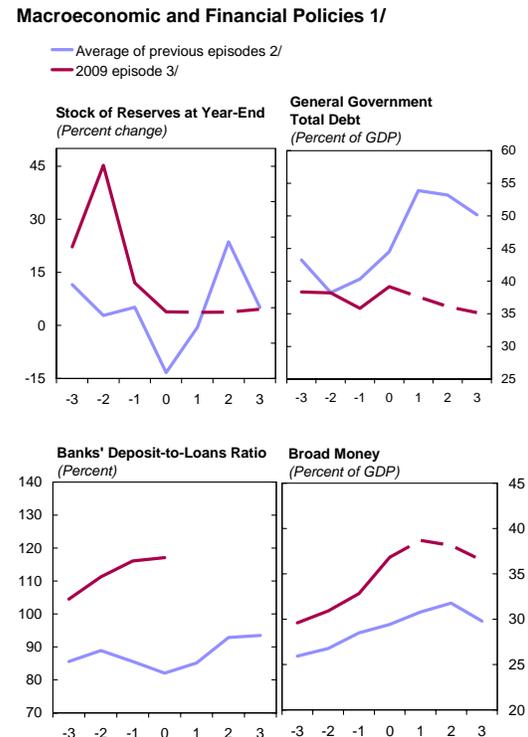
Cross-country analyses such as the one discussed in Box 3.2 have some difficulty explaining output dynamics in Mexico during this crisis. One reason may be that cross-country econometric models cannot pick up factors that seem to be special to Mexico, including the tight integration of its economy with the U.S. industrial sector, which plunged in 2009. Box 3.3 discusses this and other factors that also played a role in Mexico's weaker performance in late 2008 and the first half of 2009. Available indicators suggest that Mexico's economy returned to growth in 2009Q3.

### Stronger Policy Frameworks

Policy frameworks in many LAC countries have improved substantially during the last decade, particularly among the largest economies. Countries in the financially integrated commodity exporting group, for example, adopted inflation targeting and more flexible exchange-rate regimes. Several countries also have adopted fiscal frameworks that establish fiscal and debt sustainability rules.

Stronger and more credible policy frameworks, which led to lower external and

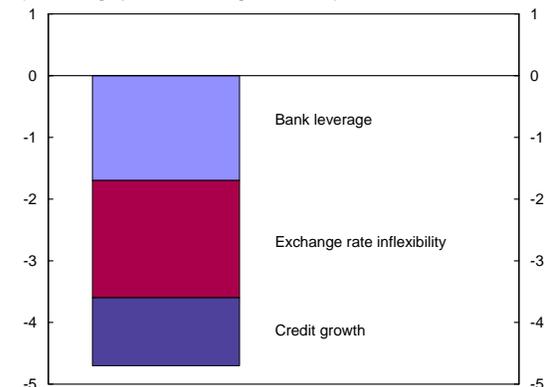
Figure 3.5. Vulnerabilities have been lower this time. International reserve growth was faster and public debt burdens and banking sector leverage were lower.



Sources: IMF, *International Financial Statistics*; and IMF staff calculations.  
 1/ Annual medians of ARG, BOL, BRA, CHL, ECU, PRY, PER, URY, VEN, MEX, CRI, PAN, DOM, and TTO.  
 2/ The data show the average evolution 3 years before and after the previous crises episodes (t=0 corresponds to the episodes of years 1982, 1998 and 2001).  
 3/ The data show the evolution 3 years before and after the 2009 crisis episode (t=0). Dotted lines indicate projections.

Figure 3.6. Countries with more-leveraged financial systems, limited exchange rate flexibility, and higher credit growth experienced sharper revisions to growth.

### Factors Driving Changes in 2009 Growth Forecasts 1/ (Percentage points of GDP growth rates)



Sources: IMF staff calculations.  
 1/ Estimated contribution of each independent variable to the predicted change in expected growth arising from increasing each independent variable from its first to its third quartile value, in a sample of 40 countries.

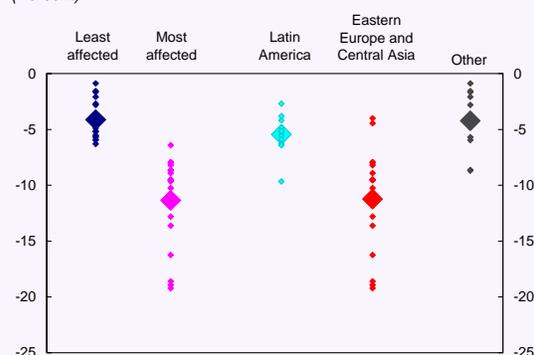
<sup>6</sup> See Kamil and Rai (forthcoming) and Porzencanski (forthcoming).

### Box 3.2. The Global Financial Crisis: Why Were Some Countries Hit Harder?

**In the aftermath of the collapse of Lehman Brothers in September 2008, some countries fared better than others, suggesting that specific country features may have influenced the transmission of the crisis.**

A recent IMF staff study focuses on “*growth forecast revisions*”—the change in forecasts for 2009 between 2008 and 2009—and looks at whether trade and financial openness, vulnerabilities, and policies can explain why some countries weathered the global crisis better than others. The focus on growth revisions carries several advantages: they are not affected by cyclical corrections or other anticipated adjustments in growth, allow for a flexible lag in the transmission of the global shock to each country, and take into account expectations of the likely success of policy responses. According to this measure, the countries most affected by the global crisis would have larger downward revisions to their growth forecasts for 2009.

Changes in expected growth for 2009 by different country groups  
(Percent)



Sources: Consensus Economics; and IMF staff calculations.

#### Key Results

**The study finds—for a sample of 40 emerging market countries—that financial vulnerabilities contributed to larger negative growth revisions, while exchange rate flexibility served as a shock absorber.** Countries with greater financial vulnerabilities—more-leveraged domestic financial systems and more rapid growth in lending to the private sector—tended to suffer larger downward revisions to their growth outlooks. Also, countries with less flexible exchange rate regimes experienced a larger downward revision in their growth outlooks for 2009. In countries with more flexible regimes, currency depreciation seems to have helped cushion the effect on growth by curtailing the incentives for capital outflows and supporting the profitability of exports.

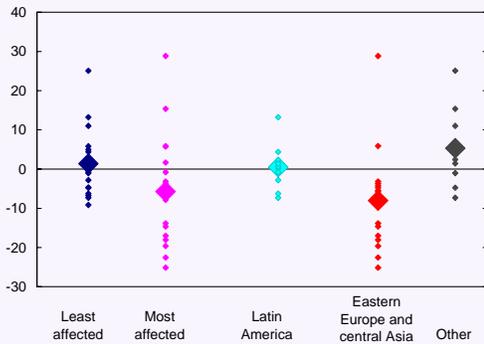
**Trade linkages also appear to have an effect on growth performances, although the trade variables are statistically significant only in a larger sample of countries that includes lower-income as well as emerging market countries.** In particular, the composition of exports rather than overall trade openness seems to explain different growth patterns across countries. While the share of commodities (both food and overall) in exports is associated with smaller negative growth revisions, the share of manufacturing (both advanced and overall) in exports is associated with larger negative revisions.

**Interestingly, lending from advanced economies appears to matter in the larger group of countries, though this is not detected in the smaller sample of emerging market economies.** Using the larger sample, the study finds some support for the notion that countries with stronger financial linkages with advanced economies, measured as their borrowing from advanced economies as a share of GDP, experienced larger negative growth revisions.

Note: This box was prepared by Pelin Berkmen, Gaston Gelos, Robert Rennhack, and James P. Walsh. The results of the study will be described fully in a forthcoming working paper.

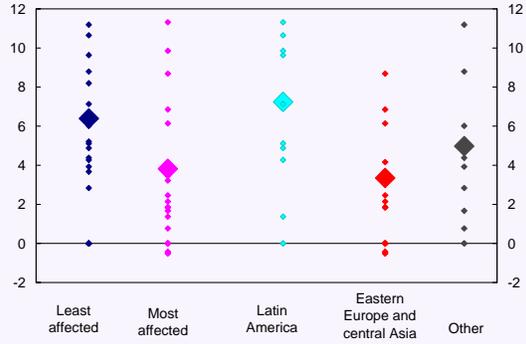
### 3. WHY HAS LATIN AMERICA AND THE CARIBBEAN FARED BETTER THIS TIME?

**Current Account Balance**  
(Percent of GDP)



Source: IMF staff calculations.

**Primary Fiscal Balance Gap**  
(Percent of GDP)



Source: IMF staff calculations.

**There is also some evidence that several other factors helped cushion the blow. Specifically:**

- *External vulnerabilities.* Countries with stronger external current account balances tended to experience smaller growth revisions, most likely by reducing their vulnerability to a sudden stop of capital flows.
- *Strong fiscal position.* Some of the results suggest that a stronger primary balance prior to the crisis, as measured by the primary balance gap (the difference between the actual primary balance and the balance consistent with a constant debt-to-GDP ratio), helped reduce the magnitude of the output decline, whereas other fiscal indicators, such as public debt as a share of GDP, appeared to have little effect. This is consistent with the notion that a strong primary balance gives a country more room to undertake countercyclical fiscal policies without raising concerns about debt sustainability.

**Interestingly, other measures of the strength of economic policies (besides exchange rate and fiscal policies) did not appear to dampen the effects of the global crisis on growth in emerging markets.**

Variables capturing differences in economic policies, such as the adequacy of international reserves, the level and variability of inflation, and credit ratings, did not yield significant results.

*Conclusion*

**On balance, these results suggest that the global financial crisis hit the large emerging market countries at their point of weakness.** Larger corrections in growth were experienced by those countries with more-leveraged financial systems, faster credit growth, and limited exchange rate flexibility. There is some support for the view that strong current account and fiscal positions helped cushion the blow. At the same time, there is some evidence that export linkages mattered.

### Box 3.3. ¿Qué Pasó? Behind Mexico's Cycle, by Way of Comparison to Canada

The economies of both Mexico and Canada are expected to contract this year, reflecting their strong real and financial linkages with the U.S. economy. However, whereas the Canadian economy is projected to shrink less than that of the United States (unlike in past recessions), the Mexican economy is projected to experience its largest contraction since the Tequila crisis and shrink by more than 7 percent in 2009. Stronger spillovers from the manufacturing sector and tighter financing conditions are likely among key contributors to Mexico's weaker performance.

#### Canada and Mexico are both strongly exposed to the U.S. economy.

This includes real links—more than three-fourths of their exports are directed to the United States—as well as financial links, with significant funding for both Canadian and Mexican firms sourced in the United States. Indeed, reflecting strong integration of production in North America, the decline in manufacturing activity has been very similar across North American Free Trade Agreement (NAFTA) countries. The crisis in the North American auto industry (in which production and trade flows have fallen by 40 percent or more) has played a role, but the correlation also holds for the rest of manufacturing.

#### Mexico is projected to contract more than would be expected in 2009, whereas Canada is proving more resilient.

The volatility of growth in Mexico has historically been greater than that in Canada, and spillovers from activity in the United States have been larger. For the post-Tequila period, the response of Mexican real GDP to U.S. factors is estimated to have ranged between 0.9 and 1.5 times the size of the shock to U.S. industrial production and real GDP, respectively, reflecting increasing trade and linkages with the U.S. economy post-NAFTA.<sup>1</sup> In contrast, the spillovers to growth in Canada have fallen. Some estimates suggest a 1–1 reduction in Canadian growth in line with a U.S. growth shock. Comparing these rules of thumb

Note: This box was prepared by Kornelia Krajnyak, Evridiki Tsounta, and Ivana Vladkova-Hollar.

<sup>1</sup> Schmitt-Grohe (1998), Sosa (2008), and Swiston and Bayoumi (2008) estimate the rules of thumb discussed here. U.S. industrial production has historically been more volatile than GDP.

<sup>2</sup> GDP growth in 2009 is projected to contract by –7.3 percent in Mexico, –2.1 percent in Canada, and –2.8 percent in the United States. Mexican GDP fell by –9.1 percent year on year in 2009:H1, during which period U.S. industrial production fell by –12.4 percent.

#### Canada and Mexico: Integration with the U.S.

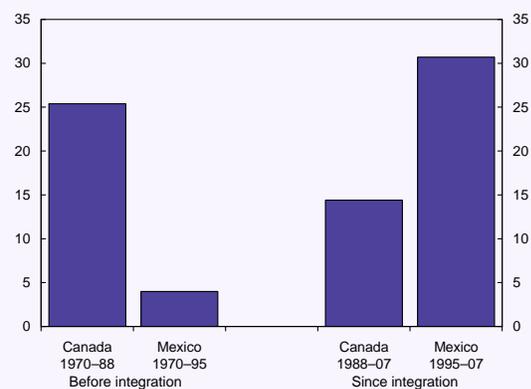
(Percent of GDP)

	Canada	Mexico
Total exports of goods	31	27
Exports of goods to the U.S.	23	21
Cross-holdings of financial assets	91	49

Sources: IMF, *Directions of Trade Statistics*; Bank for International Settlements; and IMF staff calculations.

#### Variance Decomposition of Real GDP 1/

(Percent explained after eight quarters)

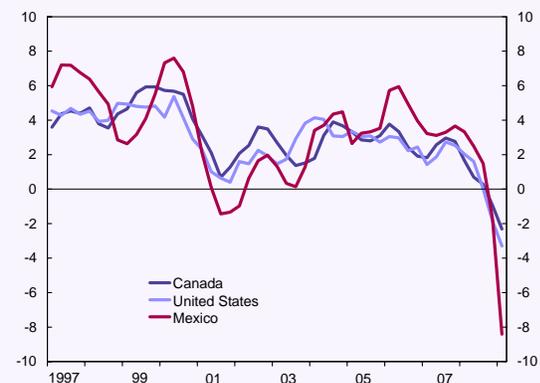


Source: Swiston and Bayoumi (2008).

1/ Integration defined as CUSFTA implementation (1988) for Canada and NAFTA implementation (1995) for Mexico.

#### Real GDP Growth

(Four quarter percent change)



Source: Haver Analytics.

with the IMF's current projections for growth across NAFTA countries in 2009 suggests that Mexico could contract somewhat more than explained by past relationships with the United States. Canada, on the other hand, appears to be doing better than in the past based on these metrics.<sup>2</sup>

**In part, this may reflect that Mexico's links to U.S. fluctuations have increased, whereas they have come down in Canada.** The research previously cited shows that the variance of Mexican output explained

by that in the United States has increased in the post-Tequila crisis period, whereas it has fallen in Canada. This may reflect the growing resilience of Canada in the last decade because policy frameworks were significantly strengthened.

Although macroeconomic frameworks in Mexico have also been substantially strengthened, Mexico's integration into the U.S. manufacturing sector increased sharply following the introduction of NAFTA.

	Canada		Mexico	
	% of total	y/y change	% of total	y/y change
Total GDP		-2.5		-8.2
Manufacturing	13.1	-12.2	17.8	-13.8
Trade	11.4	-7.0	14.8	-17.2
Transportation/Warehousing	4.6	-3.4	7.3	-10.3
Other Services	55.8	1.4	37.8	-4.2

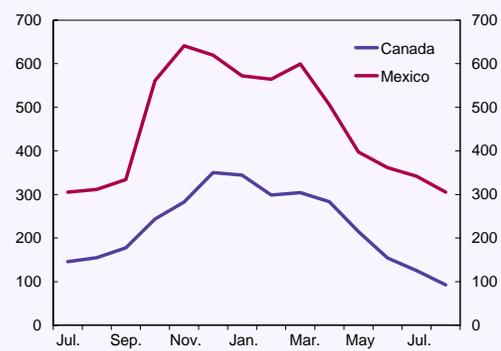
Sources: Haver Analytics; and IMF staff calculations.

**Also, the decline in manufacturing appears to have had larger cross-sectoral effects in Mexico than in Canada.** Spillovers to services from the sharp decline in manufacturing production have been much more significant in Mexico than in Canada. Activity in transportation and trade,<sup>3</sup> which are relatively more important in Mexico, has fallen far more sharply in Mexico than in Canada. Indeed, IMF staff analysis shows that more than one-fourth of the variation in all services output in Mexico can be explained by shocks to U.S. industrial production despite the absence of strong trade links to these sectors, suggesting significant spillovers. However, the mechanism through which they operate remains an area for further research (Sosa, 2008).

**The substantial tightening of financing conditions has also weighed on growth in Mexico relative to that in Canada and in part explains Mexico's weaker-than-expected outlook.** The cost of financing (for example, corporate spreads) has risen sharply in both countries but more so in Mexico. Indeed, although financial markets in both countries have escaped substantial disruption, a number of large Mexican firms experienced a sudden stop of financing in the aftermath of large losses on derivative operations in late 2008.<sup>4</sup>

Moreover, overall credit extension by the domestic banking system has decelerated sharply in Mexico, to 4.2 percent year on year in 2009:Q2 from 18.8 percent year on year in 2008:Q1, though it is unclear to what extent this reflects balance sheet pressures on Mexican subsidiaries of troubled global banks, as opposed to reduced credit demand. In Canada, the deceleration in credit growth has been much less pronounced, to about 6 percent during the first half of 2009 from 8.3 percent in 2008.

Corporate Bond Yields (Percent)



Sources: Merrill Lynch; and Credit Suisse.

<sup>3</sup> A split into retail and wholesale trade activity (the latter more directly related to manufacturing output) is unavailable for Mexico.

<sup>4</sup> Total external financing flows to the domestic private sector turned strongly negative in 2008:Q4, resulting in a total outflow of about US\$7 billion by the end of 2009:Q1.

**Box 3.3 (concluded)****Sharply slowing consumer credit, deteriorating labor market conditions, and effects of the H1N1 flu are additional Mexico-specific sources of drag.**

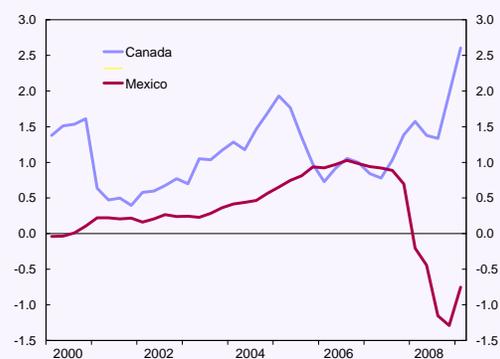
Available data suggest that labor market conditions have deteriorated substantially in both countries, with unemployment at an 11-year high in Canada, and substantial declines in employment in Mexico. The impact on consumption, however, is ameliorated in Canada by comprehensive unemployment benefits.<sup>5</sup> Meanwhile consumer credit has decelerated sharply in Mexico, across both foreign and domestic banks, whereas it was essentially unchanged from 2008 levels in Canada. Combined with a greater weakening in confidence, these factors have undermined

consumption demand. More broadly, part of the weak performance in Mexico in 2009 is explained by the effects of the H1N1 flu, which could lower GDP growth by about 0.5 percent.

**Differing policy constraints.** As has been the case elsewhere, macroeconomic policies have been eased substantially to cushion the impact of the global crisis in both Canada and Mexico. This has been done in the context of strong policy frameworks—inflation targeting and fiscal rules (a gradual debt reduction rule in Canada and a balanced-budget rule in Mexico). Indeed, the policy response has been exceptional by historical standards (policy rates are at historical lows in both countries, and the fiscal impulse is also sizable) and has likely acted to reduce the downturn in both countries relative to their historical experience. However, the extent of market disruption engendered by the global crisis and different starting conditions has restricted room for maneuver, more in Mexico (and other emerging economies) than in Canada. As such, policies have been eased faster and to a greater extent in Canada than in Mexico, and also explain part of the different growth outcomes in 2009, including Canada's better-than-historical performance.

<sup>5</sup> Although remittances have fallen sharply in U.S. dollar terms, their impact on household incomes has been muted by their increased Mexican peso value arising from the currency depreciation.

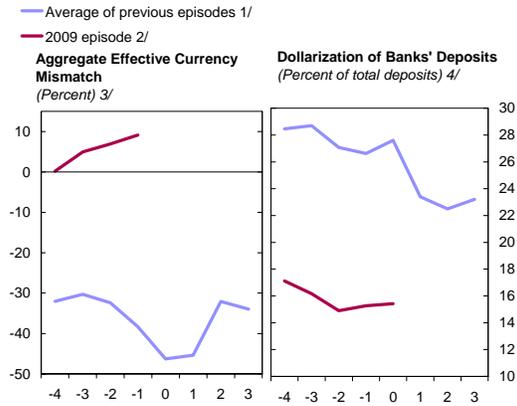
**Consumer Credit Impulse**  
(Percentage points of contributions to four-quarter percent change)



Sources: Haver Analytics; and IMF staff calculations.

Figure 3.7. Monetary and financial policy frameworks have encouraged lower exchange rate risk exposure.

**Lower Exposure to Exchange Rate Fluctuations**



Source: Bank for International Settlements, IMF, *International Financial Statistics*; and IMF staff calculations.  
 1/ The data show the average evolution 3 years before and after the previous crisis episodes (t=0 corresponds to the episodes of years 1982, 1998 and 2001).  
 2/ The data show the evolution 3 years before and after the 2009 crisis episode (t=0). Dotted lines indicate projections.  
 3/ Simple average for ARG, BRA, CHL, PER, MEX, COL, and VEN. A country has a net foreign currency asset position, as a share of export values. Negative numbers indicate a net debtor position in foreign currency.  
 4/ Simple average for ARG, BRA, CHL, CRI, DOM, MEX, PER, URY, and VEN. Dollar deposits measured at constant nominal exchange rates.

public sector borrowing requirements, allowed those countries to implement active countercyclical policies to smooth the impact of external shocks.

Flexible exchange rates acted as a key shock absorber. Domestic currencies depreciated rapidly in many countries following the collapse of Lehman Brothers. In contrast to past global recessions, the depreciations did not have destabilizing effects on domestic balance sheets, avoiding more serious disruptions in economic activity.

The gains made on the monetary front are one key reason why those effects were not present this time. New monetary regimes encouraged lower levels of dollarization, which led supervisors to adopt and carefully enforce prudential regulations that limit exchange rate risk, and in some cases prompted the development of markets that allow the diversification of such risk (Figure 3.7).

The new monetary policy frameworks also allowed for better deployment of international

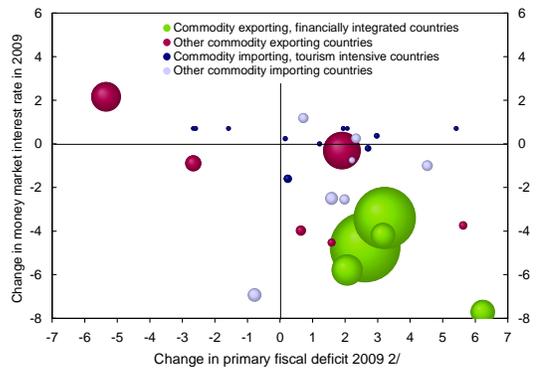
reserves. During this crisis, reductions in international reserves in LAC countries were moderate. Instead of committing reserves to defend an exchange rate peg, these were used prudently to help LAC corporate and financial sectors meet their immediate external obligations.

More credible fiscal frameworks also played a role. In contrast to the situation in earlier years, and thanks to prudent behavior in the last decade, many countries were able to allow the fiscal deficit to rise by letting *automatic stabilizers* work, mainly on the revenue side. Fewer countries were able to increase discretionary spending, in an active countercyclical fiscal policy response (Chapter 4). This shielded the domestic economy from the additional fiscal contraction observed in earlier worldwide recessions. In addition, some governments used their savings (liquid assets) abroad to finance their larger overall fiscal deficits, allowing fiscal stimulus with little impact on the gross debt burden.

In sum, this time, many LAC countries were able to react to the crisis with monetary or fiscal policy easing. And a number of countries were able to ease both policies (see lower right quadrant below in Figure 3.8).

Figure 3.8. Several countries were able to ease fiscal and monetary policies.

**Macroeconomic Stimulus 1/**  
(Percentage points)



1/ Bubble size is proportional to 2008 GDP at purchasing power parity.  
 2/ Primary deficit based on domestic tax revenues excluding commodity revenue and grants, in percentage points of GDP.  
 Source: IMF staff calculations.

## Policy Implications

Globally and in Latin America and the Caribbean, the recent experience is very rich and will certainly inform future policy agendas. In some respects, the crisis has brought some new lessons and challenges that will require new thinking—starting with financial regulation and supervision. At the same time, this global recession has confirmed older lessons, underscoring policies and conditions that make a country less vulnerable to external shocks. In particular, the global crisis has put to the test policies and frameworks that have been increasingly adopted by LAC countries in the last decade. It has served to show that economies that are open to global trade and finance can withstand severe external shocks without falling into a crisis—and can use the “policy space” gained in normal times to counter effects of external shocks. The region’s progress in reducing vulnerabilities and building capacity for countercyclical policies needs to continue.

Drawing also on the discussions in earlier chapters, we see policy implications in four areas.

*1. Financial sector sins and solutions: excess risk taking in the financial sector can bring down any economy; ongoing efforts to contain systemic financial risk are therefore essential.*

- Recently identified gaps and weaknesses in financial regulation and supervision in advanced economies—the origin of the recent crisis—need to be corrected.
- Past efforts at strengthening LAC financial regulation and supervision have paid off, as confirmed by its resilience to recent shocks. But progress has not been uniform, and even countries now in the lead need to keep moving ahead.
- Although LAC financial sectors were not undertaking the complex financial operations that were at the core of the U.S.

financial crisis, the regulatory and prudential frameworks of the region should incorporate the newly learned lessons on how to better handle these risks.

- In particular, countries should consider (1) countercyclical dynamic provisioning, (2) establishing clearer mandates and responsibility for financial stability, (3) clarifying and widening the perimeter of financial regulation, (4) paying closer attention to factors contributing to systemic risk, so that they can be avoided, and (5) adopting other regulations to limit liquidity risks and other mismatches.
- A period of significant capital inflows to some LAC countries is likely in the near term, as discussed in Chapter 2, and this could facilitate the formation of bubbles. This possibility also underscores the importance of financial policies that align private incentives correctly to avoid excess risk taking.

*2. Well-established, predictable, and transparent frameworks for monetary and fiscal policy can make a difference in mitigating the effect of shocks on activity.*

- Credible monetary and fiscal policies can play a countercyclical role in dire times. Monetary policy is normally the first line of defense for countries in a position to use it. Monetary policy decisions can be taken quickly and with an immediate effect on expectations (see chapter 4).
- The record of previous fiscal policies, as reflected in public debt levels and perceptions of credibility, will determine whether a government can act as a stabilizing force during downturns. The first challenge is to be able to maintain government expenditure when revenues decline temporarily.
- In countries with the strongest fiscal frameworks, it will be possible to let automatic stabilizers operate, and often this

may be all the fiscal support necessary. In cases of severe shocks, discretionary fiscal policy will be a useful tool. These governments will be able to borrow even in bad times, and may also choose to draw down previously accumulated financial assets.

- Better yet is to increase automatic fiscal stabilizers or to have crisis response expenditure plans prepared, ready to be implemented when certain contingencies arise.
- Fiscal rules can play a significant role in ensuring sustainability while allowing some degree of fiscal support during downturns. Many fiscal rule designs are possible, but one that works well is to keep public spending in line with potential output growth in normal times, so that boom times generate the resources that can be used during downturns.
- Transitions from rule-based fiscal policy reactions and (exceptional) discretionary fiscal policy should be defined in escape clauses established in advance. This will allow fiscal policy, during future extreme situations, to react and help monetary policy support activity without undermining credibility.

*3. Preparations for external shocks: the recent experience confirms the interrelated values of strengthening balance sheets, reducing currency mismatches, and allowing significant flexibility in the exchange rate.*

- Across emerging economies worldwide, those with larger fiscal and external deficits and debt, significant foreign currency mismatches, and less flexible exchange rates tended to have greater difficulties coping with the global crisis.
- Countries with intermediate exchange rate regimes should consider moving in the direction of greater exchange rate flexibility. At the same time, for some countries, a

hard peg to a foreign currency will continue to make sense. These countries should try to keep relatively larger fiscal policy space to confront shocks successfully.

- “Fear of floating” can be overcome. The recent experience confirms that currency depreciation need not be a channel through which a foreign crisis becomes a domestic one. With the right steps and policies, the ability to let the exchange rate move rapidly in response to external shocks can be part of the solution to a capital account shock. Quick overshooting of exchange rates to levels clearly below equilibrium helps contain capital outflows, by establishing expectations of eventually large gains. The key is to establish the right incentives to keep exposure contained—this means good data transparency as well as appropriate regulation of currency mismatches. Central banks must also provide a credible anchor to contain passthrough of depreciation to inflation.
- That said, the availability of substantial foreign exchange liquidity was also a stabilizing factor in the recent global recession—even in countries with high exchange rate flexibility. Although such countries made use of their reserves to ease foreign exchange pressures, intervention occurred in controlled amounts, still allowing the market to continuously determine exchange rates.

*4. An issue that will need more consideration: determining the optimal level of a country's international reserves and the rules of access to foreign exchange liquidity.*

- The recent crisis has led some to conclude that a very large stock of official reserves is a necessary preparation for facing external shocks—but this conclusion is unwarranted and a worrisome development in itself.
- Reserves provide a form of self-insurance, but this insurance has a cost. One such cost

is the spending that does not take place owing to the reserve accumulation, as well as the implicit loss from earning low rates of return on reserves. Moreover, there is an international coordination problem: what might be seen as good for one country may be counterproductive collectively.

- The difficult issues ahead are how much foreign exchange liquidity countries should have, and how best to accumulate this liquidity, without creating distortions (including on the pricing of the exchange rate).
- Within the LAC region, a number of countries already have sizable reserves, and there is no presumption that they should strive to reach the still higher levels of reserves of some countries in other regions.
- In the end, securing access to foreign exchange liquidity through international cooperation may be the best way for all to insure against future shocks.

### Methodological Appendix: Box 3.2

*This study draws on data from a range of sources to estimate several regressions.* The growth revisions come from the Consensus Forecast database and are defined as the difference between the averages of January-June 2008 and January-June 2009 projections for growth in 2009. These revisions were calculated for the 40 emerging market countries in the Consensus Forecast database. Data on trade, bank credit and deposits, exchange rate regimes, and public finances come from IMF databases. International lending data are from the Bank for International Settlements. Composition of trade data are published by the World Trade Organization. Various indicators on governance and country risk were compiled by The PRS Group, Inc. The regressions were conducted in ordinary least squares. The study uses

precrisis values for the explanatory variables to limit any problems of endogeneity. Similar results are obtained for regressions using growth revisions defined as the difference between the August 2009 projections and April 2008 projections (see Table 3.1).

*Columns (1)–(3) suggest that leverage in the financial system, credit growth, and a fixed exchange rate were associated with the largest negative growth revisions.* Leverage is defined as the ratio of bank credit to the private sector to deposits; credit growth is the cumulative growth in bank credit to the private sector between 2004 and 2007; and the dummy variable indicates a currency peg set to 1 for exchange regimes classified as 1–3 on the IMF's scale and 0 otherwise. Column (2) suggests that ten European accession countries in the sample experienced unusually large growth revisions, possibly because of their stronger trade and financial linkages with advanced economies in Europe, but column (3) suggests that this regional effect captures the stronger impact of leverage created by financial integration.

*Columns (4)–(5) test for the effects of external linkages and fiscal policy.* Column (4) suggests that a stronger current account balance tended to limit downward revisions to growth. Column (5) suggests that the primary gap (defined as the difference between the actual primary balance and the primary balance required to hold public debt constant) also helped limit growth revisions. In this set of regressions for emerging market economies, foreign trade variables did not enter the specifications in a consistently significant manner. Beyond exchange rate flexibility, the stability or credibility of monetary policy did not appear to have much explanatory power in reducing the impact of the crisis.

### 3. WHY HAS LATIN AMERICA AND THE CARIBBEAN FARED BETTER THIS TIME?

**Table 3.1 Regression Results**

Specification	(1)	(2)	(3)	(4)	(5)
Dependent variable: Change in consensus forecast					
Leverage	-0.04 *** (0.01)	-0.04 *** (0.01)	-0.02 (0.01)	-0.04 *** (0.01)	
Leverage * EU accession dummy			-0.04 ** (0.02)	-0.02 *** (0.01)	
Exchange rate peg dummy	-1.94 ** (0.87)	-1.82 ** (0.81)	-1.28 (0.81)	-2.45 *** (0.78)	-4.27 *** (1.05)
Cumulative credit growth	-0.01 * (0.00)	0 * (0.00)	-0.01 ** (0.00)		
EU accession dummy		-2.29 ** (0.88)	3.29 (2.66)		
Current account balance				-0.08 * (0.04)	
Primary gap					0.48 *** (0.15)
Constant	0.72 (1.30)	0.44 (1.21)	-1.82 (1.54)	0.24 (1.23)	-7.06 *** (0.98)
Observations	40	40	40	40	32
R-squared	0.574	0.643	0.688	0.666	0.462

Note: Standard errors in parentheses.  
 \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .



## 4. Fiscal Policy Response to the Crisis: How Much Space for Countercyclical Policy?

*The global crisis put fiscal policymaking at the forefront, highlighting differences in policy frameworks and preparedness within the region. Countries' circumstances prior to the crisis, largely reflecting past fiscal behavior, shaped the varied fiscal policy responses that Latin American and Caribbean (LAC) governments have recently taken. The experience of 2009 confirms that some LAC governments do have "space" to support economic activity during a major downturn. But the experience also draws attention to limits on such space, as well as the need for fiscal policymaking and frameworks to evolve—to be prepared for future shocks.*

As the financial crisis in advanced economies quickly triggered a global recession, economic activity in LAC economies cooled down and, as a result, public finances deteriorated. Governments across the region soon saw their own revenues decline significantly, including those related to commodity exports. Moreover, financing conditions suddenly tightened, though in a number of cases this effect was neither severe nor long lasting. Amid these conditions, countries faced a basic choice: Should fiscal policy actively respond to the crisis and, if so, in which direction? In broad terms, three kinds of responses could be considered, each with its own rationale depending on country circumstances:

- A country might actively tighten fiscal policy, aiming to contain the increase in the fiscal deficit and financing needs triggered by the shock to government revenue. Such a response, known as *procyclical*, would result in expenditure cuts (or tax increases), reducing domestic demand, at a time when output is in decline. Yet it might be the best available alternative if financing possibilities are limited, perhaps

because public debt is already very high and the country is unable to assure creditors of future debt servicing, or the government does not have sizable liquid assets of its own.

- A country could hold its expenditure and tax policies essentially constant, fully accepting a weaker fiscal balance as an automatic consequence of the revenue shock. This approach can be called *acyclical* in the sense that it involves no discretionary steps or revisions to policies at a time when output is falling. Even so, the public sector would be helping to stabilize demand and support economic activity by allowing so-called *automatic stabilizers* to operate, at least by collecting less tax revenue.<sup>7</sup> In the case of a temporary drop in output and revenues, such an approach would be a natural reaction for governments with good access to financing (or to their own liquid assets), more so if preexisting automatic stabilizers are judged to be adequate in size, and if monetary policy is free to play an active and effective role in stabilizing domestic demand.
- A country might decide to actively loosen fiscal policy, taking discretionary steps to raise expenditures (or cut taxes), seeking to provide extra support for demand at a time when activity is weakening. Such a *countercyclical* response implies an even larger increase in the fiscal deficit than that triggered by the revenue shock alone, so financing possibilities would need to be plentiful. Considerations favoring this approach could include automatic fiscal stabilizers that are relatively small and confidence that discretionary easing can be

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Note: This chapter was prepared by Gabriel Di Bella.

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<sup>7</sup>Although an "acyclical" response implies no discretionary change in fiscal policy, letting automatic stabilizers work can substantially reduce domestic demand fluctuations.

implemented—and reversed—in a timely manner. More fundamentally, this approach may be called for when monetary policy alone cannot be sufficiently effective in countering an unusually large drop in domestic demand, as may have been the case recently in some countries.<sup>8</sup>

In fact, fiscal policy has been playing a role to buffer the impact of the crisis in several countries in the region during 2009, but in greatly varying degrees. While fiscal balances are likely to weaken in nearly all LAC countries this year, some countries took steps to tighten their fiscal positions, while others actively raised expenditures—in some cases, substantially. This chapter aims at measuring the fiscal response to the crisis in the region, understanding the basis for the observed patterns, and drawing lessons that may inform fiscal policymaking in the future.

The first part of the chapter briefly looks at LAC countries' fiscal policies prior to the global crisis, noting differences in how countries reacted to strong revenue growth in the last several years of "good times." Next, the chapter analyzes fiscal developments during the crisis by decomposing the revenue shock, finding that most revenue losses were automatic consequences of the crisis itself. Turning to the expenditure side, the chapter documents wide variation across countries in the size—and direction—of expenditure policy responses to the crisis. Although the focus is on the level of primary expenditure, it is noted how some countries acted to change its composition, seeking to mitigate the effects of the crisis on vulnerable groups.

To evaluate the contribution of the public sector to domestic demand in 2009, the chapter looks at the change in fiscal balance measures that exclude revenues from commodity exports and foreign grants. Then, to identify the part of that

<sup>8</sup> There are limits to the effectiveness of monetary policy, including in cases of financial stress that impair its transmission, or when policy interest rates are close to the "zero bound."

contribution that arose from discretionary policy decisions rather than automatic stabilizers, the chapter presents *fiscal impulse* estimates and assesses their effect in stabilizing output. In turn, these policy responses are linked to a set of factors likely to influence countries' choices of whether to pursue an active countercyclical policy.

Finally, drawing lessons from the recent experiences of LAC countries, the chapter identifies key fiscal policy issues, including the need to eventually unwind recent stimulus and to adapt to a new global environment that will likely be less favorable than in the precrisis expansionary years. The recent experience suggests ways in which fiscal policy frameworks could evolve, not only to support fiscal discipline over time, but also to establish space for maintaining public expenditure and buffering macroeconomic shocks in the future.

## The Precrisis Context: Prudent Fiscal Policies and Some Profligacy

Previous studies have emphasized that fiscal policies in the LAC region have often been procyclical, with fiscal policy contributing to output fluctuations. Actively countercyclical policies, and sometimes even the normal functioning of automatic stabilizers, were not possible owing to the absence of financial buffers and large levels of public debt that restricted financial market access during downturns, as prospective creditors were reluctant to lend (Gavin and Perotti, 1997; and Reinhart, Rogoff, and Savastano, 2003, among others).<sup>9</sup>

The last decade witnessed significant change in the fiscal policies of several countries in the region. Better fiscal discipline over time brought down public debt levels in many cases (Vladkova-Hollar and Zettelmeyer, 2008). Moreover, some countries managed to build enough political consensus for the

<sup>9</sup> The procyclicality of fiscal policy in Latin America has been explained by a number of causes (Aizenman, Gavin, and Hausmann, 2000; and Talvi and Végh, 2005, among others).

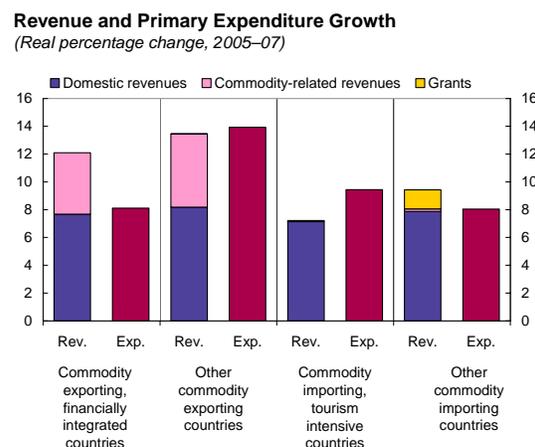
#### 4. FISCAL POLICY RESPONSE TO THE CRISIS: HOW MUCH SPACE FOR COUNTERCYCLICAL POLICY?

application of fiscal rules, at times embedded in fiscal responsibility laws (FRLs).<sup>10</sup> Successful implementation of fiscal rules supported fiscal discipline and therefore contributed to avoiding crisis episodes in which fiscal policy is forced to overreact in response to a cutoff in financing. The combination of improved policy frameworks and better fundamentals resulted in a number of countries in the region gaining investment-grade credit ratings, which brought better access to international capital markets, even in times of stress.

This shift has resulted in considerable heterogeneity in the conduct of fiscal policy. While some countries have broadly continued with procyclical policies, in particular with expenditures closely tracking revenues upward in favorable times, others have attained considerable countercyclicality.

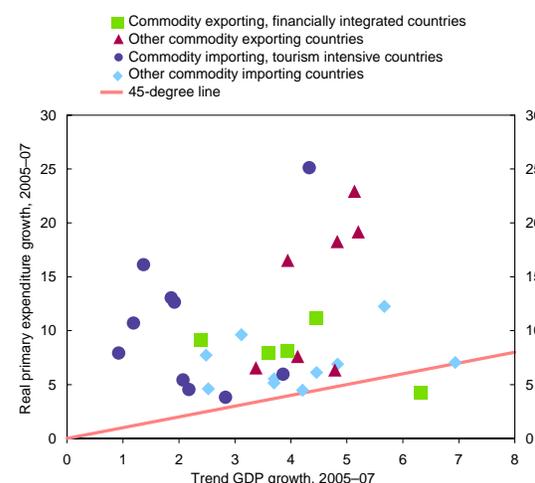
This difference is illustrated by the behavior of primary fiscal revenues and expenditures in the three years before the crisis (2005–07). These were years of above-trend growth, increasingly positive output gaps, and rising commodity export prices. As in Chapter 2, it is useful to refer to four groups of LAC countries (Figure 4.1).<sup>11</sup> In commodity exporting, financially integrated countries (CEFI), growth of primary expenditures was lower than that of total revenues, and was about equal to the contribution of noncommodity revenues to total revenue growth. In contrast, primary expenditure growth slightly exceeded total revenue growth in the other

Figure 4.1. Some countries have continued with procyclical policies, while others attained countercyclicality.



Source: IMF staff calculations.

**Growth of Real Primary Expenditures and Trend Growth, 2005–07**  
(Percent)



Source: IMF staff calculations.

commodity exporting countries (OCE), and far surpassed the contribution of noncommodity revenues to total revenue growth. In the commodity importing, tourism intensive countries (CITI), primary spending grew at higher rates than revenues, while in the other commodity importing countries (OCI), primary expenditures grew somewhat less than revenues.

A similar message comes from comparing growth of primary expenditures to that of trend GDP. In the other commodity exporting countries, primary

<sup>10</sup> See Corbacho and Schwartz (2007) and Dabán and others (2003). Countries in the region with FRLs include Argentina, Brazil, Chile, Colombia (only applicable for regional governments), Ecuador, Panama, Peru, and Venezuela; ECCU countries have committed to achieving a debt target of 60 percent of GDP by 2020.

<sup>11</sup> CEFI includes Brazil, Chile, Colombia, Mexico, and Peru; OCE includes Argentina, Bolivia, Ecuador, Paraguay, Suriname, Trinidad and Tobago, and Venezuela; CITI includes Antigua, Bahamas, Barbados, Belize, Dominica, Grenada, Jamaica, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines; and OCI includes Costa Rica, the Dominican Republic, El Salvador, Guatemala, Guyana, Haiti, Honduras, Nicaragua, Panama, and Uruguay. Figures reported for different groups refer to simple country averages.

expenditures grew much faster than trend GDP growth during the commodity boom years preceding the global crisis. As discussed below, this behavior implied a strong fiscal impulse to domestic demand for these countries during this period, compared with only a mild impulse in commodity exporting, financially integrated countries.

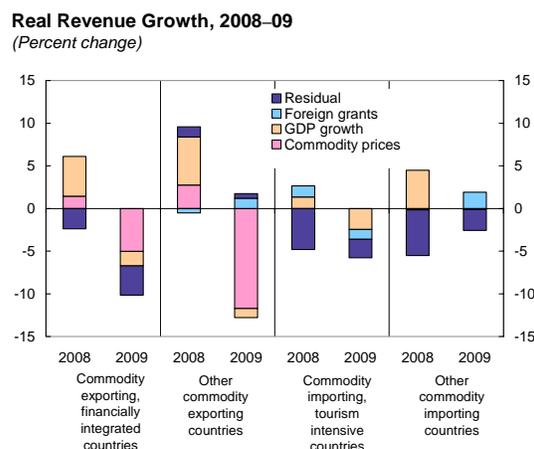
### The Crisis Hits: Lower Output and Commodity Prices Slash Fiscal Revenues . . .

LAC governments have experienced significant revenue losses during the crisis, in some cases more than expected. Losses were linked to weak (or negative) output growth and, in many of the region's larger economies, steep drops in commodity export prices. The declines in fiscal revenues during 2009 seem to be mostly "automatic" consequences rather than arising from discretionary actions on tax policy. The size of automatic stabilizers is, however, relatively small in many LAC countries (compared with those of most OECD countries, for example), given their lower tax ratios.

Indeed, countries where fiscal revenue is strongly linked to commodity exports have had very large revenue drops in 2009 (Figure 4.2).<sup>12</sup> In such countries, the decrease in commodity export prices accounts for the majority of the decline in revenues (with Bolivia, Ecuador, Trinidad and Tobago, and Venezuela showing the largest decreases, though drops are also important for Chile and Peru). Only 10–20 percent of the revenue loss seems attributable to the decrease in GDP growth rates (based on IMF staff assumptions of revenue elasticities to GDP). The remaining portion of the revenue loss is not identified and could reflect any tax policy changes, other structural changes (such as falling production of commodities), or that revenues are more sensitive to the output cycle than assumed.

<sup>12</sup> Figures for 2009–10 reflect the latest information available on outcomes thus far in 2009, policy announcements (including of "stimulus packages," Box 4.1), and IMF staff forecasts.

Figure 4.2. Revenues declined significantly in 2009, linked to both lower output and commodity prices.



For commodity importing countries, the residual unidentified part of the revenue loss is the most important. These losses can neither be attributed to changes in policy, as most of these countries are not implementing discretionary decreases in taxes in 2009, nor to drops in commodity production, since these countries are not large commodity exporters. Instead, the residual must relate mostly to the actual value of the short-term elasticity of tax revenues with respect to GDP turning out to be larger than the standard assumption of a value equal to 1.<sup>13</sup>

### . . . But Only Some Countries Can Afford to Keep Expenditure Growing . . .

Expenditure developments in the region can be interpreted as mainly the result of discrete policy actions, since automatic stabilizers on the expenditure side are also relatively small. In fact, expenditure policies differ significantly across countries—in some countries, expenditures seem to

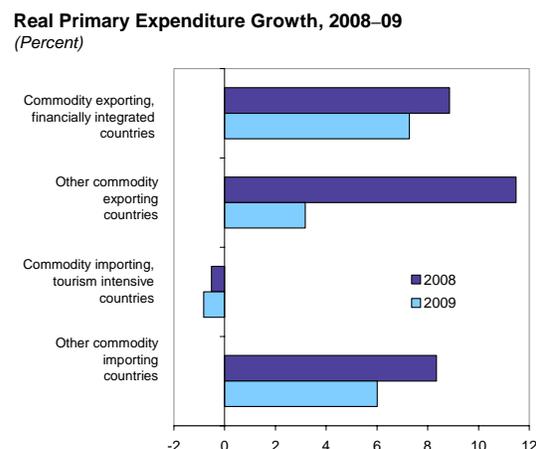
<sup>13</sup> This greater sensitivity of revenue to the cycle may in part be explained by relatively large decreases in imports, following drops in tourism, remittances, and foreign direct investment inflows. This is the case with many countries in Central America and the Caribbean, as the collection of taxes on consumption mainly relies on the withholding of taxes at customs.

mimic the behavior of revenues; in others, this is not the case.

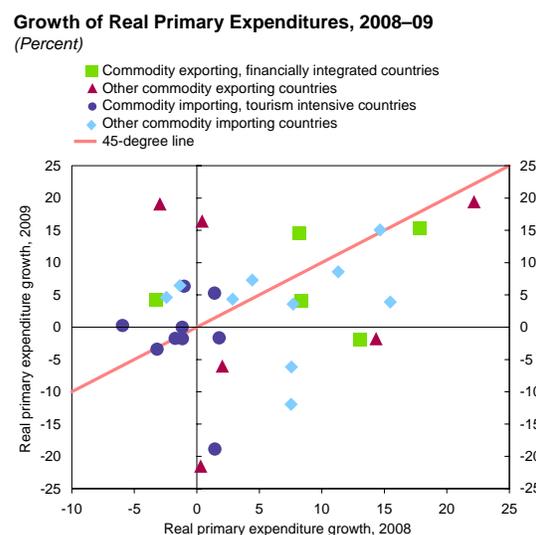
In particular, there is a strong contrast in the behavior of primary expenditure (in real terms) among the commodity exporting countries (Figure 4.3). While primary expenditure growth in financially integrated countries is expected to be somewhat similar in 2008 and 2009 (increasing by about 9 percent and 8 percent, respectively), it is expected to decline significantly between 2008 and 2009 in the other commodity exporting countries (having grown by about 12 percent in 2008, but only increasing by about 3 percent during 2009), as the decrease in commodity-related fiscal revenue turns into a binding constraint. Primary expenditures also show positive growth rates in 2008 and 2009 for other commodity importing countries, though the expected rate for 2009 is lower than that observed in 2008. In commodity importing, tourism intensive countries, real primary spending slightly contracted in 2008, and a further decrease is expected in 2009, reflecting a tightened constraint from the revenue side.

A more detailed look at the cross-country pattern for 2008–09 shows that the growth of real primary spending came to a halt for some countries of the region during 2009. In particular, primary expenditure is contracting in real terms in a number of countries of the region suffering a reversal of the terms of trade linked to energy export prices, including in Bolivia and Mexico, and especially in Ecuador, Trinidad and Tobago, and Venezuela. This behavior seems to indicate, for some of these countries, a continuation of the procyclical expenditure patterns observed in the past. In contrast, primary expenditure is increasing at rates similar (or higher) than those observed in 2008 in other countries of the region (including Argentina, Chile, Costa Rica, and Peru, among others). In many countries, the expected growth in primary expenditure (at a rate higher than trend GDP growth) reflects the implementation of stimulus packages (Box 4.1).

Figure 4.3. Some countries had to curtail expenditure growth in response to the revenue shock.



Source: IMF staff calculations.



Source: IMF staff calculations.

### ... Resulting in Varied Fiscal Support During the Crisis

The discussion so far has concentrated on the individual pieces of the fiscal policy reaction, that is, on the behavior of revenues and expenditures separately. Here, the pieces are brought together to gauge the size of the contribution of the public sector in stabilizing domestic demand and output in 2009. While the net change in domestic fiscal revenues and expenditures affects domestic demand, in turn its impact on output is assumed to depend

### Box 4.1 Fiscal Stimulus Packages in Latin America and the Caribbean

**A number of countries in the LAC region announced specific “anticrisis fiscal packages” during 2009 aimed at stabilizing aggregate demand, providing economic stimulus, and granting relief, on a mostly temporary basis, to vulnerable groups.** In the majority of cases, the measures were part of

countries’ budgets (in their original or reformed versions) and were to be implemented by central governments as, for instance, increases in public infrastructure spending or compensatory transfers to vulnerable groups. However, there were other measures that involved extrabudgetary transfers to state-owned enterprises (SOEs) or the provision of liquidity to state-owned development banks with the purpose of sustaining domestic credit. Most fiscal packages concentrated on increasing expenditures, transfers, or both, but some countries announced temporary tax reductions or administrative measures that allowed taxpayers to defer payment of their tax obligations. On the other hand, some countries were forced to introduce tax measures and improve tax administration to offset the decrease in revenues. The main elements of some of the fiscal stimulus packages announced across the region are described in greater detail in this box.

#### **Among commodity exporting financially integrated countries:**

- **Brazil** announced several on-budget tax and spending measures to stimulate aggregate demand and support specific groups (through cash transfers to the poor, tax breaks for auto purchases, and subsidies for housing construction for the poor). States were partially shielded from transfer declines, with some in negotiations to improve debt terms with federal bodies (for example, social security). The fiscal package also included small-scale loan guarantee programs for small and medium-sized enterprises. The largest measure was off budget: a below-the-line loan of 3.3 percent of GDP to BNDES, a state-owned development bank, over two years for lending, including to the state-owned oil company Petrobrás. Other public banks also increased lending.
- In **Chile**, the fiscal package included both on-budget and off-budget measures; the former comprised temporary tax reductions and increases in transfers to the poor, while the latter included transfers to state entities providing credit guarantees, the capitalization of the state-owned bank, and the state-owned copper mining company, CODELCO.
- **Mexico** announced measures including increases in social and infrastructure spending (above the line), freezes and reductions of administered prices, increases in lending limits, and the provision of additional guarantees by development banks.
- In **Peru**, measures included large increases in infrastructure spending, transfers to foster social protection (education, health, and agriculture), guarantees of funds, transfers to sectors affected by the crisis, and drawbacks, in that order.

#### **Among other commodity exporting countries:**

- **Argentina** announced large increases in infrastructure and other capital spending, a widening of coverage under antipoverty programs and pensions, measures to support consumer credit, and some reductions in export taxes, among other measures.
- In **Paraguay**, the economic reactivation plan includes short-term measures, including a larger (2 percent of GDP more expansionary) budget in 2009–10 than that of 2008 and some refocusing of conditional cash transfers and capital spending (financed partly by international financial institutions), and measures addressing medium-term structural issues, including public financial management improvement, SOE reform, and stronger financial sector supervision.

**Among commodity importing, tourism intensive countries**, The Bahamas shifted the composition of spending to maintain expenditures on infrastructure and provide transitory unemployment benefits, though revenue measures were also announced to contain the fiscal impact of the shock. In **Grenada**, measures included the acceleration of capital spending within a tighter budget, temporary tax relief to hotel and guest houses (to support the tourism industry and limit job losses), and targeted social spending (for example, a road maintenance program).

**Among other commodity importing countries**, Costa Rica announced a number of measures, including increased spending on education and labor-intensive infrastructure projects, an increase in public sector employment (through the hiring of teachers and police officers), and strengthening of cash transfer programs. In **El Salvador**, authorities announced increases in social spending and in public investment projects, free medicines for hospitals, and urban conditional cash transfers and temporary employment programs. In **Guatemala**, measures focused on transfers to vulnerable groups and labor-intensive investment projects. In **Panama**, measures focused on infrastructure works and expanding the social safety net; moreover, authorities granted noncontributory pensions to the elderly and increased wages for the police. The Fiscal Responsibility Law was modified in June 2009 to allow a deficit of up to 2.5 percent of GDP (up from 1 percent) in 2009 and 2 percent in 2010. The Canal expansion project, though it is not part of the stimulus strategy, is expected to support economic activity during 2010, despite its high import content.

**The importance of timely implementation of the stimulus measures (and of budgets, more generally) is particularly high given the generalized slowdown in economic activity across the region.** Although a detailed report on cross-country budget implementation (including fiscal stimulus measures) is difficult, given some data limitations, available data for 2009 indicate that progress has been mixed. In this connection, although a number of measures requiring only administrative decisions were implemented relatively quickly, spending proceeded at a pace that was slower than planned in a number of countries during the first half of 2009 and is picking up during the second half of the year. The reasons behind the delays include problems with implementation capacity (particularly in regard to investment), delays in approving budgets or budget reforms, and delays in approving external debt contracting, among others.

on the size of the *fiscal multiplier*. The larger the multiplier, the larger the impact in output of changes in fiscal policy.

Changes in “domestic primary fiscal deficits,” that is, excluding revenue related to commodity exports and foreign grants, provide a simple summary view of the contribution of the public sector to domestic demand, one that includes the effects of both discrete policy actions and automatic stabilizers.<sup>14</sup> An expansion of the domestic primary deficit, as shown below, signifies a push to domestic demand from the public sector. From this perspective, governments of commodity exporting, financially integrated countries are contributing most strongly to domestic demand in 2009, with a deficit increase of about 3.5 percent of GDP (following several years of approximately neutral contributions). The situation is starkly different for other commodity exporting countries, where domestic primary deficits are expanding by about 0.7 percent of GDP (in contrast to the strong expansion of 1.9 percent of GDP during 2008). In the two other country groups, domestic primary deficits are growing in 2009, albeit not by as much as in the first group.

**Movements in Domestic Primary Deficits 1/**  
(Average change in ratios to GDP, from previous year, in percentage points)

	Commodity exporting financially integrated countries	Other commodity exporting countries	Commodity importing tourism intensive countries	Other commodity importing countries
2006	-0.1	1.7	1.6	0.0
2007	-0.3	-0.4	0.0	-1.3
2008	0.5	1.9	0.9	1.5
2009	3.5	0.7	1.0	1.7
2010	-1.3	0.3	-1.0	-0.6

Source: IMF staff calculations.

1/ Excluding commodity-related fiscal revenues and foreign grants.

<sup>14</sup> Commodity revenues and foreign grants, where sizable, are excluded because such revenues are, to a large extent, received from nonresidents and thus do not directly affect domestic demand. Countries with significant commodity-related fiscal revenues are defined as those in which such revenues exceed 2 percent of GDP; these include Argentina, Bolivia, Chile, Colombia, Ecuador, Guyana, Mexico, Paraguay, Peru, Suriname, Trinidad and Tobago, and Venezuela. The same cutoff is applied for foreign grants, requiring adjustments for Bolivia, Dominica, Grenada, Guyana, Haiti, Honduras, Nicaragua, and Suriname.

Next, to distinguish the actively supportive role of countercyclical fiscal policy from the support coming from automatic stabilizers, the *cyclically adjusted primary balance* (CAPB) is first estimated. A standard framework is used to identify the cyclical reaction of domestic primary revenues and primary expenditures to the output gap. For countries where a significant portion of fiscal revenues are commodity related, an estimate is provided as to what part of the observed commodity-related revenues is “structural,” using estimates of long-term commodity prices.

The sign and size of the CAPB gives an indication of the underlying fiscal position, abstracting from temporary influences. It is also useful for projecting the future path of public debt, when taking into account the interest rate at which the government may borrow and the economy’s trend growth rate, among other factors.

Headline (that is, unadjusted) primary balances improved during the expansion years (2003–07) for the commodity exporting countries. In turn, among commodity importers, the primary balance improved initially and then deteriorated, especially in tourism intensive countries. For 2009, the headline primary balance is expected to deteriorate for all groups, although the other commodity exporting countries are expected to *tighten* their CAPB, while commodity exporting, financially integrated countries are *relaxing* theirs. This pattern appears to reflect differing policies during the expansion years, in particular the use of past revenue windfalls to build financial buffers, as opposed to finance expenditure increases (Figure 4.4).

Estimations of CAPBs are subject to uncertainty, particularly related to commodity revenue.<sup>15</sup> Countries with larger shares of commodity-related revenues in total revenues (as in Ecuador and Venezuela) will be subject to greater uncertainty as to the actual size of the CAPB. Bearing in mind this uncertainty, the largest countries in the region

<sup>15</sup> Reported cyclically adjusted concepts refer to simple averages of alternative estimates (Box 4.2 and Technical Appendix).

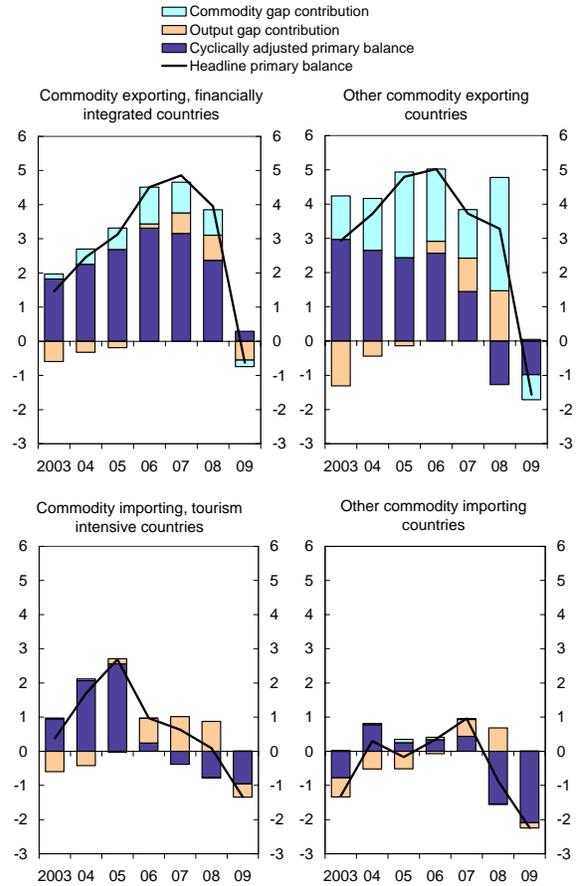
appeared to have had cyclically adjusted surpluses during the first part of the decade, in part reflecting improvements in long-term commodity prices. However, during the three years prior to the crisis, CAPBs improved in some cases (as in Chile and Peru) and worsened in others (as in Argentina, Ecuador, Mexico, and Venezuela). For 2009, a number of countries are letting their CAPBs deteriorate in varying degrees in response to the downturn (including Argentina, Brazil, Chile, and Peru), while others are consolidating their cyclically adjusted positions (including Ecuador and Venezuela).

While the *level* of the CAPB is the relevant indicator for questions of solvency and debt sustainability, its *year-to-year changes* are useful for questions of the short-term impact of fiscal policy decisions on domestic demand and output. Relatedly, the *fiscal impulse* (FI) is defined as the difference between the *domestic CAPB* (that is, excluding commodity-related fiscal revenues and foreign grants) in the current year and that of the previous year (Box 4.2). This FI is not influenced by commodity price issues, though it is still subject to measurement uncertainty associated with the size of the output gap.

The FI during the years preceding the crisis as well as that expected for 2009 shows some interesting differences across the region. Commodity exporting, financially integrated countries displayed a neutral to mildly procyclical fiscal policy stance during the expansion years (2003–07), while current plans imply the implementation of a clearly countercyclical fiscal policy during 2009, withdrawing some stimulus in 2010 as economies recover. FI changes have been less pronounced and fiscal policy has been less volatile, when compared with other country groups. In contrast, other commodity exporting countries implemented a clearly procyclical fiscal policy during the expansion years, and they will continue to do so during the downturn. For these countries, fiscal policy changes are at times abrupt and fiscal policy in general has been more volatile than for

Figure 4.4. Not all countries have been able to ease cyclically adjusted fiscal balances in the crisis.

**Headline and Cyclically Adjusted Primary Balances**  
(Percent of GDP)



Source: IMF staff calculations.

commodity exporting financially integrated countries.

Interestingly, fiscal policy in the other commodity importing countries appears on average to have been mildly countercyclical in past years—a trend that continues in 2009. In the case of Costa Rica, the fiscal impulse in 2009 is especially substantial. Finally, commodity importing, tourism intensive countries have implemented procyclical fiscal policies through most of the years analyzed, with such trends also continuing during 2009–10 (Figure 4.5).

As the table shows, the entire role of the public sector in stabilizing domestic demand, as captured

#### **Box 4.2. Measuring the Fiscal Stance: The Cyclically Adjusted Primary Balance and the Fiscal Impulse**

**The methodology for estimating the cyclically adjusted primary balance (CAPB) used in this chapter allows the portion of the changes in fiscal variables that result from policy decisions to be identified and differentiated from the portion resulting from the economic cycle (or *automatic stabilizers*).<sup>1</sup>** In turn, the estimation for the CAPB allows calculation of how much impulse fiscal policy is providing to domestic demand in a given year. Such *fiscal impulse* is measured as the difference between the cyclically adjusted primary deficit in two consecutive years.

**Estimating the CAPB requires country-specific information, including the elasticity of fiscal revenues and expenditures with respect to changes in output, as well as an estimation of the output gap.** The “typical” case for the region in 2009 is one in which (1) GDP growth is negative, and the output gap is deteriorating with respect to 2008, which is also negative; (2) the income elasticity of domestic fiscal revenues (that is, excluding commodity-related revenues and foreign grants) is equal (or larger) than one, meaning that changes in output (in percentage terms) are reflected in similar (or larger in absolute terms) changes in fiscal revenues; and (3) the income elasticity of primary expenditures is equal to zero, meaning that the level of spending does not change as a result of the economic cycle, but rather that changes in its level are mostly the result of discrete policy measures.

**In the typical case for 2009, the primary expenditure-to-GDP ratio is increasing and the domestic primary revenue-to-GDP ratio is decreasing (or staying about constant).** Absent discretionary policy measures, domestic revenues will decline, but the ratio of domestic revenues to GDP will remain about constant or decrease, given estimated elasticities. In turn, the levels of primary expenditures will remain about constant, but the ratio of expenditures to GDP will increase.

**Automatic stabilizers are estimated by comparing fiscal variables (as percentages of GDP) in the downturn with those same variables when the output gap is zero:**

- On the expenditure side, the level of expenditures remains about constant, but increases in terms of GDP and provides some stabilization, which is measured by subtracting the ratio of expenditures to GDP in bad times to that ratio when the output gap is zero. Such a difference constitutes the *automatic stabilization* provided by expenditures or, in other words, the expenditure (in percentage of GDP) that occurs for cyclical reasons.
- On the revenue side, the level of domestic revenues falls and the domestic fiscal revenues-to-GDP ratio decreases (or remains about constant). The portion of the decline in fiscal revenues providing *automatic stabilization* would again be measured by the difference between the domestic revenue-to-GDP ratio in the downturn and that ratio when the output gap is zero.

**The domestic CAPB results from excluding from the observed domestic primary revenues- and expenditures-to-GDP ratios, the portion that results from automatic stabilization.** Any changes in the domestic cyclically adjusted primary balance between two consecutive years (that is, the *fiscal impulse*) would add one to one to (or subtract one to one from) domestic demand. A deterioration in the CAPB (or analogously, an increase in the primary deficit) implies a positive contribution of fiscal policy to domestic demand.

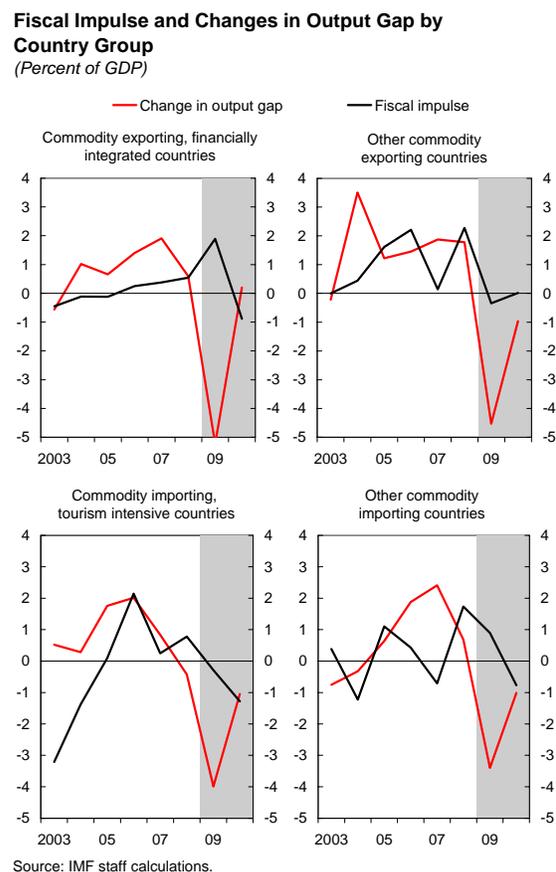
<sup>1</sup>A more formal discussion of this topic is included in the Technical Appendix.

by the change in the headline domestic primary deficit, can be decomposed into two parts. The FI measures the part of such a change explained by discretionary policy responses, whereas the rest of the change is explained by the operation of automatic stabilizers.

A look at the largest countries of the region suggests that a number of them ran fiscal policies that were procyclical, in varying degrees, during the precrisis period. For 2009, the response is expected to be clearly countercyclical in the cases of Brazil, Chile, Mexico, and Peru, and less so in the cases of Argentina and Colombia; responses are clearly procyclical in the cases of Ecuador and Venezuela.<sup>16</sup>

Finally, the contribution of fiscal impulse to output stabilization is assessed, depending on both the estimated size of the impulse and that of the assumed fiscal multiplier. In this regard, a number of studies estimate that, for developing countries, the fiscal multiplier is about 0.5, although the range of estimates is wide.<sup>17</sup> Using that estimate and assuming a one-quarter lagged effect for fiscal policy, the commodity exporting, financially integrated countries show the largest fiscal contribution to output stabilization.

Figure 4.5. Fiscal impulses varied greatly. Commodity exporting, financially integrated countries achieved the greatest countercyclicality in 2009.



### Why Did Active Fiscal Policy Responses Differ? A Look into Fiscal Space

Fiscal impulses in 2009 are expected to differ across countries. While in some countries fiscal policy will provide stimulus, in others it will withdraw stimulus, potentially contributing to the downturn. Why such different responses?

<sup>16</sup> FIs were calculated on the basis of *above-the-line* figures, that is, without considering *below-the-line* operations as for instance, those to inject fiscal resources into state-owned banks with the purpose of supporting domestic credit, as in Brazil, with BNDES; and Chile, with Banco de Estado (see Box 4.1).

<sup>17</sup> Ilzetki and Végh (2008) estimate three-year cumulative multipliers for developing countries at about 0.5; IMF (2008) estimates the three-year cumulative multipliers for taxes at 0.2 and for spending, at -0.2. Estimates also vary widely for advanced economies. For a survey, see Spilimbergo, Symansky, and Schindler (2008).

Decomposition of the Changes in Domestic Primary Deficits into Fiscal Impulses and Automatic Stabilizers  
(Percent of GDP)

Year	Commodity Exporting, Financially Integrated Countries			Other Commodity Exporting Countries		
	Primary deficit change (1+2)	Automatic stabilizers (1)	Fiscal impulse (2)	Primary deficit change (1+2)	Automatic stabilizers (1)	Fiscal impulse (2)
2008	0.5	0.0	0.5	1.9	-0.4	2.3
2009	3.5	1.6	1.9	0.7	1.1	-0.3
2010	-1.3	-0.4	-0.9	0.3	0.3	0.0

Year	Commodity Importing, Tourism Intensive Countries			Other Commodity Importing Countries		
	Primary deficit change (1+2)	Automatic stabilizers (1)	Fiscal impulse (2)	Primary deficit change (1+2)	Automatic stabilizers (1)	Fiscal impulse (2)
2008	0.9	0.1	0.8	1.5	-0.2	1.7
2009	1.0	1.3	-0.3	1.7	0.8	0.9
2010	-1.0	0.3	-1.3	-0.6	0.2	-0.8

Source: IMF staff calculations.

Fiscal Impulse Contribution to Output Growth  
(Percent of GDP, simple averages)

	Commodity Exporting, Financially Integrated Countries	Other Commodity Exporting Countries	Commodity Importing, Tourism Intensive Countries	Other Commodity Importing Countries
2007	0.2	0.4	0.4	-0.2
2008	0.2	0.8	0.3	0.5
2009	0.7	0.2	0.0	0.6
2010	0.0	0.0	-0.5	-0.1

Source: IMF staff calculations.

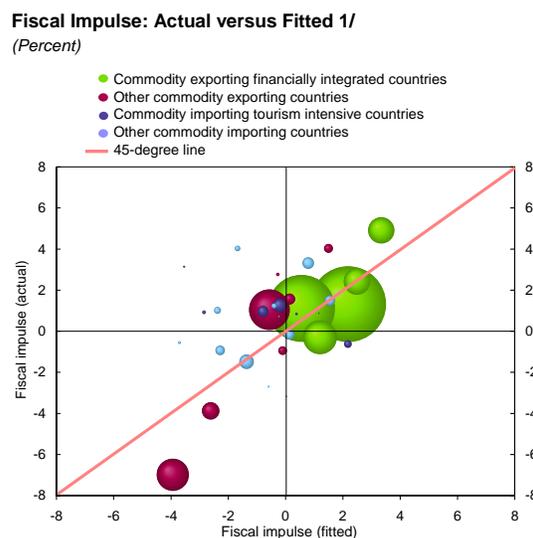
Some analysis suggests that the answer to this question is related to differences in the conditions prevalent in countries of the region before they were hit by the crisis. Indeed, the smaller fiscal impulses of some countries may have reflected constraints on their ability to secure more financing. In other words, countries implementing countercyclical policies in 2009 are those that have the ability to do so. This is the notion of *fiscal space*, which is related to the availability of financial buffers, the ability to access international capital markets, and having stronger precrisis primary balances. Countries with larger debt ratios, lower debt ratings, and no financial buffers would have less space to conduct fiscal policies than those with lower debt ratios, investment grade debt ratings, and available financial buffers.

This conclusion is supported by a simple cross-country regression (with each country weighted by its relative size) that relates fiscal impulse in 2009 with the level of the cyclically adjusted fiscal balance in 2008 and the credit rating on external debt, as indicators of each country's "initial" conditions.

The results indicate that FIs in 2009 are higher in countries with stronger initial CAPBs and with stronger credit ratings (Figure 4.6). Relating these results with the analysis above suggests that countries running procyclical policies tend to take advantage of abundant liquidity during moments of favorable international conditions, but when market access turns more difficult, they are bound to adjust their fiscal positions, resulting in negative fiscal impulses. In contrast, governments running countercyclical policies enjoy continued access to international capital markets. A few countries stand out as having an FI different from the average reaction. Among others, Chile and Costa Rica (the latter in the context of an IMF-supported program) appear to have larger FIs, while Ecuador and Venezuela have smaller ones.

There are other possible explanations for the differing fiscal policy responses. One possibility is that responses were constrained by fiscal rules that limited overall deficits. What was observed,

Figure 4.6. Countries with stronger fiscal positions and credit ratings were able to ease fiscal policy.



Source: IMF staff calculations.  
 1/ Bubble sizes reflect country sizes in 2008 (valued at PPP exchange rates).

**Initial Conditions and Cross-Country Variation in Fiscal Impulses, 2009**

Dependent Variable: Fiscal Impulse in 2009

	Coefficients	Robust Standard Error	P-value
Intercept	1.42	0.05	0.00
Debt rating 1/	-0.31	0.01	0.00
Cyclically adjusted primary balance 2008	0.60	0.01	0.00
Adjusted R-squared	0.68		
Observations (weighted by PPP GDPs)	32		

Source: IMF staff calculations.  
 1/ Lower values imply stronger ratings.

however, is that countries with functioning fiscal rules relaxed or modified rules in ways that accommodated larger fiscal deficits, owing to the notion that circumstances in 2009 were extraordinary. On the other hand, the fiscal response of some Caribbean countries appears to have been bound by their debt-reduction target.

Fiscal policy responses could in principle be constrained by problems of coordination between monetary and fiscal authorities. However, the largest fiscal response occurred in countries with inflation-targeting regimes and flexible exchange rates, and, in those countries, monetary policy conditions were relaxed along with fiscal policy. Moreover, the fact that many countries with fixed exchange rates are actually running procyclical fiscal policies might indicate the presence of limited access to external capital markets, and thus that authorities are

reluctant to accumulate further debt to avoid jeopardizing their exchange rate system.

Some countries might have refrained from actively implementing countercyclical fiscal policy because they were uncertain whether it would be effective in stabilizing output, or they expected that letting existing automatic stabilizers operate would be enough. This might explain the policy response in economies with very open current accounts, as openness is thought to reduce the size of the multiplier. However, such a pattern is not clear: some countries with very open current accounts are implementing procyclical fiscal policies (as in most of the Caribbean), while others are applying countercyclical policies (as in Chile and Peru). Moreover, there is no clear pattern between the size of FIs and that of automatic stabilizers.

### Looking Ahead: Balancing Fiscal Sustainability with Sustaining the Recovery

What path should the fiscal balance take once the economic recovery takes hold and medium- and long-term fiscal goals regain importance? There are a number of aspects to this question.

The first aspect is the appropriate timing for withdrawing the fiscal stimulus implemented in 2009. As discussed in Chapter 2, the answer depends on a number of factors, including the timing and strength of the recovery and also on the degree of remaining space or buffers available. While there is always concern with removing stimulus too early, countries that have few buffers and unclear access to financing may need to err on the side of caution, keeping their remaining ammunition in reserve. More generally, it will usually make sense to remove fiscal stimulus before monetary stimulus.

The second aspect is related to the impact of current policies on medium-term debt ratios. The functioning of automatic stabilizers implies that fiscal balances deteriorate in recessions and improve in expansions, and thus, there is a public debt cycle associated with the fiscal balance cycle. However,

the long-term path for public debt will depend on the CAPB. In the current context, the discretionary response of fiscal authorities in many countries has weakened the CAPB, and thus, if the extra impulse is not withdrawn, debt ratios may end up increasing. Thus, it is important to assess the magnitude of fiscal consolidation needed to ensure that public debt ratios at least remain stable at end-2008 levels, or decline in cases of overly high levels. This analysis is particularly important for countries with already high public debt ratios and those with difficulties accessing capital markets, as well as for those with potentially high contingent liabilities (for instance, the capitalization of state-owned enterprises, development banks, or the central bank, which can cause discrete jumps in the public debt level).

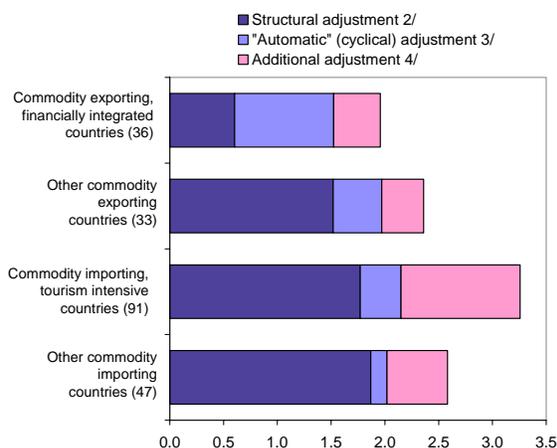
A basic debt sustainability analysis shows that LAC countries will need eventually to strengthen their fiscal balances significantly (with respect to that expected for 2009), if public debt ratios are to remain constant at the levels observed at end-2008. However, the adjustment needed is of a different nature for different countries. For instance, the adjustment needed in commodity exporting, financially integrated countries will be produced mostly automatically as the economy recovers, output gaps are closed, and commodity prices return to long-term values. In contrast, the adjustment needed in the remaining groups is mostly structural, that is, it will need policy action by fiscal authorities. Finally, if the global crisis persistently affects trend growth and interest rates (that is, more so than already assumed for the baseline scenario—see Chapter 2), the fiscal adjustment needed to keep debt ratios constant will increase, with the increase being larger in countries with a legacy of larger debt ratios (Figure 4.7).<sup>18</sup>

The third aspect is related to fiscal policy frameworks, targets, and rules. The current crisis has

<sup>18</sup> Owing to data availability, the analysis uses *gross debt* ratios. The fiscal adjustment needed to keep *net debt* ratios constant would be larger. This is particularly important for countries with large precrisis fiscal financial buffers.

Figure 4.7. Fiscal positions will need to strengthen significantly to keep debt from rising.

**Fiscal Balance Adjustment Needed to Keep Debt Ratios Constant at End-2008 Values 1/**  
(Percent of GDP)



Source: IMF staff calculations.

1/ Values in parentheses refer to public debt in percent of GDP at end-2008.

2/ Structural adjustment to headline primary balance in 2009 that leaves debt ratios unchanged.

3/ Including for commodity prices.

4/ If trend growth is lower by 0.35% and interest rates are higher by 90 basis points.

shown that countries that had secured enough political consensus for the application of prudent fiscal frameworks entered the crisis better prepared, in particular owing to the accumulation of large fiscal buffers during good times (as in Chile and Peru). This is particularly important for countries with a large proportion of commodity-related revenues in total revenues, as fiscal revenues in such countries tend to be more unpredictable, with commodity gaps not necessarily coinciding with domestic output gaps. The presence of such fiscal rules has not constrained the implementation of discretionary policy measures, as credibility in their resumption allows some flexibility in their application. Even if not formally adopting a rule, targeting a cyclically adjusted fiscal balance can be useful in policy analysis and discussion, as well as to broadly guide fiscal policy. The estimation of CAPBs would, at least, provide a reference point and help increase accountability, promoting saving during good times, raising credibility of fiscal policy, and allowing countries to increase net debt during bad times by accessing capital markets. Carefully designed "escape clauses," when fiscal rules are well entrenched, would also be desirable.

The fourth aspect is concerned with the functioning of automatic stabilizers. These are generally small in the region on both from the revenue and the expenditure sides—and arguably too small.<sup>19</sup> Regarding those from the expenditure side, stabilization is only provided by the size of primary spending with respect to output. Only a few countries have some form of automatic transfers linked to the cycle, and these are often minor or negligible. It would be worthwhile to consider and carefully design further automatic stabilizers, including larger, temporary, automatically triggered transfers to the most vulnerable sectors of the population (perhaps in the form of unemployment insurance), and even consider mechanisms that provide relief to taxpayers (both individuals and corporations) during downturns. Increasing the size of automatic stabilizers would reduce the need for discretionary fiscal policies during bad times, and enhance credibility by avoiding the political cost of withdrawing discretionary stimulus when the economy recovers.

The fifth aspect is related to the role of discretionary policies at current and future junctures. Discretionary fiscal policies were justified given the extraordinary magnitude of the current crisis, as well as the need for a coordinated international response. For less extraordinary, more normal times, a good strategy would be based on the following: a careful design of automatic stabilizers, ensuring that they are not too small; the estimation of a CAPB to inform, and perhaps to guide, fiscal policy, to accumulate financial buffers during good times (reducing debt and improving liquidity access); and continuous coordination between monetary and fiscal policy, subject to the constraints imposed by the monetary framework. While fiscal policy has regained prominence with the crisis, and will maintain a central role in less flexible exchange rate regimes, monetary policy should normally be at the forefront in cyclical management in countries with more flexible exchange rate arrangements.

<sup>19</sup> Notwithstanding the large tax revenue falls observed in a few countries.

This chapter concludes with two observations about the *impact* of fiscal policy choices implemented in 2009. First, regarding the overall level of national income, it is extremely difficult for any one country to quantify what would have happened if fiscal policies had responded differently to the crisis. Extensive literature addresses this question, and suggests a wide range of possible fiscal “multipliers,” depending on many factors that vary across countries and over time. The presumption here is that, first, those LAC countries that had the fiscal space to raise expenditure in 2009 were in general wise to do so, even without being certain of its degree of success in supporting output; in the unusual circumstances of large and growing output gaps, a positive impact was reasonably likely, and worth the attempt. And second, beyond the effort to support total demand and output, there was also a special challenge in 2009 for fiscal policy to play an important social role, to cushion the effect of the downturn on vulnerable groups, irrespective of demand management objectives. Ideally, such social responses should be designed and planned far in advance of downturns, with their implementation being stepped up (and subsequently phased out) in an essentially automatic manner. However, where such systems were not already adequately established, the size of the shock in 2009 called for a discretionary policy response—and vulnerable groups benefited to the extent that their governments were ready and able to act, having previously accumulated the necessary fiscal space.

## Technical Appendix

### The Fiscal Impulse

The *fiscal impulse* measures the impact on domestic demand of discretionary changes in fiscal policy. A positive fiscal impulse is defined as a discretionary change in policy that results in an increase in domestic demand.

The measurement of the fiscal impulse is complicated by the fact that the observed fiscal position is influenced by cyclical factors. This

chapter uses a standard framework that identifies what portion of each country’s fiscal position can be attributed to cyclical factors (that is, the workings of *automatic fiscal stabilizers*) and what portion to discretionary fiscal responses.

The size of automatic stabilizers depends on the size of the public sector, on revenue and expenditure elasticities with respect to output, and on fiscal-related legislation (for example, the existence or absence of unemployment-related transfers, the composition of tax revenues between indirect and direct taxes, and the progressivity of the tax system, among others). Concretely, the framework is defined by the following expressions:

$$T_t^* / Y_t^* = T_t / Y_t \cdot [1 - (\eta^{T,Y} - 1) \cdot gap_t], \quad (1)$$

$$G_t^* / Y_t^* = G_t / Y_t \cdot [1 - (\eta^{G,Y} - 1) \cdot gap_t], \quad (2)$$

$$pdef_t^{D,*} = G_t^* / Y_t^* - T_t^* / Y_t^*, \quad (3)$$

$$fi_t = pdef_t^{D,*} - pdef_{t-1}^{D,*}, \quad (4)$$

In the expressions above,  $gap_t = (y_t - y_t^*) / y_t^*$ , where  $y$  is real output and  $y^*$  refers to real trend output,  $T$  denotes domestic primary revenues (that is, excluding commodity-related fiscal revenues and foreign grants),  $G$  denotes primary expenditures,  $Y$  refers to output, and an asterisk denotes cyclically adjusted concepts. In addition,  $\eta^{T,Y}$  is the income elasticity of domestic revenues, and  $\eta^{G,Y}$  is the income elasticity of primary expenditures. Finally,  $pdef_t^{D,*}$  refers to the cyclically adjusted domestic primary deficit, whereas  $fi_t$  denotes the fiscal impulse: An increase in the cyclically adjusted domestic primary deficit implies a positive fiscal impulse.<sup>20</sup>

The measurement of fiscal impulse excludes commodity-related fiscal revenues and foreign

<sup>20</sup> Expressions (1) and (2) result from taking a first-order Taylor approximation of the underlying expressions, around an output gap equal to zero.

grants, as they mostly originate from abroad. For instance, an increase in fiscal revenues in the form of grants will not imply a decrease in the disposable income of a resident, but rather, in that of a nonresident. In contrast, the impact of the use of such revenue will be fully captured in primary expenditures. The same applies for commodity-related revenues, which mostly originate from exports.

### The Cyclically Adjusted Primary Balance

In countries where the share of commodity-related revenues and foreign grants in total fiscal revenues is not significant, the cyclically adjusted primary balance (CAPB) is defined by the negative of Expression (3).

From a policy perspective, the sign of the CAPB can have different interpretations depending on whether the output gap is positive or negative, and also depending on the cost of servicing public debt. For instance, at times of positive output gaps, a positive CAPB could be interpreted as a relatively strict fiscal policy, which could be the result either of prudence or of the need to service an onerous public debt. Conversely, a negative CAPB in times of positive output gaps could be associated with a lax fiscal policy, more so in the presence of a large interest bill. More important, the sign of the CAPB will determine the speed of public debt accumulation through the economic cycle.

In countries with significant commodity-related fiscal revenues (or foreign grants), the CAPB will need to include an estimate of the long-term value of such fiscal revenues.

Commodity-related fiscal revenues can take a number of country-specific forms (including royalties, resource rent taxes, regular income taxes, production-sharing schemes, indirect taxation, or other nontax payments) or could result from the direct involvement of the state in the production of natural resources (Davis, Ossowski, and Fedelino, 2003).

Accounting for the commodity-related impact on fiscal accounts will be more challenging in countries that are resource rich in a number of commodities as opposed to just one. Moreover, it is necessary to differentiate commodity-related revenues that originated from exports from others that originated domestically. The finiteness (or not) of the natural resource under analysis introduces additional complications, as it blurs the distinction between temporary and permanent commodity-related revenues.

Concretely, cyclically adjusted commodity-related fiscal revenues are estimated as follows:

$$cr_t^* = cr_t \cdot (1 + gap_t) \cdot (CP_t^* / CP_t). \quad (5)$$

In Expression (5),  $cr_t$  denotes observed commodity-fiscal revenues (as percent of output), and  $cr_t^*$  denotes cyclically adjusted commodity revenues (as percent of trend output) expressed at long-term commodity prices,  $CP_t^*$  (as opposed to observed prices,  $CP_t$ ).

The analysis assumes that commodity revenues depend on variables that are mostly beyond the control of fiscal authorities; it also assumes that commodity revenues do not always move together with output.

In countries where foreign grants constitute a large proportion of fiscal revenues, the calculation of the CAPB should proceed using revenues, excluding grants, for reasons analogous to those for which commodity-related revenues are excluded. Interestingly, if grants are large and volatile and the recipient government is cash constrained, the fiscal impulse will reflect such volatility. As grants can have different purposes (some negatively correlated with the cycle, as, for instance, humanitarian relief, while others are not), the analysis in this chapter assumes that such correlation is zero for the aggregate of grants.

To sum up, the CAPB is defined as follows:

$$pb_t^* = T_t^* / Y_t^* - G_t^* / Y_t^* + cr_t^* + gr_t^*. \quad (6)$$

In Expression (6),  $pb_t^*$  denotes the CAPB and  $gr_t^*$  the ratio of grants to trend output.

### Estimation Uncertainty

Estimations of CAPBs and associated measures of fiscal impulse are subject to uncertainty, as their calculation implies the estimation of unobserved variables, including trend output and long-term commodity prices, as well as that of unobserved parameters, including relevant income elasticities.

Such uncertainty is compounded by a number of methodological assumptions regarding the relation between the observed and long-term values of certain price ratios. In particular, Expressions (1), (2), (5), and (6) assume that the observed and long-term price levels are identical; moreover, Expressions (1) and (2) further assume that the long-term ratio of relevant price deflators to the output deflator are identical to those observed. Finally, Expressions (5) and (6) assume that the ratio of the observed exchange rate to the price level is identical to that in the long term.

The approach in this chapter is to accept the methodological assumptions for the sake of simplicity. Regarding estimation uncertainty, the approach is to attempt to measure it. In this vein, different estimates of trend output (and associated output gaps) were obtained by setting the smoothing parameter of a Hodrick-Prescott (HP) filter at different values (6, 10, 100, and 250). To avoid the end-of-period bias, the filter was applied to series that include forecasts through 2010.

In turn, alternative estimates for long-term commodity prices were estimated by applying a one-sided HP filter, with different values for the smoothing parameter (6, 10, 100, and 250), as well as by calculating moving averages of different lengths (3, 5, and 10 years) of observed commodity prices. A one-sided HP (instead of two-sided) was chosen to avoid biasing the long-term commodity price estimations with too much hindsight.

Regarding income elasticities of fiscal revenues and primary expenditures, this chapter uses the

estimations in IMF (2007) and working assumptions in Horton, Kumar, and Mauro (2009). Accordingly, the income elasticity of tax revenues was set at a value equal to 1.00 for all countries, except for Brazil (1.01), Chile (1.05), Colombia (1.10), Costa Rica (1.11), El Salvador (1.36), Nicaragua (1.20), Panama (0.90), and Peru (1.09). Income elasticities of primary expenditures were assumed to be zero in all cases.

This approach results in 4 alternative estimates of fiscal impulse and 28 alternative estimates of CAPB for each country. The country-specific results reported in the chapter correspond to the simple averages of such estimations. Upper and lower bounds correspond to the maximum and minimum estimation values for the concept reported.

From a policy perspective, the existence of upper- and lower-bound CAPBs creates some challenges, as it is not possible to establish with certainty the “true” size (and at times not even the sign) of the CAPB. This is particularly important for countries that target public debt ratios or need to reduce their debt levels. Such countries would need to have larger CAPBs to achieve a target debt ratio with a given probability, if upper- and lower-bound CAPB estimations differ too much (Di Bella, 2008).

There are also policy challenges regarding the appropriate size of the fiscal impulse. These arise, for instance, from the absence of synchronicity between commodity price cycles and output gaps. In this connection, a country with significant commodity-related fiscal revenues may benefit from an increase in the long-term price of a relevant commodity, at a moment in which the economy is overheating. In such a case, the government could increase its long-term primary expenditures without compromising debt sustainability; however, such an increase would overheat the economy further. Analogously, the long-term price of a given commodity may decrease at a time of negative output gaps: while this will require a reduction in long-term primary expenditures to keep public debt ratios constant, an immediate decrease in expenditures may worsen the recession.

## Debt Sustainability

The assessment of fiscal adjustment needed to keep debt ratios constant presented in this chapter makes use of the following expression:

$$\overline{pb} = \bar{d} \cdot \frac{1}{(1 - \hat{y})} \cdot [\hat{r} - \hat{y} + \varepsilon \cdot \alpha \cdot (1 + \hat{r})], \quad (7)$$

where  $\overline{pb}$  is the primary balance (as a percentage of output) that stabilizes the debt-to-output ratio at a given target,  $\bar{d}$  (see, for instance, IMF, 2005). In addition,  $\hat{y} = \gamma + \pi + \gamma \cdot \pi$  denotes the output growth rate (in nominal terms),  $\gamma$  is the output growth rate (in real terms), and  $\pi$  is the inflation rate; moreover,  $\hat{r} = \alpha \cdot r^f + (1 - \alpha) \cdot r^d$  is the average interest rate paid on public debt,  $\alpha$  is the proportion of foreign currency-denominated debt in total debt,  $r^f$  is the interest rate on foreign

currency-denominated debt,  $r^d$  is the interest rate on domestic currency-denominated debt, and  $\varepsilon$  is the change in the real exchange rate. The analysis in this chapter sets  $\bar{d}$  at its end-2008 value and compares  $\overline{pb}$  with the expected headline primary balance for 2009,  $pb09$ , as well as with the estimated CAPB at end-2009,  $pb09^*$ . Thus, the expression  $A^T = \overline{pb} - pb09$  will denote the total adjustment in the primary balance needed to keep debt ratios constant at their end-2008 values. In turn, the expression  $A^* = \overline{pb} - pb09^*$  will denote the adjustment in the CAPB required to keep the debt ratio constant at its end-2008 value. Then,  $A^C = A^T - A^*$  can be defined as the “automatic” fiscal adjustment that would occur as output gaps close and commodity prices return to their long-term values.

## REFERENCES

- Aizenman, Joshua, Michael Gavin, and Ricardo Hausmann, 2000, "Optimal Tax and Debt Policy with Endogenously Imperfect Creditworthiness," *Journal of International Trade and Economic Development*, Vol. 9, No. 4, pp. 367–95.
- Barrera, Natalia, Marcello Estevão, and Geoffrey Keim, 2009, "United States—U.S. Potential Growth in the Aftermath of the Crisis," in *United States: Selected Issues*, IMF Staff Country Report No. 09/229 (Washington: International Monetary Fund).
- Calvo, Guillermo, Leonardo Leiderman, and Carmen Reinhart, 1996, "Inflows of Capital to Developing Countries in the 1990s," *Journal of Economic Perspectives*, Vol. 10, No. 2, pp 123–39.
- Celasun, Oya, 2009, "United States—Spillovers from U.S. Federal Debt Issuance: The Case of Emerging Market Sovereign Borrowing," in *United States: Selected Issues*, IMF Staff Country Report No. 09/229 (Washington: International Monetary Fund).
- Corbacho, Ana, and Gerd Schwartz, 2007, "Fiscal Responsibility Laws," in *Promoting Fiscal Discipline*, ed. by M. Kumar and T. Ter-Minassian (Washington: International Monetary Fund).
- Dabán, Teresa, Enrica Detragiache, Gabriel Di Bella, Gian Maria Milesi-Ferretti, and Steven Symansky, 2003, *Rules-Based Fiscal Policy in France, Germany, Italy, and Spain*, IMF Occasional Paper No. 225 (Washington: International Monetary Fund).
- Davis, Jeffrey, Rolando Ossowski, and Annalisa Fedelino, 2003, *Fiscal Policy Formulation and Implementation in Oil-Producing Countries* (Washington: International Monetary Fund).
- Di Bella, Gabriel, 2008, "A Stochastic Framework for Public Debt Sustainability Analysis," IMF Working Paper 08/58 (Washington: International Monetary Fund).
- Engen, Eric, and Glenn Hubbard, 2004, "Federal Government Debt and Interest Rates," *NBER Macroeconomics Annual 2004*, pp. 83–138 (Cambridge, Massachusetts: National Bureau of Economic Research).
- Gavin, Michael, and Roberto Perotti, 1997, "Fiscal Policy in Latin America," *NBER Macroeconomics Annual 1997*, pp. 11–72 (Cambridge, Massachusetts: National Bureau of Economic Research).
- Hausmann, Ricardo, and Eduardo Fernández-Arias, 2000, "Foreign Direct Investment: Good Cholesterol?" IDB Research Department Working Paper No. 417 (Washington: Inter-American Development Bank).
- Horton, Mark, Manmohan Kumar, and Paolo Mauro, 2009, *The State of Public Finances: A Cross-Country Fiscal Monitor*, IMF Staff Position Note 09/21 (Washington: International Monetary Fund).
- Ilzetzki, Ethan, and Carlos Végh, 2008, "Procyclical Fiscal Policy in Developing Countries: Truth or Fiction?" NBER Working Paper No. 14191 (Cambridge, Massachusetts: National Bureau of Economic Research).
- International Monetary Fund (IMF), 2005, "Information Note on Modifications to the Fund's Debt Sustainability Assessment

- Framework for Market Access Countries" (Washington).
- , 2007, *Regional Economic Outlook: Western Hemisphere* (Washington, November).
- , 2008, *World Economic Outlook* (Washington, October).
- , 2009, *Global Financial Stability Report* (Washington, October).
- , 2009, *Regional Economic Outlook: Western Hemisphere* (Washington, May).
- , 2009, *World Economic Outlook* (Washington, October).
- Kamil, Herman, and Kulwant Rai, forthcoming, "On the Eve of Retrenchment? The Effect of the Global Credit Crunch on Foreign Banks' Lending to Latin America and the Caribbean" (Washington: International Monetary Fund).
- Laubach, Thomas, 2009, "New Evidence on the Interest Rate Effects of Budget Deficits and Debt," *Journal of the European Economic Association*, Vol. 7, No. 4, pp. 858–85.
- Levchenko, Andrei, and Paolo Mauro, 2006, "Do Some Forms of Financial Flows Help Protect from Sudden Stops?" IMF Working Paper 06/202 (Washington: International Monetary Fund).
- Österholm, Pär, and Jeromin Zettelmeyer, 2007, "The Effect of External Conditions on Growth in Latin America," IMF Working Paper 07/176 (Washington: International Monetary Fund).
- Porzecanski, Arturo, forthcoming, "Latin America: The Missing Financial Crisis," ECLAC Working Paper (Washington: Economic Commission for Latin American and the Caribbean).
- Reinhart, Carmen M., Kenneth S. Rogoff, and Miguel A. Savastano, 2003, "Debt Intolerance," *Brookings Papers on Economic Activity*, Vol. 34 (2003-1), pp. 1–74 (Washington: Brookings Institution).
- Romeu, Rafael, 2008, "Vacation Over: Implications for the Caribbean of Opening U.S.-Cuba Tourism," IMF Working Paper 08/162 (Washington: International Monetary Fund).
- , and Andrew Wolfe, forthcoming, "Caribbean Tourism: Standing Against a Tide of OECD Unemployment," IMF Working Paper (Washington: International Monetary Fund).
- Schmitt-Grohe, Stephanie, 1998, "The International Transmission of Economic Fluctuations: Effects of U.S. Business Cycles on the Canadian Economy," *Journal of International Economics*, Vol. 44, No. 2, pp. 257–87.
- Sosa, Sebastián, 2008, "External Shocks and Business Cycle Fluctuations in Mexico: How Important Are U.S. Factors?" IMF Working Paper 08/100 (Washington: International Monetary Fund).
- Spilimbergo, Antonio, Steven Symansky, and Martin Schindler, 2009, *Fiscal Multipliers*, IMF Staff Position Note 09/11 (Washington: International Monetary Fund).
- Swiston, Andrew, and Tamim Bayoumi, 2008, "Spillovers Across NAFTA," IMF Working Paper 08/3 (Washington: International Monetary Fund).

Talvi, Ernesto, and Carlos Végh, 2005, "Tax Base Variability and Procyclical Fiscal Policy," *Journal of Development Economics*, Vol. 78, pp. 156–90.

Vladkova-Hollar, Ivanna, and Jeromin Zettelmeyer, 2008, "Fiscal Positions in Latin America: Have They Really Improved?" IMF Working Paper 08/137 (Washington: International Monetary Fund).

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