SECOND MEETING OF THE FINANCE MINISTERS
OF THE AMERICAS AND THE CARIBBEAN

POLICY DISCUSSION PAPER

# Global Financial Regulatory Reform: Implications for Latin America and the Caribbean (LAC)

**Viña del Mar, Chile**
**July 3, 2009**

This policy discussion paper is intended to serve as the basis for a discussion by Finance Ministers of the Western Hemisphere at the upcoming meeting in Chile in July 2009.

This paper was prepared by a team led by Robert Rennhack, Assistant Director of the Western Hemisphere Department (WHD) of the International Monetary Fund. The team included Rita Babihuga, Geoff Bannister, Jingqing Chai, Jorge Chan-Lau, Marcello Estevao, Enrique Flores, Alejandro Guerson, Herman Kamil, Carla Macario, Fabian Valencia, Francisco Vazquez and James P. Walsh. This paper benefited from comments from Nicolas Eyzaguirre, David J. Robinson and Gilbert Terrier of WHD as well as the IMF country teams for the entire LAC region. The staff of the IMF's Monetary and Capital Markets Department provided valuable guidance on the evolving global debate on financial regulatory reform. The authors would like to give special thanks to Alexandre Chailloux, Luis Cortavarria, Luis Jacome, Barry Johnston, Laura Kodres, Cheng Hoon Lim, Rodolfo Maino, Noel Sacasa, and Francisco Vazquez for their time and thoughtful comments. Jorge Cayazzo served as a consultant on this project and also provided valuable guidance.

## EXECUTIVE SUMMARY

The Latin America and Caribbean (LAC) region has weathered the global financial crisis reasonably well so far, although tighter global financial conditions began to take their toll on trade, capital flows and economic growth in late 2008. This resilience reflects the reforms put in place by many countries over the past decade to strengthen financial supervision and adopt sound macroeconomic policies. Building on this progress, the region's financial sector reform agenda now aims at further improvements, including steps aiming to improve compliance with the Basel Core Principles of Banking Supervision and to broaden and deepen domestic financial markets.

Going forward, the region's agenda for financial sector reform will be strongly influenced by the emerging global debate on how to strengthen financial regulation to prevent another meltdown of global credit markets. While the process of reform will undoubtedly take several years, ministers may want to begin thinking about these issues at an early stage, given the need to build the political consensus for change and the possible need for additional resources.

The Financial Stability Board (FSB) and the G20, with the participation of the IMF and other international institutions, have been developing key priorities and specific proposals. This paper assesses the implications of these reforms for the region and offers some suggestions for areas of possible action. The key proposals and issues to consider include:

***I. Expand the perimeter of regulation by re-evaluating what is considered a systemic institution, which would be subject to strong regulation.***

*Background*

- These changes stem from the growing consensus for the view that strong regulation should apply to any financial institution, not just banks, that can threaten the financial system. This draws on a key lesson of the crisis that the previous approach to regulation, which centered on strong supervision of just banks, left the system overexposed to risks.

- Generally speaking, the definition of a systemic institution would include any large financial institution (including off-balance sheet items), those that play a key role in the financial infrastructure, or those with high leverage. It could also include a group of small financial institutions that may be collectively systemic if they move together during a crisis.

- Most countries in the LAC region could benefit from re-evaluating their perimeters, even though many have bank-centered financial systems with fairly broad regulatory perimeters. There is the potential for systemic risk from many non-bank financial institutions, including insurance companies, financial conglomerates, cooperatives, investment and mutual funds and retail chains (such as supermarkets) that issue credit cards. This may be a more pressing issue in the countries with sizable non-bank financial institutions and domestic capital markets, but even those with less developed capital markets also face potential risks from outside the banking system.

*Policy Options*

- Improve methodologies for assessing systemic risks, especially to understand potential risks that may arise from all types of financial institutions, not just banks.

- Subject systemic institutions, which may include non-banks, to additional prudential requirements on capital adequacy, leverage and liquidity to contain the moral hazard stemming from the perception that they are too big too fail.

- Set up a single regulator responsible for supervising systemic risk.

- Continue to oversee to non-systemic institutions. The G20 has called for tighter prudential standards on all financial institutions. Hedge funds would be subject to registration and disclosure requirements to allow supervisors to assess their contribution to systemic risk.

***II. Make consolidated supervision more effective*.**

*Background*

- In advanced countries, supervisors often lacked the information and capacity to see the links between different types of financial institutions and instruments within a country (cross-functional) as well as links among financial institutions across countries (cross-border). This was especially true for large complex financial institutions that operated in many different financial markets within a country as well as in many different countries. Also these institutions tended to design financial instruments that were covered by the least intrusive regulations available.

- In the LAC region, many countries have strengthened their legal frameworks for consolidated supervision. However, these frameworks typically suffer from two key shortcomings. First, the scope of consolidated supervision often does not allow a supervisor to monitor all institutions within a financial conglomerate, which in several countries has contributed to difficulties with offshore operations of a conglomerate. Second, supervisors often do not have the same powers to enforce regulations and require prompt corrective action for all institutions within a conglomerate. Cross-border supervision also matters in many countries, where international banks have a significant presence, accounting for more than 40 percent of total banking system deposits in a number of countries.

*Policy Options*

- ➢ Strengthen the legal framework for consolidated cross-functional supervision through several steps, including by (i) applying prudential requirements to all parts of a financial group, not just some of the individual affiliates, and (ii) mandating the exchange of information among supervisors.

- ➢ Set up institutional mechanisms to build closer cooperation among supervisors

- ➢ Create more effective cross-border supervision of global banks by forming regulatory colleges composed of the supervisors in the countries where the global banks operate. These colleges would have to allow for full information sharing, harmonization of norms across countries and a clear assignment of responsibilities among supervisors.

### *III. Reducing the Procyclicality of Prudential Regulations*

*Background*

- The excessive credit growth prior to the crisis, as well as the rapid deleveraging currently underway, may have been exacerbated by procyclical features of regulatory frameworks. These features include the capital adequacy guidelines under Pillar 1 of the Basel II framework, which define risk-weighted assets using procyclical factors. Loan loss provisioning is typically linked to the payment history on loans, which tends to be stronger during booms and creates incentives to expand lending. Also fair value accounting (FVA)—which requires that the prices of assets on banks' books be marked to market prices to reflect their "true" value—can be procyclical.

- The regulatory systems in the LAC region do have features that give rise to procyclicality, such as backward-looking loan loss provisions and use of collateral-based lending. Other features—the capital adequacy requirement and the use of FVA—could also be introducing procyclicality.

*Policy Options*

- ➢ Make capital adequacy requirements countercyclical, possibly through adjustments of capital charges required by the supervisor or the issuance of debt by financial institutions that would convert into equity under certain conditions.

- ➢ Introduce dynamic provisioning requirements, as in Spain, Bolivia, Colombia, Peru and Uruguay;

- ➢ Retain fair value accounting (marking to market), while introducing buffers or limited flexibility to value illiquid assets.

### *IV. Improving Public Disclosure of Information*

*Background*

- Supervisors as well as the public need much more detailed information on the exposures of financial institutions, and their linkages across borders and markets. The crisis revealed extensive gaps in financial data disclosure and the understanding of underlying risks. Financial activities expanded in areas with few or no disclosure requirements, leaving regulators ill-equipped to see risk concentrations.

- In most of the region, balance sheets and financial statements of banks and private pension funds are publicly available, typically on a monthly or quarterly basis. However, most countries require little or no reporting of other financial operations, especially off-balance sheet operations of banks; transactions by the non-bank affiliates of a financial conglomerate; or the activities of lightly regulated non-banks.

- Policymakers in the LAC region typically lack information on key issues—such as prices of residential and commercial real estate and other non-financial assets and household indebtedness—that are crucial to understand the potential effects of financial vulnerabilities on growth and inflation and the effects of macroeconomic policies on the financial and real sectors.

*Policy Options*

➢ Develop much better information on the linkages between macroeconomic developments and the financial sector.

➢ Strengthen public disclosure practices of systemic financial institutions.

➢ Revamp and broaden the coverage of financial soundness indicators.

➢ For countries moving toward the Basel II prudential framework, systemic financial institutions need to disclose their risk management practices and models used to value risk.

➢ Supervisors in Chile, Colombia and Mexico, which have significant over-the-counter (OTC) derivatives markets, could improve the transparency of these markets and require exchange trading of derivatives.

### *V. Greater Flexibility for Central Banks*

*Background*

- Many central banks, including several in the LAC region, have injected liquidity into their financial system to prevent a complete seizure in financial markets, often innovating to overcome institutional limitations.

- There is a debate as to whether central banks should broaden their interpretation of the mandate to safeguard financial stability, as well as maintain low inflation.

- Under the broader mandate, safeguarding financial stability would mean that central banks should try to arrest excessive credit expansion in credit and sharp runups in asset prices, which might have helped avoid the loose credit conditions in advanced countries that contributed to the current crisis.

*Policy Options*

➢ Central banks in the region should continue to work within their existing institutional frameworks to limit the risk to their credibility that can arise from the exceptional liquidity support.

➢ This suggests that the task of halting bubbles in credit or asset prices is best left to the financial supervisor.

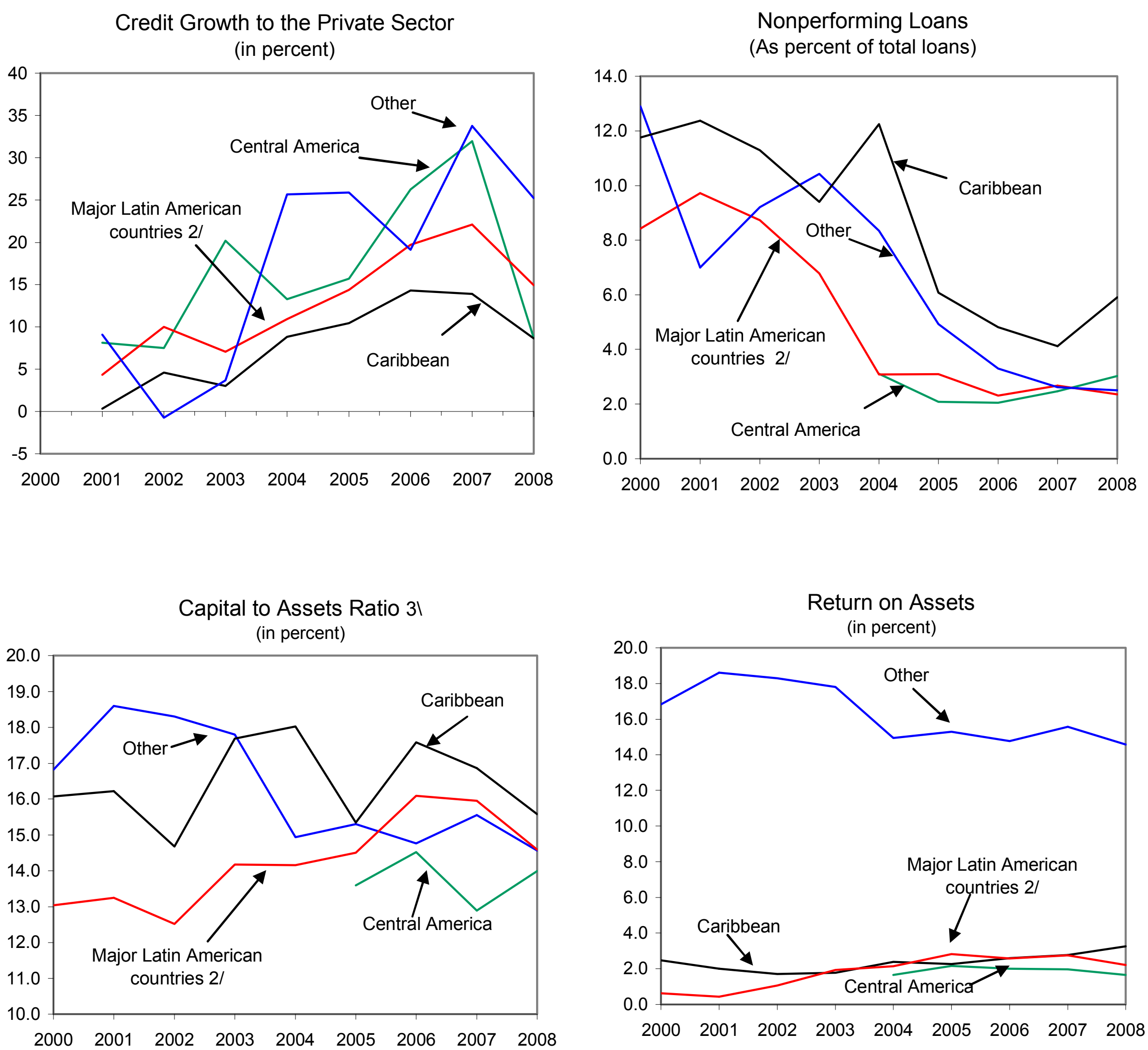
# I. INTRODUCTION

***The Latin America and Caribbean (LAC) region has weathered the global financial crisis reasonably well so far, although tighter global financial conditions began to take their toll on trade, capital flows and economic growth in late 2008.*** One reason for the region's resilience has been the cushion that financial systems throughout much of the region have built up in recent years. Growth in credit to the private sector returned to a more moderate pace in 2008, especially in Central America (Figure 1). Capital adequacy ratios for banks are close to 15 percent on average throughout the region, with Caribbean banks having a slightly larger cushion than the rest of the region. Nonperforming loans have been falling over the last few years, although these rose somewhat in a number of countries during 2008. Credit is funded largely through domestic deposits and other domestic sources, while external sources play a much smaller role than in other regions, such as Central and Eastern Europe. Another strength has come from the limited role that structured financial products have played in the region's financial activity and low direct exposure to subprime-related structured credit products. This low exposure may reflect the relatively high returns to domestic banking operations in the region as well as regulatory frameworks in several countries strictly limiting bank exposure to complex derivatives and structured finance products.

***This resilience reflects the reforms put in place by many countries over the past decade to strengthen financial supervision and adopt sound macroeconomic policies.*** Many countries have improved the legal framework for supervision, bolstering inter alia prudential requirements, prompt corrective action and bank resolution and legal protections for supervisors. Most countries have healthier public sector balance sheets—with less public debt and more net international reserves. Many central banks resisted the surge in inflation from end-2006 through mid-2008, while allowing for more exchange rate flexibility than a decade ago. Moreover, improved confidence in policies has helped keep expectations well-anchored, even in those countries implementing a countercyclical policy response to the global crisis. With strong financial and macroeconomic policies, countries in the region have—by and large—been able to limit adverse feedback loops between the real and financial sectors.

***Building on this progress, the region's financial sector reform agenda now aims at further improvements.*** These steps would aim to improve compliance with the Basel Core Principles of Banking Supervision and to broaden and deepen domestic financial markets (Figure 2). Areas for additional reform include enhancing risk-based supervisory capacity, especially in countries such as Brazil, Mexico, Chile, Colombia, Panama, and Peru, that are moving towards adopting the Basel II regulations framework. The increasing role of nonbank financial institutions such as financial funds and private pools of capital (i.e. mutual funds), together with more foreign participation in several financial markets call for effective consolidated cross-functional and cross-border supervision. Improving bank resolution frameworks and financial safety nets (such as the clarification of lender-of-last-resort functions and the role of deposit insurance, and crisis contingency planning) will be important to sustained financial stability. Finally, the recent growth in the derivatives markets in several Latin American countries underscores the importance of evaluating risks associated with financial innovation.

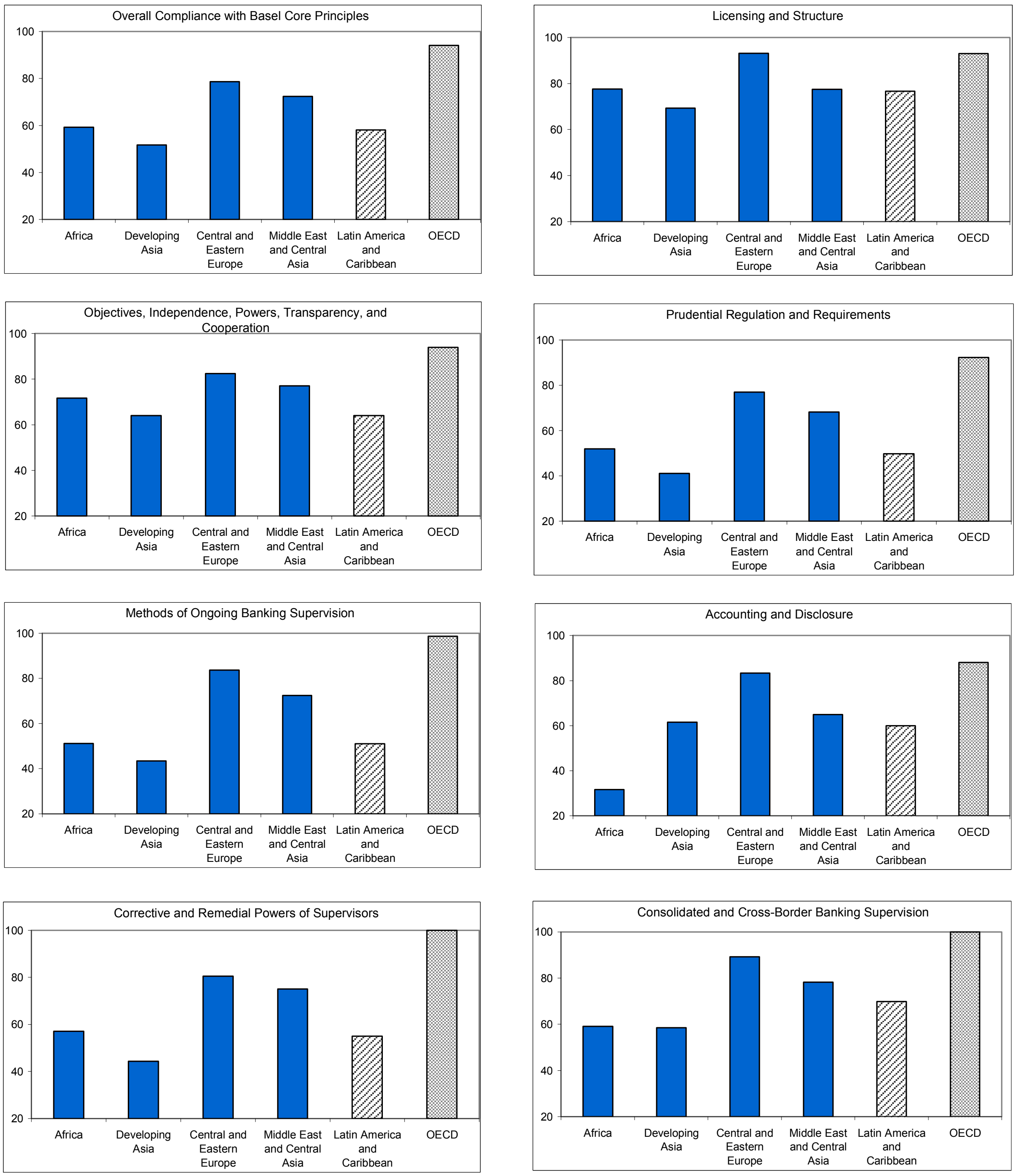
Figure 1. Latin America and Caribbean: Financial Soundness Indicators, 2000-2008 1/




Sources: Country authorities and IMF staff estimates.

1/ The lines indicate the median of the distribution.
2/ Argentina, Brazil, Chile, Colombia, Mexico and Peru.
3/ Regulatory capital to risk-weighted assets.

Figure 2. Compliance with Basel Core Principles 1/ 2/

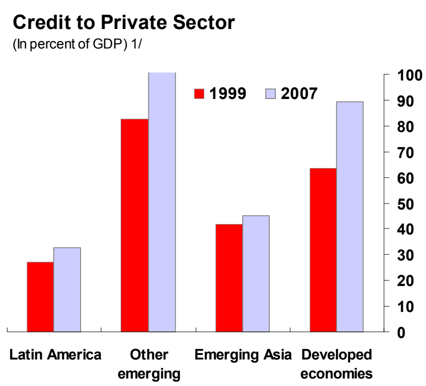



Source: IMF's standards and codes database.

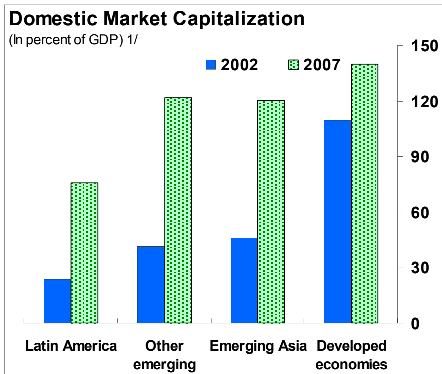
1/ Average fraction of assessments resulting in largely or fully compliant.

2/ Albania, Algeria, Andorra, Anguilla, Antigua and Barbuda, Armenia, Aruba, Australia, Austria, Azerbaijan, Bahamas, The, Bahrain, Bangladesh, Barbados, Belarus, Belgium, Belize, Bermuda, Bolivia, Bosnia and Herzegovina, Botswana, Brazil, British Virgin Islands, Bulgaria, Cameroon, Canada, Cayman Islands, Central Economic African Monetary Union, Chile, Colombia, Cook Islands, Costa Rica, Côte d Ivoire, Croatia, Cyprus, Czech Republic, Denmark, Dominican Republic, Eastern Caribbean Central Bank, Ecuador, Egypt, El Salvador, Estonia, Finland, France, Gabon, Georgia, Germany, Ghana, Gibraltar, Greece, Guatemala, Guernsey, Guinea, Guyana, Honduras, Hong Kong, Hungary, Iceland, India, Indonesia, Iran, Islamic Republic of, Ireland, Isle of Man, Israel, Italy, Jamaica, Japan, Jersey, Jordan, Kazakhstan, Kenya, Korea, Republic of, Kuwait, Kyrgyz Republic, Labuan (Malays Latvia, Lebanon, Lithuania, Luxembourg, Macau, Macedonia, former Yugoslav Republic of, Madagascar, Malta, Marshall Islands, Mauritius, Mexico, Moldova, Montserrat, Morocco, Mozambique, Namibia, Netherlands, Netherlands Antilles, New Zealand, Nicaragua, Nigeria, Norway, Oman, Pakistan, Palau, Panama, Paraguay, Peru, Philippines, Poland, Portugal, Qatar, Romania, Russian Federation, Rwanda, Samoa, American, Saudi Arabia, Serbia, Seychelles, Singapore, Slovak Republic, Slovenia, South Africa, Spain, Sri Lanka, St. Vincent a the Grenadines, Sweden, Switzerland, Syrian Arab Republic, Tanzania, Thailand, Trinidad and Tobago, Tunisia, Turk and Caicos, Turkey, Uganda, Ukraine, United Arab Emirates, United Kingdom, Uruguay, Vanuatu, Yemen, Republic of, Zambia.

***Going forward, the region's agenda for financial sector reform will be strongly influenced by the emerging global debate.*** This debate began after the financial crisis erupted in mid-2007 and focuses on the longer-term reforms that advanced countries should adopt to close the gaps in financial supervision that helped sow the seeds of the current crisis. Financial systems in the LAC region differ in many respects from those in advanced countries—with much smaller banking systems and less developed domestic capital markets, including shallower money and equity markets, less corporate financing through commercial paper and bonds, and smaller markets for housing finance. This suggests that feedback loops between asset prices, financial markets and real activity are not as strong as in advanced countries. However, the reforms under consideration in advanced countries could help strengthen financial systems in the region even further, especially as the depth and sophistication of the region's financial markets develop over time and the links between asset prices and real activity become tighter. Also most countries would probably want to adapt to a shift in global standards for financial supervision.



Source: IMF, *International Financial Statistics.*
1/ GDP weighted averages.



Sources: Bank for International Settlements; and the World Federation of Exchanges.
1/ GDP weighted averages. Defined as the sum of local corporate bonds outstanding and domestic stock market capitalization.

***The Financial Stability Board (FSB) and the G20, with the participation of the IMF and other international institutions, have been developing key priorities and specific proposals.***[1] The reforms under consideration reflect the view that the current approach of close supervision of banks, combined with market discipline and self-regulation to monitor non-banks, has serious shortcomings. Yet these reforms seek to strike a balance between mitigating systemic risk and stifling financial innovation with excessive and inefficient

---

[1] Other assessments of possible reforms include Acharya and Richardson (2009), Brunnermeier et. al (2009), CRMPG (2008), the de Larosiere Group (2009), the Group of Thirty (2009) and the Turner Review (2009).

regulation. Implicit in these proposals is the understanding that strong political commitment is a prerequisite for effective financial regulation. The key priorities for action include:[2]

- Expand the perimeter of regulation by re-evaluating what is considered a systemic institution, which would be subject to strong regulation.
- Improve cross-border and cross-functional regulation and cooperation to help promote level playing fields across markets.
- Re-examine existing regulatory and institutional practices to reduce procyclicality.
- Strengthen public disclosure practices for systemically important financial institutions and markets.
- Give greater flexibility to central banks to provide liquidity and focus greater attention on credit and asset price booms.

***This paper assesses the implications of this global debate for the region and presents policy options for improving financial regulation in the long run***. It concludes that countries in the region may want to look closely at steps to broaden the regulatory perimeter, improve consolidated supervision and strengthen public disclosure of information. The proposals to reduce procylicality of prudential regulations may be advisable for many countries as well. The recommendations to grant more flexibility to central banks need to balance the benefits of an increased role in preserving financial stability with preserving the credibility of monetary policy.

***The paper is organized as follows***. Section II looks at broadening the regulatory perimeter, Section III improving consolidated supervision, Section IV reducing procyclicality, Section V strengthening public disclosure of information, and Section VI greater flexibility for central banks. Section VII presents concluding remarks.

## II. Broadening the Regulatory Perimeter

*Recommended Reform*

***A consensus is growing for the view that any financial institution, not just banks, that can threaten the financial system should come under an inner perimeter of strong regulation.*** Non-systemic financial institutions would fall under an outer perimeter, which would entail micro-prudential supervision of non-systemic banks to protect depositors and deposit insurance funds and lighter regulation and minimum information disclosure for other

[2] In April 2009, the G20 also recommended steps to align compensation in the financial sector more closely with long-term objectives and prudent risk taking, improve oversight of credit rating agencies, and deal with tax havens and non-cooperative jurisdictions.

institutions. This would give institutions operating in the outer perimeter more flexibility and scope for innovation. Supervisors would need to manage the perimeter flexibly to bring less regulated institutions into the inner perimeter if they become systemic. Similarly, systemic institutions can shift to the outer perimeter if they no longer pose risks for the system.

***This draws on a key lesson of the crisis that the previous approach to regulation, which centered on strong supervision of just banks, left the system overexposed to risks.*** This view held that market discipline, self-regulation, and some disclosure of information could contain the risks that could arise from non-bank financial institutions, such as investment banks, insurance companies, and private pools of capital such as hedge and private equity funds.

***Essentially the crisis in the United States and other advanced countries can be viewed as a run on non-banks—not considered systemic—that contaminated the entire financial system***.[3] In the U.S., these non-bank institutions took highly-leveraged positions in long-term, illiquid assets relying on funding from short-term debt markets. They were highly interconnected with banks, although they were more exposed to a run on their liabilities than banks, who were protected by the financial safety net. In early 2007, as the U.S. housing market weakened, many small non-bank mortgage lenders lost their access to wholesale funding, forcing them to shut down. This helped spur the fall in the value of mortgage backed securities, which spilled over to structured investment vehicles (SIV)—linked to banks through off-balance sheet activities that held instruments built from securitized mortgages and other assets and were backed by contingent credit lines from banks—and contaminated the market for commercial paper backed by assets, including mortgages. Subsequently many banks were forced to bring SIVs onto their balance sheet and absorb the losses. As the commercial paper market went into a tailspin, counterparty risk surged, and banks curtailed lending, funding problems spread to independent broker-dealers, money-market funds, hedge funds and other institutions that depended on short-term financing. Of course, some advanced countries, such as Canada, have avoided serious financial system dislocations, even through growth is slowing sharply (Box 1).

*Implications for LAC Region*

***Most countries in the region have broad regulatory perimeters (Table 1), yet most could benefit from re-evaluating them.*** Typically, virtually all financial institutions are subject to some form of regulation, although the intensity varies with the type of institution. The strongest supervision applies to banks, which dominate financial systems in the region and are the only financial institutions with access to liquidity facilities and other aspects of the financial safety net. However, the remaining financial institutions are often subject to less stringent supervision, even though they might have systemic implications. This perimeter is very similar to the pre-crisis perimeters in the United States and some other advanced countries.

[3] Acharya and Richardson (2009) provide an excellent description of how the crisis in the U.S. unfolded.

## Box 1. Relative Financial Calm in Canada

***Canada's banking system has so far displayed remarkable stability amid the global turbulence, owing mostly to stringent supervision and regulation.*** The financial crisis has affected Canada, especially by widening credit and money-market spreads to unprecedented levels, raising bank-risk indicators, and hurting pensions and insurers, which are particularly exposed to U.S. mortgage-related writedowns and the equity crash. Nonetheless, no Canadian financial institution has failed or required public capital injections.

***Stringent supervision and regulation, as well as conservative business practices, allowed banks to enter the crisis with strong balance sheets***. Key features of the prudential framework include:

- ***Tighter capital regulations***, which apply to banks' consolidated commercial and securities operations. Canada's minimum capital requirements are tougher than called for by Basel II, and all other G-7 bank regulators. The leverage ratio is limited to 5 percent of total assets.

Tier 1 and 2 Capital Requirements as a Percent of Risk-Weighted Assets

| | Basel II | Canada | U.S.A. | France | Germany | Italy | Japan* | U.K. |
|---|---|---|---|---|---|---|---|---|
| Tier 1 Capital | 4 | 7 | 4 | 4 | 4 | 4 | 4/2 | 4 |
| Total Capital | 8 | 10 | 8 | 8 | 8 | 8 | 8/4 | 8 |

*Higher (lower) requirements apply to internationally active (domestically-oriented) banks.

- ***Financial regulation reviews every five years*** *t*o keep pace with financial innovation.

- ***Rigorous exchange of information across supervisory agencies****,* which meet regularly to discuss issues affecting the financial sector, including matters with implications for solvency, last-resort lending, and the risk of deposit-insurance payouts.

***Moreover, the banking sector focuses on a profitable and stable domestic retail market, with a low risk tolerance.*** Also, the mortgage market is very conservative, where only 5 percent of mortgages are non-prime and 25 percent are securitized (compared with 25 percent and 60 percent, respectively, in the United States). Almost half of residential loans are guaranteed, while the remaining have a loan-to-value ratio below 80 percent. Also, mortgage interest is not deductible from income taxes, encouraging quick repayment.

***In addition to these structural strengths, the Canadian authorities have responded proactively to financial market strains.*** They have expanding liquidity facilities, providing liability guarantees, purchasing (already government-insured) mortgage portfolios, and standing ready to inject public capital into banks, if needed.

Table 1. Regulatory Perimeter in Selected Latin American and Caribbean Countries 1/

| | Significant Domestic Capital Markets | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Argentina | Brazil | Chile | Colombia | Mexico | Panama | Peru | Trinidad and Tobago | Bolivia | Costa Rica | Dominican Republic | Ecuador | Guatemala | Jamaica | Paraguay | Uruguay |
| **Institutions** | | | | | | | | | | | | | | | | |
| Systemic 2/ | | | | | | | | | | | | | | | | |
| Banks | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Non-systemic | | | | | | | | | | | | | | | | |
| Finance companies | ✓ | ✓ | … | ✓ | ✓ | ✓ | ✓ | ✓ | … | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Savings banks | ✓ | ✓ | … | ✓ | ✓ | ✓ | … | ✓ | ✓ | ✓ | ✓ | ✓ | … | ✓ | ✓ | ✓ |
| Off-shore banks | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | … | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Other non-bank intermediaries | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Insurance | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Brokerage houses | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Mutual funds | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Pension funds | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Microfinance | ✓ | ✓ | … | ✓ | ✓ | ✓ | ✓ | … | ✓ | … | ✓ | … | … | ✓ | ✓ | … |
| Cooperatives | ✓ | ✓ | ✓♦ | ✓ | ✓ | ✓ | ✓ | X | ✓ | ✓♦ | X | ✓ | X | ✓ | ✓ | ✓ |
| Hedge funds | ✓ | ✓ | … | … | ✓ | … | ✓ | … | … | … | … | … | … | … | … | … |
| Financial services 3/ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| Securitization companies | ✓ | ✓ | … | ✓ | ✓ | ✓ | ✓ | … | … | … | ✓ | ✓ | X | ✓ | … | ✓ |
| Other Unregulated | | | | | Sofoles | Priv. equity | | | | | | | | | | |

1/ ✓ => subject to regulation; ✓♦ => for Cooperatives, it implies subject to regulation only if above certain size; for Off-shores, it implies that they are not explicitly licensed in the country, but the legislation poses restrictions on them through jurisdiction requirements, consolidated supervision, and parent bank's risk exposure; X=> Not subject to regulation; … => Not available in the respective country.

2/ The systemic classification is based mainly on size, and depicts an average case for the region.

3/ Includes warehouses, trust companies, credit card entities, leasing and factoring corporations, rating agencies, and other entities providing support to financial activities.

***The regulatory perimeter may be a more pressing issue in the countries with sizable non-bank financial institutions and domestic capital markets.*** Banks are at the core of the financial systems in Chile, Brazil, Mexico, Peru, Colombia, Argentina, Panama and Trinidad and Tobago, but these countries also have sizable domestic equity and corporate bond markets, sizable pension funds, financial funds, and fairly close ties with global capital markets (Table 2). Brazil's stock exchange is one of the largest in emerging markets; the market for the Mexican peso is among the most liquid currency markets in the world; trading of derivatives is significant in Brazil, Chile, Colombia, and Mexico; and mutual funds are a significant investment vehicle in Brazil and Chile.

***Countries with less developed capital markets also face potential risks from outside the banking system, and may also benefit from reconsidering the regulatory perimeter.*** Currently, financial activity outside of banks—such as domestic equity and corporate bond markets, pension funds, and mutual funds—are relatively small in Central America, most of the Caribbean and part of South America. However, even in these countries, non-bank financial institutions can create systemic pressures. Moreover, the financial systems in these countries are likely to broaden and deepen further, and a close evaluation of the perimeter now will leave them better prepared for managing financial risks in the coming years.

*Key Issues*

**Which institutions are systemic?**

***Each country would decide which of its institutions were systemic***. The recent G-30 report on financial supervision recommends that the financial supervisor and central bank, where these roles are separate, should set broad guidelines for determining systemic importance. However, in regions, such as Central America and the Caribbean, where large financial institutions operate in many countries, supervisors may want to cooperate in making this decision.

***Generally speaking, a systemic institution, if it ran into difficulties, could cause disruptions and a widespread loss of confidence throughout the system***. This certainly would include any large financial institution (including off-balance sheet items) or those that play a key role in financial infrastructure, such as custody, clearing, settlement or payments. In addition, a group of small financial institutions may be non-systemic individually but may be collectively systemic, since their behavior—especially during a crisis—may be highly correlated. Highly levered institutions should be considered systemic, since a rapid unwinding of their liabilities could affect liquidity across the system. Similarly, small but specialized institutions with large and complex derivatives exposures, or boutique private capital firms with strong linkages to large banks might be considered systemic if a sudden collapse in their positions might undermine confidence in the broader financial sector.

Table 2. Financial Sector Overview, 2008 1/

| | Larger Domestic Capital Markets | | | | | | | | Smaller Domestic Capital Markets | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Argentina | Brazil | Chile | Colombia | Mexico | Panama | Peru | Trinidad and Tobago | Bolivia | Costa Rica | Dominican Republic | Ecuador | Guatemala | Honduras | Nicaragua | Uruguay | Venezuela |
| **Financial system** | | | | | | | | | | | | | | | | | |
| **Financial Sector Credit 2/** | | | | | | | | | | | | | | | | | |
| **Total credit/ GDP** | 20.4 | 41.2 | 74.7 | 37.1 | 14.7 | 128.2 | 15.4 | 38.2 | 26.3 | 42.8 | 17.8 | 25.5 | 31.6 | 84.9 | 35.8 | 25.9 | 22.0 |
| % foreign currency denominated | 2.1 | … | 13.4 | … | 3.8 | … | 49.7 | 16.5 | 74.4 | 42.0 | 21.3 | 100.0 | 42.5 | 12.9 | | 50.3 | 0.0 |
| Credit to private sector/GDP | 11.9 | 40.4 | 72.8 | 34.9 | 13.2 | 126.5 | 33.1 | 35.7 | 25.6 | 39.3 | 15.8 | 25.2 | 24.1 | 51.6 | 25.7 | 24.6 | 32.0 |
| *Of which:* | | | | | | | | | | | | | | | | | |
| **Non-bank financial institutions** | | | | | | | | | | … | … | | … | … | … | | 10.0 |
| Total credit/GDP | 0.5 | 4.6 | … | … | 3.4 | … | 5.2 | 4.2 | 6.6 | … | … | 5.7 | 0.1 | 1.7 | 3.1 | … | 10.0 |
| Credit to the private sector/GDP | 0.5 | … | … | … | 2.3 | … | 26.7 | 3.9 | 6.5 | … | … | 5.7 | 0.1 | 1.1 | 3.1 | … | 7.0 |
| **Financial Sector Deposits** | | | | | | | | | | | | | | | | | |
| Total deposits/GDP | 20.9 | 76.2 | 63.2 | 33.3 | 17.4 | 158.9 | 24.8 | 40.4 | 35.2 | 21.1 | 23.2 | 25.1 | 33.2 | 44.5 | 39.9 | 43.0 | 24.5 |
| In percent of foreign currency denominated | | 0.1 | 13.8 | 0.0 | 12.2 | … | 58.2 | 29.6 | 53.4 | 49.8 | 27.1 | 100.0 | 33.9 | 13.7 | 24.4 | 76.5 | 0.0 |
| Private deposits/GDP | 14.5 | 74.5 | … | … | … | 106.5 | ... | 39.4 | 35.2 | 20.8 | 20.9 | 23.2 | 29.8 | 44.0 | | 41.2 | 18.2 |
| **Mutual funds assets/GDP** | 2.6 | 33.5 | 15.8 | … | 7.9 | 2.9 | 2.3 | … | 2.4 | 7.4 | 0 | 1.6 | 0 | 0 | … | 0.0 | 0.7 |
| **Pension funds assets/GDP** | 11.6 | 17.0 | 62.5 | 14.3 | 8.9 | 0.4 | 12.7 | 18.7 | 19.7 | 0.2 | 3.6 | … | 0 | 0.04 | … | 13.4 | … |
| **Stock market capitalization/GDP** | 13.8 | 63.9 | 118.0 | 50.3 | 34.5 | 41.6 | 50.4 | 71.8 | 14.9 | 8.7 | 0 | 9.2 | 0 | 0 | 6.9 | 0.4 | 4.5 |
| **Domestic government bond market** | | | | | | | | | | | | | | | | | |
| Amount outstanding/GDP | 58.8 | 42.2 | 10.0 | 27.9 | 23.8 | 35.1 | 6.0 | 9.6 | 4.8 | 37.3 | 15.6 | 4.2 | 21.2 | … | 16.6 | 22.7 | 47.2 |
| **Corporate bond markets** | | | | | | | | | | | | | | | | | |
| Amount outstanding/GDP | 3.7 | 8.6 | 11.4 | 0.4 | 3.0 | 12.1 | 0.9 | … | … | 1.4 | 0.8 | … | 0.4 | … | … | 1.1 | 1.1 |

1/ End-June 2008 unless otherwise indicated.

2/ Includes both banks and NBFIs unless otherwise indicated.

***It might be beneficial for regulators to set flexible definitions for systemic institutions.*** While broad guidelines promote transparency and minimize uncertainty about regulation, overly specific criteria would give institutions a strong incentive to find loopholes to avoid being classified as systemic. In addition, flexibility will allow supervisors to adapt these criteria as market conditions evolve.

***In the region, examples of possible systemic non-bank financial activity could include***:

- *Non-bank financial institutions.* In some countries, these institutions are quite large. For example, in Brazil, investment funds account for a significant share of financial system assets. In Mexico, very lightly-regulated finance companies (Sofoles) have been operating for a while. While these institutions in Brazil and Mexico have not had major difficulties, mutual funds in Bolivia experienced runs in mid-2002 following a political crisis, affecting the stability of their affiliated commercial banks because of their large maturity and liquidity mismatches. Financial system outflows reached US$540 million (7 percent of GDP). In general securities regulation in the LAC region compares favorably with other emerging market regions, yet there are still several areas for improvement (Figure 3).

- *Insurance companies*. These companies are sizable in a number of countries in the region, connected to the financial system through holdings of assets such as equities, government securities, and bank deposits. In countries with private pensions, insurance companies provide annuities, and in Chile the government provides an annuity performance guarantee. Several Financial System Stability Assessment (FSSA) reports refer to the need to maintain adequate provisioning against expected claims and to continue to strengthen regulation. Also insurance supervision in many countries in the region falls short of complying with the core principles of the International Association of Insurance Supervisors (Figure 4). The recent experience with the CL Financial Group—a large conglomerate headquartered in Trinidad and Tobago with operations throughout the Caribbean—points to the potential risks from this sector. With the deterioration of global financial conditions in 2008, several highly-leveraged subsidiaries of the group faced liquidity and solvency pressures, including insurance subsidiaries throughout the region, prompting the government intervention in the financial group as well as several of the subsidiaries. In Jamaica, a crisis started in the mid-nineties with liquidity problems in the life insurance industry and then spread to affiliate commercial banks, which were forced to turn to the central bank for liquidity support. The fiscal cost of resolving the problems at Jamaica's non-bank institutions exceeded 11 percent of GDP.

- *Offshore financial institutions*. Offshore-licensed financial institutions often operate under less-supervised, informal structures, and can exacerbate contagion risks that spread to the onshore bank affiliates, and facilitate capital overvaluation, insider or related-lending to avoid prudential controls, and fraud and money-laundering. In

Guatemala, an offshore affiliate of Banco del Cafe—fourth largest—had a large undisclosed exposure to a related company that was uncovered with the collapse of the brokerage house REFCO. Deposit runs on the offshore in early 2006 affected also the parent bank, which was ultimately resolved. In Antigua and Barbuda, problems arose in the Antigua-based Stanford International Bank—an offshore bank—following charges by the U.S. Securities and Exchange Commission of fraud. This led to a deposit run on the Stanford-owned Bank of Antigua—an onshore bank—and ultimately its intervention by the Eastern Caribbean Central Bank.

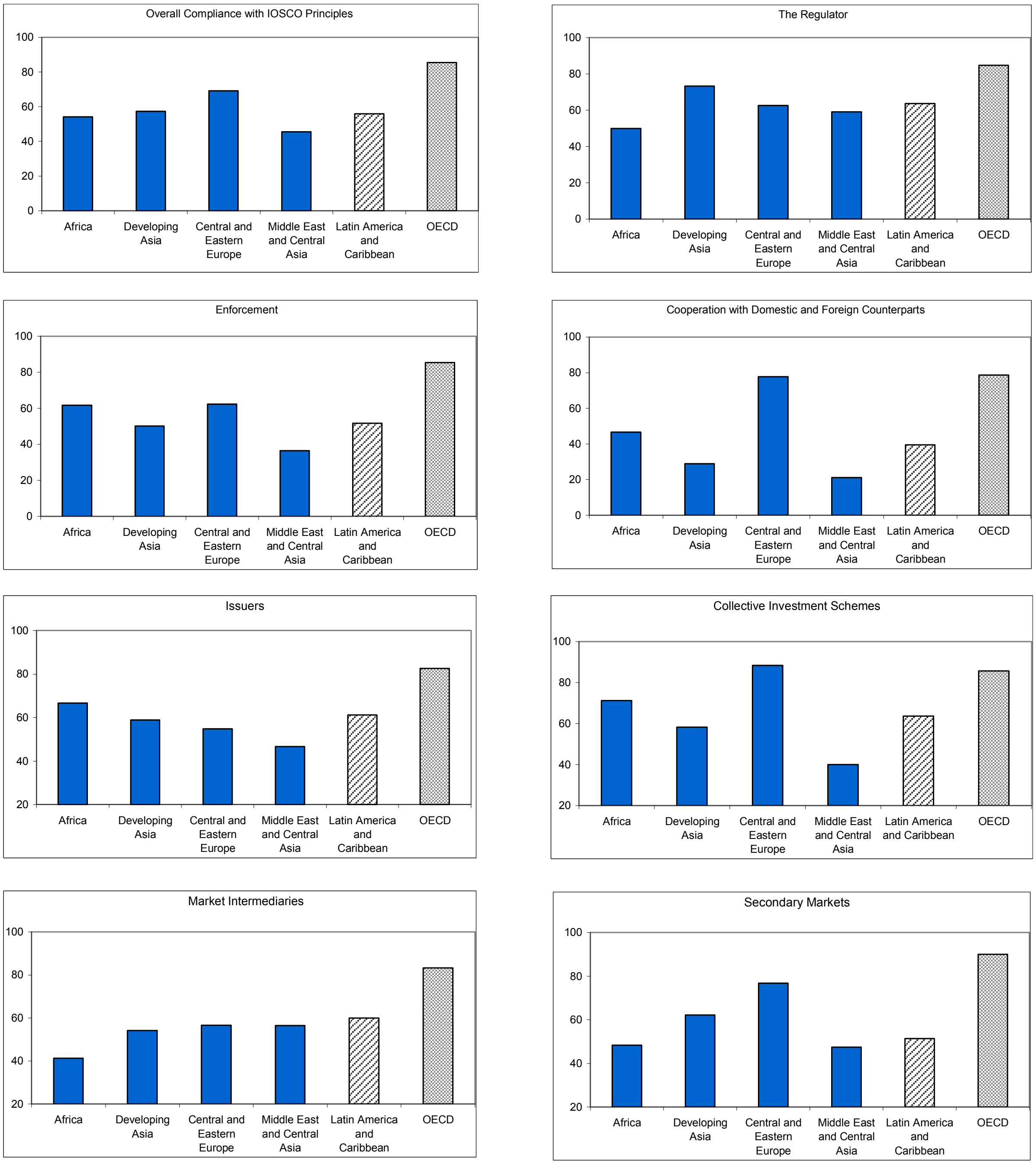
- *Credit unions/cooperatives.* In Jamaica, credit unions cover over half the population, and the largest credit unions appear increasingly like traditional banks. Nonetheless, a formal supervisory framework for these entities is still being developed and the Bank of Jamaica only recently obtained the authority to receive information on the operations of credit unions. In other countries, such as Honduras and Paraguay, cooperatives play a similar role as credit unions in Jamaica and are often subject to light regulation as well.

- *Non-financial firms issuing credit cards.* In a number of countries, supermarkets and other major retail chains are issuing credit cards to households, using credit lines from banks as well as funds raised directly in capital markets. These obligations fall outside the supervisory net, yet could pose a risk for the financial system if households were to run into difficulties servicing this debt.

- *Derivatives exposure***.** In 2008, exporters and other nonfinancial firms in Brazil and Mexico took large speculative positions in derivatives, taken with the aim of profiting from local currency appreciation and interest rate differentials. These firms incurred losses when the Brazilian real and the Mexican peso depreciated sharply in August-November 2008. The central banks in each country intervened heavily in their foreign exchange markets to contain the effect of these losses on currency volatility.

- *Financial conglomerates.* Financial conglomerates operate in many countries, including Brazil, Chile, Colombia, Mexico, Peru and Trinidad and Tobago and often provide a wide array of financial services besides banking, including insurance, mutual funds, leasing, credit cards, securities trading and underwriting, and offshore affiliates. While the bank affiliate of the conglomerate falls under the regulatory net, the gaps in consolidated supervision in many countries mean that the connections among the all the affiliates may be poorly understood and a potential source of systemic risk.

Figure 3. Compliance with International Organization of Securities Commissions Objectives and Principles of Securities Regulation 1/ 2/

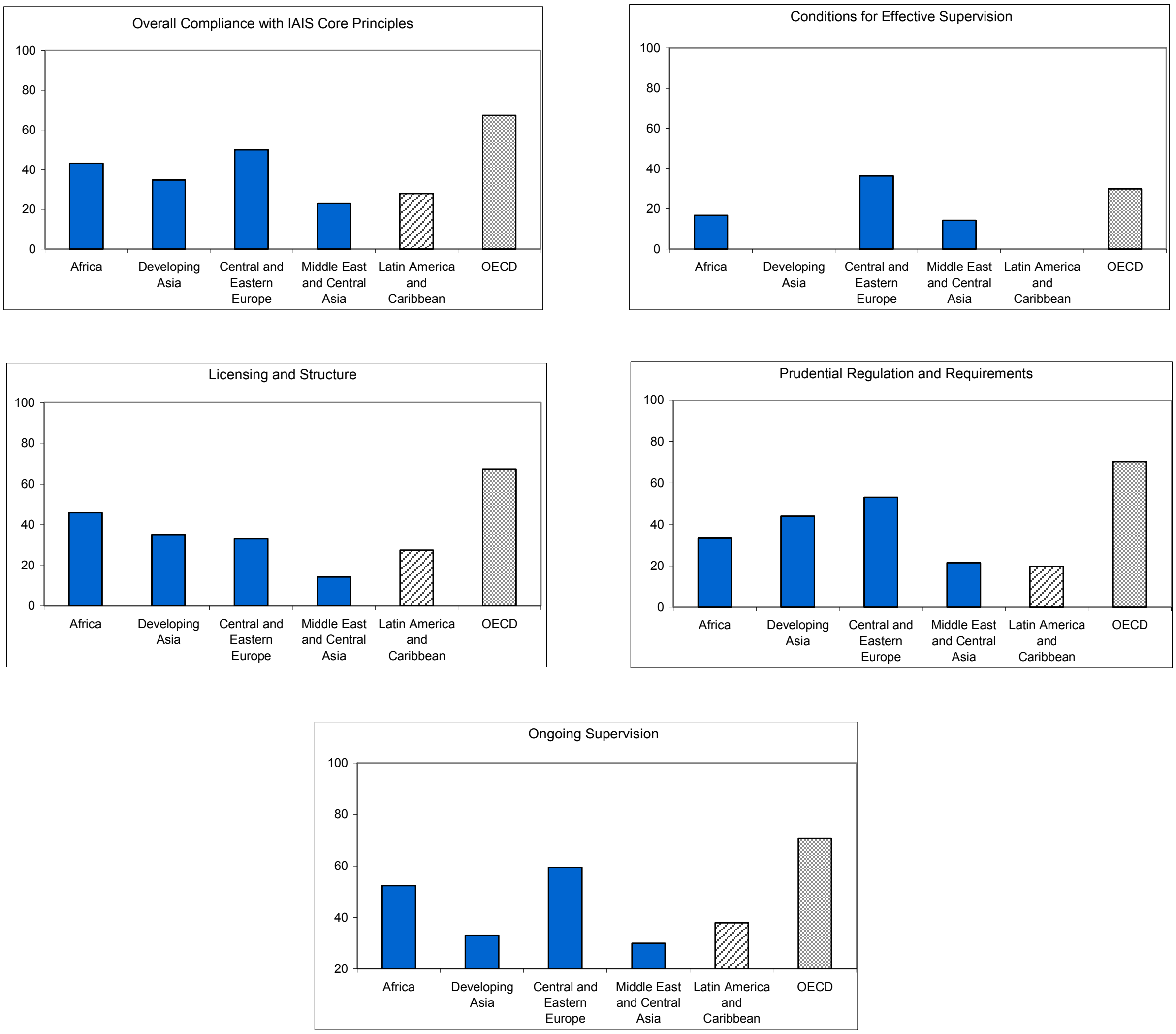



Source: IMF's standard and codes database.

1/ Average fraction of assessments resulting in broadly or fully compliant.

2/ Countries include: Argentina, Armenia, Australia, Austria, Bahamas, The, Bahrain, Bangladesh, Barbados, Belgium, Bermuda, Brazil, British Virgin Islands, Bulgaria, Cayman Islands, Chile, Colombia, Croatia, Czech Republic, Egypt, Estonia, Finland, France, Georgia, Germany, Ghana, Gibraltar, Greece, Guernsey, Hong Kong, Hungary, Iceland, India, Ireland, Isle of Man, Israel, Italy, Japan, Jersey, Jordan, Kazakhstan, Kenya, Korea, Republic of, Kuwait, Labuan (Malaysia), Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Mexico, Monaco, Morocco, Netherlands, New Zealand, Nigeria, Oman, Pakistan, Panama, Philippines, Poland, Portugal, Romania, Russian Federation, Senegal, Singapore, Slovak Republic, Slovenia, South Africa, Spain, Sri Lanka, Sweden, Switzerland, Tunisia, Ukraine, United Kingdom.

Figure 4. Compliance with International Association of Insurance Supervisores Core Principles 1/ 2/




Source: IMF's standards and codes database.

1/ Average fraction of assessments resulting in largely or fully compliant. Assessment based on IAIS 2000 methodology.

2/ Countries include: Argentina, Armenia, Aruba, Barbados, Belize, Bermuda, Brazil, British Virgin Islands, Bulgaria, Cameroon, Canada, Cayman Islands, Croatia, Czech Republic, Dominican Republic, Egypt, Estonia, Finland, Gabon, Georgia, Germany, Ghana, Gibraltar, Guernsey, Hong Kong, Hungary, Iceland, Ireland, Isle of Man, Israel, Japan, Jersey, Jordan, Kazakhstan, Korea, Republic of, Labuan (Malaysia), Latvia, Liechtenstein, Lithuania, Luxembourg, Macau, Malta, Mexico, Morocco, Netherlands Antilles, Nigeria, Philippines, Poland, Russian Federation, Senegal, Singapore, Slovak Republic, Slovenia, South Africa, Sweden, Switzerland, Tunisia, Turk and Caicos, United Kingdom, Vanuatu.

**Should systemic institutions be treated differently?**

***Supervisors will probably need to improve methodologies for assessing systemic risks.*** Throughout the world, supervisors recognize the need to improve the understanding of how to assess systemic risk. While many countries evaluate this risk on an ad hoc basis, a number of central banks or supervisors have frameworks to assess linkages across markets and across institutions, applying methodologies of varying degrees of sophistication. The Banco de Mexico, as well as the Swiss National Bank, the German Bundesbank and the Bank of England, have used network analysis. This draws on a matrix of interbank exposures through operations such as loans, deposits, securities, derivatives and foreign exchange transactions and assesses the effect of a credit event in one bank on the capital adequacy of the others. Other frameworks are being developed that rely on asset prices, such as spreads on credit default swaps of financial institutions, or default probabilities.[4] Key challenges going forward are to apply these methods across all financial institutions and elaborate the linkages between financial and macroeconomic conditions.

***Regulators could subject systemic institutions to higher standards by taking into account their contribution to systemic risk.*** Those standards could be tailored to the risks coming from factors such as size, funding mismatches, leverage, and liquidity, with a view to limit a systemic institution's potential to disrupt financial stability and to contain the moral hazard created by the perception of being too big or too interconnected to fail. Possible actions would be to better calibrate prudential requirements on capital adequacy, leverage, and liquidity, and scrutinize risk management practices. A number of countries in the region already tailor prudential requirements for risks faced by each bank. In Chile, the Superintendency of Banks requires Banco Santander—because of its market share—to maintain a minimum capital adequacy ratio of 11 percent, while the standard minimum is 8 percent. In Peru, the Superintendency of Banks has its own internal "shadow capital adequacy ratio", above the legal minimum per type of institution, which triggers some action by the supervisory agency when the observed capital adequacy ratio approaches or falls below it. However, broadening of the perimeter of strong supervision may require new tools and approaches for those countries that decide that some non-banks are systemic.

***Higher scrutiny may come in hand with access to central bank liquidity facilities.*** There is an open question as to whether all systemic institutions would have access to the financial safety net. While this access could curtail the risk of a run on liabilities, a broad extension of the financial safety net could add to moral hazard. One option would be to give systemic non-bank financial institutions access to the financial safety net only in extreme emergency situations when systemic risk is high.

---

[4] Chapter 2 of the IMF's April 2009 Global Financial Stability Report explains several of these approaches to measuring systemic risk.

***There are proposals for more unified supervision of systemic risk.*** The U.S. Treasury and the De Larosiere commission for the EU have recommended the creation of an independent regulator to supervise systemic institutions. This authority would monitor the stability of systemic institutions and financial infrastructure, track rapidly increasing exposures that cut across firms and markets, and oversee the quality of risk management practices. By focusing on the consolidated operations of systemic institutions, it could close any regulatory gaps. In some proposals, such a systemic risk authority would work with existing regulators, which would still focus on the soundness of individual institutions, while other proposals call for a single regulator for systemic institutions, which require special attention because of their size and complexity and ability to exploit cracks in the regulatory system.[5]

**How would non-systemic institutions be treated?**

***Naturally, some oversight is warranted for non-systemic institutions as well.*** In Latin America there has been a sustained expansion of nonbank financial institutions, such as mutual funds, brokerage entities, insurance companies, and investment banks, subject to weaker regulation. These entities could be required to disclose information to help safeguard investors, while being subject to less stringent prudential requirements to allow for innovation. The April 2009 G20 declaration recommends that stronger prudential standards be applied to all financial institutions, once the global economy has recovered from the current crisis. The G20 also would like countries to subject hedge funds above some minimum size to registration and disclosure requirements. This would allow supervisors to assess their contribution to systemic risk, either individually or collectively and to ensure that hedge funds follow sound risk management. Also countries should share this information, since many hedge funds operate in many countries.

***Some institutions could move from the outer to the inner perimeter.*** Supervisors might occasionally also have to determine when institutions begin to approach systemic importance, necessitating a move to the higher regulatory standard, and supervisors would need sufficient information to make this decision. A practical example of such an approach is the one followed by Chile with credit cooperatives, whose supervision and control moves to the jurisdiction of the bank supervisor when their equity exceeds a certain threshold. Other parameters that could be employed include size of deposits, assets, and exposures to other financial intermediaries.

[5] This issue is discussed in Chapter 13 of Acharya and Richardson (2009).

## III. Improving Consolidated Supervision

*Recommended Reforms*

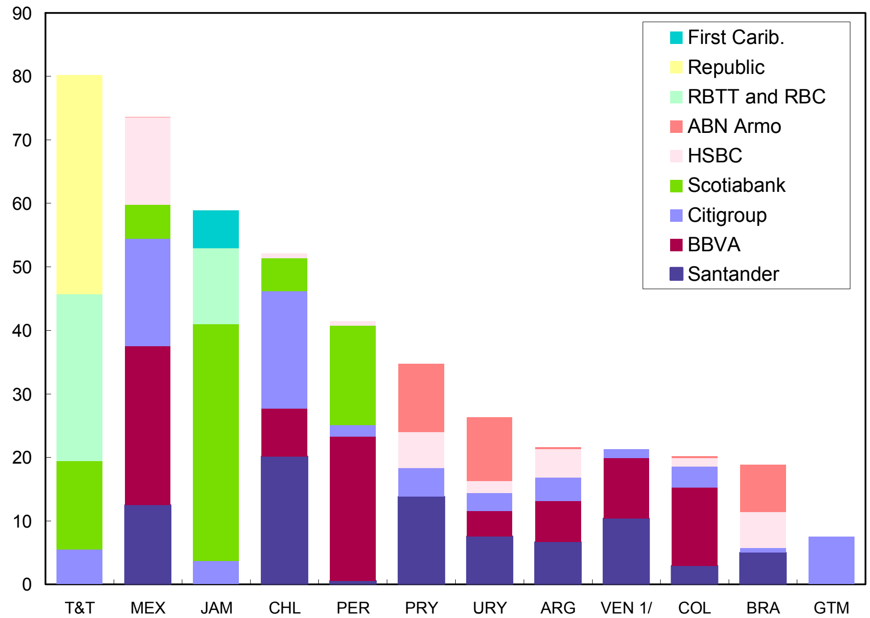
***Improved consolidated supervision will require better information sharing and closer harmonization to limit regulatory arbitrage, while facilitating crisis resolution.*** In advanced countries, supervisors often lacked the information and capacity to see the links between different types of financial institutions and instruments within a country (cross-functional) as well as links among financial institutions across countries (cross-border). This was especially true for large complex financial institutions that operated in many different financial markets within a country as well as in many different countries. Also these institutions tended to design financial instruments that were covered by the least intrusive regulations available. Harmonized regulations on deposit insurance, resolution procedures and safety nets, and international understandings on the responsibility of various national entities in resolving multinational banks, would have made it easier for regulators in Europe and elsewhere to manage the effects of crisis.

*Implications for LAC Region*

***With an increased focus on all systemic financial institutions, the region could benefit from putting in place explicit legal frameworks to ensure a stronger cross-functional consolidated supervision.*** In much of the region, large financial conglomerates, often foreign-owned, or bank holding companies operate in many segments of the financial sector and supervisors need a stronger legal framework to see the connections among all the different operations. Many countries, such as Brazil, have strengthened their legal frameworks for consolidated supervision (Box 2). However, these frameworks typically suffer from two key shortcomings. First, the scope of consolidated supervision often does not allow a supervisor to monitor all institutions within a financial conglomerate, which in several countries has contributed to difficulties with offshore operations of a conglomerate. Second, supervisors often do not have the same powers to enforce regulations and require prompt corrective action for all institutions within a conglomerate.

***Cross-border supervision also matters in many countries, where international banks have a significant presence (Box 3).*** In a number of these countries, these banks account for more than 40 percent of total banking system deposits. The host country supervisors must understand key elements of the operations of the parent bank to understand the systemic risks posed by the subsidiary that operates in their country. Moreover, in the global financial crisis, parent banks may face a capital or liquidity shortage and could try to draw resources from its subsidiaries, posing a possible threat to the financial system of the host country. In Central America, regional banks account for about 15 percent of total bank deposits in the region, and have complex structures, including parallel and offshore banks, creating legal gaps in the oversight authority which limit effective supervision.

Share of Deposits Held by Subsidiaries of International Banking Groups
(Percent of total banking system deposits, latest available)




Sources: National authorities; and IMF staff calculations.
1/ Foreign banks' liabilities in percent of total banking system liabilities.

*Key Issues*

**How to strengthen consolidated supervision?**

***The legal framework for consolidated cross-functional supervision could be strengthened.*** Depending on the country, the reforms could include giving the supervisor the ability to: (i) set capital requirements for the bank as well as all other affiliates of the group; (ii) monitor and apply remedies to all institutions within a conglomerate; and (iii) establish clear rules that mandate the exchange of information among supervisors. Moreover the legal framework could establish a lead supervisor in countries with multiple supervisors and require joint inspections of each institution in a conglomerate that involve all the relevant supervisors. The law, or the supporting regulations, could clearly spell out the triggers for intervention of systemic institutions and clarify arrangements for providing emergency liquidity support. Steps to harmonize prudential requirements across different types of financial institutions as much as possible might help limit the size of conglomerates by curtailing the opportunities for regulatory arbitrage.

### Box 2. Brazil—Regulations to Strengthen Consolidated Supervision

***The regulatory framework for the consolidation of financial holdings in Brazil has reduced the scope to use off-balance sheet vehicles for regulatory arbitrage.*** Banking and securities regulations govern the consolidation of special purpose vehicles (SPV) and other securitized investments.

- Banking regulations require financial institutions to prepare consolidated financial statements that include direct or indirect, *solo* or joint, investments (including those resulting from shareholder's agreements). Investments must be consolidated if the supervised financial institution has the power to: (i) elect or dismiss the management of the invested entity, (ii) exercise effective operational control, or (iii) exercise shareholder control, directly or indirectly, even through mutual funds. Unsupervised financial institutions that are deemed to be controlled *de facto* by a supervised financial institution must also be consolidated, even in the absence of investment. Consolidated financial statements are subject to external audits and complete external audits of financial institutions must be performed twice a year.

- In parallel, securities regulations require that consolidated financial statements be prepared by: (i) listed companies, and (ii) the parent companies (even if not listed) of a group of entities that include a listed company. Securities regulations require that consolidated financial statements comprise all special purpose vehicles (SPV) whose activities are by principle controlled directly or indirectly by the listed company, unless deemed not material. Furthermore, the securities supervisor can require the consolidation of investments on entities that are not formally controlled, or to request the exclusion of investments in entities that are otherwise formally controlled. Capital market regulations also require that listed companies consolidate all their subsidiaries.

***Special purpose vehicles are also subject to capital charges that match those on comparable balance sheet positions.***

- Receivables Investment Funds (FIDC) are the most common SPV structure in the Brazilian capital market. While these mutual funds are not consolidated, capital is required for the risk exposure of positions, reflecting the credit and market risks of the underlying assets. This regulation seeks to avoid regulatory capital arbitrage associated with asset securitization.

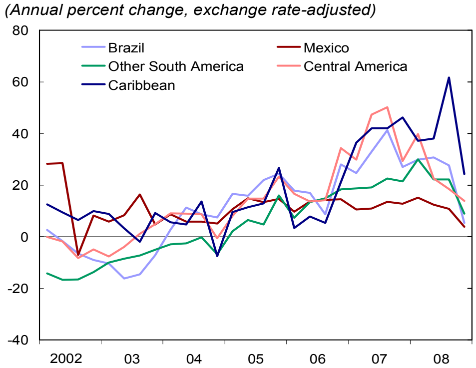
- Under accounting and disclosure norms, which conform to international financial reporting standards, the classification and disclosure of asset sales must take into account the extent of the effective transfer of risk, returns, and control over the underlying assets. Securitized loans must remain in the balance sheet of the originating financial institution, unless there is a significant and final transfer of risk, profits, and control over the portfolio. This closes the door for regulatory arbitrage between on- and off-balance sheet positions, or among portfolio classes.

- Capital requirements on off-balance sheet guarantees are similar to those established in the simplified standardized approach of Basel II. However, Brazil has chosen not to rely on rating agencies. Risk weights on off-balance sheet guarantees match the factors used in similar credit operations carried on-balance, which vary by counterparty types reflecting differences in risk.

## Box 3. Adapting to a New Regulatory Environment—The Role of Foreign Banks?

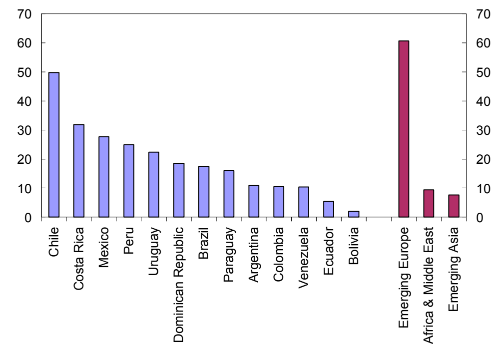
***Foreign banks now have a significant presence in much of the LAC region.*** Since 2005, foreign bank lending to the LAC region has expanded rapidly, accounting for a significant share of banking activity in many countries by 2008. This increased presence offers key benefits for macro-financial stability in host countries by strengthening risk management and corporate governance. At the same time foreign banks respond to conditions in both their home as well as host countries, presenting a challenge for host country supervisors. Kamil and Rai (2009) show that foreign bank lending to the LAC region—through local subsidiaries and direct cross-border transactions—is influenced by credit conditions in global money markets and the financial soundness of the parent bank as well as economic conditions in the host country. In the fourth quarter of 2008, lending by foreign banks to the LAC region slowed rapidly, amid the freezing of global money markets and doubts about the health of banks following the collapse of Lehman.

**Growth in Foreign Banks' Lending to LAC, by Country or Region 1/**
*(Annual percent change, exchange rate-adjusted)*




Sources: Bank for International Settlements; IMF, *International Financial Statistics;* and IMF staff calculations.
1/ Includes cross-border lending and lending by foreign-owned local affiliates in each country.

**Foreign Banks' Lending as a Share of GDP, 2008 1/**
*(Percent)*




Sources: Bank for International Settlements; and IMF staff calculations.
1/ Includes cross-border lending and lending by foreign-owned local affiliates in each country.
Note: Regional data correspond to the median across countries.

***One question is whether changes in prudential rules applying to parent banks would affect the supervisory frameworks in the LAC countries with a sizable presence of foreign banks.***

- Currently, local subsidiaries of foreign banks—which account for roughly two-thirds of total foreign bank lending to the LAC region—must comply with regulations of the host country to ensure that the playing field is level among all banks in the host country. For example, as mentioned previously Banco Santander's subsidiary in Chile must meet the minimum capital requirement of 11 percent set by the Chilean supervisor, because of its large size in Chile's financial system. Similarly, home country prudential norms for parent banks typically apply to their domestic operations, and not to their entire global balance sheet.

- However, proposals for a new regulatory framework call for much more effective consolidated cross-border supervision—especially for systemic global banks—to cut off opportunities for regulatory arbitrage. This would mean that prudential norms should apply to the consolidated global operations of systemic institutions. These proposals also call for the creation of regulatory colleges of supervisors in the countries where global banks operate to allow for full information sharing, harmonization of norms across countries and a clear assignment of responsibilities.

***At this stage, it is premature to draw strong conclusions about how a new regulatory framework in advanced countries would affect the operation of subsidiaries of global banks in the LAC region.***

- Foreign bank subsidiaries will continue to comply with the host country prudential framework.

- Also, many key aspects of more effective cross-border supervision still need to be developed, and parent banks may have considerable latitude to decide how to satisfy new requirements that apply to their global balance sheet. For example, they could have the scope to comply with a special capital charge in ways that have little effect on subsidiaries—such as by selling common or preferred shares in their home financial markets—or in ways that do affect subsidiaries—such as requiring subsidiaries to curtail credit growth.

- However, complications could arise if regulations were less strict in the host country than in the home country, which might open loopholes to bypass tougher standards in the home country.

***Countries may benefit from creating institutional mechanisms to build closer cooperation among supervisors***. Many countries rely on memoranda of understanding (MOU) to spell out clear responsibilities and operational rules covering information exchange and supervisory decision making, yet the experience with MOUs is mixed at best. To strengthen information sharing within a country, cooperation can be institutionalized by setting up regular technical meetings of superintendents to discuss diversified financial companies or establishing collaborative reports on cross-cutting issues. In addition, the minister of finance or the central bank can convene regular meetings of the different supervisors to help promote cooperation.

***Ensuring close cooperation among supervisors across countries is more challenging***. Financial supervisors in countries where international banks have a significant presence often have MOUs with their counterparts in the United States, the UK, Spain or other countries where the parent bank is headquartered. While these agreements provide an avenue for cooperation, an institutional mechanism for collaboration, such as a college of supervisors, may be useful. For countries with close ties, especially where depositors can freely move across borders, harmonization of deposit insurance schemes may also be crucial. In regions, such as Central America, where banks operate across borders, bank resolution frameworks (especially loss-sharing arrangements) and lender of last resort facilities could be agreed on by all cooperating countries.

**Is there an optimal structure for cross-functional regulation**?

***One option to improve cross-functional supervision is to unify all financial supervision under a single agency.*** Some countries, such as Colombia, have decided to supervise all financial activities through a single agency, consolidating oversight of the financial sector into one overriding supervisor.[6] The logic to this approach is that a single regulator for all financial activities can reduce the scope for different treatment of companies based on their original line of business or for regulatory arbitrage. Information can also be shared more easily within one regulator than across a group. Finally, economies of scale and scope can be harnessed by a single regulator covering all aspects of financial supervision.

***On the other hand, there are drawbacks to a unified supervisor.*** Most other countries in the region, both those with more developed financial markets, such as Brazil and Chile as well as countries with less-developed markets, continue to have multiple functional supervisors. Unified supervisors can become quite unwieldy, especially in countries with complex and large financial systems, and a system of multiple supervisors may allow for better specialization by each type of institution. Regulators tend to develop different cultures over time and consolidating varied regulators, particularly those with long experiences in very different fields, might be counterproductive.

[6] In Colombia, some cooperatives are supervised by a different entity,

## IV. Reducing Procyclicality in Financial Systems

*Recommended Reforms*

***Countries should take steps to make their regulatory frameworks less procyclical and even countercyclical.*** The excessive credit growth prior to the crisis, as well as the rapid deleveraging currently underway, may have been exacerbated by procyclical features of regulatory frameworks**.** These features include the capital adequacy guidelines under Pillar 1 of the Basel II framework. These define risk-weighted assets using procyclical factors—ratings of credit agencies, which exhibit a strong degree of procyclicality, or banks' internal risk models under the more advanced framework, which often focus only on the recent past and not the entire cycle. Loan loss provisioning is typically linked to the payment history on loans, which tends to be stronger during booms and creates incentives to expand lending. Also fair value accounting (FVA)—which requires that the prices of assets on banks' books be marked to market prices to reflect their "true" value—can be procyclical. In this crisis, FVA required banks to register losses during the downturn as the value of their assets fell, intensifying funding problems which created pressure to sell those assets and contributing to a further fall in asset prices. This problem can be aggravated by low liquidity, which can lead to larger swings in market prices and the "fair value" of bank assets. However, these effects can be mitigated to the extent that financial institutions make use of the exemption for assets held to maturity, which can be reported on the balance sheet at amortized cost—not the current market value.

*Implications for LAC Region*

***The regulatory systems in the region do have features that give rise to procyclicality.*** In some countries, loan loss provisions are linked to loan quality and past payment history, though in others more forward-looking criteria and judgment are used. In the same vein, lending tends to be based on collateral, whose value may fluctuate sharply during the cycle given the thin secondary markets for most types of collateral.

***Other features—the capital adequacy requirement and the use of FVA—may be less procyclical than in advanced countries.*** Capital adequacy standards throughout the region conform to Basel I, although several countries—Brazil, Mexico, Chile, Colombia, Peru, and Panama—are moving towards Basel II. Basel I guidelines rely on fixed risk weights that are stable throughout the cycle. In principle, the minimum capital asset ratio (CAR) under Basel I could induce procyclicality in a downturn, if banks curtail lending to keep the CAR above the minimum. However, this may not be a significant issue in the region, where the average CAR is well above the minimum. FVA is used in a number of countries, such as Brazil, Mexico, Colombia, Peru, Costa Rica, Bolivia and Jamaica. However, some countries may want to continue moving forward with adopting Pillar 1 of Basel II capital requirements or broadening the use of FVA, and these countries would benefit from adopting reforms now to reduce the procyclicality of these features of regulatory systems.

*Key Issues*

**What are some of the possible options to make regulations less procyclical or countercyclical?**

***Countries can mitigate the effects of marking to market and apply more conservative valuations for collateral.*** FVA is still considered essential to fairly value a financial institution's traded assets and offers important advantages over amortized cost accounting, which recognizes losses or gains only when they are realized and can paint a misleading picture of a firm's true net worth. Also FVA incorporates other more judgmental methods for assets without a clear market price, such as relying on an observable price for a similar asset (a level 2 asset) or a model to value an asset (a level 3 asset), as acceptable tools to price assets with small, illiquid markets. Moreover, the US Financial Accounting Standards Board recently approved three amendment to FVA to firms more discretion in using mark-to-model valuations for illiquid securities. Going forward, possible improvements could include allowing institutions to build cushions for the effects of marking asset prices to market by setting aside a valuation reserve for their trading book or to value assets at average prices over some period, although any such changes should be undertaken with an eye towards their effects on the transparency of revenue and earnings. Collateral valuations could be set at historical averages instead of market values, or more cautiously, the lower of the current price and the average price over some recent period, say the last 5 years. Of course, any these kinds of solutions would need to be consistent with a country's accounting framework.

***Another option is to make provisioning requirements forward of looking, focusing on losses over the cycle.*** Bolivia, Colombia, Peru and Uruguay have followed the example set by Spain and established systems that seek to make provisioning more forward-looking to reflect expected losses through the life of each loan (Box 4).

***It may be possible to make capital adequacy requirements countercyclical.*** One possible approach would define two levels of regulatory CAR—a publicly disclosed minimum to be enforced at all times, and an extra capital cushion to be raised during periods of strong growth and reduced during downturns. The CAR would remain above the minimum of 8 percent throughout the cycle. Also, making the cyclical adjustment with a clear rule would promote transparency, enhance credibility and protect supervisors from political pressures for discretionary adjustments in CARs. These adjustments to capital could be equivalent to dynamic provisioning. Other proposals suggest that financial institutions could rely on contingent capital with debt that would convert into equity under certain conditions. [7]

[7] Squam Lake Group (2009).

**Box 4. Forward Looking Provisioning in the LAC Region**

*Several countries have tried to make banks set provisions taking into account the risk profile of the loan portfolio over the entire cycle. Spain pioneered this approach in 2000, and more recently, Bolivia, Colombia, Peru, and Uruguay have introduced similar schemes.*

**Spain**

In 2000, Spain introduced a statistical provision to act as a buffer while specific provisions—which are set according to the payment history of a credit—fluctuate during the cycle. The statistical provision is based on a bank's internal models (based on data spanning at least an entire economic cycle) or a set of rates, between 0–1.5 percent, established by the regulator. Statistical provisions equal the difference between the estimated underlying risk over the entire cycle and the specific provisions. During high growth periods, specific provisions would fall but statistical provisions would rise. During periods of poor credit quality, banks would raise specific provisions but could fund these by drawing down the statistical provision; ameliorating the impact on the income statement.

It is unclear whether this approach helped curbed the growth in credit, which increased sharply from 1999 to 2007. However, the build up of provisions has been quite significant, providing an important cushion in the current global crisis.

**Bolivia**

In October 2008, the regulatory authority established a countercyclical provisioning rule. The required provisions fall in the range 1.5 to 5.5 percent of outstanding loans, varying depending on the classification and type of loan, and are in addition to standard specific provisions. The use of these provisions is limited to a 50 percent of the required specific provisions that would arise during a downturn. Banks can make use of it only when (i) required specific provisions have increased for 6 consecutive months, (ii) banks have met the total targeted amount of countercyclical provisions, and (iii) the no objection of the regulatory authority.

**Colombia**

Starting in mid-2007 for commercial loans, and mid-2008 for consumer loans, provisions have a countercyclical as well as a specific component. During an upturn, banks must fund the countercyclical component, according to default probabilities for an adverse scenario estimated by the financial supervisor, for use if needed during a downturn. The supervisor determines the phase of the cycle at its discretion.

**Peru**

In November 2008, the Peruvian authorities established mandatory countercyclical provisions to complement specific and general provisions. For the countercyclical provision the regulator established a set of rates, between 0.4–1.0 percent, according to the type of loan. During the upturn, banks will have to accumulate countercyclical provisions, and reallocate them to specific provisions for nonperforming loans if needed in a downturn. The supervisor determines the phase of the cycle based on a series of thresholds for GDP growth.

**Uruguay**

Dynamic provisions were created in September 2001 along the lines of the Spanish model. Banks have to make provisions ranging from 0.1 to 1.8 percent (depending on the loan classification category) net of speciof their average loan portfolios net of specific loan loss provisions until the sum of the dynamic provisions reaches 3 percent of total loans.

## V. IMPROVING PUBLIC DISCLOSURE OF INFORMATION

*Recommended Reforms*

***Supervisors as well as the public need much more detailed information on the exposures of financial institutions, and their linkages across borders and markets.*** The crisis revealed extensive gaps in financial data disclosure and the understanding of underlying risks. Financial activities expanded in areas with few or no disclosure requirements, leaving regulators ill-equipped to see risk concentrations. Disclosure requirements need to be strengthened in many areas, including on and off-balance sheet exposures; valuation of complex financial instruments; over-the-counter derivatives markets and clearing arrangements; leverage; and cross-border and counterparty exposures. Such measures would also strengthen market discipline, helping final investors to perform some of the due diligence currently outsourced to rating agencies. There is also a need to upgrade early warning frameworks used to gauge systemic and institutional risks.

*Implications for LAC Region*

***Better disclosure of information in the region could facilitate policymaking and improve market discipline.*** In most of the region, balance sheets and financial statements of banks and private pension funds are publicly available, typically on a monthly or quarterly basis. However, most countries require little or no reporting of other financial operations, especially off-balance sheet operations of banks; transactions by the non-bank affiliates of a financial conglomerate; or the activities of lightly regulated non-banks. The contents of financial stability reports could also be broadened to publish stress tests and other tail-risk analysis.

***Moreover, the development of much better information on the linkages between macroeconomic developments and the financial sector would be of use to policymakers***. Policymakers typically lack information on key issues—such as prices of residential and commercial real estate and other non-financial assets and household indebtedness—that are crucial to understand the potential effects of financial vulnerabilities on growth and inflation and the effects of macroeconomic policies on the financial and real sectors. Moreover, gaps in corporate accounting standards often make it difficult not only to assess the risks taken by mutual funds and other investors in corporate securities, but also to assess potential vulnerabilities for macroeconomic policy. The surprises in the exposure of Brazilian and Mexican corporates to currency derivatives, and the reaction of currency markets and the central banks, illustrate the potential effects of poor information on activities of the corporate sector.

*Key Issues*

**What are the key areas for improving information disclosure?**

***Systemic financial institutions might need to strengthen public disclosure practices.*** Reporting could be more frequent and cover market positions as well as exposures by economic sector, large counterparties, and countries, and off-balance sheet positions. Institutions should use a common template to allow supervisors and the market to aggregate exposures, identify key linkages and allow for cross-country comparisons. Reaching agreement on such a template will require close international cooperation.

***Supervisors could revamp and broaden the coverage of financial soundness indicators (FSIs)***. It will be important to re-prioritize the FSIs for banks, include the indicators for non-banks and provide more detail on sector risk exposures, including in foreign exchange. The IMF's Spring 2009 Global Financial Stability Report finds that leverage ratios and equity prices of financial institutions can be better indicators of stress than capital asset ratios or non-performing loans. Supervisors would also benefit from better information and analysis of the balance sheets and capacity to repay of households and non-financial corporations to help identify risks that may emerge.

***For countries moving toward the Basel II prudential framework, systemic financial institutions need to disclose their risk management practices and models used to value risk.*** These institutions could report standardized information for the credit and risk management methodologies, their internal risk models, and how these models are linked to macroeconomic conditions.

***Supervisors in Chile, Colombia and Mexico, which have significant over-the-counter (OTC) derivatives markets, could improve the transparency of these markets.*** Financial institutions operating in these markets could report these transactions more frequently and include information on the instruments, counterparties, and market concentration and focus on the exposures of market participants as opposed to the volume of operations. These countries might need to require non-financial corporates to report their derivatives exposures undertaken in offshore markets. There may also be clear advantages to require exchange trading of derivatives to reduce counterparty risk and enhance transparency.

## VI. Greater Flexibility for Central Banks

*Recommended Reforms*

***Central banks need to refine their liquidity facilities to provide greater room for maneuver during periods of exceptional stress.*** Major central banks have injected liquidity into their financial system to prevent a complete seizure in financial markets, often innovating to overcome institutional limitations. For example, the U.S. Federal Reserve Board widened the range of acceptable collateral and introduced a range of new lending instruments to both the financial and the corporate sectors.

***Central banks could broaden their interpretation of the mandate to safeguard financial stability, as well as maintain low inflation.*** Under the broader mandate, safeguarding financial stability would mean that central banks should try to arrest excessive expansion in credit and sharp runups in asset prices, which might have helped avoid the loose credit conditions in advanced countries that contributed to the current crisis.

*Implications for LAC Region*

***The responsibility for ensuring financial stability in most countries in the region already falls under the purview of central banks***. With the exception of Bolivia,[8] Brazil, Mexico, and Peru, central banks in Latin America have a clear mandate for ensuring financial stability, even where multiple regulators exist, and most central banks or supervisory agencies regularly publish financial stability reports.

***The financial stability role has been interpreted as tailoring monetary and liquidity policy to support macroeconomic stability as well as serving as the lender of last resort.*** Macroeconomic stability typically means keeping inflation low, and six countries in the region (Brazil, Chile, Colombia, Mexico, Peru and Uruguay) have been implementing inflation targeting (IT) for at least several years. The central banks' decisions take into account the effects of a shift in the stance of monetary policy on the financial system. The lender of last resort facilities typically operate within clear guidelines. The responsibility for resolving financial crises usually rests with financial supervisors and ministries of finance.

***During the global financial crisis, a number of central banks have been working within their mandate to provide liquidity to offset bouts of extreme funding pressure***. Monetary authorities in many countries have shifted into an easing cycle, as inflation pressures began to recede. In addition, many countries have adopted extraordinary measures to ensure the normal functioning of financial markets (Table 3). These have included: (i) liquidity support to ensure orderly money markets (Peru, Colombia, Mexico, Brazil, Chile, Costa Rica, Guatemala); (ii) widening the scope of institutions that could access the discount window (Brazil, Mexico, Colombia and Costa Rica); (iii) lowering reserve requirements (Argentina, Brazil, Colombia, Dominican Republic, Honduras, Paraguay, and Peru); and (iv) expanding

---

[8] In Bolivia and Peru, the Superintendency of Banks is responsible for financial stability. In Brazil, the primary responsibility for financial stability lies in the Ministry of Finance. In Mexico, the financial regulatory system is highly compartmentalized and financial stability is the joint responsibility of a number of institutions including the Ministry of Finance, Central bank, the Superintendency of Banks, the Stock Exchange and the Deposit Insurance Agency.

Table 3. Latin America: Monetary and Financial Sector Policy Responses to the Global Crisis

| | Policy Rate Cut | Reserve Requirement Reduction: US dollars | Reserve Requirement Reduction: Local currency | Open Market Operations: US dollar liquidity provision | Open Market Operations: Local currency liquidity provision | Other |
|---|---|---|---|---|---|---|
| Argentina | √ | √ | √ | | | • Threefold increase in BCRA credit line to local banks<br>• Central bank repurchase program of BCRA bonds |
| Brazil 1/ | √ | | √ | √ | √ | • US dollar auctions to banks with the purpose of providing funding for trade finance |
| Chile | √ | √ | | √ | √ | • Peso and US dollar short term repurchase arrangements (or swap operations).<br>• Implementation of a special 7-day rolling repo operation that would accept bank CDs as collateral, with a 35% haircut which was later reduced to 10 percent.<br>• New liquidity facility implemented in January 2009 accepts a broader range of collateral, including government bonds, over a longer term (28 days to 1 year).<br>• Financing of the fiscal stimulus plan through the planned drawdown of US$3 billion from the sovereign wealth fund, operationalized through daily auctions of US$50 million by the central bank .<br>• Ministry of Finance repartriation of US$ 1 billion to the local banking system. 2/ |
| Colombia | √ | | √ | | √ | • Secured IADB resources to provide contingency liquidity support to banks and corporates (foreign trade lines) |
| Mexico | √ | | | √ | √ | • Extraordinary US$ auctions to provide liquidity to tackle exceptional foreign exchange demands<br>• Daily auctions (both minimum and no minimum price) and direct sales of US dollar.<br>• Currency swap facility with the US Federal Reserve.<br>• Central bank facility offering short term financing. Banks can obtain short term funding through guaranteed loans backed by their reserve requirements; also through repurchase agreements with the central bank accepting a wide range of government and corporate debt instruments.<br>• Government guarantee program for commercial paper intended to help corporates refinance their short-term liabilities and ease liquidity pressures in the commercial paper market.<br>• Remuneration of dollar-denominated commercial bank deposits, in order to alleviate pressure in the overnight forward peso funding market<br>• Central bank (IPAB) debt buyback program<br>• Auctions of interest rate swaps<br>• Temporary liquidity facility for investment funds |
| Peru | √ | √ | √ | | | • Foreign currency swap contracts<br>• Sales of US$ in spot market<br>• US$ repurchase agreement auctions<br>• Collateralized loans to banking system aimed at financing exports |
| Uruguay | | | | √ | √ | • Early buyback/repurchase of central bank bonds which provided domestic and foreign currency liquidity to the market |

1/ Measures to provide foreign currency liquidity have included: foreign currency swap contracts, sales of US$ in the spot market, US$ repurchase auctions, collateralized loans aimed at financing exports, currency swap transactions with the US Federal Reserve and through direct loans to companies and banks to roll over external debt.

2/ Chile: Not an explicit policy measure but nonetheless helped to ease US$ liquidity conditions in the market.

the use of international reserves to support external refinancing needs of the corporate sector (Brazil). These measures have generally targeted the financial system, although some countries, notably Brazil and Mexico, have provided direct liquidity support to fund key non-financial entities and markets, including exporters, commercial paper and corporate bond markets. For the inflation-targeting countries, these actions have complemented the cushion provided by movements in the exchange rate. Still, most of these countries also intervened in foreign exchange markets to dampen depreciation pressures.

*Key Issues*

***How can central banks guard against the risks of exceptional liquidity support from central banks?***

***Central banks in the region have worked within their existing institutional frameworks, which limits the risk to their credibility.*** Long-term inflation expectations have become reasonably well anchored around the inflation target in the IT countries in the past few years. Most central banks have retained key features, such as strong limits on central bank financing of fiscal deficits or on quasi-fiscal activities, that fortify their credibility and help highlight the temporary and exceptional nature of the recent liquidity operations. In some advanced countries, the massive expansion in central bank balance sheets is raising concerns about the prospects for inflation once the crisis subsides. Also the widening of acceptable collateral may expose these central banks to quasi-fiscal losses. Central banks in the LAC region could face similar challenges, especially if the institutional framework were diluted. Another concern is that central bank liquidity might be perceived as favoring certain sectors, especially for direct financial support to the corporate sector, and reliance on an intermediary, such as a network of primary dealers, to channel liquidity could help diminish the reputational risk for the central bank.

***Should central banks expand their financial stability mandate to become involved in targeting asset prices?***

***This is still an open question in the global debate.*** On the one hand, preserving financial stability can also be interpreted as ensuring that asset price or credit bubbles do not grow out of control, and some observers now recommend that central banks take on this task as well by raising interest rates to deflate such bubbles before they become large enough to cause severe misallocation of resources. On the other hand, there is a strong case for letting monetary policy to focus on inflation, since it would be difficult to use one instrument to achieve more than one target. Steps to prevent financial market bubbles could be handled through sensible prudential regulations to avoid excessive leverage and stop excesses such as a deterioration in lending standards. Of course, a central bank could raise interest rates to slow rampant credit growth or curb asset price inflation if this step were consistent with the inflation objective. On balance, central banks in the region would benefit from avoiding this expansion in their mandate to preserve their hard-won gains in credibility.

## CONCLUDING REMARKS

***Financial systems in the region have become much more resilient over the past decade, reflecting better financial supervision and stronger macroeconomic policies.*** With strong capital and liquidity cushions and a relatively strong credit portfolio, financial institutions in most countries entered the current global crisis from a position of strength. Also, improved confidence in policies has helped keep expectations well-anchored, allowing countries to implement a countercyclical policy response to the global crisis, while absorbing generally appropriate changes in relative prices, without weakening the financial system. With strong financial and macroeconomic policies, countries in the region have—by and large—been able to contain any adverse feedback loops between the real and financial sectors.

***Nonetheless, the region might benefit from taking under consideration some of the proposals to reform financial supervision in advanced countries, where the crisis originated.***

- The proposals to modify the regulatory perimeter would encourage countries to broaden their definition of systemic institutions; to rethink how to assess systemic risk and apply prudential regulations to systemic institutions, especially to guard against excessive leverage; and to be aware of changes in financial markets that bring new institutions within the scope of systemic regulation. These reforms would give immediate help to those countries with reasonably well developed domestic capital markets as well as those countries where capital markets will be deepening in the coming years.

- The key to improving consolidated supervision is to resolve shortcomings in the legal framework and to make MOUs effective by creating mechanisms that institutionalize information sharing and cooperation. Of course, developing effective consolidated supervision with advanced countries will remain a major challenge.

- The benefits of reducing the procyclicality of regulations will vary with each country. All countries apply the Basel I prudential framework, although several are moving towards adoption of Basel II, and FVA is used by some but not all countries. However, provisioning requirements tend to be backward looking, and lending tends to be based on collateral. The systems to establish forward looking provisions in Bolivia, Colombia, Peru and Uruguay may serve as examples for the rest of the region. And shifting to countercyclical capital adequacy requirements may prove to be another effective option.

- The region would benefit from much better disclosure of information, even though most of its financial institutions and instruments are much simpler than in advanced countries. While banks and private pension funds report balance sheets and financial statements, all countries need better information on all other financial operations.

Moreover, the region needs to develop much better information on the linkages between macroeconomic developments and the financial sector.

- Many central banks in the region have been providing liquidity to keep financial markets operating smoothly, relying on their mandate to maintain financial stability. It would be important to continue to work within the existing institutional framework to limit the risks to credibility, and it would probably be best to stay away from a broader interpretation of their financial stability mandate.

***Regardless of the reforms each country may pursue, a key lesson of the crisis is that a strong political commitment is a prerequisite for effective financial supervision.*** Of course, the political system must play a key role in establishing the legal framework for supervision, but once that framework is in place, regulators must continue to enjoy strong *de facto* independence from political pressures as they carry out the law. Ensuring adequate resources for regulators should also be a priority, especially with the prospect of a broader range of systemic institutions, a more flexible regulatory perimeter, better information sharing among supervisors, and enhanced disclosure of information. Providing more resources for regulators will be particularly difficult in small or low-income countries; in those cases prioritization of which areas are most in need of regulatory improvement will be crucial.

## BIBLIOGRAPHY

Acharya, Viral V., and M. Richardson, 2008, "Restoring Financial Stability: How to Repair a Failed System," New York University Stern School of Business.

Armone, Marco, S. M. Darbar, and A. Gambini, 2007, "Banking Supervision: Quality and Governance," IMF Working Paper No. 07/82 (Washington: International Monetary Fund).

BIS, 2009, "Basel Committee on Banking Supervision, Consultative Document—Proposed Enhancements to the Basel II Framework," January (Bank for International Settlements).

__________, 2006, "Basel Committee on Banking Supervision, International Convergence of Capital Measurement and Capital Standards," June (Bank for International Settlements).

Brunnermeier, Markus, A. Crockett, C. Goodhart, A. D. Persaud and H. Shin, 2009, "The Fundamental Principles of Financial Regulation," Geneva Reports on the World Economy – Preliminary Conference Draft (ICMB International Center for Monetary and Banking Studies).

Cihák, Martin, and A. Tieman, 2008, "Quality of Financial Sector Regulation and Supervision Around the World," IMF Working Paper No. 08/190 (Washington: International Monetary Fund).

Counterpary Risk Management Policy Group, 2008, "Containing Systemic Risk: The Road to Reform," August (Counterparty Risk Management Policy Group).

De Larosiere, Jacques, et. al., 2009, "Report of the High Level Group on Financial Supervision in the EU, (Brussels: European Commission).

Financial Services Authority, 2009, "The Turner Review: A Regulatory Response to the Global Banking Crisis," (London: Financial Services Authority), March.

G20, April 2009, "Declaration on Strengthening the Financial System".

Group of Thirty, 2009, "Financial Reform: A Framework for Financial Stability."

IMF, 2002, "Brazil—Financial System Stability Assessment" (Washington: International Monetary Fund).

__________, 2003a, "Bolivia—Financial System Stability Assessment" (Washington: International Monetary Fund).

__________, 2003b, "Honduras—Financial System Stability Assessment" (Washington: International Monetary Fund).

__________, 2004a, "Chile—Financial System Stability Assessment" (Washington: International Monetary Fund).

__________, 2004b, "Ecuador—Financial System Stability Assessment" (Washington: International Monetary Fund).

__________, 2004c, "El Salvador—Financial System Stability Assessment—Update" (Washington: International Monetary Fund).

__________, 2004d, "Nicaragua—Financial System Stability Assessment" (Washington: International Monetary Fund).

__________, 2005a, "Colombia—Financial System Stability Assessment" (Washington: International Monetary Fund).

__________, 2005b, "Peru—Financial System Stability Assessment" (Washington: International Monetary Fund). (Washington: International Monetary Fund).

__________, 2005c, "Trinidad and Tobago—Financial System Stability Assessment" (Washington: International Monetary Fund).

__________, 2006a, "Jamaica—Financial System Stability Assessment" (Washington: International Monetary Fund).

__________, 2006b, "Paraguay—Financial System Stability Assessment" (Washington: International Monetary Fund).

__________, 2006c, "Uruguay—Financial System Stability Assessment" (Washington: International Monetary Fund).

__________, 2007a, Costa Rica—Financial System Stability Assessment" (Washington: International Monetary Fund).

__________, 2007b, "Guatemala—Financial System Stability Assessment" (Washington: International Monetary Fund).

__________, 2007c, "Mexico: Publication of Financial Sector Assessment Program—Update—Technical Note on Organizational Arrangements for Effective Financial System Regulation, Supervision and Policymaking" (Washington: International Monetary Fund).

__________, 2009a, "Lessons of the Financial Crisis for Future Regulation of Financial Institutions and Markets" Monetary and Capital Markets Department (Washington: International Monetary Fund).

__________, 2009b, *Global Financial Stability Report*, (Washington: International Monetary Fund), forthcoming.

Kamil, Herman and Kulwant Rai, 2009, "Will International Banks Transmit the Global Credit Crunch to Latin American and Caribbean Countries?" Regional Economic Outlook: Western Hemisphere—Stronger Fundamentals Payoff, (Washington: International Monetary Fund), May.

Manuelito, Sandra, Filipa Correa and Luis Felipe Jimenez, "La Crisis Subprime en Estados *Unidos y la Regulación y Supervisión Financiera: Lecciones para América Latina y el Caribe,"* (Santiago, Chile: Comisión Económica para América Latina), February 2009.

Squam Lake Working Group on Financial Regulation, 2009, "Reforming Capital Requirements for Financial Institutions," (New York: Council on Foreign Relations), April.

United States Department of the Treasury, "Treasury Outlines Framework for Regulatory Reform," March 2009.