

World Economic and Financial Surveys

Regional Economic Outlook

Western Hemisphere Adjusting Under Pressure

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Contents

Preface	v
Executive Summary	vii
1. The United States, Canada, and the World: Outlook, Risks, and Policies	1
Setback and Rebound	1
The United States: Recovery Regains Its Footing	4
Canada: Lower Oil Prices Weigh Heavily on the Economy	8
2. Outlook and Policy Challenges for Latin America and the Caribbean	15
Protracted Slowdown	15
Financially Integrated Economies	20
Other Commodity Exporters	28
Central America and the Dominican Republic	31
The Caribbean	34
Annex 2.1. Data Disclaimer	49
3. To Hike or Not to Hike: Is That an Option for Latin America? Assessing Monetary Policy Autonomy	51
Co-movement in Financial Conditions: A First Glance	51
From Global Financial Conditions to Domestic Interest Rates: Quantifying the Linkages	53
What Can Latin America Expect from U.S. Monetary Policy Normalization?	57
Conclusion and Policy Implications	60
Annex 3.1. Technical Details	62
4. Trade Integration in Latin America and the Caribbean: Hype, Hope, and Reality	65
Setting the Stage	65
Is LAC Undertrading? A More Formal Analysis	69
Heterogeneity in LAC	70
The Role of Value Chains and Regional Trade Agreements	71
Policy Takeaways	72
5. Advancing Financial Development in Latin America and the Caribbean	75
Measuring Financial Development	75
Financial Development: Where Does LAC Stand?	77
Financial Development and Macroeconomic Fundamentals	79

The Nexus between Finance, Stability, and Growth: What Is in Store for LAC?	79
Conclusions and Policy Implications	82
Annex 5.1. Sources and Data Processing	85
Abbreviations	89
Countries	89
Country Groups	90
Regions	90
References	91
New Publications from the Western Hemisphere Department	97
Boxes	
1.1 How Accommodative Is U.S. Monetary Policy?	12
2.1 Historical Perspective on the Deceleration of Real Economic Activity in LAC	37
2.2 Macroeconomic Fluctuations in the Caribbean: The Role of Oil Prices	39
2.3 Financial Integration in Latin America	41
2.4 Inequality and Commodity Booms in Latin America	44
3.1 Global Financial Conditions and Portfolio Flows to Latin America	61
5.1 Financial Inclusion: Latin America and the Caribbean	83

Preface

The October 2015 *Regional Economic Outlook: Western Hemisphere* was prepared by a team led by Hamid Faruqee and Marcello Estevão under the overall direction and guidance of Alejandro Werner and Krishna Srinivasan. The team included Ali Alichí, Steve Brito, Carlos Caceres, Yan Carrière-Swallow, Bertrand Gruss, Dyna Heng, Kotaro Ishi, Anna Ivanova, Geoffrey Keim, Genevieve Lindow, Bogdan Lissovólik, Nicolas E. Magud, Rodrigo Mariscal, Koffie Nassar, Natalija Novta, Rania Papageorgiou, Uma Ramakrishnan, Fabiano Rodrigues Bastos, Udi Rosenhand, and Joyce Wong. In addition, Andrea Pescatori and Juan Solé contributed to Chapter 1, Ahmed El Ashram, Sebastian Acevedo, Ravi Balakrishnan, Arnold McIntyre, Alla Myrvoda, Anayochukwu Osueke, Julien Reynaud, and Marika Santoro contributed to Chapter 2, and Ishak Demir, André Meier, and Jaume Puig Forne contributed to Chapter 3. Production assistance was provided by Maria Salome Gutierrez and Irina Sirbu with support from Jermaine Ogaja. Joanne Creary Johnson of the Communications Department coordinated editing and production. This report reflects developments and staff projections through early September 2015.

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Executive Summary

Following an early setback in 2015, the pace of global activity rebounded, but the outlook remains modest in both the near and medium term. The recovery in advanced economies is becoming more firm, though it is weaker than previously anticipated. After a slow start this year, the U.S. economy regained momentum on the back of resilient consumption, while a gradual recovery in the euro area continues and Japan is returning to positive growth. Emerging markets, however, continue slowing. Notably, China is transitioning to slower growth as its economy rebalances. At the same time, current and projected global commodity prices remain soft, well below their 2011 peaks, including renewed weakness in oil prices. While financial conditions remain accommodative in advanced economies, financial pressures and market volatility in emerging markets have risen, with some retreat in capital flows and downward pressure on asset prices and currencies. On balance, risks to the global outlook are tilted to the downside, amid uncertainty about slowing growth in China and prospective lift-off of U.S. interest rates, as well as concerns about medium-term global growth and secular stagnation.

Against this global backdrop, activity in Latin America and the Caribbean (LAC) continues to decelerate. Real GDP growth is projected to decline for a fifth consecutive year, turning slightly negative in 2015, before rebounding modestly in 2016. This reflects underlying weakness in both aggregate demand and supply in the context of a less favorable external environment. While stronger U.S. growth should benefit the region, especially for those economies with tighter links through trade, remittances, and tourism (Mexico, Central America, and the Caribbean), weaker commodity prices will continue to hurt South America's net commodity exporters—lowering national incomes, reducing investment, and worsening fiscal balances. With commodity prices expected to remain low for the foreseeable future and dampened investment prospects, the region's productive potential has also declined. These developments could, in turn, impede progress made in recent years in reducing poverty and inequality. Key global risks—including an abrupt tightening of U.S. interest rates or a further slowdown in China—may disproportionately affect Latin America.

The credibility of policy frameworks and the resolve of policymakers are likely to be tested in the context of heightened market pressures and weakened underlying fundamentals. This is because, alongside the terms-of-trade shock, domestic headwinds have played an overarching role in the region's slowdown, interacting with changing external conditions. For instance, political crises have intensified in some economies and past policy decisions have limited the space for supporting growth in the wake of lower commodity prices. In economies facing more dire circumstances, severely distortive policy interventions and flawed macroeconomic frameworks have led to large domestic imbalances. Finally, various structural considerations (for example, a high degree of dollarization) have acted as further constraints to how well some economies can respond to external shocks. In these circumstances, labor markets are generally deteriorating, unemployment rates are increasing, and real wage growth is slowing, while private sector confidence has weakened.

From a policy standpoint, exchange rate flexibility remains a first line of defense and should facilitate external adjustment. Fiscal space remains limited across most countries, limiting the scope for a countercyclical policy response. Maintaining an accommodative monetary stance in the context of shifting terms of trade and changes in relative prices from currency depreciation remains broadly appropriate, although with inflation above target in many economies, possible second-round effects and inflation expectations need to be monitored closely. From a longer-term perspective, the ongoing slowdown underscores the importance of structural reforms to alleviate serious supply-side constraints and bolster long-term growth, including by boosting productivity, closing infrastructure gaps, and promoting economic diversification.

These policy recommendations broadly apply to *financially integrated economies*, tailored to individual country circumstances. Brazil needs to continue fiscal consolidation efforts to stabilize public debt while reining in high inflation. Colombia and Mexico are feeling the weight of lower oil prices, but economic activity will continue to expand despite the planned fiscal consolidation to put public debt on a downward path. Chile and Peru are in different stages of the adjustment to the weaker external context. However, their initial strong fiscal and monetary positions and credible macroeconomic frameworks will help them navigate the transition.

Within *other commodity exporters*, unsustainable policies in Venezuela (with possibly dire social consequences) need to be fixed with urgency. Exchange rate rigidity in Bolivia and, especially, Ecuador—a fully dollarized economy—has placed the adjustment burden squarely on fiscal policy, which should continue alongside structural reforms. Eliminating price and exchange rate distortions, together with a fiscal adjustment and somewhat tighter monetary policy, would raise private sector confidence and boost medium-term growth in Argentina.

The current external environment offers an opportunity for *Central America*, a net oil importer, to consolidate fiscal accounts and strengthen monetary frameworks to better anchor inflation expectations. Most *Caribbean* countries should use the breathing room from lower fuel prices to continue reining in unsustainable debt paths and to shore up the fragile financial sectors.

This issue of the *Regional Economic Outlook* features analytical chapters assessing Latin America's monetary autonomy and exposure to global financial shocks; evaluating regional trade integration and its potential benefits; and analyzing the link between financial depth, growth, and economic stability in the region. Key findings are:

- As the Federal Reserve appears set to start raising policy rates, some central banks may not have much room to support economic activity. The actual effect on domestic *interest rates* will depend on whether the U.S. rate lift-off is gradual and in line with an improving economic outlook, or abrupt and accompanied by uncertainty, increased risk aversion, and a larger term premium. Ensuring exchange rate flexibility, enhancing policy credibility, and reducing financial dollarization would raise the region's degree of monetary autonomy.
- Despite efforts to deepen *trade integration*, LAC remains relatively less open to trade and most countries in the region appear to be “under-trading” given fundamentals. Successful exporters have been able to penetrate large markets, including in advanced economies. Deeper integration into global value chains is beneficial, but the direct trade impact is likely to be small. Trade agreements should increase global competitiveness and avoid the creation of regionally protected trade blocs.
- LAC lags behind other emerging markets in financial development, particularly in markets. Many of its financial systems fall short of levels consistent with current macroeconomic fundamentals. The near-term priority is to close these gaps. In the longer term, LAC's growth and stability can benefit from further financial development as fundamentals progress. The sequencing and speed of reforms matter, however, as excessive market development without adequate institutions could threaten macroeconomic stability.

1. The United States, Canada, and the World: Outlook, Risks, and Policies

Global growth remains modest and uneven. Following a setback in early 2015, the pace of global activity rebounded but the growth outlook remains subdued over both short and longer horizons. Western Hemisphere economies figured prominently in these developments and trends. In the United States, following a slow start this year, renewed momentum in the recovery was underpinned by resilient consumption and labor markets, but Canada continued to lose momentum in the wake of lower oil prices. Elsewhere, regional growth will turn slightly negative, against a backdrop of weaker commodity prices, tightening financial conditions, domestic headwinds, and dampened medium-term prospects. Risks to the outlook are tilted to the downside, including possible stagnation in advanced economies coupled with reduced potential growth in emerging markets. Policies to raise potential thus remain a priority in many economies, with investment and structural reform being crucial, including within the region.

Setback and Rebound

Global growth disappointed in the first half of 2015, owing to slower growth in emerging markets and weaker recovery in advanced economies. As discussed in the October 2015 *World Economic Outlook*, the global economy is projected to expand by 3.1 percent this year (about ¼ percentage point below earlier forecasts; see Figure 1.1). In large part, this markdown reflects unexpectedly weak first-quarter activity in North America. Also, a protracted slowdown in emerging markets, including a transition to slower growth in China and weaker performance in oil exporters, is a factor behind slower global growth.

Global activity is expected to regain some momentum in 2016, with growth projected at

Note: Prepared by Hamid Faruqee with Ali Alich, Kotaro Ishi, Andrea Pescatori, and Juan Solé. Steve Brito, Rania Papageorgiou, and Udi Rosenhand provided excellent research assistance.

Figure 1.1

Global Growth and Commodity Prices

Global growth declined in 2015, reflecting slower growth in emerging markets and weaker recovery in advanced economies, while commodity prices remain subdued.

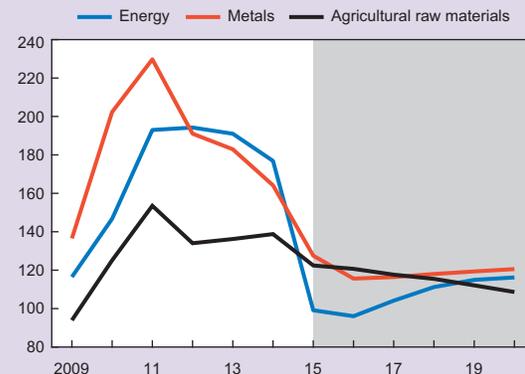
1. Real GDP Growth

(Percent; annual rate)

	2013	2014	Projections	
			2015	2016
World	3.3	3.4	3.1	3.6
Advanced economies	1.1	1.8	2.0	2.2
United States	1.5	2.4	2.6	2.8
Euro area	-0.2	0.9	1.5	1.7
Japan	1.6	-0.1	0.6	1.0
Emerging market and developing economies	5.0	4.6	4.0	4.5
China	7.7	7.3	6.8	6.3
Russia	1.3	0.6	-3.8	-0.6

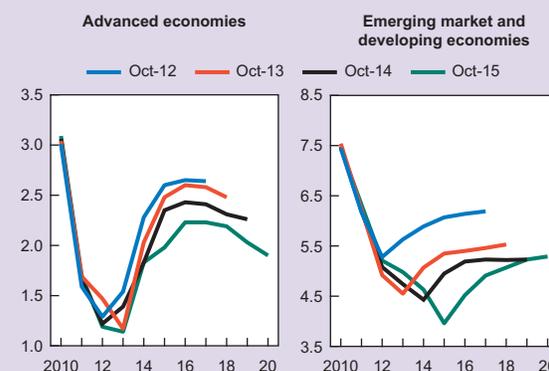
2. Global Commodity Prices

(Index, 2005 = 100)



3. Real GDP Growth by WEO Vintage

(Percent; annual rate)



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

3.6 percent. Growth in advanced economies is envisaged to pick up modestly this year and next, led by a solid growth rebound in the United States, modest but firming recovery in the euro area, and a return to positive growth in Japan.

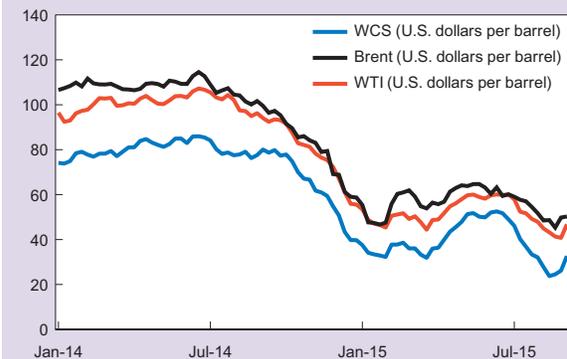
This rebound would be partly offset by lower growth in commodity exporters, such as Canada. In emerging markets, a growth pick-up in 2016 is also envisaged, but mainly reflecting a fading of adverse shocks. Specifically:

- In the *United States*, the recovery regained its footing, led by private consumption on the back of steady job creation and personal income growth. Going forward, stronger residential and business investment, as well as less fiscal drag, should support solid growth of about 2¾ percent in 2016 (see section below).
- In the *euro area*, moderate growth of about 1½ percent in 2015–16 is anticipated, given lower oil prices, relaxed financial conditions, and a shift to a broadly neutral fiscal stance.
- In *China*, growth is broadly in line with previous forecasts and expected to slow to 6¼ percent in 2016. Meanwhile, a sharp contraction in *Russia* is expected in 2015, given a larger-than-expected GDP decline in the first half of the year, before output broadly stabilizes in 2016.
- With a deepening recession in Brazil, activity in *Latin America and the Caribbean* is projected to contract slightly at the regional level in 2015—marking the fifth consecutive year of slower growth. A modest recovery is projected for 2016, but with growth well below trend (Chapter 2).

Commodity and Financial Markets

Alongside weaker global growth, commodity prices have generally fallen and prospects remain soft—well below their 2011 peak. Oil prices resumed their decline after remaining broadly stable in 2015:Q2 (see Figure 1.2). This reflected buoyant supply (notably, strong production in OPEC

Figure 1.2
Oil Price Developments
(U.S. dollars per barrel)



Source: Haver Analytics.

Note: WCS = Western Canada Select; WTI = West Texas Intermediate.

economies as well as the United States and Russia) and weakening demand given slower-than-expected global activity. Metal prices have fallen on concerns about global demand, especially the slowdown in China's investment and manufacturing activity, as well as higher supply (as new production capacity came on stream). A further decline in oil prices should provide some additional demand boost in net importers, but the demand response from lower oil prices, thus far, has been weaker than anticipated.

Meanwhile, market volatility has risen sharply and financial conditions have tightened for emerging markets, albeit to various degrees. Amid higher risk aversion and concerns about growth and financial vulnerabilities (notably, surrounding China after announcement of its new exchange rate policy), emerging market asset prices have come under pressure. This includes increasing dollar bond spreads and local currency bond yields, weaker stock prices, some retreat in capital flows, and exchange rate depreciation pressures.

This appears particularly true for commodity exporters, where weaker terms of trade and dampened growth prospects may be reinforcing the turn in market sentiment. Many economies are also at late stages of their credit cycles while growth outlooks have been marked down, leaving them more vulnerable to tighter external financing

conditions, including those associated with an eventual lift-off of U.S. interest rates.¹

Financial conditions continue to remain accommodative in advanced economies, particularly safe havens, with low interest rates and compressed risk spreads. Stability risks have also moderated alongside improving macroeconomic conditions, particularly in Europe. Low rates for a protracted period, however, remain a concern where the recovery is more established, including the United States.

Looking beyond recent market turbulence, exchange rate movements over the past six months across major currencies have included modest real effective appreciation of the U.S. dollar, the Chinese renminbi, and the euro, and a depreciation of the Japanese yen. Over the past year, exchange rate movements across floating-rate currencies have been broadly consistent with changes in growth prospects and terms of trade, as part of global adjustment.

Risks and (Modest) Growth Prospects

Risks to global growth remain tilted to the downside. External conditions for many emerging markets are more challenging, including weaker commodity prices, alongside a weaker outlook for growth.² While slower growth and rebalancing in China is welcome, a possible “hard-landing” scenario remains a risk that could have sizable spillovers. Heightened market volatility can pose challenges in advanced economies, but a greater boost to their demand from declining commodity prices is an upside risk.

Beyond near-term risks, medium-term growth prospects remain subdued, after successive markdowns, as discussed in earlier reports (see Figure 1.1). Repeated setbacks to a sluggish

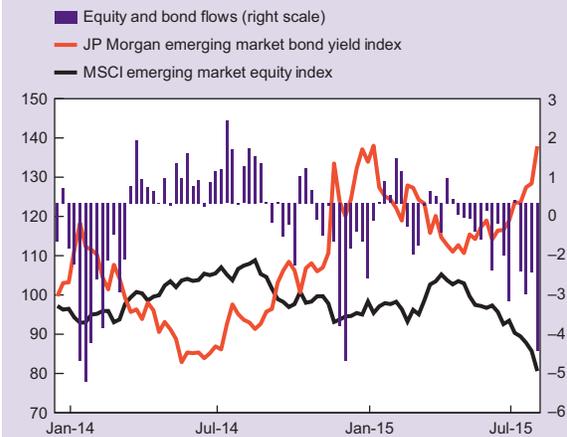
¹ See October 2015 *Global Financial Stability Report*.

² See October 2015 *World Economic Outlook* (Chapter 2) for effects of lower commodity prices on actual and potential growth.

Figure 1.3

Emerging Markets: Financial Conditions and Capital Flows

(Index, 2014 = 100; billions of U.S. dollars)



Sources: Haver Analytics; EPFR; and Bloomberg, L.P.
Note: MSCI = Morgan Stanley Capital International.

recovery in advanced economies and a protracted growth slowdown in emerging markets suggest that common underlying factors are at play. These include low productivity growth in the aftermath of the crisis; legacies of high public and private indebtedness; financial sector weakness and continued low investment; and demographic transitions.

Over the medium term, economic stagnation is a risk for many advanced economies, particularly if demand in emerging market economies also falters—including the possibility of much slower potential growth in China.

Policy Challenges

Raising both actual and potential output through demand support and structural reform continues to be a priority in many economies. In advanced economies, accommodative monetary policy remains appropriate, along with being watchful of possible stability risks, and scope remains to ease the fiscal stance in countries with fiscal space, especially through increased infrastructure investment.

Emerging market and developing economies generally have more limited policy space to support

demand, but they should use it to the extent possible. The policy agenda varies, given large differences in growth, sensitivity to commodity price shocks, and external vulnerabilities. Structural reforms to raise productivity and remove bottlenecks to production are urgently needed in many economies.

In Latin America, many of the same issues are central against the backdrop of an extended slowdown. Many of the region's economies tend to be rather sensitive to commodity prices and face structural weaknesses, as well as relatively limited trade integration and financial depth (see Chapters 4 and 5). With constraints on near-term policy stimulus, structural reform will thus need to shoulder the burden for boosting economic growth and prosperity.

The United States: Recovery Regains Its Footing

The U.S. economy appears to have regained its footing in the second quarter of this year, growing by 3¾ percent (seasonally adjusted annual rate—SAAR). The strong rebound followed unexpectedly weak first quarter growth (0.6 percent SAAR), hurt by temporary factors such as bad weather and a West Coast port strike that disrupted exports (see Figure 1.4).

Much of the economy's resilience, notably in private consumption, can be attributed to steady job creation and personal income growth. Gains in payrolls this year averaged more than 200,000 per month—a healthy level by historical standards. The unemployment rate has fallen to 5.1 percent and real disposable personal income is growing by about 3 percent year over year. Nevertheless, wage growth has not picked up much. Long-term unemployment and part-time work remain elevated and a sizable number of workers who left the labor market have not yet found employment.

Lower oil prices have been a mixed blessing for the economy. The decline in oil prices has added about 1 percent of GDP to households' purchasing power since mid-2014. Earlier in the year, this windfall was largely saved. Since then, consumers have boosted

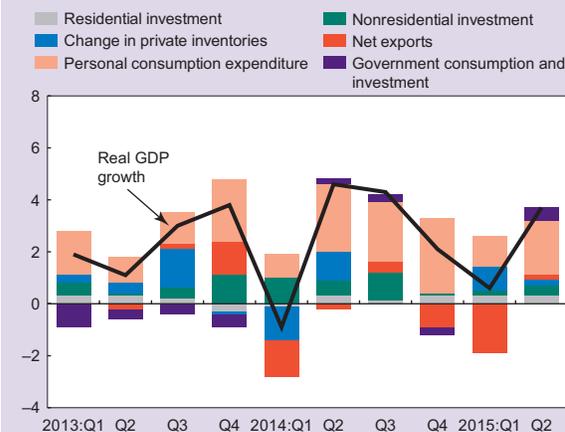
Figure 1.4

United States Recovery

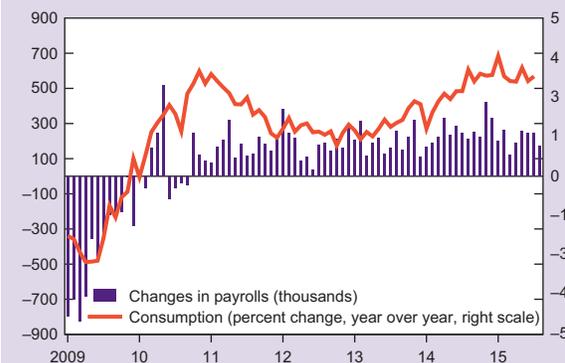
Led by resilient consumption and job gains, the U.S. economic recovery regained its footing, and housing market activity tended to improve.

1. United States: Contribution to GDP Growth

(Percentage change from previous quarter, seasonally adjusted annual rate)



2. United States: Consumption and Payrolls



3. United States: Housing Activity

(Millions of units, seasonally adjusted annual rate)



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

spending, as the saving rate fell below 5 percent—where it was prior to the oil price decline. This positive demand impetus has been offset, though, by a sharp decline in oil-related investment as crude prices fell below breakeven thresholds for many U.S. fields. Indicators of investment in the energy sector have bottomed out, however, signalling that this drag to growth is coming to an end.

Exports and non-oil business investment growth have been less buoyant than expected. Soft overseas demand and a strong dollar have raised competition in the tradable sector, taking its toll on business investment. But structural headwinds may also be weighing on industry and manufacturing: demand is shifting to labor-intensive services as the U.S. population ages; labor productivity growth has declined, possibly as a result of reduced innovation; and the output gap could be larger than estimated.

While housing market indicators remain mixed, residential investment in the first half (at an average annualized rate of more than 8 percent per quarter) was better than expected.

Solid Growth Outlook

Growth in 2015 is projected at about 2½ percent and expected to pick up to about 2¾ percent in 2016. Consumption will likely continue to be a backbone of the recovery. Drivers of robust household spending include a further strengthening of the labor market, low energy prices, and tame core inflation, boosting real disposable incomes. Steady income growth will further support a broadening of the recovery:

Housing. As the cohort of millennials increasingly gains a stronger foothold in the labor market, household formation and residential investment are expected to rise. Past recoveries point to the possibility of a rapid increase in housing starts; and, accordingly, residential investment is expected to boost growth in 2016. Still, housing market conditions are uncertain and interest rates are expected to rise. This together with uncertainty about the rate of household formation and some recent weakness in home prices pose risks to a solid housing recovery.

Business investment. The combination of solid consumer demand, an aging capital stock, and substantial corporate cash holdings should support a cyclical recovery in investment. Encouragingly, forward-looking indicators (notably, factory orders of core capital goods) have started recovering after several months of weakness. The strong dollar will likely continue and may postpone some investments in the tradable sector, but these effects should wane over time. The exception is the energy sector where low energy prices are eroding profitability and may suppress investment for some time.

Finally, *fiscal consolidation* will continue this year, albeit at a slower pace and generating less drag on growth than last year. Taken all together, strengthening of domestic demand is expected to continue and underlying growth will rise to about 3 percent in the short term. Over the medium term, an aging population and weaker innovation and productivity growth are expected to lower potential growth to about 2 percent.³

Lift-off of U.S. Interest Rates

Against this setting of renewed momentum in the recovery, the timing and path of U.S. monetary policy normalization has attracted considerable attention, including potential spillovers to the region (see Chapter 3). The Federal Open Market Committee's policy decisions should remain data dependent—with the first rate increase awaiting firmer signs of inflation rising steadily toward the central bank's inflation objective, and with continued strength in the labor market.

At present, a broad range of indicators suggest a notable improvement in the labor market, but there is little evidence of meaningful wage and price pressures. Leaving aside the timing of lift-off, the data suggest that the pace of subsequent rate increases should be gradual.

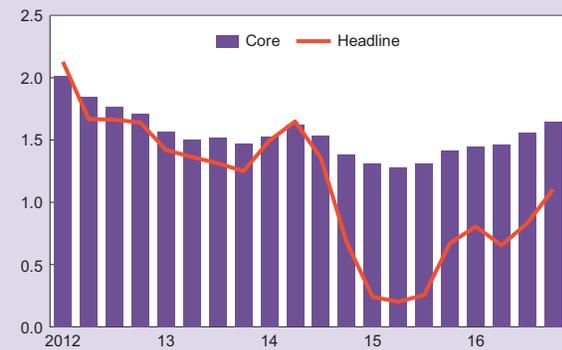
Inflation remains subdued. Headline personal consumption expenditure (PCE) inflation has been

³ See Alichì (2015).

Figure 1.5

United States: PCE Inflation

(End of period, year-over-year percent change)



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

Note: PCE = personal consumption expenditure.

temporarily dragged down by lower oil prices. Core PCE inflation edged down slightly to 1.2 percent year over year in July with the effects of rising demand more than offset by dollar appreciation, the falling global prices of tradable goods, and residual pass-through from cheaper energy.

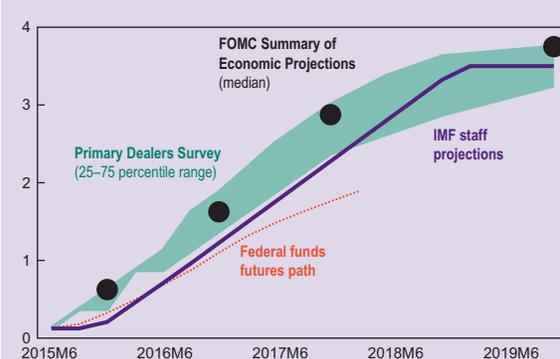
Underlying inflation is projected to remain tame. Headline inflation should rebound after the summer as the effects from dollar appreciation and lower energy prices dissipate. But given the still sizable employment gap, wage increases are likely to remain subdued. Inflation pressures are also dampened by the scope for firms to absorb cost increases into their (currently healthy) profit margins. Core PCE inflation is therefore projected to rise only gradually with the closing output gap, reaching the Federal Reserve’s 2 percent medium-term objective by end-2017 (see Figure 1.5).

Amid limited near-term inflation pressures, long-term interest rates have remained at low levels and continue to support monetary accommodation and domestic demand. The compressed term premium reflects weaker external conditions, excess demand for safe assets, and expectations of future dollar strength—and it may take time for these effects to recede. Thus, markets expect a very gradual interest rate normalization path (see Figure 1.6).

Figure 1.6

United States: Policy Rate Expectations

(Percent)



Sources: Federal Reserve; Bloomberg, L.P.; and IMF staff projections.

Note: Projections are from June 17, 2015, for Federal Open Market Committee (FOMC) and federal funds, and June 2015 for Primary Dealers.

Weighing these considerations, the Federal Reserve has explained that it will be appropriate to raise the target range for the policy rate when it has seen further improvement in the labor market and is reasonably confident that inflation will move back to its 2 percent objective over the medium term. Monetary policy can thus remain accommodative for some time and rate increases should likely be gradual given the underlying path of neutral rates (see Box 1.1), subdued inflation, and some remaining slack in labor markets.

Risks to the U.S. Recovery

Although developments point to renewed momentum in the U.S. recovery, there are several downside risks:

- The U.S. dollar could continue to appreciate due to cyclical divergences between the U.S. economy and those of key trading partners. A sharp rise of the dollar, in particular, could weaken profitability and production in the domestic tradable sector and also widen the current account deficit.
- A prolonged period of low interest rates and search for yield points to some emerging financial vulnerabilities, including rapid growth in assets of the nonbank sector, signs of

stretched valuations across a range of asset markets, and life insurance companies that have taken on greater market risk.

- Long-term interest rates could rise abruptly and harm the recovery. Compressed term premia, partly related to global developments, could reverse if markets were to return to a “risk-on” mode. Lift-off by the Federal Reserve from the zero interest bound could be another trigger, although previous monetary tightening cycles have typically been associated with declining term premia.
- On the fiscal side, political brinkmanship over the debt limit or the 2016 budget could raise the risk premium on sovereign debt. The tightening of financial conditions would likely be associated with greater volatility of yields and could spread to other asset classes. Sharply rising mortgage rates can be a particular issue for first-time home buyers and delay the housing recovery further.
- Longer-term growth challenges could come to the fore. Labor productivity has slumped after the global financial crisis and could fail to recover. There is also the potential that business investment remains flat. Depending on which of the aforementioned reasons (for example, demand shift towards services; lack of innovation) is at play, weakness in investment could continue and feed into slower job gains and income growth.

U.S. Policy Priorities

After a long period of very low interest rates, financial sector resilience needs to be further strengthened. Despite progress on many fronts—for example, household balance sheets and banks’ capital positions have strengthened—pockets of vulnerabilities have emerged, especially in the nonbank financial sector. Life insurers have taken on risk and their capital positions are susceptible to an interest rate shock; “run” and “redemption” risks have increased in the nonbank sector; and deeply interconnected wholesale funding chains pose vulnerabilities.

Addressing these challenges requires completing the regulatory reforms that started with the Dodd Frank Act. Among other issues, systemic risk oversight can be strengthened, data blind spots addressed, supervision of insurers and asset managers improved, and risk management standards upgraded. Detailed recommendations have been made in the 2015 U.S. Financial Sector Assessment Program (FSAP) report.

Over the medium term, U.S. potential growth is estimated to be about 2 percent, weighed down by a slowdown in labor force and productivity growth. The underlying reasons for the decline in U.S. total factor productivity growth are not well understood, but it is unlikely that the dynamics can change quickly.

Addressing these growth challenges will require implementing an ambitious agenda of supply-side policies in a fractious political environment. Policies should be targeted toward raising labor force participation. Any reform package should include measures to incentivize work by expanding the earned income tax credit system and providing support for childcare.

Productivity-enhancing innovation could be induced more effectively through reforms of the business tax system. In tandem, skill-building could be fostered through better training programs at the state level and through partnerships with industry and higher education institutions. Finally, key infrastructure investment can be made in the United States at relatively modest near-term cost but with long-term growth benefit.

Finally, fiscal sustainability concerns need to be addressed, as the public debt-to-GDP ratio remains on an unsustainable trajectory. A credible plan should include the following:

- *Tax reform.* A reform of the U.S. tax code is long overdue. Complexity and loopholes have increased over the years, undermining revenues and damaging productivity. The IMF’s longstanding advice has been that changes should focus on simplifying the system by capping or eliminating personal income tax deductions; removing tax preferences,

exclusions, and deductions from the business tax; and changing the tax treatment for multinationals to limit base erosion and profit shifting. Also, more revenues should be raised through a broad-based carbon tax, a higher federal gas tax, and by introducing a federal-level value-added tax (VAT).

- *Pension reform.* The prospective depletion of the social security trust fund needs to be countered through a gradual increase in the retirement age, greater progressivity of benefits, an increase in the maximum taxable earnings for social security contributions, and by indexing benefit and contribution provisions to a chained Consumer Price Index.
- *Healthcare.* Cost pressures have declined but more efforts are needed. Legislation could usefully focus on ensuring better coordination of services for patients with chronic conditions, taking steps to contain overuse of expensive procedures and technologies, including through a higher degree of cost sharing with beneficiaries, and eliminating tax breaks for more generous employer-sponsored health plans.

A plan to address the fiscal sustainability issues mentioned above would provide near-term fiscal space to finance supply-side measures that support growth, job creation, and productivity.

Canada: Lower Oil Prices Weigh Heavily on the Economy

After a solid expansion in 2014, Canada’s economy has lost momentum in the wake of the oil price shock. In the first half of 2015, economic activity contracted, for the first time since the 2008–09 recession, at a ¾ percent annual rate (see Figure 1.7).

Weaker investment has been the primary driver behind the slowdown. Specifically, nonresidential business investment has been a major drag on demand, declining 8 percent since 2014:Q4. Alongside falling oil prices and deteriorating terms

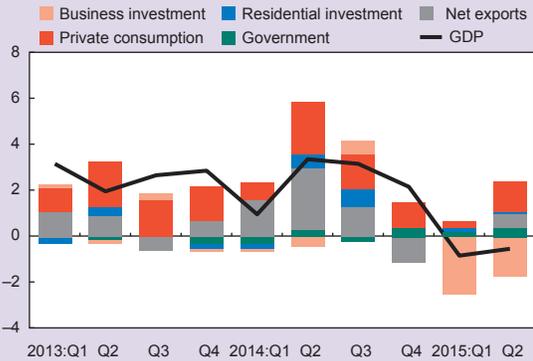
Figure 1.7

Canada Slowdown

Growth weakened in Canada as lower oil prices weighed heavily on investment and output in the energy sector.

1. Canada: Contribution to GDP Growth

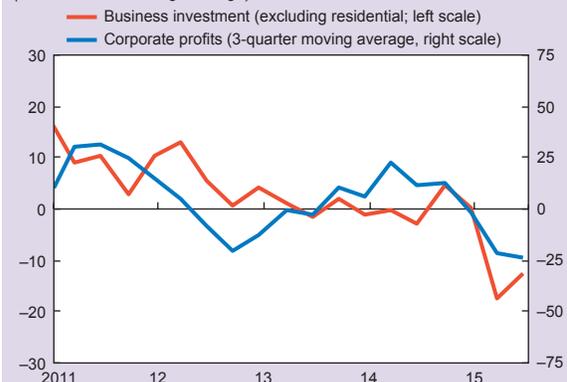
(Percentage change from previous quarter, seasonally adjusted annual rate)



Note: Expenditure components do not include inventories and statistical discrepancies.

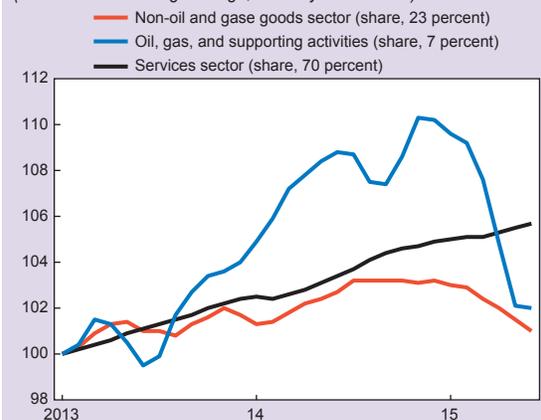
2. Canada: Business Investment and Profits

(Three-month moving average)



3. Canada: Output by Industry

(Three-month moving average; January 2013 = 100)



Sources: Statistics Canada; Bank of Canada; and Haver Analytics.

of trade, weaker investment reflects a sharp drop in corporate profitability—particularly in the energy sector (although reported profits in other sectors have been more encouraging recently).

From the supply side, output in the oil and gas sector has led the downturn, falling by nearly 10 percent since oil prices began declining in mid-2014, trimming an estimated $\frac{3}{4}$ percentage point off GDP growth. However, the services sector (accounting for 70 percent of total output) has held up relatively well.

Exports also disappointed in the first half of the year. As expected, commodity (oil, gas, and metal) exports have declined in value terms in tandem with the drop in their prices. Meanwhile, a hoped for increase in non-energy goods exports, alongside a more competitive Canadian dollar and continued U.S. recovery, did not materialize. As a result, the trade deficit ballooned to a new high in early 2015. Recent data for nonenergy exports, however, have been more encouraging.

Despite the slowdown in economic activity, the unemployment rate remained relatively low (at about 7 percent nationally). Payroll cuts have so far been largely confined to Alberta, where the unemployment rate edged higher to 6 percent (about $1\frac{1}{2}$ percentage points above last year's level). Elsewhere, the pace of employment gains has actually risen. There has also been a notable change in employment composition since late 2014. A greater number of full-time workers have been added to the payrolls compared with part-time workers, which had been the main driver of job gains over the past two years. This has led to strong growth in real disposable income this year.

With favorable labor market conditions, household spending has remained solid. Private consumption slowed in the first quarter, affected by severe winter weather, but rebounded strongly in the second quarter.

Headline inflation pressures have been muted. CPI inflation has been about $1\frac{1}{4}$ percent—well below the 2 percent midpoint of the central bank's

target range—driven by subdued energy prices. Core inflation (CPI excluding energy, food, and other volatile components) has picked up some, however, driven by pass-through effects from a weaker Canadian dollar, and hovers slightly above the central bank's reference level.

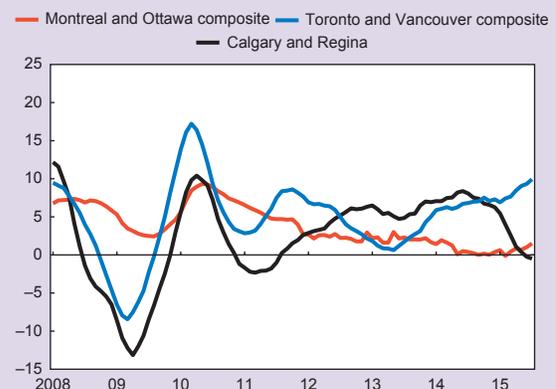
Housing Sector Vulnerabilities Remain Elevated

Housing markets remain generally buoyant, though trends are now diverging across regions. House prices continue to surge in the major metropolitan areas of Vancouver and Toronto, rising by about 10 percent from a year ago (see Figure 1.8). This reflects strong demand for premium single-family homes as well as land supply constraints. In contrast, house prices are cooling in oil-rich regions and rural areas where growth in prices has slowed to about zero and housing starts have fallen sharply (for example, Prairie region).

Mortgage lending has slowed from its brisk pace several years ago, but is still growing at about 5 percent annually. Canadian banks' exposure to mortgages and consumer loans secured by real estate represent their single largest asset class (about 53 percent of total loans).

Figure 1.8

Canada: House Price Index, Metropolitan Areas (Year-over-year percentage change)



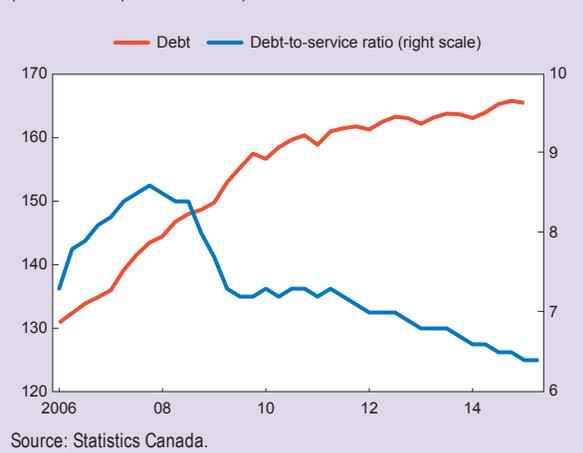
Source: Canadian Real Estate Association.

In terms of composition, more than half of new mortgages today are uninsured, partly reflecting past regulatory efforts to tighten standards on insured mortgages. Although the uninsured mortgages have a relatively low loan to value and, in principle, are safer, the Bank of Canada's Financial System Review indicated that some down payments may be borrowed through "co-lending arrangements" with secondary lenders, and a small share of the new debt may be subprime and originated by unregulated lenders.

Against this backdrop, household indebtedness has grown to about 165 percent of gross disposable income, a historically high level in Canada. Interest servicing costs, however, remain at historic lows, mitigating the effects of higher house prices on affordability (see Figure 1.9). But this also implies that households could be vulnerable to a faster-than-expected increase in interest rates. Were a sharp house price correction to materialize, it would have substantial wealth effects on private consumption, dampen residential investment, and, given extensive macro-financial linkages, impair banks' asset quality.

However, the impact on banks of a severe housing downturn would be mitigated by the government guarantee on insured mortgages, which covers three-fifths of outstanding mortgage credit. Banks are also profitable, well capitalized, and well regulated.

Figure 1.9
Canada: Household Debt and Debt-Service
(Percent of disposable income)



Growth Rebound Likely, but with Downside Risks

Growth is projected to recover moderately in the two remaining quarters resulting in an annual growth rate of 1 percent in 2015. The projection hinges on (1) the strengthening U.S. recovery, combined with a more competitive Canadian dollar, boosting non-energy goods exports; (2) private consumption growth remaining solid with relatively robust labor markets and steady growth in household income; and (3) financial conditions remaining accommodative.

Around this baseline, the balance of risks is tilted to the downside:

- Uncertainty in oil prices continues to pose the most important risk to the economy. Lower oil prices have already hit unconventional oil extraction activities particularly hard because their long-term break-even costs are high (C\$50–C\$110 per barrel). Therefore, if oil prices stay at current low levels for an extended period, or if oil prices fall further, energy companies may curtail capital spending more than expected.
- Market sentiment may turn more bearish, as many analysts now view lower oil prices as hurting not only Canadian oil companies but also businesses that export oil-related machinery and services. Oil companies' equity prices have already fallen substantially from their peak.
- Externally, the main downside risks pertain to a slower-than-anticipated recovery in the United States, as their business cycles are closely linked (about 75 percent of Canada's exports are directed to the United States).⁴ A slowdown in emerging Asia, notably China (to which about 4 percent of Canada's exports are directed), is another source of concern, including through commodity markets.

⁴ A lift-off in the U.S. policy rate may generate some volatility in financial markets, but adverse spillover effects for Canada are likely to be offset by higher demand for its exports.

- Domestic risks include a sharp correction in the housing market, with attendant effects on household balance sheets and bank asset quality. A weaker economy, high household debt, and market overvaluation pose the risk of a boom-bust cycle in the housing market. Given extensive government-backed mortgage insurance, the impact of a severe housing downturn on fiscal positions could be considerable.

Policy Priorities in Canada

With lower oil prices, slower growth, and some financial vulnerability, the policy challenge is to contend with supporting near-term growth, while preventing a further build-up of sectoral imbalances, and vigorously pursuing structural reforms to enhance long-term growth potential.

In the near term, fiscal stabilizers should be allowed to operate to cushion the effects of the slowdown. Needed fiscal consolidation at the provincial level should be measured. The federal government can maintain a neutral stance for now, but has room to maneuver if downside risks to growth materialize. In July, the Bank of Canada cut

its policy rate for the second time in 2015, by 25 basis points to 0.5 percent, which should support activity in the wake of a large terms-of-trade shock.

A prolonged period of low interest rates, however, can lead to higher household indebtedness and—with housing highly interconnected to the rest of the economy—this may exacerbate financial risks. Over the past several years, the authorities have introduced multiple measures to reduce housing sector vulnerabilities—most recently, raising the insurance premium and guarantee fees for mortgage-backed securities. If housing risks continue to increase, additional macroprudential policy measures should be considered to safeguard financial stability.

Strengthening structural policies will be important to enhance Canada's long-term potential. The authorities' efforts on this front have been extensive and should continue, including making R&D investment to promote innovation, reducing restrictions on public-private partnerships, strengthening job matching and competition, diversifying Canada's export markets, and expanding the country's energy infrastructure.

Box 1.1

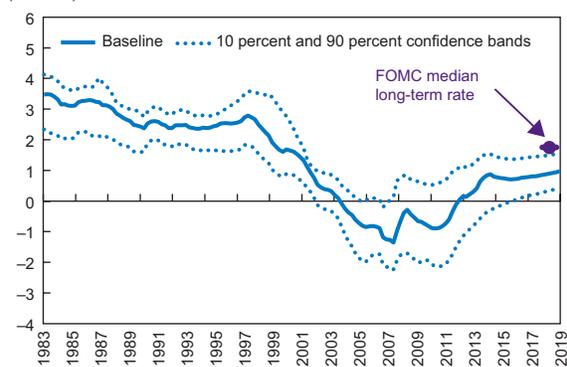
How Accommodative Is U.S. Monetary Policy?

The issue of interest rate lift-off and the path of U.S. monetary normalization depend on an assessment of policy accommodation. Real interest rates in the United States have been declining for some time but what matters to gauge the policy stance is the deviation from the neutral rate of interest—that is, the rate consistent with the economy achieving full employment and price stability over the medium term. In fact, even though the real federal funds rate has been in negative territory for the last seven years, this alone cannot determine whether or how forcefully the economy has been pushed toward eventual overheating pressures and rising inflation, or vice versa. To assess how accommodative monetary policy is, one needs to look at the difference between actual and neutral interest rates—that is, the “interest rate gap.”

Pescatori and Turunen (2015) suggest that the real neutral rate has declined over time and was likely negative during the crisis (see Figure 1.1.1). The trend decline in the neutral real rate seems to be partly driven by a gradual decline in U.S. potential growth in the 2000s (see Figure 1.1.2). Other relevant factors include a significant increase in demand for U.S. safe assets—partly reflecting substantial increases in emerging market current account surpluses during this period—and increased risk aversion during the crisis.¹ Moreover, taking into account in the estimation process the role of unconventional monetary policies undertaken in the aftermath of the financial crisis lowers the estimates of the neutral rate further.²

After bottoming out shortly after the crisis began, the neutral rate appears to have been trending upward, and estimates suggest it likely turned positive in 2014. Looking ahead, the projected increase in neutral rates is driven mostly by reductions in emerging market current account surpluses and diminishing headwinds from the global

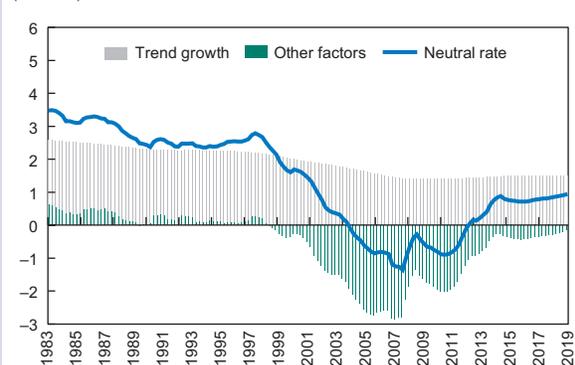
Figure 1.1.1

Estimates of Neutral Rates
(Percent)

Source: IMF staff projections.

Note: FOMC = Federal Open Market Committee.

Figure 1.1.2

Components of Neutral Rates
(Percent)

Source: IMF staff projections.

Note: This box was prepared by Andrea Pescatori.

¹ See Pescatori and Turunen (2015) for a more detailed decomposition of U.S. neutral rates and for a discussion of the estimation methodology.

² To take into account the effect of unconventional monetary policies in the estimation of the neutral rate, it is possible to replace the federal funds rate with a *shadow* policy rate as an alternative measure that is not bounded by zero. To construct this, Pescatori and Turunen (2015) takes a simple average of three different shadow rates available in the literature (see Krrippner 2013, Lombardi and Zhu 2014, and Wu and Xia 2014).

Box 1.1 (continued)

financial crisis—including a return to more normal degrees of risk appetite. A small rebound in trend growth also helps raise the neutral rate of interest. Hence, the analysis suggests that the neutral rate is likely to increase only gradually and stay well below the Federal Open Market Committee participants' median forecast for the long-term real policy rate (at about 1.75 percent).

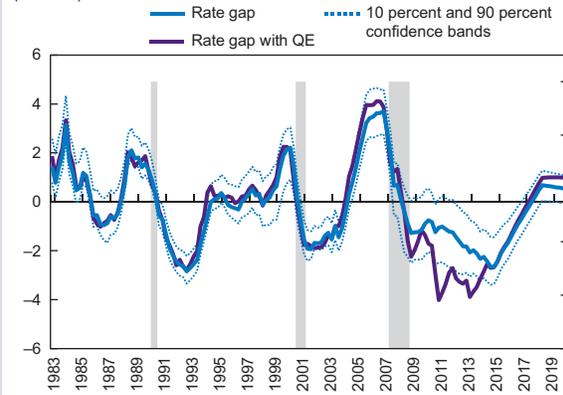
The interest rate gap suggests that monetary policy has been accommodative since the crisis started (see Figure 1.1.3). Additional accommodation, on the order of 1 to 3 percentage points, has likely been provided by unconventional monetary policies though their effects have been waning.³ Overall, given the recent increase in the neutral rate, monetary policy is still providing considerable economic stimulus. Looking ahead, the IMF staff expects that the Federal Reserve will raise policy rates gradually, implying the rate gap will remain negative for several years as the (real) neutral rate slowly increases above 1 percent. This path suggests that monetary policy is likely to remain quite accommodative for some time, which would support the economic recovery.

³ Monetary accommodation, including unconventional monetary policies, is calculated as the difference between the shadow policy rate and the corresponding neutral rate estimated using shadow policy rates. The higher gap or amount of accommodation reflects a substantially negative shadow policy rate in the aftermath of the crisis (about –3 percent), which is only partially offset by a lower estimate of the neutral rate over this period.

Figure 1.1.3

Interest Rate Gaps

(Percent)



Source: IMF staff projections.
Note: QE = quantitative easing.

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

Economic activity in Latin America and the Caribbean (LAC) is undergoing a protracted slowdown, in tandem with weaker underlying fundamentals. Growth is projected to decline again in 2015, turning negative before rebounding modestly in 2016. Externally, renewed weakness in commodity prices has further deteriorated the region's terms of trade, reflected in widening current account deficits, exchange rate depreciation, and weakening investment. Financial market strains have also risen to varying degrees, with retreating capital flows placing additional downward pressure on currencies, thus testing the credibility of existing policy frameworks. Domestically, headwinds to growth owing to country-specific factors are also mounting. Policy responses depend on country circumstances, including the depth of the downturn and degree of domestic rigidities. Some countries have already embarked on policy adjustment, but others will need to tighten policies further to address fiscal or external sustainability concerns. Net commodity importers can use the breathing room from lower commodity prices to deepen fiscal adjustment. Exchange rate flexibility remains instrumental for external adjustment, while structural reforms are crucial to address low trend growth.

Protracted Slowdown

Economic activity in Latin America and the Caribbean (LAC) has been slowing steadily since 2010 (Figure 2.1). After several years of high commodity prices and strong regional growth, a period commonly referred to as the “commodity super-cycle,” commodity prices have been decreasing since 2011, in tandem with a deceleration in Chinese economic activity, weakening the region’s

Note: Prepared by Marcello Estevão and Nicolas Magud with Ravi Balakrishnan, Carlos Caceres, Geoffrey Keim, Bogdan Lissovlik, Alla Myrvoda, Koffie Nassar, Julien Reynaud, and Marika Santoro and contributions from Ahmed El Ashram, Sebastian Acevedo, and Arnold McIntyre. Geneviève Lindow and Steve Brito provided excellent research assistance, with contributions from Anayochukwu Osueke.

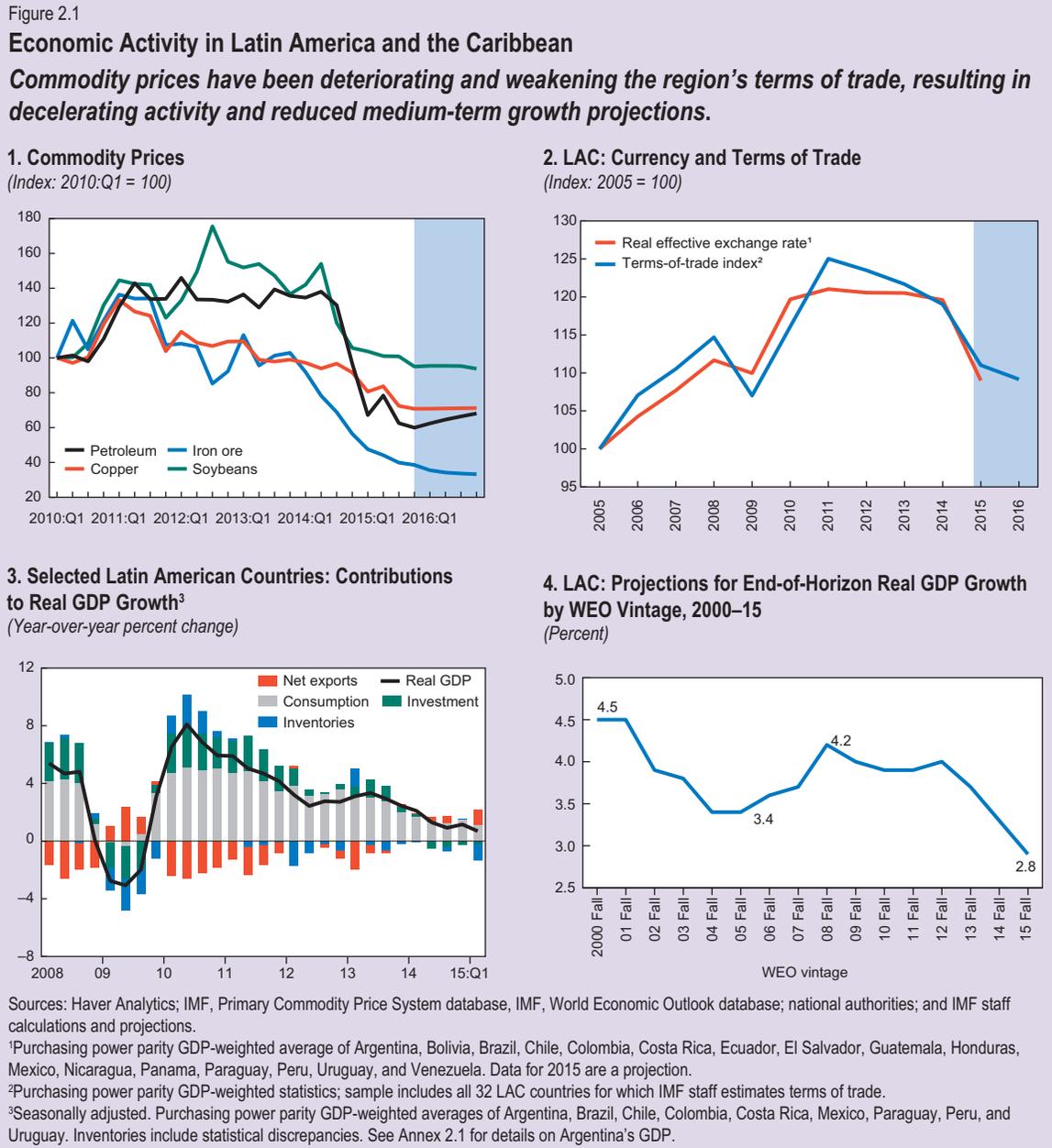
terms of trade. Moreover, this external shock is likely to be persistent. In addition, financial market pressures have risen recently to differing degrees across economies depending on their fundamentals. Concomitantly, important domestic vulnerabilities or constraints have further weighed on growth in key economies.

Against this backdrop, a sharp deceleration is projected in economic activity for LAC in 2015 implying a slight real GDP contraction ($-1/4$ percent), followed by a modest rebound in 2016. The deceleration reflects underlying weaknesses in both aggregate demand and supply, in the context of a less benign external environment. This said, the magnitude and duration of the slowdown is not unusual from a historical perspective (Box 2.1). Obviously, this broad outlook does not apply to every single country in LAC, with net-commodity importers of Central America and the Caribbean benefiting from improved terms of trade and a recovering U.S. economy.

Terms-of-Trade Shocks

Lower global prices for energy, metals, and agricultural goods have been a key factor behind the slowdown. The steady reduction in the region’s commodity terms of trade over the last several years has lowered national incomes, reducing private investment¹ and consumption. For example, the drop in commodity terms of trade resulted in more than 20 percentage points of GDP loss for Venezuela, close to 10 percent for Ecuador, about 7 percent for Bolivia and Chile, 5½ percent for Colombia, and about 4 percent for Peru (Figure 2.2). The terms-of-trade shocks to Argentina, Brazil, and Mexico have been weaker; around 2 percent of GDP or less.

¹ *Regional Economic Outlook: Western Hemisphere*, April 2015, Chapter 4.



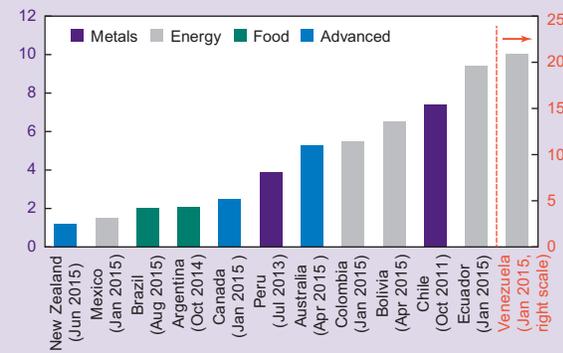
On the supply side, the dampened outlook for commodity prices has triggered a reevaluation of the region's growth potential,² including because

of the impact of decelerating investment on capital accumulation (Figure 2.1).

² See *World Economic Outlook*, October 2015, Chapter 2, which finds that annual output growth for commodity exporters, and to some extent medium-term growth, tend to fall during downswings in commodity prices.

For most economies in the region, current account and trade deficits widened, while currencies have weakened noticeably. The timing and impact of the shock have varied at the country level, largely because many commodity prices have been weakening since 2011 (for example, metals), while

Figure 2.2
Peak-to-Trough Change of Commodity Terms of Trade
(Percentage points of GDP)



Sources: Gruss 2014; and IMF staff calculations.
Note: Through period of current commodity terms of trade cycle in parentheses for each country. Excludes precious metals, except in Bolivia, Colombia, and Peru.

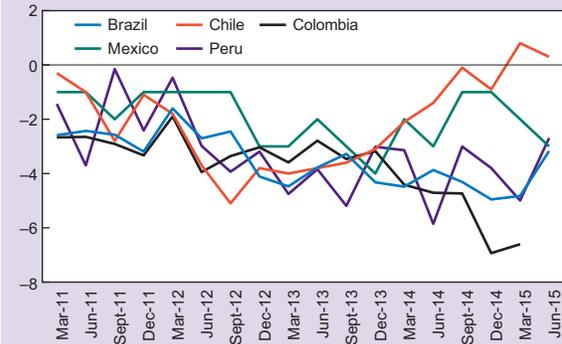
others started to decline more recently (such as oil, since mid-2014). In turn, external adjustments to weaker commodity terms of trade are at different stages (Figure 2.3). Chile, being a major exporter of copper, for example, has already undergone significant adjustment in its external current account, with a deficit that is now closed. In contrast, Colombia is still in the midst of adjusting to more recent price declines in oil, its main export.

Adjustment to pressures in the external account has been facilitated by currency movements. Indeed, exchange rate developments have partly reflected weakening terms of trade and the timing of shocks to country-specific commodity prices, with larger depreciations for countries with greater exchange rate flexibility. In turn, more flexibility facilitated a faster response of exports and imports to softer terms of trade.

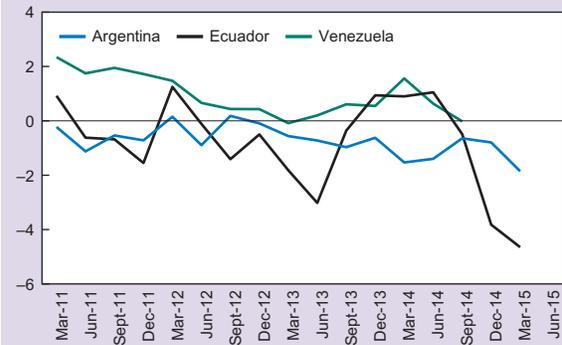
Some (for example, Chile) that have allowed their exchange rates to respond flexibly to the external shock have seen a significant narrowing of previously large external deficits. Adjustment has been slow in countries where exchange rate depreciation has proceeded at a more gradual pace

Figure 2.3
Current Account Adjustments
Current account adjustment occurring at difference pace across countries depending on the type of main commodity exported, and the size and timing of negative price shocks.

1. LA5: Current Account
(Percent of GDP)



2. Other Commodity Exporters: Current Account
(Percent of GDP)



Sources: Haver Analytics, and IMF staff calculations.

and supply-side constraints have temporarily dented exports (for example, Peru).

In contrast, countries with dollarized economies (for example, Ecuador) or pegs to the U.S. dollar (for example, Bolivia) have had less room to maneuver— in these countries, current accounts have widened— making them more vulnerable. Net commodity importers in the Caribbean (which have pegs to the U.S. dollar, see Box 2.2) and dollarized economies of Central America have benefited from lower oil prices, although they continue to post large current account deficits.

Domestic Headwinds

Although the main shock has been external, domestic factors have also played an important role in some countries. For instance, the region's largest economy, Brazil (for which the terms-of-trade shock has been relatively small), has relied too much on demand-bolstering measures in the past and finds itself with limited policy buffers. Moreover, the country is in a tough spot with a case of corruption and a political crisis adversely affecting confidence, thus playing a key role in the deepening recession. The weakening of the currency more recently, however, is expected to provide some relief to tradable sectors of the economy.

Some other countries are stuck in a rut of distortionary interventions and/or weak macroeconomic frameworks and policies. Venezuela is an extreme case, where microeconomic distortions combined with unsustainable macroeconomic policies have led to large imbalances, including very high inflation (indeed, the highest inflation rate in the world in 2014), a deep contraction in activity (the third largest in the world in 2014), and a widening fiscal deficit (the second largest in the world in 2014).

In Argentina, inflation remains high owing to the monetization of the fiscal deficit. Lack of market access is hurting activity and distortive macroeconomic and microeconomic policies are affecting the country's fundamentals. As a result, inflation in Argentina was the fifth highest in the world in 2014.

Financial Market Pressures

Financial conditions, meanwhile, have started to tighten in reaction to a changing external environment, although with differentiation depending on domestic realities. The worsening growth outlook for LAC economies, in general, and the strengthening U.S. recovery—with its implications for the Federal Reserve's interest rate tightening (see Chapter 1)—have moderated

net capital flows to the region, exerting further exchange rate depreciation pressures (Figure 2.4). Going beyond terms-of-trade changes, currency depreciation has varied within the region, depending on macroeconomic frameworks and country-specific developments, including political stability and past policy decisions.

Financial market pressures, more broadly speaking, have been differentiated given underlying fundamentals. Equity prices have come down (Figure 2.5), while corporate spreads have risen, although currency depreciations *so far* do not seem to have caused noticeable balance-sheet strains from possible mismatches between corporate dollar

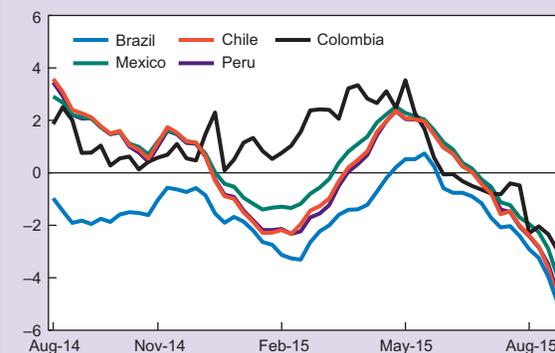
Figure 2.4

Capital Flows

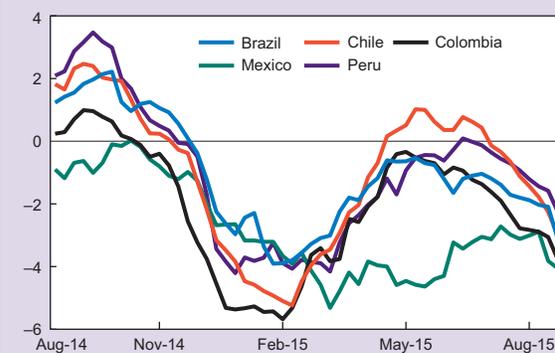
(Three-month moving sum, percent of initial stock)

Some capital flows turned negative recently.

1. Bonds—Weekly Data



2. Equities—Weekly Data



Sources: Haver Analytics, based on EPFR Global; and IMF staff calculations.

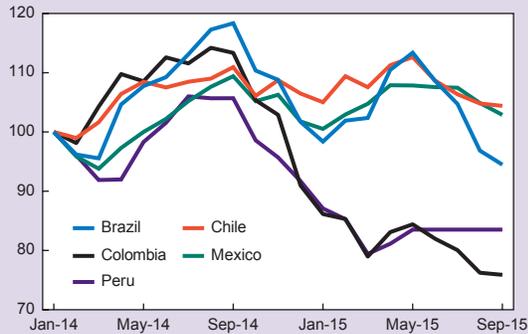
Figure 2.5

Market Valuations and Spreads

Stock market valuations have been receding along with increasing risk.

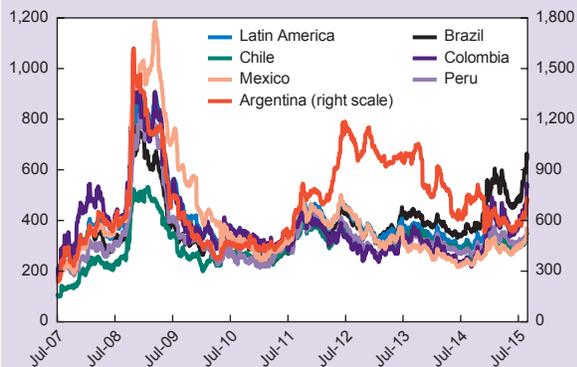
1. LA5: Equity Indices

(Index: January 2014=100)



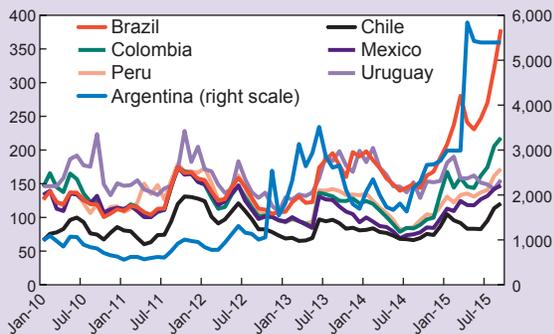
2. LAC: Corporate Spreads¹

(Basis points, spread over sovereign)



3. LAC: Sovereign Credit Default Swaps²

(Basis points)



Sources: Bloomberg, L.P.; and IMF staff calculations.
¹ J.P. Morgan CEMBI Broad Diversified Indices; U.S. dollar-denominated corporate bonds.
² Five-year credit default swap sovereign spreads.

liabilities and assets.³ Less financially integrated economies remained relatively shielded from volatility in financial asset prices but imbalances have surfaced in the form of rapidly deteriorating fiscal and external balances (for example, Bolivia and Paraguay) and a scarcity of goods in Venezuela.

Overall, changes in financial conditions in large swaths of the region have reinforced weaker economic fundamentals. Market pressures have further hurt consumer and business confidence and, in turn, amplified the downward adjustment in activity. These underlying forces intensified more recently as markets downgraded the outlook for Chinese economic growth and financial stability. Besides being a key source of demand for commodities, China is also an important trade partner for many countries in the region, including Brazil, Chile, Peru, Uruguay, and Venezuela. The volatility in financial conditions since August has added to the steadily worsening economic outlook for the region (Figure 2.6).

On the positive side, the economic recovery in the United States will provide some support to LAC's economic growth. That applies in particular to countries with strong links to the U.S. economy, including through trade (Mexico and Central America), remittances (Central America) and tourism (Caribbean).

Downside Risks Dominate

Risks around the baseline are tilted to the downside. If the U.S. economic recovery falters, the economies of Mexico (the second largest in LAC), Central America, and the Caribbean would feel the largest

³ Chapter 3 of the October 2015 *Global Financial Stability Report* finds that corporate leverage has edged up in Chile, Brazil, Mexico, and Peru. The chapter shows that global drivers have played a significant role in explaining the growth in emerging markets leverage and corporate spreads, suggesting that, in general, those countries must be prepared for a tightening in financial conditions as the U.S. Federal Reserve starts raising interest rates. This is particularly applicable to Latin America, which seems especially sensitive to financial conditions in the United States (Chapter 3).

Figure 2.6

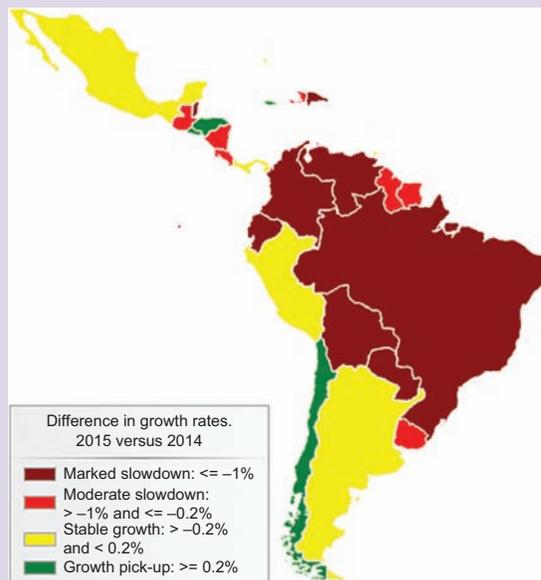
LAC Growth

The regional growth deceleration started in 2010 is projected to continue in 2015.

1. LAC: Real GDP Growth¹

(Percent)

	2013	2014	Projections	
			2015	2016
LAC²	2.9	1.3	-0.3	0.8
Financially integrated economies (LA6) ³	4.0	2.4	1.5	2.1
Other commodity exporters ³	6.0	2.0	-0.6	0.1
CAPDR ³	4.2	4.4	4.0	4.1
Caribbean				
Tourism-dependent ³	1.5	2.4	2.3	2.3
Commodity exporters ³	2.8	2.5	2.0	2.5
Memorandum items:				
Brazil	2.7	0.1	-3.0	-1.0
Mexico	1.4	2.1	2.3	2.8

2. LAC: Growth Momentum, 2014–15

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

Note: For country group information see page 89.

¹For definitions of the other country groups and details on the aggregation method, see Table 2.1.

²Purchasing power parity GDP-weighted average.

³Simple average.

pain. Of course, an upside to the U.S. recovery would be good for the world economy and there is some evidence that capital flows to LAC could grow if U.S. Federal Reserve policy rates were to rise owing to better growth dynamics, as long as the term premium embedded in long-term U.S. treasuries does not rise (Chapter 3).

More importantly, the expected lift-off of policy rates in the United States poses risks to the region.

Previous U.S. monetary tightening cycles have been typically associated with a *declining* term premium on U.S. long-term yields. However, the term premium is currently well below historical averages (Chapter 1). That could reverse if markets perceive policy risks going forward. Stronger wage growth or another sign of growing inflationary pressures in the United States could also raise the term premium on top of a steeper path for expected changes in short-term rates. A sharper rise in longer-term bond yields in the United States associated with a larger term premium would trigger tighter financial conditions and lower economic growth in Latin America (Chapter 3).

China's recent stock market volatility and changes in currency management illustrate the potential for shocks from Asia. A harder-than-expected landing of the Chinese economy would have deleterious effects on external demand for LAC's exports and commodity prices more broadly. The latter would affect South America negatively but represent a boon to net commodity importers in the region (mainly Central American countries and most of the Caribbean). Moreover, this highlights the need for diversifying away from commodity dependence. Deeper integration into global value chains could raise diversification in LAC economies. But, we find that the direct trade impact on LAC of more integration into global value chains would likely be small (Chapter 4).

The potential for financial disturbances emanating from Europe is still alive despite the positive developments in the Greek negotiations. However, direct spillovers to asset prices in LAC would probably be minor, as seen during recent episodes, partly owing to the region's limited financial integration (Box 2.3).

Financially Integrated Economies

Developments and Outlook

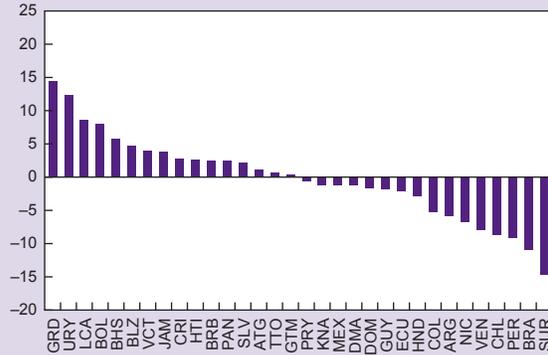
Economic activity among Latin America's financially integrated economies (LA6: Brazil, Chile, Colombia, Mexico, Peru, and Uruguay) has diverged, as external and domestic factors weigh differently in each country (Figure 2.7).

Figure 2.7

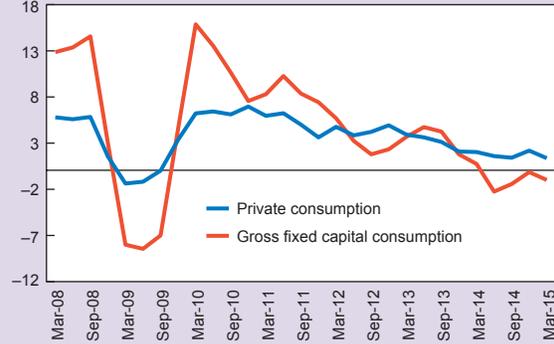
Effects of Worsening Terms of Trade

Worsening terms of trade have hit Latin America, weighing on domestic demand spending and real wages, impacting on private sector confidence and weakening real exchange rates. Economies linked to U.S. growth are holding up.

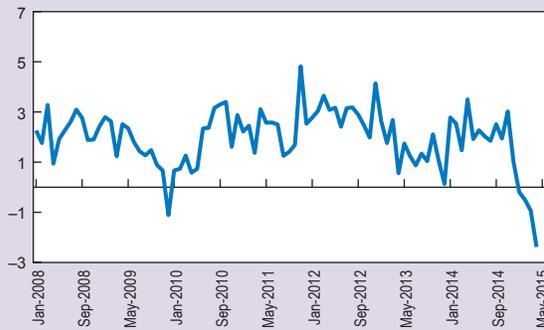
1. Terms of Trade, 2014 vs. 2011
(Cumulative percentage change)



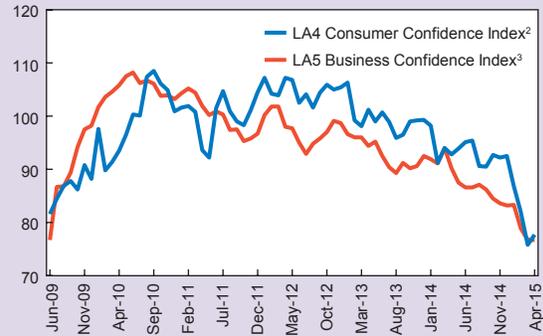
2. LA5: Private Consumption and Gross Fixed Capital Formation
(Year-over-year percent change)



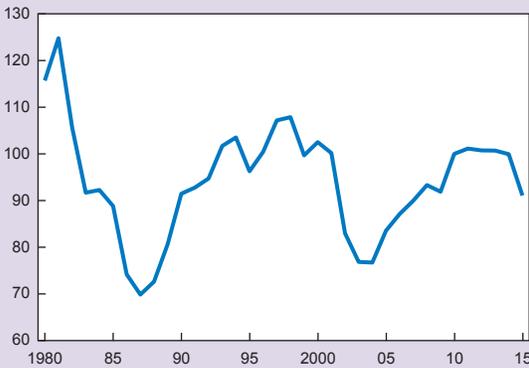
3. Latin America: Real Wage Growth¹
(12-month percentage change, seasonally adjusted)



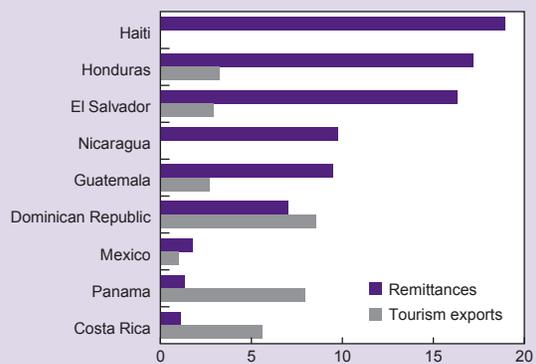
4. Latin America: Confidence Indices
(Index: 2011=100)



5. Latin America: Real Effective Exchange Rate⁴
(Index: 2010=100, increase=appreciation)



6. Remittances and Tourism Exports, 2013–14
(Average, percent of GDP)



Sources: Haver Analytics; IMF, International Financial Statistics database; IMF, World Economic Outlook database; national authorities; UN Comtrade; and IMF staff calculations and projections.

Note: For country acronyms see page 89.

¹Purchasing power parity-weighted GDP averages of Brazil, Chile, Colombia, Ecuador, Mexico, Peru, and Uruguay. Peru data are minimum wage real index.

²Purchasing power parity GDP-weighted average of Brazil, Chile, Colombia, and Mexico.

³Purchasing power parity GDP-weighted average of Brazil, Chile, Colombia, Mexico, and Peru.

⁴Purchasing power parity GDP-weighted average of Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela. Data for 2015 are a projection.

After stalling in 2014, the Brazilian economy is projected to contract noticeably by 3 percent in 2015 and 1 percent in 2016. While external factors such as deteriorating commodity prices explain some of the contraction in activity, domestic factors are the biggest drag. Brazil entered mid-2014 with large macroeconomic imbalances stemming from a diagnosis that the economic slowdown since 2010 was caused by lack of sufficient aggregate demand. With inflation well above the central bank target, public policies appropriately shifted to avoid a more severe economic crisis toward a tighter monetary stance and a fiscal adjustment to contain inflationary pressures and stabilize the trajectory of public debt.

At the same time, a serious political crisis has been triggered by a wide-ranging investigation of corruption involving Brazil's major oil company, Petrobras, its private sector contractors, and politicians; allegations of campaign finance irregularities during the 2014 presidential elections; and a review by the Federal Court of Accounts questioning the 2014 fiscal accounts. The interaction of the economic and political crisis has fueled uncertainty and driven consumer and business confidence to historical lows, further undermining current and prospective economic activity. The economic slowdown has depressed fiscal revenues well below the authorities' initial expectations and, together with lack of congressional support for further spending cuts, led to a marked downward revision of fiscal targets for 2015–17. This has raised market concerns about the sustainability of public debt, and triggered a sovereign downgrade to junk status by a debt rating agency this September.⁴ Largely reflecting these developments, yields on government debt have risen steeply since July.

⁴ Specifically, on September 9 Standard and Poor's moved Brazil's sovereign rating below investment grade. A number of banks and nonfinancial corporations' credit rating was downgraded as well, in accordance with Standard and Poor's policies for rating other issuers in relation to the sovereign. So far, Fitch and Moody's have kept Brazil's sovereign investment grade credit rating.

In Mexico, the economy is projected to expand by 2¼ percent in 2015 and 2¾ percent in 2016—more slowly than previously anticipated. The more gradual recovery is attributed largely to a further decline in oil production and a weaker-than-expected recovery in construction activity. Fiscal consolidation is projected to have exerted only a modest drag on growth. Looking ahead, a projected rebound in industrial activity in the United States should boost manufacturing output and overall growth in Mexico. On the negative side, low oil prices have forced the government to announce a restrictive fiscal budget for 2016 and underscore recent downward revisions in growth potential. The implementation of structural reforms is expected to work in the opposite direction and boost economic activity in the medium term through higher private investment and increased productivity.

In Chile, domestic factors have added to the drag on activity emanating from falling commodity prices. Private domestic demand is expected to remain subdued in 2015, with private investment affected by the large decline in business confidence reflecting both low copper prices (which fell by about 20 percent in the three months between May and August 2015) and the short-term costs from the structural reform agenda. Consumer confidence also weakened in 2015, on the back of slower growth in private sector employment and wages. Chile's real GDP growth is expected to pick up modestly in 2015 to 2¼ percent, mainly reflecting the large fiscal stimulus this year (in particular through greater capital spending). Growth for 2016 is projected at 2½ percent, over ½ percentage point less than that projected in April, on account of weaker copper prices. The recent depreciation of the peso (15 percent since May) is expected to slow the return of inflation to within the central bank's target range, but medium-term inflation expectations remain anchored around the central bank's 3 percent target.

Peru's growth slowed sharply last year as a result of a drop in private investment as well as subnational public investment and temporary supply disruptions in fishing, mining, and agriculture. As some of the shocks lingered into 2015, and were

compounded by the renewed slide in metal prices, Peru's economy is projected to grow this year at a similar pace as in 2014 (about 2½ percent). Growth is expected to pick up to about 3¼ percent in 2016, supported by a rebound in mining production, although there is considerable uncertainty, including from a possibly stronger-than-expected negative impact from the El Niño weather phenomenon.

Whereas Chile and Peru have been adjusting to lower metal prices since 2013, the Colombian economy has been hit by the more recent sharp decline in oil prices. Real GDP growth is projected at 2½ percent in 2015, down from 4.6 percent in 2014, as the sizable worsening of its terms of trade since mid-2014 has hurt domestic income, business confidence, and private investment. As oil prices stabilize in 2015 and the U.S. economy continues to recover, growth is projected to rebound modestly in 2016. However, lower oil prices increase fiscal challenges owing to reduced revenues.

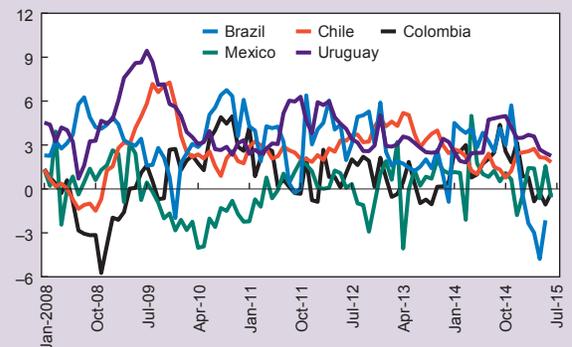
Negative spillovers from weak economic activity in Argentina and Brazil are expected to weigh on growth in Uruguay, projected at 2½ percent in 2015—about 1 percent lower than in 2014—slowing to 2¼ percent in 2016. Notwithstanding the deceleration in economic activity so far, inflation remains stubbornly above the central bank's target band.

Labor markets are weakening (with the rapid rise in the unemployment rate in Brazil in the past 12 months being particularly noteworthy) and real wages growth has slowed in most countries since end-2014 (Figure 2.8). Despite growing labor market slack, other indicators, such as large external current account deficits and relatively high inflation, suggest little space for active demand support in LA6 economies, though. The current account deficits have been financed in great part by sizable foreign direct investment (FDI), although portfolio inflows have also contributed and foreign ownership of domestic assets increased in most countries (Figure 2.9). This entails some risks if international financing conditions were to change abruptly.

Figure 2.8

Real wages have been decelerating.**LA6: Real Wage Growth**

(12-month percentage change, seasonally adjusted)



Sources: Haver Analytics; and IMF staff calculations.

Note: Excludes Peru.

The LA6 financial sector appears reasonably sound, with low levels of non-performing loans (NPLs). However, corporate and household debt has been increasing in most countries, requiring vigilance, especially as international interest rates are set to rise.⁵ For instance, in Brazil, NPLs for at least 90 days remain at 3 percent system-wide; nevertheless, for non-earmarked loans, which represent about one-half of bank loans, NPLs stood at 4.8 percent in July, their highest in 19 months. The ongoing recession and rising unemployment are expected to further affect loan performance in coming quarters. While banks' soundness indicators remain strong, their profitability is likely to be affected by the overall state of the economy. Credit has been decelerating for several quarters now, and in real terms credit to the private sector stopped growing in July.

Excess exchange rate volatility might pose additional risks to countries with larger exposure to foreign exchange credit (for example, Peru and Uruguay). In addition, a weaker currency could help boost exports noticeably in more diversified economies (for example, Brazil) but its effect could be more limited elsewhere, at least until investment can be directed to other tradable sectors. The negative income effect from lower commodity

⁵ *Global Financial Stability Report*, October 2015, Chapter 3.

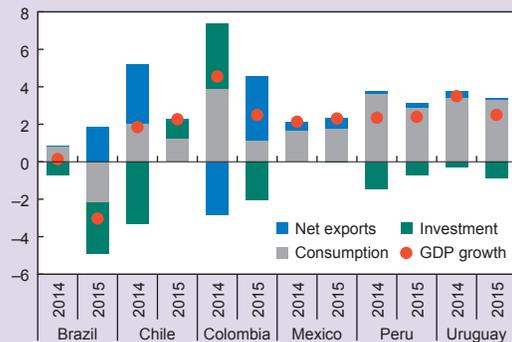
Figure 2.9

Growth Dynamics and Measures of Slack and Adjustment Divergence

Growth dynamics across financially integrated economies diverge, with mixed measures of slack. Lower wages suggest some softening in labor markets, though current account deficits are widening despite depreciating domestic currencies owing to weaker terms of trade—with some pass-through to inflation.

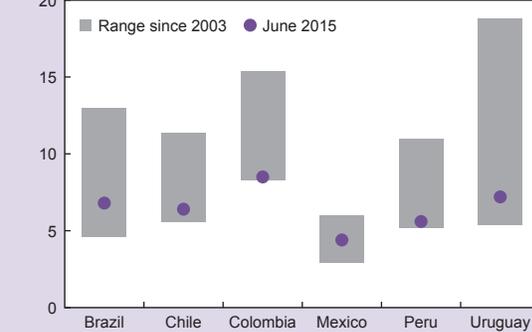
1. LA6: Real GDP Growth Contributions

(Percentage points)



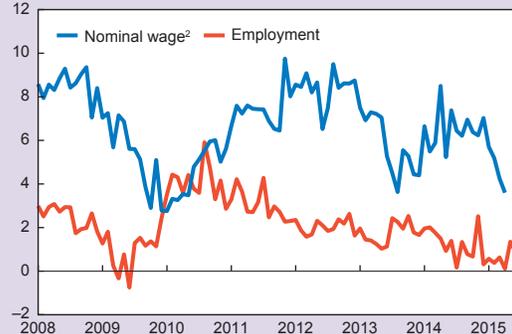
2. LA6: Unemployment Rate¹

(Percent)



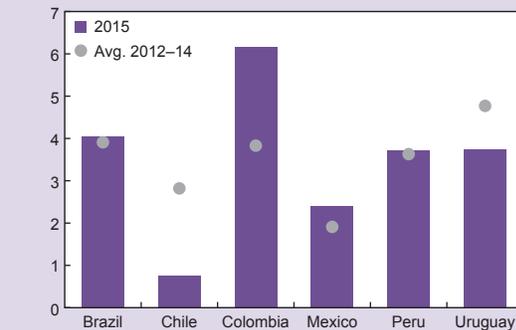
3. LA6: Nominal Wage and Employment Growth

(Median, 12-month percentage change, seasonally adjusted)

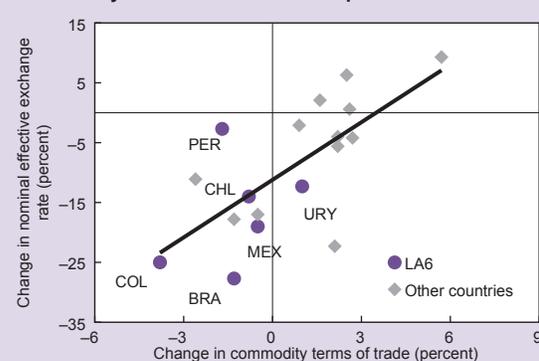


4. LA6: External Current Account Deficit

(Percent of GDP)

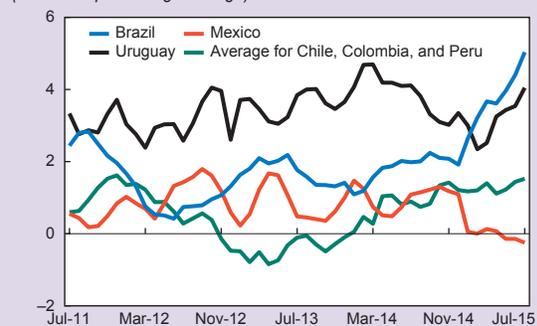


5. LA6: Change in NEER versus Change in Commodity Terms of Trade Since April 2013³



6. LA6: Headline Inflation Less Inflation Target

(12-month percentage change)



Sources: Bloomberg, L.P.; Haver Analytics; IMF, Information Notice System database; IMF, World Economic Outlook database; national authorities; UN Comtrade; and IMF staff calculations and projections.

Note: For country acronyms, see page 89; NEER = nominal effective exchange rate.

¹Seasonally adjusted.

²Peru data are minimum wage.

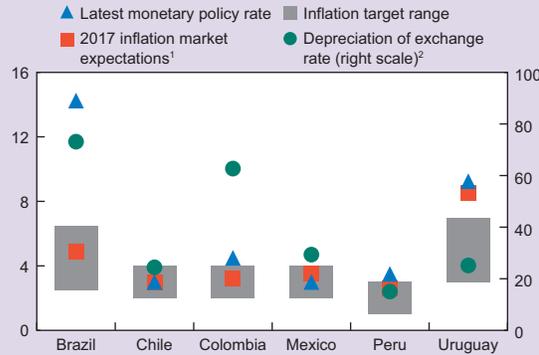
³Data are through end-July 2015. Other countries include Hungary, India, Indonesia, Israel, Korea, Malaysia, Philippines, Poland, Romania, South Africa, Thailand, and Turkey. Commodity terms of trade are weighted by the share of commodity exports/imports in GDP; thus, a 1 percent increase can be interpreted approximately as an income gain of 1 percent of GDP. Indices exclude precious metals, except for Colombia and Peru. See also Gruss (2014).

Figure 2.10

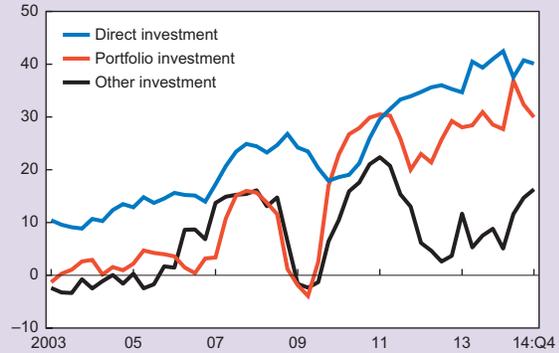
Monetary Policy, Inflation, and Capital Flows

Inflation is on the rise, but inflation expectations remain well anchored. Though moderating, capital inflows have continued to finance LA6’s widening external current account deficits. High shares of non-resident holdings of domestic debt remain a risk. However, large stocks of international reserves and exchange rate flexibility provide some protection from external shocks.

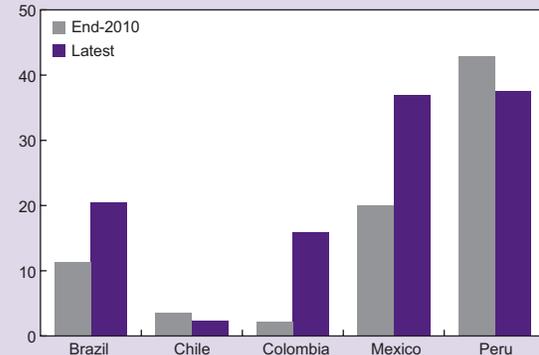
1. LA5: Monetary Policy Rates¹
(Percent)



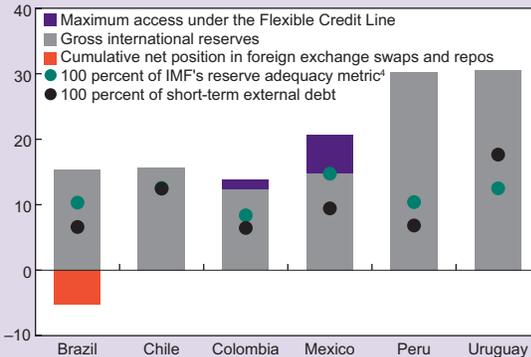
2. LA6: Gross Capital Inflows³
(Billions of U.S. dollars, 4-quarter moving average)



3. LA5: Nonresident Holdings of Domestic Debt
(Percent of total)



4. LA6: Official Foreign Exchange Reserves, 2014
(Percent of GDP)



Sources: Bloomberg, L.P.; IMF, Balance of Payments Statistics Yearbook database; IMF, International Financial Statistics database; IMF, World Economic Outlook database; national authorities; and IMF staff calculations.

Note: For region name abbreviations, see page 89.

¹Data come from national authorities, surveys, and market participants.

²National currency per U.S. dollar. Percentage change on the average of June 2014 to the average of September 2015.

³Excludes Peru.

⁴Methodology described in Assessing Reserve Adequacy, Specific Proposals, IMF (2015).

prices, and, thus, lower domestic purchasing power would counteract some of the positive exports effect from a currency depreciation. The Latin American experience suggests that the net benefits of a currency depreciation associated with lower commodity prices are indeed limited.⁶ Inflation

rates are either near or above the upper bound of the inflation target range in LA6 but markets expect that 2017 inflation will fall within targeted ranges (Figure 2.10), with the exception of Uruguay, suggesting limited second-round effects from the currency depreciation so far.

⁶ *Regional Economic Outlook: Western Hemisphere*, April 2015, Chapter 2.

Policy Priorities

Persistently weaker commodity prices have changed the outlook for LA6 economies. Financial conditions are expected to tighten and currencies could soften further. Against this backdrop, policymakers need to continue to allow exchange rate flexibility aiming at facilitating external adjustment, while keeping an eye on inflation targets.

The depreciation in regional currencies reflects a relative price shock and weaker underlying fundamentals and, thus, should be accommodated by the monetary authorities. Central banks should, however, remain attentive to possible second-round effects (for example, accelerating wage demands or unmooring of inflation expectations) and tighten the monetary stance if needed to preserve the credibility of their inflation target frameworks. So far, medium-term inflation expectations remain within the targeted ranges (Figure 2.9). Exchange rate flexibility comes with a risk, though, especially where the exposure to foreign exchange denominated-debt, in a context of increasing leverage, is relevant. While there are only a few indications of large corporate balance-sheet mismatches in LA6 countries to date, authorities in more dollarized economies (Peru and Uruguay) need to be especially attentive to excess exchange rate volatility. If needed, intervention in foreign exchange markets should be temporary and limited to smoothing short-term fluctuations in exchange rates, aimed at avoiding excessive volatility, possibly following a rules-based, sterilized operation.

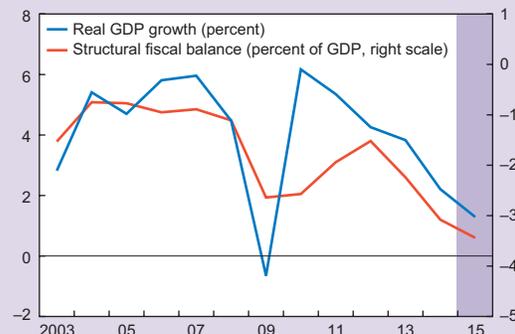
While the current debt outlook is generally manageable in LA6 countries, the incomplete reversal of the fiscal stimulus implemented during the crisis has reduced fiscal buffers to confront possible future downturns (Celasun and others 2015). Public debt in most of these countries remains above precrisis levels (Figure 2.11), primary balances have deteriorated, and, despite the still favorable global financial conditions, the difference between interest rates and GDP growth is larger than before. This heightens vulnerabilities to

Figure 2.11

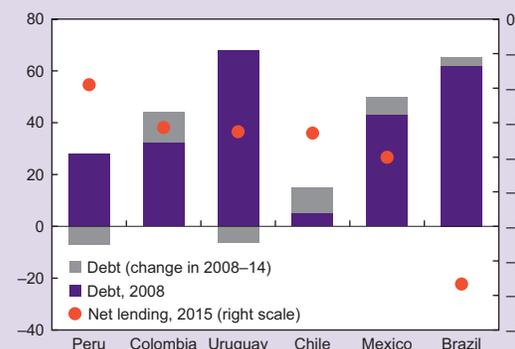
Deteriorated Fiscal Positions

Countercyclical fiscal deficits have increased public debt in recent years.

1. LA5: Real GDP Growth and Structural Fiscal Balance¹



2. LA6: General Government Gross Debt and Net Lending² (Percent of fiscal year GDP)



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

Note: For country acronyms see page 89.

¹Simple average of Brazil, Chile, Colombia, Mexico, and Peru.

²For definitions of government coverage, see Table 2.2.

potential shocks and spending pressures, including from long-term social liabilities, guarantees to public enterprises, and natural disasters, while at the same time tests the credibility and strength of existing policy frameworks. In view of these risks, there is a clear case for rebuilding fiscal buffers across LA6 countries. Gaining fiscal space is also needed to protect the income redistribution policies that have served LA6 countries well during the last decade (Box 2.4).

More specifically, in Brazil, the focus of macroeconomic policies should be on bolstering credibility and addressing supply-side constraints. Fiscal consolidation should proceed without

delay and monetary policy should remain tight to bring inflation back toward the central bank's central target.

Strengthening fiscal and monetary policy frameworks and alleviating structural bottlenecks are needed to boost investment, productivity, and competitiveness. Within this broad contour, exchange rate flexibility should continue to be used as the main external shock absorber. The ongoing foreign exchange intervention through swap operations could be gradually unwound and limited to episodes of excessive market volatility. Lending by public banks should focus on missing markets only; in practice implying reductions from their current level of credit creation. The risks to banks' balance sheets from the effects of the recession calls for close supervision.

In Mexico, monetary policy has remained appropriately accommodative as inflation is slightly below the central bank target and output below potential. The depreciation of the exchange rate reflects deteriorating oil prices (and their impact on future oil investment). With the monetary stance well calibrated to business cycle conditions, fiscal policy consolidation (consistent with a lower world oil price environment) is critical to put the debt ratio into a downward path. A steady and transparent implementation of the proposed structural reforms is critical.

There is room for monetary policy to remain accommodative in Chile (given downside risks to economic activity and still well-anchored inflation expectations), while remaining attentive to second-round effects of the ongoing currency depreciation. Fiscal consolidation is warranted following this year's large fiscal impulse to help anchor inflation expectations and restore confidence. The structural reform agenda should be designed and implemented with the objective of minimizing potential short-term negative effects, including those related to policy uncertainty. Although the financial sector is generally healthy, prudential measures might need to be considered if corporate debt continues to grow rapidly. Strengthening the regulatory and supervisory framework for life insurance companies and

financial conglomerates would buttress Chile's financial sector.

Monetary policy faces similar challenges in Peru, where the economy has also been adjusting to the protracted decline in international metal prices. Allowing some pass-through of exchange rate depreciation to consumer prices is sensible, but monetary policy should remain responsive to inflation expectations and external developments. Exchange rate flexibility should be the first line of defense against any additional external pressures, although intervention may be needed to avoid excessive market volatility given dollarization. Ongoing dedollarization efforts should be continued, with macroprudential measures being a useful tool to strengthen the financial system while dedollarization proceeds. Deepening structural reforms to raise productivity and economic diversification would leverage the benefits of currency depreciations when shocks hit the commodity sector. Although Peru has policy space to do more if the slowdown is protracted, the priority should be effective implementation of existing stimulus measures. Accelerating the execution of public investment is urgent, while hikes in non-priority current spending should be avoided. As the recovery takes hold, the gradual withdrawal of fiscal stimulus will be appropriate.

The Colombian economy is in an earlier phase of deceleration than the economies of Chile and Peru. Thus, so far, a broadly neutral monetary policy stance would be consistent with achieving the inflation target in the near to medium term, despite some near-term pressure on inflation from the currency depreciation. This said, inflation expectations need to be monitored carefully. Some fiscal tightening will be required to accommodate lower-than-expected revenues owing to weaker oil prices, however. Revenue mobilization will be needed to protect social and infrastructure spending, including through tax reform (increasing the rate and the base of the value-added tax) and better enforcement. Colombia's ambitious infrastructure program based on public-private partnerships is welcome, though contingent fiscal risks should be carefully assessed. With deepening

financial activity in the country also comes the need for stronger supervision of nonbank financial intermediation, while the derivatives market’s regulatory regime could be further simplified.

In Uruguay, where inflation has exceeded the target range since 2010, a comprehensive disinflation strategy is needed to bring inflation to the mid-point of the target range. This would include maintaining a tight monetary policy stance, moving toward more restrictive fiscal policy, and reducing the extent of backward-looking wage indexation. While exchange rate flexibility continues to be a key adjustment variable, it would be useful to strengthen risk weights for foreign currency loans to unhedged borrowers and to incorporate a greater exchange rate stress scenario into the supervisory stress tests.

Other Commodity Exporters

Developments and Outlook

Weaker commodity prices have also affected most of the other commodity exporters of South America, which are less financially integrated (Figure 2.12). The abrupt drop in the price of oil since mid-2014, on the one hand, has had a marked impact, especially in Venezuela but also in Bolivia and Ecuador. On the other hand, lower oil prices have benefited Paraguay, a heavy hydrocarbons importer.

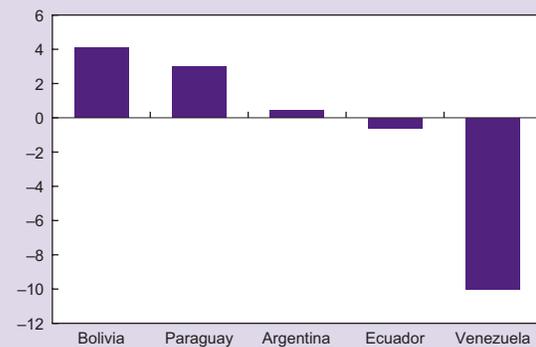
Venezuela has been pursuing unsustainable macroeconomic policies for several years on the back of widespread microeconomic distortions. This has resulted in high and rapidly increasing inflation (projected to be about 200 percent in 2015 and 2016), a severe scarcity of goods, and a black market exchange rate that is currently more than 100 times larger than the lowest official exchange rate (in a system of multiple exchange rates, but for which 95 percent of the transactions take place at the lowest official exchange rate). Against this backdrop, Venezuela was hard hit by the sudden fall in its terms of trade (which has also compressed fiscal revenues from the government-owned oil producer *Petróleos de Venezuela*

Figure 2.12

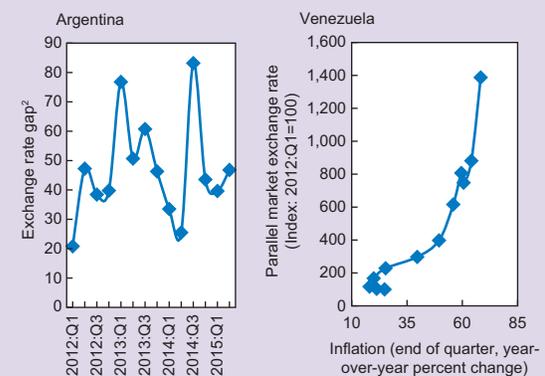
Real GDP, Exchange Rates, and Sovereign Spreads

Softer commodity prices strongly affected other commodity exporters. In turn, weaker terms of trade were amplified in countries with larger imbalances

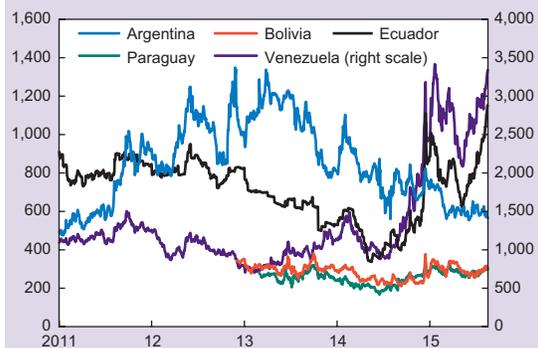
1. Other Commodity Exporters: Real GDP Growth (2015, percent)



2. Parallel Market Exchange Rates 2012:Q1–2015:Q2¹



3. Other Commodity Exporters: Sovereign Credit Spreads³ (Basis points)



Sources: Bloomberg, L.P.; Haver Analytics; IMF, World Economic Outlook database; national authorities; and IMF staff calculations.

¹ Latest data for Venezuela are 2014:Q4.

² Difference of the parallel exchange rate and the official exchange rate as percentage of the official exchange rate.

³ Refers to J.P. Morgan Emerging Market Bond Index.

(PDVSA), private sector confidence has collapsed, and the economy has been in a deep recession since 2014. Venezuela's GDP is projected to contract by about 10 percent in 2015 and 6 percent in 2016.

Ecuador's economic and financial outlook has deteriorated substantially. Following a 3.8 percent expansion in economic activity during 2014, GDP is projected to contract by about ½ percent in 2015 and to remain flat in 2016. This sharp deceleration results mainly from the strong fiscal response to the drop in oil prices, but also to the contraction of liquidity in the financial system and weakening consumer confidence. The oil shock and worse terms of trade in the presence of dollarization have caused a marked deterioration of the external current account, which has led the authorities to impose trade restrictions.

In Argentina, a strong fiscal impulse has helped stabilize economic activity in 2015 but macroeconomic imbalances have worsened. Government spending has boosted private consumption and construction activity, while industrial production growth ceased to decline in June and July (in year-over-year terms) after two years of contraction. Balance of payments pressures have remained relatively contained so far in 2015, although the gap between the official and parallel exchange rates widened to about 50 percent as of September despite the central bank's attempts to increase the supply of foreign exchange and support the demand for the Argentine peso, including through higher deposit rates. The monetary and fiscal policy mix continues to be unsustainable, and macroeconomic imbalances, fueled by the greater monetization of fiscal deficits and exchange rate overvaluation, have deteriorated in 2015. Growth is expected to remain around ½ percent for 2015, with heavy foreign exchange controls continuing to depress investment and imports, while the weakening terms of trade, the ongoing recession in Brazil (Argentina's main trading partner), and the real appreciation of the peso weigh on exports and contribute to a further decline in the trade surplus.

In Bolivia, owing to weaker hydrocarbon prices, growth is projected to moderate to a still-robust 4 percent in 2015, down from 5½ percent in 2014. The external current account, which deteriorated from a surplus of 3½ percent of GDP in 2013 to a balance in 2014, is projected to further deteriorate to a large deficit of about 4½ percent of GDP in 2015. The slowing economy and weaker energy-related exports will further increase the public sector primary deficit in 2015 to about 5 percent of GDP. Although Bolivia has some prior buffers, the sharp deterioration in the external current account and the fiscal balance are worth monitoring.

In Paraguay, economic activity has slowed in recent months, reflecting adverse spillover effects from the recession in its largest trading partner, Brazil, and the continued decline in agricultural commodity prices. Nonetheless, the broader outlook remains comparatively benign, underpinned by sound macroeconomic fundamentals, favorable demographics, and the potential from ongoing economic diversification. Growth is projected to decline to 3 percent in 2015.

Policy Priorities

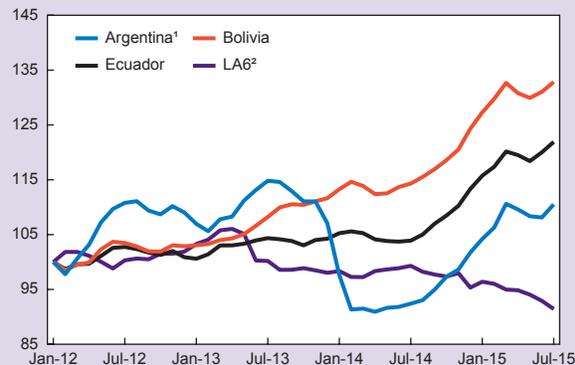
First and foremost, greater exchange rate flexibility would allow these economies to better absorb the impact of weaker terms of trade (Figure 2.13). Countries with unsustainable fiscal expansions would need to go through the needed adjustment to put public finances in order.

Venezuela needs to correct several years of macroeconomic and microeconomic mismanagement to turn around dire economic and social conditions. On the macroeconomic side, this includes reducing the public sector deficit and ending its monetization, reigning in extremely high inflation, and correcting the many distortions in the foreign exchange market. Removing trade restrictions and price controls is important to alleviate the scarcity of goods, while relative price corrections through the removal of subsidies and controls will be necessary to bolster confidence and stimulate private investment.

Figure 2.13

Other Commodity Exporters: Real Effective Exchange Rates

(Index: January 2012 = 100)



Source: IMF, Information Notice System database; and IMF staff calculations.

¹Real effective exchange rate using wage index for Argentina, CPI for trading partners and the official exchange rate.

²Simple average of Brazil, Chile, Colombia, Mexico, Peru, and Uruguay.

In Bolivia, a key policy imperative is to improve the nonhydrocarbons primary balance. A progressive approach to meet this objective could be pursued, particularly since there are currently sizable buffers of low debt, large reserves, low dollarization, and a reasonably sound financial system. Other important reforms include strengthening the monetary policy framework and upholding the central bank operational independence and the primacy of its price stability mandate; adopting a strong medium-term fiscal framework; clarifying commodity-related investment regimes; and improving the business climate in general. Modifying credit quotas and interest rate caps under the financial services law may be warranted if financial stability risks become material. Greater exchange rate flexibility would facilitate the adjustment to a new external context.

Policy alternatives are more limited in fully dollarized economies, such as Ecuador. The authorities have adjusted to the new external conditions with a strong fiscal retrenchment, but any financing shortfall would have to be addressed with further fiscal effort. To regain competitiveness in the face of real currency overvaluation and prevent protracted slow growth, substantial real wage and price adjustments are

called for. Diminishing liquidity in the banking system warrants close monitoring and rapid reaction if pressures continue, while eliminating restrictions and distortions in the banking system as well as enhancing supervision would make the system more resilient to shocks. The authorities' own timeframe for removing import surcharges is an important policy decision, so that resource allocation responds more effectively to new market realities. Bolstering private sector confidence by improving the business environment would be key to stemming deposit declines and preserving dollarization, as well as to sustaining healthy medium-term growth and reducing oil dependence. A broad structural reform agenda will be essential to foster productivity, crowd-in the private sector, attract FDI, and raise economic diversification.

Argentina needs to remove microeconomic distortions, which magnify the need for macroeconomic adjustment, in order to rekindle growth. In particular, foreign exchange controls have distorted relative prices, generated a parallel foreign exchange market, and eroded competitiveness. Utility prices have been frozen, driving a wedge between retail prices and cost recovery, while price agreements have temporarily contained deep inflationary pressures. Unwinding these distortions is crucial to a better allocation of resources and higher growth following price adjustments. Fiscal adjustment and a tighter monetary stance will be needed to contain the effects on inflation and limit the resulting depreciating pressures on the Argentine peso. In turn, eliminating distortionary subsidies and reducing inflation would pave the way for more equitable growth.

In the case of Paraguay, sticking to the 1½ percent of GDP deficit target will be important to build credibility for the recently enacted Fiscal Responsibility Law. Efforts should concentrate on further improving tax enforcement and containing current spending. Meanwhile, structural reforms are critical to secure sustained solid growth—the priority being to enhance the effectiveness of the public administration and provide better public

services, including in infrastructure, education, and the legal system.

Central America and the Dominican Republic

Developments and Outlook

Central America, Panama, and the Dominican Republic (CAPDR) have benefited from the recovery in the United States and the continued weakness in international energy prices, as the region is a net importer of hydrocarbons. This mix favors a “virtuous circle” of stronger demand, lower inflation, and a better external position. Yet, some of the hoped-for gains are still tentative, while strong policies are essential to reap durable benefits from the favorable conditions.

Growth has been robust at 4¼ percent over the year ending in the first quarter of 2015 (Figure 2.14), but slightly below that of 2014 (4½ percent). Among the possible explanations for this small deceleration in economic activity is a cooling of remittances in the first half of 2015. There have also been one-off country-specific drags to growth, including Intel’s withdrawal from Costa Rica (particularly affecting its trade with the United States) and a deceleration of remittances to El Salvador. While the political crisis in Guatemala so far has not affected macroeconomic activity, the risks are tilted to the downside. On a positive note, Honduras’ output picked up in early 2015, driven by investment and exports.

Headline inflation in these countries has dropped well below their central banks’ targets, reflecting mainly the pass-through of lower commodity prices to domestic inflation (Figure 2.15). Core inflation has also been declining (except in Nicaragua). There were further modest policy rate reductions in inflation-targeting countries across the region.

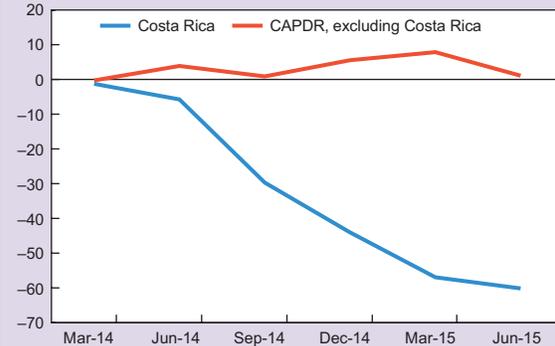
Going forward, output in the region is expected to grow at around 4 percent in 2015–16, broadly in line with its medium-term growth potential. With output gaps almost closed, inflation is expected to bounce back but to remain contained

Figure 2.14

Growth and Remittances in CAPDR

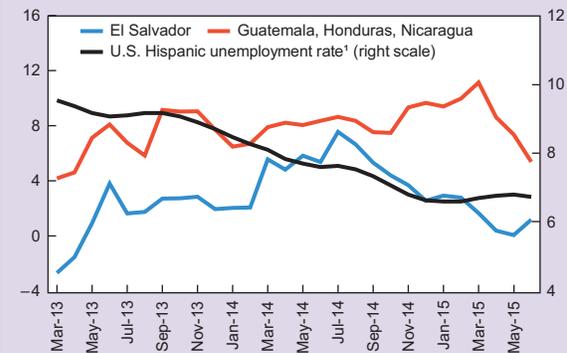
Trade traction with the United States seems modest so far and strong remittance flows have eased. Output growth is robust but not accelerating.

1. CAPDR: Goods Export Growth to the United States (Year-over-year percent change, 3-month moving average)



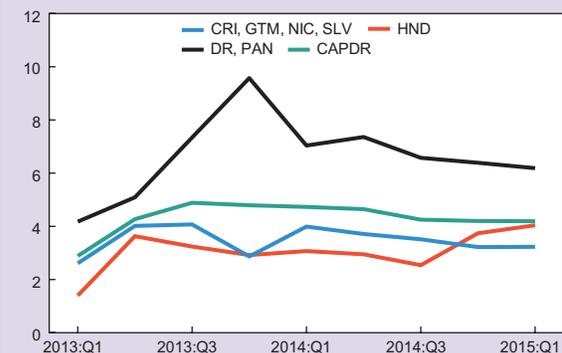
2. Remittances’ Growth

(Year-over-year percent change, current U.S. dollars, 3-month moving average)



3. GDP Growth

(Year-over-year percent change)



Sources: Central American Monetary Council; national authorities; St. Louis Federal Reserve; U.S. Census Bureau; and IMF staff calculations.

Note: Properly deflated corresponding volume data of trade with the United States are not available on a timely basis. The figure does not include services exports to the United States, which are important for some CAPDR countries. For country and region acronyms see page 89.

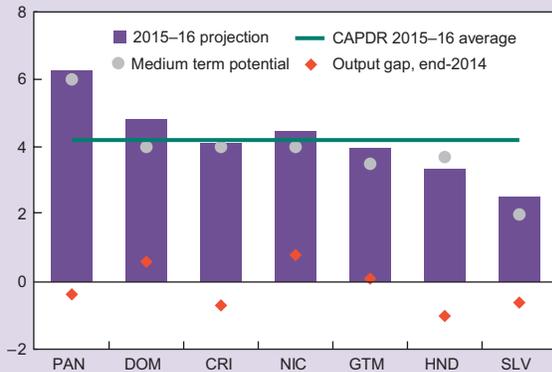
¹Three-month moving average percentage change. CAPDR = Central America, Panama, and the Dominican Republic.

Figure 2.15

Growth and Inflation in CAPDR

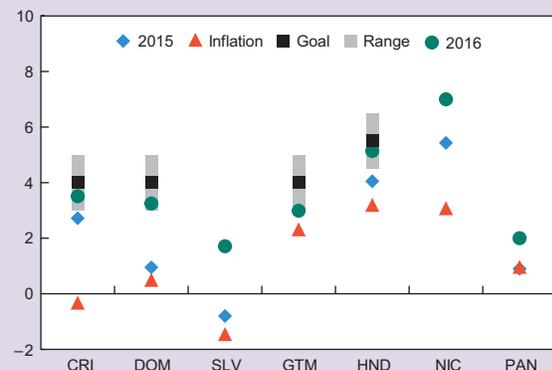
Growth is projected to be close to potential, with inflation rebounding but under control.

1. CAPDR: Real GDP Growth and Output Gap (Percent)



2. Target Range vs. Actual Inflation

(Year-over-year inflation as of July 2015, in percent; inflation forecasts are an annual average)



Sources: Central America, Panama, and the Dominican Republic (CAPDR) central banks; IMF, World Economic Outlook database; and IMF staff calculations. Note: For country acronyms see page 89.

at the lower end of the targeted ranges. Risks include international (financial market or geopolitical tensions) and regional/national developments (natural disasters or lack of action to address political, economic, or security challenges).

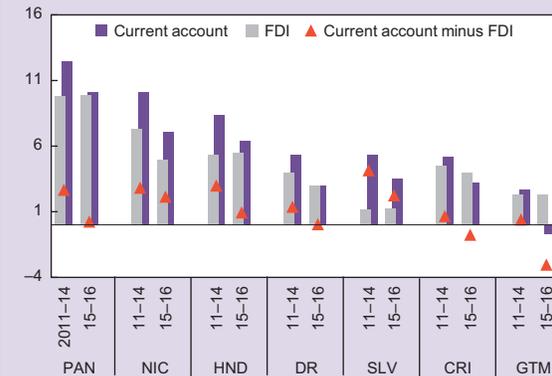
The region's external position has been improving markedly (Figure 2.16). The external current account deficit declined by more than 1 percent of GDP in 2014 and is expected to fall sharply again this year, from 6 percent of GDP to

Figure 2.16

CAPDR External Position

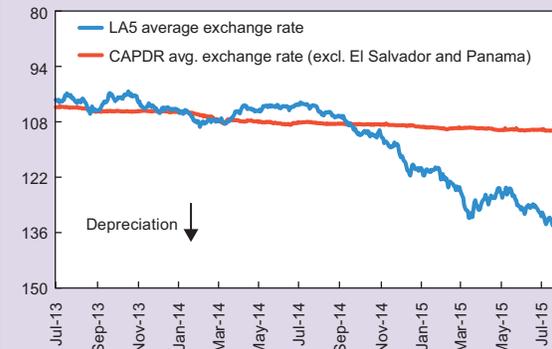
The current account deficits are falling and largely financed by FDI; foreign exchange markets have been broadly stable.

1. CAPDR: Current Account Deficits and FDI (Percent of GDP)



2. Exchange Rates

(Jan 1, 2012 = 100)



Source: Bloomberg, L.P.; IMF, World Economic Outlook database; national authorities; and IMF staff calculations. Note: CAPDR = Central America, Panama, and the Dominican Republic; FDI = foreign direct investment. LA5 = Brazil, Chile, Colombia, Mexico, and Uruguay.

4¼ percent of GDP. This improvement reflects primarily a decline in the energy import bill, but also more robust exports of goods and services. Exchange rates have been broadly stable while international reserves have been rising. Still, there are pockets of vulnerabilities as external financing requirements remain sizable and bank financing flows non-negligible, while FDI is projected to moderate in a few countries. Over the medium term, the improvement in external current account deficits is expected to partially reverse owing to some recovery in international energy prices and

the dissipation of the precautionary saving of the private sector's windfall.

Fiscal vulnerabilities remain a primary concern, against a backdrop of large sustainability gaps and insufficient adjustment plans (Figure 2.17). Moreover, significant revenue underperformance in light of the tax corruption scandals is expected to be met by expenditure cuts, including capital and social spending. On current policies, public debt ratios are projected to rise in El Salvador, Costa Rica, Nicaragua, and the Dominican Republic (though fairly mildly in the latter two), carrying risks for debt sustainability.

Also, the favorable external environment is unlikely, by itself, to translate into fiscal improvements in some countries as the terms-of-trade windfall may not rule out a “revenue curse.”⁷ While sovereign spreads have reacted only slightly to the mid-2015 volatility in Europe, they remain high in most CAPDR countries—and broadly unchanged relative to large, financially integrated Latin American countries (despite higher market pressures on the latter). By contrast, Honduras' fiscal consolidation is being rewarded by markets with spreads improving by about 100 basis points in comparison with LA5 since the beginning of the year.

Bank credit has decelerated gradually but remains robust and supported by deposits. Loans to firms have continued to grow slower than loans to households. In some countries, banks have been increasing wholesale borrowing from abroad, but that continues to be well below precrisis levels while loan-to-deposit ratios remain healthy. Bank data suggest solid financial soundness indicators—dollarization has been edging down slightly but remains high at about 45 percent on average in non-fully-dollarized countries. Still-low access to finance by both households and firms exacerbates economic informality and social deprivation.

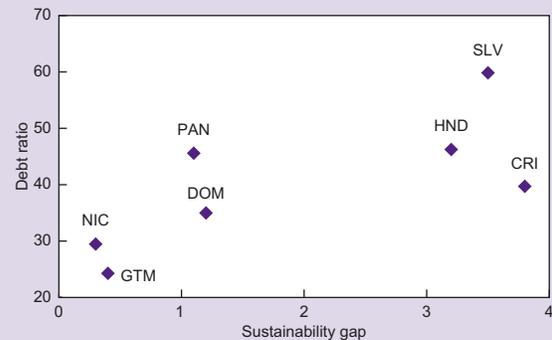
⁷This reflects a drop in the share of relatively easy-to-collect import taxes on petroleum products in favor of harder-to-collect domestic taxes on economic activity. El Salvador and Guatemala have seen particularly weak revenue growth so far this year.

Figure 2.17

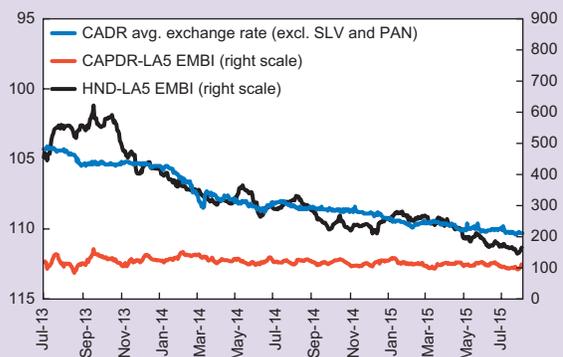
Fiscal Sustainability and Sovereign Spreads in CAPDR

Fiscal imbalances remain a problem for some countries; sovereign debt spreads have not closed the gap with LA5 countries (except Honduras).

1. CAPDR: Fiscal Sustainability Gap vs. General Government Debt¹ (Percent of GDP)



2. Difference in Sovereign Spreads (Basis points)



Source: Bloomberg, L.P.; national authorities; and IMF staff calculations. Note: For country and region acronyms, see page 89.

¹Debt ratios refer to 2014. Fiscal sustainability gaps are defined as the difference between the 2014 primary deficit and the primary deficit that would stabilize debt by 2020, except for Costa Rica, Honduras, and El Salvador, where lower debt levels are targeted.

Policy Priorities

Fiscal consolidation is a priority in countries with high and rising public debt ratios. In particular, Costa Rica and El Salvador should flesh out credible plans to close high sustainability gaps. In this context, the experience of Honduras' ongoing recovery despite the sizable fiscal adjustment suggests that fiscal multipliers in Central America

may not be large, with consolidation efforts geared toward addressing sustainability problems inducing investor confidence effects.⁸ The current external environment offers an opportunity for adjustment with limited social tensions. Thus, countries seeking consolidation, but also those in need of financing additional social or infrastructure spending (for example, Guatemala), could capture part of the oil windfall through well-calibrated tax-policy and tax-administration measures. Rationalizing poorly targeted energy subsidies would contribute to the fiscal adjustment (while reducing inequality) and limit dependence on PetroCaribe financing, particularly in Nicaragua. These measures could be buttressed by adopting or enhancing fiscal rules, advancing public financial management, and tackling future imbalances from population aging (including in El Salvador, where a pension reform is being discussed, and in Nicaragua, where partial progress was recently made).

The monetary policy framework (except for the two fully dollarized economies) should aim at improving credibility, and anchoring inflation expectations. Where relevant, countries should continue to transition to inflation-targeting regimes. Monetary policy should focus on underlying price pressures, thereby avoiding unwarranted relaxation in response to temporary price declines. At the same time, greater exchange rate flexibility should be fostered as an important shock absorber.

Further progress in implementing prudential measures, including those aimed at reducing dollarization and improving bank supervision on a consolidated basis, would be essential to enhance central banks' monetary transmission mechanisms and promote sound growth of the financial system.

Pursuing productivity-enhancing structural reforms is important for raising potential output growth. Key regional challenges include boosting the investment climate and addressing insecurity, which is accentuated by the recent spike in violence in El Salvador. Additionally, the region would benefit from reforming labor markets through better

taxation while bolstering incentives to work in a formal, more productive, sector. Fostering financial development, while incentivizing the use of large remittances flows for investment and not just consumption, could have significant benefits for inclusive growth.

The Caribbean

Developments and Outlook

Similarly to Central America (and unlike South America), low commodity prices and a strengthening U.S. economy imply a brighter outlook for most of the Caribbean. More specifically, in 2014 the tourism sector was a strong contributor to growth in the tourism-intensive economies of the Caribbean (The Bahamas, Barbados, Jamaica, and the countries of the Eastern Caribbean Currency Union, ECCU), owing to strengthening visitor arrivals (buoyed by the U.S. recovery). Tourism contributed to stronger-than-expected growth in these countries, except in Jamaica, where a drought significantly undermined growth. Recent mixed tourism-sector performances and idiosyncratic developments in agriculture and construction point to still decent real GDP growth of about 2¼ percent in 2015 and 2016 (Figure 2.18). Inflation is expected to dip temporarily to 1 percent in 2015; some countries are experiencing short-lived deflation largely owing to the full-year impact of lower fuel prices. Upside risks from favorable fuel prices (Box 2.2), external demand, and citizenship-by-investment programs are balanced by the possible adverse effects from real effective exchange rate appreciation, U.S. Federal Reserve policy tightening, and easier access to Cuba for U.S. tourists.

Growth in commodity exporters (Belize, Guyana, Suriname, and Trinidad and Tobago) is projected at about 2 percent in 2015 before rising to 2½ percent in 2016. The projections are based on expected small improvements in commodity terms of trade and prospects in other sectors. Inflation for this group of countries is expected to pick up somewhat in 2015–16, owing to higher food prices

⁸ See Estevão and Samake (2013).

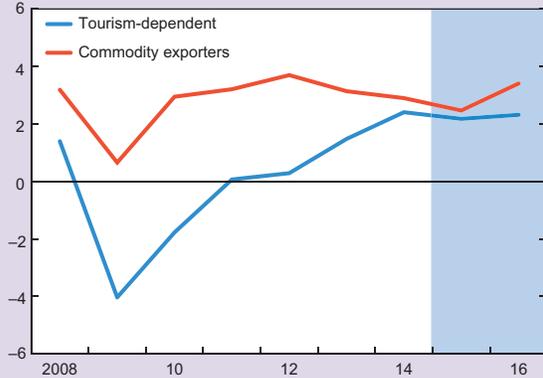
Figure 2.18

Economic Activity in the Caribbean

Tourism-dependent economies are recovering on the back of tourism arrivals, while fiscal positions have been deteriorating in commodity exporters. Financial risks have increased in some countries.

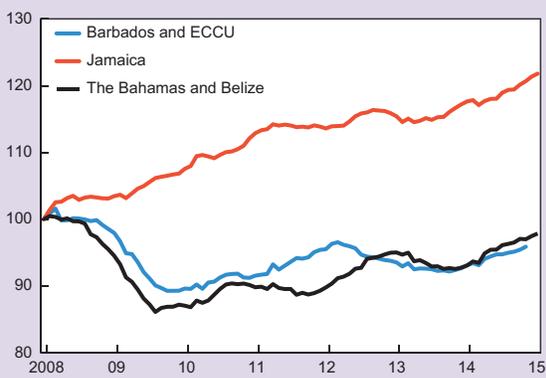
1. The Caribbean: Real GDP Growth¹

(Percent change)



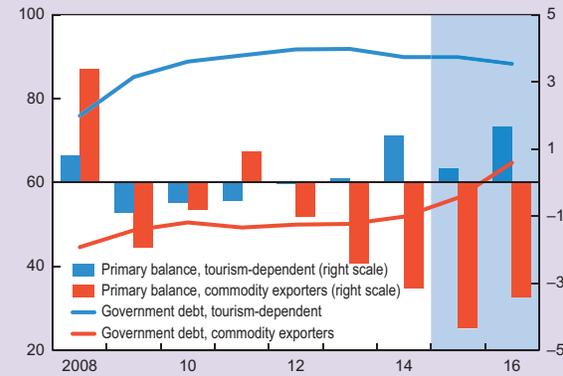
2. The Caribbean: Tourist Arrivals

(Index: 2008 = 100; 12-month moving average)



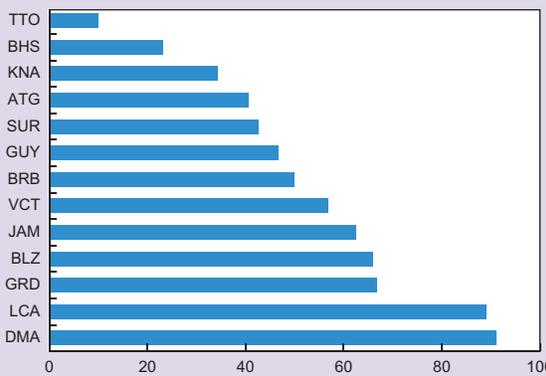
3. The Caribbean: Fiscal Accounts

(Percent of fiscal year GDP)



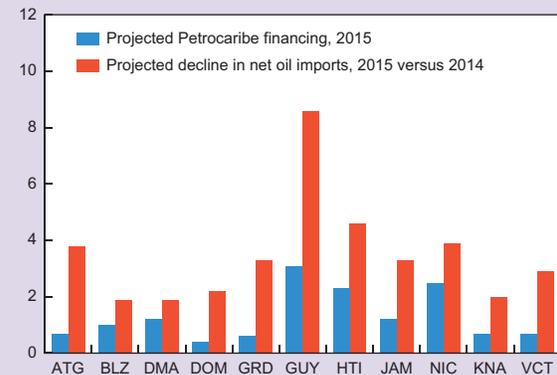
4. The Caribbean: External Debt, 2014

(Percent of GDP)



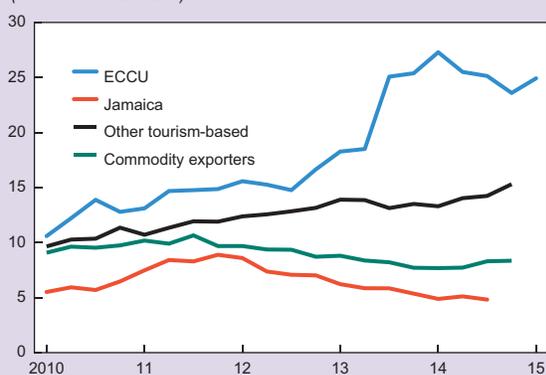
5. The Caribbean: Petrocaribe Exposure

(Percent of GDP)



6. The Caribbean: Nonperforming Loans²

(Percent of total loans)



Sources: IMF, World Economic Outlook database; national authorities; Caribbean Tourism Organization; Eastern Caribbean Central Bank; and IMF staff calculations.

Note: For country and region acronyms, see page 89. Commodity exporters = Belize, Guyana, Suriname, Trinidad and Tobago; Tourism-dependent economies = Antigua and Barbuda, The Bahamas, Barbados, Dominica, Grenada, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines; Eastern Caribbean Currency Union (ECCU) = Anguilla, Antigua and Barbuda, Dominica, Grenada, Montserrat, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines.

¹Simple average.

²Simple average of countries in group, as available. Observations are shown only if more than half of countries in group reported non-performing loans data.

and other country-specific factors, but should remain below levels observed in recent years.

The large external current account deficits in most of the tourism-based countries are expected to improve owing basically to lower fuel import bills (all countries in this group are net oil importers) and to stronger tourism receipts. Foreign reserves have stabilized or begun to grow. In contrast, lower gold and fuel prices have weighed on commodity exporters' external current account balances, with deficits projected to rise on average by about 2 percent of GDP in 2015.

Policy Priorities

Most Caribbean countries should take advantage of low commodity prices to deepen fiscal adjustment aiming at improving debt dynamics. The countries with current and recently expired reform programs supported by the IMF (Grenada, Jamaica, and St. Kitts and Nevis) have made substantial progress in addressing vulnerabilities from high debt levels. Notably, Jamaica is expected to have lowered its public debt by about 15 percent of GDP by end-2015. It bought back U.S. \$3 billion in debt it owed to Venezuela's PDVSA under the PetroCaribe agreement, at a discount, financed through issuing an external bond (with an estimated net present value gain of about 2.1 percent of GDP). However, fiscal sustainability challenges have yet to be definitively tackled in most other tourism-based Caribbean countries. High debt—averaging about 82 percent of GDP in 2014—remains a major vulnerability. While a number of countries, including The Bahamas and Barbados, recently implemented welcome fiscal adjustment measures, public debt levels in the Caribbean are still set to rise to an average of 85 percent of GDP in 2015. The commodity exporters of the region have generally lower debt burdens, but strong policies are required, especially

to increase revenues following the adverse effects of lower commodity prices.

In the bank-dominated financial sectors of the tourism-based countries, elevated levels of NPLs continue to be a major headwind. Indeed, NPLs are only slightly below recent peaks. The slow pace of balance-sheet cleanup contributed to a contraction of credit to the private sector in many economies last year, blunting the support to economic growth from prudent lending to creditworthy borrowers. In the ECCU, policymakers have made some progress under their strategy to strengthen the indigenous (locally incorporated) banks. Most ECCU members have passed revised legislation to enhance the framework for bank supervision and regulation. Asset-quality reviews have also been conducted. Nevertheless, determined efforts to continue the process will be needed going forward.

Despite the recovery in the tourism-based economies and the resilience of commodity exporters, the Caribbean continues to face significant challenges that have manifested themselves in low potential growth and stagnant productivity. Improved long-term prospects require stronger implementation of structural policies going forward. In particular, policymakers in many Caribbean economies should redouble efforts to mitigate high production costs, such as better aligning wage setting with productivity trends; strengthening regulation of utility tariffs; and addressing pressures to the finance costs of businesses. Measures to boost structural competitiveness should aim to improve educational attainment and mitigate skill mismatches, accelerate contract dispute resolution processes, and reform insolvency regimes. Finally, and critically, policies will need to build stronger resilience to natural disaster events, such as Tropical Storm Erika, which struck Dominica in August with tragic consequences.

Box 2.1

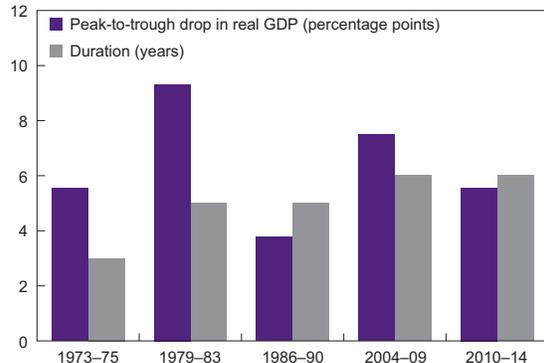
Historical Perspective on the Deceleration of Real Economic Activity in LAC

GDP growth in LAC has been declining steadily since 2010. Based on current projections for 2015, this year will mark the worst performance in more than 30 years (excluding the global financial crisis of 2009). The magnitude and duration of this deceleration is in line with previous episodes, and near the upper limit of the historical experience. However, given the improved fundamentals and macroeconomic frameworks engineered since the late 1990s, a deceleration of a magnitude and duration similar to past episodes raises more concerns than relief. It should be mentioned, though, that the size of the shocks need not be the same, except shocks to the terms of trade during the 1970s and 2000s.¹

Decelerations in the 1970s and 1980s lasted from three to five years (Figure 2.1.1). During the 2000s, the duration was six years. Based on the current real GDP projections for 2015–16, the current episode would last five years. The ongoing episode has so far produced a peak-to-trough drop in GDP growth of about 6 percentage points since 2010. Other than the short deceleration of the early 1970s, other growth declines in LAC have been somewhat larger. The late 1970s episode saw a reduction in real GDP growth of more than 9 percentage points over its 5-year duration. More recently, the early 2000s event posted a slow-moving deceleration, which ended with a sharp drop in 2009.

The main demand-side drivers of growth declines have changed over time. Investment declined the most during the late 1970s–early 1980s (Figure 2.1.2). In the second half of the 1980s, it was consumption that declined the most. For 2004–09, consumption and net exports (as imports, presumably owing to investment, were growing faster than exports) drove the deceleration. The current slowdown is driven by investment and consumption. A salient feature of the ongoing episode is that the deceleration is taking place as the contributions from the external sector are improving—potentially suggesting a strong effect from import compression.

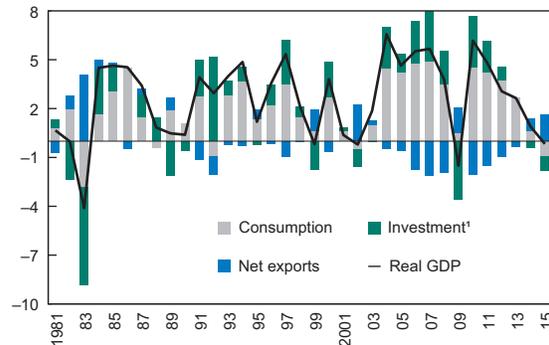
Figure 2.1.1
Past and Current Activity Decelerations
(Percent; number of years)



Source: World Economic Outlook database.
Note: Purchasing power parity GDP-weighted averages of the 32 countries of Latin America.

Figure 2.1.2
Selected Latin American Countries:
Contributions to Real GDP Growth

(Year-over-year percent change)



Sources: World Economic Outlook database; and IMF staff calculations and projections.
Note: Purchasing power parity GDP-weighted averages of Argentina, Brazil, Chile, Colombia, Mexico, Peru, Uruguay, and Venezuela.
¹ Investment includes inventories and statistical discrepancies.

Note: This box was prepared by Nicolas E. Magud, with contributions from Steve Brito.

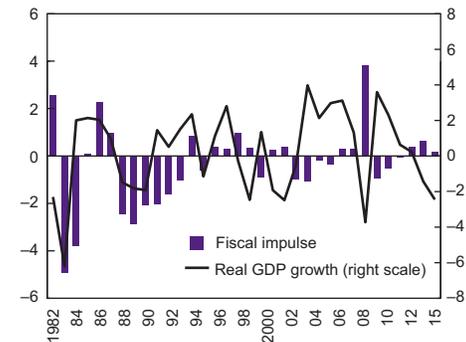
¹See Adler and Magud (2015) for details.

Box 2.1 (continued)

The role of the public sector has also changed over time. Through the late 1970s to the early 2000s, real GDP drops occurred along with negative fiscal impulses (Figure 2.1.3). Fiscal policy was procyclical. The year 2009 marked a change, being the first time in recent history that LAC was able to implement a countercyclical fiscal policy in response to a crisis. More recently, the fiscal impulse has been decreasing, raising doubts about whether fiscal policy will return to its historical procyclicality.

In sum, the steady deceleration in economic activity is comparable with past episodes, which could be seen as somewhat disturbing (instead of comforting) given the improved macroeconomic institutions in the region. The external sector has actually been contributing positively to growth in recent years, including because currency depreciation has been suppressing domestic purchasing power. Domestic aggregate demand is adjusting to negative external shocks (for example, lower commodity prices) and domestic shocks, and looks relatively weak when compared with external demand. Fiscal policy provided a significant boost to economic activity in 2009 but the space for further fiscal expansion has been narrowing.

Figure 2.1.3
Selected Latin American Countries: Fiscal Balance and Real GDP Growth¹
(Percent of fiscal year GDP)



Sources: IDB, Structural Fiscal Balances database for LAC; IMF, World Economic Outlook database; Rojas-Suárez and Weisbrod (1995); and IMF staff calculations.

Note: 1981 to 1992 fiscal balance data come from Rojas-Suárez and Weisbrod (1995).

¹ Purchasing power parity GDP-weighted averages of Argentina, Chile, Colombia, Mexico, and Peru. Fiscal balance represents general government primary net lending/borrowing. Fiscal impulse is calculated as fiscal balance in period $t - 1$ minus fiscal balance in period t .

Box 2.2

Macroeconomic Fluctuations in the Caribbean: The Role of Oil Prices

Caribbean economies are characterized by their overdependence on imported fossil fuels. Except for Trinidad and Tobago, which is the single net exporter of oil and natural gas in the Caribbean, all other Caribbean countries are net importers of oil. Suriname is the most energy independent owing to its crude oil production and significant wealth of hydropower. Of the remaining countries, about 87 percent of primary energy consumed is imported petroleum products, mostly diesel fuel for electricity generation, gasoline for transportation, and liquefied petroleum gas (Figure 2.2.1). Hydroelectric power, harnessed through facilities in, Belize, Dominica, St. Vincent and the Grenadines, and Suriname, supplies 2½ percent of energy consumption in the region.

Over the past decade, persistently high oil prices have increased macroeconomic pressures in oil-importing Caribbean countries. The average value of net oil imports has doubled, widening the trade and external current account deficit by an average of 3.7 percent of GDP annually over 2005–14, compared with the previous decade. Terms of trade worsened and pressure on foreign exchange reserves increased (Figure 2.2.2).

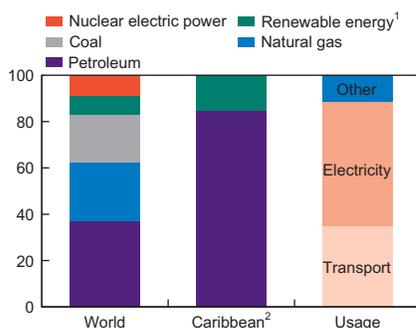
The energy bill has been absorbing a growing share of households' discretionary real income, reducing consumption spending in other sectors of the economy. High and volatile electricity prices have raised the cost of doing business in the region. About 40 percent of Caribbean firms identify electricity costs as a major constraint to doing business, above the average of the LA6 and other developing countries in the world.¹ This has increased uncertainty of investment planning, with unfavorable repercussions on capital formation, the inflow of foreign direct investment, and therefore long-term growth.

Fixed exchange rate regimes in many Caribbean countries limit the extent to which the exchange rate can cushion the impact of oil price shocks on external balances. Large and persistent inflationary shocks, as the ones resulting from higher fuel prices, expose these countries to episodes of real exchange rate appreciation, triggering a difficult-to-reverse loss of competitiveness in the region (Figure 2.2.3). Moreover, the tourism industry is exposed to spillovers of international oil price shocks through potentially lower tourism receipts as higher oil prices dampen demand from key source markets and could increase the cost of airfare, encouraging a substitution effect to other tourist destinations.

Figure 2.2.1

Primary Energy Consumption by Source and Use

(Percent of total)



Source: US Energy Information Administration; IDB Energy Matrix Country Briefings for the Caribbean (2013); and IMF staff calculations.

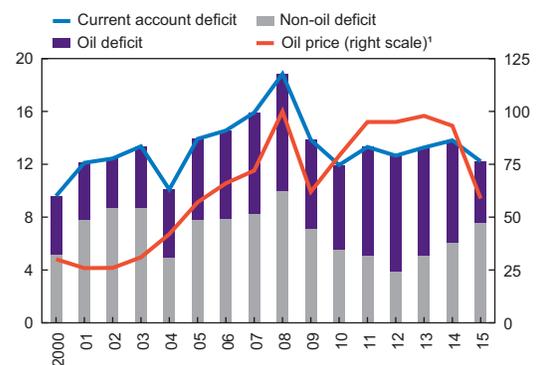
¹Includes hydroelectric power, geothermal, solar/PV, wind and biomass. For the Caribbean, renewables include hydropower and biomass.

²Excludes Trinidad and Tobago and Haiti.

Figure 2.2.2

Average External Current Account Deficit in the Caribbean

(In percent of GDP)



Source: Country authorities and IMF staff calculations.

Note: Excludes Trinidad and Tobago and Haiti.

¹ Average in U.S. dollars.

¹ The LA6 includes Brazil, Chile, Colombia, Mexico, Peru, and Uruguay.

Box 2.2 (continued)

More broadly, external shocks have been an important source of business cycle fluctuations in the Caribbean, accounting for an average of 30 percent of output fluctuations at medium-term horizons (Figure 2.2.4):² about 35 percent of business cycle fluctuations in tourist-dependent economies and only 20 percent in other Caribbean economies. In the former, the largest contributor is external demand, as proxied by real GDP growth in advanced economies, with a contribution of about 25 percent. Oil shocks rank second, accounting for an average 7 percent of business cycle fluctuation across the sample. Domestic factors play larger roles in business cycle fluctuations for commodity producers.

More recently, oil prices have come down, which is an expansionary shock for most countries in the region. A 1 percentage-point increase in advanced economies' real GDP growth increases real GDP growth by 1 percentage point, on average, in tourism-dependent economies and 0.5 percentage point in commodity producers.³ After five years, the average cumulative increase in real GDP growth comes to 2.4 percentage points and 1.2 percentage points, respectively. A 10 percentage-point decrease in real oil prices increases real GDP growth in the first year by 0.2 percentage point in tourism-dependent economies and 0.05 percentage point for the rest of the sample. Suriname and Trinidad and Tobago are oil exporters and lower oil prices reduce their real GDP growth. After five years, the average cumulative increase in real GDP growth in tourism-dependent economies is 0.5 percentage point and 0.1 percentage point for the rest of the sample, showcasing the high sensitivity of tourism-dependent economies to oil price shocks.

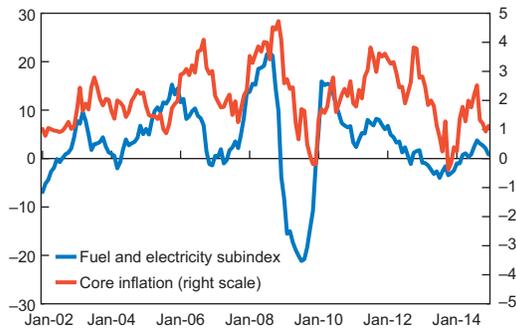
Note: This box was prepared by Julien Reynaud with contributions from Ahmed El Ashram, Sebastian Acevedo, Arnold McIntyre, and research assistance from Anayochukwu Osueke.

²The empirical framework is based on Cashin and Sosa (2013). It consists of country-specific vector autoregressive (VAR) models with block exogeneity restrictions for the period 1976–2013. The model contains an external block including foreign economic variables—the real oil price growth rate, advanced economies real GDP growth rates, and advanced economies real interest rate; and a domestic economy block—including real GDP growth rates and real effective exchange rate growth rates. The model also controls for the effects of natural disasters and assumes that all foreign variables are exogenous to the small domestic economy and complete exogeneity of natural disaster shocks.

³These results are in line with Osterholm and Zettelmeyer (2008) who find that increases in world growth are passed on to Latin America about one-to-one, and Cashin and Sosa (2013), who found that a 1 percent increase in advanced economies growth translates into a 1.5 increase in real growth in the Eastern Caribbean states.

Figure 2.2.3

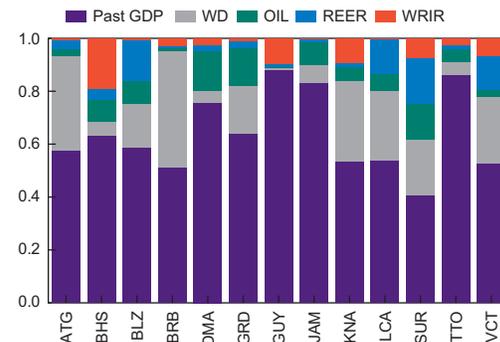
OECS: Energy Price Volatility vs. Core Inflation
(Year-over-year percentage change)



Source: Eastern Caribbean Central Bank Monthly Inflation Statistics, and IMF staff calculations.
Note: OECS = Organization of Eastern Caribbean States. Core inflation excludes food and fuel; weights are based on St. Lucia consumption basket.

Figure 2.2.4

Variance Decomposition of Real GDP
(Percent)



Sources: IMF, Information Notice System and World Economic Outlook databases; national authorities; and IMF staff calculations.
Note: GDP = Past real GDP growth. WD = World demand which is the real GDP growth of advanced economies. OIL = the percent change in real oil prices, and it is deflated by U.S. oil production costs. REER = the percent change in the real effective exchange rate. WRIR = world interest rate which is the interest rate, six-month London interbank offered rate (LIBOR), period average, deflated by advanced economies' consumer price indices. For country acronyms see page 89.

Box 2.3

Financial Integration in Latin America

Regional financial integration in Latin America remains relatively low (Figure 2.3.1) and is largely mirrored by weak trade performance, relative to potential (Chapter 4). Given the healthy profitability of financial intermediaries and the high interest rate spreads along with the low credit intermediation in the region, it appears that key Latin American financial institutions—as they continue to gain the necessary size and strength for cross-border expansion—could take advantage of the favorable financial conditions to enter other markets in the region and fill in existing credit intermediation gaps (Figure 2.3.2). Indeed, this unrealized potential in the financial services industry suggests the existence of ample opportunities for regional financial integration.

Financial integration continues to be curbed by a number of natural and institutional barriers to entry. The lack of sufficiently large financial players has posed the greatest impediment to regional integration. Colombian banking groups, for instance, have a significant presence in Central America, but are absent in the larger South American market. Only recently has the rise of a few Brazilian financial institutions and Colombian asset managers triggered regional mergers and acquisitions (M&A) activity in the banking, pension fund, and insurance industries. Other barriers, however, affect regional and global players alike. Cultural and linguistic differences, as well as lack of familiarity with foreign markets have hindered both regional and foreign integration, especially for global players. Low levels of efficiency, depressed credit demand owing to a history of financial crises, low financial literacy, and inefficiencies in the judicial systems are further barriers to cross-border activity.

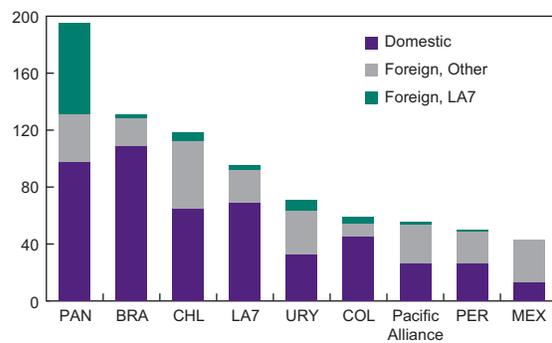
Figure 2.3.1

LA7 Commercial Bank Ownership and Pension Funds under Management

Regional financial integration through the presence of regional banks and pension funds—the largest financial intermediaries in Latin America—remains limited relative to the large share of assets held by domestic and foreign (extra regional) institutions. Foreign bank entry in Latin America has been largely the result of the history of financial crises...

1. LA7: Commercial Bank Ownership, 2014¹

(Bank assets in percent of GDP)

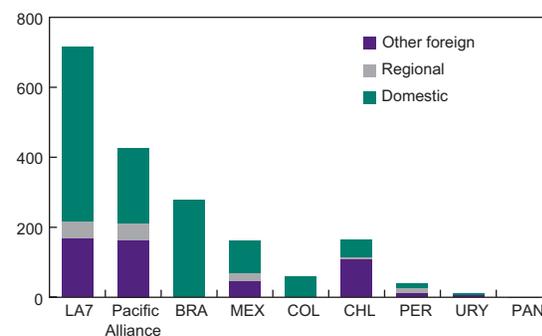


Sources: National authorities; Bureau van Dijk; and IMF staff calculations. Note: For country acronyms, see page 89. LA7 = Brazil, Chile, Colombia, Mexico, Panama, Peru, and Uruguay. The Pacific Alliance is comprised of Chile, Colombia, Mexico, and Peru.

¹ Year-end 2014 or latest available. Data for some countries may include partial estimates depending on availability. Ownership definition may vary by country.

2. LA7: Pension Fund Assets Under Management, 2014¹

(Billions of U.S. dollars, by type of ownership of asset manager)



Sources: National authorities; Bureau van Dijk; and IMF staff calculations. Note: For country acronyms, see page 89. LA7 = Brazil, Chile, Colombia, Mexico, Panama, Peru, and Uruguay. The Pacific Alliance is comprised of Chile, Colombia, Mexico, and Peru.

¹ Year-end 2014 or latest available. Data for some countries may include partial estimates depending on availability. Ownership definition may vary by country.

Note: This box was prepared by Carlos Caceres and Alla Myrvoda (WHD).

Box 2.3 (continued)

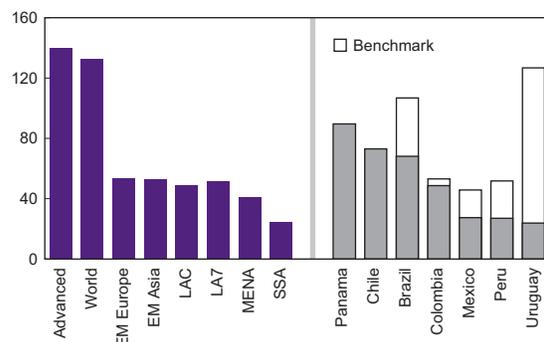
Figure 2.3.2

Credit Intermediation Gap and Profitability

and less so inspired by the unrecognized potential of the domestic financial industry, as indicated by the healthy banking profitability, attractive interest rate spreads, and existing credit intermediation gap ...

1. Credit Intermediation Gap

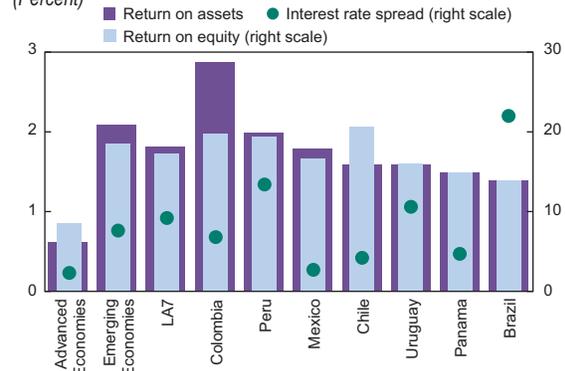
(In percent of GDP, domestic credit to private sector)



Sources: World Bank, WDI, "Emerging Issues in Financial Development", 2014; and IMF staff estimates and calculations.
 Note: LA7 = Brazil, Chile, Colombia, Mexico, Panama, Peru, and Uruguay. Latest available, sample varies based on data availability. Benchmark based on proportions using World Bank private credit gap estimates. EM = emerging and developing economies, For country acronyms see page 89.

2. Profitability

(Percent)¹



Sources: National authorities; IMF, FSI, and staff estimates and calculations. Note: LA7 = Brazil, Chile, Colombia, Mexico, Panama, Peru, and Uruguay. ¹ Latest available. Lending-deposit interest rate spread. Sample varies based on data availability.

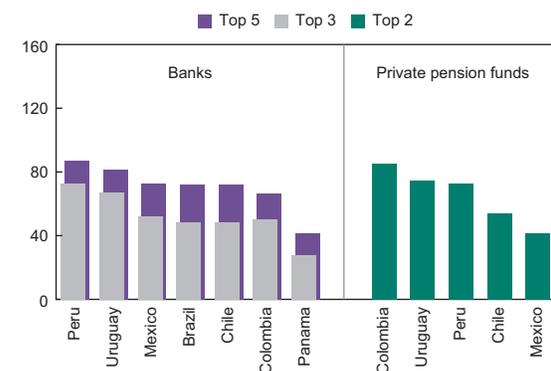
Figure 2.3.3

Bank and Pension Fund Concentration and Pension Fund Asset Allocations

... which is largely a result of explicit and implicit barriers to entry, including high concentration within potentially oligopolistic markets, and regulatory barriers, such as the restrictions on pension funds and insurance companies' foreign asset investments, among others.

1. Concentration¹

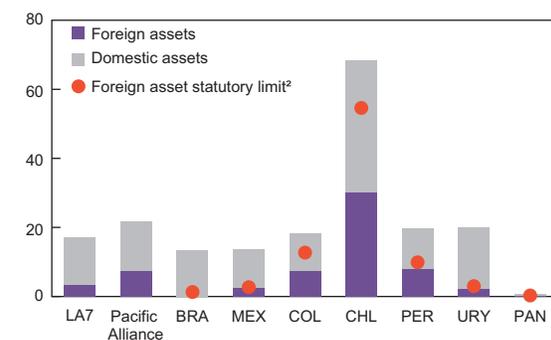
(Percent of total assets)



Sources: National authorities; AOIS; and IMF staff estimates and calculations. Note: Data availability varies by country.

2. LA7: Pension Fund Asset Allocations, 2014¹

(Assets in percent of GDP)



Sources: National authorities; Bureau van Dijk; and IMF staff calculations. Note: For country acronyms, see page 89. The Pacific Alliance is comprised of Chile, Colombia, Mexico, and Peru. ¹Year-end 2014 or latest available. Data for some countries include partial estimates depending on availability. ²Statutory limits on holdings of foreign assets (in percent of total pension fund assets) are: Brazil (10%); Chile (80%); Colombia (40–70%); Mexico (20%); Panama (45%); Peru (50%); and Uruguay (15%).

Box 2.3 *(continued)*

High industry concentration and entry barriers have limited M&A opportunities and green-field investments, while regulatory barriers hamper cross-border activity. In many Latin American countries, the largest three banks account for most banking sector assets, while the top two pension funds comprise the bulk of the industry assets. Many countries only allow foreign operations through subsidiaries, thus limiting spillovers via foreign branch activity. Some countries restrict ownership of financial institutions by foreign entities, as is the case for Brazil, where foreign bank entry is subject to presidential approval. Diverging regulatory and accounting standards, including in the form of different levels of implementation of Basel standards for banks and solvency-type regulation for insurance companies, impose additional compliance costs in some jurisdictions. Moreover, low regulatory limits on foreign asset and equity holdings for pension funds and insurance companies diminish capital market integration and hurt optimal portfolio allocation, given the small market size and the limited supply of securities in domestic capital markets (Figure 2.3.3). Capital markets' integration is further depressed by the absence of double-taxation treaties in some countries as well as the misalignments in the taxation regimes.

Harmonization of regulatory frameworks following best practices could enhance financial stability and performance and foster regional financial integration. Prudential measures adopted in response to past crises and low integration helped shield Latin American financial systems from the global financial crisis. However, low financial integration also reduces long-term growth. Countries should move forward in the implementation of international regulatory (for example, the Basel Committee on Banking Supervision, International Organization of Securities Commissions, International Accounting and Systems Association, etc.) and accounting standards (for example, the International Financial Reporting Standards). Intraregional agreements (for example, the Pacific Alliance) could also facilitate cross-border financial flows. Deeper regional markets would likely be more liquid, reduce costs, and increase portfolio diversification and investment opportunities. Stronger and better coordinated supervisory frameworks could promote regional integration and mitigate risks.

Box 2.4

Inequality and Commodity Booms in Latin America

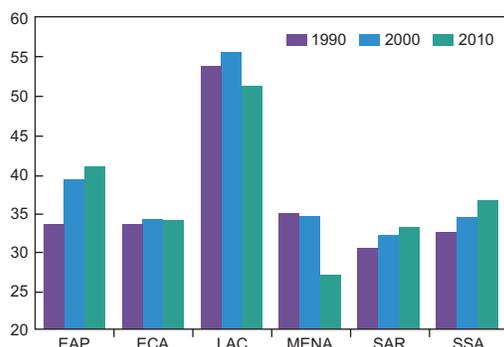
Latin America has the highest income inequality in the world (Figure 2.4.1). There is higher income concentration among the top deciles of the income distribution in Latin America while the bottom 60 percent of individuals only holds about 20 percent of aggregate income. In the rest of the world, the bottom 60 percent of the income distribution holds around 30 percent of aggregate income. For the top decile, the share of income is the highest in Honduras (over 40 percent), closely followed by Nicaragua, Colombia, Brazil, Chile, Paraguay, and Mexico (all about 40 percent). Persistent inequality in Latin America has been linked to: (1) existence of strong elites, (2) capital market imperfections, (3) inequality of opportunities (in particular, in terms of access to high-quality education), (4) labor market segmentation (for example, owing to informality), and (5) discrimination against women and non-whites (see Cornia 2013, for a survey).

On the positive side, Latin America was the only region that registered a fall in inequality in the 2000s. Inequality fell across a whole range of country types: big, small, Central American, and South American (Figure 2.4.2). Two key factors appear to be behind the decline: (1) a decrease in the skill premium; and (2) better and more generous transfer programs (López-Calva and Lustig 2010; Lopez-Calva, N. Lustig, and Ortiz-Juarez 2013).

There appears to be a link between declines in inequality and commodity price booms in Latin America. The decline in the 2000s seems to have been larger in commodity exporters such as Argentina, Bolivia, Brazil, Chile, and Ecuador. Panel regressions using data since the 1980s for 154 countries also show that a 1 percent increase in commodity prices in Latin America is associated with a decrease of 0.5 percent in inequality, as measured by the income Gini coefficient.

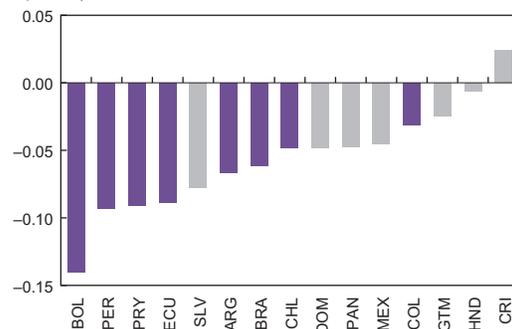
Commodity booms could be influencing the distribution of income by reducing the skills premium and increasing the fiscal capacity for social transfers. Countries experiencing commodity booms saw larger real wage gains for all sectors and skills—especially unskilled workers—than in non-boom countries (Figure 2.4.3). Regarding the skills premium itself, higher commodity prices could lead to a reallocation of factors toward sectors where the skill premium is lower, for example the sector producing the commodity or the construction and transportation sectors, which may experience high growth associated with the commodity boom. There could also be larger fiscal revenues

Figure 2.4.1
Income Distribution Around the World
(Gini coefficients, population-weighted average)



Source: PovcalNet, the on-line tool for poverty measurement developed by the Development Research Group of the World Bank.
Note: For country and region acronyms, see page 89.

Figure 2.4.2
Latin America: Inequality Reduction
(Difference in Gini Index from 2000–13, purple indicates commodity exporters)

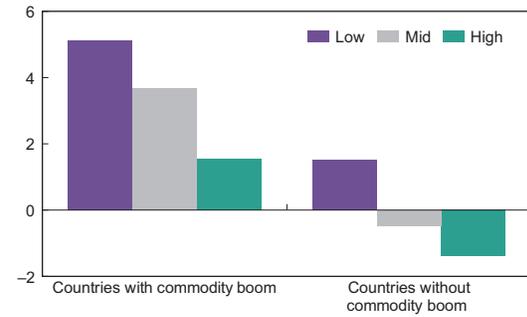


Source: SEDLAC (CEDLAS and the World Bank).
Note: For country acronyms, see page 89.

Box 2.4 (continued)

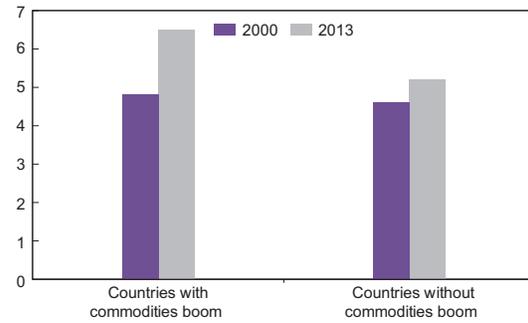
in commodity-boom countries (*Regional Economic Outlook-Western Hemisphere*, April 2015), leading to increased spending on social transfers that reduce inequality (Figure 2.4.4). Recent work disentangling the contribution of these factors to the fall in inequality finds that the decrease in labor earning inequality explains most of that decline (World Bank 2015).

Figure 2.4.3
Annualized Real Wage Growth by Education Level
 (Percent)



Source: SEDLAC (CEDLAS and the World Bank).

Figure 2.4.4
Average Government Transfer in Latin America
 (Percent of GDP)



Source: IMF, World Economic Outlook database; and IMF staff calculations.

Note: This box was prepared by Ravi Balakrishnan and Marika Santoro.

Table 2.1. Western Hemisphere: Main Economic Indicators¹

	Output Growth (Percent)					Inflation ² (End of period, percent)					External Current Account Balance (Percent of GDP)				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
			Est.	Projections				Est.	Projections			Est.	Projections		
North America															
Canada	1.9	2.0	2.4	1.0	1.7	1.0	1.0	1.9	1.1	2.0	-3.3	-3.0	-2.1	-2.9	-2.3
Mexico	4.0	1.4	2.1	2.3	2.8	3.6	4.0	4.1	2.6	3.0	-1.4	-2.4	-1.9	-2.4	-2.0
United States	2.2	1.5	2.4	2.6	2.8	1.8	1.3	0.6	0.9	1.4	-2.8	-2.3	-2.2	-2.6	-2.9
South America															
Argentina ³	0.8	2.9	0.5	0.4	-0.7	10.8	10.9	23.9	19.3	26.4	-0.3	-0.8	-1.0	-1.8	-1.6
Bolivia	5.1	6.8	5.5	4.1	3.5	4.5	6.5	5.2	4.2	5.0	7.2	3.4	0.0	-4.5	-5.0
Brazil	1.8	2.7	0.1	-3.0	-1.0	5.8	5.9	6.4	9.3	5.5	-3.5	-3.8	-4.4	-4.0	-3.8
Chile	5.5	4.3	1.9	2.3	2.5	1.5	2.8	4.6	4.2	3.5	-3.6	-3.7	-1.2	-0.7	-1.6
Colombia	4.0	4.9	4.6	2.5	2.8	2.4	1.9	3.7	4.2	3.3	-3.1	-3.3	-5.2	-6.2	-5.3
Ecuador	5.2	4.6	3.8	-0.6	0.1	4.2	2.7	3.7	3.7	2.5	-0.2	-1.0	-0.6	-2.6	-2.8
Guyana	4.8	5.2	3.8	3.2	4.9	3.5	0.9	1.2	1.0	3.5	-11.6	-13.3	-15.6	-14.9	-18.9
Paraguay	-1.2	14.2	4.4	3.0	3.8	4.0	3.7	4.2	3.8	4.5	-0.9	2.2	0.1	-2.0	-1.9
Peru	6.0	5.8	2.4	2.4	3.3	2.6	2.9	3.2	3.3	2.5	-2.7	-4.2	-4.0	-3.7	-3.8
Suriname	3.1	2.8	1.8	1.5	0.5	4.4	0.6	3.9	5.2	3.2	3.3	-3.9	-7.4	-9.4	-7.8
Uruguay	3.3	5.1	3.5	2.5	2.2	7.5	8.5	8.3	9.0	7.9	-5.0	-4.9	-4.4	-3.7	-3.7
Venezuela	5.6	1.3	-4.0	-10.0	-6.0	20.1	56.2	68.5	190.0	210.0	3.7	2.4	5.3	-3.0	-1.9
Central America															
Belize	3.8	1.5	3.6	2.2	3.2	0.8	1.6	-0.2	0.7	1.7	-1.2	-4.4	-7.6	-6.3	-7.1
Costa Rica	5.2	3.4	3.5	3.0	4.0	4.6	3.7	5.1	2.1	4.0	-5.3	-5.0	-4.9	-3.8	-3.9
El Salvador	1.9	1.8	2.0	2.3	2.5	0.8	0.8	0.5	-1.0	2.0	-5.4	-6.5	-4.7	-2.6	-2.9
Guatemala	3.0	3.7	4.2	3.8	3.7	3.4	4.4	2.9	2.8	3.3	-2.6	-2.5	-2.4	-1.7	-1.9
Honduras	4.1	2.8	3.1	3.5	3.6	5.4	4.9	5.8	4.7	5.2	-8.5	-9.5	-7.4	-6.5	-6.4
Nicaragua	5.1	4.5	4.7	4.0	4.2	6.6	5.7	6.5	5.7	7.0	-10.6	-11.1	-7.1	-6.6	-7.0
Panama ⁴	10.8	8.4	6.2	6.0	6.3	4.6	3.7	1.0	3.0	2.0	-9.8	-12.2	-12.0	-9.8	-9.6
The Caribbean															
Antigua and Barbuda	3.6	1.5	4.2	2.2	2.1	1.8	1.1	1.3	0.5	1.6	-14.6	-14.8	-14.5	-10.5	-10.2
The Bahamas	2.2	0.0	1.0	1.2	2.2	0.7	1.0	0.2	1.6	1.3	-18.3	-17.7	-22.2	-12.9	-8.9
Barbados	0.3	0.0	0.2	1.0	1.1	2.4	1.1	2.3	0.6	1.1	-9.3	-9.3	-8.5	-4.8	-4.6
Dominica	-1.3	0.6	3.9	2.8	3.3	1.2	-0.4	0.5	0.8	0.3	-18.8	-13.3	-13.1	-12.8	-18.9
Dominican Republic	2.6	4.8	7.3	5.5	4.5	3.9	3.9	1.6	2.0	3.5	-6.6	-4.1	-3.2	-2.4	-2.5
Grenada	-1.2	2.3	5.7	3.4	2.4	1.8	-1.2	-0.6	0.3	2.2	-21.1	-23.2	-15.5	-13.7	-13.1
Haiti ⁵	2.9	4.2	2.7	2.5	3.2	6.5	4.5	5.3	10.3	5.9	-5.7	-6.3	-6.3	-4.3	-3.4
Jamaica	-0.5	0.2	0.4	1.1	2.1	8.0	9.5	4.0	6.1	6.8	-10.7	-8.7	-7.4	-4.6	-2.9
St. Kitts and Nevis	-0.9	6.2	6.1	5.0	3.5	0.1	1.0	0.6	-2.2	1.7	-9.8	-6.6	-7.6	-12.6	-18.6
St. Lucia	-1.1	0.1	0.5	1.8	1.4	5.0	-0.7	3.7	0.5	3.7	-13.5	-11.2	-6.7	-6.6	-7.0
St. Vincent and the Grenadines	1.3	2.3	-0.2	2.1	2.5	1.0	0.0	0.1	0.5	1.6	-27.6	-30.9	-29.6	-26.9	-25.1
Trinidad and Tobago	1.4	1.7	0.8	1.0	1.4	7.2	5.6	8.5	7.8	5.9	3.4	7.0	5.7	0.7	-0.8
Memorandum:															
Latin America and the Caribbean (LAC)	3.1	2.9	1.3	-0.3	0.8	5.4	7.4	8.2	12.0	10.5	-2.4	-2.9	-3.0	-3.3	-3.0
Financially integrated LAC ⁶	4.1	4.0	2.4	1.5	2.1	3.9	4.3	5.0	5.4	4.3	-3.2	-3.7	-3.5	-3.5	-3.4
Other commodity exporters ⁷	3.1	6.0	2.0	-0.6	0.1	8.2	17.3	20.4	50.4	55.5	1.9	1.2	0.7	-2.8	-2.6
CADR ⁸	4.7	4.2	4.4	4.0	4.1	4.2	3.9	3.3	2.8	3.9	-7.0	-7.3	-6.0	-4.8	-4.9
Caribbean															
Tourism-dependent ⁹	0.3	1.5	2.4	2.3	2.3	2.4	1.2	1.3	1.0	2.3	-16.0	-15.1	-13.9	-11.7	-12.1
Commodity exporters ¹⁰	3.3	2.8	2.5	2.0	2.5	4.0	2.2	3.3	3.7	3.6	-1.5	-3.6	-6.3	-7.5	-8.6
Eastern Caribbean Currency Union (ECCU) ¹¹	0.4	1.7	2.7	2.5	2.2	2.1	0.1	1.2	0.1	2.0	-17.2	-16.8	-14.3	-12.9	-12.9

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

¹ Regional aggregates are purchasing-power-parity GDP-weighted averages unless otherwise noted. Current account aggregates are U.S. dollar nominal GDP weighted averages. CPI series exclude Argentina. Consistent with the IMF, *World Economic Outlook*, the cut-off date for the data and projections in this table is September 16, 2015.

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 See Annex 2.1 for details on Argentina's data.

⁴ Ratios to GDP are based on the "1996-base" GDP series.

⁵ Fiscal year data.

⁶ Simple average of Brazil, Chile, Colombia, Mexico, Peru, and Uruguay.

⁷ Simple average of Argentina, Bolivia, Ecuador, Paraguay, and Venezuela. CPI series exclude Argentina.

⁸ Simple average of Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, and Panama.

⁹ Simple average of The Bahamas, Barbados, Jamaica, and ECCU member states.

¹⁰ Simple average of Belize, Guyana, Suriname, and Trinidad and Tobago.

¹¹ Eastern Caribbean Currency Union (ECCU) members are 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 2.2. Western Hemisphere: Main Fiscal Indicators¹

	Public Sector Primary Expenditure (Percent of GDP)					Public Sector Primary Balance (Percent of GDP)					Public Sector Gross Debt ²² (Percent of GDP)				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
			Est.	Projections				Est.	Projections			Est.	Projections		
North America															
Canada	37.7	37.4	36.3	36.6	36.4	-2.5	-2.3	-1.3	-1.3	-1.0	87.9	87.7	87.9	90.4	89.4
Mexico ²	25.1	25.5	25.4	25.3	24.1	-1.2	-1.2	-1.9	-1.2	-0.5	43.2	46.4	49.8	52.0	52.1
United States ³	34.5	33.7	33.1	33.4	33.2	-5.7	-2.7	-2.0	-1.8	-1.5	102.5	104.8	104.8	104.9	106.0
South America															
Argentina ⁴	32.0	34.1	36.5	37.9	37.3	-0.5	-0.7	-1.0	-2.5	-2.2	37.3	40.2	45.3	52.1	55.1
Bolivia ⁵	35.0	37.5	42.3	39.4	37.2	2.8	1.6	-2.4	-4.3	-4.6	33.3	32.5	33.0	38.0	41.9
Brazil ⁶	31.5	32.5	33.9	33.1	34.6	2.0	1.8	-0.6	-0.4	-0.9	63.5	62.2	65.2	69.9	74.5
Chile	23.1	23.3	24.3	25.5	26.0	0.8	-0.4	-1.4	-3.1	-1.6	12.0	12.8	15.1	18.1	20.0
Colombia ⁷	25.6	26.4	26.9	26.5	26.2	1.6	1.2	0.3	-0.2	0.0	34.1	37.8	44.3	50.9	48.9
Ecuador	39.6	43.0	43.2	35.6	35.3	-0.2	-3.6	-4.3	-3.7	-1.6	21.7	26.0	31.3	37.4	40.4
Guyana ⁸	30.2	29.2	32.9	32.3	29.8	-3.9	-3.5	-4.4	-3.7	-2.9	62.5	57.3	65.8	70.2	70.2
Paraguay	24.7	22.8	22.8	23.2	22.8	-1.1	-0.7	0.3	-0.6	-0.1	16.2	16.8	19.0	22.5	24.2
Peru	19.2	20.5	21.5	21.5	21.6	3.0	1.7	0.6	-1.0	-1.2	21.2	20.3	20.7	22.4	24.6
Suriname ⁹	28.0	30.1	27.8	29.0	27.1	-2.9	-5.4	-4.3	-7.8	-3.5	21.6	30.2	26.9	36.9	40.9
Uruguay ¹⁰	27.9	29.1	29.3	28.8	28.9	-0.2	0.4	-0.6	0.0	0.1	57.9	60.2	61.3	64.1	65.3
Venezuela	37.3	35.0	39.8	39.4	39.1	-13.8	-11.6	-11.3	-21.3	-22.9	44.3	52.1	51.8	53.0	44.1
Central America															
Belize ⁸	25.1	27.9	30.4	30.1	28.2	1.3	-0.2	-1.2	-2.6	-1.2	75.0	75.2	75.3	77.2	99.9
Costa Rica ⁸	16.0	16.6	16.7	16.5	16.5	-2.3	-2.9	-3.1	-2.8	-1.9	35.2	36.3	39.7	44.0	46.3
El Salvador ¹¹	19.6	19.6	19.0	19.8	19.9	-1.7	-1.2	-1.0	-1.5	-1.4	55.2	55.3	56.8	59.8	62.1
Guatemala ⁸	12.5	12.2	11.9	11.3	11.8	-0.9	-0.6	-0.4	-0.3	-0.5	24.3	24.6	24.3	24.8	25.5
Honduras	25.4	28.5	26.6	25.4	24.8	-4.3	-7.1	-3.8	-1.3	-0.4	34.7	45.3	45.7	48.4	50.1
Nicaragua ¹¹	23.2	23.7	23.9	24.4	24.9	0.5	-0.2	-0.7	-0.6	-0.8	28.6	29.8	29.5	30.6	31.5
Panama ¹²	24.5	25.1	24.6	24.2	23.9	0.0	-0.5	-1.7	-1.7	-1.2	42.6	41.7	45.6	47.5	47.5
The Caribbean															
Antigua and Barbuda ¹³	18.7	20.5	20.3	27.4	16.2	1.1	-1.7	-0.2	-6.6	5.2	87.1	95.5	98.2	105.5	101.1
The Bahamas ⁸	20.0	19.3	17.9	17.7	17.9	-2.0	-3.0	-0.8	1.0	1.1	48.4	56.3	60.9	62.1	62.2
Barbados ¹⁴	39.6	41.1	37.4	37.5	37.2	-4.0	-6.7	-2.0	-0.9	0.1	84.6	95.9	100.7	103.3	105.3
Dominica ¹³	33.9	31.0	31.4	30.8	30.8	-3.4	-1.0	-1.5	-1.3	-1.4	72.6	74.7	76.4	77.8	79.3
Dominican Republic ¹¹	17.8	15.8	15.6	15.4	16.1	-4.2	-1.2	-0.5	2.3	-1.5	30.5	34.6	35.0	33.3	34.6
Grenada ¹³	23.3	24.8	25.6	21.7	19.4	-2.5	-3.9	-1.1	2.1	3.5	103.3	106.7	100.5	90.3	85.9
Haiti ⁸	27.8	27.6	24.9	22.3	21.2	-4.4	-6.7	-5.9	-2.3	-1.3	16.5	21.4	26.6	26.5	26.5
Jamaica ¹³	20.4	19.5	18.8	20.1	19.9	5.4	7.6	7.5	7.6	7.5	145.3	139.7	135.7	124.8	120.5
St. Kitts and Nevis ¹³	25.4	29.2	29.7	30.1	28.7	10.8	16.0	12.2	7.0	0.5	137.3	102.9	79.9	74.5	68.8
St. Lucia ¹³	30.5	27.4	25.3	25.1	25.0	-5.8	-2.1	0.2	0.0	-0.2	73.7	78.6	79.4	81.7	83.2
St. Vincent and the Grenadines ¹³	26.4	28.8	29.8	30.1	28.8	-0.3	-4.1	-1.5	-2.8	-1.1	72.0	74.3	76.7	77.0	78.8
Trinidad and Tobago ¹⁵	32.1	33.8	33.6	34.1	34.6	1.4	-0.4	-2.4	-4.3	-5.3	40.7	39.1	39.3	43.9	50.6
Memorandum:															
Latin America and the Caribbean (LAC)	29.1	29.7	30.6	30.0	29.9	0.0	-0.1	-1.4	-1.6	-1.6	47.9	48.7	51.9	54.8	56.3
Financially integrated LAC ¹⁶	25.4	26.2	26.9	26.8	26.9	1.0	0.6	-0.6	-0.9	-0.7	38.6	40.0	42.7	46.2	47.6
Other commodity exporters ¹⁷	33.7	34.5	36.9	35.8	34.3	-2.5	-3.0	-3.8	-6.5	-6.3	30.6	33.5	36.1	40.6	41.1
CADR ¹⁸	19.9	20.2	19.8	19.6	19.7	-1.8	-2.0	-1.6	-0.8	-1.1	35.9	38.2	39.5	41.2	42.5
Caribbean															
Tourism-dependent ¹⁹	26.5	26.9	26.3	26.7	24.9	-0.1	0.1	1.4	0.7	1.7	91.6	91.6	89.8	88.6	87.2
Commodity exporters ²⁰	28.9	30.2	31.2	31.4	29.9	-1.0	-2.4	-3.1	-4.6	-3.2	49.9	50.4	51.8	57.0	65.4
Eastern Caribbean Currency Union (ECCU) ^{13,21}	26.3	27.2	26.7	28.1	24.5	-0.4	0.1	1.3	-0.9	1.5	85.9	85.0	82.8	82.3	80.4

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

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 purchasing-power-parity GDP-weighted averages, unless otherwise noted. Consistent with the IMF, *World Economic Outlook*, the cut-off date for the data and projections in this table is September 16, 2015.

² Includes central government, social security funds, nonfinancial public corporations, and financial public corporations.

³ For cross-country comparability, expenditure and fiscal balances of the United States are adjusted to exclude the items related to the accrual basis accounting of government employees' defined benefit pension plans, which is counted as expenditure under the 2008 System of National Accounts (2008 SNA) recently adopted by the United States, but not so in countries that have not yet adopted the 2008 SNA. Data for the United States in this table may thus differ from data published by the U.S. Bureau of Economic Analysis.

⁴ Federal government and provinces; includes interest payments on a cash basis. Primary expenditure and primary balance include the federal government and provinces. Gross debt is for the federal government only.

⁵ Nonfinancial public sector, excluding the operations of nationalized mixed-ownership companies in the hydrocarbon and electricity sectors.

⁶ Nonfinancial public sector, excluding Petrobras and Eetrobras, and consolidated with the Sovereign Wealth Fund (SWF). The definition includes Treasury securities on the central bank's balance sheet, including those not used under repurchase agreements. The national definition of general government gross debt includes the stock of Treasury securities used for monetary policy purposes by the Central Bank (those pledged as security in reverse repo operations). It excludes the rest of the government securities held by the Central Bank. According to this definition, general government gross debt amounted to 58.9 percent of GDP at end-2014.

⁷ Nonfinancial public sector reported for primary balances (excluding statistical discrepancies); combined public sector including Ecopetrol and excluding Banco de la República's outstanding external debt reported for gross public debt.

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

⁹ Primary expenditures for Suriname exclude net lending. Debt data refer to central government and government-guaranteed public debt.

¹⁰ Consolidated public sector.

¹¹ General government.

¹² Ratios to GDP are based on the "1996-base" GDP series. Fiscal data cover the nonfinancial public sector excluding the Panama Canal Authority.

¹³ Central government for primary expenditure and primary balance; public sector for gross debt. For Jamaica, the public debt includes central government, guaranteed, and PetroCaribe debt.

¹⁴ Overall and primary balances include off-budget and public-private partnership activities for Barbados and the nonfinancial public sector. Central government for gross debt (excludes NIS holdings).

¹⁵ Central government for primary expenditure. Consolidated public sector for primary balance and gross debt.

¹⁶ Simple average of Brazil, Chile, Colombia, Mexico, Peru, and Uruguay.

¹⁷ Simple average of Argentina, Bolivia, Ecuador, Paraguay, and Venezuela.

¹⁸ Simple average of Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, and Panama.

¹⁹ Simple average of The Bahamas, Barbados, Jamaica, and ECCU member states.

²⁰ Simple average of Belize, Guyana, Suriname, and Trinidad and Tobago.

²¹ Eastern Caribbean Currency Union (ECCU) members are 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.

²² For Ecuador, public debt includes the outstanding balance for advance oil sales.

Table 2.3. Western Hemisphere: Selected Economic and Social Indicators, 2005–14¹

	2014				2005–2014 Average				2014			Latest Available		
	GDP ² (US\$ Billion)	Population (Million)	GDP per Capita (PPP\$)	Nominal Output Share of LAC Region ² (Percent)	Real GDP Growth (Percent)	CPI Inflation ³ (Percent)	Current Account (Percent of GDP)	Domestic Saving (Percent of GDP)	Trade Openness ⁴ (Percent of GDP)	Gross Reserves ⁵ (Percent of GDP)	Unemployment Rate (Percent)	Poverty Rate ⁶	Gini Coefficient ⁶	Sovereign Credit Rating ⁷
North America														
Canada	1,785.4	35.5	44,967	—	1.9	1.8	-1.3	22.4	64.1	4.2	6.9	—	31.3	AAA
Mexico	1,291.1	119.7	17,950	22.3	2.5	4.1	-1.3	21.4	60.6	14.8	4.8	11.4	49.1	BBB+
United States	17,348.1	319.1	54,370	—	1.5	2.1	-3.7	17.0	28.4	0.8	6.2	—	47.6	AAA
South America														
Argentina ⁸	543.1	42.6	22,302	9.4	5.1	11.2	0.7	20.1	33.4	5.4	7.3	5.0	42.0	SD
Bolivia	33.2	11.3	6,224	0.6	5.0	6.2	5.9	24.8	72.7	40.8	4.0	14.4	46.5	BB
Brazil	2,346.6	202.8	16,155	40.5	3.4	5.4	-1.8	18.3	24.2	15.4	4.8	9.4	52.3	BBB-
Chile	258.0	17.8	23,057	4.4	4.3	3.6	0.1	22.8	70.8	15.7	6.4	2.0	50.8	AA-
Colombia	377.9	47.7	13,480	6.5	4.8	4.0	-2.8	20.2	35.6	12.3	9.1	15.2	53.4	BBB
Ecuador	100.5	16.0	11,303	1.7	4.4	4.2	0.7	26.7	60.5	3.5	3.8	10.5	46.2	B
Guyana	3.1	0.8	6,921	0.1	3.9	5.0	-11.8	7.1	132.9	21.8	—	—	—	—
Paraguay	30.2	6.9	8,476	0.5	5.0	6.2	1.2	17.2	102.1	22.1	5.5	8.3	52.6	BB
Peru	202.6	31.4	11,860	3.5	6.1	2.9	-1.4	22.3	50.7	30.2	6.0	10.0	45.3	BBB+
Suriname	5.2	0.6	16,261	0.1	4.1	7.8	3.8	—	104.0	11.0	8.9	—	—	BB-
Uruguay	57.5	3.4	21,055	1.0	5.4	7.5	-2.8	17.8	55.1	30.5	6.6	2.3	41.3	BBB
Venezuela	206.3	30.5	17,759	3.6	3.7	30.9	7.5	31.1	58.1	3.4	7.0	11.5	40.4	CCC
Central America														
Belize	1.7	0.4	8,333	0.0	2.7	2.0	-5.2	11.9	125.6	28.7	11.1	—	—	B-
Costa Rica	49.6	4.8	14,919	0.9	4.6	7.6	-5.1	17.2	67.1	14.6	8.2	4.6	48.5	BB+
El Salvador	25.2	6.4	8,060	0.4	1.9	2.9	-4.6	10.2	65.2	9.7	5.5	12.7	41.8	B+
Guatemala	58.7	15.9	7,550	1.0	3.7	5.5	-3.0	13.3	62.9	12.0	—	40.7	52.2	BB
Honduras	19.5	8.3	4,746	0.3	3.8	6.4	-7.3	18.9	90.5	17.6	4.5	39.6	57.2	B
Nicaragua	11.8	6.2	4,790	0.2	3.8	8.7	-11.6	15.8	94.8	19.3	6.8	29.3	45.7	B
Panama	43.8	3.9	19,546	0.8	8.5	4.1	-8.9	16.6	75.4	9.2	4.8	9.9	51.9	BBB
The Caribbean														
The Bahamas	8.5	0.4	25,075	0.1	0.6	1.9	-14.2	13.0	95.9	10.3	14.6	—	—	BBB
Barbados	4.4	0.3	16,365	0.1	0.9	5.1	-8.7	7.0	98.1	14.5	12.7	—	—	B
Dominican Republic	64.1	9.9	14,014	1.1	5.8	5.5	-5.3	20.2	58.9	7.6	6.4	13.9	47.4	B+
Haiti	8.7	10.5	1,757	0.2	2.1	8.2	-3.1	25.6	65.4	22.0	—	—	—	—
Jamaica	13.7	2.8	8,610	0.2	0.1	9.9	-11.1	12.4	90.4	18.0	15.3	—	—	B-
Trinidad and Tobago	28.9	1.4	32,170	0.5	2.7	8.0	17.3	32.6	97.8	41.2	3.3	—	—	A-
Eastern Caribbean Currency Union	5.7	0.6	15,587	0.1	1.6	2.7	-20.0	8.4	97.2	24.1	—	—	—	—
Antigua and Barbuda	1.2	0.1	22,998	0.0	1.7	2.2	-18.2	11.7	110.7	23.8	—	—	—	—
Dominica	0.5	0.1	11,163	0.0	2.1	1.9	-18.0	-0.2	87.8	19.4	—	—	—	—
Grenada	0.9	0.1	12,477	0.0	1.7	2.6	-24.9	1.8	78.6	18.6	—	—	—	—
St. Kitts and St. Nevis	0.9	0.1	21,474	0.0	2.3	3.4	-15.6	20.1	86.7	38.4	—	—	—	—
St. Lucia	1.4	0.2	11,644	0.0	0.9	3.0	-17.8	11.1	106.0	18.3	—	—	—	—
St. Vincent and the Grenadines	0.7	0.1	10,684	0.0	1.1	3.1	-27.8	-1.6	86.7	21.6	—	2.9	40.2	B-
Latin America and the Caribbean	5,799.3	602.9	15,551	100.0	3.7	6.3	-1.1	20.4	43.1	14.4	—	11.3	49.6	—

Sources: IMF, *International Financial Statistics*; IMF, *World Economic Outlook*; Inter-American Development Bank (IDB); national authorities; Socio-Economic Database for Latin America and the Caribbean (CEDLAS and The World Bank); and IMF staff calculations.

¹ Estimates may vary from those reported by national authorities on account of differences in methodology and source. Regional aggregates are purchasing-power-party GDP-weighted averages, except for regional GDP in U.S. dollars and population where totals are computed. CPI series excludes Argentina. Consistent with the IMF, *World Economic Outlook*, the cut-off date for the data and projections in this table is September 16, 2015.

² At market exchange rates.

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

⁴ Exports plus imports of goods and services in percent of GDP.

⁵ Latest available data from IMF, *International Financial Statistics*.

⁶ Data from Socio-Economic Database for Latin America and the Caribbean (SEDLAC), based on the latest country-specific household surveys. In most cases, the surveys are from 2013 or 2014, though the vintage for Nicaragua (2009) is less recent. Poverty rate is defined as the share of the population earning less than US\$2.50 per day. For Venezuela, poverty rate is defined as a share of the population in extreme poverty per national definition (INE). Gini index is calculated by the World Bank using pooled data for each country. For Venezuela, Gini index is based on official statistics (INE). Data for aggregate is population-weighted average from the IDB. Data for the United States are from the U.S. Census Bureau; those for Canada are from Statistics Canada.

⁷ Median of long-term foreign currency ratings published by Moody's, Standard & Poor's, and Fitch.

⁸ See Annex 2.1 for details on Argentina's data.

Annex 2.1. Data Disclaimer

GDP data for Argentina are officially reported data as revised in May 2014. On February 1, 2013, the IMF issued a declaration of censure, and in December 2013 called on Argentina to implement specified actions to address the quality of its official GDP data according to a specified timetable. On June 3, 2015, the Executive Board recognized the ongoing discussions with the Argentine authorities and their material progress in remedying the inaccurate provision of data since 2013, but found that some specified actions called for by the end of February 2015 had not yet been completely implemented. The Executive Board will review this issue again by July 15, 2016, in line with the procedures set forth in the IMF legal framework.

Consumer price data for Argentina from December 2013 onward reflect the new national CPI (IPCNu), which differs substantively from the preceding CPI (the CPI for the Greater Buenos Aires

Area, CPI-GBA). Because of the differences in geographical coverage, weights, sampling, and methodology, the IPCNu data cannot be directly compared to the earlier CPI-GBA data. Because of this structural break in the data, average CPI inflation for 2014 is not reported in the October 2015 *World Economic Outlook*. Following a declaration of censure by the IMF on February 1, 2013, the public release of a new national CPI by the end of March 2014 was one of the specified actions in the IMF Executive Board's December 2013 decision calling on Argentina to address the quality of its official CPI data. On June 3, 2015, the Executive Board recognized the ongoing discussions with the Argentine authorities and their material progress in remedying the inaccurate provision of data since 2013, but found that some specified actions called for by the end of February 2015 had not yet been completely implemented. The Executive Board will review this issue again by July 15, 2016, in line with the procedures set forth in the IMF legal framework.

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3. To Hike or Not to Hike: Is That an Option for Latin America? Assessing Monetary Policy Autonomy

While Latin America experiences a sharp economic slowdown, a stronger U.S. economy is setting the stage for the Federal Reserve to continue normalizing its monetary stance. This chapter quantifies the likely impact and possible risks for domestic financial conditions in Latin America, and explores to what extent its central banks will be able to keep rates aligned with domestic objectives. It also sheds light on the policies that can serve to enhance monetary autonomy in the future.

As the U.S. economic outlook strengthens, the Federal Reserve is preparing to raise policy rates for the first time in almost a decade. After several years of policy rates at the zero lower bound, unconventional operations, and long-term rates and term premiums at historically low levels, many market analysts and policymakers are anxious about the global implications of the normalization of U.S. monetary policy.

While the upcoming tightening reflects an improving U.S. economic outlook and is among the most analyzed and anticipated monetary policy moves in recent history—suggesting that market participants have already priced it in to a large extent—it could still generate sudden disruptions in global financial markets. First, the actual move by the Federal Reserve may lead agents to revise upward their expectations about the future path of U.S. short-term rates, in turn raising longer-term yields. Second, the lift-off could be accompanied by uncertainty about the future rate path and increased risk aversion, both drivers of global term premiums.

This prospective change in global conditions finds Latin America amid a persistent deceleration in

economic activity with rising unemployment. While structural factors explain part of the slowdown, many economies in the region are now estimated to be operating below potential. Thus, keeping domestic monetary conditions neutral or supportive would generally seem appropriate where inflation expectations are well-anchored (see Chapter 2).

Despite this context, monetary policy committees throughout the region have been considering the possibility of raising rates in their recent meetings. And, in fact, a quick glance at international data suggests that interest rates do co-move strongly with external financial conditions and with U.S. policy rates in particular. This raises the broader question of whether, in a highly integrated global financial system, monetary authorities around the world have full autonomy to tailor policy rates to their domestic macroeconomic conditions.¹

Can monetary authorities in Latin America avoid a tightening of financial conditions that is not warranted by the domestic cycle? Or will tightening alongside the Federal Reserve become a necessity?

This chapter attempts to address this question by measuring the degree of monetary autonomy in Latin America since the early 2000s, exploring policies that can help to increase it, and shedding light on the likely impact and risks associated with U.S. monetary policy normalization.

Co-movement in Financial Conditions: A First Glance

How do financial conditions in Latin America move in relation to global financial conditions and, in

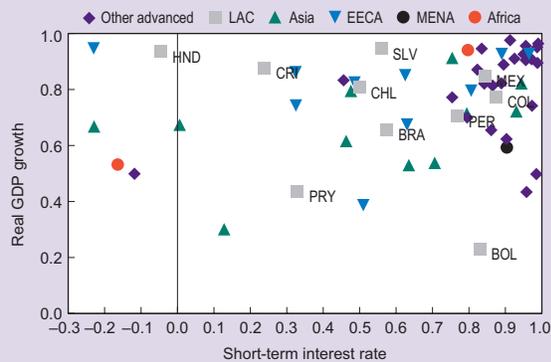
Note: Prepared by Carlos Caceres, Yan Carrière-Swallow, and Bertrand Gruss. Steve Brito and Genevieve Lindow provided outstanding research assistance. Ishak Demir provided valuable contributions to the chapter. See Caceres, Carrière-Swallow, and Gruss (forthcoming) for technical details.

¹ The debate on the ability of open economies to implement autonomous monetary policies in the context of a highly integrated global financial system has intensified recently. See, for instance, Rey (2015) and Obstfeld (2015).

Figure 3.1

Synchronicity of Global Output and Interest Rate Cycles Across Countries

(Correlation with global component)



Sources: IMF, International Financial Statistics database, and IMF staff calculations.

Note: LAC includes Bolivia, Brazil, Chile, Colombia, Costa Rica, El Salvador, Honduras, Mexico, Paraguay, and Peru. Asia includes Bangladesh, China, Hong Kong SAR, India, Indonesia, Malaysia, Philippines, Singapore, South Korea, Taiwan Province of China, Thailand, and Vietnam. EECA includes Albania, Bulgaria, Croatia, Czech Republic, Hungary, Kazakhstan, Latvia, Poland, Romania, Russia, and Slovenia. MENA includes Egypt and Saudi Arabia. Africa includes Kenya and South Africa. Other advanced includes Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Israel, Italy, Japan, Malta, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, and United States. For each variable, the global component is computed as the first principal component for all the countries in our sample over the period from January 2000 to December 2014.

particular, U.S. monetary policy? Is this correlation in financial conditions different from that of real business cycles? A principal component analysis of output growth, price inflation, and interest rates for a large set of countries sheds light on these questions.²

At least since the early 2000s, there has been substantial co-movement of interest rates across a large sample of advanced and emerging market economies. Indeed, short-term interest rates tend to exhibit a positive correlation with the global component in most countries (Figure 3.1). The co-movement over the past decade has been particularly strong among advanced economies, with an average correlation of about 0.9. Yet,

² See Annex 3.1 for a description of the principal component analysis.

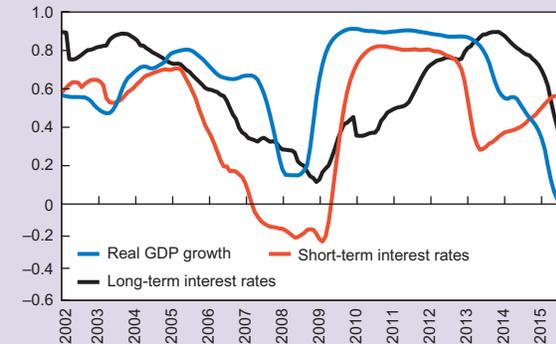
a relatively high degree of co-movement with the global component is also observed for interest rates among the most financially integrated economies of Latin America (Brazil, Chile, Colombia, Mexico, and Peru; LA5 hereafter). The average correlation of LA5 short-term interest rates with the global factor is slightly above 0.7, comparable with that of financially integrated economies in Asia (for example, Hong Kong SAR, Singapore, South Korea, and Taiwan Province of China). Other Latin American countries, such as Costa Rica, Honduras, and Paraguay, show more limited co-movement with global short-term rates. The patterns are similar in the case of long-term interest rates.

This synchronicity of interest rates may simply reflect a high degree of co-movement in business cycles across countries. Indeed, all countries in our sample exhibit a positive correlation of real GDP growth with the corresponding global component (Figure 3.1). On average, countries that exhibit a high degree of synchronicity with the global factor in terms of interest rates also tend to show a high degree of co-movement in terms of output growth and price inflation.

It is often argued that the degree of co-movement in asset prices is increasing over time, driven by deeper integration of financial markets.³ Indeed, the degree of co-movement of interest rates with respect to the corresponding global factor varies over time. For instance, the degree of synchronicity of LA5 short-term interest rates with the global factor has reached particularly high levels in recent years (Figure 3.2). However, these fluctuations tend to mimic the variations in synchronization of business cycles across countries, which increased strongly around the global financial crisis. This underscores the need to account carefully for co-movement in business cycles when assessing linkages from global to domestic financial conditions. We turn to this in the following sections.

³ See, for instance, Obstfeld, Shambaugh, and Taylor (2010) and Rey (2015).

Figure 3.2

LA5: Evolution of Correlation with Global Component*(Average correlations across LA5 with corresponding global component; four-year moving average)*

Sources: IMF, International Financial Statistics database, and IMF staff calculations.

Note: LA5 includes Brazil, Chile, Colombia, Mexico, and Peru. For each variable, the global component is computed as the first principal component for all the countries in our sample over the period from January 2000 to December 2014.

From Global Financial Conditions to Domestic Interest Rates: Quantifying the Linkages

How are changes in global or U.S. financial conditions transmitted to interest rates in different economies? We estimate a set of country-specific vector autoregression (VAR) models using monthly data since the early 2000s to quantify the reaction of domestic interest rates to changes in external financial variables.^{4,5} Our analysis is largely focused on the effects of changes in U.S. interest rates, as these are a key driver of global financial conditions, but we also consider model

⁴ See Box 3.1 for a brief discussion of potential effects on capital flows.

⁵ All model specifications share the assumption that domestic variables do not affect global variables. Following the results in Chen, Mancini-Griffoli, and Sahay (2014), we also include the VIX in the exogenous block to account for changes in global risk sentiment. See Annex 3.1 for details.

specifications that include financial conditions in the euro area.⁶

The first model includes the federal funds rate as an exogenous variable and short-term market interest rates as the domestic variable.⁷ Short-term rates react quite differently across countries to movements in the federal funds rate (circles in Figure 3.3, panel 1).⁸ For instance, a 100-basis-point hike in the federal funds rate leads to an increase of 95 basis points and 80 basis points in Mexican and Peruvian short-term rates, respectively. The response to the same shock in Canada and Israel is about 60 basis points, and only 20 to 40 basis points in Argentina, Bolivia, Chile, Costa Rica, and Uruguay. Short-term rates in Colombia, in turn, exhibit responses close to zero, and the response is negative—though not significant—in the case of Brazil. The average response for a broad sample of emerging markets outside Latin America is less than 10 basis points, while the average response for advanced economies is about 30 basis points.

Movements in short-term rates are only part of the story, since many economic decisions depend on longer-term rates. Moreover, the Federal Reserve has conducted monetary policy by influencing the longer end of the yield curve through quantitative easing and forward guidance since the policy rate hit the zero lower bound during the global financial crisis.

Long-term rates typically do not react much to changes in the federal funds rate. A notable

⁶ For instance, Ricci and Shi (forthcoming) report that movements in U.S. interest rates can explain 70 percent of the variation in the policy rates of the 30 largest economies.

⁷ We use interest rates on short-term government bonds (with maturity of about three months; see Annex 3.1). Even though this interest rate is not the monetary policy instrument, it should be closely linked to changes in the monetary policy stance. In fact, if changes in the policy instrument did not heavily influence this short-term interest rate in local currency, it would be hard to argue that the central bank can affect domestic monetary conditions at all.

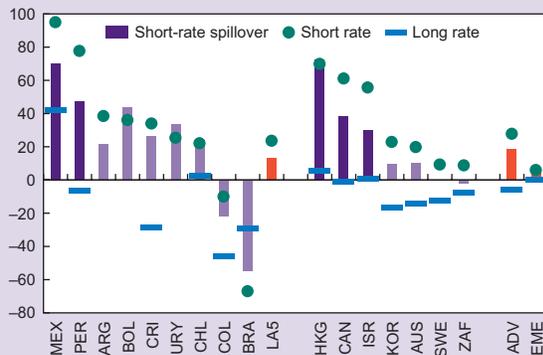
⁸ Throughout the chapter we focus on cumulative impulse response functions of models after 12 months to allow transmission to be fully realized.

Figure 3.3

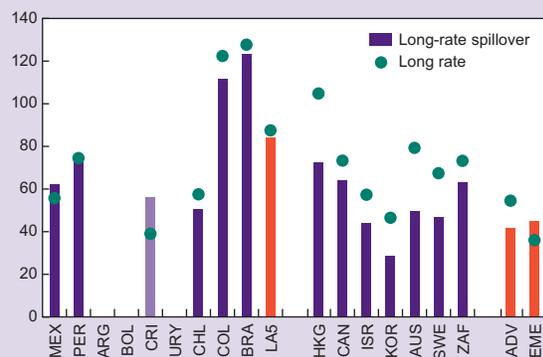
Assessing the Impact of Movements in U.S. Interest Rates

(Cumulative response of domestic interest rates to a 100-basis-point permanent increase in U.S. rates; in basis points)

1. Response to an Increase in the Federal Funds Rate



2. Response to an Increase in the 10-Year U.S. Treasury Bond Yield



Source: IMF staff calculations.

Note: The charts show the cumulative response after 12 months to a shock that increases the federal funds rate (panel 1) or the 10-year U.S. Treasury bond yield (panel 2) by 100 basis points after 12 months.

“Short rate spillover” and “Long rate spillover” denote the responses of domestic interest rates that have been purged from the effect of the domestic business cycle (see Annex 3.1). Solid bars denote that the response is statistically significant at the 5 percent confidence level. ADV and EME denote averages for the set of countries listed under Advanced and Non-LA Emerging Markets, respectively, in Annex Table 3.1.

exception in the region is Mexico, where long-term rates are estimated to rise by about 40 basis points. Movements in 10-year U.S. bond yields, however, typically have a greater impact on corresponding domestic rates—and in a more similar fashion across countries—than changes in the federal funds rate (circles in Figure 3.3, panel 2). After a 100-basis-point increase in U.S. Treasury yields,

long-term rates in emerging market and advanced economies increase by an average of 35 and 55 basis points, respectively. The average response of long-term rates in LA5 economies is even larger, at about 90 basis points. Brazil stands out with a response of about 130 basis points, followed by Colombia (120 basis points). The response in the other LA5 countries lies between 55 and 75 basis points.

Synchronization or “Spillovers”?

As discussed above, there is nothing surprising or inherently undesirable about domestic financial conditions being synchronized with conditions of international financial markets. For instance, countries with strong trade and financial linkages to the United States—such as Canada and Mexico—will tend to have an economic cycle that is highly synchronized with the U.S. cycle. In such cases, changes in domestic financial conditions may be broadly aligned with U.S. financial conditions, without posing challenges to achieving price and output stabilization objectives. A tension could emerge, however, in a case where domestic financial conditions are driven by foreign conditions that are out of sync with the domestic business cycle. To distinguish between these cases, we use a multi-stage VAR procedure (see Annex 3.1).

In the first stage, we estimate a Taylor-type rule for the dynamic relationship between domestic interest rates and 12-months-ahead forecasts of inflation and output growth, as reported by Consensus Economics. These market forecasts are meant to capture changes in the economic outlook due to both idiosyncratic and global factors. The residuals or unexplained components from these estimations can be interpreted as deviations from the historical policy reaction function that characterizes the central bank’s efforts to stabilize the domestic cycle. These unexplained interest rate movements could reflect other central bank objectives beyond preserving price stability, including financial stability concerns, and thus

could well be welfare-enhancing.⁹ Nonetheless, they entail changes in domestic monetary conditions beyond what can be attributed to the central bank's usual response to inflation and output developments.

In the second stage, we seek to quantify to what extent these residual movements in domestic interest rates can be explained by movements in global financial conditions. To do so, we substitute the domestic interest rates in the country-specific VAR models with the corresponding residuals from our first-stage estimation. We label the second-stage estimated responses to global financial shocks as *spillovers*, and expect these to be low where monetary autonomy is high.

In general, the *spillover* response of domestic short-term rates after a 100-basis-point increase in the federal funds rate (depicted with bars in Figure 3.3) is smaller than the overall response reported earlier (20 basis points lower on average). That is to say, an important portion of the co-movement in interest rates is simply a reflection of synchronized business cycles, and thus cannot be construed as inconsistent with monetary autonomy.

Nonetheless, estimated *spillovers* to domestic short-term rates are statistically significant in 8 out of 46 advanced and emerging market economies, where they average a nontrivial 40 basis points, but differ substantially across countries.¹⁰ Interestingly, these economies include countries with fully flexible exchange rates and well-established central bank credibility, such as Canada and Israel.

⁹ Consider the case of a central bank that decides to increase interest rates in the face of a shock that would otherwise lead to exchange rate depreciation. Our procedure identifies the part of the rate increase that can be explained by its concern for the second-round effects on inflation, as captured by its historical behavior. The remainder is considered unexplained, even though it could correspond to an explicit intent to contain vulnerabilities from balance sheet mismatches in order to preserve financial stability.

¹⁰ The eight economies that show significant *spillover* responses are Canada, Hong Kong SAR, Israel, Mexico, Peru, Saudi Arabia, Singapore, and Taiwan Province of China.

In Latin America, the *spillover* response to short-term rates is significant and large in the cases of Mexico (about 70 basis points) and Peru (about 50 basis points), but smaller and not statistically significant in the other countries. This is not surprising given the tight financial links with the United States in the former and the high degree of dollarization in the latter. In the current juncture, where the U.S. and Latin American business cycles seem out of sync, our results suggest that a co-movement with U.S. rates would be more likely in Mexico and Peru than elsewhere.¹¹

Turning to the longer-end of the yield curve, the *spillover* response (bars in Figure 3.3, panel 2) is essentially the same as the overall response (circles).

Our approach is subject to common empirical limitations. While we should employ the central bank's internal forecasts used to inform the policy decision, these are only publicly available for a handful of countries and with a significant delay. The market forecasts that we use instead are subject to two limitations. First, there is a timing problem because they are not collected on the day of monetary policy decisions.¹² While this could potentially bias our *spillover* estimates, we find that using alternative timings does not significantly alter our results.¹³ Second, even if timing were not an issue, market forecasts may incorporate

¹¹ Note that our estimates reflect historical average effects, and thus do not fully capture improvements in policy frameworks that have been implemented since 2000.

¹² We use lagged market forecasts to ensure that they are predetermined with respect to policy decisions, but this reduces their information content.

¹³ An event that occurs between the forecast date and the policy decision and which affects rates in both countries could be (wrongly) considered a *spillover* response. However, using forecasts from the same month as the decision or the following month does not significantly affect results. For instance, the estimated *spillover* to Mexico remains significant and in the range of 59 to 66 basis points.

expected policy responses.¹⁴ In practice, however, monetary policy only affects economic conditions with a significant delay. Accordingly, movements in 12-months-ahead market forecasts should be highly correlated with movements in the central bank's internal forecasts.

In sum, we find that a large portion of the response of short-term interest rates to movements in U.S. rates can be attributed to the synchronicity of business cycles across countries. However, we also find that, for several countries, including a few in Latin America, movements in U.S. rates generate significant *spillovers* to domestic short-term rates above and beyond what can be explained by standard business-cycle co-movement.

Exploring the Determinants of Monetary Autonomy

What determines a country's exposure to unexplained monetary tightening (or loosening) due to external financial shocks? The traditional trilemma framework points to the degree of exchange rate flexibility and capital account openness as the main determinants of monetary policy autonomy. More recently, Rey (2015) has questioned the dimensions of the trade-off, arguing that autonomy can only be achieved by restricting the capital account. Our results lay somewhere in between. Even countries with flexible exchange rates display significant *spillovers* from global financial conditions. However, their magnitudes vary a great deal, suggesting that other factors may also affect the tradeoffs underlying monetary autonomy.

In this section, we use a panel VAR estimation approach to exploit the differences in *spillovers*

¹⁴ Under this argument and if the central bank is fully credible, market forecasts might not move at all in response to a shock that would otherwise affect output growth and inflation because agents anticipate that the central bank will do whatever is necessary to neutralize the shock.

across countries and explore how these are affected by policy choices and characteristics of the domestic financial system.¹⁵

We find that, indeed, maintaining a fully flexible exchange rate regime sharply reduces the degree of *spillovers* to domestic short-term rates. Specifically, for a country with a relatively open capital account, the *spillover* effect declines from about 30 basis points under a fixed exchange rate to about 10 basis points under a floating exchange rate and to only 3 basis points under a fully flexible regime (Figure 3.4, panel 1).^{16,17} In turn, opening the capital account increases the degree of *spillover* for a country with a flexible exchange rate regime.

But other factors also matter. Figure 3.4 (panel 2) shows that under a floating exchange rate and a relatively open capital account, increased financial dollarization, the presence of global banks in the domestic financial system and perceived fiscal vulnerability all reduce the degree of monetary autonomy. Foreign ownership of sovereign debt does not seem to affect the degree of *spillovers*. Conversely, an active use of reserve requirements and greater central bank credibility reduce the intensity of *spillovers*.

The size of these effects is also economically meaningful. Take the example of financial dollarization, which reduces the ability of balance sheets to absorb large exchange rate movements driven by external shocks. Our estimates suggest that reducing financial dollarization, proxied by the share of bank deposits denominated in foreign currency, from 60 percent—the level observed in Peru over our estimation sample—to the median level in our sample (about 6 percent), decreases

¹⁵ The model setup follows Towbin and Weber (2013). See Annex 3.1 for more details.

¹⁶ The exchange rate regime classification follows Ilzetzki, Reinhart, and Rogoff (2009).

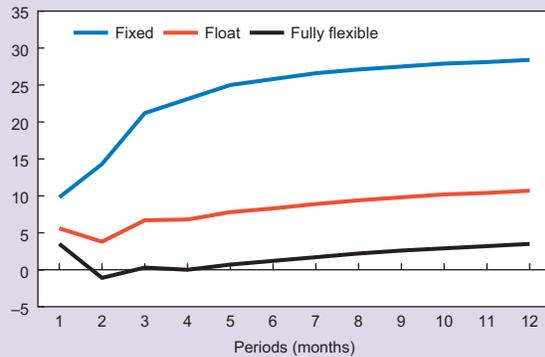
¹⁷ This finding is in line with Obstfeld's (2015) panel analysis for a similar broad sample of countries, and the narrative approach in Claro and Opazo (2014) and De Gregorio (2014) for the case of Chile.

Figure 3.4

Determinants of Spillovers

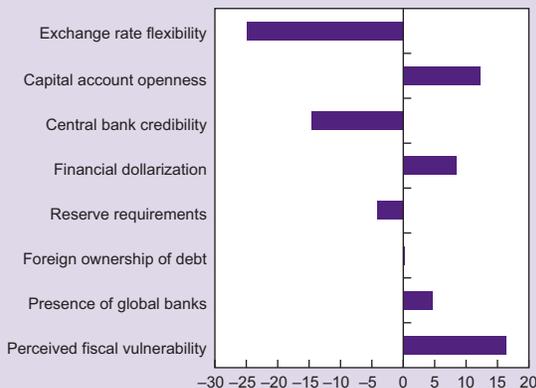
1. Cumulative *spillover* response of domestic short-term rates to a 100-basis-point increase in the U.S. federal funds rate under alternative exchange rate regimes for countries with high capital account openness

(Basis points)



2. Difference in *spillover* responses of short-term rates to a 100-basis-point shock to the U.S. federal funds rate for alternative values of fundamentals

(Basis points)



Source: IMF staff calculations.

Note: The impulse responses are estimated with an Interacted-Panel VAR (see Annex 3.1). Each bar denotes the difference in the responses when that fundamental moves from the lower (3rd decile) to the higher (7th decile) end of its empirical distribution holding other fundamentals at their median values, except for the exchange rate that is set as floating. "Exchange rate flexibility" is an updated version of Ilzetzki, Reinhart, and Rogoff (2009). "Capital account openness" is from Aizenman, Chinn, and Ito (2010). "Central bank credibility" index is based on inflation forecast disagreement as described in Annex 3.1. "Financial dollarization" is an updated version of Levy-Yeyati (2006). The index on the active use of "Reserve requirements" is from Cordella and others (2014). "Foreign ownership of (sovereign) debt" is from Ebeke and Kyobe (2015). "Presence of global banks" follows Cetorelli and Goldberg (2012). The "Perceived fiscal vulnerability" is proxied by credit default swap spreads. See the list of countries included in Annex Table 3.1.

the extent of *spillovers* by about 25 basis points in response to a U.S. monetary tightening. Of course, many of these variables are slow-moving fundamentals, and changing them would require

persistent policy action, along with a broader assessment of their welfare implications.

What Can Latin America Expect from U.S. Monetary Policy Normalization?

The analysis presented so far reflects average responses to movements in U.S. interest rates. But the actual effect on Latin American interest rates from the upcoming U.S. monetary policy normalization will depend on the combination of underlying developments that drive the U.S. rates. Is it an anticipated response to a better economic outlook as reflected in current futures-implied market expectations? Will it be attenuated by accommodative monetary policy in other major advanced economies? Will the term premium remain compressed? In this section, we attempt to quantify the expected impact on domestic rates under different scenarios surrounding these questions.

Do the Nature and Source of Global Financial Shocks Matter?

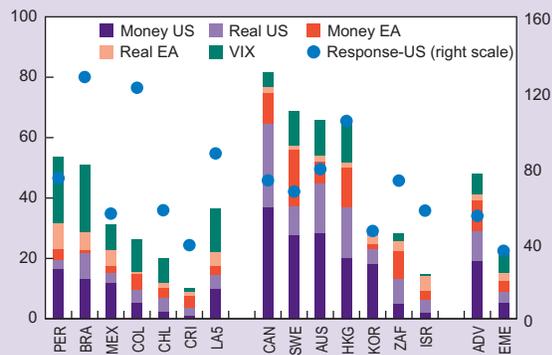
The impact of a Federal Reserve policy decision will likely differ if it responds to a better economic outlook or reflects tighter monetary conditions alone. One reason is that decisions responding to an improved economic outlook are easier to anticipate, and may already be priced in by financial markets before they occur. An unanticipated rate hike, in turn, is likely to generate sharper adjustments of asset prices than one that has been fully anticipated. Another channel is that the better U.S. outlook will itself have implications for many global variables, including demand for exports and commodity prices, which will affect countries differently.

To analyze these issues, we decompose movements in U.S. and euro area 10-year bond yields according to whether they respond to movements in global risk aversion, unexpected monetary tightening, or an improved economic outlook in each of the

Figure 3.5

What Drives Long-Term Interest Rates? Expected and Unexpected Shocks to 10-Year Bond Yields in the United States and the Euro Area

(Share of variance explained by each component; percentage points, left scale. Cumulative response after 12 months; basis points, right scale)



Source: IMF staff calculations.

Note: The bars denote the variance decomposition (in percent, left scale) of domestic long-term interest rates attributable to expected ("Real US") and unexpected ("Money US") changes in 10-year U.S. bond yields; expected ("Real EA") and unexpected ("Money EA") changes in euro area 10-year bond yields; and global risk sentiment, as proxied by the VIX index. The shock decomposition and identification are based on Osorio Buitron and Vesperi (forthcoming); see Annex 3.1. The markers denote the cumulative response after 12 months (in basis points, right scale) of domestic long-term interest rates to a permanent increase of 100 basis points in the 10-year U.S. Treasury bond yields ("Response-US," which is the same as in Figure 3.3, panel 2). "ADV" and "EME" denote averages for the set of countries listed under Advanced and Non-LA Emerging Markets, respectively, in Annex Table 3.1.

two economies.¹⁸ We then include these identified drivers of global long-term rates among the exogenous variables of our model, while long-term government bond yields are included in the domestic block. Figure 3.5 (bars) shows the share of variation in domestic long-term rates that can be attributed to each of these drivers. It also shows (circles) the cumulative response of domestic rates

¹⁸The method was first proposed by Matheson and Stavrev (2014) and has been further extended by Osorio Buitron and Vesperi (forthcoming) to incorporate global risk aversion and euro area yields. Note that while the identification strategy cannot distinguish between monetary policy shocks and inflationary surprises, our interest is in distinguishing expected interest rate movements associated with changes in the economic outlook. See Annex 3.1.

to a 100-basis-point increase in 10-year U.S. bond yields previously reported.

The first result that stands out is that monetary surprises significantly affect bond yields around the world, and Latin America is no exception. Indeed, movements in global long-term rates that are driven by an unexpected monetary tightening explain a larger fraction of the variability in domestic rates than those driven by an improved economic outlook. The contribution from monetary surprises among the external factors excluding the VIX is about 70 percent in advanced economies and 60 percent in emerging economies. Among LA5, the share is about 60 percent, with individual shares ranging from about 45 percent in Chile to about 70 percent in Colombia.

Another important feature at the current juncture is that the United States is set to start normalizing its monetary policy while other major economies, such as the euro area and Japan, are maintaining a highly accommodative stance. An interesting question in this context is how much of an attenuating effect this asynchronicity of advanced economy monetary policies could provide for Latin America.

The results suggest that the relief Latin America may receive will be limited, where movements in U.S. rates are the main source of global financial shocks. Indeed, the share of total variation in domestic bond yields in LA5 economies attributable to U.S. shocks is twice the share corresponding to euro area shocks.

Finally, it is worth noting that idiosyncratic factors still explain a large fraction of interest rate movements in Latin America. For instance, an increase in U.S. yields has a much larger effect on interest rates in Brazil and Colombia than in the average advanced economy. However, the share of the overall interest rate variability attributable to U.S. yields is comparable across these groups of countries.

Assessing the Effects of Shocks to the Term Premium

Another potential source of risk surrounding the normalization of U.S. monetary policy is a sudden

decompression of the term premium—that is, the difference between the 10-year yield and the average of expected future short-term rates over the same horizon—which is currently at historically low levels.¹⁹

To assess the potential impact from a rise in the term premium, we include the decomposition of the 10-year U.S. Treasury bond yield into the expected path of short-term interest rates and the term premium as exogenous variables in the country-specific VAR models.²⁰

Our results confirm that movements in the term premium are a major source of spillovers of long-term interest rate shocks across countries, and in particular for Latin America (bars in Figure 3.6). On average, for a sample of 42 advanced and emerging market economies, we find that shocks to the U.S. term premium account for about three-fourths of the variance in domestic long-term rates attributable to shocks to U.S. rates. This share is as large as 85 percent on average for LA5 economies.

In terms of the magnitude of the responses to a shock in the term premium, our results suggest that the average response of domestic long-term rates across countries is somewhat larger if the shock is entirely driven by a movement in the term premium rather than to a change in the expected path of short-term rates in the United States (markers in Figure 3.6).²¹ The median difference in our sample is

¹⁹ The term premium can be thought of as the extra return investors require to hold a longer-dated bond instead of investing in a series of short-term securities, and likely reflects their uncertainty about the future path of interest rates as well as their degree of risk aversion. As such, movements in the term premium tend to be closely correlated with risk premiums on other assets in global financial markets.

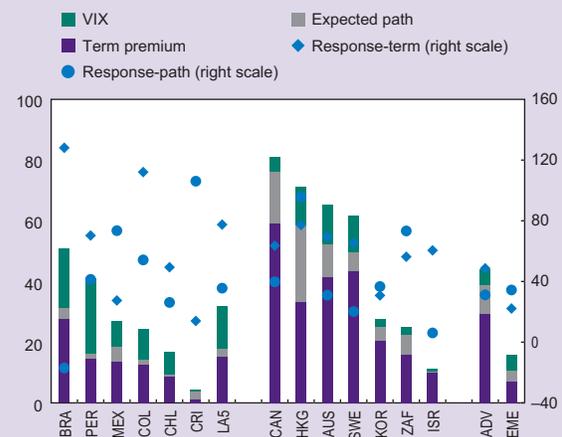
²⁰ We employ the estimate produced by Adrian, Crump, and Moench (2013) and maintained by the Federal Reserve Bank of New York.

²¹ While we focus on the results after 12 months throughout the chapter, we also inspect the full response functions and find that shock transmission is relatively quick and does not suggest significant overshooting.

Figure 3.6

What Drives Long-Term Interest Rates: U.S. Term Premium, Expected Path of U.S. Monetary Policy, or Global Risk Sentiment?

(Share of variance explained by each component; percentage points, left scale. Cumulative response after 12 months; basis points, right scale)



Source: IMF staff calculations.

Note: The bars denote the variance decomposition (in percent, left scale) of domestic long-term interest rates attributable to changes in the expected path of U.S. short-term interest rates ("Expected Path"), term premium, and global risk sentiment, as proxied by the VIX index. The markers denote the cumulative response after 12 months (in basis points, right scale) of domestic long-term interest rates to a permanent increase of 100 basis points in the term premium or the expected path of U.S. short-term interest rates, respectively. "ADV" and "EME" denote averages for the set of countries listed under Advanced and Non-LA Emerging Markets, respectively, in Annex Table 3.1.

about 15 basis points. For LA5 economies, the average difference is larger—about 45 basis points—but with some heterogeneity across countries. In the case of Mexico, for instance, a term premium shock is associated with a smaller impact than a shock to the expected path of short rates.

Risk Scenario Analysis

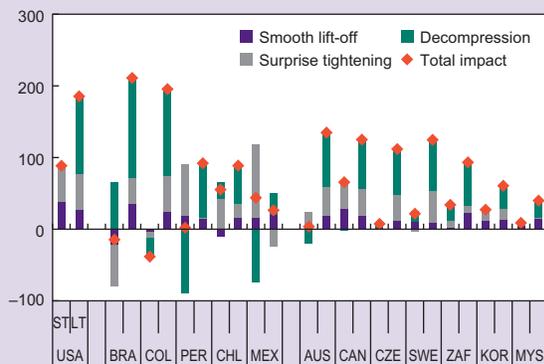
Using country-specific estimates, we assess the likely impact of U.S. monetary normalization on short-term and long-term domestic rates under alternative scenarios. Throughout this exercise, we maintain our focus on medium-term accumulated impacts rather than on shorter-horizon market reactions.

The baseline scenario assumes that the federal funds rate and 10-year U.S. Treasury yields evolve according to current futures-implied market

Figure 3.7

Impact of U.S. Lift-off on Domestic Interest Rates: Alternative Scenarios

(Basis points)



Source: IMF staff calculations.

Note: This chart shows the change in domestic short-term (ST) and long-term (LT) government bonds due to the realization of each scenario. The counterfactual is a situation in which there is no change in interest rates, and this is in line with a weaker evolution of the U.S. economy and market expectations. The change in U.S. rates under the smooth lift-off scenario is based on interest rate futures reported by Bloomberg on September 23, 2015.

expectations, which anticipate an accumulated increase of 39 basis points and 27 basis points over the next 12 months, respectively. The impact on LA5 economies is estimated to be quite limited, consistent with these expectations already being priced in by the market (Figure 3.7).²²

Deviations from market expectations for U.S. rates would provoke more noticeable impacts on LA5 financial conditions. In a first risk scenario, we assume that the federal funds rate and 10-year U.S. bond yields each rise by 50 basis points more than currently expected by markets, and that this additional tightening is not accompanied by an improved economic outlook. In this case, the impact on LA5 interest rates is somewhat more pronounced, particularly at the longer end of the curve.

We then consider a riskier scenario under which, in addition, the U.S. term premium decompresses

²² To assess the impact from expected versus unexpected movements in the federal funds rate, we follow the identification strategy in Romer and Romer (2004).

back to its precrisis average (January 2000 to August 2008). This implies an increase in the term premium of about 109 basis points, arguably a very large movement. This scenario would generate much larger movements in certain Latin American countries, with estimated increases of over 200 basis points in Brazil and Colombia's long-term rates.

Conclusion and Policy Implications

Asset prices, and interest rates in particular, exhibit a large degree of co-movement across countries, including in the financially integrated economies of Latin America. This synchronicity in financial conditions goes hand in hand with a high degree of co-movement in business cycles.

However, we do find evidence of excessive financial correlation, or *spillovers*: even after controlling for domestic economic conditions, interest rates in many economies, including some in Latin America, respond to global financial shocks. We interpret this result as evidence that these economies do not enjoy full autonomy to set monetary conditions according to domestic price and output stability objectives, and are to a certain extent forced to follow external signals, although there is significant country variation.

The intensity of these financial *spillovers* depends, first of all, on the nature of the global shock. Particularly large *spillovers* are caused by movements in global interest rates that are not accompanied by changes in the economic outlook, or that are associated with fluctuations in the term premium. The source of the shock also matters. For Latin America, U.S.-originated shocks matter more than those originating in the euro area.

Importantly, the magnitude of the *spillovers* also appears to depend on the economic policy framework that is in place and other country-specific characteristics. Our results confirm

that more exchange rate flexibility allows for greater monetary autonomy, even if the capital account is unrestricted. But they also suggest that, for a given policy choice along the capital account openness and exchange rate flexibility

dimensions, improving the credibility of policy frameworks, reducing the extent of financial dollarization, and using macroprudential reserve requirements can help achieve a higher degree of monetary autonomy.

Box 3.1

Global Financial Conditions and Portfolio Flows to Latin America

The analysis in this chapter has focused on the response of asset prices—more precisely, interest rates on government bonds—to changes in global financial conditions. But what can we expect regarding quantity flows of these assets? In fact, a simple look at the data suggests that gross portfolio inflows to emerging markets since 2000 have been positively correlated with U.S. interest rates. For Latin America, flows are relatively more correlated with other external factors, such as global risk sentiment and commodity prices. Just as we find for interest rates, the reason underlying the movement in U.S. rates might matter: flows tend to soften somewhat following increases in the U.S. term premium, and to accelerate following an increase in the risk-neutral U.S. rate, which is associated with an improved economic outlook. This is broadly consistent with the behavior of flows during the two most recent episodes of U.S. rate increases, where the “taper tantrum” of 2013 had a greater impact than the “Greenspan conundrum” period of the mid-2000s, due to the decompression of the term premium during the former.

This simple exercise does not allow us to draw strong conclusions, but is consistent with the more comprehensive analysis in Adler, Djigbenou, and Sosa (2014) and Chapter 3 of the April 2014 *Regional Economic Outlook: Western Hemisphere*. They find that a surprise increase in U.S. interest rates leads to a significant drop in gross capital inflows to emerging market economies, whereas an increase that is driven by an improved economic outlook actually increases flows.

Table 3.1.1. Correlation between Global Financial Variables and Normalized Gross Portfolio Flows to Emerging Markets

	Federal Funds Rate	10-year U.S. Treasury Yields	U.S. Term Premium	U.S. Risk-neutral	VIX	Commodity Export Price Index
Median EM	*0.40	0.17	−0.22	*0.42	*−0.43	*0.46
LA5	0.13	0.09	−0.09	0.19	*−0.32	*0.36
Asia	*0.34	0.11	−0.19	*0.32	*−0.46	*0.41
EMEA	*0.44	0.15	*−0.26	*0.45	*−0.32	*0.35

Sources: IMF staff calculations using data from the IMF International Financial Statistics database; Federal Reserve Bank of New York; Chicago Board Options Exchange; and Gruss (2014).

Note: Correlations at quarterly frequency over the period of 2000:Q1–2014:Q4. Normalized flows are computed by subtracting the moving five-year average of inflows for the respective quarter. LA5 includes Brazil, Chile, Colombia, Mexico, and Peru. Asia includes China, India, Indonesia, Korea, Philippines, and Thailand. EMEA includes Hungary, Israel, Poland, Russia, South Africa, and Turkey. Median EM includes all countries listed above. * denotes a correlation that is statistically different from zero at the 0.05 confidence level.

Note: This box benefited from the contributions of Jaume Puig and Andre Meier.

Annex 3.1. Technical Details

Interest Rate Database

Short-term and long-term nominal interest rates correspond to three-month and 10-year (respectively) secondary market yields for government bonds denominated in local currency.¹ Gaps in interest rates at these maturities are interpolated using the variability in bond yields at close maturities (using maturities from one month to two years for short-term rates and five to 20 years for long-term rates). When Treasury bond yields are not available, bonds issued by the central bank for monetary policy operations are used. Data sources vary by instrument, country, and period but include the IMF's International Financial Statistics and Monetary Surveys, Bloomberg, L.P., Haver Analytics, Global Financial Data, and national authorities.

Measuring Global Factors

The global factor (or component) of short-term and long-term interest rates, real output growth, and consumer price index (CPI) inflation is the *principal component* of the time-series of each variable across countries, based on the principal component analysis (PCA). The first or principal component is the linear combination of those series that produces the maximum variance in the available data.

Computing Spillover Responses

To compute the *spillover* response of domestic interest rates to an increase in the federal funds rate, we follow a three-stage procedure. First, we estimate a VAR(2) model including domestic variables only: a domestic interest rate r_t , as well as

¹ Time series of policy rates are often impaired as the choice of policy instrument changes over time. Money market rates are widely available and are typically more homogeneous across countries, but are subject to volatility not necessarily related to monetary policy.

a vector X_t including the 12-month-ahead forecasts of real GDP growth and CPI inflation from Consensus Economics (lagged one period to avoid potential endogeneity issues):

$$\begin{bmatrix} r \\ X \end{bmatrix}_t = A_0 + \sum_{j=1}^2 A_j \begin{bmatrix} r \\ X \end{bmatrix}_{t-j} + \begin{bmatrix} e^r \\ e^X \end{bmatrix}_t. \quad (\text{A3.1.1})$$

Second, we take the residual \hat{e}_t^r from the first equation (which essentially purges the interest rate r_t from the effects of the *lags* of X_t) and regress it on the other two residuals (vector \hat{e}^X):

$$\hat{e}_t^r = a + \beta' \hat{e}_t^X + u_t^r. \quad (\text{A3.1.2})$$

Finally, we include the residual \hat{u}_t^r from the above regression (which is now also purged from the *contemporaneous* effects of X_t) in a VAR model that includes global variables:

$$\begin{bmatrix} \hat{u}^r \\ z^* \end{bmatrix}_t = B_0 + \sum_{j=1}^2 B_j \begin{bmatrix} \hat{u}^r \\ z^* \end{bmatrix}_{t-j} + \begin{bmatrix} v \\ v^* \end{bmatrix}_t, \quad (\text{A3.1.3})$$

where vector z_t^* includes the U.S. interest rate (r_t^*) and the VIX index, and the matrices B_j are restricted to ensure the (block) exogeneity of z_t^* (under which global variables are not affected by domestic variables). We denote the Cholesky-orthogonalized impulse response of \hat{u}_t^r to a shock from r_t^* a *spillover*.

Interacted Panel VAR

An Interacted-Panel VAR (IPVAR) model is used to explore how the *spillover* response of domestic interest rates to U.S. interest rates depends on country-specific fundamentals or characteristics. The model includes the same variables as in equation (A3.1.3) but in a panel setting. A regular panel VAR would force all the matrices B_j in equation (A3.1.3) to be the same for all countries. In the IPVAR model, instead, matrices B_j are functions of country-specific fundamentals that can, in addition, vary over time. More precisely, for each country i characterized by a vector of fundamentals $F_{i,t}$ at time t , the coefficients inside the B_j are defined as: $b_{i,t} = c + \gamma' F_{i,t}$.

Annex Table 3.1. Sample of Countries for Model Estimates

Country Sample				
Advanced		LA	Non-LA Emerging	
AUS	NOR	ARG*	ARM+	PAK+
CAN	NZL	BOL*	BGR+	PHL
CHE	SGP	BRA	CHN+	POL
CZE	SVN+	CHL	EGY*+	ROM+
DNK	SWE	COL	HRV+	RUS+
GBR	TWN+	CRI	HUN+	SAU+
HKG+		MEX	IDN	THA
ISR		PER	IND	TUR
JPN		URY*+	KAZ*+	VNM*+
KOR			MYS	ZAF
LVA			NGA	

Source: IMF staff calculations.

Note: * denotes countries for which long-term interest rates are not available. + denotes countries not included in the Interacted-Panel VAR model due to data limitations. See page 89 for country acronyms.

Central Bank Credibility Index

Forecast disagreement has commonly been used as a proxy of inflation uncertainty, which reflects both the predictability and credibility of the central bank, as well as the variability of supply and demand shocks affecting the economy. Inflation forecast disagreement is moreover closely related to de jure measures of central bank independence in G7 economies (see, Dovern, Fritsche, and Slacalek 2012). In this chapter, we use the degree of anchoring of inflation expectations to construct an index of central bank credibility. More precisely, the central bank credibility index $CBC_{i,t}$ for country i at time t is constructed as an ordinal ranking

of the inverse disagreement among forecasters (measured as the four-year moving average of the standard deviation of inflation forecasts reported by Consensus Economics, $MA48(\sigma_{i,t})$):

$$CBC_{i,t} = \frac{1}{N} \text{Rank} \left[\frac{1}{MA48(\sigma_{i,t})} \right]. \quad (\text{A3.1.4})$$

Identified Global Financial Shocks

The identification of shocks driving movements in U.S. and euro area 10-year bond yields is based on the methodology proposed by Matheson and Stavrev (2014) for U.S. yields and further extended by Osorio Buitron and Vesperoni (forthcoming) to account for shifts in global risk aversion and to include euro area yields (constructed as PPP-GDP weighted-average of 10-year bonds issued by Germany, France, Italy, and Spain) as well. The approach uses sign restriction and data on the VIX, stock prices, and bond yields to identify “real” shocks and “money” shocks (which arguably include monetary policy shocks and inflationary surprises). It is based on the assumption that money shocks raise sovereign bond yields and depress stock prices, while positive real shocks lead to an increase in both yields and stock prices. It also distinguishes the money and real shocks coming from the United States and those of the euro area (to this end it also assumes that contemporaneous shocks from the United States can affect euro area variables, but not the other way around).

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4. Trade Integration in Latin America and the Caribbean: Hype, Hope, and Reality

Latin America and the Caribbean (LAC) is less open to trade than most other emerging market regions. This chapter finds that most of the countries in the region have been “undertrading” given fundamentals, despite efforts by a number of them to open up to trade. Strong performers have been able to penetrate large markets, including advanced economies, which requires higher levels of productivity and competitiveness. LAC stands to benefit from deeper integration into global value chains, although we find that the direct short-term trade impact is likely to be small. Finally, trade agreements should focus on raising global competitiveness, and avoid the creation of regionally protected trade blocks.

Growth in Latin America and the Caribbean (LAC) has been slowing for several years, amid generally worsening terms of trade and pressing policy challenges (Chapter 2). In this context, deeper trade integration—both within the region and with the rest of the world—has been put forward as a strategy for reinvigorating the region’s economic dynamism (Figure 4.1) (World Bank 2014, De la Torre and others 2015).

Like their peers in emerging Asia and Europe, LAC economies have significantly increased their share in total world exports over the past 25 years, whether measured in terms of gross flows (total, final, or intermediate goods exports) or in value-added terms (Figure 4.1).¹ However, the strong growth in export values in LAC partly reflected rising prices during the commodity boom, which fueled an underlying trend of greater export concentration. Against this backdrop, it is timely to take stock of key trade patterns in LAC, including comparison with other emerging market regions, and analyze the potential for deeper trade integration and its benefits.

Note: Prepared by Natalija Novta and Fabiano Rodrigues Bastos with outstanding research assistance provided by Steve Brito.

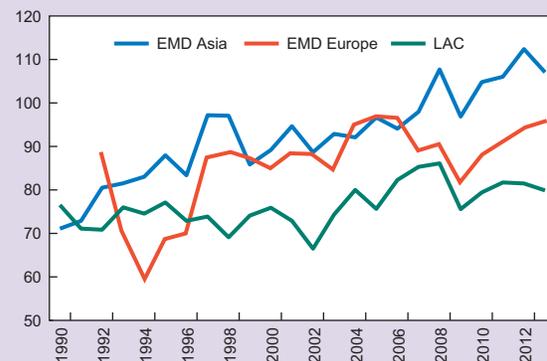
¹ Gross exports can be decomposed into domestic and foreign content (or value added; for details see Koopman, Wang and Wei 2014). Note that China has had a particularly strong performance, improving its share in global exports by about 10 percentage points over this period.

Figure 4.1

Trade: LAC and Other Regions

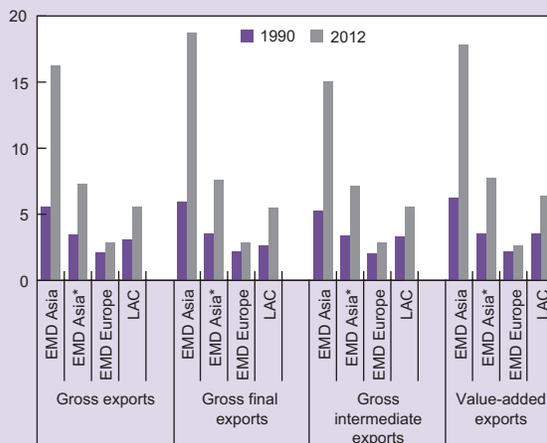
1. Trade Openness

(In percent of GDP, regional median)



2. Participation in World Exports

(Percent)



Sources: Eora MRIO, Comtrade; CEPP; IMF, World Economic Outlook database; and IMF staff calculations.

Note: EMD = emerging and developing; LAC = Latin America and the Caribbean. EMD Asia* excludes China. Openness (gross) is the sum of gross exports and imports divided by nominal GDP from the IMF, World Economic Development database.

Setting the Stage

This chapter highlights three background facts that are relevant when discussing policies to promote trade in LAC: heterogeneity in policy orientation, patterns of intra-regional trade, and the role of potential trade hubs in the region (Brazil and Mexico).

1. The region is marked by heterogeneity in openness and trade policy orientation.

In terms of openness to trade, LAC exhibits vast cross-country differences, with gross imports and exports ranging from 25 percent to 125 percent of GDP. Variation in trade openness measured in value-added terms is still prominent, but smaller (Figure 4.2).

Regarding trade policies (Figure 4.2), the region is also diverse, with tariff levels ranging from 1.5 percent to almost 14.5 percent. Still, all countries in the region have made progress in reducing trade restrictiveness since 1990 (Figure 4.2).

While conducive to stronger trade, lower average tariffs alone may not be sufficient to secure more homogenous and improved trade openness across LAC. This is likely to be particularly challenging in the current slowing environment for global trade (IMF 2015b).

2. Intra-regional trade in LAC—as a share of its exports—is comparable with other regions of emerging and developing economies. However, its composition is different, skewed toward final goods.

While intra-regional trade as a share of LAC exports is lower than in other regions (such as Europe or Asia), if we restrict the comparators to emerging markets and developing countries only, LAC appears to have similar levels of regional trade integration (Figure 4.3). A clear difference, though, relates to the composition of trade flows within the region, more heavily oriented toward final goods than in other regions (Figures 4.3 and 4.6).

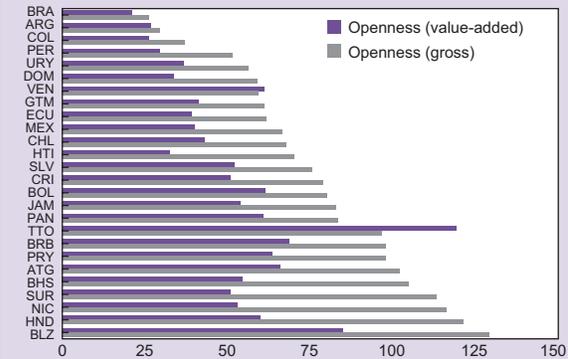
These trade patterns are consistent with the region’s comparative advantages and natural resource endowments—apparent from the contribution of agriculture and mining sectors to the total domestic content of exports (Figure 4.3).

Similar structures of production in LAC, concentrated in the commodity sector, limit the immediate scope to increase regional trade in intermediate goods. The region’s structural

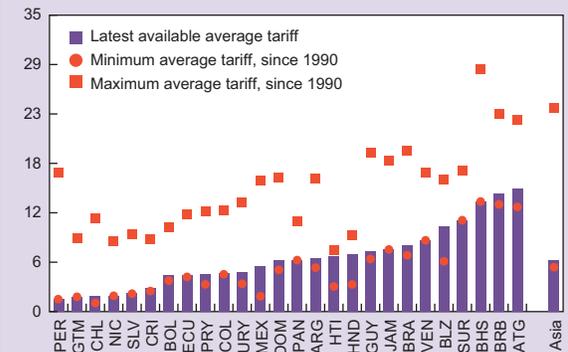
Figure 4.2

Openness and Trade Policies

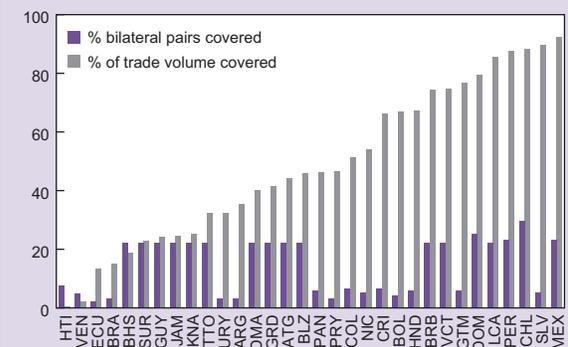
1. Openness
(Percent of GDP)



2. Trade Restrictiveness in LAC
(Percent)

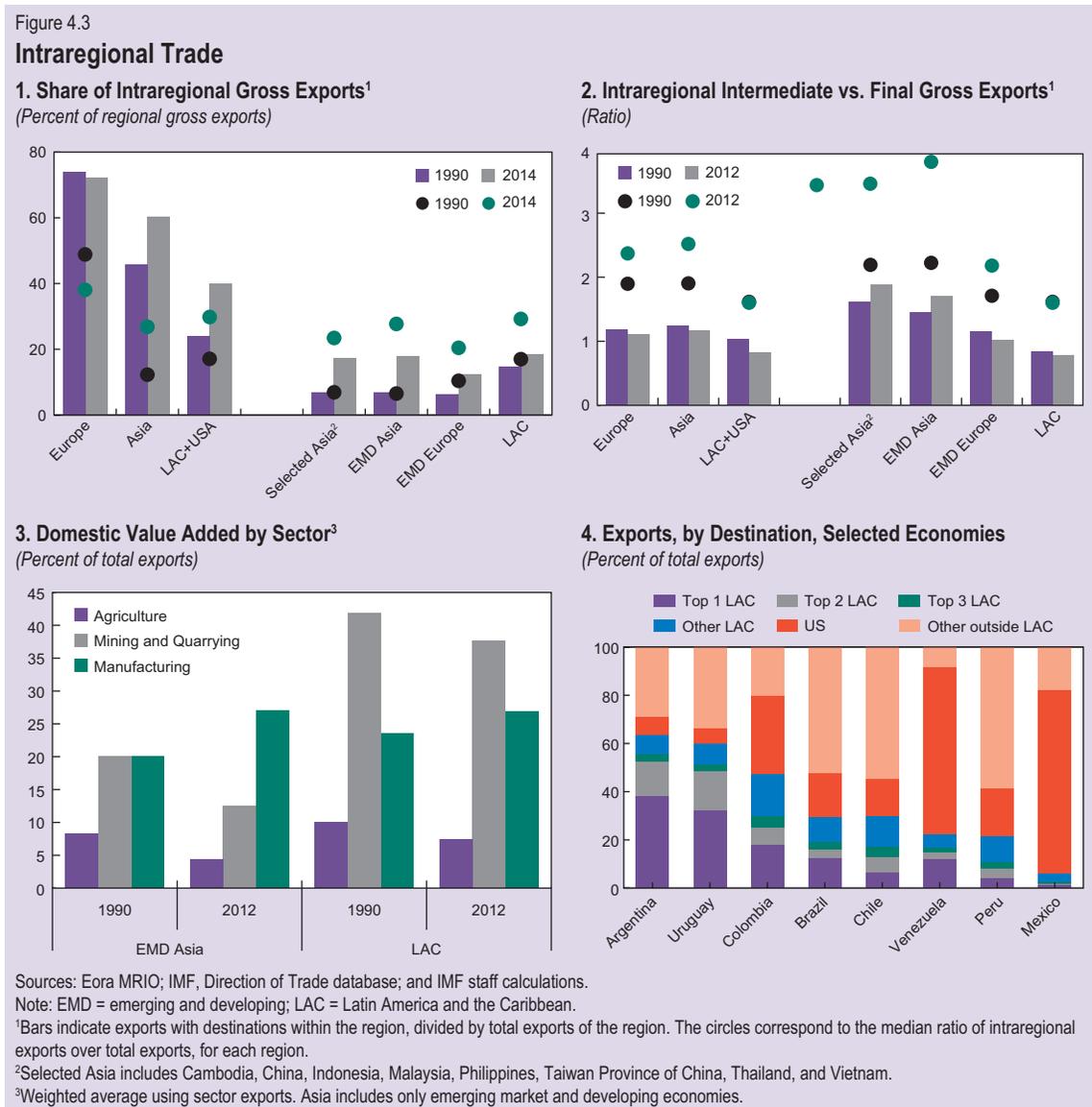


3. Trade Agreement Coverage in LAC
(Percent)



Sources: Eora MRIO; UN Comtrade database; CEPII; IMF, World Economic Outlook database; World Bank, World Development Indicators tariff database; and IMF staff calculations.

Note: EMD = emerging and developing; LAC = Latin America and the Caribbean. Openness (value added) uses value-added exports as defined by Koopman, Wang, and Wei (2014) divided by nominal GDP. Tariffs are calculated as a weighted average across all industries. For Asia, we show the simple average for all emerging market and developing economies. See page 89 for country acronyms.



drawbacks (Figure 4.4) also hold back the materialization of productive complementarities and economic diversification. Still, there is important heterogeneity across LAC countries in the extent of intra-regional trade.

3. Brazil and Mexico are not playing the role of dynamic emerging market trade hubs in LAC, as China is in emerging Asia.

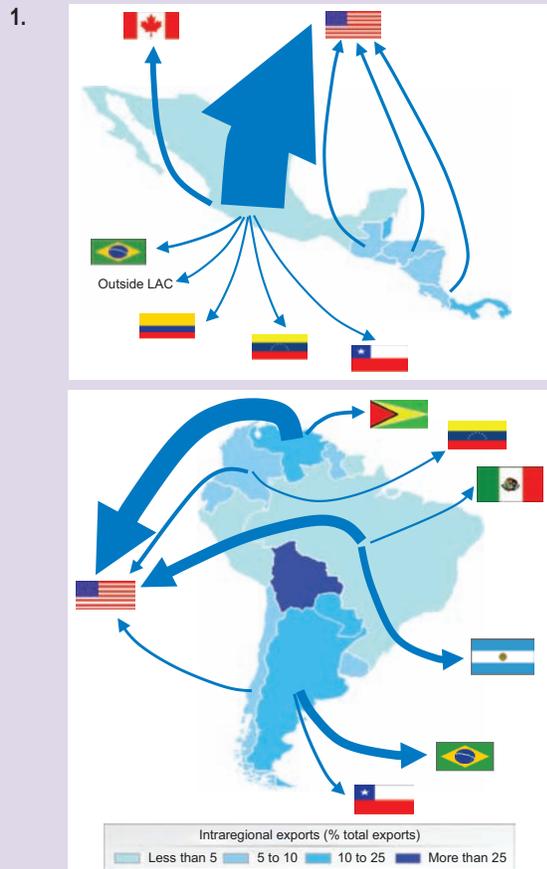
No economy in LAC has played the dual role of a competitive exporter to large markets and systemic importer from within the region

(particularly of intermediate goods)—that is, a trade hub. Specifically:

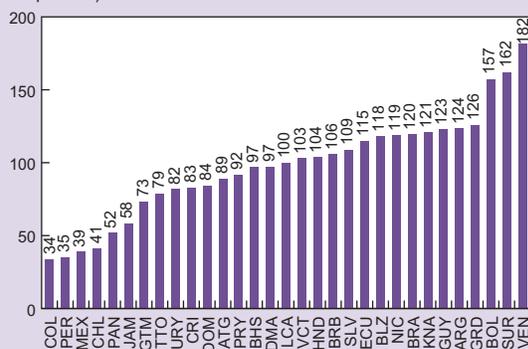
- Both Brazil and Mexico are top-five trading partners for no more than 12 regional partners (Figure 4.5). Mexico's linkages with the United States are very strong, but integration with LAC has remained limited. Brazil has grown in importance as a regional trade destination (see Figure 4.5), but its important linkages with Argentina and other neighboring economies have not been accompanied by growing market penetration beyond its immediate neighborhood.

Figure 4.4
Regional Links and Business Environment

LAC Intraregional Exports, 2012
(Arrows: current U.S. dollars, shade: percent of country exports)



2. Doing Business, 2015
(Rank position)

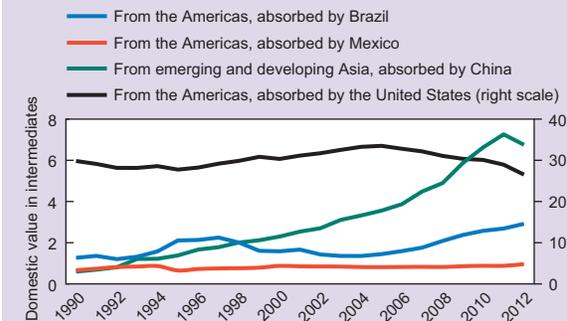


Sources: Eora MRIO; IMF staff calculations; and World Bank, Doing Business 2015.

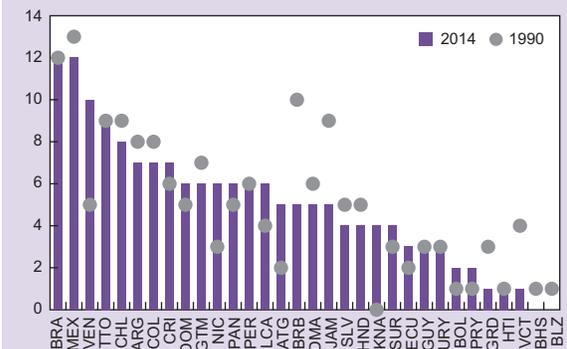
Note: The shading of countries in the map indicates each country's level of intraregional exports, that is, the share of total gross exports with a destination in LAC. The arrows indicate top 10 bilateral export flows for each subregion, with destination in the Americas. The thickness of each arrow corresponds to the value of the bilateral export flow in 2012, in current U.S. dollars. For country acronyms see page 89.

Figure 4.5
Systemic Countries in LAC Trade

1. Domestic Value in Intermediate Goods Exports, from the Americas and Asia, Absorbed by Local Hubs
(Percentage of exports, weighted average)



2. Number of Times the Country Appears as Top Five Export Destinations in LAC¹
(Units)



Sources: Eora MRIO; IMF, Direction of Trade database; and IMF staff calculations.

Note: Circles reflect the number of top five export destinations within LAC, for each country shown, in 2014 and 1990. For country acronyms see page 89. ¹Only LAC destinations considered.

- In marked contrast, China has emerged as a catalyst for wider intra-regional productive complementarities in Asia as it went through significant structural transformation. China has become a trading/processing hub for intermediate goods with growing access to large markets in advanced economies and an indispensable source of regional dynamism of a type that LAC currently does not possess (Blyde 2014; Baumann 2008).

The United States remains an essential trade partner for LAC countries. However, the development of

a strong emerging market trade hub could further boost the region's trade outlook.

Is LAC Undertrading? A More Formal Analysis

We estimate gravity equations for bilateral trade flows to formally assess comparative trade performance across economies—see Anderson (2011), Shepherd (2013), and Noguera (2012).² The gravity model provides a useful benchmark to control for standard trade determinants, which we use to characterize trade intensity “gaps” across regions and countries based on the estimated residuals. We consider different specifications based on the following equation:

$$e_{ijt} = \beta'X_{ijt} + \gamma'U_{ijt} + \theta'W_{ijt} + \varepsilon_{ijt} \quad (4.1)$$

The variable e_{ijt} corresponds to the logarithm of bilateral exports between countries i and j in period t . Model I includes a limited set of standard explanatory variables in vector X (namely GDP of countries i and j , distance, contiguity, whether a common language is spoken, whether a previous colonial relationship existed, whether the exporting country is landlocked, and time fixed effects) (see Table 4.1).

Later in the chapter, we introduce Model II, which includes bilateral pair fixed effects (vector U), and a set of additional variables, including supply chain and trade policy related measures, captured in vector W .³

² Over the last decade, research has been focusing on the theoretical foundations of the gravity equation—see Anderson and van Wincoop (2003).

³ The sample includes bilateral exports from 1990 to 2012 or 2013 (depending on the variable). The datasets used are the UN Comtrade database, EORA, WEO, and CEPPI. The model is estimated using ordinary least squares with clustered robust standard errors and also through Poisson pseudo-maximum likelihood (PPML). Santo Silva and Tenreyro (2006) argue that PPML performs better because it can account for cases of zero trade flows.

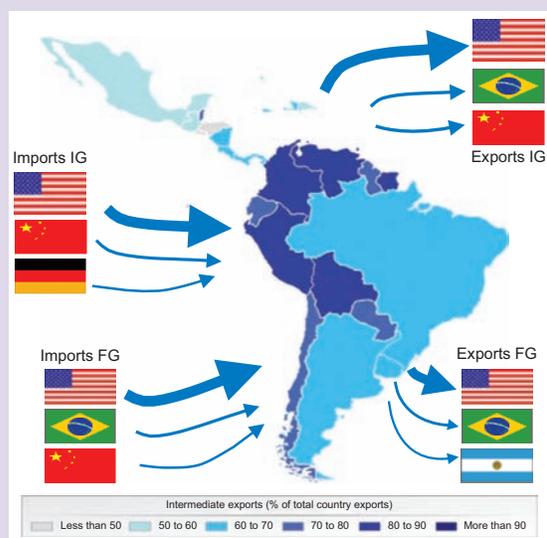
Figure 4.6

Intermediate and Final Goods: Top Partners (Arrow: current U.S. dollars; shade: percent of country's exports)

1. LAC: Imports and Exports, 1990



2. LAC: Imports and Exports, 2012



Sources: Eora MRIO; and IMF staff calculations.

Note: IG = intermediate goods, FG = final goods. The shading of countries in the map indicates each country's intermediate goods exports as a share of total country exports. The arrows indicate the top three export destinations and import sources, for LAC as a whole in 1990 and 2012, for final and intermediate goods. The thickness of each arrow corresponds to the value of the aggregate export (import) flow in 1990 and 2012, in current U.S. dollars.

The estimated residuals obtained from Model I capture bilateral trade intensity after controlling for the basic set of determinants. The model is estimated for both gross exports and value-added

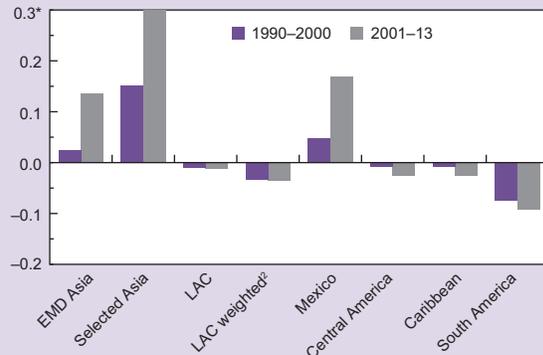
Figure 4.7

Estimated Trade Intensity Gaps

(Based on residuals from gravity regressions)

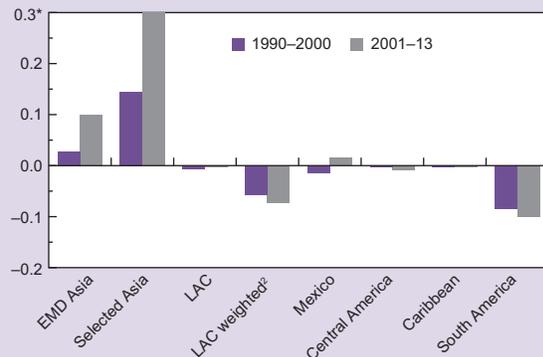
1. Trade Performance, Gross Exports¹

(Mean of gravity regression residuals: + overtrading /- undertrading)



2. Trade Performance, Value Added¹

(Mean of gravity regression residuals: + overtrading /- undertrading)



Sources: CEPPI; IMF, World Economic Outlook database; UN Comtrade; and IMF staff calculations.

¹Bars correspond to the mean of estimated residuals in the gravity model, which includes the following regressors: distance, contiguity, language, colonizer, landlocked, and time fixed effects.

²GDP-weighted average.

Note: Bar for selected Asia (2001-13) capped—value reaches 0.6 (gross exports, panel 1) and 0.4 (value-added exports, panel 2). Bars for Central America, Caribbean and South America are also GDP-weighted means.

Note: EMD = emerging and developing. Selected Asia includes Cambodia, China, Indonesia, Malaysia, Philippines, Thailand, and Vietnam.

exports.⁴ The resulting residuals can be interpreted as deviations of observed export intensities from what would be predicted based on standard geographic and cultural determinants along with common calendar year effects. Figure 4.7 shows a summary of these residuals, or trade intensity gaps.

⁴The data on value-added exports include goods and services, while the data on gross exports include only goods. This is an important feature to keep in mind as a growing literature on services exports documents important specificities (see Saez and others 2015).

On average, all else being equal, LAC countries stand out for bilateral trade intensity gaps in both periods of the sample (1990–2000 and 2001–13), and their comparative standing has worsened more recently—this result applies to both gross and value-added exports (Figure 4.7), and South America is the main driver of this result.

Heterogeneity in LAC

Estimates of residuals from the basic gravity equation can also be used to further highlight regional heterogeneities with respect to trade intensity (Figure 4.8). Argentina and Brazil, for example, appear with relatively large negative residuals, suggesting “undertrading,” and this seems consistent with their relatively restrictive trade policies. However, several economies with more trade-friendly policies also fall short of what could be expected—for instance, Colombia, Costa Rica, or Peru.

One factor that appears to affect average trade performance relative to the model benchmark is how well (or badly) economies perform in large markets. This can be illustrated by examining the partner-specific residuals of countries at opposite ends of Figure 4.8.

- For instance, on the one hand, Mexico’s strong average trade performance is overwhelmingly driven by bilateral trade flows with the United States. For Brazil, on the other hand,

Figure 4.8

Heterogeneity in LAC, 2000–13¹

(Units, average residuals)

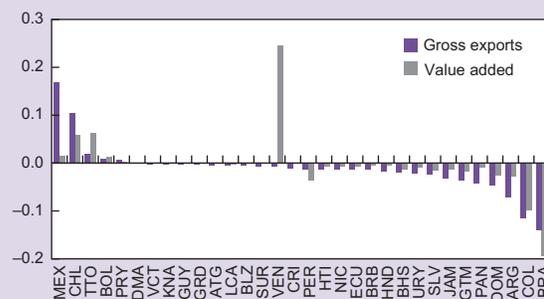
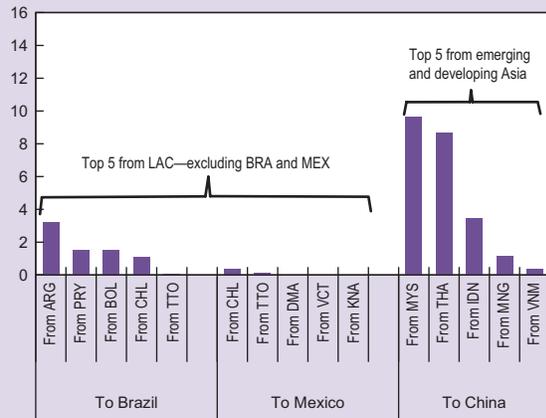


Figure 4.9

Regional Hubs: Brazil, China, and Mexico*(Average residuals from gravity equations, 2001–13)*

Sources: CEPPI; IMF, World Economic Outlook database; UN Comtrade; and IMF staff calculations, based on Poisson pseudo-maximum likelihood estimation of the gravity equation.

Note: See page 89 for country acronyms.

a particularly strong negative residual in trade flows with the United States is behind the large average trade intensity gap.

- The sources of residuals for Chile are a bit more varied, including not only trade with China as expected, but also Japan and Korea. In the case of Colombia, weak bilateral exports to the two largest countries in the region (Brazil and Mexico) are pulling down average residuals.

The analysis also corroborates the limited role that Brazil and Mexico play as regional trade hubs. The residuals for exports of LAC countries to Brazil and Mexico are low, especially compared with residuals for exports of Asian countries to China (Figure 4.9).

The importance of performance in large economies is not trivially due to size, since the GDPs of reporting and partner countries are controlled for in this framework. However, by construction, the residuals will reflect a number of factors affecting competitiveness not directly included in the regression. Hence, we turn to a set-up with bilateral pair fixed effects, to control for unobserved heterogeneity.⁵

⁵We also run specifications with exporter and importer fixed effects—see Novta and Rodrigues Bastos (forthcoming).

The Role of Value Chains and Regional Trade Agreements

The emergence of value chains across countries has contributed to rising trade volumes and caused positive growth spillovers across several Asian economies.⁶ We examine the role of global supply chains by augmenting Model I with two variables (included in vector W of equation 4.1): (1) foreign value added in gross exports, and (2) domestic value added of intermediate goods exports that are reexported to third countries.⁷ The specification uses bilateral pair fixed effects (vector U in equation 4.1). Both GVC variables are used at the country level (not bilateral pair level), measured in percent of gross exports, and are lagged in the estimation. They are meant to capture the impact of predetermined economy-wide features related to global value chains on bilateral trade performance.

Higher foreign value added in gross exports is typically used to capture rising integration in global value chains. For example, imports of intermediate goods to assemble and export a final product would embed higher foreign value added in production. Countries that are more downstream in the global production chain tend to have higher foreign value added in their exports, whereas commodity-rich economies are placed upstream and would naturally have a lower proportion of foreign value added in their exports.

The other global supply chain variable used is less well known: domestic value added embedded in intermediate goods exports that are reexported to third countries. This measure captures the extent to which economies supply intermediate inputs to third countries, thereby engaging in longer productive chains.

⁶For discussion of how the development of global value chains has changed the elasticity of exports with respect to the exchange rate, see the October 2015 *World Economic Outlook*, Chapter 3.

⁷This measure is based on a decomposition of domestic value added that traces in which countries final and intermediate goods are ultimately absorbed. It was first proposed by Koopman, Wang, and Wei (2014).

The econometric results suggest that countries with a higher foreign content of exports (more integration into global value chains) tend to have stronger performance in bilateral gross export flows. However, the direct quantitative impact is small and stronger for emerging and developing Asia than for LAC. Moving from the 5th to the 95th percentile of foreign value added in the sample is associated with an increase in gross exports of about 3 percent in Asia versus 2 percent in LAC.

The results also suggest that economies that engage in longer supply chains have stronger bilateral export performance. The direct quantitative impact is again relatively small, but stronger in LAC than in Asia. Moving from the 5th to the 95th percentile in the sample is associated with an increase in gross exports of about 2 percent in LAC versus 1 percent for emerging and developing Asia.⁸

The economically small, though statistically significant, direct short-term impact of aggregate global value chain variables suggests that more than trade integration is needed. To reap long-term gains, LAC should leverage trade to promote knowledge spillovers and innovation, a long-standing challenge for the region (De La Torre, Lederman, and Pienknagura 2015).

Finally, after controlling for country-specific global value chain dynamics over time and unobserved heterogeneity at the bilateral pair level, we investigate how trade agreements affect bilateral export performance.⁹ The results (Table 4.1) obtained from Model II suggest that trade agreements have not been effective in boosting LAC export performance. However this finding is overturned if we use country fixed effects rather

⁸ Results for both global value chain variables included are robust to Poisson Pseudo-Maximum Likelihood Estimation (Table 4.1). The results are also robust to using exporter and importer fixed effects instead of bilateral pair fixed effects.

⁹ We introduce a dummy variable for trade agreement in vector W in equation 4.1. The dataset on trade agreements is from de Sousa (2012).

than bilateral pair fixed effects.¹⁰ Such contrasting results on the impact of trade agreements are commonly found in the literature.¹¹ Overall, the takeaway from our results and related literature is that increasing the number of trade agreements might not necessarily boost trade. The specifics of each agreement, and accompanying reforms, will determine its actual benefits.

Policy Takeaways

Improving export performance in LAC is both critical and challenging. Many economies in the region are facing significant slowdowns with deteriorating medium-term perspectives. Exchange rate adjustments will continue to play a role, but tapping trade as a medium-term growth engine is more difficult.

Over the past 25 years, LAC has remained more closed than other emerging market regions, and most economies in the region are undertrading given fundamentals. This has been true despite policy efforts in the region to lower trade barriers. While remaining realistic about the potential for significant improvements, this chapter points to policy avenues that can help:

- Efforts to penetrate large markets are crucial, both through advanced economies and regional emerging market trade hubs. In order to gain

¹⁰ The results for this alternative specification are discussed by Novta and Rodrigues Bastos (forthcoming). Basically, the country-level fixed effects specification controls for unobserved heterogeneity through exporter and importer fixed effects, rather than through bilateral pairs fixed effects. Thus, it exploits not only the variation over time in the model (within variation) but also the variation between bilateral pairs for each country. The downside of this approach is that unobserved heterogeneity at the bilateral pair level could introduce omitted variable bias in the estimates. Some studies have also found a low impact of trade agreements on export flows—Frankel, Stein and Wei (1995); Frankel (1997)—while other authors have argued that a greater impact can be found by treating potential endogeneity of trade policy (Baier and Bergstrand 2007).

¹¹ Cipollina and Salvatici (2012) survey more than 80 different papers on the issue, highlighting their variability in estimated impact, but siding with the view that trade agreements do contribute to trade.

market shares in a competitive environment, bolder progress in structural reforms is needed within LAC.¹²

- LAC should seek to increase participation in multicountry production chains, and lift barriers to trade in intermediate goods. The direct short-term impact on trade from such strategy, however, will remain small unless integration ultimately leads to sustained productivity growth. To achieve that, the best route is to create fertile ground for resource reallocation, learning spillovers and innovation, particularly through the unlocking of intra-industry trade (De La Torre, Lederman, and Pienknagura 2015). In that respect, research has shown that institutions (contract enforceability and judicial quality, in particular) are important conduits for improving trade, especially in intermediate inputs (Nunn 2007).
- Trade agreements are not a magic wand for boosting trade. Lowering tariff barriers is necessary but not sufficient—it requires accompanying structural reforms, and attention to nontariff barriers. Trade agreements should be a tool for raising global competitiveness, and LAC should guard against the risk of creating protected regional blocs or reinstating inward-looking policies (Taylor 1998). In mega-regional trade negotiations, countries in LAC face a challenge to advance their interests—the involvement of Chile, Mexico, and Peru in the Trans-Pacific Partnership (TPP) is a leading example.¹³ Last, but not least, the proliferation of trade agreements requires stepped up coordination among the multiple existing and planned initiatives—particularly true for the MERCOSUR and Pacific Alliance.

¹²This point has been emphasized in previous *Regional Economic Outlooks: Western Hemisphere* editions of April 2015 and April 2013, where policy strategies for raising long-term growth prospects were also discussed.

¹³The TPP includes 12 countries in Asia and the Americas, including the United States.

Table 4.1. Gravity Equation

Variables	(1) OLS Gross Exports	(2) OLS Value Added	(3) OLS Gross Exports	(4) OLS Value Added	(5) POISSON Gross Exports	(6) POISSON Value Added
Lag Ln GDP Reporting	1.202*** (0.006)	0.967*** (0.005)	0.430*** (0.024)	0.247*** (0.007)	0.516*** (0.037)	0.435*** (0.022)
Lag Ln GDP Partner	0.904*** (0.006)	0.836*** (0.004)	0.578*** (0.017)	0.439*** (0.006)	0.635*** (0.035)	0.739*** (0.029)
Ln Weighted Distance	-1.316*** (0.020)	-0.648*** (0.017)				
Contiguity	0.972*** (0.104)	0.876*** (0.110)				
Common Official Language	0.615*** (0.047)	0.453*** (0.040)				
Colonial Relationship	1.082*** (0.103)	0.580*** (0.096)				
Common Colonizer post 1945	0.988*** (0.067)	0.245*** (0.057)				
Landlocked	-0.326*** (0.037)	0.001 (0.025)				
Ln Commodity Export Price			0.158 (0.104)	0.467*** (0.022)	0.869*** (0.133)	0.327*** (0.076)
Trade Agreement			0.045 (0.034)	0.018** (0.009)	0.067* (0.040)	0.020 (0.019)
EMD Asia			0.174* (0.096)	0.109*** (0.037)	0.057 (0.060)	0.058 (0.045)
EMD Europe			0.238*** (0.061)	0.028** (0.014)	-0.028 (0.064)	-0.004 (0.032)
LAC			-0.211*** (0.078)	-0.135*** (0.017)	0.030 (0.072)	-0.008 (0.032)
Lag FVA_exports			-0.005 (0.003)	-0.011*** (0.001)	0.017** (0.007)	-0.012*** (0.003)
EMD Asia			0.058*** (0.005)	0.014*** (0.002)	0.050*** (0.008)	0.041*** (0.005)
EMD Europe			0.034*** (0.005)	0.009*** (0.001)	0.032*** (0.006)	0.004 (0.003)
LAC			0.032*** (0.005)	-0.008*** (0.002)	0.019* (0.010)	0.032*** (0.004)
Lag VA_exports (reexported intermediaries)			-0.039** (0.019)	-0.039*** (0.006)	0.011 (0.040)	-0.066*** (0.016)
EMD Asia			0.139*** (0.021)	0.071*** (0.007)	0.084** (0.041)	0.160*** (0.020)
EMD Europe			-0.011 (0.027)	0.085*** (0.007)	0.124*** (0.037)	0.018 (0.016)
LAC			0.171*** (0.025)	0.084*** (0.007)	0.169*** (0.040)	0.130*** (0.025)
Constant	-1.595*** (0.182)	-5.776*** (0.151)	-10.779*** (0.488)	-9.804*** (0.102)		
Observations	397,826	316,047	371,609	337,368	510,843	563,731
R Squared	0.635	0.790				
R Squared Fixed Effects			0.232	0.417		
Log pseudolikelihood					-75117	-59389
Time FE/Bilateral Pair Fixed Effects	YES/NO	YES/NO	YES/YES	YES/YES	YES/YES	YES/YES
Number			23,419	22,191	23,419	27,222

Note: Sample: 1990–2013 for gross exports and 1990–2012 for value-added exports. Ordinary least square (OLS) estimation with clustered robust standard errors—*** p < 0.01, ** p < 0.05, * p < 0.1. Time fixed effects are included in all models but not shown. Complete set of interaction dummies for trade agreement, FVA and VA are estimated for all regions (models 3–6), but shown only for emerging and developing Asia, Europe, and LAC. Bilateral pair fixed effects are included in models 3–6. Commodity price index is from Gruss (2014).

5. Advancing Financial Development in Latin America and the Caribbean

In recent years, many Latin American and Caribbean (LAC) countries have made significant efforts to develop their financial systems. This chapter examines the current state of financial development in the region, as well as implications for potential growth and stability from further development. The analysis suggests that access to financial institutions has expanded notably in the past decade, and LAC compares favorably with other emerging market regions on this dimension. Nonetheless, the region continues to lag behind peers on broader financial development, especially with respect to markets, though there is substantial heterogeneity across countries. Moreover, financial systems in many LAC countries appear underdeveloped relative to their macroeconomic fundamentals. From today's vantage point, therefore, further financial development would likely convey net benefits to the region, provided there is adequate regulatory oversight to prevent excesses.

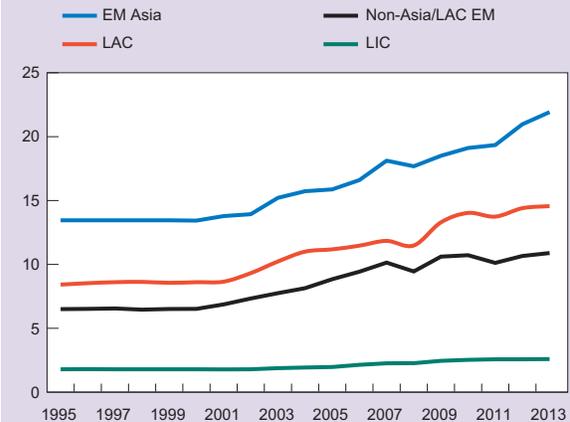
Measuring Financial Development

Financial development has proven difficult to measure in a comprehensive way. Typical proxies in the literature have included the ratio of private credit to GDP and, to a lesser extent, stock market capitalization. These traditional indicators, however, are too narrow to capture the broad spectrum of financial sector activities. Indeed, nonbank financial institutions (pension funds, insurance companies, mutual funds, etc.) have grown significantly over the past decade, providing opportunities for greater consumption smoothing, investment funding, and risk diversification across households and firms (Figure 5.1). Similarly, financial markets have grown and become more diversified, with access to market finance available to a wider set of economic agents.

Note: Prepared by Dyna Heng, Anna Ivanova, Rodrigo Mariscal, Uma Ramakrishnan, Joyce Cheng Wong, with contributions from Steve Brito.

Figure 5.1

Nonbank Assets (Regional averages in percent of GDP)



Sources: World Bank, FinStats and World Development Indicators; and IMF staff calculations.

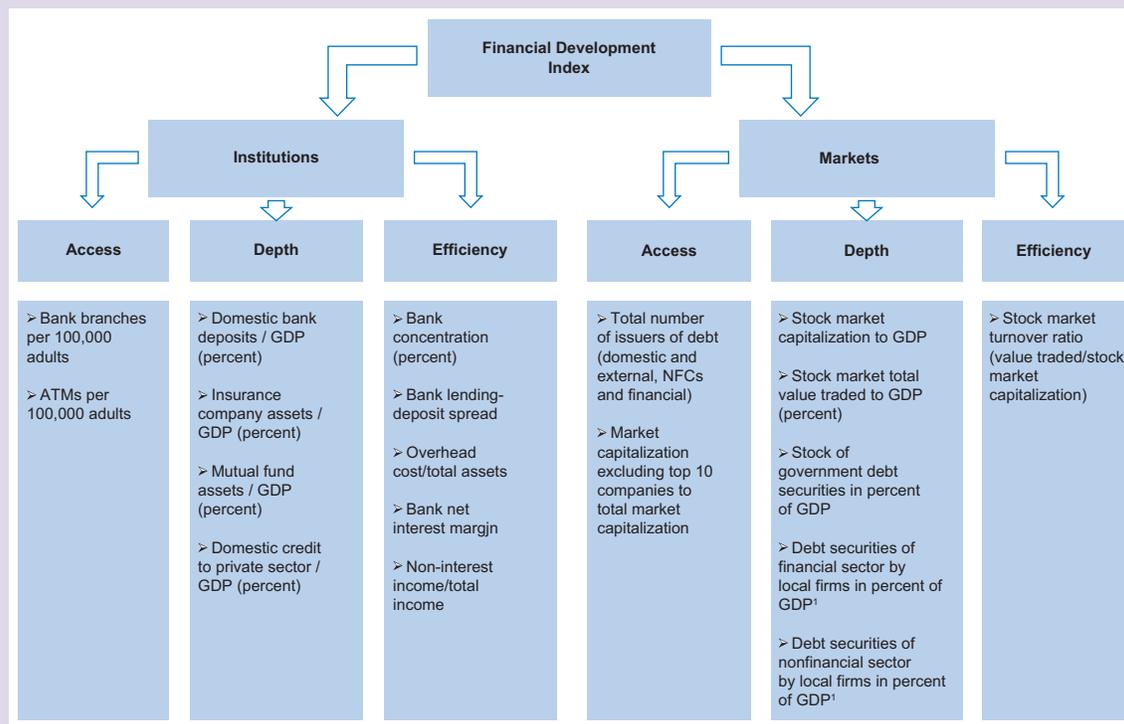
Note: Nonbank assets are defined as the sum of insurance company assets and mutual fund assets as a percent of GDP. Simple average across countries. EM Asia = emerging Asia; LAC = Latin America and the Caribbean; Non-Asia/LAC EM = emerging market economies excluding Asia and LAC; LIC = low-income countries.

To better capture different facets of these trends, a new comprehensive and broad-based index of financial development was developed by the IMF (Sahay and others 2015a). The index contains two major components: financial institutions and financial markets. Each component is broken down into access, depth, and efficiency subcomponents. These subcomponents, in turn, are constructed based on a number of underlying variables that track development in each area. We employ the same framework to capture financial sector development in LAC, with a few modifications (Figure 5.2 and Annex 5.1). Even though data availability limits the choice of countries and variables for index construction, the database includes 123 countries for 1995–2013.

There are some striking differences between our financial development index and more

Figure 5.2

How to Measure Financial Development



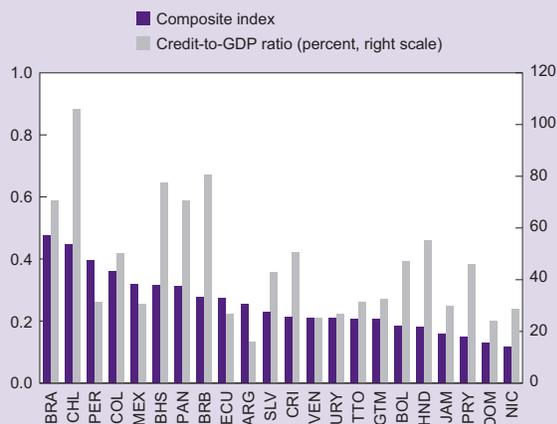
Source: IMF staff calculations.

Note: NFCs = nonfinancial corporations.

¹Stock of debt by local firms is based on residency concept.

Figure 5.3

Composite Financial Development Index vs. Credit-to-GDP Ratio, 2013



Sources: World Bank, FinStats and World Development Indicators; and IMF staff calculations.

Note: The composite index takes values from zero to one, with one indicating the highest level of financial development based on the performance of 123 countries from 1995–2013. For country name abbreviations, see page 89.

traditional measures (Figure 5.3). For example, driven by large domestic banks, Honduras’s credit ratio—the most common measure of financial deepening—is high, suggesting strong financial development. Honduras, however, does not fare well on nonbank institutional depth, efficiency of financial institutions, or on all aspects of financial market development, resulting in a weaker composite index. In a similar vein, Trinidad and Tobago’s stock market capitalization is currently the third highest in the region but this ranking reflects to a large extent cross-listing of regional companies, while market access by domestic companies and market efficiency measured by the turnover ratio have remained low. That points to the limitations of market cap measures to signal “financial development.” Trinidad and Tobago also does not score well on access to financial institutions.

Financial Development: Where Does LAC Stand?

Overall, countries in LAC compare unfavorably with other emerging markets with respect to financial development. In fact, only low-income countries (LICs) lag behind LAC (Figure 5.4). However, results vary by component:

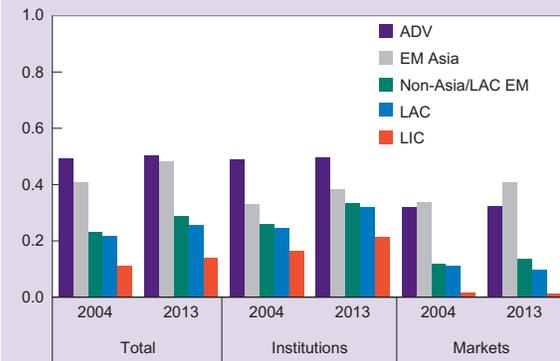
- LAC scores higher on financial institutions than on financial markets, a feature shared with LICs. Even so, the LAC region's scores on depth and efficiency of financial institutions lag other emerging market regions, as do its metrics for all the subcomponents of financial market development.
- The category in which LAC excels relative to other emerging markets is access to financial institutions, reflecting the emphasis that countries have placed on improving financial inclusion through improved bank and ATM networks. However, LAC still lags other emerging market regions on the level of usage of financial services by households (Box 5.1).

Moreover, there is substantial variation in financial development across LAC (Figure 5.5). Chile and Brazil rank the highest in the development of financial markets and financial institutions, respectively. Peru, Colombia, and Mexico are next on the list; the latter has made major strides recovering from its 1994 crisis.

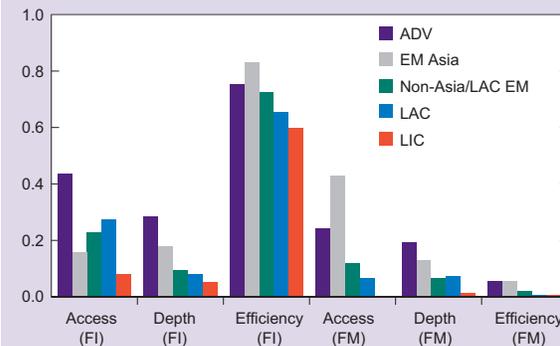
- Chile's financial reforms began in the mid-1970s, with measures to facilitate bond and equity market development. The creation of a fully funded pension system generated a large domestic institutional investor base, which provided stable demand for private bonds of increasingly longer maturities. Reforms in the 2000s gave institutional investors further flexibility to increase the portion of their portfolios invested in domestic equities. Currently, the domestic bond market represents almost 40 percent of GDP, while the market

Figure 5.4
Interregional Variation in Financial Development

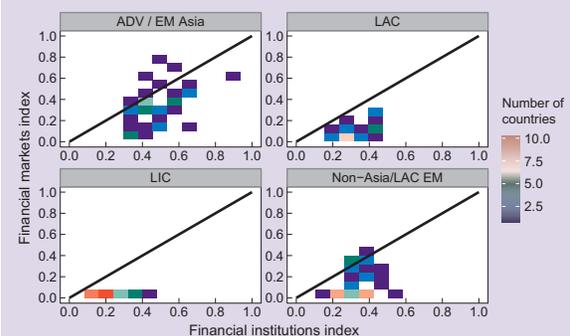
1. Financial Development by Region, 2004 and 2013



2. Components of the Financial Development Index by Region, 2013



3. Distribution across Institutions and Markets, 2013¹



Source: IMF staff calculations.
Note: ADV = advanced economies; EM Asia = emerging Asia; FI = financial institutions; FM = financial markets; LAC = Latin America and the Caribbean; LIC = low-income countries. Non-Asia/LAC EM = emerging market economies excluding Asia and LAC.

¹Two-dimensional histogram based on countries' frequency. The rectangular bins show the number of countries for each combination of FI and FM.

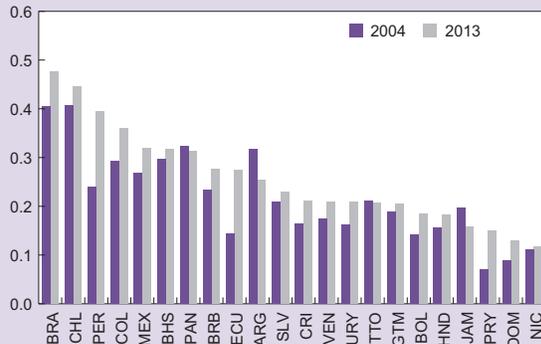
value of listed companies in the equity market (about 90 percent of GDP) far exceeds that of its neighbors.

Figure 5.5

**Latin America and the Caribbean:
Financial Development Progress and
Remaining Gaps**

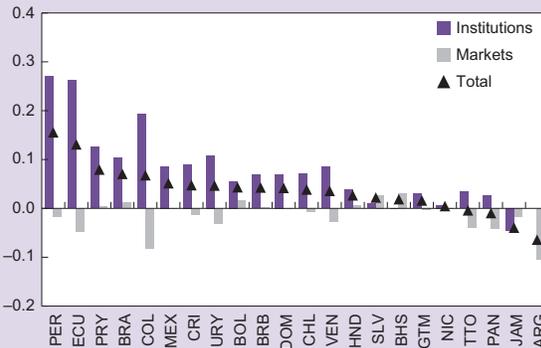
1. Financial Development Index

(Composite index)

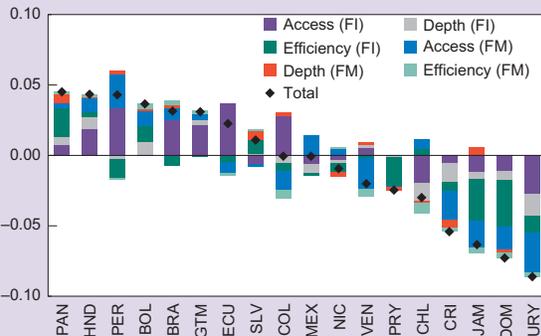


2. Changes in Financial Development Index, 2004–13

(Change of composite index between dates)



**3. Financial Development Gaps with Respect to
Country's Own Fundamentals, 2013¹**



Source: IMF staff calculations.

Note: FI = financial institutions; FM = financial markets. For country name abbreviations, see page 89.

¹Gap decomposition is calculated using the aggregated regression specification on the individual components.

- Brazil, in contrast, saw rapid development in both financial institutions and markets over the past decade. The government implemented a market-friendly debt management strategy, which helped develop the domestic capital market, including lengthening maturities of government bonds, building benchmarks at different points along the yield curve, and reviving the market for covered bonds. These reforms also contributed to the development of Brazil's financial institutions—the ratio of insurance company assets to GDP more than doubled in the past decade, while mutual fund assets grew from 30 percent of GDP to 50 percent of GDP, making Brazil sixth in the world, excluding financial centers. The markets for private bonds, equities, and derivatives also grew remarkably.
- After its 1994 crisis, Mexico focused on increasing trust in the banking system by strengthening regulations, reforming deposit insurance, and improving collateral execution and information sharing among credit bureaus.¹ At the same time, there were also reforms to promote financial education and competition in the banking sector. All these reforms contributed to an acceleration in credit growth, which is a welcome development given the still low credit to GDP ratio.

Other LAC countries (such as Colombia, Ecuador, and Peru) also experienced notable progress in financial development over the past decade. In particular, Colombia and Peru took large steps in developing financial institutions as the number of commercial bank branches more than quadrupled. In Ecuador the number of bank branches also grew dramatically, driven by the expansion of two large banks and the conversion of several cooperatives into commercial banks. On the market side, The Bahamas and El Salvador have seen notable development, with the former rooted in the growth of the financial sector.

¹ See Klemm and Herman (forthcoming) for a discussion of financial intermediation in Mexico.

Financial Development and Macroeconomic Fundamentals

For many LAC countries, the current stage of financial development does not appear to be fully aligned with their respective macroeconomic fundamentals. Financial development gaps—computed as the deviation of the IMF’s index from a prediction based on economic fundamentals, such as income per capita, government size, macroeconomic stability, and others (see Annex 5.1)—can help identify potential distortions or other sources of financial under- or overdevelopment for individual countries (see Figure 5.5).²

Consistent with previous studies (De La Torre, Ize, and Schmukler 2012; De La Torre, Feyen, and Ize 2014) we find that shortfalls on institutional efficiency and depth as well as market access and efficiency are common in LAC. The gaps can reflect a variety of factors. For instance, financial systems that experienced crises in the more recent past may still be in recovery mode. In the case of the Dominican Republic, which experienced a financial crisis in 2003, for example, the *lower* levels of development than those implied by fundamentals partly reflect the erosion of trust in financial institutions and depressed demand for credit as a consequence of the crisis. In Uruguay (which had a banking crisis in 2002), on the other hand, the negative gap mostly reflects low access to financial institutions and markets. Negative gaps can also result from weak frameworks for obtaining or seizing collateral (for instance, Peru’s negative efficiency gap). In other cases (e.g., Jamaica’s negative efficiency gap), the lack of efficiency reflects both high levels of bank concentration and a historical investment dependence on low-risk government debt, which has hindered banks’

²The regressions explain a large portion of the variation in financial development, with R-squares of 0.74 and 0.61 for institutions and market regressions, respectively. Nonetheless, the lack of a solid theory on the factors driving financial development implies that the correct model specification is subject to uncertainty. Hence, the gaps should be interpreted with due caution.

capacity for risk assessments when lending to the private sector, thus driving up spreads. Negative market efficiency gaps in LAC are linked to offshoring by larger companies, according to De La Torre, Ize, and Schmukler (2012), though the underlying drivers still need to be identified.

Positive gaps in financial development should also be examined for indications of potential excess or inefficiency. For example, Bolivia’s use of regulated interest rates and credit quotas for certain sectors can pose risks to banks’ profitability and generate inefficient allocation of credit. Similarly, rapid credit growth in Honduras beyond what can be justified by macroeconomic fundamentals has largely fueled consumption due to scant investment opportunities. In yet other countries, notably in Central America, positive gaps in the development of financial markets capture the fact that stock markets feature a small number of listed firms but hardly see any trading activity, lack adequate legal and contractual infrastructure, and are not viewed as an affordable financing source by the majority of domestic companies.

Countries in LAC should strive to alleviate gaps in financial development. Given that macroeconomic fundamentals are often difficult to change in the short term, policies to alleviate gaps in financial development should be tailored to address country-specific distortions (see Conclusions).

The Nexus between Finance, Stability, and Growth: What Is in Store for LAC?

Financial development has been shown to be positively related to economic growth (Goldsmith 1969; McKinnon 1973; Shaw 1973; Beck, Demirgüç-Kunt, and Levine 2004; Levine 2005). Efficient financial systems help channel capital to productive uses, provide insurance against shocks, reduce information asymmetries, and can potentially alleviate poverty and inequality (Beck, Demirgüç-Kunt, and Levine 2004). Sound financial systems can also foster innovation and entrepreneurship through risk diversification (King and Levine 1993).

However, recent studies document the existence of a certain threshold of financial development beyond which additional deepening generates decreasing returns to growth and stability (Arcand, Berkes, and Panizza 2012; Sahay and others 2015a). One possible explanation is that large financial systems divert resources from productive activities to speculative and risky financial investments (Minsky 1975).³ Also, excessive leverage and risk taking can lead to increased economic and financial volatility, with potentially negative consequences for long-term growth, especially if regulation and supervision are inadequate (IMF 2003; Reinhart and Rogoff 2011; Sahay and others 2015a; and Sahay and others 2015b).

Following previous work on this broad topic, we also find nonlinear relationships between financial development and growth (Figure 5.6), and between financial development and instability in LAC.⁴ Financial development initially lowers the risk of macroeconomic instability, perhaps by creating greater opportunities for risk management, insurance, and diversification. However, there appears to be a turning point after which the marginal contribution to greater stability turns negative (Annex 5.1).⁵ Similar nonlinearity also

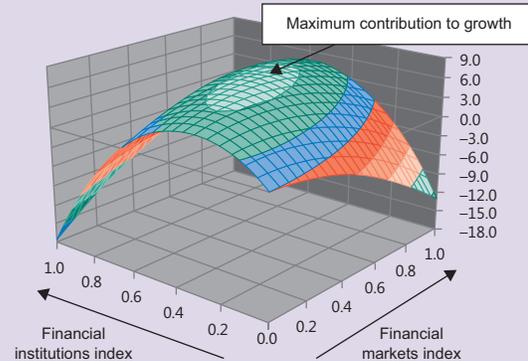
³ Diminishing returns to growth from financial development were also documented in Cecchetti and Kharroubi (2012, 2015), Philippon and Reshef (2013), Aizenman, Jinjark, and Park (2015), Cournède, Denk, and Hoeller (2015), and Sahay and others (2015a).

⁴ We use a measure of financial instability calculated as the first principal component of the inverse of the $\bar{\alpha}$ -score (the distance to distress), real credit growth volatility, and real and nominal interest rate volatility. For growth volatility the standard deviation of GDP growth is used.

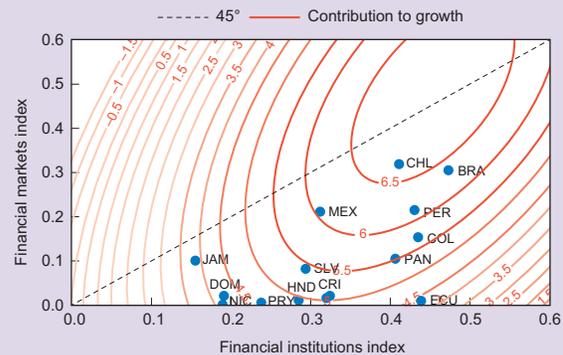
⁵ We tried testing the relevance of regulatory quality, as proxied by a dummy variable based on a $\bar{\alpha}$ -score (see Annex 5.1), as a conditioning variable for the link between financial development and growth. However, adequately measuring regulatory quality presents a serious challenge due to (1) the lack of an appropriate measure across countries and over time, and, more important, (2) because most regulatory changes occur in response to financial crises which also affect growth, causing endogeneity problems for the regression.

Figure 5.6
Financial Institutions and Markets Development, and Economic Growth

1. Contribution to Growth by Institutions and Markets¹



2. LAC: Composite Indices and Growth Contribution, 2013²



Source: IMF staff calculations.

Note: For country name abbreviations, see page 89.

¹Surface shows the predicted effect on growth for each level of the indices, holding fixed other sets of controls.

²The lines show the levels of contribution to growth projected from a three-dimensional surface to a two-dimensional plane; circles show the financial institutions and markets combination for selected LAC countries.

holds for financial development and growth. This nonlinearity is particularly pronounced in the relationship between institutional depth and growth, maybe because a large financial system is more likely to give room for excessively risky behavior (Bruno and Song 2014; Rajan 2005), which, for instance, could generate excessive credit creation, and, in turn, portend large credit losses and macroeconomic instability, thus hindering strong and durable growth (Cecchetti and Kharroubi 2015). However, the linear relationship between growth and financial services efficiency suggests continued welfare gains from a more

efficient financial sector, though there could be stability costs because reduced bank profitability could provide incentives to diversify into riskier business areas.

Regression evidence also suggests that too much market development at the early stages of institutional development may have negative effects on stability. This is likely because the increased volatility from market development dominates when financial institutions are not strong enough to help insure against shocks. In particular, rapid market development driven by liberalization and deregulation without sound institutional and legal settings can make a country more vulnerable to market manipulation, volatile capital flows, and financial crises (Laeven 2014; De La Torre and Schmukler 2007). For similar levels of development, however, institutions and markets complement each other positively for both growth and stability. Hence, a gradual approach, aimed at first securing gains in institutional development before taking steps toward market development, may be warranted.

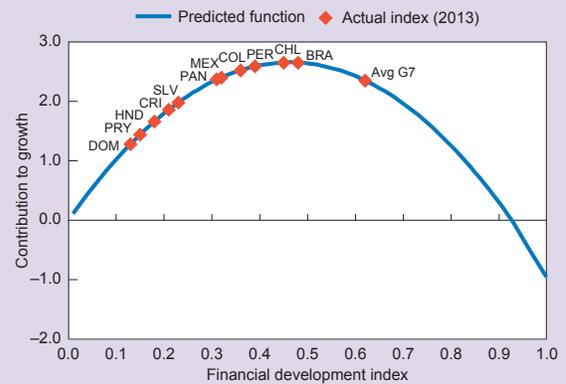
In summary, there is scope for further financial development in LAC over the longer horizon. Most of the countries in the region have not yet reached the turning point where marginal growth dividends from additional financial development become negative. Brazil and Chile are nearest to this “optimum” level of financial development, whereas the Dominican Republic, Paraguay, and Honduras are on the opposite side of the spectrum (Figure 5.7). Note that these relationships stem from a partial analysis that assumes that all other growth determinants (such as income level, inflation, government size, etc.) are held constant and financial development is consistent with the level of macroeconomic fundamentals.

Thus, in the longer term, reaping maximum benefits from financial development for growth and stability would also require improving a country’s macroeconomic fundamentals, which in turn would support the further development of financial systems. This is an interactive process whereby financial systems are shaped by fundamentals, and fundamentals evolve partly as a function of more

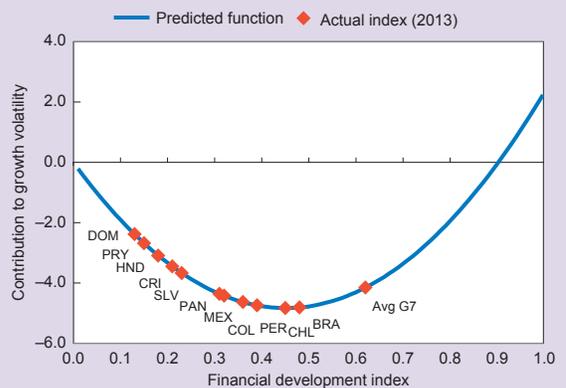
Figure 5.7

Financial Development, Growth, and Stability

1. Predicted Contribution to Growth¹



2. Predicted Contribution to Growth Volatility²



Source: IMF staff calculations.

Note: For country name abbreviations, see page 89.

¹Curve shows the predicted effect on growth for each level of the index, holding fixed other sets of controls.

²Curve shows the predicted effect on growth volatility for each level of the index, holding fixed other sets of controls. Growth volatility refers to the standard deviation of GDP growth rate over five-year samples.

developed financial systems. Estimates should, however, be interpreted with caution since it is difficult to disentangle causality in econometric terms, even though instrumental variables were used to address potential endogeneity issues.⁶

⁶ We use the system generalized method of moments estimation (Arellano and Bover 1995; Blundell and Bond 1998) to address the dynamic dependence of our variables of interest and potential endogeneity of control variables. We also employ additional instrumental variables used in the literature, namely, rule of law (Kaufmann, Kraay, and Mastruzzi 2010) and a set of dummies for the country’s legal origin (La Porta, Lopez-Silanes, and Shleifer 2008).

Conclusions and Policy Implications

Financial systems in LAC have developed and deepened in recent years but continue to lag other emerging market groupings, especially with respect to financial market development. More importantly, some countries have financial development gaps compared with the levels implied by their macroeconomic fundamentals. In particular, gaps on institutional efficiency and depth as well as market access and efficiency are common.

Given that the fundamentals are sticky in the short term, countries should explore policies tailored to their own circumstances and that aim to remove the distortions and, in turn, help close the financial development gaps.

While there is no one-size-fits-all solution, the literature points to several important building blocks for a well-functioning financial system, such as (1) strong property rights; (2) an efficient legal system; (3) low incidence of corruption; (4) sufficient financial information; (5) good corporate governance; and (6) sound prudential regulation and supervision of the banking system (Mishkin 2007; Laeven 2014). These building blocks could be useful in designing policies geared toward closing financial development gaps in LAC.

For example, LAC countries that are recovering from financial crises could benefit from improving the credibility of financial systems, strengthening capital and liquidity buffers, ensuring credible deposit insurance, and addressing balance-sheet mismatches. Many of these reforms were undertaken in Mexico after the 1994 crisis and have proven invaluable—although a negative financial development gap still remains in Mexico.

Countries that have negative gaps in the depth and efficiency of financial institutions (such as the Dominican Republic, Jamaica, and Peru) could explore strengthening institutional and legal

frameworks related to property rights and collateral, as well as improving the efficiency of courts and credit reporting systems (Emerging Market Committee 2012).

Similarly, LAC countries that have underdeveloped bond markets (such as Costa Rica and Uruguay) could benefit from following market-friendly debt management and issuance strategies, such as the use of standardized simple instruments with conventional maturities, to help foster secondary markets for government securities. These countries could also benefit from strengthening legal and regulatory frameworks.

Finally, countries where stock markets are underdeveloped or inefficient, which is the case for the majority of LAC countries, could benefit from a strong macroeconomic environment, institutional and legal frameworks that promote investor rights and information disclosure, as well as policies that increase market size (for example, pension reforms, carefully sequenced financial liberalization, corporate governance, and tax reforms; see Laeven 2014). However, in smaller LAC economies developing domestic equity markets may not be justified owing to the small market size.

In countries where financial development levels are *higher* than those implied by macroeconomic fundamentals (that is, positive development gaps), efforts could be reinforced to enhance supervisory vigilance aimed at improving credit quality and avoiding problems of poor underwriting quality, as well as strengthening macroprudential policy frameworks.

In the longer term, as fundamentals continue to evolve, LAC countries could benefit from further financial development by stimulating economic growth without jeopardizing macroeconomic and financial stability. The process, however, is likely to be gradual and iterative, with income growth supporting financial development and vice versa.

When financial development proceeds too fast, it can lead to economic and financial instability, especially where regulation and

supervision do not keep pace. Hence, developing regulation and supervision that are consistent with the existing level of financial development and embed enough flexibility to address future challenges in financial deepening is an important safeguard.

The sequencing of reforms could also be important. Indeed, care should be taken to avoid promoting excessive market development when financial institutions are underdeveloped, since this could jeopardize macroeconomic and financial stability.

Box 5.1

Financial Inclusion: Latin America and the Caribbean

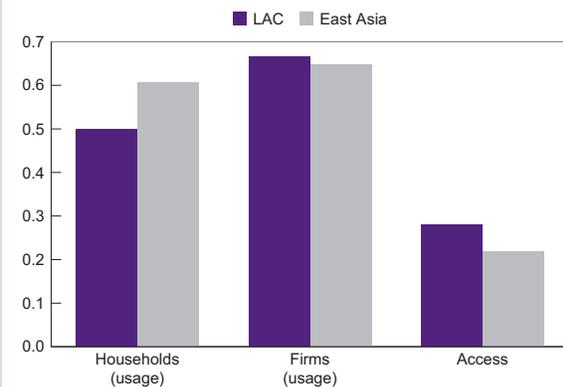
Latin America and the Caribbean (LAC) has recently made strides in improving the financial inclusion of households, strengthening many dimensions, including the proportion of people having an account, saving and borrowing in a financial institution, and using ATMs and debit cards.¹ Despite this progress, the region continues to lag behind other emerging markets (particularly emerging Asia).² In 2014, only 47 percent of households in LAC had an account at a formal financial institution versus 60 percent of those in emerging Asia. Only 17 percent of adults in LAC save formally—about half the share of savers in emerging Asia (31 percent). Progress in the region has also been uneven: while Brazil, Chile, Mexico, and Uruguay took big steps forward between 2011 and 2014, there was much less progress in Haiti and Honduras. In the case of Haiti, household inclusion actually worsened between those years. LAC performs well on the usage of financial services by small

and medium-size enterprises, more than 90 percent of which have an account at a financial institution—comparable to such firms in emerging Asia. The share of firms with a loan or line of credit (46 percent) is also comparable to that in emerging Asia (48 percent). In addition, the region is exploring options with nontraditional financing sources such as factoring.³ Nevertheless, collateral requirements are high and access to, and the cost of, finance is seen as a major constraint by a larger share of firms—the average collateral (considering only collateralized loans) in LAC represents about 200 percent of the loan value, compared with 175 percent in east Asia. In some countries, this reflects cumbersome legal systems and regulations (for example, Peru) in others, information asymmetries and lack of

Figure 5.1.1

Financial Inclusion Index

(2011 data, 2014 for households)



Source: IMF staff calculations.

Note: This box was prepared by Joyce Wong.

¹ Financial inclusion is measured using three indices: (1) usage of financial services by households (FINDEX), (2) usage of financial services by enterprises (enterprise surveys), and (3) access to financial services (FAS). For further details on the indices, see Dabla-Norris and others (2015).

² Emerging Asia includes Brunei Darussalam, China, Fiji, Indonesia, Malaysia, the Philippines, and Thailand.

³ Factoring refers to a financial transaction whereby a business sells its accounts receivable (for example, invoices) to a third party (called a factor) at a discount in exchange for immediate financing. Factoring differs from a bank loan in three ways. First, the emphasis is on the value of the receivables, not the firm's creditworthiness. Second, factoring is not a loan—it is the purchase of a financial asset (for example, the receivable). Finally, a bank loan involves two parties, whereas factoring involves three.

(continued)

Box 5.1 *(continued)*

reliable credit information (for example, Guatemala). Furthermore, the legal proceedings to collect collateral in cases of nonpayment are cumbersome in many countries (for example, El Salvador).

LAC generally provides good access to financial infrastructure. Specifically, LAC has a higher number of bank branches, both in relation to country area and population, than other emerging markets. However, a severe urban-rural divide persists (for example, Guatemala), largely due to the generally weak infrastructure, and in some Latin American countries (Bolivia, Chile, Venezuela) and the Caribbean, overall access remains poor. With these concerns in mind, several countries in the region are moving ahead with e-money and mobile banking initiatives, taking advantage of the high levels of cell phone penetration in the population (for example, the “Peru Model”).

Many LAC countries have created a favorable enabling environment for financial inclusion. According to the Global Microscope, LAC leads on enabling environment for inclusion, compared to other regions. Peru and Colombia top the list. LAC particularly excels in establishing credit bureaus and ensuring client protection but is lagging behind on regulation and supervision of microfinance and formation/operation of regulated microcredit institutions, although formation/operation of nonregulated microcredit institutions is thriving.

Reliance on nontraditional sources of finance, including informal finance, remains high. The correspondent model has helped to bridge the gap between informal and formal finance by allowing accessible retailers (food stores, gas stations, pharmacies) to act as intermediaries for basic financial transactions (deposits, withdrawal, bill payment).⁴ LAC as a region has the highest number of banking correspondents per capita in the world. Brazil boasts the oldest (since 1973) and most developed correspondent model in the region but Mexico and Colombia have made significant strides in recent years as well. Nonetheless, informal finance remains important and has been growing in the region. More than one-fifth of households report borrowing from friends and family or an informal lender in 2014, up from 16 percent in 2011.

⁴ Banking correspondents refer to nonfinancial commercial establishments that offer basic financial services under the name of a financial services provider, becoming access points to the formal financial system. This differs from correspondent banks, which are financial institutions that provide services on behalf of other banks, mostly located in a different country.

Annex 5.1. Sources and Data Processing¹

The data generally cover the period 1995 to 2013 with gaps, in particular, for countries in the Middle East, sub-Saharan Africa, and Latin America. For some variables, for example, ATMs per thousand adults, the data were only available starting in 2004. Our data came from numerous sources: the World Bank's World Development Indicators (WDI) database, FinStats, Non-Bank Financial Institutions database (NBFI), Global Financial Development database (GFD); the IMF's International Financial Statistics (IFS) database; Bureau van Dijk, Bankscope; Dealogic's debt capital markets statistics; World Federation of Exchanges (WFE); and the Bank for International Settlements' debt securities statistics.

After a gap-filling process to generate a balanced panel, all variables were normalized using the following formula:

$$I_{x,it} = \frac{x_{it} - \min(x_{it})}{\max(x_{it}) - \min(x_{it})}, \quad (\text{A5.1.1})$$

where $I_{x,it}$ is the normalized variable x of country i on year t , $\min(x_{it})$ is the lowest value of variable x_{it} over all $i-t$; and $\max(x_{it})$ is the highest value of x_{it} . For variables capturing lack of financial development, such as interest rate spread, bank asset concentration, overhead costs, net interest margin, and noninterest income, one minus the formula above was used.

The weights were estimated with principal component analysis in levels and differences, factor analysis in levels and differences, as well as equal weights within a subcomponent of the index. For most of the methods the weights were not very different from equal weights and econometric results were robust to the method of aggregation. For simplicity, we use an index with equal weights.

¹ The framework for the index largely follows Sahay and others (2015). For further details, see Heng and others (forthcoming).

Regression Frameworks

Regressions were carried out using five-year averages to abstract from cyclical fluctuations, and estimated using dynamic panel techniques common in the growth literature.

Financial Development Gaps

The benchmarking regressions link financial development (FD), institutions (FI), and markets (FM) development indices to fundamentals. Following the literature on benchmarking financial development (Beck and others 2008) fundamentals (X_{it}^{FI}) included initial income per capita, the ratio of government consumption to GDP, inflation, trade openness, educational attainment proxied by the average number of years of secondary schooling for people 25 years and older, population growth, capital account openness, the size of the shadow economy (given its importance for the LAC region) and the rule of law. Instruments (Z_{it}) for financial development, such as the rule of law and legal origin dummies, were also used. Predicted norms were computed using the following equation:

$$FI_{it} = \delta'_1 X_{it}^{FI} + \delta'_2 Z_{it} + \eta_t^{FI} + \varepsilon_{it}^{FI}, \quad (\text{A5.1.2})$$

where FI_{it} stands for one of the financial indices (FD, FI, or FM). Gaps shown are the differences between the actual values of the index and the calculated norms.

Financial Development, Growth, and Stability

The link between financial development, growth, and stability was examined using a dynamic panel regression framework. Real GDP growth (ΔY_{it}) is linked to financial development, allowing for a potential nonlinearity by adding a square of financial development while controlling for other factors that are likely to affect growth (below). In the case of individual subcomponents of FI and FM, the interaction term between these two indices is included. The controls for the growth regression (X_{it}^Y) were the same as in the benchmarking regression (X_{it}^{FI}), with two additional variables: the ratio of foreign direct investment to GDP and capital account openness.

The impact of financial development on financial and macroeconomic instability used a similar framework. Financial instability (FS_{it}) is measured by the first principal component of the inverse of the distance to distress (\varkappa -score),² real credit growth volatility, and real and nominal interest rate volatility. This combined variable allows capturing of different facets of financial instability, thus improving previous research, which typically focused on a single variable. Growth volatility (GV_{it}) is measured by the standard deviation of GDP growth. The controls included initial income per capita, the ratio of government consumption to GDP, trade openness, changes in terms of trade, growth in income per capita, the ratio of capital flows to GDP, exchange rate regime, a measure of political stability, and an indicator for whether a country is an offshore financial center.

The following three equations were estimated using the Arellano-Bond approach:

$$\Delta Y_{it} = (\alpha_0 - 1)\ln(Y_{it-1}) + \beta' f(\text{FinDev}_{it}) + \dots + \gamma' X_{it}^Y + \eta_t^Y + \nu_i^Y + \varepsilon_{it}^Y \quad (\text{A5.1.3})$$

$$FS_{it} = \alpha_0 FS_{it-1} + \beta' f(\text{FinDev}_{it}) + \gamma' X_{it}^S + \dots + \eta_t^S + \nu_i^S + \varepsilon_{it}^S \quad (\text{A5.1.4})$$

$$GV_{it} = \alpha_0 GV_{it-1} + \beta' f(\text{FinDev}_{it}) + \gamma' X_{it}^V + \dots + \eta_t^V + \nu_i^V + \varepsilon_{it}^V \quad (\text{A5.1.5})$$

where $f(\text{FinDev}_{it})$ have two forms, one with the aggregated index: $f(FD_{it}) = \beta_1 FD_{it} + \beta_2 FD_{it}^2$; and one with the subcomponents:

$$f(FI_{it}, FM_{it}) = \beta_1 FI_{it} + \beta_2 FI_{it}^2 + \beta_3 FM_{it} + \dots + \beta_4 FM_{it}^2 + \beta_5 FI_{it} \times FM_{it} \quad (\text{A5.1.6})$$

Annex Table 5.1 shows the results of the estimated equations for growth and instability.

Annex Table 5.1. Estimated Equations

Dependent Variable	Financial Instability		Growth Volatility		Growth	
FD	-6.457*		-21.42***		11.47*	
	(3.814)		(7.270)		(6.279)	
FD ²	6.263		23.74**		-12.38*	
	(5.735)		(10.82)		(6.556)	
ΔFD	5.283**		8.423**		5.698*	
	(2.160)		(4.008)		(3.075)	
FI		-13.75**		-27.89***		30.83***
		(5.419)		(9.533)		(8.788)
FI ²		18.64**		36.38**		-48.36***
		(8.123)		(14.45)		(11.58)
FM		-0.772		-6.779		-0.586
		(3.119)		(5.345)		(3.987)
FM ²		3.360		18.02**		-12.35**
		(4.886)		(8.324)		(5.314)
FM*FI		-5.140		-5.354		27.27**
		(9.730)		(15.81)		(13.16)
ΔFI		4.753**		14.08***		7.088**
		(2.114)		(3.708)		(2.958)
ΔFM		3.190*		-2.335		0.508
		(1.672)		(2.846)		(2.222)
Number of Observations	143	143	158	158	301	301

Source: IMF staff calculations.

Note: FD = financial development; FI = financial institutions; FM = financial markets. Standard errors in parentheses. *** $p < 0.01$, ** $p < 0.05$, * $p < 0.1$.

²The \varkappa -score is a measure of financial health that compares the buffer of a country's commercial banking system (capitalization and returns) with the volatility of those returns.

Annex Table 5.2. Index Components for 2004 and 2013

Variable	ARG	BHS	BOL	BRA	BRB	CHL	COL	CRI	DOM	ECU	GTM	HND	JAM	MEX	NIC	PAN	PER	PRY	SLV	TTO	URY	VEN
2013																						
Automated teller machines (ATMs) (per 100,000 adults)	51.4	74.4	27.9	118.6	36.5	67.3	35.8	54.7	30.7	43.6	28.7	23.6	26.7	47.3	11.9	53.5	35.6	19.8	30.7	35.6	42.7	41.4
Number of branches per 100,000 adults, commercial banks	13.5	34.6	11.7	47.7	19.2	17.2	72.2	22.3	11.7	80.1	38.0	24.0	6.1	15.3	7.6	24.7	88.4	10.3	9.8	12.6	12.7	16.8
Domestic credit to private sector / GDP (percent)	15.8	77.4	47.0	70.7	80.6	105.9	50.2	50.4	24.0	26.7	32.6	55.2	29.6	30.6	28.8	70.7	31.4	45.8	42.7	31.1	26.8	25.3
Mutual fund assets / GDP (percent)	2.3	—	4.5	49.7	22.3	13.8	0.1	3.9	—	0.2	—	—	—	10.1	—	2.9	3.0	—	2.9	27.0	0.0	—
Insurance company assets / GDP (percent)	3.1	17.4	3.1	10.4	26.9	20.2	6.0	6.6	1.5	1.6	1.7	3.1	19.5	5.8	0.6	5.3	5.2	1.7	2.6	26.7	5.5	3.2
Domestic bank deposits / GDP (percent)	23.3	72.1	49.7	57.9	113.8	49.8	24.4	22.5	22.7	30.3	40.4	47.5	41.3	28.4	31.6	78.7	35.4	29.2	41.3	55.0	41.7	41.1
Interest rate spread (lending rate minus deposit rate, percent)	2.3	3.1	9.3	14.1	6.2	4.1	6.8	11.3	7.6	5.6	8.1	8.4	14.1	2.9	14.0	4.5	14.1	14.1	4.6	6.0	7.8	1.4
Bank net interest margin (percent)	50.9	20.7	36.1	27.7	33.0	32.1	31.7	20.7	28.4	30.1	20.7	25.8	27.9	53.2	34.5	22.3	33.9	24.1	20.7	26.2	30.9	25.3
Noninterest income / total income (percent)	36.0	86.0	51.1	54.4	94.6	43.0	52.8	62.0	70.8	55.9	67.0	42.9	89.1	55.2	83.7	60.3	74.2	51.4	56.5	78.7	67.3	45.3
Overhead costs / total assets (percent)	25.0	—	—	141.0	—	36.0	20.0	3.0	2.0	—	3.0	1.0	2.0	65.0	—	2.0	17.0	—	—	—	—	2.0
Three bank asset concentration (percent)	29.9	—	—	46.9	—	55.0	20.9	—	—	—	—	—	—	34.1	—	—	38.4	—	—	—	—	—
Total number of issuers of debt (domestic and external, nonfinancial corporations and financial)	5.7	35.6	16.4	54.7	106.4	117.7	70.8	4.4	0.7	6.7	0.9	8.8	43.2	44.3	—	33.0	50.3	3.9	45.1	64.7	0.4	6.6
Market capitalization excluding top 10 companies to total market capitalization	0.2	0.2	0.1	37.1	0.4	17.6	7.0	0.1	—	0.2	0.1	—	1.4	10.0	—	0.3	2.6	0.2	0.2	0.5	0.0	0.0
Market capitalization of listed companies (percent of GDP)	7.4	10.7	6.5	2.6	12.8	1.6	5.7	5.0	5.9	1.6	3.2	—	20.4	4.3	—	23.1	7.1	—	20.0	3.9	20.7	8.0
Stocks traded, total value (percent of GDP)	0.4	14.8	0.0	5.0	20.7	5.2	4.5	0.4	0.0	0.4	1.5	15.4	—	3.3	—	8.0	6.0	1.4	2.9	0.6	—	4.4
Outstanding international public debt securities / GDP (percent)	3.7	65.2	2.1	13.1	36.2	22.9	9.2	4.7	5.9	1.2	2.5	5.2	31.3	19.8	2.2	30.9	11.0	1.4	3.0	13.2	4.2	15.6
Debt securities of financial sector by local firms in percent of GDP ¹	3.8	—	0.5	67.9	0.4	16.0	11.2	1.9	—	2.3	6.4	—	3.0	25.3	—	1.0	5.7	5.5	0.6	0.8	0.8	0.2
Debt securities of nonfinancial sector by local firms in percent of GDP ¹	7.1	3.5	5.1	5.0	4.6	3.6	6.1	5.7	10.1	6.8	7.6	8.8	10.1	3.0	5.8	3.2	6.2	8.2	5.9	5.1	4.9	7.8
Stock market turnover ratio (value traded/stock market capitalization)	6.5	2.2	5.0	2.8	0.8	2.3	3.9	4.0	6.5	5.2	4.0	6.0	6.5	2.5	4.1	1.6	3.5	4.2	3.6	3.8	4.3	4.4
2004																						
ATMs (per 100,000 adults)	21.8	63.6	13.3	105.2	34.9	33.2	27.0	26.2	18.8	3.1	21.1	4.7	18.3	27.7	3.4	33.7	10.7	12.5	20.7	31.2	27.8	21.9
Number of branches per 100,000 adults, commercial banks	13.4	39.7	4.5	40.9	19.3	12.5	13.4	16.1	9.8	12.8	18.8	16.3	7.3	10.6	5.0	22.6	4.3	4.1	11.7	12.6	12.8	15.4
Domestic credit to private sector / GDP (percent)	8.8	61.2	42.7	29.0	66.0	75.6	27.3	32.0	25.2	19.2	26.2	38.4	20.0	15.0	19.6	85.1	18.2	14.7	41.8	36.0	24.2	11.0
Mutual fund assets / GDP (percent)	1.5	—	2.9	31.6	16.2	11.0	0.2	5.7	—	0.9	—	—	—	4.5	—	2.9	2.4	—	2.9	20.1	0.1	—
Insurance company assets / GDP (percent)	3.0	10.8	4.8	5.7	16.5	20.3	3.5	1.2	1.8	0.5	1.4	2.9	14.7	3.5	0.4	5.4	3.0	1.0	1.9	31.4	3.6	2.1
Domestic bank deposits / GDP (percent)	23.1	57.1	38.0	47.3	96.6	45.8	14.9	21.0	17.7	20.1	35.2	41.3	42.5	21.0	38.3	73.9	20.8	17.2	40.1	33.3	43.2	17.2
Interest rate spread (lending rate minus deposit rate, percent)	4.2	2.2	7.1	19.2	5.8	3.2	7.3	13.9	11.5	5.8	9.6	8.8	10.2	4.7	8.8	6.6	19.2	19.2	4.6	6.5	17.5	5.9
Bank net interest margin (percent)	2.4	1.1	4.4	7.5	4.7	4.4	4.4	7.2	9.8	6.0	6.6	6.6	7.7	7.7	8.1	3.4	6.2	7.7	5.5	4.9	5.6	9.8
Noninterest income / total income (percent)	65.2	49.9	50.6	30.3	46.6	28.9	59.7	30.6	53.1	65.2	19.9	30.4	22.7	32.2	24.3	37.1	33.8	65.2	19.9	41.9	64.8	33.3
Overhead costs / total assets (percent)	3.9	1.0	6.8	6.1	4.3	2.9	7.0	6.0	8.9	7.4	4.6	5.5	5.6	5.2	5.2	2.6	5.5	8.9	2.9	4.6	8.9	7.0
Three bank asset concentration (percent)	45.7	70.2	48.9	47.1	100.0	53.5	34.6	55.2	66.1	48.6	45.4	53.4	79.6	62.3	72.1	37.4	76.7	43.6	68.8	79.8	54.9	39.4
Total number of issuers of debt (domestic and external, nonfinancial and financial)	53.0	—	—	51.0	1.0	26.0	—	1.0	—	—	1.0	1.0	—	45.0	—	—	—	—	—	—	—	2.0
Market capitalization excluding top 10 companies to total market capitalization	20.7	—	—	51.0	—	55.5	45.7	—	—	—	—	—	—	38.0	—	—	45.4	—	—	—	—	—
Market capitalization of listed companies (percent of GDP)	25.3	33.7	22.7	49.8	149.0	116.3	21.5	7.6	0.7	7.1	0.9	8.8	103.9	22.3	—	24.0	30.1	3.1	16.7	132.3	0.6	5.4
Stocks traded, total value (percent of GDP)	4.2	0.5	0.1	14.1	6.6	11.5	1.2	0.2	—	0.3	0.1	—	4.7	5.6	—	0.4	1.7	0.0	0.2	4.1	0.0	0.4
Outstanding international public debt securities / GDP (percent)	47.3	2.8	—	9.1	8.8	3.8	10.8	9.4	6.9	17.1	4.6	—	22.6	5.9	—	40.5	9.1	—	14.7	5.3	31.7	17.0
Debt securities of financial sector by local firms in percent of GDP ¹	2.3	—	—	3.1	5.7	0.4	0.5	0.1	—	0.9	—	—	5.3	—	1.5	—	5.1	0.4	—	2.8	2.3	4.2
Debt securities of nonfinancial sector by local firms in percent of GDP ¹	8.4	59.4	3.3	7.1	18.6	35.1	5.9	2.2	3.2	2.9	2.8	1.4	2.0	10.0	0.9	24.1	4.3	0.9	5.3	14.8	2.2	8.2
Stock market turnover ratio (value traded/stock market capitalization)	17.9	—	0.3	33.1	5.3	11.4	7.4	2.3	—	4.2	6.4	—	4.2	29.1	—	1.6	6.2	1.4	1.4	3.8	0.8	9.1

Source: IMF staff calculations.

Note: For country name abbreviations see page 89.

¹Stock of debt by local firms based on residency concept.

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Abbreviations

Countries

Antigua and Barbuda	ATG	Korea	KOR
Argentina	ARG	Latvia	LVA
Armenia	ARM	Malaysia	MYS
Australia	AUS	Mexico	MEX
The Bahamas	BHS	Mongolia	MNG
Barbados	BRB	New Zealand	NZL
Belize	BLZ	Nicaragua	NIC
Bolivia	BOL	Nigeria	NGA
Brazil	BRA	Norway	NOR
Bulgaria	BGR	Pakistan	PAK
Canada	CAN	Panama	PAN
Chile	CHL	Paraguay	PRY
China	CHN	Peru	PER
Colombia	COL	Philippines	PHL
Costa Rica	CRI	Poland	POL
Croatia	HRV	Romania	ROM
Czech Republic	CZE	Russia	RUS
Denmark	DNK	Saudi Arabia	SAU
Dominica	DMA	Singapore	SGP
Dominican Republic	DOM	Slovenia	SVN
Ecuador	ECU	South Africa	ZAF
Egypt	EGY	St. Kitts and Nevis	KNA
El Salvador	SLV	St. Lucia	LCA
Grenada	GRD	St. Vincent and the Grenadines	VCT
Guatemala	GTM	Suriname	SUR
Guyana	GUY	Sweden	SWE
Haiti	HTI	Switzerland	CHE
Honduras	HND	Taiwan Province of China	TWN
Hong Kong SAR	HKG	Thailand	THA
Hungary	HUN	Trinidad and Tobago	TTO
India	IND	Turkey	TUR
Indonesia	IDN	United Kingdom	GBR
Israel	ISR	United States	USA
Jamaica	JAM	Uruguay	URY
Japan	JPN	Venezuela	VEN
Kazakhstan	KAZ	Vietnam	VNM

Country Groups

Financially Integrated Economies (LA6)	Other Commodity Exporters	CAPDR	Caribbean Tourism-Dependent	Caribbean Commodity Exporters	Eastern Caribbean Currency Union (ECCU)
Brazil	Argentina	Costa Rica	The Bahamas	Belize	Anguilla
Chile	Bolivia	Dominican Republic	Barbados	Guyana	Antigua and Barbuda
Colombia	Ecuador	El Salvador	Jamaica	Suriname	Dominica
Mexico	Paraguay	Guatemala	ECCU States	Trinidad and Tobago	Grenada
Peru	Venezuela	Honduras			Montserrat
Uruguay		Nicaragua			St. Kitts and Nevis
(The LA5 includes the same countries except Uruguay)		Panama			St. Lucia
					St. Vincent and the Grenadines

Regions

East Asia Pacific	EAP	Middle East and North Africa	MENA
Europe and Central Asia	ECA	South Asia	SAR
Latin America and the Caribbean	LAC	Sub-Saharan Africa	SSA

References

- Adler, G., and N. Magud. 2015. “Four Decades of Terms-of-Trade Booms: Saving-Investment Patterns and a New Metric of Income Windfall.” *Journal of International Money and Finance* 55 (July): 162–92.
- Adler, G., M. Djigbenou, and S. Sosa. 2014. “Global Financial Shocks and Foreign Asset Repatriation: Do Local Investors Play a Stabilizing Role?” IMF Working Paper 14/60, International Monetary Fund, Washington.
- Adrian, T., R. Crump, and E. Moench. 2013. “Pricing the Term Structure with Linear Regressions.” *Journal of Financial Economics* 110(1): 110–38.
- Ahmed, S., M. Appendino, and M. Ruta. 2015. “Depreciations without Exports? Global Value Chains and the Exchange Rate Elasticity of Exports.” World Bank Policy Research Working Paper 7390, World Bank, Washington.
- Aizenman, J., Y. Jinjarak, and D. Park. 2015. “Financial Development and Output Growth in Developing Asia and Latin America: A Comparative Sectoral Analysis.” NBER Working Paper 20917, National Bureau of Economic Research, Cambridge, Massachusetts.
- Aizenman, J., M. D. Chinn, and H. Ito. 2010. “The Emerging Global Financial Architecture: Tracing and Evaluating New Patterns of the Trilemma Configuration.” *Journal of International Money and Finance* 29(4): 615–41.
- Alichi, A. 2015. “A New Methodology for Estimating the Output Gap in the United States.” IMF Working Paper 15/144, International Monetary Fund, Washington.
- Anderson, J. 2011. “The Gravity Model.” *Annual Review of Economics* 3(1): 133–60.
- Anderson, James E., and Eric van Wincoop. 2003. “Gravity with Gravitas: A Solution to the Border Puzzle.” *American Economic Review* 93(1): 170–92.
- Arcand, J. L., E. Berkes and U. Panizza. 2012. “Too Much Finance?” IMF Working Paper 161, International Monetary Fund, Washington.
- Arellano, M., and O. Bover. 1995. “Another Look at the Instrumental Variable Estimation of Error-Components Models.” *Journal of Econometrics* 68: 29–51.
- Arslanalp, S., and T. Tsuda. 2014. “Tracking Global Demand for Emerging Market Sovereign Debt.” IMF Working Paper 14/39, International Monetary Fund, Washington.
- Baier, S., and J. Bergstrand. 2007. “Do Free Trade Agreements Actually Increase Members’ International Trade?” *Journal of International Economics* 71: 72–95.
- Baier, S., J. Bergstrand, and E. Vidal. 2007. “Free Trade Agreements in the Americas: Are the Trade Effects Larger Than Anticipated?” *The World Economy* 30(9): 1347–377.
- Baumann, R. 2008. “Integration in Latin America—Trends and Challenges.” Economic Commission for Latin America and the Caribbean, Office in Brazil.
- Beck, T., A. Demirgüç-Kunt, and R. Levine. 2004. “Finance, Inequality and Poverty: Cross Country Evidence.” NBER Working Paper 10979, National Bureau of Economic Research, Cambridge, Massachusetts.
- Bernanke, B., and M. Gertler. 1999. “Monetary Policy and Asset Price Volatility.” *Economic Review* Q-IV: 17–51.
- Blundell, R., and S. Bond. 1998. “Initial Conditions and Moment Restrictions in Dynamic Panel Data Models.” *Journal of Econometrics* 87: 115–43.
- Blyde, J. 2014. “Synchronized Factories: Latin America and the Caribbean in the Era of Global Value Chains.” Inter-American Development Bank, Washington.

- Bruno, V., and Shin H. Song. 2014. “Globalization of Corporate Risk Taking.” *Journal of International Business Studies* 45(7): 800–820.
- Caceres, C., Y. Carrière-Swallow, and B. Gruss. Forthcoming. “Assessing International Monetary Policy Autonomy.” IMF Working Paper, International Monetary Fund, Washington.
- Canuto, O., C. Fleischhaker, and P. Schellekens. 2015. “The Curious Case of Brazil’s Closedness to Trade.” VoxEU blog. <http://www.voxeu.org/article/brazil-s-closedness-trade>.
- Cashin, P., and S. Sosa. 2013. “Macroeconomic Fluctuations in the Eastern Caribbean: The Role of Climatic and External Shocks.” *Journal of International Trade & Economic Development* 22(5): 729–48.
- Cecchetti, S. G., and E. Kharroubi. 2012. “Reassessing the Impact of Finance on Growth.” BIS Working Paper 381, Bank for International Settlements, Basel.
- . 2015. “Why Does Financial Sector Growth Crowd Out Real Economic Growth?” CEPR Discussion Paper 10642, Centre for Economic Policy Research, London.
- Celasun, O., F. Grigoli, K. Honjo, J. Kapsoli, A. Klemm, B. Lissovolik, J. Luksic, M. Moreno-Badia, J. Pereira, M. Poplawski-Ribeiro, B. Shang, and Y. Ustyugova. 2015. “Fiscal Policy in Latin America: Lessons and Legacies of the Global Financial Crisis.” IMF Staff Discussion Note, International Monetary Fund, Washington.
- Cerutti, E., S. Claessens, and L. Laeven. 2015. “The Use and Effectiveness of Macroprudential Policies: New Evidence.” IMF Working Paper 16/61 International Monetary Fund, Washington.
- Cetorelli, N., and L. S. Goldberg. 2011. “Global Banks and International Shock Transmission: Evidence from the Crisis.” *IMF Economic Review* 59: 41–76.
- . 2012. “Liquidity Management of U.S. Global Banks: Internal Capital Markets in the Great Recession.” *Journal of International Economics* 88(2): 299–311.
- Chen, Mancini-Griffoli, and Ratna Sahay. 2014. “Spillovers from United States Monetary Policy on Emerging Markets: Different This Time?” IMF Working Paper 14/240, International Monetary Fund, Washington.
- Claro, S., and L. Opazo. 2014. “Monetary Policy Independence in Chile,” BIS Working Paper 78, Bank for International Settlements, Basel.
- Constantinescu C., A. Mattoo, and M. Ruta. 2015. “The Global Trade Slowdown: Cyclical or Structural?” IMF Working Paper 15/6, International Monetary Fund, Washington.
- Cordella, T., P. M. Federico, C. A. Vegh, and G. Vuletin. 2014. “Reserve Requirements in the Brave New Macroprudential World.” World Bank, Washington.
- Cornia, A. 2013. “Inequality Trends and Their Determinants: Latin America over 1990–2010.” In *Falling Inequality in Latin America: Policy Changes and Lessons*, edited by A. Cornia. Oxford, United Kingdom: Oxford University Press.
- Cournède, B., O. Denk, and P. Hoeller. 2015. “Finance and Inclusive Growth.” OECD Economic Policy Papers 14, Organisation for Economic Co-operation and Development, Paris.
- Dabla-Norris, E., Y. Deng, A. Ivanova, I. Karpowicz, D. Filiz Unsal, E. VanLeemput; J. Wong. 2015. “Financial Inclusion: Zooming in on Latin America.” IMF Working Paper 15/206, International Monetary Fund, Washington.
- De Gregorio, J. 2014. “Some Challenges for Financial Policies in Emerging Markets.” Paper presented at the Conference on Financial Sector Development: Policies to Promote and Strengthen Local Capital Markets, October 2–3, Graduate Institute Geneva.
- De la Torre, A., and S. Schmukler. 2007. *Emerging Capital Markets and Globalization: The Latin American Experience*. Washington: World Bank.
- De la Torre, A., E. Feyen, and A. Ize. 2014. “Benchmarking LAC’s Financial Development: The Banking and Equity Gaps.” In *Emerging Issues in Financial Development. Lessons from Latin*

- America*, edited by T. Didier and S. L. Schmukler. Washington: World Bank.
- De la Torre, A., A. Ize, and S. L. Schmukler. 2012. *Financial Development in Latin America and the Caribbean: The Road Ahead*. Washington: World Bank.
- De la Torre, A., D. Lederman, and Samuel Pienknagura. 2015. “Doing It Right.” *Finance and Development* 52(3).
- De la Torre, A., T. Didier, A. Ize, D. Lederman, and S. Schmukler. 2015. “Latin America and the Rising South, Changing World, Changing Priorities.” World Bank, Washington.
- De Melo, J., and S. Dhar. 1992. “Lessons of Trade Liberalization in Latin America for Economies in Transition.” Policy Research Working Paper 1040, World Bank, Washington.
- De Sousa, J. 2012. “The Currency Union Effect on Trade Is Decreasing over Time.” *Economics Letters* 117(3): 917–20.
- Didier, T., and S. Schmukler. 2014. “Emerging Issues in Financial Development.” World Bank, Washington.
- Dovern, J., U. Fritsche, and J. Slacalek, 2012. “Disagreement Among Forecasters in G7 Countries.” *Review of Economics and Statistics* 94(4): 1081–96.
- Ebeke, C., and A. Kyobe. 2015. “Global Financial Spillovers to Emerging Market Sovereign Bond Markets.” IMF Working Paper 15/141, International Monetary Fund, Washington.
- Emerging Market Committee. 2012. “Development and Regulation of Institutional Investors in Emerging Markets.” International Organization of Securities Commissions No. FR04/12.
- Estevão, M., and I. Samake. 2013. “The Economic Effects If Fiscal Consolidation with Debt Feedback,” IMF Working Paper 13/136, International Monetary Fund, Washington.
- Feyen, E., K. Kibuuka, and D. Sourrouille. 2014. “FinStats 2015: A Ready-to-Use Tool to Benchmark Financial Sectors across Countries and Time.” World Bank. Unpublished.
- Frankel, Jeffrey A. 1997. *Regional Trading Blocs*. Washington: Institute for International Economics.
- , and D. Romer. 1999. “Does Trade Cause Growth?” *American Economic Review* 89(3): 379–99.
- Frankel, Jeffrey A., Ernesto Stein, and Shang-Jin Wei. 1995. “Trading Blocs and the Americas: The Natural, the Unnatural, and the Super-Natural.” *Journal of Development Economics* 47(1): 61–95.
- Goldsmith, R. W. 1969. *Financial structure and development*. New Haven, Connecticut: Yale University Press.
- Gruss, B. 2014. “After the Boom—Commodity Prices and Economic Growth in Latin America and the Caribbean.” IMF Working Paper 14/154, International Monetary Fund, Washington.
- Heng, D., A. Ivanova, R. Mariscal, U. Ramakrishnan, and J. Wong. Forthcoming. “Advancing Financial Development in Latin America and the Caribbean.” IMF Working Paper, International Monetary Fund, Washington.
- Holt, C. C. 2004. “Forecasting Seasonals and Trends by Exponentially Weighted Moving Averages.” *International Journal of Forecasting* 20(1): 5–10.
- Ilzetzki, E., C. M. Reinhart, and K. S. Rogoff. 2009. “Exchange Rate Arrangements Entering the 21st Century: Which Anchor Will Hold?” University of Maryland and Harvard University. Unpublished.
- Inter-American Development Bank (IDB). 2013. “Energy Matrix Country Briefings for the Caribbean.” Washington.
- International Monetary Fund (IMF). 2003. “Financial Asset Price Volatility: A Source for Instability.” Chapter 3 in *Global Financial Stability Report*. Washington.
- . 2015. “Assessing Reserve Adequacy—Specific Proposals.” Washington, April.
- . 2015a. “Global Value Chains: Where Are You? The Missing Link in Sub-Saharan Africa’s Trade Integration.” *Regional Economic Outlook: Sub-Saharan Africa*, Washington, April.

- . 2015b. “Review of the Role of Trade in the Work of the Fund.” Washington, February.
- . 2015c. “Stabilizing and Outperforming Other Regions.” *Regional Economic Outlook: Asia and Pacific*. Washington, April.
- Kaufmann, D., A. Kraay, and M. Mastruzzi. 2010. “The Worldwide Governance Indicators: A Summary of Methodology, Data and Analytical Issues.” Policy Research Working Paper 5430, World Bank, Washington.
- King, R. G., and R. Levine. 1993. “Finance, Entrepreneurship and Growth.” *Journal of Monetary Economics* 32(3): 513–42.
- Klemm, A., and A. Herman. Forthcoming. “Financial Intermediation in Mexico.” Selected Issues Paper, International Monetary Fund, Washington.
- Koopman, R., Z. Wang, and S.-J. Wei. 2014. “Tracing Value-Added and Double Counting in Gross Exports.” *American Economic Review* 104(2): 459–94.
- Krippner, L. 2013. “Measuring the Stance of Monetary Policy in ZLB Environments.” *Economics Letters* 118.
- Laeven, L. 2014. “The Development of Local Capital Markets: Rationale and Challenges.” IMF Working Paper 234, International Monetary Fund, Washington.
- La Porta, R., F. Lopez-de-Silanes, and A. Shleifer. 2008. “The Economic Consequences of Legal Origins.” *Journal of Economic Literature* 46(2): 258–332.
- Lederman, D., S. Pienknagura, and D. Rojas. 2015. “Latent Trade Diversification and Its Relevance for Macroeconomic Stability.” Policy Research Working Paper 7332, World Bank, Washington.
- Lenzen, M., K. Kanemoto, D. Moran, and A. Geschke. 2012. “Mapping the Structure of the World Economy.” *Environmental Science and Technology* 46(15): 8374–381.
- . 2013. “Building Eora: A Global Multi-Region Input-Output Database at High Country and Sector Resolution.” *Economic Systems Research* 25(1): 20–49.
- Levine, R. 2005. “Finance and Growth: Theory and Evidence.” In *Handbook of Economic Growth*, Vol. 1, Chapter 12, edited by P. Aghion and S. Durlauf, 865–934. Amsterdam: Elsevier.
- Levy-Yeyati, E. 2006. “Financial Dollarization: Evaluating the Consequences.” *Economic Policy* 21(45): 62–118.
- Lombardi, M., and F. Zhu. 2014. “A Shadow Policy Rate to Calibrate US Monetary Policy at the ZLB.” BIS Working Paper 452, Bank for International Settlements, Basel.
- Lopez-Calva, L. F., and N. Lustig (editors). 2010. *Declining Inequality in Latin America: A Decade of Progress?* Washington: Brookings Institution and the United Nations Development Programme.
- Lopez-Calva L., N. Lustig, and E. Ortiz-Juarez. 2013. “Deconstructing the Decline in Inequality in Latin America.” Tulane Economics Working Paper 1314.
- Matheson, T., and E. Stavrev. 2014. “News and Monetary Shocks at a High Frequency: A Simple Approach.” *Economics Letters* 125: 282–86.
- McKinnon, R. 1973. *Money and Capital in Economic Development*. Washington: The Brookings Institution.
- Minsky, H. 1975. *John Maynard Keynes*. New York: Columbia University Press.
- Mishkin, F. S. 2007. “Globalization and Financial Development.” Speech to the New Perspectives on Financial Globalization Conference, Washington, April 26.
- Noguera, G. 2012. “Trade Costs and Gravity for Gross and Value Added Trade.” Unpublished.
- Nunn, N. 2007. “Relationship-Specificity, Incomplete Contracts, and the Pattern of Trade.” *The Quarterly Journal of Economics* 122(2): 569–600.
- Obstfeld, M., J. Shambaugh, and A. Taylor. 2005. “The Trilemma in History: Tradeoffs among Exchange Rates, Monetary Policies, and Capital Mobility.” *Review of Economics and Statistics* 87(3): 423–38.
- Obstfeld, M. 2015. “Trilemmas and Tradeoffs: Living with Financial Globalization.” In *Global*

- Liquidity, Spillovers to Emerging Markets and Policy Responses*, edited by C. Raddatz, D. Saravia, and J. Ventura. Central Bank of Chile: Santiago.
- Osorio Buitron, C., and E. Vesperoni. Forthcoming. “Big Players Out of Synchrony: Spillover Implications of US and Euro Area Shocks.” IMF Working Paper, International Monetary Fund, Washington.
- Österholm, P., and J. Zettelmeyer. 2008. “The Effect of External Conditions on Growth in Latin America.” *IMF Staff Papers* 55(4): 595–623.
- Pescatori, A., and J. Turunen. 2015. “Lower for Longer: Neutral Rates in the United States.” IMF Working Paper 15/135, International Monetary Fund, Washington.
- Philippon, T., and A. Reshef. 2013. “An International Look at the Growth of Modern Finance.” *Journal of Economic Perspectives* 27(2): 73–96.
- Rajan, R. G. 2005. “Has Financial Development Made the World Riskier?” NBER Working Paper 11728, National Bureau of Economic Research, Cambridge, Massachusetts.
- Reinhart, Carmen M., and Kenneth S. Rogoff. 2011. *This Time Is Different: Eight Centuries of Financial Folly*. Princeton, New Jersey: Princeton University Press.
- Rey, H., 2015, “Dilemma Not Trilemma: The Global Financial Cycle and Monetary Policy Independence.” NBER Working Paper 21162, National Bureau of Economic Research, Cambridge, Massachusetts.
- Ricci, L.A., and W. Shi. Forthcoming. “Trilemma or Dilemma: Inspecting the Heterogeneous Response of Local Currency Interest Rates to Foreign Rates.” IMF Working Paper, International Monetary Fund, Washington.
- Rodrik, D. 2015. “Premature Deindustrialization.” NBER Working Paper 20935, National Bureau of Economic Research, Cambridge, Massachusetts.
- Rojas-Suárez, Liliana, and Steven R. Weisbrod. 1995. *Financial Fragilities in Latin America: The 1980s and 1990s*. IMF Occasional Paper No. 132. Washington: International Monetary Fund.
- Romer, C., and D. Romer. 2004. “A New Measure of Monetary Shocks: Derivation and Implications.” *American Economic Review* 94(4): 1055–84.
- Sahay, R., M. Cihak, P. N’Diaye, A. Barajas, D. Ayala Pena, R. Bi, Y. Gao, A. Kyobe, L. Nguyen, C. Saborowski, K. Svirydzenka, and R. Yousefi. 2015. “Rethinking Financial Deepening: Stability and Growth in Emerging Markets.” IMF Staff Discussion Note 15/8, International Monetary Fund, Washington.
- Sahay, R., M. Cihak, P. N’Diaye, A. Barajas, S. Mitra, A. Kyobe, Y. N. Mooi, S. R. Yousefi. 2015b. “Financial Inclusion: Can It Meet Multiple Macroeconomic Goals?” IMF Staff Discussion Note 15/17, International Monetary Fund, Washington.
- Santos Silva, J. M. C., and S. Tenreyro. 2006. “The Log of Gravity.” *The Review of Economics and Statistics* 88(4): 641–58.
- Sebastian Saez, J., D. Taglioni, E. van der Marel, C. Hollweg, and V. Zavacka. 2015. “Valuing Services in Trade: A Toolkit for Competitiveness Diagnostics.” International Trade Unit Publication 93714, World Bank, Washington.
- Shaw, E. S. 1973. *Financial Deepening in Economic Development*. New York: Oxford University Press.
- Shepherd, B. 2013. “The Gravity Model of International Trade: A User Guide.” United Nations Economic and Social Commission for Asia and the Pacific.
- Svirydzenka, K. Forthcoming. “Introducing a New Broad-Based Index of Financial Development.” IMF Working Paper, International Monetary Fund, Washington.
- Taylor, A. 1998. “On the Costs of Inward Development: Price Distortions, Growth, and Divergence in Latin America.” *The Journal of Economic History* 58(1): 1–28.
- Towbin, Pascal, and Sebastian Weber. 2013. “Limits of Floating Exchange Rates: The Role of Foreign Currency Debt and Import Structure.” *Journal of Development Economics* 101(C): 179–94.

Tukker, A., and E. Dietzenbacher. 2013. “Global Multiregional Input-Output Frameworks: An Introduction and Outlook.” *Economic Systems Research* 25(1): 1–19.

United Nations. 2015. “Global Value Chains and Development: Investment and Value Added Trade in the Global Economy.”

Wacziarg, R., and K. Horn Welch. 2008. “Trade Liberalization and Growth: New Evidence.” *World Bank Economic Review* 22(2): 187–231.

World Trade Organization. 2014. “World Trade Report 2014: Trade and Development: Recent Trends and the Role of the WTO.” World Trade Organization, Geneva.

Wu, J., and F. Xia. 2014. “Measuring the Macroeconomic Impact of Monetary Policy at the ZLB.” NBER Working Paper 20117, National Bureau of Economic Research, Cambridge, Massachusetts.

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15/76

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15/108

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15/116

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15/128

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15/134

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15/135

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15/142

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Stefan Laseen, Andrea Pescatori, and Jarkko Turunen

15/143

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15/144

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Ali Alichì

15/145

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Yangfan Sun and Hui Tong

15/170

A Model for Monetary Policy Analysis in Uruguay

Rafael Portillo and Yulia Ustyugova

15/174

Institutions and Growth: a GMM/IV Panel VAR Approach

Carlos Góes

15/179

Collateral Damage: Dollar Strength and Emerging Markets' Growth

Pablo Druck, Nicolas E. Magud, and Rodrigo Mariscal

15/180

Filling the Gap: Infrastructure Investment in Brazil

Mercedes Garcia-Escribano, Carlos Góes, and Izabela Karpowicz

15/206

Financial Inclusion: Zooming in on Latin America

Era Dabla-Norris, Yixi Deng, Anna Ivanova, Izabela Karpowicz, D. Filiz Unsal, Eva VanLeemput, and Joyce Wong

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Western Hemisphere, October 2015

