World Economic and Financial Surveys

Regional Economic Outlook

Western Hemisphere

Rebuilding Strength and Flexibility

APR 12

INTERNATIONAL MONETARY FUND

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Preface

This April 2012 *Regional Economic Outlook: Western Hemisphere* was prepared by a team led by Luis Cubeddu and Charles Kramer under the overall direction of Nicolás Eyzaguirre and the guidance of Miguel Savastano. The team included Gustavo Adler, Sebastián Sosa, Camilo E. Tovar, and Evridiki Tsounta. In addition, Eric Le Borgne, Paulo Medas, and Martin Sommer contributed to Chapter 1; Alexandra Peter contributed to Chapter 2; and Francesco Columba, Kevin Greenidge, Geoff Keim, Ruy Lama, Juan Pablo Medina, Garth Nicholls, and Jose Daniel Rodriguez-Delgado contributed boxes. Excellent research assistance was provided by Bennett Sutton, Alejandro Carrión, Andresa Lagerborg, and Anayochukwu Osueke. Production assistance was provided by Patricia Delgado Pino and Luke Lee; Joe Procopio of the External Relations Department edited the manuscript and coordinated the production. This report reflects developments through April 16, 2012.

Executive Summary

The global economic environment is stabilizing, but remains weak. Positive economic news in the United States and policy action in Europe in recent months eased market stress. However, remaining strains and Europe's slowdown are expected to weigh on global activity going forward. Meanwhile, in emerging markets, growth is still robust, with most economies operating near potential. On balance, global output is expected to expand by about 3¼ percent in 2012, a markdown of about ½ percent from the IMF's September forecasts.

Downside risks continue to dominate. In the near term, renewed bouts of financial stress in the euro area could accelerate bank deleveraging, disrupt markets, and hit activity, both in Europe and beyond. Also, geopolitical tensions in the Middle East could drive up oil prices, dampening global demand as well as nonoil commodity prices. Over the medium term, persistent fiscal imbalances in the U.S. and Japan could unsettle financial markets if unaddressed, while a hard landing in China could downshift global growth and trigger a rout in commodities prices.

Notwithstanding the higher volatility, external conditions remain stimulative for much of Latin America, and are likely to persist for some time. Monetary policies in advanced countries are apt to remain accommodative for an extended period, given sluggish growth, high unemployment, and fiscal drags—in turn, implying that external financing for the region will continue to be abundant and cheap. Meanwhile, sustained demand from emerging Asia will support commodity prices, keeping terms of trade high for South America's commodity exporters. That said, conditions will remain less favorable for Central America and the Caribbean, where external demand is more strongly linked to advanced economies. Countries with financial ties to Europe need to remain vigilant. However, spillovers would be mitigated by the fact that most European bank subsidiaries operating in the region are well capitalized and domestically funded.

Growth in much of the region remains robust, though moderating on account of earlier policy tightening, the end of the post-crisis rebound, and global uncertainties. In this context, the task for many countries remains to rebuild policy space.

- The financially integrated commodity exporters should take advantage of favorable external conditions—which are expected to last for a while, but not forever—to continue reining in public debt, in order to allow due flexibility for monetary policy, and preserve hard-won fiscal credibility. Central banks should remain watchful of liquidity conditions, which could be disrupted by further bouts of global financial stress. Meanwhile, exchange rate flexibility should be preserved to buffer shocks, while macroprudential policies can address financial excesses.

- A number of other commodity exporters need to end procyclical policies, which are exacerbating overheating pressures, eroding buffers, and weakening the balance of payments.

- Countries in Central America, which are operating near potential and have debt-to-GDP ratios above precrisis levels, should redouble efforts to consolidate their fiscal positions, while strengthening monetary and prudential frameworks.
- Many Caribbean countries will have to remain focused on working down fiscal overhangs and addressing financial fragilities, given the threats they pose to stability.

This edition of the *Regional Economic Outlook* features three short analytical notes on the effects of global financial shocks, spillovers from the largest economies in the region, and credit and housing dynamics. The main findings are:

- Sustainable external positions and exchange rate flexibility hold the key for emerging markets to lessen the adverse effects of global financial shocks on economic activity. In Latin America, improved fundamentals have made economies less sensitive to these external shocks in recent years.
- Spillovers from Brazil are significant for selected South American partners, but not for others. These spillovers take place through the transmission of "homegrown" shocks in Brazil and through Brazil's amplification of global shocks. In contrast, Central America's linkages with Mexico are very weak.
- Rapidly growing mortgage credit does not appear to pose imminent risks to stability in the region. However, this assessment is hampered by a serious lack of quality data, pointing to an urgent need to close information gaps and strengthen oversight of the housing sector.

1. United States, Canada, and the World: Outlook and Challenges

After slowing in the second half of 2011, global growth is stabilizing. Policy action in Europe and better-than-anticipated U.S. economic performance have eased market strains and revived capital flows to emerging economies, although conditions remain volatile. Downside risks continue to dominate the outlook, given still-fragile public and financial sector balance sheets in many advanced economies. Nevertheless, the global environment under our baseline—easy financing conditions and high commodity prices—remains stimulative for much of Latin America.

Global Backdrop: A Quieting Storm?

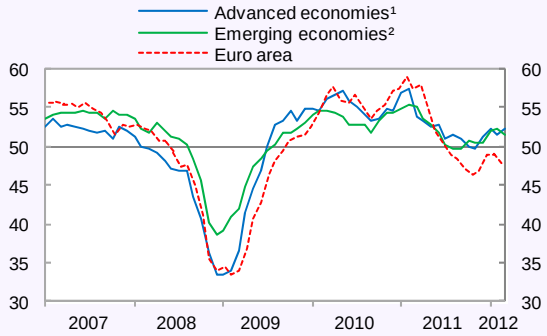
Global growth softened during the second half of 2011, as uncertainties emerged about the strength of the U.S. recovery and the ability to contain the escalating crisis in Europe. European bank and sovereign spreads reached record highs, leading banks to curtail credit and countries to accelerate fiscal consolidation plans. Increased global risk aversion moderated capital flows to emerging economies, while fears of a sharp slowdown in emerging Asia pushed down commodity prices somewhat.

Since late 2011, better-than-anticipated U.S. data, along with strong policy actions in Europe (notably the European Central Bank's Longer Term Refinancing Operation), have helped to turn market sentiment. Most European sovereign spreads have come down, equity prices have rebounded, and capital flows to emerging economies have picked up, although conditions remain volatile. Commodity prices have bounced back, particularly for oil, which is now close to historic highs amid growing Middle East tensions. Metals and food prices also are well above historic averages.

Note: Prepared by Gustavo Adler, Luis Cubeddu, Eric Le Borgne, and Paulo Medas, with contributions from Francesco Colomba and Martin Sommer. Alejandro Carrión provided excellent assistance.

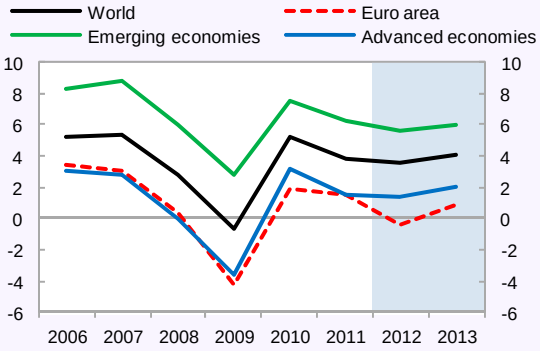
Figure 1.1. Global activity has stabilized following a sharp deceleration in mid-2011. World growth is projected to slow and commodity prices to soften, but remain high.

Purchasing Managers Index: Output
(Values greater than 50 indicate an expansion)



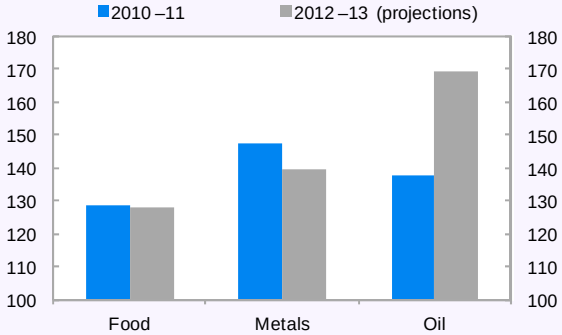
Sources: Markit; and Haver Analytics.
[1] Average of United States, Japan, and United Kingdom.
[2] Average of Brazil, China, India, Russia, Turkey, and South Africa.

World: Real GDP Growth
(Percent)



Source: IMF, *World Economic Outlook*.

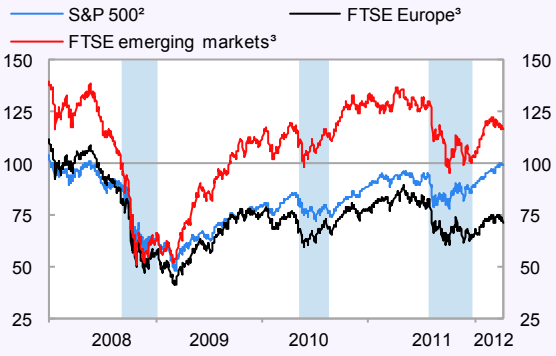
Commodity Prices: Near-Term Outlook
(*Index, 100 = average 2003–11*)



Sources: IMF, *World Economic Outlook*; and IMF staff projections.

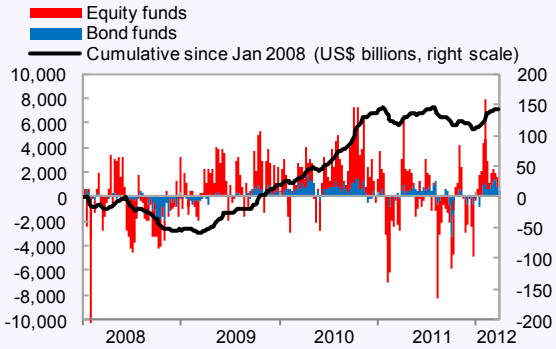
Figure 1.2. Global financial markets have rebounded and inflows to emerging economies strengthened since late-2011. But bouts of global volatility will likely continue.

Equity Prices[1]
(January 2007 = 100)



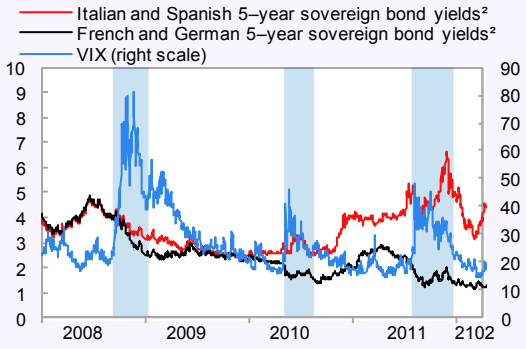
Source: Haver Analytics.
[1] Shaded areas correspond to periods of VIX stress.
[2] S&P = Standard and Poor's.
[3] FTSE = London Stock Exchange Index
VIX = Chicago Board Options Exchange Market Volatility index.

Net Fund Flows to Emerging Markets
(US$ millions)



Sources: Emerging Portfolio Fund Research; Haver Analytics; and IMF staff calculations.

Global Risk Aversion: VIX and Bond Yields[1]
(*Percent*)



Sources: Bloomberg, LP; and IMF staff calculations .
[1] Shaded areas correspond to periods of VIX stress.
[2] Simple average.
VIX =Chicago Board Options Exchange Market Volatility Index.

Against this backdrop, global growth is projected to slow to 3½ percent in 2012, but return to 4 percent the following year. Downward revisions to the global forecast (½ percent relative to the September 2011 *World Economic Outlook* [IMF, 2011d]) reflect primarily the effect of lingering problems in Europe.[1] The global expansion will remain uneven, led by emerging and developing countries.

Advanced economies are projected to grow by about 1¼ percent in 2012, after expanding by 1½ percent in 2011, as weak sovereign, financial, and household balance sheets continue to constrain growth. Europe is expected to register a mild recession, with drags from fiscal consolidation and further bank deleveraging. U.S. growth is projected to firm to slightly more than 2 percent annually during 2012–13, on the back of continued labor market improvements and a gradual housing-sector recovery.

Emerging economies as a whole are projected to expand by 5½–6 percent during the next two years, led by robust, albeit somewhat slower, growth in emerging Asia. Barring renewed turbulence, negative spillovers from the euro area recession are expected to be small (except in eastern Europe), partly offset by policy easing in some countries. In emerging Asia, growth will be increasingly driven by domestic demand, and current account surpluses will be moderate. With most emerging economies near full capacity, scope for further easing in the absence of a shock will be limited, and policies will need to aim at avoiding overheating and the buildup of financial excesses.

Commodity prices are projected to remain high during 2012–13, with energy prices above 2010–11 levels given geopolitical tensions and supply constraints. Although somewhat less than previous highs, owing to increased supply and more subdued demand from Asia, metal and food prices will remain at stimulative levels for commodity exporters.

[1] Despite recent policy action, bank deleveraging and fiscal consolidation in the euro area (especially in the periphery) are projected to be larger than anticipated last fall.

Although risks to the near-term outlook abated somewhat in the first quarter of 2012, they remain tilted to the downside. The situation in Europe remains fragile, and fresh shocks to confidence could rekindle investor concerns and accelerate bank deleveraging with adverse impacts on real activity in Europe and beyond. In addition, rising tensions in the Middle East could set off a prolonged surge in oil prices, hitting global growth and metal and food prices.[2]

Significant downside risks are also likely in the medium term. Delays in enacting comprehensive fiscal consolidation plans in the United States (and other advanced economies) could eventually increase U.S. interest rates and the cost of financing globally. Meanwhile, difficulties in reorienting demand in China, away from investment and toward consumption, could result in an overinvestment cycle with an adverse impact on actual and potential growth. Weaker growth in Asia would reduce commodity prices, delivering a blow to commodity exporters.

Overall, a protracted process of balance sheet repair in advanced economies, although necessary, will likely hold back growth for an extended period. Given the appreciable economic slack, monetary policy in those economies is apt to remain accommodative for some time, leading to easy financing conditions in international markets. Fiscal consolidation will continue to restrain demand growth in advanced economies; at the same time, barring new shocks, strong fundamentals and balance sheets will underpin robust growth in emerging economies, keeping commodity prices high.

The United States: A Stronger, But Still Sluggish, Recovery

Following a sluggish first half, U.S. growth accelerated in the last two quarters of 2011, expanding at 2.4 percent (seasonally adjusted annual rate) as the impact of Japan's earthquake unwound, inventories were rebuilt, and oil prices softened. Further signs of improvement have appeared since then. Private consumption remains resilient, as a steady recovery in jobs lifts income, and improving risk sentiment and robust profits bolster household stock-market wealth. After a dramatic contraction during the crisis, residential investment is now contributing to growth. Meanwhile, for the first time since 2008, the fiscal impulse was negative in 2011, due to strong revenues and lower-than-expected outlays amid delays in Congressional appropriations.

Labor and housing markets are recovering from depressed levels. Amid relatively robust job creation since the second half of 2011, the unemployment rate dropped to 8.2 percent in March 2012. However, long-term unemployment remains high, and there are concerns that the natural rate of unemployment could be rising (Box 1.1). Construction activity and home sales have expanded notably, albeit from a low base, but overall housing market conditions remain weak: elevated foreclosures and a large shadow inventory continue to weigh on house prices. Despite historically low mortgage rates and record high affordability, housing demand is held back by tight lending standards, still-elevated household liabilities, and subdued incomes.

Credit is reviving, except for housing, as banks are starting to ease lending standards and pricing from tight levels. Concerns about bank vulnerabilities have diminished on policy action in Europe and because U.S. banks reduced their exposure to the euro area (Box 1.2). Moreover, legal risks are down,[3]

[2] These downside scenarios are discussed in detail in the April 2012 *World Economic Outlook* (IMF, 2012) and in Chapter 2 of this report.

[3] A settlement agreement was reached in February 2012 between the federal and state governments and five financial institutions accused of abuses of foreclosure and ancillary mortgage services. The settlement will provide up to US$25 billion in relief to distressed borrowers, and direct payments to federal and state governments.

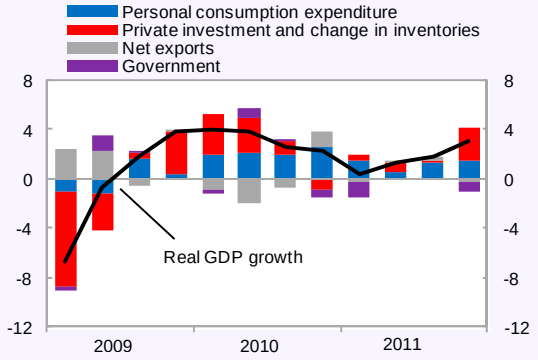
Figure 1.3. U.S. growth is strengthening, but weaknesses in the housing sector continue to hold back the recovery.

United States: Key Indicators

	2010	2011	Proj. 2012	Proj. 2013
	(Percent)			
Real GDP growth	3.0	1.7	2.1	2.4
Inflation, end of period	1.7	3.0	1.9	1.9
Unemployment rate	9.6	9.0	8.2	7.9
	(Percent of disposable income)			
Personal savings rate	5.3	4.7	4.6	4.3
	(Percent of GDP)			
Current account balance	-3.2	-3.1	-3.3	-3.1
Fiscal primary balance	-8.5	-7.3	-6.1	-4.4

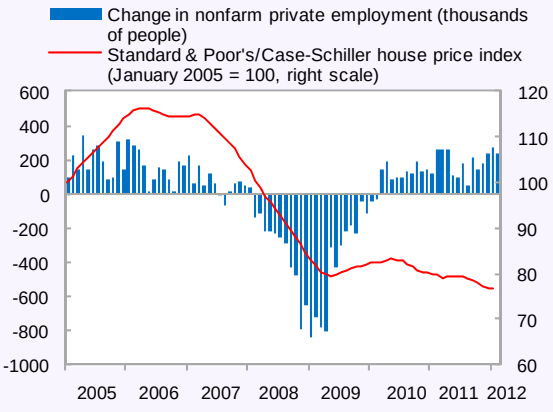
Sources: IMF, *World Economic Outlook;* and IMF staff calculations.

United States: Contributions to Real GDP Growth
(*Percentage points, seasonally adjusted annual rate*)



Sources: Haver Analytics; and IMF staff calculations.

United States: Employment and Housing Indicators



Sources: Haver Analytics; and IMF staff calculations.

and 18 of the 19 largest U.S. banks performed well in the stringent 2012 supervisory stress scenario undertaken by the U.S. Federal Reserve.

As a result of low core inflation, stable long-term inflation expectations, and a tepid recovery, the U.S. Federal Reserve continued to ease monetary policy, using a mix of conventional and unconventional measures aimed at driving down long-term interest rates. Notably, in January 2012, it extended by 18 months its earlier conditional commitment to maintaining extraordinarily low interest rates (now through mid-2014); and, for the first time, it revealed the Federal Fund rates projected by the members of its monetary committee. This step followed the Maturity Extension Program (or "Operation Twist") of September 2011, aimed at increasing the maturity of its asset holdings.[4] The ongoing operation has helped to hold down long-term interest rates.

As noted, fiscal policy turned contractionary in 2011. In 2012, the structural primary balance is projected to improve by an additional 1 percent of GDP—a broadly appropriate pace given the slow recovery. Nonetheless, the general government deficit, at about 9½ percent of GDP in 2011, remains one of the highest among major advanced economies, underscoring the challenges of fiscal consolidation in the medium term.

Under our baseline, the U.S. economy is projected to expand by slightly more than 2 percent in 2012–13, supported by gradually recovering housing markets, stronger household balance sheets, and steady job creation. However, growth will be constrained by fiscal restraint and subpar global demand.

Although strengthening labor markets present some upward potential, the U.S. outlook has significant

[4] The operation, which expires end-June 2012, entails the purchases of up to US$400 million of U.S. Treasury securities with remaining maturities of 6–30 years and the sales (of an equal amount) of U.S. Treasury securities with remaining maturities of 3 years or less. In addition, and to support conditions in mortgage markets, the U.S. Federal Reserve is reinvesting principal payments on agency debt and mortgage-backed securities (MBS) into agency MBS.

downside risks in both the short and medium term. A worsening euro area crisis and a spike in oil prices caused by geopolitical factors are critical external risks.[5] On the domestic front, house prices could post renewed declines (damaging household balance sheets, consumption, and employment); and an unduly large fiscal withdrawal could occur in 2013 amid political gridlock around the November 2012 elections. For the medium term, the absence of a comprehensive fiscal consolidation plan could lead to a sharp rise in interest rates.

Policy Challenges

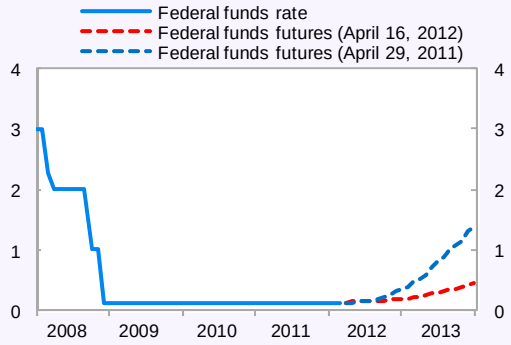
With a still sizable output gap (about 5 percent of potential GDP at end-2011) and well-anchored inflation expectations, U.S. monetary policy should remain supportive of growth. Steps recently taken to strengthen communications and transparency should help enhance the effectiveness of monetary policy by improving control over long-term interest rates while keeping long-term inflation expectations well anchored. Should the outlook deteriorate, further monetary easing could be warranted.

In the near term, fiscal policy should be aimed at supporting the still-sluggish recovery. Given the unusual concentration of large tax provisions expiring at the end of 2012, and the risk of deep, automatic, and across-the-board spending cuts from 2013 onward, the fiscal stance in 2013 could be excessively contractionary. Reaching an agreement to avoid this outcome is crucial. In IMF staff's view, the deficit reduction should proceed at a measured pace in 2013, especially in light of the weak economy and sizeable external risks.

Over the medium term, tangible progress in putting U.S. public finances on a sustainable trajectory is necessary. Early enactment of a comprehensive fiscal consolidation framework, with the deficit reduction proceeding gradually, should be a priority. Both revenue-raising provisions and savings in core entitlements—such as health care and public pensions—will be necessary to put public finances on a sound footing (see Box 1.1 of the April 2011 *Regional Economic Outlook: Western Hemisphere* [IMF, 2011b]).

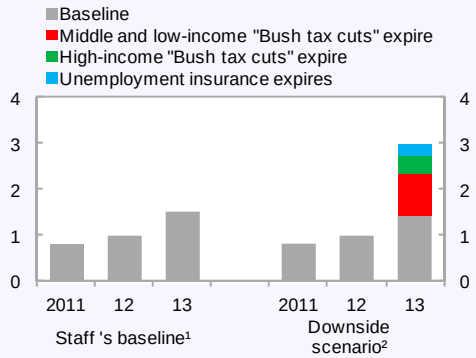
Figure 1.4. U.S. monetary policy will remain accommodative, while fiscal consolidation continues. Risk of a larger fiscal drag persists.

United States: Federal Funds Rate Expectations Implied by Futures Contracts
(Percent)



Sources: Bloomberg, LP; and IMF staff calculations.

United States: Change in Structural Primary Balance
(Percent of GDP)



Sources: IMF, *World Economic Outlook;* and IMF staff calculations.
[1] The IMF staff's baseline projections assume a 2-year extension of emergency unemployment benefits and extension of Bush tax cuts (CY 2012–13). Payroll tax relief is not extended beyond 2012 and the spending sequester takes place as scheduled under current law.
[2] Large adjustment scenario assumes nonrenewal of Bush tax cuts, as well as emergency unemployment benefits.

[5] IMF staff estimate that a 10 percent increase in oil prices would reduce GDP growth in the United States by 0.15 percentage points. Gains in equity markets have largely offset the higher energy costs of recent months.

Further policy measures to support housing and labor markets also are needed. Actions to facilitate the housing market adjustment, including strong implementation of the administration's recent proposals to ease mortgage writedowns and refinancing, would help accelerate the recovery. Strengthening active labor market policies, especially those aimed at helping the long-term unemployed through training and education, would also be important.

Finally, further progress in implementing the Dodd-Frank Act, including the "Volcker rule" (while paying attention to possible international spillovers), remains critical for improving the resilience of the U.S. financial system. Notwithstanding the creation of the inter-agency Financial Stability Council (FSOC), the U.S. regulatory architecture remains unduly complex, requiring strong coordination. Many specific provisions of the act have not been implemented owing to lengthy public consultation processes (which are taxing regulatory resources). Reform of housing finance also remains incomplete, given that the act leaves untouched the housing governments sponsored enterprises (GSEs).

Canada: Rebalancing Growth as the Fiscal Stimulus Fades

Economic growth in Canada slowed to 2½ percent in 2011, partly reflecting a gradual unwinding of fiscal stimulus and the continued burden from net exports. After a strong recovery from the 2008–09 crisis, the labor market is starting to weaken. The unemployment rate is edging up and real wages are stagnating, because of slowing job creation in the manufacturing and financial sectors.

Still, private investment, and to a lesser extent consumption, are expanding rapidly, supported by easy credit conditions for both firms and households. Household debt has reached record-high levels (more than 150 percent of disposable income at end-2011), supported by low interest rates and elevated house prices.[6]

During 2012–13, the Canadian economy is projected to expand by slightly more than 2 percent per year. Private domestic demand will remain the key driver of growth, while fiscal consolidation continues and export growth remains constrained by the tepid U.S. recovery and Europe's challenges. With a strong Canadian dollar, the current account deficit is expected to decline only modestly in the medium term from its current level of about 3 percent of GDP, as the U.S. recovery gradually takes hold.

The main external risks come from the negative spillovers that renewed turmoil in Europe may have on U.S. economic activity and global funding conditions. On the upside, a faster-than-expected recovery in the United States and renewed stability in global financial markets would help lift exports and growth, including through their effect on commodity prices. A spike in oil prices would have a small, positive impact on growth in Canada, provided its negative effect on global growth is contained. Finally, elevated household debt and house prices persist as key downside risks on the domestic front. Private consumption could be weaker than projected as households feel the weight of elevated debt. The financial sector, which weathered the financial crisis well, would also be affected in a scenario with high households' financial distress; although stress tests developed by the authorities indicate the losses would be manageable.

Policy Challenges

Canada's key challenge is sustaining growth at close to potential against a backdrop of fiscal consolidation and unsettled global financial markets.

[6] After some moderation in the second half of 2011, house prices in Canada gained renewed momentum in early 2012 (up 2.9 percent in February, month over month, seasonally adjusted). In addition, several house price indicators remain at historical highs (e.g., price-to-income and price-to-rent indices are 20–30 percent higher than the average of the previous 10 years).

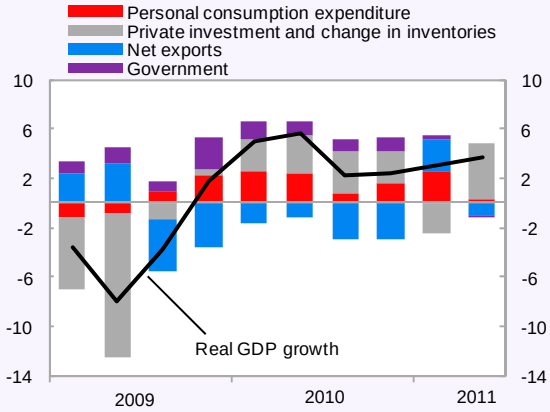
Figure 1.5. In Canada, growth is projected to moderate, reflecting in part high household debt and fiscal consolidation.

Canada: Key Macroeconomic Indicators

	2010	2011	Proj. 2012	Proj. 2013
	(Percent)			
Real GDP growth	3.2	2.5	2.1	2.2
Inflation, end of period	2.2	2.7	2.0	2.0
	(Percent of GDP)			
Current account balance	-3.1	-2.8	-2.7	-2.7
Fiscal primary balance [1]	-4.9	-4.1	-3.1	-2.5
Public debt [1]	85.1	85.0	84.7	82.0

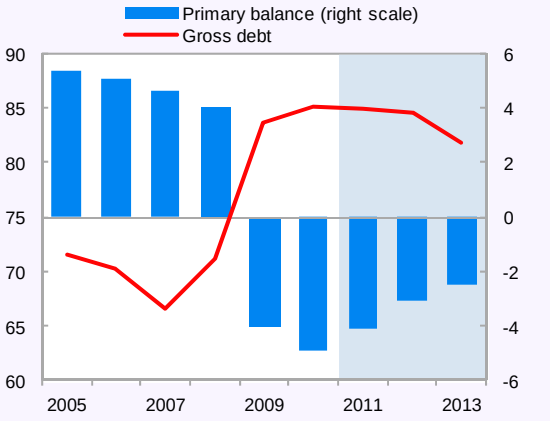
Sources: IMF, *World Economic Outlook;* and IMF staff calculations.
[1] General government.

Canada: Contributions to Real GDP Growth
(Percentage points, seasonally adjusted annual rate)



Sources: Haver Analytics; and IMF staff calculations.

Canada: General Government Primary Balance[1] and Gross Public Debt
(*Percent of GDP*)



Sources: IMF, *World Economic Outlook;* and IMF staff calculations.
[1] Primary net lending / borrowing.

Current fiscal consolidation plans at the federal level are appropriately set and envisage a gradual fiscal withdrawal of ½ percent of GDP in 2012, and the achievement of a balanced budget by 2016. Although fiscal consolidation at the federal level remains necessary in the medium term, there is scope to adjust its pace if downside risks materialize. At the same time, however, provinces need to make further headway in their deficit-reduction plans. The federal government and the provinces will also need to undertake concerted efforts to deal with the longer term fiscal challenges posed by rising health costs in an aging society.

In light of existing economic slack and global risks, monetary policy will likely remain accommodative for some time, as long as inflation expectations remain well anchored. However, because a long period of low interest rates could lead to further leveraging by households, a further tightening of macroprudential measures may be warranted to curtail the expansion of mortgage credit—for example, larger down-payment requirements for new mortgages or tightening of debt service-to-income ratios.

Implications for Latin America and the Caribbean

Overall, the twin tailwinds of easy external finance and high commodity prices that have supported many economies in the region remain in place. Monetary policy in the United States and other advanced economies is likely to remain accommodative for some time; consequently, easy global financing conditions will continue, bringing the prospects of large capital flows into Latin America's financially integrated economies, particularly those with strong policy frameworks. Commodity exporters (mostly in South America) will continue to benefit from favorable terms-of-trade, which in turn will drive domestic investment and foreign direct investment for some time.[7]

[7] Given limited prospects of a sustained run up in prices, the stimulus to growth from high commodity prices is projected to fade over time.

However, tourism- and remittances-dependent economies in Central America and the Caribbean will continue to face austere external conditions, as growth in advanced countries remains subdued and U.S. imports remain sluggish.

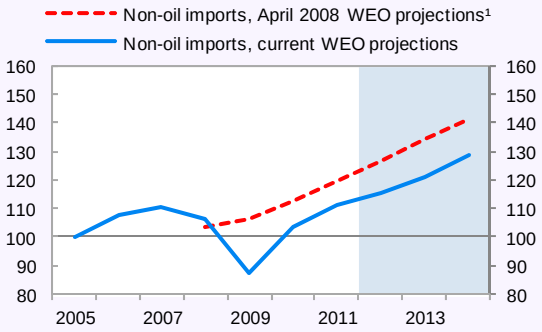
As noted, although downside risks have subsided in recent months, they still dominate the near-term outlook. The direct impact of a worsening European crisis on Latin America, however, may not be too large. Real linkages (trade and remittances) with Europe are relatively low, except in the Caribbean. Spillovers from European bank deleveraging also are likely to be limited; European banks have either limited presence in the region or, as in the case of Spanish banks, rely on profitable and well-capitalized domestically funded subsidiaries (see Box 2.1). Still, global repercussions from a tail event in Europe could have a more significant impact, through its effect on commodity prices, risk aversion, and capital flows (even short periods of financial stress could have adverse output on the region; see Chapter 3). Last, a spike in world oil prices could negatively affect nonoil commodity prices, hitting food and metal exporters.

Downside risks are expected to persist in the medium term. Notably, failure to put the U.S. public debt on a sustainable trajectory could eventually push up U.S. dollar interest rates. In addition, problems in effectively rebalancing China's investment-led expansion toward consumption could result in a sharp growth slowdown, weighing down commodity prices and slowing world demand.

On balance, given the likelihood that the twin tailwinds will persist for a while, but not forever, countries in the region (especially in South America) should take advantage of the still-favorable external environment to strengthen their balance sheets, and avoid the buildup of vulnerabilities common in the context of abundant financing and high commodity prices. This will put them in a stronger position to respond to global shocks in the near term, as well as to smooth the transition to a less stimulative external environment in the medium term.

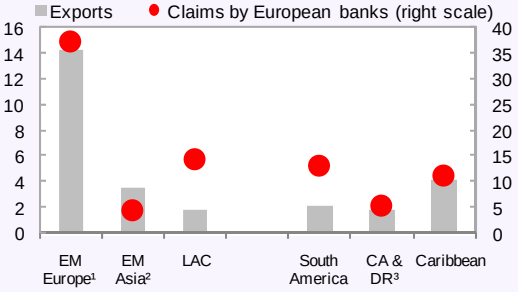
Figure 1.6.Growth in Central America and the Caribbean will be constrained by lower U.S. imports, but financial exposure and high commodity dependence makes South America more vulnerable to a global shock.

United States: Volume of Non-oil Imports
(Index, 2005 = 100)



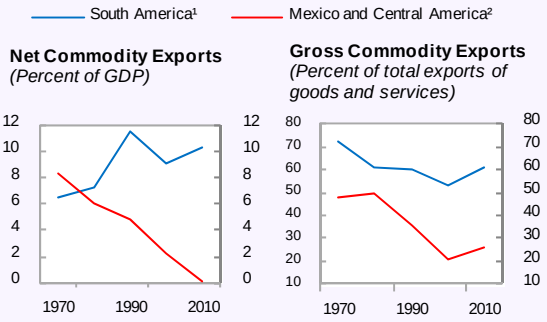
Source: IMF, *World Economic Outlook*.
[1] Assumes the previous year's growth trajectory for 2013–14.

Trade and Financial Exposure to Europe
(*Percent of GDP, average 2009–10*)



Sources: Bank for International Settlements; and IMF, *Direction of Trade Statistics, World Economic Outlook*.
[1] Albania, , Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Georgia, Poland, Romania, Russia, and Slovenia
[2] China, India, Indonesia, Malaysia, Philippines, Thailand, and Vietnam.
[3] Central America and the Dominican Republic.

Latin America's Commodity Dependence and Export Diversification



Sources: World Integrated Trade Solutions database; IMF staff calculations.
[1] Simple average for Argentina, Brazil, Chile, Colombia, Ecuador, Peru, Uruguay, and Venezuela.
[2] Simple average of Costa Rica, El Salvador, Guatemala, and Mexico.

Box 1.1. United States: Is the Labor Market Starting to Turn Around?

The U.S. labor market has improved during the last six months. The unemployment rate (8.2 percent in March 2012) has been on a downward trend since September 2011 (after hovering at 9 percent for the previous 2½ years), owing mainly to strong net job creation. An average of about 200,000 private jobs per month have been created since September 2011, compared with 84,000 during September 2009–11. Moreover, the percentage of adults who are working—another measure of the health of the labor market—has been rising in recent months, and is now at its highest level in almost two years.

The recovery has stretched across sectors and demographic groups. Education, health, and professional services have been the main job-creating sectors throughout the recovery, with manufacturing jobs also picking up more recently. The recent strengthening of job creation reflects a combination of temporary shocks (such as the fading off of supply disruptions from Japan's March 2011 earthquake) and structural improvements, including diminishing job destruction by state and local governments and renewed job creation in the services sectors. Jobs are also gradually being created in the construction sector, as activity is beginning to firm up from depressed levels.

However, unemployment remains high, with an unusually large share of long-term unemployed. Almost 2½ years after the recession officially ended, almost 13 million people are still unemployed in the United States, 5½ million of them for more than six months. The long-term unemployed account for more than 40 percent of total unemployment (3½ percent of the labor force), about twice the previous historic peak, reached during the 1982 recession. In addition, income gains have been muted; and are projected to remain subdued because of slack in the labor market. Payrolls remain well below their pre-recession levels, but they are expected to start growing gradually because hours worked per worker are now near their pre-crisis peak.

Further improvements in the labor market hinge on the continued strengthening of household balance sheets. Growth remains sluggish compared with past recessions. Sustaining household consumption depends critically on the recovery of the housing sector, in which a large part of household wealth resides. Meanwhile, firms, which continue to sit on near-record profits, could accelerate hiring if the recovery is regarded to be less fragile.

The rise in the natural rate of unemployment (NAIRU) could constrain this recovery. Research suggests that the NAIRU has risen by at least 1 percentage point since the onset of the Great Recession, reflecting among other factors: (1) the uneven impact of the crisis across sectors (Barnichon and others, 2011) and (2) skill mismatches and difficulties in labor mobility attributable to a broken housing market (Estevão and Tsounta, 2011).[1] The apparent increase in mismatches between available vacancies and the unemployed (suggested by the shifting out of the Beveridge curve) has coincided with high long-term unemployment. Long-term unemployed workers are less able to compete for jobs than workers who have just recently stopped working, because of skill erosion, lower connection to the workforce, and signaling (Krueger and Mueller, 2011).

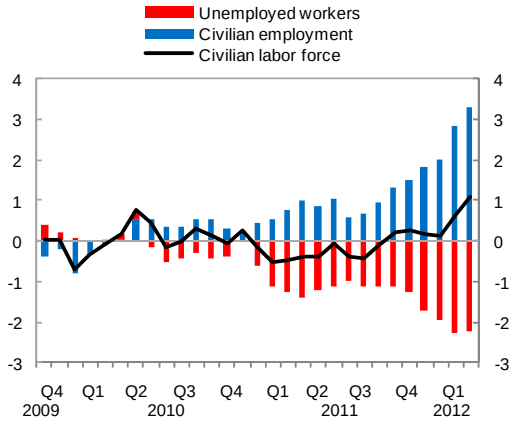
Policies geared toward the specific needs of the long-term unemployed are necessary. With short-term and frictional unemployment rapidly approaching pre-recession levels, efforts should be geared toward the specific needs of the persistent and large pool of long-term unemployed. Training programs, including through community colleges, have been successful in other countries, as have tax incentives for hiring the long-term unemployed (Katz, 2010).

Note: Prepared by Eric Le Borgne.

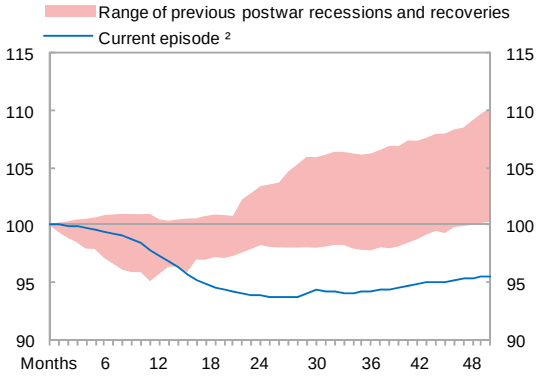
[1] Recent estimates suggest that the NAIRU had increased by 1 percentage point since the onset of the recession (Congressional Budget Office, 2012; and Daly and others, 2011), mostly as the result of cyclical factors. Estevão and Tsounta (2011) estimate the NAIRU increase at about 1½ percentage points, caused by rising skill and geographical mismatches.

Box 1.1 Figure: United States Labor Market Developments

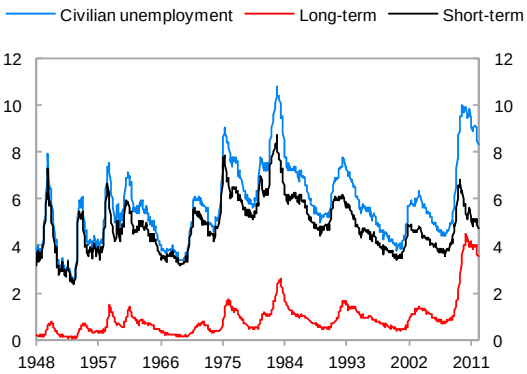
Change in Unemployment and Sources of Change [1]
(Cumulative change since Oct. 2009, millions)



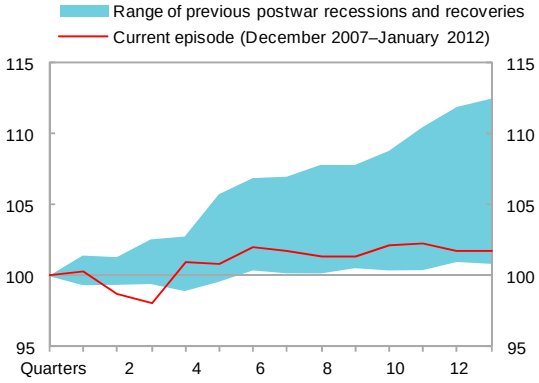
Total Nonfarm Employment Compared with Previous Postwar Recessions and Recoveries
(Indices; NBER business cycle peak = 100)



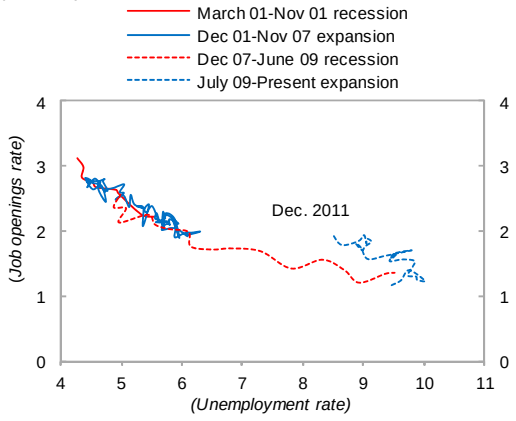
Unemployment rate by duration [1] [2]
(Percent)



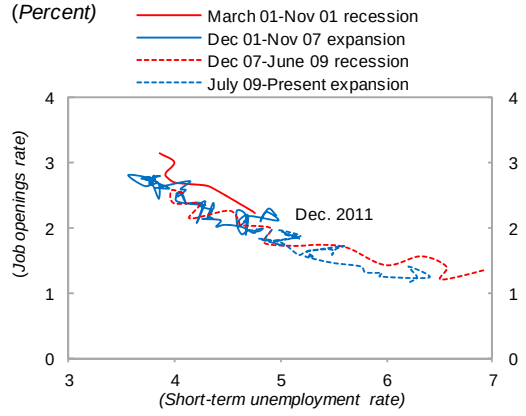
Real Compensation Per Hour in the Nonfarm Business Sector Across Postwar Cycles
(Indices; NBER peak = 100)



United States Total Unemployment Beveridge Curve [1] [3]
(Percent)



United States Short-Term Unemployment Beveridge Curve [1] [3]
(Percent)



Sources: Haver Analytics; and IMF staff calculations.
[1] Seasonally adjusted data.
[2] Short-term unemployment is defined as being unemployed for less than 27 weeks. Long term unemployment is defined as being unemployed for more than 27 weeks.
[3] Recessions and expansions as defined by the NBER.

Box 1.2. United States: Financial Exposure to Europe

U.S. banks, money market mutual funds (MMMF), and insurance companies have limited direct claims on countries in the euro area periphery. These claims have declined substantially during the last year—by more than 25 and 90 percent, respectively, for U.S. banks and MMMFs (Table). Although potential gross derivative exposures and other credit commitments of U.S. banks are larger than direct claims, they likely overstate the true exposure of banks to the region.[1] The recent debt restructuring in Greece did not cause noticeable disruption to U.S. banks.

The claims of the U.S. financial system on core euro area countries as well as the United Kingdom are larger, attesting to the central role played by financial institutions from those countries in global financial markets. With the intensification of financial turmoil in the euro area in the second half of 2011, pressures on U.S. financial institutions increased, widening spreads on credit default swaps (CDS) and depressing stock prices for large international banks, and outflows from MMMFs. In response, the substantial claims of U.S. MMMFs on core euro area banks have been scaled back by about half since June 2011, and their maturities are much shortened. U.S. banks tightened standards on loans to European banks and to nonfinancial firms with significant exposures to Europe. Since the beginning of the year, CDS spreads on U.S. banks have declined substantially (despite increasing more recently), and the retrenchment of U.S. MMMFs from the euro area has subsided.

The recently conducted "stress tests" on major U.S. banks indicate the resiliency of their capital structure to a very adverse global scenario, including financial turmoil in the euro area. The results of the Comprehensive Capital Analysis and Review of major U.S. banks, disclosed by the U.S. Federal Reserve on March 13, suggest that the capital adequacy of 18 of the 19 largest U.S. bank holding companies would be resilient to a very severe shock, including—for the six largest banks—a global market shock with additional stresses related to Europe. At the same time, the simulated shock only captures first-round effects, and does not incorporate banks' creditors and counterparty responses to increased financial turmoil that could amplify the initial shock with adverse feed-back loops.

U.S. Financial Sector Exposure to Europe
(Percent of financial assets)

	Direct Claims		Indirect Claims
	Latest	Jun.-11	Latest
Banks[1]			
Core	4.7	4.7	8.8
Periphery	0.9	1.2	3.8
U.K.	4.7	4.5	4.8
Prime money market funds[2]			
Core	13.9	27.4	...
Periphery	0.1	1.3	...
U.K.	10.0	11.2	...
Insurance companies[3]			
Core	...	1.7	...
Periphery	...	0.3	...
U.K.	...	1.2	...

Sources: FED Board of Governors; Federal Financial Institutions Examination Council, E.16 Country Exposure Lending Survey; Investment Company Institute; National Association of Insurance Commissioners; Haver Analytics; and IMF staff calculations.
[1] Foreign claims and derivatives exposures. Latest: Sep. 2011.
[2] Securities holdings of European issuers. Latest: Jan. 2012.
[3] Exposures to European bonds.

In response to market pressure, core euro area banks have been reducing the scale of their international activities, but the impact on U.S. credit has not been noticeable so far. Although it is difficult to assess the net impact of core euro area banks' deleveraging on credit extended in the United States, anecdotal evidence suggests that U.S. assets disposed of by European banks may have been acquired by U.S. banks. Also, the U.S. Senior Loan Officer Opinion Survey reports an expansion of U.S. banks' business as a result of decreased competition from European banks, and it does not suggest that credit supply constraints are binding. Overall, the evidence suggests that the impact of deleveraging of international banks on U.S. credit has not been sizeable to date.

Note: Prepared by Francesco Columba and Geoff Keim.

[1] These statistics do not account for the insurance purchased by U.S. banks against default in European countries; they do not adjust for the fact that credit commitments are typically not drawn entirely; and they assume no recovery value for assets and take collateral into account only if it is liquid and held outside the country of the obligor. The largest U.S. banks reported that the net overall exposures to the euro area periphery amounted to less than 1 percentage point of their assets as of September 2011, taking into account hedges and the value of collateral held against derivatives positions. That said, concentration of counterparty credit risk cannot be discarded.

2. Outlook and Policy Challenges for Latin America and the Caribbean

Growth in much of Latin America remains solid, although it slowed during the second half of 2011 under the combined effects of policy tightening and global uncertainties. However, many countries are still operating near or above potential, and global financial conditions and commodity prices remain stimulative. In this context, countries should continue to rebuild buffers, to regain fiscal space, preserve hard-won fiscal credibility, and increase monetary policy flexibility. Monetary policy, meanwhile, should shift into neutral and serve as a first line of defense in a downside scenario, complemented by macroprudential policies to address financial excesses.

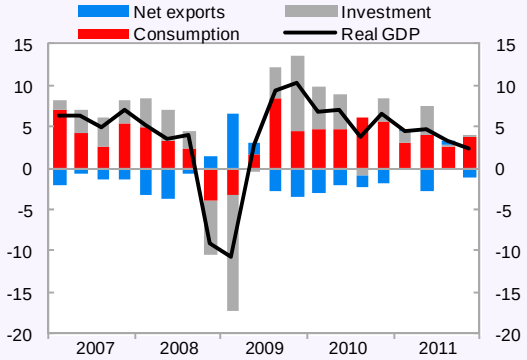
Overview

Output in Latin America and the Caribbean (LAC) expanded by about 4½ percent in 2011, down from a post-crisis rebound of 6¼ percent the previous year. Growth moderated in the second half of last year, amid increased global uncertainties and the lagged effects of earlier steps to normalize fiscal and monetary policies (Figure 2.1). Growth continues to be led by commodity exporters, for which overheating pressures remain relevant as favorable external conditions continue to push domestic demand growth above output growth. Meanwhile, growth has held up reasonably well in Mexico and Central America, in part as a result of the slow but steady recovery in the United States. The Caribbean region finally turned the corner in 2011 after a long recession, although high debt levels and tourism dependence continue to constrain the outlook. Overall, output growth was more evenly distributed across the region in 2011 than the year prior.

Note: Prepared by Luis Cubeddu and Sebastián Sosa, with contributions from Alexandra Peter, Camilo E. Tovar and Evridiki Tsounta. Andresa Lagerborg and Anayochukwu Osueke provided excellent assistance.

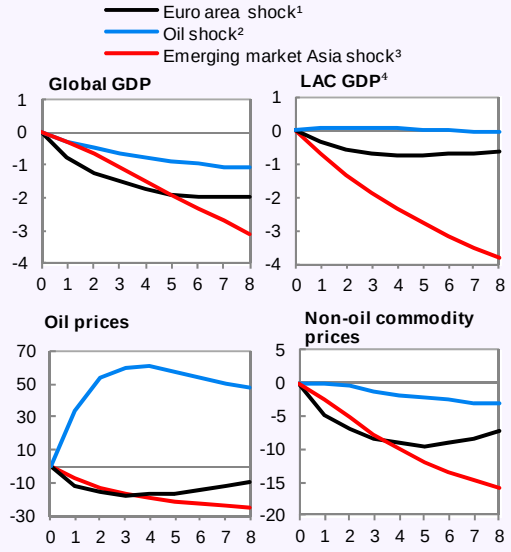
Figure 2.1. Growth in Latin America slowed in the second half of 2011, but remains robust. Downside risks dominate the outlook.

Selected Latin American Countries: Contributions to Real GDP Growth[1]
(Percent)



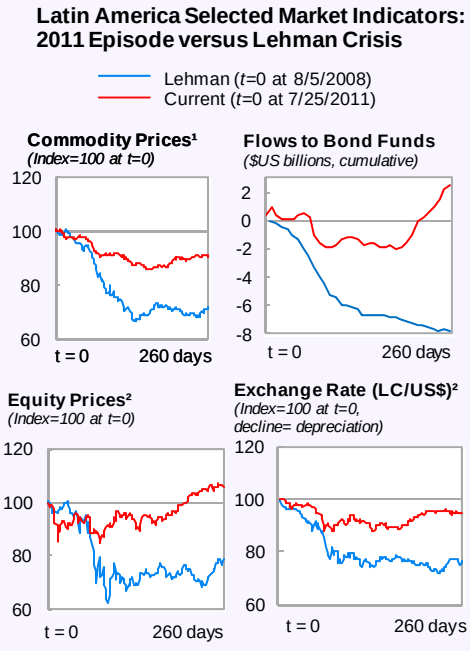
Sources: Haver Analytics; national authorities; and IMF staff calculations.
[1] Seasonally adjusted annual rate. PPP–GDP–weighted averages of Argentina, Brazil, Chile, Colombia, Costa Rica, Mexico, Paraguay, and Peru.

Possible Downside Scenarios
(Deviations from baseline, percent; quarters on x-axis)



Source: IMF, *World Economic Outlook*.
[1] Assumes European banks reduce credit by €720 billion in 2012–13 (compared with €220 under baseline).
[2] Assumes oil price increase of about 50 percent for a few years, settling at 20 percent above baseline.
[3] Assumes lower credit growth (by 3 percentage points per year) and potential output (by 10 percent in the long run).
[4] Weighted average of Brazil, Chile, Colombia, Mexico, and Peru.

Figure 2.2. Following a period of global distress in mid-to late 2011 (less severe than Lehman), financial markets rebounded, although conditions remain volatile.



Sources: Bloomberg LP; Emerging Portfolio Fund Research, Inc.; Haver Analytics; and IMF staff calculations.
[1] Weighted average of oil and non-oil commodities.
[2] Average of Brazil, Chile, Colombia, Mexico, and Peru.

Financial markets lost ground in the second half of 2011 but have recovered. Fears of a full-blown financial crisis in Europe and an impasse on the 2012 budget in the United States increased sovereign spreads and sent regional currencies and equities sharply lower in mid-2011. Markets recovered fairly quickly on positive news on the strength of the U.S. recovery and strong policy action in Europe, although conditions remain volatile (Figure 2.2).

Under our baseline, growth in the region is projected to slow to near 3¾ percent in 2012 and strengthen to about 4 percent the following year. This slowdown is consistent with the projected moderation in global growth (to 3½ percent in 2012) as well as further policy tightening to counteract a still-stimulative external environment. Commodity prices are expected to remain high, although food and metal prices will soften relative to the levels observed in 2010–11. External financing will remain cheap and abundant (notwithstanding some increase in funding costs more recently) because monetary policy in advanced economies continues to support their fragile recoveries. Small downward revisions to the LAC outlook (½ percent for 2012–13, compared with six months ago) mainly reflect lower projected global growth.

Short-term risks still tilt to the downside. The baseline for LAC hinges on further strong policy action in advanced economies and the containment of geopolitical tensions. However, more adverse scenarios (Figure 2.1) entail risks to growth and instability in capital flows:

- *Renewed tensions in Europe*– Slippages in carrying out fiscal consolidation plans in euro area countries could trigger a spike in sovereign and bank spreads along with more disruptive deleveraging. IMF staff simulations suggest that global spillovers under this downside scenario could reduce LAC's GDP by about ½ percent through end 2013 (Figure 2.1). The subsidiary model of European banks operating in the LAC region is likely to mitigate the impact of deleveraging (Box 2.1). But a disorderly process could lead to a fire sale of bank assets and a credit crunch and cause liquidity pressures to re-emerge in Latin America's foreign exchange and interbank markets.

- *Oil-price shock*– The baseline scenario assumes that geopolitical tensions ease and that oil prices fall gradually after peaking this year. However, escalating tensions in the Middle East could trigger a spike in oil prices, adversely affecting global growth and reducing non-oil commodity prices, especially for metals. Countries highly dependent on oil imports (Central America and the Caribbean) and non-oil exports (e.g. Chile, Paraguay, Peru) would be particularly affected. Although the impact of an oil shock on the region as a whole will be more muted (the region is, on average, a small net oil exporter), a shock of this type could well be accompanied by increased financial stress, engendering wider spillovers.

- *Frontloaded U.S. fiscal adjustment*– The baseline scenario assumes that U.S. fiscal policy strikes a

reasonable balance between supporting the recovery and medium term consolidation. However, political gridlock may prevent extending income tax cuts (the "Bush tax cuts") and unemployment insurance for 2013. Failure to extend the tax cuts would add the equivalent of 1½ percentage points of GDP to the fiscal withdrawal that year, with possible spillovers to economies strongly linked to the United States (Mexico and Central America).

Downside risks will linger in the medium term. The lack of an agreed-upon framework for reducing public debt in the United States could, over time, push up interest rates and crimp capital flows to the LAC region. Also, difficulties in reorienting growth in China away from investment and exports and toward consumption could harm China's trend growth, and consequently, reduce global growth and commodity prices. A scenario of a sharp slowdown in Asia would have a severe impact on LAC (see Figure 2.1 and Box 2.2).

Upside risks cannot be dismissed. A weak, yet stable, recovery in Europe and other advanced economies would reduce global uncertainty and prompt surges in capital flows that would boost credit and domestic demand in Latin America. The U.S. recovery could also prove stronger than expected, particularly if the housing sector begins to recover. Finally, domestic demand and output growth in LAC could be higher than under the baseline if the assumed policy normalization does not materialize or turns out to be insufficient.

Policy Challenges

External conditions are expected to remain favorable, notwithstanding downside risks. In this environment, the challenge for many countries is to take advantage of favorable conditions to rebuild fiscal space and strengthen fiscal policy frameworks. This challenge is especially crucial for South America: countries there stand to benefit the most from continued favorable terms of trade and low global interest rates, but with output near or above potential, they also need to guard against overheating (Figure 2.3). Mexico and Central America, which are more dependent on the U.S. economy than their

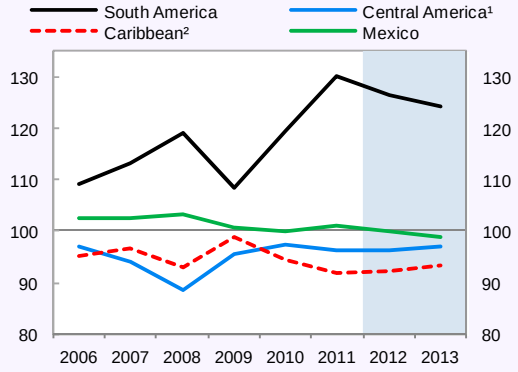
Figure 2.3. Growth is projected to slow during 2012–13, led by South America, which continues to enjoy strong terms of trade.Output gaps have closed in most countries.

LAC: Real GDP Growth[1]
(*Percent*)

	2010	2011	Proj. 2012	Proj. 2013
LAC[2]	**6.2**	**4.5**	**3.7**	**4.1**
South America	6.6	5.7	3.8	4.8
Mexico	5.5	4.0	3.6	3.7
Central America[3]	4.0	3.7	3.5	3.7
Caribbean				
Tourism intensive[4]	-0.8	0.5	1.6	2.0
Commodity exporters[5]	3.0	2.5	3.5	4.7

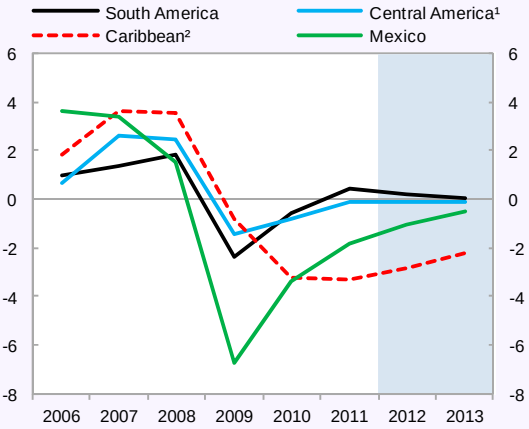
Source: IMF, *World Economic Outlook*.
[1] LAC: Latin America and the Caribbean. Simple average of growth rates within regions unless otherwise noted.
[2] PPP-GDP weighted average.
[3] Includes the Dominican Republic, but excludes Panama.
[4] Includes The Bahamas, Barbados, Belize, Jamaica, and the ECCU member states.
[5] Includes Guyana, Suriname, and Trinidad and Tobago.

LAC: Terms of Trade
(2005 = 100, simple average by region)



Sources: IMF, *World Economic Outlook;* and IMF staff calculations.
[1] Central America includes the Dominican Republic and Panama.
[2] Includes The Bahamas, Barbados, Belize, Jamaica, and ECCU member states.

LAC: Output Gaps
(Percent of potential GDP)



Sources: IMF, *World Economic Outlook*; and IMF staff calculations.
[1] Central America includes the Dominican Republic and Panama.
[2] Includes The Bahamas, Barbados, Belize, Jamaica, and the ECCU member states.

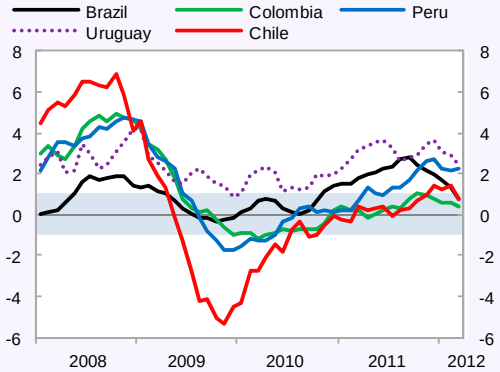
Figure 2.4. In financially integrated (FI) South America, output growth, inflation, and domestic demand are moderating, but current account deficits are widening.

FI South America: Key Indicators[1]

	2010	2011	Proj. 2012	Proj. 2013
		(Percent)		
Real GDP growth	7.0	5.5	4.4	4.6
Inflation, end-of-period	4.2	5.6	4.2	3.9
		(Percent of GDP)		
Current account balance	-1.3	-2.0	-2.7	-2.6
Primary fiscal balance	1.0	2.2	1.9	1.8
Gross public debt	38.7	37.3	35.4	34.4
Memo: Real GDP growth		(Percent)		
Brazil	7.5	2.7	3.0	4.1

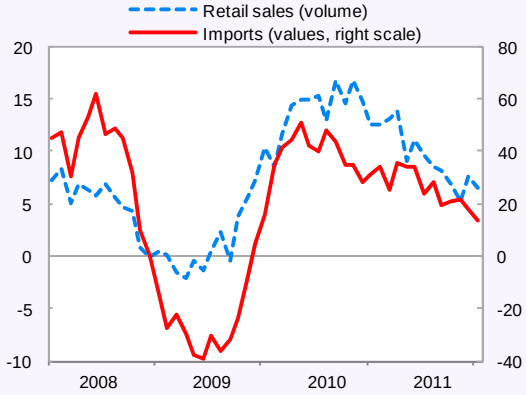
Source: IMF, *World Economic Outlook*.
[1] Simple average of Brazil, Chile, Colombia, Peru, and Uruguay.

FI South America: Difference between Actual and Target Inflation[1]
(Percent)



Sources: Haver Analytics; and IMF staff calculations.
[1] Target inflation is midpoint of official inflation band. The shaded area represents the inflation target range (± 1, except in the cases of Brazil and Uruguay, for which it is ± 2). Data are through March 2012.

FI South America: Indicators of Domestic Demand[1]
(12-month percent change)



Sources: Haver Analytics; and IMF staff calculations.
[1] Average of Brazil, Chile, Colombia, Peru, and Uruguay.

southern neighbors, also need to continue rebuilding fiscal buffers, especially Central America, where output is near potential and public debt in some cases is approaching uncomfortable levels. Weak balance sheets and strong tourism dependence will continue to restrain growth in the Caribbean, where fiscal consolidation needs to continue despite the sluggish growth environment.

South America's Financially Integrated Economies—Balancing policies in a stimulative yet volatile environment

Real GDP growth in South America's financially integrated commodity-exporting countries slowed to about 5½ percent on average in 2011 from close to 7 percent in 2010 (Figure 2.4). Earlier policy tightening (particularly in Brazil) and weaker global demand in the second half of 2011 dampened economic activity and domestic demand. Output is projected to expand by about 4½ percent during 2012–13, roughly in line with potential. With output gaps largely closed, policies are expected to hold steady or tighten in some cases, to balance the still-stimulative external conditions of easy financing and high commodity prices. Growth will continue to be driven by domestic demand, supported by strong credit and labor market conditions (unemployment is at or near historic lows in many countries).

Annual *inflation* reached 5½ percent in 2011, up from 4¼ percent, brought about, in part, by higher food and fuel prices. For most of 2011, headline inflation trended near or above the upper bound of the official inflation target range, and core inflation rose. More recently, however, inflation appears to have peaked, and inflation expectations have stabilized within target ranges in most countries (except for Uruguay).

The *current account* deficits of these countries continued to widen, despite very favorable terms of trade, as domestic demand growth persisted in outstripping activity. During 2011, these deficits rose to an average of about 2 percent of GDP (from 1¼ percent in 2010) and are projected to widen by an additional ¾ percent in 2012. Although still

manageable, the external accounts of these countries (and others in South America) are increasingly vulnerable to sharp declines in commodity prices. (A reversal of commodity prices to 2005 levels, for example, would widen current account deficits, on average, by about 3¼ percentage points of GDP, all else equal).

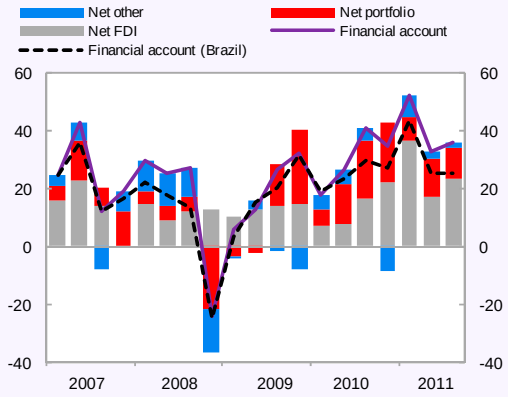
Capital inflows to these countries remain buoyant but volatile (Figure 2.5). After peaking in 2011:Q1, inflows came down slightly in the second half of the year amid heightened global risk aversion; flows of foreign direct investment remained strong, however, and offset lower portfolio flows. For the year as a whole, capital inflows continued to be larger than current account deficits, and international reserves coverage ratios rose to well above precrisis levels. Preliminary data suggest that capital flows have been on the rise since early 2012 on improved global sentiment.

Exchange rates rebounded with the resumption of capital flows. During the global financial stress of late 2011, most central banks stopped intervening and let currencies depreciate to buffer the shock; some also provided U.S. dollar funding and took other steps to counter liquidity pressures in domestic foreign exchange and interbank markets. In 2012, as global uncertainties receded, real exchange rates have appreciated (to near historic highs in some cases), leading some countries to again accumulate reserves (Brazil, Colombia, Peru) and tighten capital flow management measures (Brazil).[1]

Bank credit, in real terms, continues to expand rapidly in many countries of the region. This dynamism is generalized across market segments, although the fast growth in mortgage credit stands out in a few cases (Brazil, Colombia and Peru), albeit from a low base.[2]

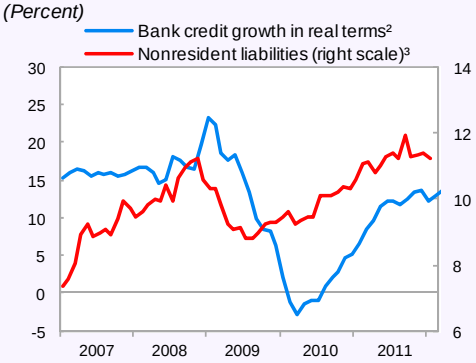
Figure 2.5. In FI South America, buoyant capital flows continue fueling bank credit and exchange rates.

FI South America: Financial Account[1]
(US$ billions)



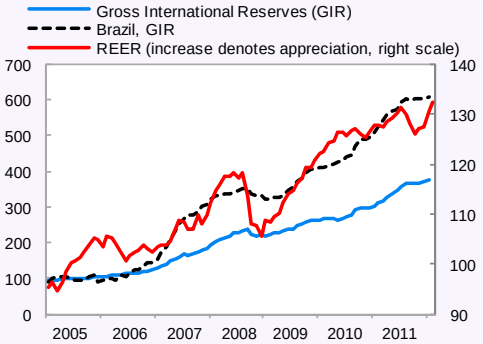
Sources: Haver Analytics; national authorities; and IMF staff calculations.
[1] Includes Brazil, Chile, Colombia, Peru, and Uruguay, except in the case of 2011:Q3, for which Colombia and Uruguay data were not available.

FI South America: Bank Credit and Nonresident Bank Liabilities[1]
(Percent)



Sources: Emerging Markets Economic Data (EMED); Haver Analytics; and IMF staff calculations.
[1] Average of Brazil, Chile, Colombia, Peru, and Uruguay.
[2] Bank credit to private sector in real terms; 12-month percentage change. Data through February 2012.
[3] Defined in percent of total bank liabilities. Data through January 2012.

FI South America: International Reserves and Real Exchange Rates[1]
(Index, 2005 = 100)

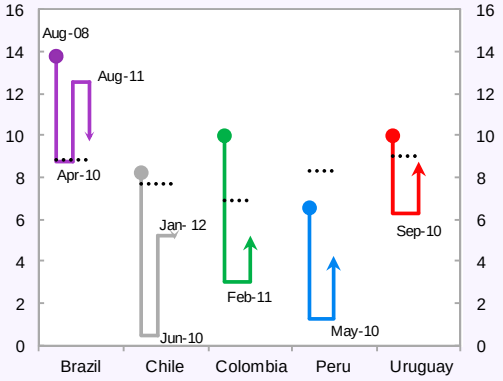


Sources: Haver Analytics; and IMF staff calculations.
[1] Simple average of Brazil, Chile, Colombia, Peru, and Uruguay. REER = real effective exchange rate.

[1] In March 2012, Brazil extended the 6 percent tax on foreign loans to cover loans with maturities of up to three years (maturities of up to two years were already taxed), and two weeks later, extended the IOF to loans with maturities of up to five years.
[2] In the case of Brazil, public banks hold much of the mortgage credit.

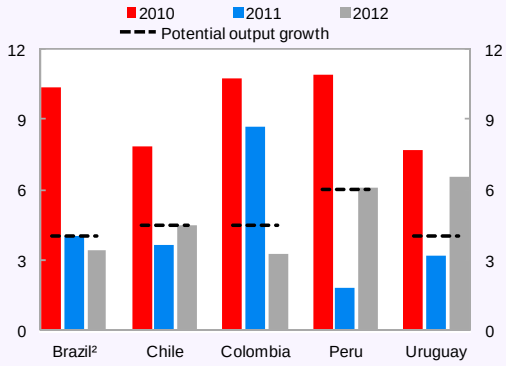
Figure 2.6. Monetary tightening has been put on hold in some FI countries, but fiscal consolidation continues.

FI South America: Monetary Policy Rate[1]
(Percent)



Sources: Haver Analytics; and IMF staff calculations.
[1] Dot at the beginning of the continuous line for each country represents the peak policy rate prior to the beginning of the easing cycle in the second half of 2008. Discontinuous line represents the sum of the official inflation target and staff estimates of potential growth. Data through March 2012.

FI South America: Growth of Government Primary Expenditure[1]
(Percent)



Source: IMF staff estimates and calculations.
[1] Deflated by consumer price inflation.
[2] Excludes policy lending in all years and Petrobras' capitalization in 2010.

Banks by and large remain well capitalized, profitable, liquid, and funded primarily by domestic deposits. Although credit quality has deteriorated in some sectors, and banks rely increasingly on external borrowing to finance credit expansion, overall credit quality remains healthy and bank leverage levels is still relatively low. Household and corporate indebtedness in some countries has also been on an upward trend but remains at comfortable levels. That said, data gaps limit proper assessment, particularly of the extent of household leverage across much of the region (see also Chapter 5). Overall, although financial and external vulnerabilities continue to build up in many of the financially integrated economies of the region, they remain generally manageable.

Policy challenges

With these financially integrated economies operating near or above potential, *monetary policy* should remain nimble and strike a balance between anchoring inflation expectations and mitigating the impact of shocks on activity. The monetary policy responses during the 2011 episode of global financial stress was varied. Some countries (Brazil, Chile, Peru) reduced or kept nominal policy rates unchanged in response to slowing growth (Figure 2.6). Others (Colombia and Uruguay) continued tightening as demand pressures persisted and inflation expectations stayed above targets (Uruguay).

Now that global conditions have settled somewhat, some countries in this group may need to resume tightening to neutral levels to keep inflation expectations well anchored. Thus, keeping inflation closer to the midpoint of the official range will be important, to offset earlier slippages. In the meantime, central banks should remain watchful of liquidity conditions in foreign exchange and interbank markets, which could be disrupted by further bouts of financial stress emanating from Europe. Under such conditions, central banks should stand ready to respond to ensure smooth market functioning and prevent negative spillovers to domestic financial conditions.

Fiscal consolidation should continue. Most financially integrated countries strengthened fiscal primary balances and reduced public debt levels during 2011, processes aided by strong growth and commodity-related revenues. However, fiscal deficits and public debt remain above precrisis levels in most countries, and the situation in Europe underscores that hard-won fiscal credibility can be fragile. With output gaps closed or positive, fiscal consolidation is necessary to allow needed flexibility for monetary policy, particularly as high real interest rates can attract potentially disruptive short-term flows. Finally, countries should strengthen their fiscal

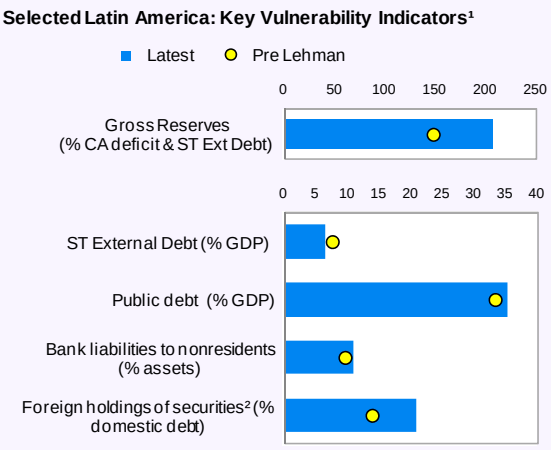
positions today because the current favorable external environment will wane and could even reverse in the medium term (Box 2.2).

However, fiscal consolidation must be designed to avoid compromising social and infrastructure spending, and revenue mobilization should be considered where the tax burden is low. In addition, countries should contemplate moving toward structural fiscal targets (i.e., isolating expenditures and revenue developments driven by the economic cycle). An important guiding principle should be to set the annual growth of primary government expenditures broadly in line with growth in structural revenues, which in most cases roughly corresponds to potential output growth.[3]

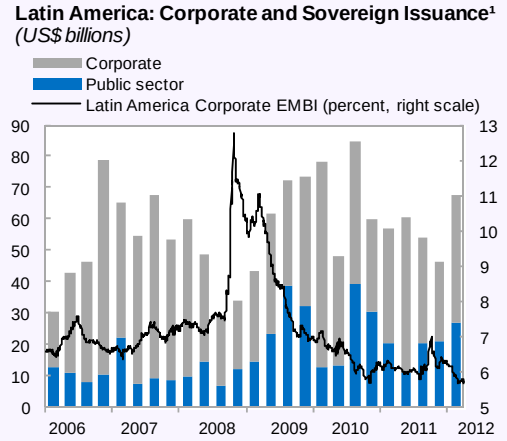
Exchange rates should remain flexible to provide buffers against external shocks. To deal with high and volatile capital inflows, exchange rates should be allowed to fluctuate to avoid creating one-sided bets. Foreign exchange intervention could be considered, particularly after a substantial degree of appreciation has been allowed, while staying mindful of sterilization costs.[4] Administrative measures to discourage inflows could also be part of the toolkit, but they should not substitute for an appropriate policy stance. Trade restrictions should also be avoided.

Macroprudential policies may be needed to avoid financial excesses, particularly in the face of volatile capital inflows. The financially integrated countries, Brazil in particular, continue to be active on this front (see Table 2.1). The impact of these policies has been difficult to gauge since they have been targeted to specific markets or sectors and generally complement action on the monetary front. Although more research is required to appropriately calibrate macroprudential policies, these tools tend to work best when they complement macroeconomic policies, although they need not always move in the same direction. Moreover, because the effect of macroprudential policies tends to be short-lived, some regular fine-tuning may be needed to sustain their impact (see Chapter 2, October 2011 *Regional Economic Outlook: Western Hemisphere* [IMF, 2011c]).

Figure 2.7. In FI countries, vulnerabilities remain low, but they are growing in some areas. Meanwhile, cheap financing continues to fuel corporate borrowing.



Sources: Haver Analytics; Vulnerabilities Database (VEE), and IMF staff calculations.
¹Simple average for Brazil, Chile, Colombia, Mexico, and Peru. Latest data as of February 2012 where available; Pre Lehman data refers to July 2008
² Excludes Chile.
CA = current account; ST = short-term.



Sources: Bloomberg LP; and Dealogic.
¹ Includes corporate, sovereign, and quasi-sovereign issuances of bonds, equities, and loans underwritten by banks in New York.
EMBI = Emerging Markets Bond Index.

[3] With output near or above potential, some countries (Chile, Peru, Uruguay) unwound earlier policy stimulus in 2011 by reducing the growth in real primary spending to less than potential output growth.

[4] Adler and Tovar (2011) find that interventions are more effective when there are signs of currency overvaluation.

TABLE 2.1: MACROPRUDENTIAL (MAP) AND CAPITAL FLOW MANAGEMENT (CFM) MEASURES IN LATIN AMERICA (2008–2011)

Policy tool	Motivation			Country
	MaP	CFM	Objective	
Capital requirements and loan-to-value ratios	✓		Slow down credit growth.	Brazil (long-term consumer loan market, 2010↑-2011↓),[3] Peru (countercyclical and concentration-based capital requirements, 2010↑)
Dynamic provisioning [1]	✓		Build up cushion against expected losses in good times to be used in bad times.	Bolivia (2008), Colombia (2007), Peru (2008), Uruguay (2001)
Liquidity requirements [2]	✓		Measures to identify, monitor, and control liquidity risk under conditions of stress.	Colombia (2008)
Reserve requirements on bank deposits	✓		Limit credit growth, manage liquidity, and complement monetary policy.	Peru (2010↑, 2011↑), Brazil (2010↑, 2011↓),[3] Uruguay (2009, 2010, 2011↑)
Reserve requirements on short term external liabilities of banks	✓		Make short term borrowing less attractive to banks.	Peru (2010↑,2011↓)
Limits to manage foreign exchange credit risk	✓	✓	Internalize credit risks from lending to unhedged borrowers.	Peru (2010↑), Uruguay (2010↑)
Limits on foreign exchange positions	✓	✓	Manage foreign exchange risk in on- and off-balance sheet assets and liabilities of banks.	Brazil (reserve requirement on short spot dollar positions, 2011↑), Peru (2010, on net FX derivative position,2011↑)
Reserve requirements on non-resident financial institutions	✓	✓	Reduce incentives for short-term capital inflows and tilt the composition of bank liabilities toward a more stable base.	Peru (2010↑)
Tax on foreign borrowing		✓	Lower short-term capital inflows and tilt the maturity structure toward the long-term.	Brazil (IOF tax, 2010↑,2011↑ and ↓,2012↑)
Limits to foreign investment by domestic pension funds		✓	Manage capital outflows to offset pressures on currency.	Peru (2010↓)

Source: IMF staff based on national sources.
Note: A "↑"denotes policy tightening, while a "↓" policy easing.
[1] Chile's 2011 system of forward-looking provisioning is not classified as dynamic provisioning as it does not involve accumulating generic provisions in a reserve fund as is the case in the other countries cited, but rather bases a specific provision on forward-looking estimates of loan default.
[2] In many countries liquidity requirements exist, but they do not necessarily involve stress testing conditions.
[3] In recent months, Brazil has eased macroprudential policies by (i) lowering the capital requirements on auto-loans and personal credit with maturities less than 36 months and payroll deduction loans with maturities less than 60 months—while raising the capital requirements on longer term loans (Nov-2011); and (ii) authorizing large banks to acquire credit portfolios and securities of small banks through the use of resources locked in reserve requirements on time deposits (Dec-2011). To encourage the acquisition of these, the remuneration on time deposits was decreased.

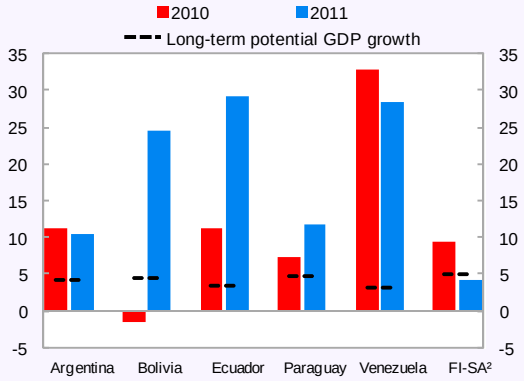
Figure 2.8. In other commodity-exporting countries of South America, policies remain highly procyclical, resulting in capital outflows in some cases.

Other South America: Key Indicators[1]

	2010	2011	Proj. 2012	Proj. 2013
		(Percent)		
Real GDP growth	6.1	5.9	3.4	4.9
Inflation, end-of-period	11.2	10.5	11.9	10.6
		(Percent of GDP)		
Current account balance	0.7	1.8	1.0	1.0
Primary fiscal balance	0.6	-0.1	-0.8	-0.5
Gross public debt	31.9	30.8	31.6	31.8
Memo: Real GDP growth		(Percent)		
Ecuador	3.6	7.8	4.5	3.9
Venezuela	-1.5	4.2	4.7	3.2

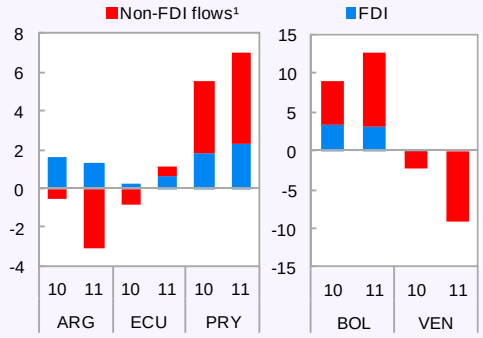
Sources: National authorities; and IMF, *World Economic Outlook*.
[1] Simple average of Argentina, Bolivia, Ecuador, Paraguay, and Venezuela. Data for Argentina are from official sources.

Other South America: Growth of Government Primary Expenditure[1]
(Percent)



Source: IMF estimates and staff calculations.
[1] Deflated by consumer price inflation, except in the case of Argentina, where an average of provincial inflation estimates is used.
[2] Simple average of FI South America (Brazil, Chile, Colombia, Peru, and Uruguay).

Other South America: Capital Account
(Percent of GDP)



Source: IMF, *World Economic Outlook*.
[1] Non-FDI flows excludes reserve accumulation and errors and omissions. For Argentina, exceptional financing flows are embedded in non-FDI flows.

Last, close *monitoring of the financial and corporate sectors* remains a priority. More efforts are required to close information gaps to allow a proper assessment of vulnerabilities and to improve oversight, particularly by strengthening capacity to assess banks' risk-management practices. Moreover, it remains important to continue monitoring corporate off-balance-sheet operations, particularly those that could give rise to currency and maturity mismatches.

South America's Less Financially Integrated Commodity Exporters—Another Boom-Bust Cycle in the Making?

Growth in South America's less financially integrated commodity exporters[5] remained strong in 2011, averaging about 6 percent, supported by continued high prices for their main commodity exports and highly expansionary policies in most countries. Most of these economies have been operating above potential for some time. Inflation generally remains high, reflecting procyclical policies and supply constraints, notwithstanding price controls in a few countries (Argentina and Venezuela). In Bolivia and Paraguay, inflation peaked in mid-2011 and declined significantly thereafter, mainly as a result of lower food prices and (in Paraguay) the lagged effects of monetary policy tightening.

Real interest rates remain negative (except in Paraguay), and monetary aggregates and private credit continue to expand rapidly. Fiscal policy continues to fuel demand pressures, with government expenditures growing well above potential output growth in all of these countries. In some countries (Argentina and Venezuela) the deterioration of external accounts, despite strong export prices, prompted the imposition of exchange controls and import restrictions.

For 2012, real GDP growth in these economies is projected to slow, especially in Argentina and

[5] The group comprises Argentina, Bolivia, Ecuador, Paraguay, and Venezuela.

Ecuador. Increasingly binding supply constraints, weaker external demand, and weather-related shocks in some cases will weigh on growth. Given still favorable terms of trade, stronger policy efforts will be necessary to rein in demand growth and contain overheating pressures.[6]

Downside risks in the event of a sharp drop in commodity prices are more significant than for the financially integrated exporters because these countries did not build adequate buffers during the boom years (with the exception of Bolivia and Paraguay). Accordingly, a priority is to strengthen policy frameworks (particularly fiscal) to avoid procyclicality and limit macroeconomic volatility, including through the adoption of rules that limit expenditure growth during export price booms (Box 2.3). Also, improving the business and investment climate remains crucial for addressing supply bottlenecks and increasing potential output.

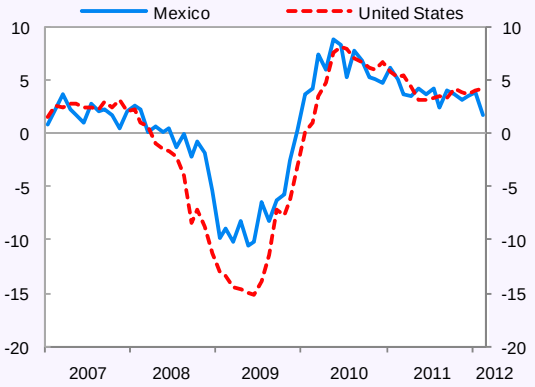
Mexico and Central America—Enduring a slow U.S. recovery

Mexico

Mexico's real GDP grew by 4 percent in 2011 (5½ percent in 2010), supported by strong manufacturing exports and domestic demand—which benefited from the recovery of U.S. manufacturing as well as from improved employment and credit conditions.[7] The output gap continued to narrow, with a modest gap remaining. Inflation expectations are well anchored, although headline inflation has increased in recent months owing to food price shocks. Output growth is projected to settle near 3¾ percent during 2012–13, allowing the remainder of the output gap to close. Risks to Mexico's economic outlook are tilted to the downside, linked to those for the United States and sensitive to renewed tensions in Europe.

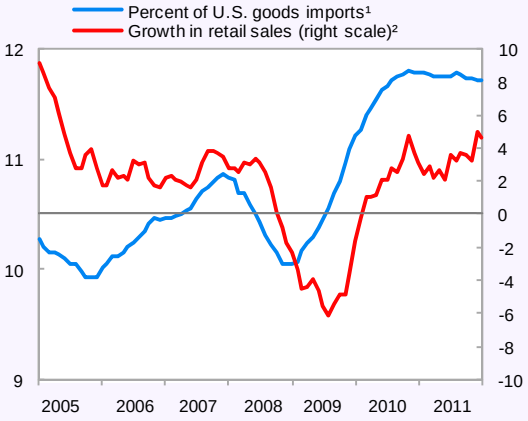
Figure 2.9. Although Mexico's recovery remains linked to that of the United States, domestic demand has strengthened.

Mexico and United States: Industrial Production
(12-month percent change)



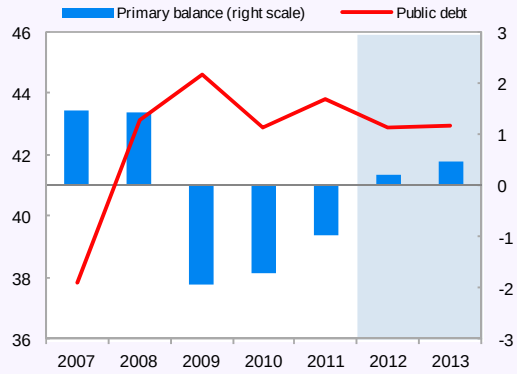
Sources: Haver Analytics; and IMF staff calculations.

Mexico: External and Domestic Contributions to Output Growth



Sources: Haver Analytics; and IMF staff calculations.
¹ 12-month moving average.
² 3-month moving average.

Mexico: Primary Balance and Public Debt
(Percent of GDP)



Sources: National authorities; and IMF staff calculations.

[6] In Paraguay, a severe drought has helped to reduce domestic demand growth and ease overheating pressures.
[7] Mexico's share in the U.S. market has been on an upward path since the 2008–09 global crisis.

Mexico's policy stance has continued to strike a prudent balance between supporting economic activity and rebuilding buffers, and exchange rate flexibility continues to play a critical role in buffering the impact of external shocks.[8] Monetary policy remains accommodative, and the pace of fiscal consolidation has been calibrated to avoid undermining the recovery. In addition, the government has continued taking advantage of the favorable financing conditions to improve its debts structure.

Looking forward, the policy challenge is how to unleash Mexico's growth potential and employment generation while tackling the long-term fiscal issues arising from a projected decline in the ratio of oil revenues to GDP and age-related pressures. To boost growth, Mexico needs to press ahead with structural reforms to increase productivity and promote investment. Addressing the longer-term fiscal challenges requires a combination of non-oil revenue mobilization efforts and expenditure rationalization.

Central America

Output growth in Central America, Panama, and the Dominican Republic (CAPDR) held up relatively well in 2011. Excluding El Salvador and Panama, real GDP grew by about 4 percent on average. In Panama, the canal expansion and a large public investment program boosted GDP growth to 10 percent; at the other extreme, growth in El Salvador remained subdued. Inflationary pressures in Central America abated in mid-2011, showing the effects of moderate food inflation and tighter monetary policy in a few cases, but average inflation stayed above 6 percent.

Although exports and remittances continued to grow at robust but slowing rates, imports grew more quickly due in part to higher oil prices. As a result, the current account deficit widened markedly (to 8 percent of GDP on average). Rising foreign direct investment and official flows helped cover the widening deficits, leaving international reserve positions largely unchanged. Nonetheless, external vulnerabilities in most CAPDR countries are, again, a concern.

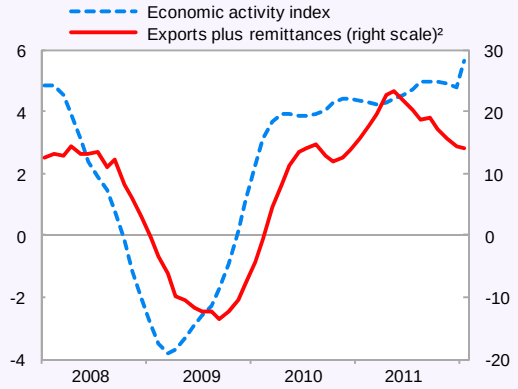
Figure 2.10. Central America: Growth has held up well, supported by exports and remittances.

Central America: Key Indicators[1]

	2010	2011	Proj. 2012	Proj. 2013
	(Percent)			
Real GDP growth	4.0	3.7	3.5	3.7
Inflation, end-of-period	5.9	6.2	5.9	5.2
	(Percent of GDP)			
Current account balance	-6.1	-8.1	-8.0	-7.5
Primary fiscal balance	-1.4	-0.9	-0.5	-0.1
Gross public debt	39.7	39.2	39.5	39.0
Memo: Real GDP growth	(Percent)			
Panama	7.6	10.6	7.5	6.6

Source: IMF, *World Economic Outlook*.
[1] Simple average of Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, and Nicaragua. Excludes Panama.

Central America: Activity and External Indicators[1]
(12-month percent change)



Sources: National authorities; and IMF staff calculations.
[1] Average of Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua. Data are through January 2012.
[2] Six-month moving average.

[8] In response to global uncertainties, the Bank of Mexico announced in November 2011 that it would sell US$400 million whenever its currency depreciated by more than 2 percent on any given day. The mechanism has not yet been triggered.

Growth is projected to moderate to 3½ percent in 2012, driven by slower external demand and a weaker fiscal impulse. Downside risks are strongly linked to those for the United States, which is CAPDR's main export market and source of remittances and where growth will remain subdued in the medium term. In addition, a spike in oil prices would compromise the external positions of most countries in the region and put pressure on their energy subsidy schemes (especially in the Dominican Republic, El Salvador, and Nicaragua).

Countries in the CAPDR region have been slow to normalize their policy stances, especially fiscal. The fiscal space used by most of the countries in the aftermath of the global crisis has not been recovered; public debt remains well above pre-crisis levels, although revenue mobilization efforts are under way in some countries.[9] With output near potential in most countries, debt reduction should remain steady but can be gradually paced to avoid compromising growth.

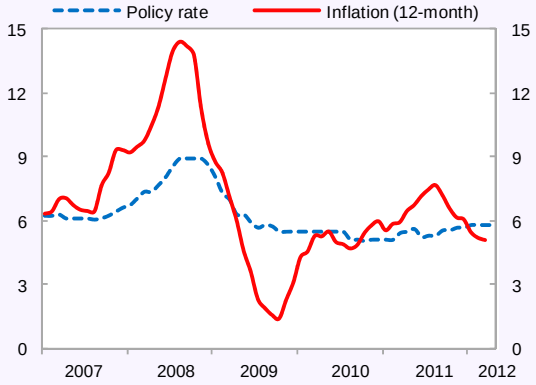
In most cases, redoubled efforts are needed to rein in current public expenditures, especially wages (which are abnormally large as a share of GDP).[10] Further revenue mobilization is also required to meet large infrastructure and social needs. Increasing direct taxes (by aligning corporate tax rates with international standards) and reducing generous tax concessions and incentives are two promising areas.

Other than El Salvador and Panama, which are fully dollarized, countries in the region also need to step up efforts to reform their monetary policy frameworks.[11] Progress toward greater exchange rate flexibility has been unduly slow in many cases, leaving the authorities with one less tool to buffer external shocks and undermining the transmission of monetary policy (see Medina Cas, and others, 2011a, 2011b).

In contrast to the financially integrated commodity exporters, Central America is benefiting little from accommodative conditions in global financial and commodity markets. Lower potential growth in the United States will be a headwind for these economies in the medium term. Accordingly, structural reforms to boost potential growth remain a key priority, particularly reforms that enhance the business climate and competitiveness (see Swiston and Barrot, 2011).

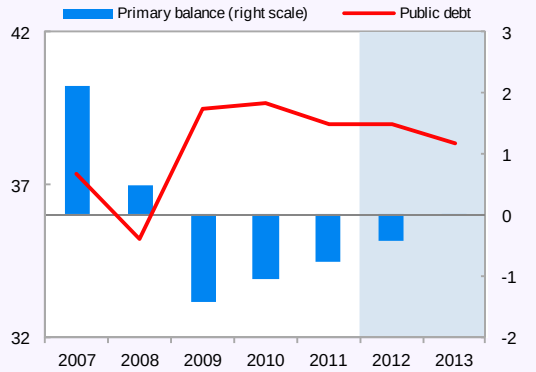
Figure 2.11. Central America: Monetary and fiscal policies have been slow to adjust. Public debt remains above pre-crisis levels.

Central America: Inflation and Policy Rates[1]
(Percent)



Sources: National authorities; and IMF staff calculations.
[1] Simple average of Costa Rica, Dominican Republic, Guatemala, and Honduras. Data through end-March 2012.

Central America: Primary Balance and Public Debt[1]
(Percent of GDP)



Sources: National authorities; and IMF staff calculations.
[1] Simple average of Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, and Panama.

[9] Tax reforms were approved in El Salvador (December 2011, worth ½ percent of GDP) and Guatemala (February 2012, 1½ percent of GDP cumulatively by 2015).The reform approved in Costa Rica (March 2012, 1¼ percent of GDP) was recently deemed unconstitutional.
[10] Honduras recently approved legislation establishing new rules for setting wages for teachers and reforming their pensions.
[11] The Dominican Republic officially adopted an inflation targeting framework (January 2012), and Honduras introduced a crawling exchange rate band (July 2011).

The Caribbean—Repairing balance sheets amid continued headwinds

Real GDP growth in the tourism-intensive countries of the Caribbean is slowly picking up after a deep and protracted recession. Constrained by a still-difficult external environment and fiscal consolidation, output is expected to expand by about 1½ percent in 2012 (compared with ½ percent last year). Tourist arrivals continue to recover but at different speeds determined in part by variations in the weak employment conditions in their main tourism markets.

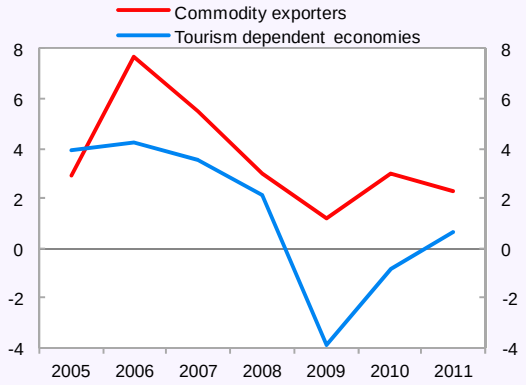
Figure 2.12. Activity in the Caribbean is picking up slowly and fiscal consolidation remains modest.

The Caribbean: Key Indicators[1]

	2010	2011	Proj. 2012	Proj. 2013
		(Percent)		
Real GDP growth	-0.8	0.5	1.6	2.0
Inflation, end-of-period	3.9	4.6	2.9	3.1
		(Percent of GDP)		
Current account balance	-14.7	-14.3	-15.5	-15.1
Primary fiscal balance	-0.4	0.4	0.0	1.3
Gross public debt	91.7	91.7	92.4	91.2
Memo: Real GDP growth		(Percent)		
Haiti	-5.4	5.6	7.8	6.9
Commodity-intensive[2]	3.0	2.5	3.5	4.7

Sources: IMF, *World Economic Outlook*.
[1] Simple average of The Bahamas, Barbados, Belize, Jamaica, and the ECCU member states.
[2] Includes Guyana, Suriname, and Trinidad and Tobago.

The Caribbean: Real GDP Growth[1]
(Percent)



Sources: IMF, *World Economic Outlook*; and IMF staff calculations.
[1] Commodity exporters include Guyana, Suriname, and Trinidad and Tobago; tourism-dependent economies include The Bahamas, Barbados, Belize, Jamaica, and the ECCU member states.

Vast challenges from high public debt levels and from adverse terms of trade, attributable to high oil prices continue to weigh on growth. Prospects are somewhat more favorable for the commodity exporters (Guyana, Suriname, and Trinidad and Tobago), where output is projected to grow by 3½ percent on average this year (2½ percent in 2011) supported by high commodity prices, particularly for gold and oil. Meanwhile, Haiti is projected to expand by close to 8 percent in 2012, reflecting increased earthquake reconstruction efforts.

In the tourism-intensive Caribbean countries, external current account deficits are widening again, reflecting higher oil imports and stagnant competitiveness. These external imbalances are being financed by foreign direct investment, which is slowly picking up, as well as by official flows, including from the IMF.[12] Financing through concessional loans from Venezuela's Petrocaribe is also helping to buffer the impact of high oil prices for some countries.

Fiscal consolidation is progressing, although slippages occurred in a few countries in 2011 (Barbados and Jamaica). The fiscal primary balance improved by an average of 1 percentage point in 2011, but public debt persists at dauntingly high levels. Stronger consolidation efforts are necessary to put debt on a steady downward trend. In some cases, the consolidation may have to be complemented with market-friendly debt restructuring, as was recently done in St. Kitts and Nevis.[13]

Financial sector weaknesses in the region remain elevated. Bank credit quality, particularly for indigenous banks, continues to deteriorate. Efforts are under way to assess the balance sheets of weak

[12] Antigua and Barbuda, Grenada, and St. Kitts and Nevis are receiving financial assistance from the IMF in the context of a program. In addition, Dominica received IMF financing in early 2012 under the Rapid Credit Facility.
[13] In February 2012, St. Kitts and Nevis made a formal exchange offer to its bondholders and external commercial creditors. The offer was accepted with a participation rate of more than 95 percent. Discussions with domestic creditors are ongoing.

banks and develop strategies to strengthen them. High exposure to sovereigns (including to those that have recently restructured debt), along with the lack of public resources, makes the task of strengthening bank balance sheets particularly challenging.

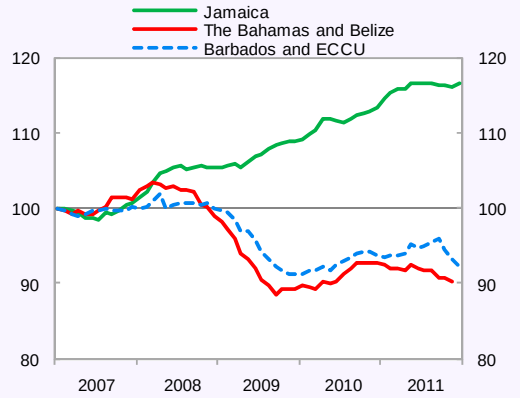
On the nonbank side, the resolution of the problems in the insurance subsidiaries of a financial group based in Trinidad and Tobago (Colonial Life Insurance Company, or CLICO; and British American Insurance Company, or BAICO) three years after the collapse of the holding company has been uneven. Trinidad and Tobago has settled claims against CLICO, but in Barbados the resolution is still pending. In the Eastern Caribbean Currency Union (ECCU), part of the insurance subsidiary is being sold, and a fraction of the claims are pending a regional resolution.

Risks to the region's outlook are tilted to the downside. On the external front, renewed tensions in Europe do not bode well for tourism and foreign direct investment flows, and an oil price spike would put further pressure on the external accounts (oil accounts for more than half of all imports in the tourism-dependent economies). On the domestic front, fiscal fatigue could undermine market confidence, and financial sector vulnerabilities could weigh on already-high public debt levels.

Looking to the future, greater efforts are needed to tackle structural weaknesses to boost competitiveness and growth (input costs are high compared with small islands in other regions: see Box 2.4.) Policies to reduce labor and energy costs would enhance competitiveness and invigorate growth. Diversifying tourism toward emerging markets would also help.

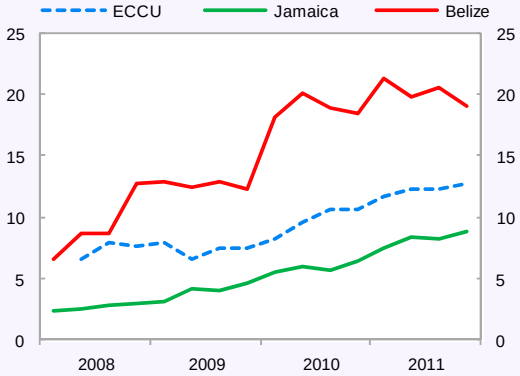
Figure 2.13. Tourism in the Caribbean is recovering at different speeds, and financial strains and fiscal drags remain a constraint.

The Caribbean: Tourist Arrivals
(Index, 2007 = 100)



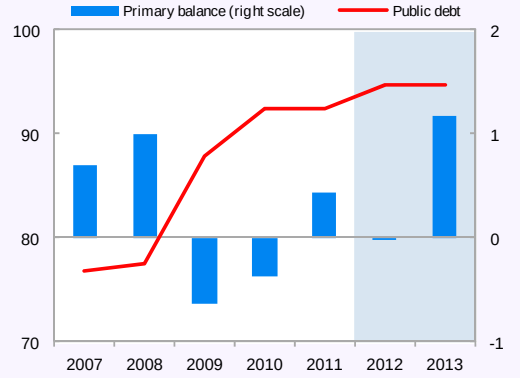
Sources: Caribbean Tourism Organization; and IMF staff calculations.

The Caribbean: Nonperforming Loans[1]
(Percent of total loans)



Sources: National authorities; and IMF staff calculations.
[1] Includes data up to 2011:Q4.

The Caribbean: Primary Balance and Public Debt[1]
(Percent of GDP)



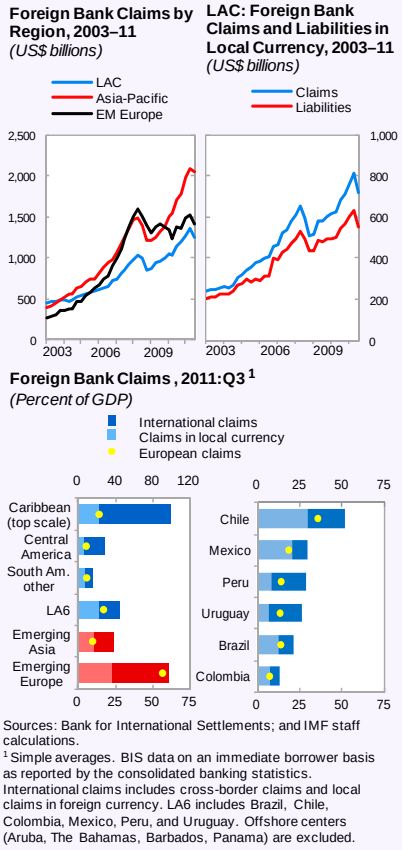
Sources: National authorities; and IMF staff calculations.
[1] Simple average of Bahamas, Barbados, Belize, Jamaica, and the ECCU member states.

Box 2.1. Foreign Banks' Exposure and Deleveraging Risks in Latin America and the Caribbean (LAC)

Foreign banks' claims in the LAC region have increased considerably during the past decade. The increase in foreign claims on the region parallels that of other emerging regions, although it has been somewhat faster in emerging Asia. Contrary to the experience in emerging Europe, foreign bank claims on the region continued to grow following the global financial crisis, after a short-lived blip.

Foreign banks' exposure (size and composition) varies substantially across the region.

- In the larger, financially integrated economies (LA6: Brazil, Chile, Colombia, Mexico, Peru, and Uruguay), foreign bank claims average about 30 percent of GDP, roughly half of which are local claims in local currency (credit to residents by foreign bank subsidiaries), with the other half being international claims (a combination of direct cross-border lending and credit by bank subsidiaries in foreign currency). European claims on the region are largest in the LA6 (more than 60 percent of all claims) because of the large presence of Spanish banks (Chile and Mexico have the largest exposure).
- Outside the LA6, foreign claims are much smaller, with the notable exception of the Caribbean. European claims in Central America and the Caribbean are small (less than 30 percent of total).



Sources: Bank for International Settlements; and IMF staff calculations.
[1] Simple averages. BIS data on an immediate borrower basis as reported by the consolidated banking statistics. International claims includes cross-border claims and local claims in foreign currency. LA6 includes Brazil, Chile, Colombia, Mexico, Peru, and Uruguay. Offshore centers (Aruba, The Bahamas, Barbados, Panama) are excluded.

The latest data suggest a small decline in foreign claims during 2011:Q3. Although this partly reflects a depreciation of currencies in the region (given the significance of claims in local currency), evidence also indicates that short-term funding in foreign currency came under pressure in late 2011, prompting authorities in some countries to inject foreign exchange liquidity and supply trade credit, although in the case of trade financing, banks from other regions also covered the void left by European banks. Moreover, credit standards and funding conditions tightened somewhat during the second half of 2011.

Vulnerabilities to a large deleveraging by European banks seem manageable, although not negligible. The bulk of the region's exposure to Europe takes place through well-capitalized and highly profitable Spanish subsidiaries that fund themselves mainly through domestic deposits; this positions the region well to withstand deleveraging shocks. IMF staff simulations show that under a large European deleveraging scenario (in which banks in Europe reduce credit by €500 billion more than under the baseline), credit in Latin America would contract and lead to a ½ percentage-point decline in real GDP levels over a two year period (*WEO Special Report: Cross-Border Spillovers from Euro Area Bank Deleveraging*). However, the impact on credit and output would be greater under a large and disorderly deleveraging process, that is, a tail event, in which uncertainties weigh on foreign bank equity prices and hinder their ability to dispose of their assets. The decision in November 2011 by a Spanish bank to sell an 8 percent stake of its operations in Brazil and Chile, had a non-negligible impact on bank equity prices (stocks fell by about 15 percent); yet this effect was temporary and did not affect overall bank credit.

The region must continue to watch closely for any signs of deleveraging. Authorities should also develop contingency plans against a large and unanticipated fire sale of foreign bank assets in the region, in particular, to ensure an orderly sale and transfer of bank balance sheets. The increased reliance of foreign bank subsidiaries on non-deposit (less stable) forms of financing also deserves attention.

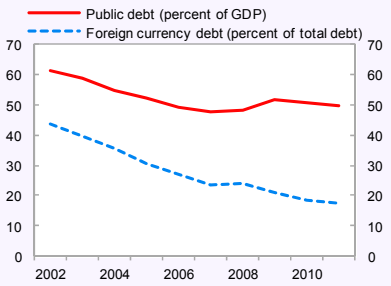
Note: Prepared by Luis Cubeddu and Camilo E. Tovar.

Box 2.2. The Importance of Fiscal Buffers: Public Debt Under Downside Scenarios in Financially Integrated Economies

The steady reduction in public debt levels since the early 2000s created space for many Latin American economies to implement countercyclical fiscal policies during the 2008–09 financial crisis. Supported by strong growth, currency appreciation, and primary fiscal surpluses, gross public debt as a share of GDP in the financially integrated economies of Latin America (LA6: Brazil, Chile, Colombia, Mexico, Peru, and Uruguay) fell by an average of 13½ percentage points of GDP during 2002–07, and reliance on foreign-currency-denominated debt declined markedly. Fiscal stimulus programs during 2008–09 led to a 4 percentage-point increase in public debt levels by end-2009, although the strong economic recovery since has allowed some reversal.

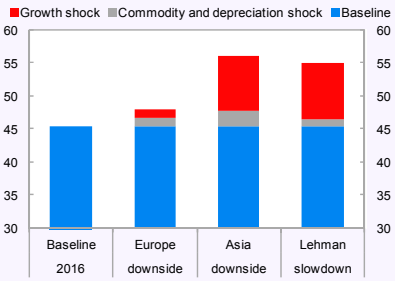
Despite current trends, public debt levels remain vulnerable to global conditions, particularly declines in global growth and commodity prices. To quantify this vulnerability, we estimate the impact on public debt of the two downside scenarios considered in the April 2012 *World Economic Outlook* and a scenario based on the region's post-crisis experience. The estimates are based on a multi-country public-debt stress test that includes shocks to GDP, commodity revenues, and real exchange rate (10 percent real depreciation), and that assumes no discretionary fiscal policy.

LA6: Public Debt
(Percent; weighted average)



Sources: National authorities; and IMF staff calculations.

LA6: Public Debt under Risk Scenarios
(Percent of GDP; weighted average)



Sources: IMF staff calculations.

- *Europe downside scenario* assumes that an intensification of the adverse feedback between bank asset quality and sovereign risk in the euro area triggers an even larger bank deleveraging in Europe and fiscal consolidation in several euro area countries. Under this scenario, Latin America's GDP levels would fall by ½ –1 percent during the next five years relative to the baseline, with commodity prices falling by 10 percent through end-2013 (gradually converging to the baseline thereafter).
- *Asia downside scenario* assumes a downward revision to potential output and a deceleration of bank credit in Emerging Asia. This would send GDP levels 3–5 percent below the levels in the baseline during the next five years and reduce commodity prices by 20–30 percent by end-2013 (with partial convergence to the baseline thereafter).
- *Lehman-like scenario* assumes a contraction in GDP and a temporary decline in commodity prices similar to that observed following the 2008–09 global crisis. GDP levels would remain 4½ percent below the baseline, whereas commodity prices would drop by 30 percent during the first year and return to the baseline shortly thereafter (2014).

Consistent with limited trade and financial linkages, the Europe downside scenario would result in a 3 percentage-points increase in public debt levels in LA6, with roughly half of the increase explained by the presence of revenue-side automatic stabilizers (or the impact of growth on noncommodity revenues). However, a shock centered in emerging Asia would result in a quick debt build up (more than 10 percentage points of GDP by 2016), reflecting not only the growth impact on revenues, but also the combined effect of lower commodity revenues and higher valuation of foreign-currency-denominated debt. Similar effects on public debt levels are found under the Lehman-like scenario.

Strong government balance sheets allowed many Latin American economies to adopt strong countercyclical policies during the 2008–09 global crisis. In the future, rebuilding the fiscal space used during the crisis remains a priority given the region's exposure to global conditions, especially to growth prospects in Asia.

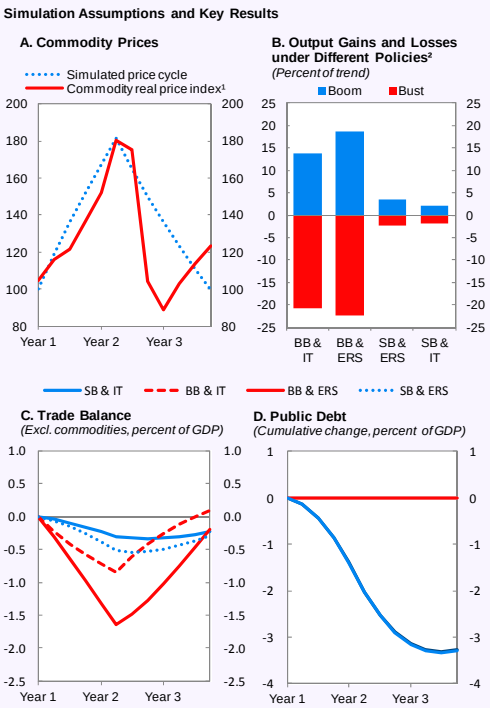
Note: Prepared by Jose Daniel Rodriguez-Delgado.

Box 2.3. Can Macro Policies Mitigate the Effects of Commodity Boom-Bust Cycles?

Commodity price swings have often generated pronounced economic cycles in Latin America, with adverse effects on output, unemployment, and fiscal and external sustainability. To what extent can prudent macroeconomic policies help smooth these cycles and mitigate their consequences? To answer this question, we study macroeconomic outcomes under alternative monetary and fiscal policy regimes during a commodity price boom-bust cycle—similar to that observed during 2007–09 (Panel A)—using a dynamic stochastic general equilibrium model calibrated to an average Latin America commodity-exporting country.[1]

Policy options. We consider two fiscal policy rules: (1) *balanced budget*, and (2) *structural balanced budget*. The first rule ensures that spending matches current revenues at all times, whereas under the second rule the windfall from a temporary surge in commodity prices (and tax revenues) is saved, and the proceeds are spent in bad times. We also consider two possible monetary policy rules: (1) *Inflation targeting*, and (2) *exchange rate stabilization*. Under the first, monetary policy focuses only on complying with an inflation target; in the second rule the central bank has a dual objective of stabilizing prices and the real exchange rate.

Impact on output. The combination of a structural balanced budget rule and inflation targeting is the most successful policy mix in isolating output from commodity price swings. In contrast, a balanced budget rule tends to amplify the cycle, generating sizable output gains during the boom, but also large losses after the bust (Panel B). The output boom-bust induced by a balanced budget rule is exacerbated when monetary policy prevents a real exchange rate adjustment. It is worth noting that the estimated output losses are likely to be a lower bound, because macroeconomic volatility tends to lead to lower long-term growth (see Berg and others 2012), an effect not captured by the model.



Sources: IMF staff calculations.
[1] Commodity prices during the period 2007:Q1–2009:Q4.
[2] The policies analyzed are: Balanced Budget (BB), Structural Balanced Budget (SB), Inflation Targeting (IT), and Exchange Rate Stabilization (ERS).

External and public debt outcomes. Commodity-producing economies following a balanced budget rule also will tend to exacerbate external vulnerabilities (Panel C). More important, and contrary to a common perception, attempting to stabilize the real exchange rate does not necessarily translate into lower external imbalances because lower interest rates (necessary to prevent appreciation) tend to stimulate aggregate demand and imports (see Lama and Medina, 2010). The combination of a structural balance rule and inflation targeting is the most successful for limiting external imbalances. Moreover, the structural balance fiscal rule also allows sizable fiscal buffers (Panel D), enabling countries to adopt better countercyclical policies during the commodity price downturn.

Caveats. This model-based analysis abstracts from the process of implementing fiscal and monetary rules, which usually require transparent and efficient institutional arrangements. Also, the model is fairly stylized and omits other relevant features of Latin American economies, such as dollarization, procyclical capital flows, and domestic credit, which could exacerbate the output effects of commodity price cycles.

Note: Prepared by Ruy Lama and Juan Pablo Medina.

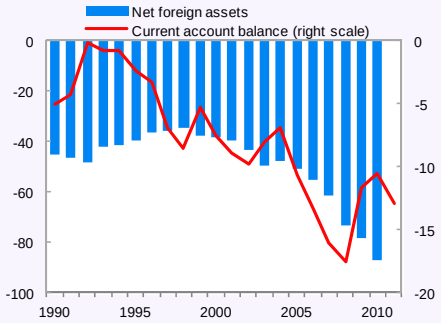
[1] The ratio of total exports to GDP is assumed to be 33 percent, commodity production 10 percent of GDP, and fiscal commodity revenues at 4 percent of GDP. Details of the model used in the simulations are presented in Medina and Soto (2007). IMF (2012a) presents similar simulations but focuses on a different set of countries.

Box 2.4. Competitiveness in the Tourism-Intensive Caribbean

In tourism-dependent Caribbean countries, which by in large have fixed exchange rate systems, two-decades worth of growing current account deficits, and shrinking shares of global tourism have given rise to competitiveness concerns. Tackling these problems will require action on several fronts, including reducing the costs of labor, energy, and trade.

Rising current account deficits and net external liabilities. External current account deficits have widened from close to balance in the early 1990s to a peak of 17½ percent of GDP in 2008. In tandem, the net foreign assets positions of these countries have deteriorated significantly, with net foreign liabilities currently averaging 90 percent of GDP. The bulk of these claims are in foreign direct investment in the tourism sector. Meanwhile, real exchange rates have been broadly stable, although they have weakened some since the early 2000s.

The Caribbean[1]: Net Foreign Assets and Current Account Balance
(Percent of GDP)

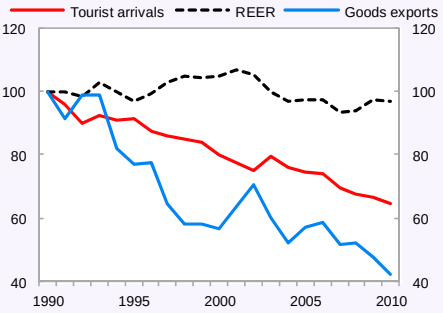


Sources: External Wealth of Nations Database; and IMF, *World Economic Indicators*.
[1] Includes The Bahamas, Barbados, Belize, Jamaica, and the ECCU member states.

Declining global share of tourism and goods exports. The Caribbean's loss of tourism market share has been pronounced. The region has also lost market share in exports in tandem with the erosion of preferential access to European banana and sugar markets and the attendant pressure from more efficient competitors.

Rising business costs, including energy and labor. Despite a relatively healthy business climate, the cost of key inputs is higher than in competitors. For example, the cost of electricity in the Caribbean is about 16 percent higher than in the Pacific Islands and more than two times that of islands in the Indian Ocean (Mauritius and Seychelles). Meanwhile, the cost of labor redundancy is double that of the Pacific Islands, and the cost of starting a business is twice that of Indian Ocean Islands. That said, the Caribbean region ranks above those competitors on important dimensions of governance, such as government effectiveness, regulatory quality, the rule of law and control of corruption.

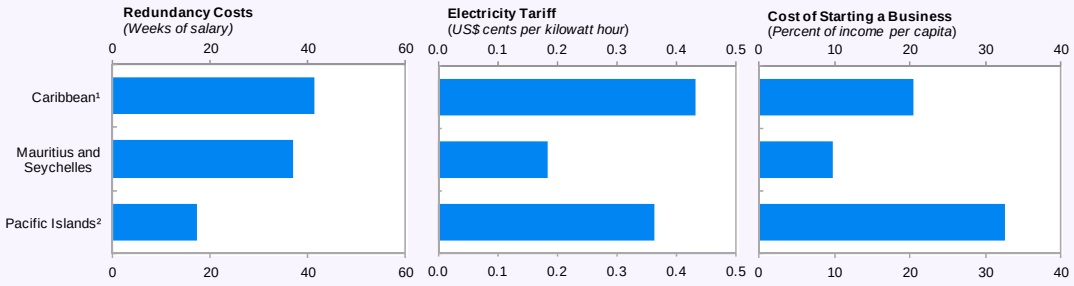
The Caribbean[1]: Real Effective Exchange Rate (REER), Exports and Tourism[2]
(Simple average index, 1990 = 100)



Sources: Caribbean Tourism Organization; World Travel and Tourism Council; Direction of Trade Statistics; and Information Notice System.
[1] Caribbean includes The Bahamas, Barbados, Belize, Jamaica, and the ECCU member states .
[2] Share of exports and tourism of the world, respectively.

Policy options. Policies to address competitiveness need to focus on key structural weaknesses, such as: (1) lowering the cost of energy, including by exploring renewable sources; (2) reducing the cost of labor, through productivity enhancements and reduction of redundancy costs; (3) lowering the cost of trading across borders; and (4) diversifying tourism markets. These actions need to be accompanied by renewed efforts to reduce high public debt levels to bring down external imbalances and address any real exchange rate misalignments.

Doing Business Indicators: The Caribbean versus Other Small Islands



Sources: Caribbean Electric Utility Service Corporation; Caribbean Tourism Organization; Central Electricity Board Annual Reports; Doing Business Reports and World Development Indicators; External Wealth of Nations Database; Fiji Commerce Commission Energy Information Administration; IMF Direction of Trade Statistics; Seychelles Abstract of Statistics; World Bank; World Travel and Tourism Council; and IMFstaff calculations.
[1] Caribbean includes The Bahamas, Barbados, Belize, Jamaica, and the ECCU member states.
[2] Pacific Islands includes Palau, Fiji, Solomon Islands, Samoa, Vanuatu, Kiribati, and Singapore.

Note: Prepared by Kevin Greenidge, Garth Nicholls, and Alexandra Peter.

Table 2.2. Western Hemisphere: Selected Economic and Social Indicators, 2001–11[1]

	2011				2001–11 average					2011		Latest available		
	GDP[2] ($US bil.)	Population (mil.)	GDP per capita ($PPP)	Nominal output share of LAC region[2]	Real GDP growth (Percent)	CPI inflation[3] (Percent)	Current account (Percent of GDP)	Domestic saving (Percent of GDP)	Trade openess[4] (Percent of GDP)	Gross reserves (Percent of GDP)	Unemployment rate (Percent)	Poverty rate[5]	Gini coefficient[5]	Sovereign credit rating[6]
North America														
Canada	1,736.9	34.4	40,541	--	1.9	2.1	0.3	21.8	68.0	3.8	7.5	—	32.0	AAA
Mexico	1,154.8	113.7	14,610	20.6	1.9	4.4	-1.0	23.8	57.1	12.9	5.2	14.0	50.5	BBB
United States	15,094.0	311.9	48,387	--	1.6	2.4	-4.4	14.1	26.8	1.0	9.0	—	46.9	AAA
South America														
Argentina[7]	447.6	40.9	17,516	8.0	5.0	10.5	2.5	23.0	40.4	9.8	7.2	6.6	44.3	B
Bolivia	24.6	10.6	4,789	0.4	4.0	5.7	4.3	22.4	62.8	42.6	—	33.5	57.2	B+
Brazil	2,492.9	194.9	11,769	44.4	3.6	6.6	-0.7	17.6	24.7	14.1	6.0	15.1	53.7	BBB
Chile	248.4	17.2	17,420	4.4	4.3	3.3	0.8	23.5	71.2	17.1	7.1	4.3	51.9	A+
Colombia	328.4	46.1	10,249	5.9	4.3	5.3	-1.9	19.5	34.4	9.7	10.8	17.0	57.9	BBB-
Ecuador	66.4	15.0	8,492	1.2	4.7	6.5	-0.2	25.3	67.1	3.1	6.0	19.4	48.9	B-
Guyana	2.5	0.8	7,466	0.0	2.6	5.9	-9.9	7.4	127.1	32.5	—	—	—	
Paraguay	21.2	6.5	5,413	0.4	4.1	7.7	-0.1	18.1	107.1	23.4	5.6	20.6	50.7	BB-
Peru	173.5	30.0	10,062	3.1	5.8	2.5	-0.6	21.4	46.7	27.7	7.5	20.0	49.1	BBB
Suriname	3.8	0.5	9,475	0.1	4.8	11.0	-3.7	18.0	123.3	22.8	—	45.1	61.6	B+
Uruguay	46.9	3.4	15,113	0.8	3.5	8.9	-1.1	17.1	53.8	21.9	6.1	3.4	44.4	BB+
Venezuela	315.8	29.8	12,568	5.6	3.5	22.9	9.7	33.0	47.3	10.9	8.1	19.8	43.5	B+
Central America														
Belize	1.5	0.3	8,264	0.0	3.8	2.6	-10.3	11.6	121.4	16.5	10.9	38.1	52.9	CCC
Costa Rica	40.9	4.6	11,927	0.7	4.3	9.7	-4.9	17.4	91.1	11.6	7.3	8.1	50.2	BB+
El Salvador	22.8	6.2	7,550	0.4	1.9	3.5	-3.9	11.4	71.1	9.7	5.8	21.1	46.6	BB
Guatemala	46.9	14.7	5,070	0.8	3.4	6.7	-4.1	14.0	64.7	12.5	—	46.7	53.2	BB+
Honduras	17.4	8.2	4,345	0.3	4.1	7.3	-6.7	20.3	122.3	16.3	4.4	39.4	55.3	B
Nicaragua	7.3	5.9	3,206	0.1	3.1	8.4	-16.6	12.3	119.8	25.9	7.8	42.7	52.3	B-
Panama	30.6	3.6	14,097	0.5	6.8	3.2	-5.9	16.4	70.0	7.5	4.2	16.1	52.1	BBB-
The Caribbean														
The Bahamas	8.1	0.3	30,959	0.1	0.8	2.4	-10.9	13.3	87.0	14.4	13.7	3.9	—	BBB+
Barbados	4.5	0.3	23,417	0.1	1.1	4.8	-6.3	10.3	95.1	19.9	11.5	—	—	BBB-
Dominican Republic	56.7	10.1	9,287	1.0	5.3	12.0	-3.5	12.0	66.0	6.3	14.6	16.4	48.9	B+
Haiti	7.4	10.0	1,235	0.1	0.6	13.4	-2.0	25.6	59.8	26.9	—	78.8	59.2	—
Jamaica	14.8	2.7	9,029	0.3	0.8	11.2	-10.5	14.5	90.9	17.6	12.8	43.1	59.9	B-
Trinidad and Tobago	22.7	1.3	20,053	0.4	5.2	6.8	17.6	36.9	100.4	45.6	5.8	—	—	A-
Eastern Caribbean Currency Union	5.1	0.6	14,429	0.1	1.8	2.8	-19.2	13.7	100.0	16.9	—	—	—	—
Antigua and Barbuda	1.2	0.1	17,981	0.0	1.5	2.3	-17.2	21.1	113.9	11.0	—	—	—	—
Dominica	0.5	0.1	13,816	0.0	1.7	2.4	-19.1	7.7	88.6	16.7	9.8	—	—	—
Grenada	0.8	0.1	13,896	0.0	1.9	2.9	-18.8	7.6	85.1	14.0	—	—	—	B-
St. Kitts and St. Nevis	0.7	0.1	15,573	0.0	1.7	3.6	-21.0	24.3	84.2	29.3	—	—	—	—
St. Lucia	1.2	0.2	12,607	0.0	1.8	2.6	-18.9	13.0	114.9	19.0	20.3	—	—	—
St. Vincent and the Grenadines	0.7	0.1	11,491	0.0	2.4	3.2	-22.0	2.8	87.2	14.4	—	2.9	40.2	B+
Latin America and the Caribbean	**5,613.5**	**567.7**	**11,863**	**100.0**	**3.5**	**6.8**	**-0.2**	**20.7**	**44.0**	**13.7**	—	—	—	—

Sources: Bloomberg Financial; World Bank, World Development Indicators Database; and IMF staff calculations.

[1] Estimates may vary from those reported by national authorities on account of differences in methodology and source.

[2] At market exchange rates, except for Venezuela for which official exchange rates are used.

[3] End-of-period, 12-month percent change.

[4] Exports plus imports in percent of GDP.

[5] Data from Socio-Economic Database for Latin America and the Caribbean (SEDLAC). Poverty is share of population earning less than US$2.50 per day. Data for the U.S. arefrom the U.S. Census Bureau and for Canada is from Statistics Canada.

[6] Median of ratings published by Moody's, Standard & Poor's, and Fitch.

[7] Figures on real GDP growth and CPI inflation for Argentina are based on official data. The IMF has called on Argentina to adopt remedial measures to address the quality of the official GDP and the consumer price index (CPI-GBA) data. The IMF staff is also using alternative measures of GDP growth and inflation for macroeconomic surveillance, including data produced by private analysts, which have shown significantly lower real GDP growth than the official data since 2008, and data produced by provincial statistical offices and private analysts, which have shown considerably higher inflation figures than the official data since 2007.

Table 2.3. Western Hemisphere: Main Economic Indicators[1]

	Output Growth (Percent)					Inflation[2] (End of period, percent)					External Current Account Balance (Percent of GDP)				
	2009	2010	2011 Est.	2012 Proj.	2013 Proj.	2009	2010	2011 Est.	2012 Proj.	2013 Proj.	2009	2010	2011 Est.	2012 Proj.	2013 Proj.
North America															
Canada	-2.8	3.2	2.5	2.1	2.2	0.8	2.2	2.7	2.0	2.0	-3.0	-3.1	-2.8	-2.7	-2.7
Mexico	-6.3	5.5	4.0	3.6	3.7	3.6	4.4	3.8	3.6	3.1	-0.6	-0.3	-0.8	-0.8	-0.9
United States	-3.5	3.0	1.7	2.1	2.4	1.9	1.7	3.0	1.9	1.9	-2.7	-3.2	-3.1	-3.3	-3.1
South America															
Argentina[3]	0.9	9.2	8.9	4.2	4.0	7.7	10.9	9.8	10.3	10.3	2.1	0.6	-0.5	-0.7	-1.1
Bolivia	3.4	4.1	5.1	5.0	5.0	0.3	7.2	6.9	5.0	4.4	4.0	4.9	2.2	1.6	1.1
Brazil	-0.3	7.5	2.7	3.0	4.1	4.3	5.9	6.5	5.0	5.0	-1.5	-2.2	-2.1	-3.2	-3.2
Chile	-0.9	6.1	5.9	4.3	4.5	-1.5	3.0	4.4	3.2	3.0	2.0	1.5	-1.3	-2.4	-2.4
Colombia	1.7	4.0	5.9	4.7	4.4	2.0	3.2	3.7	3.1	3.1	-2.1	-3.1	-2.8	-2.7	-2.4
Ecuador	0.4	3.6	7.8	4.5	3.9	4.3	3.3	5.4	5.7	4.5	-0.3	-3.3	-0.3	0.5	0.6
Guyana	3.3	4.4	4.2	3.9	6.3	3.7	4.5	6.2	4.9	6.2	-9.1	-9.5	-13.7	-12.3	-20.6
Paraguay	-3.8	15.0	3.8	-1.5	8.5	1.9	7.2	4.9	5.0	5.0	0.5	-3.4	-1.2	-3.5	-1.4
Peru	0.9	8.8	6.9	5.5	6.0	0.2	2.1	4.7	2.6	2.3	0.2	-1.7	-1.3	-2.0	-1.9
Suriname	3.5	4.5	4.5	4.9	5.4	1.3	10.3	15.3	7.5	4.0	-1.0	2.0	1.1	-13.0	-15.2
Uruguay	2.4	8.9	5.7	3.5	4.0	5.9	6.9	8.6	7.0	6.0	-0.4	-1.2	-2.2	-3.6	-3.2
Venezuela	-3.2	-1.5	4.2	4.7	3.2	25.1	27.2	25.2	33.4	28.7	2.6	4.9	8.6	7.4	5.6
Central America															
Belize	0.0	2.7	2.5	2.8	2.5	-0.4	0.0	3.8	2.5	2.5	-5.9	-3.1	-1.6	-3.0	-3.9
Costa Rica	-1.0	4.7	4.2	4.0	4.2	4.0	5.8	4.7	6.5	5.5	-2.0	-3.5	-5.2	-5.5	-5.5
El Salvador	-3.1	1.4	1.4	2.0	2.5	0.0	2.1	5.1	4.0	2.8	-1.5	-2.3	-5.9	-4.8	-4.1
Guatemala	0.5	2.8	3.8	3.1	3.2	-0.3	5.4	6.2	5.0	4.5	0.0	-1.5	-2.8	-3.2	-3.4
Honduras	-2.1	2.8	3.6	3.5	3.5	3.0	6.5	5.6	6.3	6.2	-3.7	-6.2	-8.6	-7.8	-6.3
Nicaragua	-1.5	4.5	4.7	3.7	4.0	0.9	9.2	8.0	7.5	7.3	-12.2	-14.4	-17.8	-19.8	-18.7
Panama	3.9	7.6	10.6	7.5	6.6	1.9	4.9	6.3	6.2	5.5	-0.7	-10.8	-12.7	-12.5	-12.4
The Caribbean															
Antigua and Barbuda	-10.3	-8.9	-0.5	1.0	2.5	2.4	2.9	3.9	3.4	3.0	-19.2	-12.9	-10.8	-13.7	-15.5
The Bahamas	-5.4	1.0	2.0	2.5	2.7	1.3	1.6	4.0	1.5	2.0	-11.4	-11.7	-17.0	-18.4	-19.4
Barbados	-4.2	0.2	0.5	0.9	1.5	4.3	6.6	9.5	6.0	5.3	-5.6	-8.2	-8.4	-8.3	-7.1
Dominica	-0.7	0.3	0.5	1.5	1.7	3.2	1.4	4.0	2.0	2.3	-21.3	-21.1	-23.9	-25.6	-19.8
Dominican Republic	3.5	7.8	4.5	4.5	4.5	5.8	6.2	7.8	6.0	5.0	-5.0	-8.6	-7.9	-6.9	-6.7
Grenada	-5.7	-1.3	1.1	1.5	2.0	-2.3	4.2	3.5	2.4	2.2	-24.1	-25.5	-22.9	-24.0	-26.2
Haiti[4]	2.9	-5.4	5.6	7.8	6.9	-4.7	4.7	10.4	8.0	4.9	-3.5	-2.6	-3.5	-4.5	-5.5
Jamaica	-3.1	-1.4	1.5	1.0	1.0	10.2	11.8	6.0	6.9	6.5	-10.9	-8.1	-9.9	-12.5	-12.4
St. Kitts and Nevis	-5.6	-2.7	-2.0	1.0	1.8	1.2	5.0	1.2	2.1	2.5	-25.7	-20.6	-14.0	-18.7	-17.9
St. Lucia	-1.3	3.4	0.2	1.9	2.4	-3.1	4.2	4.8	2.0	2.6	-12.6	-15.2	-17.1	-16.9	-16.0
St. Vincent and the Grenadines	-2.3	-1.8	-0.4	2.0	2.0	-2.2	0.9	4.7	0.7	2.6	-29.4	-31.6	-28.8	-25.1	-22.9
Trinidad and Tobago	-3.3	0.0	-1.3	1.7	2.4	1.3	13.4	5.3	4.0	4.0	8.2	19.9	20.7	20.0	18.2
Memorandum:															
Latin America and the Caribbean	-1.6	6.2	4.5	3.7	4.1	4.8	6.6	6.7	6.3	5.9	-0.6	-1.1	-1.2	-1.8	-2.0
(simple average)	-1.2	3.1	3.5	3.3	3.8	2.7	6.0	6.6	5.6	5.1	-5.9	-6.2	-6.6	-7.7	-7.8
LA-7[5]	-1.8	6.3	4.5	3.7	4.1	5.2	6.8	6.9	6.6	6.2	-0.4	-0.9	-1.0	-1.6	-1.8
Eastern Caribbean Currency Union[6]	-5.7	-2.4	-0.2	1.5	2.2	-0.3	3.2	4.1	2.5	2.5	-20.2	-20.0	-19.9	-21.4	-20.5

Source: IMF staff calculations.
[1]Regional aggregates calculated as PPP-GDP-weighted averages, unless otherwise noted.
[2]End-of-period (December) rates. These will generally differ from period average inflation rates reported in the IMF's, *World Economic Outlook*, although both are based on identical underlying projections.
[3]Figures are based on Argentina's official GDP and consumer price index (CPI-GBA) data. The IMF has called on Argentina to adopt remedial measures to address the quality of the official GDP and CPI-GBA data. The IMF staff is also using alternative measures of GDP growth and inflation for macroeconomic surveillance, including data produced by private analysts, which have shown significantly lower real GDP growth than the official data since 2008, and data produced by provincial statistical offices and private analysts, which have shown considerably higher inflation figures than the official data since 2007.
[4]Fiscal year data.
[5]Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Venezuela (the seven largest economies in Latin America and the Caribbean).
[6]Antigua and Barbuda, Dominica, Grenada, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines, as well as Anguilla and Montserrat, which are not IMF members.

Table 2.4. Western Hemisphere: Main Fiscal Indicators[1]

	Public Sector Revenue (Percent of GDP)					Public Sector Primary Expenditure (Percent of GDP)					Public Sector Primary Balance[2] (Percent of GDP)					Public Sector Gross Debt (Percent of GDP)					
	2009	2010	2011 Est.	2012 Proj.	2013 Proj.	2009	2010	2011 Est.	2012 Proj.	2013 Proj.	2009	2010	2011 Est.	2012 Proj.	2013 Proj.	2008	2009	2010	2011 Est.	2012 Proj.	2013 Proj.
North America																					
Canada	39.2	38.3	38.1	38.1	38.4	40.2	40.1	39.0	38.3	38.1	-1.1	-1.8	-0.9	-0.3	0.3	71.1	83.6	85.1	85.0	84.7	82.0
Mexico	23.6	22.6	22.8	22.2	22.2	25.6	24.4	23.8	22.0	21.7	-1.9	-1.7	-1.0	0.2	0.5	43.1	44.6	42.9	43.8	42.9	42.9
United States	30.9	31.7	31.8	31.9	32.9	41.4	39.4	38.5	37.1	36.2	-10.4	-7.7	-6.7	-5.2	-3.4	76.1	89.9	98.5	102.9	106.6	110.2
South America																					
Argentina[3]	34.3	37.2	36.7	36.4	36.7	34.1	35.5	37.0	36.6	36.4	0.2	1.7	-0.4	-0.2	0.3	58.5	58.7	49.1	44.2	43.3	41.9
Bolivia	36.1	33.2	35.4	36.4	35.7	33.8	30.1	33.3	34.3	34.3	2.3	3.1	2.1	2.0	1.4	37.9	40.5	39.1	32.9	31.5	30.3
Brazil	35.0	36.6	36.2	36.3	36.4	32.9	34.3	33.1	33.2	33.3	2.1	2.4	3.1	3.1	3.1	63.5	66.9	65.2	66.2	65.1	63.1
Chile	20.5	23.3	24.5	23.3	23.2	24.1	23.1	22.7	22.9	22.6	-3.6	0.2	1.8	0.5	0.6	4.9	5.8	8.6	9.9	10.1	9.8
Colombia[4]	26.5	25.9	26.7	27.2	27.1	25.7	26.2	26.0	25.7	25.7	0.8	-0.2	0.7	1.5	1.4	30.8	35.9	36.1	34.7	32.3	32.3
Ecuador	30.2	34.0	40.9	41.4	40.5	33.8	34.9	41.1	41.5	40.2	-3.6	-0.9	-0.2	-0.1	0.3	21.1	15.7	16.1	18.0	18.3	18.1
Guyana[5]	29.3	28.2	32.0	30.1	29.1	31.2	29.2	32.2	30.6	29.6	-1.9	-1.0	-0.2	-0.4	-0.5	61.6	61.2	60.2	61.8	63.4	64.5
Paraguay	23.2	22.0	23.2	24.2	24.0	22.1	20.2	21.8	25.9	25.3	1.2	1.9	1.5	-1.7	-1.3	19.0	18.0	15.0	13.7	13.5	11.9
Peru	18.7	20.0	20.9	20.9	21.0	19.6	19.1	17.9	18.7	19.0	-0.8	0.9	3.0	2.2	2.1	25.2	28.4	24.6	21.6	20.7	19.8
Suriname[6]	29.9	26.7	27.9	26.3	24.3	31.6	29.3	26.8	25.7	24.9	-1.6	-2.6	1.1	0.6	-0.6	17.9	18.5	22.0	20.6	19.8	19.8
Uruguay[7]	31.4	32.2	31.7	32.5	32.7	30.3	30.3	29.6	30.6	30.8	1.1	1.9	2.1	1.9	2.0	63.3	62.7	58.4	54.2	49.0	47.2
Venezuela	24.6	31.1	35.3	36.5	36.8	31.2	33.7	39.0	40.6	40.0	-6.6	-2.6	-3.7	-4.1	-3.2	26.3	33.8	40.2	45.5	51.6	56.8
Central America																					
Belize[8]	27.0	27.4	28.6	27.5	27.5	24.6	25.5	26.4	25.6	25.6	2.4	1.9	2.2	1.8	2.0	79.4	82.2	83.3	80.3	78.1	76.7
Costa Rica[5]	14.0	13.7	13.8	14.7	15.6	15.3	16.8	15.8	16.4	16.7	-1.3	-3.0	-1.9	-1.7	-1.0	24.8	27.2	29.2	30.8	32.4	33.2
El Salvador[7]	15.9	17.3	17.9	18.5	18.9	18.9	19.4	19.8	18.8	18.4	-3.0	-2.1	-1.9	-0.4	0.5	39.3	48.2	50.1	50.8	50.0	49.3
Guatemala[8]	11.1	11.3	11.8	11.8	12.7	12.8	13.1	13.2	12.5	13.1	-1.7	-1.8	-1.3	-0.7	-0.5	20.1	22.9	24.2	24.1	24.8	25.2
Honduras[9]	20.8	20.6	19.1	19.4	18.3	29.0	26.8	25.2	24.3	23.4	-8.2	-6.3	-6.1	-4.9	-5.1	19.8	23.9	26.3	28.1	31.2	31.0
Nicaragua[7]	32.6	32.8	34.6	34.4	33.7	33.2	31.9	32.7	33.7	32.8	-0.5	0.9	1.9	0.7	0.9	76.6	82.1	79.9	72.0	68.7	64.7
Panama[11]	24.5	24.9	24.8	24.4	24.1	22.5	23.5	24.8	24.5	23.5	2.0	1.4	0.1	-0.2	0.6	41.1	43.5	39.2	37.8	36.0	34.4
The Caribbean																					
Antigua and Barbuda[10]	18.5	22.0	20.1	21.6	21.4	29.4	20.2	19.7	23.8	17.9	-10.9	1.8	0.3	-2.2	3.5	63.2	83.7	75.2	74.6	82.4	79.3
The Bahamas[8]	16.5	16.8	17.8	17.5	17.8	19.1	18.9	19.9	20.1	19.8	-2.6	-2.1	-2.2	-2.6	-2.0	32.6	37.9	45.4	48.6	49.9	51.8
Barbados[12]	32.7	35.0	34.7	36.1	36.6	34.9	36.5	33.6	33.5	32.6	-2.2	-1.6	1.1	2.5	4.0	90.9	104.0	116.8	117.3	117.8	116.6
Dominica[10]	36.7	37.3	33.8	32.5	30.8	35.6	39.2	34.3	33.4	30.8	1.1	-1.9	-0.5	-0.9	0.0	64.6	64.5	69.3	69.9	70.7	70.5
Dominican Republic	13.7	13.6	13.2	13.7	13.7	15.3	14.2	13.7	13.6	13.9	-1.6	-0.6	-0.4	0.0	-0.2	24.7	28.4	28.7	29.3	29.9	30.5
Grenada[10]	22.6	24.2	22.4	21.1	20.6	25.6	25.2	24.5	23.7	22.9	-3.0	-1.0	-2.2	-2.6	-2.3	72.6	85.3	86.9	86.6	88.5	90.2
Haiti[8]	17.9	28.4	29.8	29.5	26.1	21.7	25.4	33.1	36.9	31.5	-3.8	3.0	-3.3	-7.3	-5.4	37.8	27.7	17.1	10.6	16.3	19.8
Jamaica[10]	27.1	26.4	25.2	24.7	24.8	21.0	21.8	22.2	21.8	22.4	6.1	4.5	3.0	2.9	2.5	126.4	139.5	141.3	139.0	145.9	148.2
St. Kitts and Nevis[10]	32.6	31.0	37.2	30.3	29.4	28.9	31.9	28.8	26.9	24.8	3.7	-0.8	8.4	3.4	4.6	131.0	148.5	163.6	153.4	151.2	147.3
St. Lucia[10]	27.1	27.1	27.3	26.7	25.9	27.5	28.7	31.7	30.6	27.4	-0.4	-1.6	-4.4	-3.9	-1.4	58.8	63.2	65.3	71.9	76.4	78.5
St. Vincent and Grenadines[10]	29.6	27.3	25.9	27.1	27.6	30.1	30.2	27.4	26.7	26.7	-0.4	-3.0	-1.4	0.4	0.9	57.0	64.9	67.8	71.4	70.4	70.4
Trinidad and Tobago	30.3	34.0	36.6	36.1	35.4	36.6	35.3	34.4	36.8	36.3	-6.3	-1.3	2.2	-0.7	-0.8	24.9	30.8	35.9	32.4	37.3	38.6
ECCU[13]	26.6	27.6	27.3	26.4	25.7	29.5	28.4	27.6	27.8	25.0	-2.9	-0.8	-0.3	-1.4	0.8	73.3	85.5	86.1	86.9	88.6	88.5
Latin America and the Caribbean																					
PPP-GDP-weighted average	**28.9**	**30.6**	**31.0**	**30.7**	**30.7**	**32.8**	**33.6**	**33.6**	**33.1**	**32.9**	**-1.3**	**-0.6**	**-0.3**	**-0.3**	**-0.1**	**47.5**	**50.5**	**50.1**	**50.6**	**49.4**	**48.5**
Simple average	**25.6**	**26.6**	**27.2**	**27.1**	**26.8**	**26.8**	**26.7**	**27.0**	**27.2**	**26.4**	**-1.4**	**-0.3**	**0.1**	**-0.3**	**0.2**	**48.6**	**53.1**	**53.9**	**52.9**	**53.2**	**52.7**

Source: IMF staff calculations.

[1] Definitions of public sector accounts vary by country, depending on country-specific institutional differences, including on what constitutes the appropriate coverage from a fiscal policy perspective, as defined by the IMF staff. All indicators reported on fiscal year basis. Regional aggregates are PPP-GDP-weighted averages, unless otherwise noted.

[2] *Primary balance* defined as total revenues less primary expenditures (thus interest received is included in total revenues).

[3] Federal government and provinces; includes interest payments on an accrued basis.

[4] Nonfinancial public sector reported for revenue, expenditures, and balances (excluding statistical discrepancies); combined public sector including Ecopetrol and excluding Banco de la República's outstanding external debt reported for gross public debt.

[5] Includes central government and social security agency. Gross debt is for the central government only.

[6] Primary expenditures for Suriname exclude net lending.

[7] General government only; data for El Salvador include operations of pension trust funds. Revenues include grants received.

[8] Central government only. *Gross debt* for Belize includes both public and publicly guaranteed debt.

[9] Revenues and Primary Balance exclude interest received.

[10] Central government for revenue, expenditure, and balance accounts; public sector for gross debt.

[11] Fiscal data cover the nonfinancial public sector excluding the Panama Canal Authority.

[12] Overall and primary balances include off-budget and public-private partnership activities for Barbados and the nonfinancial public sector. Revenue and expenditure components of these items are not available and not included in the revenue and primary expenditure estimates.

[13] Eastern Caribbean Currency Union members are Anguilla, Antigua and Barbuda, Dominica, Grenada, Montserrat, St. Kitts and Nevis, St. Lucia, and St. Vincent and the Grenadines. Central government for revenue, expenditure, and balance accounts; public sector for gross debt.

3. The Effects of Global Financial Shocks on Output in Latin America

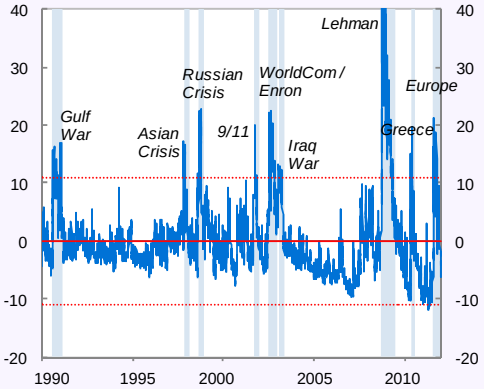
Financial risks continue to loom over the world economy, raising questions about the potential impact on Latin America. This chapter takes an in-depth look at the question of how global financial shocks affect output in this region and other emerging economies by examining the country features that influence their impact, with a special focus on financial integration and fundamentals linked to external and fiscal sustainability. We find that external sustainability, especially exchange rate flexibility, plays a key role in mitigating the effect of global financial shocks. Moreover, the mitigation or amplification effect of deeper financial integration greatly depends on the flexibility of the exchange rate regime.

Episodes of Global Financial Stress

The S&P 500 Chicago Board Options Exchange Market Volatility Index (VIX) has recently gained acceptance as a summary indicator of global uncertainty or financial stress.[1] According to this indicator, during the past two decades the world has experienced periods of global financial stress every 2½ years, on average (Figure 3.1). Whether they originated in advanced economies (e.g., the 9/11 attacks or the collapse of Lehman Brothers) or emerging market economies (e.g., the Asian or Russian financial crises), their global repercussions affected many emerging market economies (EMEs) and small advanced economies (Figure 3.2), through two types of shocks or "knock-on" effects:

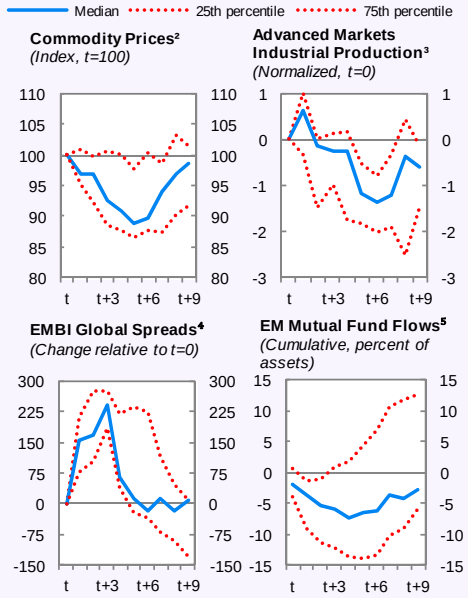
- *Trade shocks (price and quantity).* Excluding those episodes linked to geopolitical tensions in the

Figure 3.1. Global Financial Shocks, 1990-2011[1]
(Deviations of VIX from its trend)



Sources: Haver Analytics; and IMF staff calculations.
[1] An episode is identified if the value exceeds its mean by 1.65 standard deviations (as in Bloom, 2009). Episode window starts and ends when the value crosses the one standard deviation threshold.

Figure 3.2. Key Variables during Episodes of Global Financial Shocks, 1990–2011[1]

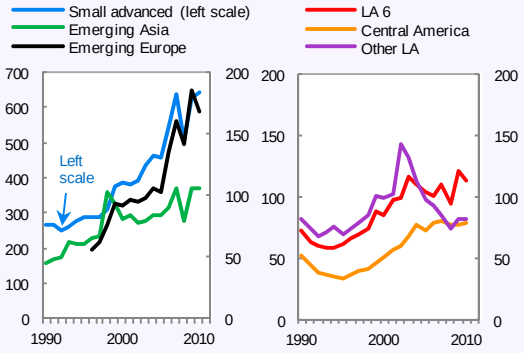


Sources: Haver Analytics; IMF, *International Financial Statistics;* and IMF staff calculations.
[1] Months reported on horizontal axis. *t*=0 is start of the episode as identified in Figure 3.1. Percentiles across episodes are reported.
[2] Broad IMF commodity price index, in real terms, adjusted for exchange rate valuation effects (see Adler and Sosa, 2011).
[3] Change in cyclical component of industrial production. Weighted average for the U.S., Japan, Germany, and France.
[4] EMBI = Emerging Market Bond Index. Excludes Gulf War and Asian crisis events, due to lack of data.
[5] Flows to emerging market (EM) equity and bond mutual funds, in percent of total assets under management. Excludes episodes prior to 2000 due to lack of data.

Note: Prepared by Gustavo Adler and Camilo E. Tovar, with research assistance from Andresa Lagerborg.

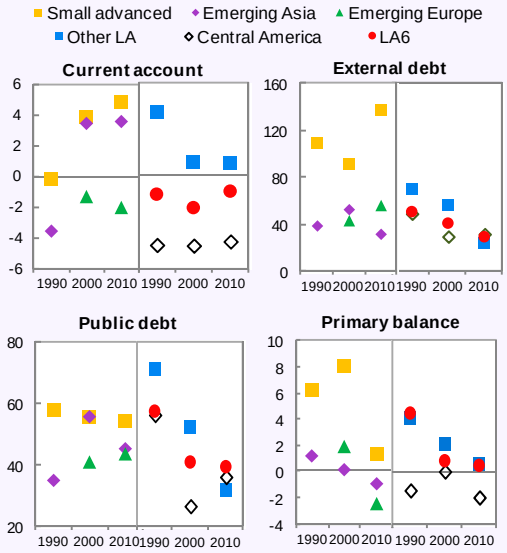
[1] The exact interpretation of spikes in the VIX is still a matter of debate in the academic literature. Bloom (2009), however, shows that the VIX is strongly correlated with measures of uncertainty, including from financial variables. This lends support to its use as a measure of global financial stress. See also Carrière-Swallow and Céspedes (2011).

Figure 3.3. Financial Integration, 1990-2010[1]
(Percent of GDP)



Source: Updated and extended version of the Lane and Milesi-Ferretti (2007) database; and IMF staff calculations.
[1] Foreign assets plus foreign liabilities net of international reserves and official external debt.

Figure 3.4. Macroeconomic Fundamentals, 1990-2010[1]
(Percent of GDP)



Sources: IMF, *World Economic Outlook*; and Lane and Milesi-Ferretti (2007).
[1] Five-year moving averages over sample averages.

Middle East, all episodes of global financial stress were accompanied by sharp falls in commodity prices. Most episodes were also followed by softer external demand (proxied by economic activity in large advanced economies).

- *Financial shocks.* Episodes of global financial stress also were accompanied by a sizable re-pricing of sovereign risk—that is, a widening of Emerging Market Bond Index (EMBI) spreads—and an abrupt slowdown or reversal of capital inflows.

Both channels are likely to have played a role in the transmission of global shocks to EMEs. Trade shocks have an evident impact on Latin America—given its dependence on commodities—and have been the subject of previous study.[2] Thus, this chapter will study only the financial channel and its effects on output fluctuations.

Financial Integration and Macroeconomic Fundamentals: Opposing Forces?

The impact of global financial shocks on any economy depends primarily on two factors: (1) the *degree of financial integration* of that economy with the rest of the world—which would, other things equal, increase sensitivity to those shocks;[3] and (2) the *strength of macroeconomic fundamentals*—which would help to mitigate the effect of the shock on the real economy both by lessening capital outflows, and by buffering the economic impact of a given shock to the capital account.

However, financial integration and macroeconomic fundamentals are not time invariant and have changed significantly in the last two decades in all EMEs and particularly in Latin America.

Latin America has been at the forefront of financial and capital account liberalization, especially between 1985 and 2000, and today stands, with Eastern Europe, as one of the emerging market regions with the fewest barriers to financial flows.[4] Liberalization

[2] For an analysis of the effects of terms-of-trade shocks, see the October 2011 *Regional Economic Outlook: Western Hemisphere* (IMF, 2011c), and Adler and Sosa (2011).

[3] Financial integration is an elusive concept that has been studied from different angles. Two aspects of financial integration are relevant for our discussion: (i) its short- versus long-run effects; and (ii) its measurement. This chapter focuses on short-term vulnerabilities to external financial shocks arising from higher integration, rather than long-term effects—e.g., risk sharing and long-term economic growth. Financial integration is measured as the sum of foreign assets and liabilities (relative to GDP). This allows capturing both the degree of arbitrage between external and domestic financial markets and the potential impact of external shocks on the domestic economy.

[4] Countries in LA6 (Brazil, Chile, Colombia, Mexico, Peru and Uruguay) and in Central America have set the pace for integration

(continued)

has resulted in deeper financial integration with the rest of the world (i.e., a growing stock of foreign assets and liabilities), particularly in the second half of the 1990s (Figure 3.3).

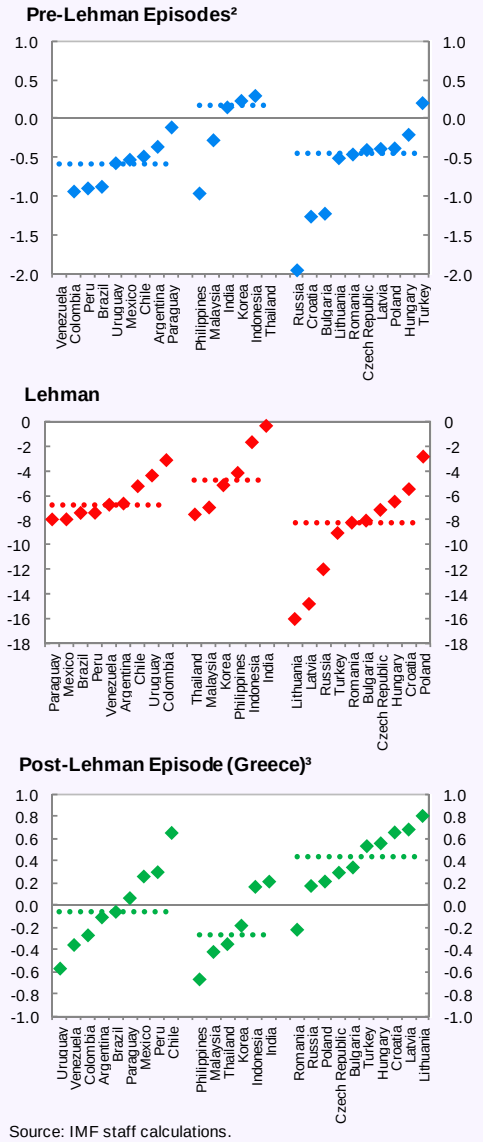
At the same time Latin American countries have strengthened their macroeconomic fundamentals significantly in the last decade, particularly on the external and fiscal fronts (Figure 3.4). Macroeconomic fundamentals also improved in emerging Asia during this period, but this was not the case in emerging Europe.

Progress on these two fronts has likely had opposing and non-negligible implications for the transmission of global financial shocks to emerging market economies. Deeper financial integration may have increased the sensitivity of output to global shocks, whereas better macroeconomic fundamentals would have tended to lessen the impact of such shocks on domestic activity. Thus, assessing the effect of these shocks on output therefore requires a multivariate approach that separates the effect of these two opposing time-varying factors.

Impact of Global Financial Shocks on Domestic Output

We assess the impact of global financial shocks on domestic output of individual economies using a cross-section estimation.[5] The cross section is constructed with quarterly observations for a sample of 49 EMEs and 'small' advanced economies, during seven episodes of global financial stress since 1990.[6]

Figure 3.5 Output Performance during Global Financial Shocks, 1990–2011[1]
(Cumulative)



Source: IMF staff calculations.
[1] Cumulative change in the cyclical component of GDP, in percent of (potential) GDP. Dotted lines reflect regional medians.
[2] Average of different episodes, excluding cases of identified idiosyncratic events: Asian countries (1997), Russia (1998), Brazil (2002), and Uruguay (2001–02).
[3] Greece event of May 2010. The European episode of mid-2011 is not included, because comprehensive GDP data were not available at the time of publication.

The estimation has three distinctive features. First, it defines the dependent variable as the cumulative change in the cyclical component of output (GDP) of every economy in each episode. This measure captures both the depth and duration of each episode (Figure 3.5) and allows us to put aside the question of the long-term relationship between country

within the region, whereas other countries in South America have moved in the opposite direction.

[5] Our approach is somewhat different from most of the literature, because it focuses on VIX shocks and strips out associated trade effects to isolate the financial disturbance. As in Calvo and others (2004); Calvo and Talvi (2005); IMF (2007); and Ocampo (2012), we study the role of fundamentals in determining the impact of such shocks.

[6] Of the nine episodes identified in Figure 3.1, those for Enron and the Iraq War are treated as one, because of their close proximity. In addition, the last event (associated with the European crisis) is dropped because of insufficient data for all the regressions.

Table 3.1 Main Results of Cross-Section Estimation[1]

Dependent Variable:	Output Performance[2]			
	Basic model		Main	Robust-ness
Level				
VIX	-0.176***	-0.047***	0.010	0.008
	(0.018)	(0.017)	(0.028)	(0.034)
Trade shock		0.117***	0.113***	
		(0.019)	(0.020)	
Terms of trade				7.637**
				(3.553)
World GDP				0.945***
				(0.207)
Interaction of VIX with:				
Financial integration			-0.077+	-0.123**
			(0.049)	(0.049)
Current account balance			0.001+	0.001
			(0.001)	(0.001)
Exchange rate flexibility			-0.096**	-0.117**
			(0.046)	(0.050)
External debt			-0.000+	-0.000
			(0.000)	(0.000)
Interaction of VIX with financial integration and:				
Current account balance				
Exchange rate flexibility			0.190***	0.235***
			(0.070)	(0.074)
External debt				
Constant	15.757***	4.015**	3.229*	4.976***
	(1.756)	(1.619)	(1.674)	(1.819)
Observations	337	337	268	268
R -squared	0.418	0.562	0.641	0.571
F	98.24	68.37	23.94	18.98

Robust standard errors in parentheses.
*** p <0.01, ** p <0.05, * p <0.10, + p <0.15

[1] See footnote 8 for an explanation on how to derive the amplification effect of a given fundamental from these estimated coefficients.

[2] Cumulative change of cyclical component of GDP, in percent of trend.

fundamentals and long-term growth.[7] Second, it uses a specification that tests the link between output performance and global financial shocks, while controlling for any effect arising from terms-of-trade and external demand shocks. This is accomplished by including as a regressor a variable that measures the cumulative loss of exports (relative to trend) during the episode.[8,9]

Third, the specification allows the global shock to interact with each country's measure of financial integration as well as with its macroeconomic fundamentals. Moreover, because these two variables may have intertwined effects, the model incorporates an interaction of each of these variables with the VIX.

The macroeconomic fundamentals used as regressors (evaluated at the beginning of each episode) are:[10]

- degree of exchange rate flexibility (following the 'de facto' exchange rate regime classification of Ilzetzki, Reinhart, and Rogoff, 2008);
- measures of external position (current account balance, external debt, net foreign assets and international reserves, as percentages of GDP);
- measures of the fiscal position (public debt and primary balance, as percentages of GDP); and
- deposit dollarization, from Levy Yeyati's (2006) database (augmented for this analysis from various sources).

The results, summarized in Table 3.1, suggest that global financial shocks have a non-linear and significant effect on domestic output that, as conjectured, can be amplified or mitigated by the joint effect of financial integration and macroeconomic fundamentals. Exchange rate flexibility and external sustainability variables appear to be particularly important. Fiscal variables and measures of dollarization, however, were not found to be statistically significant.

[7] The cumulative change in cyclical output is calculated for the duration of the episode and the following two quarters (as long as there is no overlap with a subsequent event), to capture possible lagged effects. The measure encompasses both transitory (cyclical) and permanent (trend) effects. For an analysis of the latter see Cerra and Saxena (2008).

[8] The benchmark model is:

$$y_{i,j} = \beta_0 + \beta_1 \mathrm{Exp}_{i,j} + \beta_2 \mathrm{GFS}_{i,j} + \beta_3 \mathrm{FI}_{i,j} * \mathrm{GFS}_{i,j} + \boldsymbol{\beta}_4' \mathbf{X}_{i,j} * \mathrm{GFS}_{i,j} + \boldsymbol{\beta}_5' (\mathbf{X}_{i,j} * \mathrm{FI}_{i,j}) * \mathrm{GFS}_j + \varepsilon_{i,t}$$

(continued)

in which i and j denote country and episode respectively; $\mathrm{Exp}_{i,j}$ is the cumulative change in de-trended exports; GFS_j is the global financial shock (VIX); $\mathbf{X}_{i,j}$ is the vector of macroeconomic fundamentals at the beginning of each episode; and $\mathrm{FI}_{i,j}$ denotes financial integration. The amplification effect of a given fundamental (x) is, thus, given by $\partial^2 y_{i,j} / \partial \mathrm{GFS}\, \partial \mathrm{x} = \beta_{4,x} + \beta_{5,x} * \mathrm{FI}_{i,j}$.

[9] Because exports are not entirely exogenous, the inclusion of this variable may result in "over-controlling." For robustness, the regressions were also run with terms-of-trade and world GDP as regressors. The results were qualitatively and quantitatively similar.

[10] Other country features (e.g., maturity of external debt, exchange rate misalignment, measures of strength of the financial system, macroprudential policies, and the like) may also play a role, but data limitations preclude their inclusion in the econometric exercise.

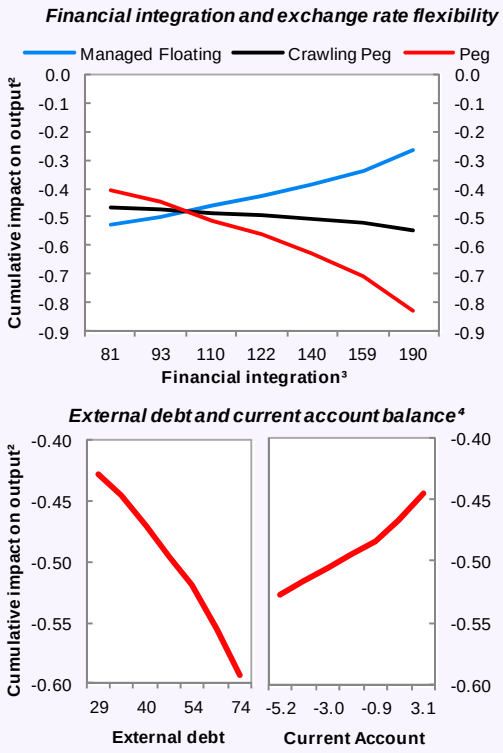
To illustrate the importance of each variable and their interactions, we use the estimated coefficients from the main regression to predict the impact of a global shock for different degrees of financial integration and fundamentals (Figure 3.6).

This exercise shows the following:

- The role of financial integration in mitigating or amplifying financial shocks greatly depends on the country's exchange rate regime. Greater financial integration amplifies the shock under fixed rate regimes but mitigates it under floating regimes.
- At the same time, for most levels of integration, greater exchange rate flexibility reduces the output cost of the global shock. Such mitigation effect is particularly pronounced for high levels of financial integration.
- As would be expected, larger current account deficits make a country more vulnerable, although the effect is of small magnitude.
- Similarly, high levels of external debt make a country more vulnerable to financial shocks, irrespective of the level of financial integration.

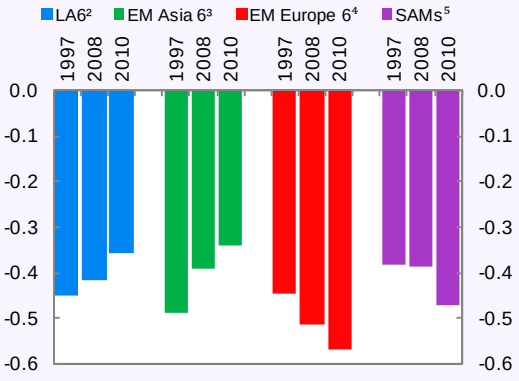
Overall, these results support the notion that financially integrated emerging economies with strong fundamentals (especially exchange rate flexibility) are better equipped to cope with global financial shocks than countries where fundamentals are weak or that have fewer financial linkages. Although not analyzed in detail here, because of data limitations, the buffering effect provided by strong fundamentals probably operates in two ways: first, by mitigating capital outflows if an adverse global shock were to occur (Box 3.1); and second, by lowering the economic impact of any resulting capital outflows.

Figure 3.6. Macro Fundamentals and the Impact of Global Shocks[1]



Source: IMF staff calculations.
[1] Impact of 10-point VIX shock for different levels of financial integration and fundamentals (other variables unchanged, at median EM value).
[2] Cumulative deviations from trend output in percent of trend.
[3] Total foreign assets plus total foreign liabilities, as percent of GDP. Reported levels correspond to deciles 20–80.
[4] Percent of GDP. Levels correspond to deciles 20–80.

Figure 3.7. Impact of Global Shock[1]
(Output effect of a 10-point VIX shock)



Source: IMF staff calculations.
[1] Estimated impact, evaluated for value of fundamentals before Asian crisis, Lehman crisis and Greece event. Median value of fundamentals for each group is used.
[2] Brazil, Chile, Colombia, Mexico, Peru, and Uruguay.
[3] India, Indonesia, Korea, Malaysia, Philippines, and Thailand.
[4] Bulgaria, Czech Republic, Hungary, Poland, Romania, and Russia.
[5] Australia, Canada, Finland, Hong Kong, Israel, New Zealand, Norway, Singapore,and Sweden.

Simulation Analysis

We use the parameters of the main regression in Table 3.1 to illustrate the differences in the impact across regions and time (Figure 3.7). These simulations take as input the values of macroeconomic fundamentals and financial integration corresponding to 1997Q2 (just before the Asian financial crisis), 2008Q2 (just before Lehman), and 2010Q1 (just before the Greek event).

The simulations show that, although still large, output costs of global financial shocks in Latin America seem to have declined in the past 15 years. This increased resilience is broadly in line with the results obtained for other emerging market regions. The exception is eastern Europe, where countries seem to have become more vulnerable to global financial shocks.

Conclusions

Our results show that, although Latin America is still vulnerable, the impact of external financial shocks on the region appears to have declined somewhat over time. Improved macroeconomic fundamentals seem to have offset the effect of deeper financial integration with the rest of the world. Macroeconomic fundamentals related to external sustainability, especially exchange rate flexibility, appear to be particularly important in mitigating the effect of global financial shocks, both by discouraging capital outflows and by buffering the economic impact of any resulting capital account shock (see Box 3.1).

Box 3.1: Macroeconomic Fundamentals and Balance-of-Payments Pressures

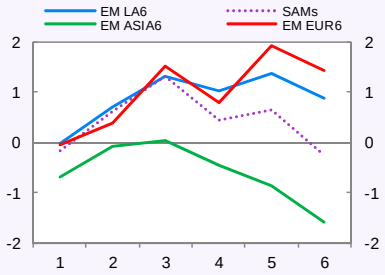
Strong macroeconomic fundamentals can help buffer the impact of global financial shocks on domestic output, on the one hand, by mitigating capital outflows, and, on the other hand, by helping the economy adjust smoothly to the capital account shock.

To gauge the importance of the first effect, we construct a measure of exchange rate market pressure (EMP)—comprising changes in central bank's net foreign assets and in the nominal exchange rate vis-à-vis the U.S. dollar—and assess, using the same cross-section of countries and episodes considered in the main text and a similar specification, whether macroeconomic fundamentals can explain differences in balance-of-payment pressures (as proxied by the EMP, after controlling for the effect of associated trade shocks) during periods of global financial stress.

We find evidence that economic fundamentals play a role in mitigating capital account pressures following global shocks. In particular, countries with stronger fundamentals, especially those related to external sustainability (current account balance, capital account openness, international reserves), appear to face less pressure.

Exchange Rate Pressures during Global Financial Shocks, 1990-2011[1]

(Exchange rate pressure index, medians)



Source: IMF staff calculations.
[1] Medians across countries and episodes, excluding idiosyncratic crises. Months from the beginning of episode are reported on horizontal axis. See Adler and Tovar (forthcoming) for further details. Country groupings same as in Figure 3.7.

Fundamentals and BOP Pressures[1]

Dependent variable:	*EMP [2]*
Variable	
VIX	-0.010
	(0.015)
Trade shock	-0.041***
	(0.010)
Interaction of VIX with:	
Financial integration	-0.019+
	(0.012)
Current account balance	-0.001**
	(0.000)
Capital account openness	-0.003+
	(0.002)
International reserves	-0.001**
	(0.000)
Constant	2.198*
	(1.225)
Observations	313
R -squared	0.195
F	7.865

[1] Econometric result of a model similar to the one explained in footnote 8 of the main text, but using EMP as dependent variable. Robust standard errors in parentheses. *** p <0.01, ** p <0.05, * p <0.10, + p <0.15
[2] Higher values of the EMP index indicate stronger depreciation pressures.

4. Spillovers from Large Neighbors in Latin America

Latin America's economic landscape is characterized by the presence of two large countries (Brazil in the south and Mexico in the north) with the potential to affect smaller neighboring economies significantly. This chapter documents trade linkages between these two large countries and their neighbors, and quantifies the economic impact of shocks stemming from these large economies. Results show important spillovers from Brazil to some of its neighbors, but not others. The analysis also finds that spillovers take place through the transmission of Brazil-specific shocks, as well as through Brazil's amplification of global shocks. Central America's trade linkages with Mexico are very weak, suggesting that real spillovers from the latter are small.

Introduction

Business cycles in Latin American economies have historically been highly correlated with those of the two largest economies in the region—Brazil in the south and Mexico in the north (Table 4.1). These high correlations suggest that an output shock in either of these countries could have a significant impact on neighbors' output.[1] Such correlations, however, could also reflect common global shocks (such as to commodity prices,[2] international financial conditions, global demand, or—in Mexico and Central America—U.S. economic conditions) as well as similar policy responses to those shocks.

A closer look at trade linkages between the two large countries and their neighbors suggests limited transmission channels for real spillovers in the majority of countries:[3]

Table 4.1. Business Cycle Comovement with Large Neighbors, 1990:Q1–2011:Q4[1]

	Cross-correlations of GDP cycle in period *t* and large neighbor's GDP cycle in period				
	t-2	*t-1*	*t*	*t+1*	*t+2*
South America (large neighbor: Brazil)					
Argentina[2]	0.37	0.42	**0.43**	0.41	0.36
Bolivia	**0.59**	0.57	0.51	0.38	0.23
Chile	0.58	0.65	**0.65**	0.58	0.48
Colombia	0.59	0.66	**0.69**	0.67	0.62
Ecuador	0.33	**0.35**	0.32	0.24	0.13
Paraguay[2]	0.57	0.72	**0.76**	0.61	0.39
Peru[2]	0.75	0.85	**0.87**	0.75	0.62
Uruguay	0.41	0.44	0.47	**0.48**	0.45
Venezuela[2]	**0.48**	0.47	0.44	0.38	0.32
Central America (large neighbor: Mexico)					
Costa Rica	0.63	**0.65**	0.64	0.58	0.47
Dominican Rep.	0.29	0.34	0.37	**0.39**	0.37
El Salvador	**0.40**	0.36	0.28	0.18	0.07
Guatemala[2]	0.58	**0.61**	0.60	0.41	0.16

Source: IMF staff calculations.

[1] Cyclical components of GDP obtained using the Hodrick-Prescott filter. Figures in bold denote the highest correlation for each row.

[2] Sample period begins in 1992 (Argentina), 1993 (Peru, Venezuela), 1994 (Paraguay), and 2001(Guatemala).

- South America has experienced a marked increase in intraregional trade integration during the past decade—along with overall trade opening—but Brazil's contribution to the process has been small (Figure 4.1). As a result, its share in the exports of the neighboring countries reverted to levels last seen in the early 1990s.
- Within South America, however, the story varies by country. Southern Cone economies (Argentina, Bolivia, Paraguay, and Uruguay, and to a lesser extent Chile) have maintained a relatively high trade exposure to Brazil, despite some fluctuations in the past two decades.[4] In

Note: Prepared by Gustavo Adler and Sebastián Sosa, with research assistance from Alejandro Carrion.

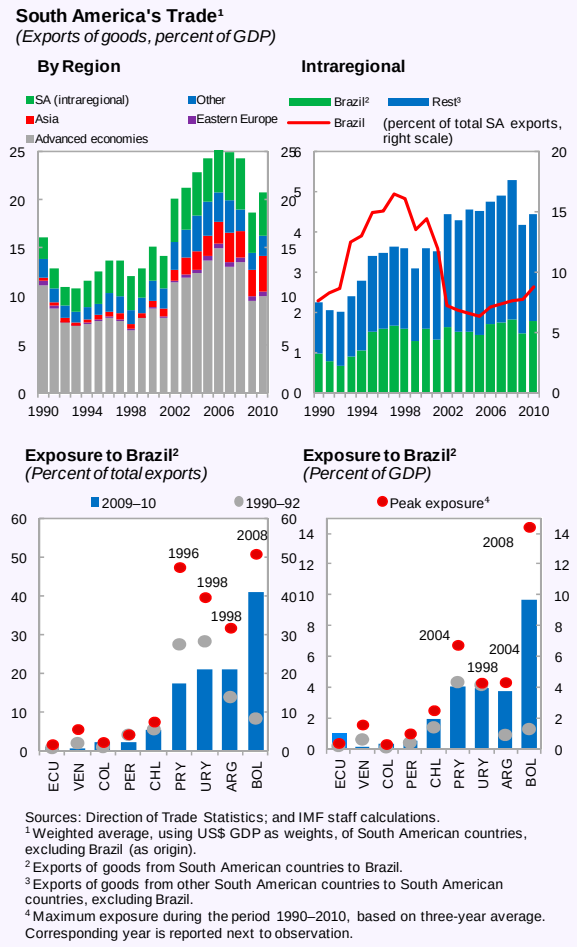
[1] Consistent with this interpretation, cross-correlation coefficients suggest that Brazil's and Mexico's cycles either co-move with or lead those of most neighboring countries.

[2] Adler and Sosa (2011) document the degree of commodity dependence in Latin America.

[3] The analysis focuses on exports of neighboring countries to Brazil and Mexico.

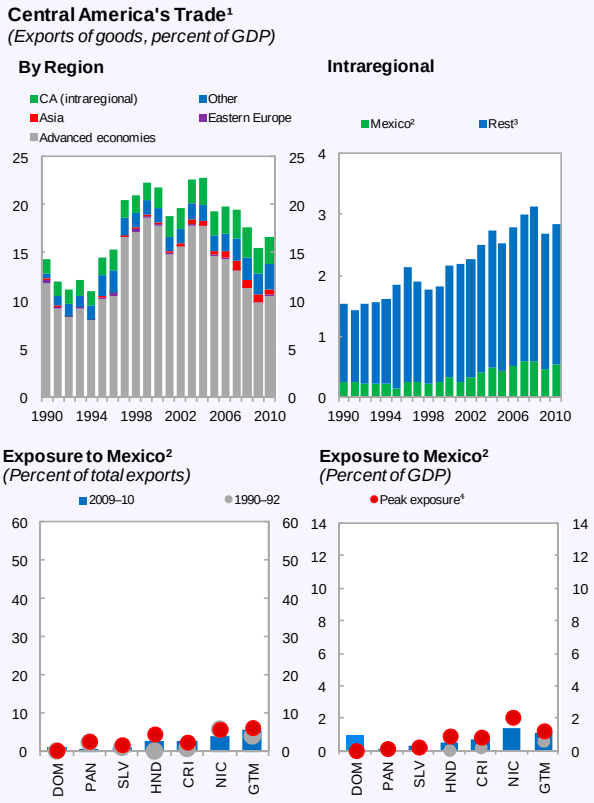
[4] Trade integration with Brazil increased in the 1990s, in part because of the creation of Mercosur, a regional trade agreement with Argentina, Paraguay, and Uruguay. During the past decade, however, Southern Cone trade with Brazil—with the exception of Bolivia—has declined.

Figure 4.1. South America: Intraregional Trade and Exposure to Brazil, 1990–2010



Sources: Direction of Trade Statistics; and IMF staff calculations.
[1] Weighted average, using US$ GDP as weights, of South American countries, excluding Brazil (as origin).
[2] Exports of goods from South American countries to Brazil.
[3] Exports of goods from other South American countries to South American countries, excluding Brazil.
[4] Maximum exposure during the period 1990–2010, based on three-year average. Corresponding year is reported next to observation.

Figure 4.2. Central America: Intraregional Trade and Exposure to Mexico, 1990–2010



Sources: Direction of Trade Statistics; and IMF staff calculations.
[1] Weighted average, using US$ GDP as weights, of Central American countries, excluding Mexico (as origin).
[2] Exports of goods from Central American countries to Mexico.
[3] Exports of goods from other Central American countries to Central American countries other than Mexico.
[4] Maximum exposure during the period 1990–2010, based on three-year average.

Colombia, Ecuador, Peru, and Venezuela, trade with Brazil has always been, and remains, small.

- Trade within Central America and with Mexico also has increased during the two past decades, although total trade (as a percentage of GDP) has been on a downward trend since the late 1990s. Still, Mexico's contribution to intra-regional trade has been limited, and trade exposures to this country (as percentages of total exports and of GDP) remain very low (Figure 4.2).

Weak trade linkages between large neighbors and the Central American and Andean countries provide a priori evidence that real spillovers from these large economies are small. However, trade linkages are significant between Brazil and its Southern Cone neighbors, and spillovers may be important.[5]

We investigate this question in the rest of this chapter. The analysis requires controlling for common external factors that may be important for economic cycles across countries in the region. Thus, disentangling the spillover effects from large neighbors must be done within a multivariate setting.

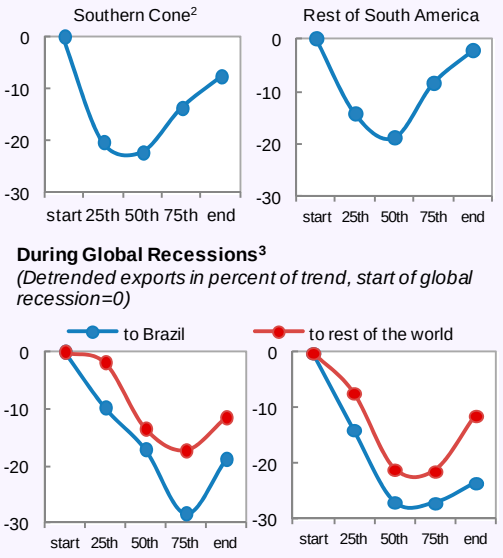
[5] Direct financial ties (e.g., cross-border bank lending and portfolio and foreign direct investment links) across the region are very limited.

Real Spillovers from Brazil—A VAR Approach

A close look at exports to Brazil from the Southern Cone countries provides some insights into how spillovers may operate (Figure 4.3).

- As expected, exports to Brazil appear quite sensitive to that country's economic cycle, suggesting that Brazil-specific shocks are likely to be important.
- Interestingly, neighbors' exports to Brazil appear to suffer significantly during *global* recessions, with exports to Brazil underperforming relative to those countries' exports to the rest of world. This suggests that Brazil may amplify global shocks.

Figure 4.3. Export Performance of Brazil's Neighbors, 1990–2011



Sources: Direction of Trade Statistics; and IMF staff calculations.
[1] A slowdown is defined as a recession if the negative domestic demand gap is at least one standard deviation of the domestic demand cycle (2.2 percent of potential domestic demand). Length of each recession normalized to a 0 (start) –100 (end) scale.
[2] Includes Argentina, Bolivia, Chile, Paraguay, and Uruguay.
[3] Recessions defined as in Adler and Sosa (2011).

In line with this evidence, we estimate country-specific vector auto regressive (VAR) models to quantify Brazil's spillovers to its Southern Cone neighbors, focusing on two types of channels: those resulting from Brazil-specific shocks, and those from the amplification of global shocks, through their impact on Brazil. This approach allows us to determine the relative importance of Brazil as a source of output fluctuations in neighboring countries.

Each country-specific VAR includes a set of global factors (demand, financial conditions, and commodity prices), Brazil's GDP, and domestic GDP.[6] The specifications for Bolivia, Chile, Paraguay, and Uruguay also include Argentina's GDP, because this country may also be a source of spillovers for the smaller economies. The model is estimated using quarterly data for the period 1990Q1–2011Q4.[7]

Brazil-Specific Shocks

The results provide some interesting insights:

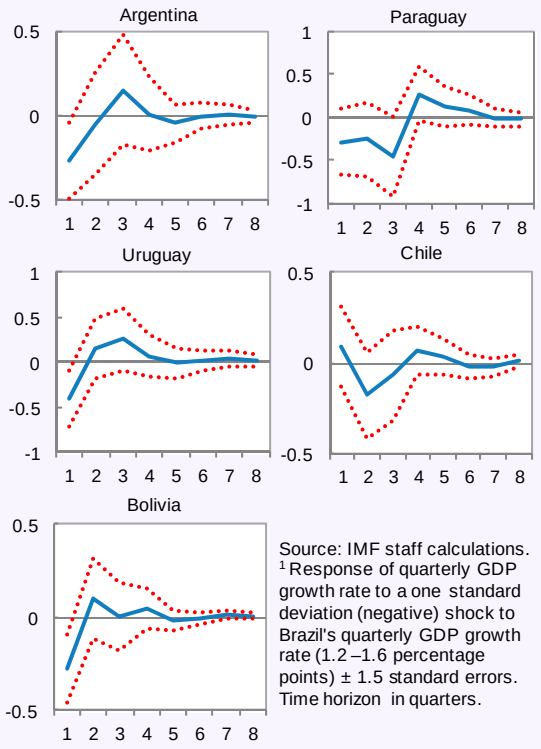
- Even after controlling for common global factors, Brazil-specific output shocks have a significant impact on its Southern Cone neighbors, especially within Mercosur (Figure 4.4). Moreover, those shocks are transmitted fairly quickly—with most of the impact taking place within the same quarter

[6] Global demand is proxied by (purchasing-power-parity-adjusted) real GDP of the Group of Seven countries and China; international financial conditions are proxied by the Chicago Board Options Exchange Market Volatility Index (VIX); and commodity prices are measured by a broad price index (in real terms and stripped of exchange rate effects, as in Adler and Sosa, 2011).
[7] All the variables are expressed in log levels, and the model is estimated in first differences (except the VIX, which is expressed in levels), using two lags. Structural parameters are identified by Choleski decomposition. The ordering, from more exogenous to more endogenous variables, is as follows: first, the global variables; second, the regional variables (Brazil's and Argentina's GDP); and finally domestic output. Results are robust to different orderings within the group of global variables. For more details, see Adler and Sosa, forthcoming.

(except in Chile, where the effects are small and transmitted with a one-quarter lag).[8]

- The cumulative impact of Brazil-specific shocks (Table 4.2) is very strong in Paraguay, where a 1 percentage-point decrease in Brazil's growth reduces output (at the peak) by 0.9 percent. The effect is markedly smaller, albeit still significant, in Argentina, Bolivia, and Uruguay (with peak cumulative impacts of about ¼ percent), and even lower in Chile.

Figure 4.4. Output Response to a Negative Shock to Brazil's Output[1]



Source: IMF staff calculations.
[1] Response of quarterly GDP growth rate to a one standard deviation (negative) shock to Brazil's quarterly GDP growth rate (1.2 –1.6 percentage points) ± 1.5 standard errors. Time horizon in quarters.

Amplification of Global Shocks

To detect possible spillovers from Brazil's amplification of global shocks, we follow a methodology proposed by Bayoumi and Swiston (2008). The methodology requires estimating a second set of VARs that include Brazil's GDP as an exogenous variable.

In that specification, the estimated output response to a global shock would capture only that shock's direct impact (not the indirect effect through Brazil). Brazil's amplification effect can be gauged by the difference between the responses to the global shocks in the two models. This amplification effect encompasses (1) the sensitivity of Brazil's output to global shocks and (2) the effect of that output response in Brazil on its neighboring country.

Table 4.2. Cumulative Impact on Output
(Percent)

		Shock to		
		VIX (10 units)[1]		Brazil's GDP
Country	Horizon	Total impact	Of which Brazil's spillovers	(1 percentage point)[2]
Argentina	peak effect	-3.05	-0.54	0.24
	at 8 quarters	-3.04	-0.46	0.16
Paraguay	peak effect	-1.84	-0.50	0.86
	at 8 quarters	-1.03	-0.08	0.47
Uruguay	peak effect	-2.07	-0.60	0.26
	at 8 quarters	-2.07	-0.53	-0.09
Bolivia	peak effect	-0.83	-0.27	0.21
	at 8 quarters	-0.83	-0.22	0.10
Chile	peak effect	-3.11	-0.37	0.10
	at 8 quarters	-3.11	-0.26	0.06

Source: IMF staff calculations.
[1] Equivalent to 2.1 standard deviations.
[2] Equivalent to 0.7 standard deviations.

The results suggest that Brazil indeed amplifies global shocks, particularly financial ones, in most Southern Cone countries (Figure 4.5). While an adverse financial shock (measured by changes in the VIX) tends to have a negative impact on output in these countries,[9] a non-negligible fraction of this effect may be attributed to its indirect effect—through its impact on Brazil's GDP.[10] More specifically, according to the estimations, a 10-unit increase in the VIX would lead to a cumulative output decline (at the peak) due to the Brazilian "knock-on" effect, of 0.5–0.6 percent in Argentina,

[8] Results for Bolivia should be interpreted with caution, because its exposure to Brazil changed markedly over the period of analysis (Figure 4.1), and trade linkages mostly reflect gas exports, which are governed by long-term contracts, with minimum volumes.

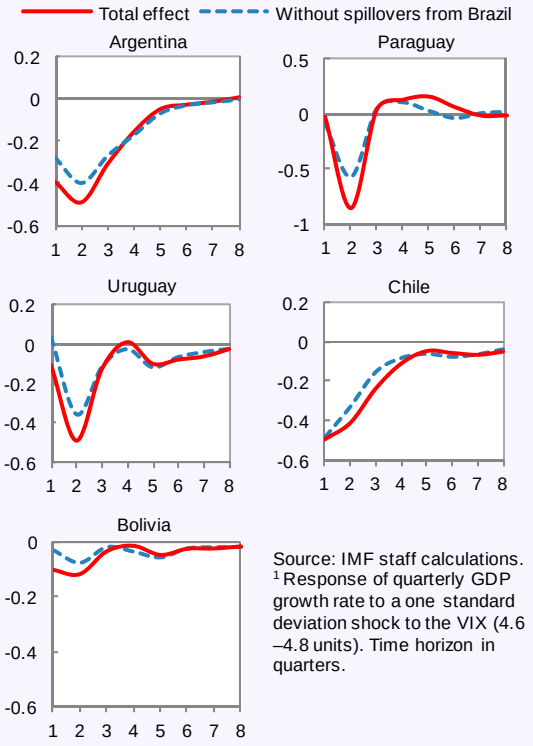
[9] The effect in Bolivia is relatively small, probably reflecting its low degree of financial integration.

[10] Results also point to amplification effects of other global shocks (global demand and commodity prices).

Paraguay, and Uruguay (Table 4.2). The impact is smaller in Bolivia and Chile.

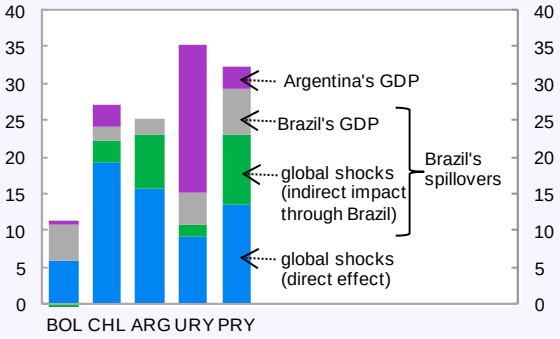
Spillovers from Brazil as a source of output fluctuations in its neighboring countries are also evident from a simple variance decomposition analysis (Figure 4.6). Brazil's spillovers account for a large fraction of GDP variance in Paraguay (16 percent) and Argentina (10 percent). In Uruguay, spillovers also are non-negligible (6 percent), but they play a much more limited role than spillovers from Argentina.

Figure 4.5. Output Response to a VIX Shock: Brazil's Amplifying Role[1]



Source: IMF staff calculations.
[1] Response of quarterly GDP growth rate to a one standard deviation shock to the VIX (4.6 –4.8 units). Time horizon in quarters.

Figure 4.6. Variance Decomposition of Output



Source: IMF staff calculations.
[1] For a horizon of eight quarters.

Conclusions

Southern Cone countries (Argentina, Bolivia, Chile, Paraguay, and Uruguay) have relatively high trade exposures to Brazil and are subject to spillovers from its large economy. Econometric estimates confirm that output in these countries (especially Mercosur's members) is affected by both output shocks stemming from Brazil and by Brazil's amplification of global shocks. The latter is particularly relevant at the current juncture, in light of the downside risks to the global outlook.

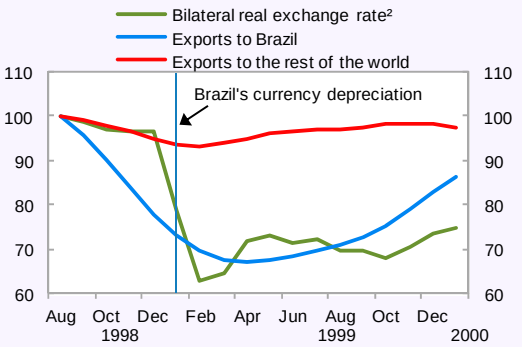
Neighbors in the Andean region (Colombia, Ecuador, Peru, and Venezuela) trade very little with Brazil. Mexico, the other large country in the region, has surprisingly small trade linkages with Central American economies. Weak trade (and financial) linkages suggest that business cycle synchronization with the large neighbors in Andean countries and in Central America mainly reflects the effect of common external shocks rather than spillovers from those large regional economies.

Box 4.1. Are Depreciations of Brazil's Currency Harmful to Its Trading Partners?

Policymakers—and private analysts—in the region, particularly in the Southern Cone, often express concern about the potential impact of a large depreciation of the Brazilian *real* on their economies, especially in countries with limited exchange rate flexibility. Such concerns hinge on the effect that a pronounced movement of the bilateral real exchange rate could have on exports to Brazil.

The sharp real depreciation of the Brazilian *real* in January 1999 provides a clear example that permits an assessment of the impact of such events on Brazil's trading partners. The performance of exports to Brazil suggests that such events could actually have a positive impact on its neighbors (see Figure), seeing that exports to Brazil collapsed before the depreciation and recovered afterward. This response may reflect expansionary effects on domestic output and demand in Brazil that are stronger than the substitution effect arising from movements in the bilateral exchange rate. This pattern holds even for trading partners that were unable to adjust their exchange rates in response to Brazil's depreciation, indicating they experienced sharp movements in bilateral real exchange rates.[1] A VAR specification similar to the one presented in the main text, but including real exchange rates of both countries, points to the same result (for details, see Adler and Sosa, forthcoming).

Real Exchange Rate Depreciation in Brazil: Export Performance in Southern Cone Neighbors
(Exports in US$, August 1998 =100)[1]



Sources: Direction of Trade Statistics; and IMF staff calculations.
[1] Simple average of Argentina, Chile, Paraguay, and Uruguay.
[2] A decline reflects a real depreciation of the Brazilian real with respect to the other countries' currencies.

[1] For a country with a flexible exchange rate regime—which can mimic the depreciation of the *real* with respect to the U.S. dollar, thus maintaining an unchanged bilateral exchange rate—a depreciation of the *real* would be unequivocally beneficial because only the expansionary effect would operate.

5. Keeping an Eye on Housing Markets in Latin America

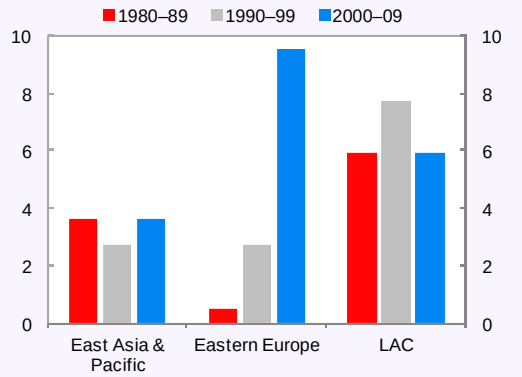
Mortgage credit across Latin America is growing very fast, albeit from a low base. Although risks do not seem imminent based on available data, vulnerabilities can rapidly emerge. For this reason, countries in the region should act decisively to close information gaps and strengthen oversight of the housing sector.

Easy financing conditions and favorable terms of trade have fueled credit and domestic demand in much of Latin America for almost a decade now, with a short interruption during the 2008–09 global crisis. Given the region's long history of credit booms gone wrong (Figure 5.1), there are valid concerns about the potential buildup of financial sector excesses, even if current credit indicators appear manageable. Experience shows that credit-driven bubbles build slowly but can sour quickly.

Mortgages in particular have expanded rapidly in some countries. Although this growth may reflect generally low mortgage credit levels and significant housing deficits,[1] if sustained it could create financial instability. Housing market crashes have been rare in the region, but Colombia's experience in the late 1990s is a useful reminder of the systemic effects that even a small mortgage sector can have on the economy (Box 5.1).

This chapter documents developments in mortgage credit and the housing sector in Latin America during the past decade, and compares them with those in other emerging economies. Unfortunately, data limitations hamper the analysis of trends, vulnerabilities, and risks. Available information reveals few areas for concern, but information shortcomings and data gaps urgently need to be addressed.[2]

Figure 5.1. Latin America has experienced more episodes of credit booms than other emerging regions since 1980.



Source: Dell'Ariccia and others (2012).
[1] Credit booms are identified based on deviations of credit-to-GDP ratio from a country-specific, backward-looking, rolling trend.

Mortgage Credit in Latin America

Despite rapid credit growth in recent years, financial intermediation levels in most of Latin America (with the notable exception of Chile) remain well below those of other emerging regions, even after accounting for income per capita. This gap reflects the region's long history of macroeconomic instability (often associated with credit booms and busts), as well as weak institutions, in particular those related to creditor and property rights, (Cottarelli and others, 2005). Underlying the relatively low credit-to-GDP levels is the shallowness of mortgage markets. Mortgage credit in Latin America stands at about 7 percent of GDP, on

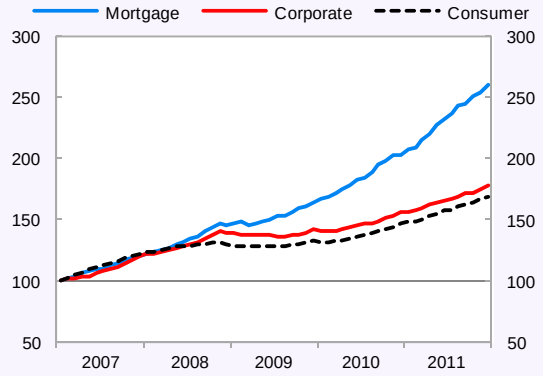
Note: Prepared by Luis Cubeddu, Camilo E. Tovar, and Evridiki Tsounta, with the assistance of Marola Castillo and Alejandro Carrion.

[1] In 2007, only 60 percent of families in Latin America and the Caribbean (LAC) had adequate housing; 22 percent lived in houses that required significant structural improvements; and the remaining 18 percent were in need of a new home (Ministerial Commission on Housing and Urbanization for Latin America and the Caribbean).

[2] IMF (2011a) discusses mortgage markets in emerging economies more broadly.

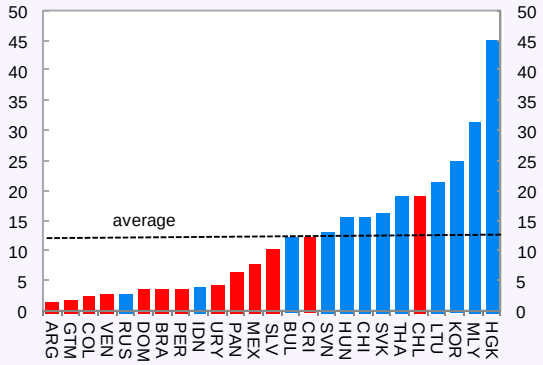
Figure 5.2. Despite its recent growth, mortgage credit in Latin America (as a share of GDP) remains relatively low.

Private Sector Credit by Market Segment[1]
(Index, 2007 = 100)



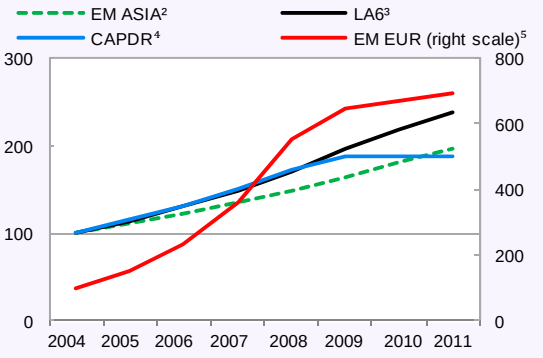
Sources: National authorities; and IMF staff calculations.
[1] In real terms. Simple average of Brazil, Chile, Colombia, Mexico, Peru, and Uruguay.

Emerging Economies: Mortgage Credit to GDP
(Average of 2010–11)



Sources: Haver Analytics; national authorities; and IMFstaff calculations.

Emerging Economies: Real Mortgage Credit Index[1]
(*Index, 2004 = 100*)



Sources: Haver Analytics; national authorities; and IMF staff calculations.
[1] Last data observation is 2011:Q3.
[2] China, Hong Kong SAR, Indonesia, Korea, Malaysia, and Thailand.
[3] Brazil, Chile, Colombia, Mexico, Peru, and Uruguay.
[4] Costa Rica, Dominican Republic, El Salvador, Guatemala, and Panama.
[5] Bulgaria, Hungary, Lithuania, Russia, Slovak Republic, and Slovenia.

average, and the share of mortgage credit to total credit (at 22 percent) is below that of other emerging economies (Figure 5.2).

During the past decade, however, much of the region has experienced unprecedented expansions in mortgage credit. Favorable external conditions, sustained economic growth, stronger fundamentals, and legal reforms have raised living standards and improved financing conditions, helping to unleash housing finance. Real mortgage credit in the more financially integrated economies of the region (Brazil, Chile, Colombia, Mexico, Peru, and Uruguay) has grown by an annual average of 14 percent since 2003, and was less affected by the 2008-09 global financial crisis than other sectors (such as consumption and corporate credit). Growth in mortgage credit has been particularly strong in Brazil, where the inflation-adjusted stock of mortgage loans has increased seven-fold since 2003.

Structural reforms in property and credit markets as well as government efforts to broaden access to credit have been critical. Both Brazil (2005) and Mexico (2007) enacted bankruptcy reforms to strengthen creditor rights,[3] and overhauled their credit registries to enable banks to better gauge the credit worthiness of debtors.[4] In addition, Brazil (where ¾ of all housing credit has been provided by state-owned banks) relied extensively on mortgage credit subsidies; and Mexico provided mortgage insurance and guarantees through a government agency to support the residential mortgage-backed securities market. The expansion of mortgage credit in Latin America has also gone hand in hand with the growth of domestic bond markets in local currency and the lengthening of the term structure of yield curves (which in some cases reached 20–30 years) (see Jeanneau and Tovar, 2008).

[3] Since its inception in 2000, the insolvency law in Mexico has been used on very few occasions.
[4] Warnock and Warnock (2008) show that housing finance is positively correlated with the enforceability of legal rights, as well as with the existence of systems to assess credit risk.

Data Gaps

Data on housing prices and activity are particularly weak in the LAC region, despite recent progress. Only Brazil, Chile, Colombia, Mexico, Peru, and Uruguay publish housing price data, but even in some instances these time series are short, and coverage is limited to large metropolitan areas.[5] Little information on the stock and flows of housing, as well as on construction activity, is available (see Table 5.1).

Supervisory authorities across the region are just starting to set up the infrastructure to maintain current information on housing-specific financial soundness indicators and household balance-sheet data.[6] The latter is critical for assessing credit risks based on leverage ratios and meaningful affordability indicators. Progress on this issue also lags behind that in other regions.

Lack of comprehensive time series on house prices is perhaps the most serious shortcoming for monitoring and assessing housing market developments. Home price data series should have national coverage and distinguish between new and existing homes, as well as between commercial and residential real estate. Those series should be complemented by information on the stock and flows of housing, as well as on construction activity (including employment, price of inputs, and land prices). Good data on housing transactions are also necessary.

Making the Most of Imperfect Data

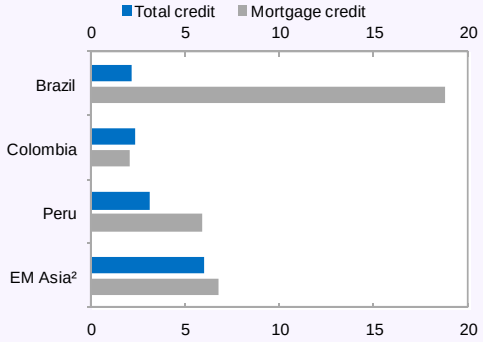
Notwithstanding severe shortcomings in the data, policymakers in the region still need to know

[5] Housing prices in the region are often published by a wide variety of agencies, which makes cross-country comparisons more cumbersome.

[6] Brazil, Chile, and Colombia have household financial or expenditure surveys aimed at collecting micro-data about households' real and financial assets. The data provide a picture of credit access and debt concentration among different household income segments, improving the assessment of credit risk and the implications of household debt for financial stability (see Persson, 2009).

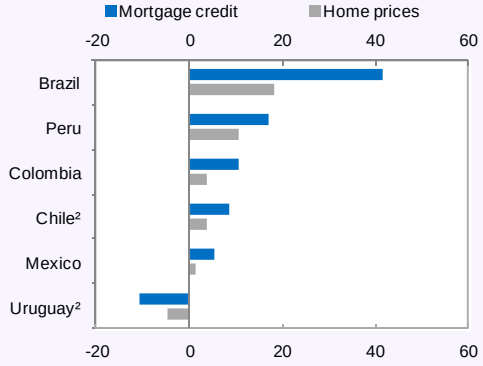
Figure 5.3. Mortgage credit, housing prices, and construction activity in selected countries.

Episodes of Real Credit Surges [1]
(Maximum deviation since mid-2009, percent)



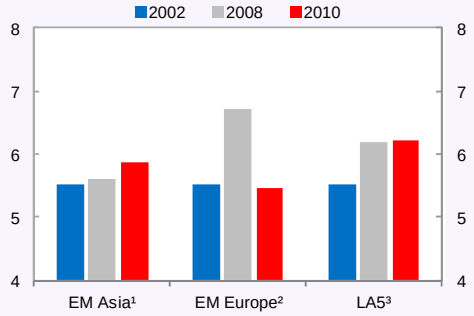
Source: IMF staff calculations based on national sources.
[1] Estimates based on end-adjusted rolling Hodrick-Prescott filters estimated using monthly data since 2000 when available. The smoothing parameter, λ, was set at 129600, and the filter was rolled month-over-month with the seed set in January 2006. In countries where sample size was an issue, the seed was adjusted accordingly. The threshold is defined to be 1.5 times the standard deviation of the level relative to trend.
[2] Average of sample includes China, Hong Kong SAR, Indonesia, Korea, Malaysia, and Thailand.
EM = emerging market.

Real Mortgage Credit and Housing Prices[1]
(*12-month percent change, average of 2010–11*)



Sources: Global Property Guide; Haver Analytics; national authorities; and IMF staff calculations.
[1] All data expressed in local currency and deflated by CPI.
[2] Includes 2010 only.

Size of Construction Sector
(*Percent of GDP*)



Sources: Haver Analytics; and IMF staff calculations.
[1] Average of China, Hong Kong SAR, Indonesia, Korea, Malaysia, and Thailand.
[2] Average of Bulgaria, Hungary, Lithuania, Russia, Slovak Republic, and Slovenia.
[3] Average of Brazil, Chile, Colombia, Mexico, and Peru.
EM = emerging market.

whether the pace of expansion of mortgage credit is reasonable or excessive. We tackle this question with the data available. Using a standard technique to identify credit booms, the results provide evidence of excessive growth in mortgage credit for a few economies in the region (Figure 5.3, top panel).[7] In Brazil, the maximum deviation from trend credit growth in recent years seems particularly large, although this may be explained by the introduction in March 2009 of a housing program ("*Mia casa, Mia vida*") aimed at low-income households. In that regard, while the technique may not capture changes in trend credit growth or structural breaks, the rapid expansion of mortgage credit warrants careful monitoring of this market segment.

Housing Prices

Residential housing prices have tended to rise more where mortgage credit is more exuberant. The average annual real home-price increase for the five countries in the region with readily available housing price data is well below that observed in the countries of emerging Europe in the years prior to the Lehman crisis, and somewhat above that registered in emerging Asia. Although housing price increases mostly reflect developments in higher-income segments of metropolitan areas, these are also the segments that had the most access to mortgage credit (see Hoek-Smit and Diamond, 2003).

Construction Activity

The share of construction in GDP has grown sharply during the past decade in the more financially integrated countries of the region, to levels well above those recorded in emerging Asia, yet below the pre-crisis peaks observed in emerging Europe (Figure 5.3, bottom panel). However, housing is not the only factor behind this rising share; commercial real estate and public works also contributed to the rise. To the extent that housing was the main driver of the increase, however, boom-bust cycles in construction tend to have important social ramifications, because construction is labor intensive and employs relatively unskilled workers who experience longer unemployment spells.

Credit Quality

In line with the trends for aggregate bank credit quality in the region, the share of non-performing mortgage loans is relatively low. Strong growth in household income has contributed to this low rate, as well as to record low unemployment.

However, this situation could change should favorable external conditions reverse. Moreover, many loans are new, and defaults are typically rare early in the life of a loan. It also seems that banks are extending loans to households with underdeveloped credit and payment histories; such households tend to be more vulnerable during downturns.

Banks and households have relatively low direct exposure to housing, providing an important mitigating factor.[8] Mortgages account for less than 20 percent of banks' total credit in many countries in the region, and banks have a sound funding structure that relies little on cross-border funding or on complex instruments (Figure 5.4). Moreover, the few existing household indebtedness indicators seem to be at manageable levels, although they have been on the rise in recent years, particularly in the case of low-income households. That said, data gaps limit a more-comprehensive assessment of household leverage.

[7] The techniques identify a credit expansion as a boom when the level of credit exceeds the underlying trend (estimated using a rolling, backward-looking Hodrick-Prescott filter) by a threshold equal to 1.5 times the standard deviation around trend. See Mendoza and Terrones (2008) and Gourinchas, Valdés, and Landerretche (2001).

[8] Although not discussed in this chapter, mortgage credit quality can have important implications for fiscal policy depending on the degree of exposure of public banks. In Brazil, for instance, the state-owned banks hold ¾ of all housing credit (IMF, 2011a), and in Mexico the government housing finance agency supports the market for residential mortgage-backed securities by offering mortgage insurance.

Conclusions

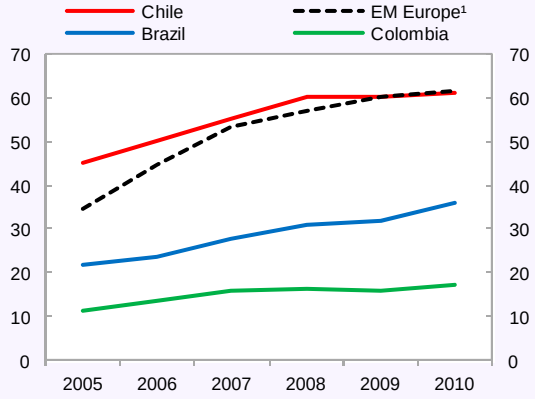
Mortgage credit is growing rapidly across much of Latin America. Although available indicators generally do not suggest imminent problems, there can be no room for complacency. Problems can arise quickly, especially in new markets with significant data gaps.

Action is needed to close information gaps and strengthen oversight. Internal risk models to gauge misalignments in housing and other credit sectors can help with risk assessments. Further efforts are needed to improve credit registries and the underwriting standards of mortgage loan originators and brokers. Standards should take into account the value of the underlying property (based on sound independent appraisals) and the borrower's credit worthiness (via credit registries), with proper verification of the submitted information. These efforts should be complemented by programs to increase consumer financial literacy, particularly as credit access expands to lower-income households.

If vigor in the housing sector is sustained, targeted macroprudential measures should be considered, similar to those recently adopted in Asian countries. The use of loan-to-value and debt-to-income limits could be particularly useful.

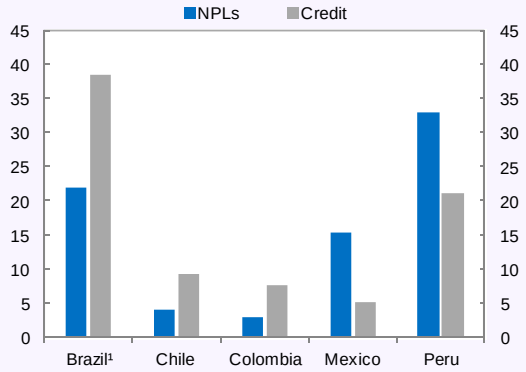
Figure 5.4. Household debt and NPLs are growing considerably, although they remain manageable in most countries.

Emerging Economies: Household Debt
(*Percent of disposable income*)



Sources: Eurostat; national authorities; and IMF staff calculations.
[1] Average of Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland, Slovenia, and Slovak Republic.
EM = emerging market.

Mortgage: Nonperforming Loans and Credit
(Real average 12-month percent change, 2009–11)



Sources: National authorities; and IMF staff calculations.
[1] Data on NPLs are only available for unearmarked housing. Mortgage credit corresponds to total housing loans.

Table 5.1. Data Availability on Select Financial and Housing Sector Indicators

Country	Housing Indicators					Household Indicators		Financial Soundness Indicators[1]			Access to Credit	
	House Prices[2]			Housing Starts/Permits	Construction Cost Index	Household Debt to Income	Household Debt Service to Income	Commercial Real Estate Loans to Total Loans	Mortgages to Total Loans	Non-performing Mortgages[3]	Legal Rights (0–10)[4]	Credit Information (0–6)[5]
	Available since	Frequency	Coverage									
United States	1987	monthly	national	√	√	√	√	√	√	√	9	6
Canada	1999	monthly	national	√	√	√	√	√	√	√	7	6
Latin America												
Brazil	2010	monthly	metropolitan		√	√	√	√	√	√	3	5
Chile	2004	quarterly	national	√	√	√	√	√	√	√	6	5
Colombia	1997	quarterly	metropolitan	√	√	√	√	√	√		5	5
Mexico	2005	quarterly	national			√	√		√	√	6	6
Peru	1998	quarterly	metropolitan						√		7	6
Uruguay	2000	monthly	metropolitan		√	√	√		√	√	4	6
Memo:												
Emerging Asia												
China	2005	monthly	city			√	√				6	4
India	2010	quarterly	metropolitan			√	√				8	4
Indonesia	2002	quarterly	city			√	√	√	√		3	4
Malaysia	1999	quarterly	national	√	√	√	√			√	10	6
Philippines	1994	quarterly	metropolitan					√	√		4	3
Emerging Europe												
Bulgaria	1993	quarterly	national								8	6
Croatia	2006	monthly	national			√			√		6	5
Estonia	2004	monthly	metropolitan		√						7	5
Hungary	1998	quarterly	national					√			7	4
Latvia	2004	monthly	metropolitan		√				√	√	10	5
Lithuania	1994	monthly	city								5	6
Poland	2004	monthly	metropolitan			√		√	√	√	9	5
Romania	2009	quarterly	national	√		√	√		√	√	9	5
Russia	2000	quarterly	national	√				√	√	√	3	5
Turkey	2007	monthly	national	√		√		√			4	5
Ukraine	2000	monthly	metropolitan	√							9	4

Sources: Eurostat; Global Property Guide; Haver Analytics; IMF, *Financial Soundness Indicators*; and World Bank, *2012 Doing Business Indicators*.

[1] Information based on reported data reported in the IMF Financial Soundness Indicators (black). In some instances, it was complemented with readily available data (green) from national sources.

[2] Data refer to start date of the series, frequency, and coverage. Some countries have more than one index, we report the one with the highest frequency.

[3] Data not reported in the FSI but are available from national sources.

[4] World Bank index that measures the degree to which collateral and bankruptcy laws protect the rights of borrowers and lenders and thus facilitate lending. The index ranges from 0 –10, with higher (green) and lower (red) values.

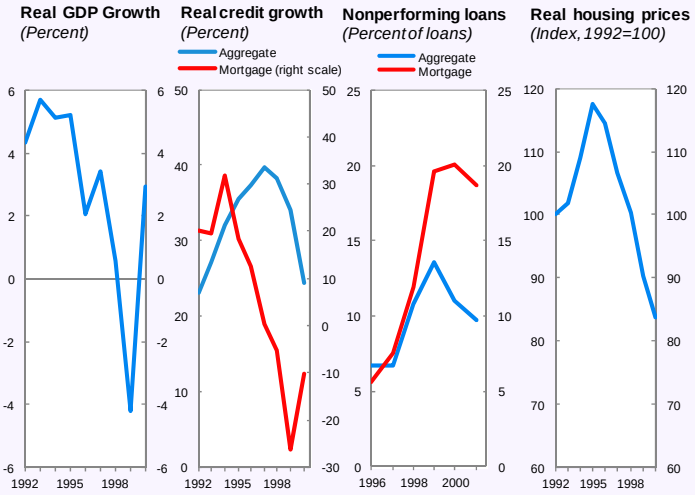
[5] World Bank index that measures rules and practices affecting the coverage, scope, and accessibility of credit information available through a credit registry. The index ranges from 0–6, with higher values (green) indicating greater availability of credit information.

Box 5.1. Colombia's Mortgage Crisis of the Late 1990s: A Cautionary Tale

The Colombian mortgage crisis of the late 1990s illustrates the possible systemic effects of problems in the housing market. The crisis had its origins in the early 1990s when a process of financial deregulation set the stage for unsustainable credit growth and asset price overvaluation, amidst weak regulatory and supervisory frameworks.

Reforms aimed at increasing competition and efficiency in the Colombian financial system in the early 1990s led to a rapid expansion of bank assets along with undesirable changes in their liability structure. A period of easy external financing conditions triggered massive capital inflows that were intermediated by the domestic financial system. Assets prices (including housing prices) rose quickly and credit boomed (bank credit as a share of GDP doubled between 1991 and 1997). At the same time, financial institutions adopted aggressive funding practices in an environment of increased competition.

Weak regulatory and supervisory systems and internal risk managing models made the financial system vulnerable. Internal risk models were ill suited for assessing borrowers' capacity to pay, and collateral was frequently overvalued. Weak regulation and supervision practices did not prompt an increase in capital requirements or loan-loss provisions to mitigate growing risks as the process unfolded. In addition, there were important information blind-spots that prevented the adequate assessment of risks.



Sources: IMF staff calculations; Banco de la Republica (Colombia); DANE; FOGAFIN 2009.

When external conditions became less favorable and the economy began to slow in 1995, housing prices started to fall. This process was compounded by the sudden stop that followed the Asian and Russian crises and domestic political problems. By 1998 interest rates reached historical highs, and households found themselves unable to continue servicing mortgages. Properties were seized, non-performing loans (NPLs) skyrocketed, and banks specializing in mortgage lending became illiquid or insolvent.

In 1999, the government was forced to intervene. Financial institutions were nationalized, closed, or recapitalized, and Colombia suffered its first recession since 1933. The crisis also set back the development of the housing market in Colombia. In the end, the total fiscal cost of the crisis (including the effects of judicial rulings that further undermined creditors' rights) exceeded 15 percent of GDP (FOGAFIN, 2009).

Note: Prepared by Camilo E. Tovar.

[1] For a detailed overview of the Colombian Mortgage crisis, see FOGAFIN (2009) and Urrutia and Llano (forthcoming).

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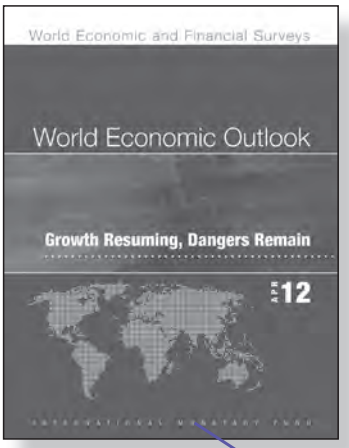

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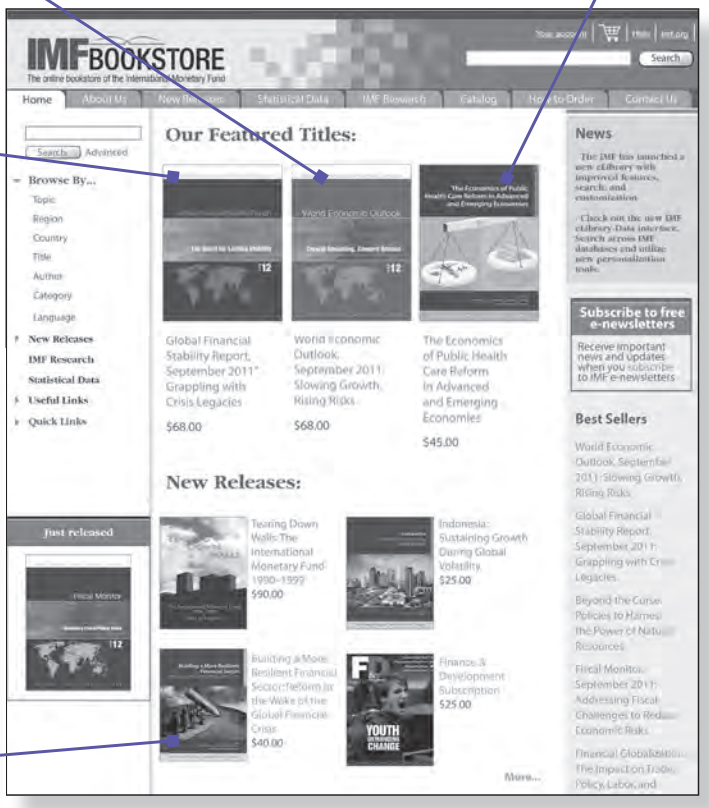

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