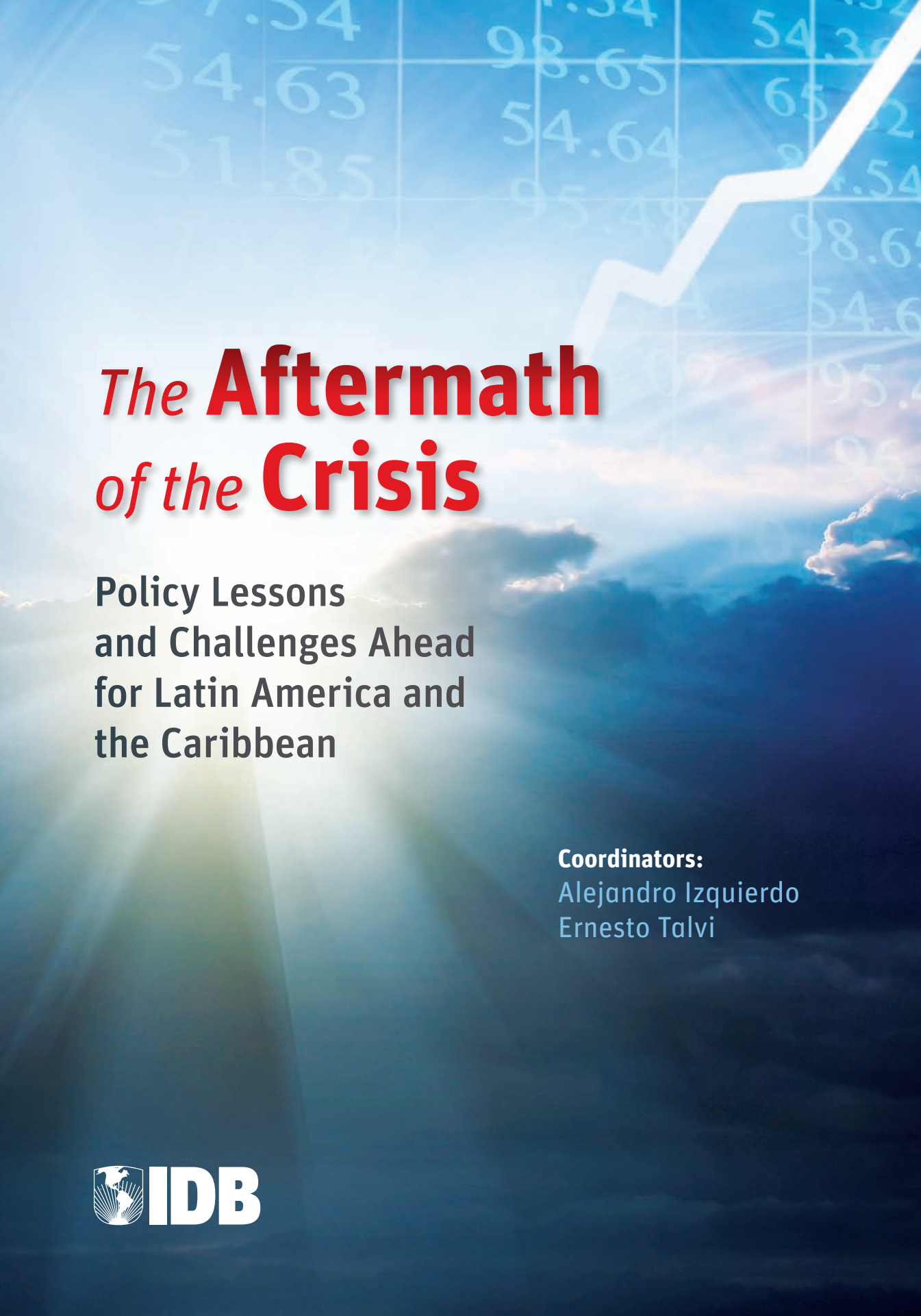

The Aftermath *of the* Crisis

Policy Lessons and Challenges Ahead for Latin America and the Caribbean

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IDB

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Foreword

In the aftermath of the direst global crisis in recent times, Latin America and the Caribbean has shown remarkable resilience by avoiding financial crises so prevalent in previous episodes of global financial turmoil. The aim of this report is threefold: first, to understand the sources of this resilience, identifying the role played by unprecedented international financial support at the peak of the crisis on the one hand, and the strength of domestic macroeconomic fundamentals on the other; second, to highlight the policy lessons that emerge from this analysis both for the region and the international financial community; and finally, to identify critical macroeconomic policy challenges for the region in the aftermath of the global financial crisis.

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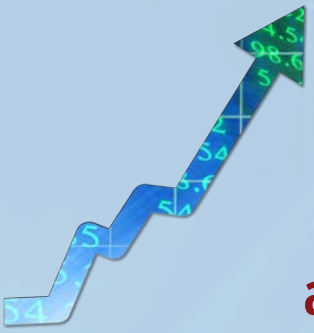

Introduction and Summary

Following the G-20 meetings in April 2009, the world heaved a sigh of relief. Finally, the shock treatment appeared to be rendering results and the patient was starting to show signs of improvement. A world depression, as it turned out, had been averted, resulting—as of the writing of this report—in a substantially improved outlook for emerging markets and Latin America. From this perspective, it could be argued that the region was "lucky." A deeper and/or more protracted global recession could have significantly changed the outcomes for the region.

However, even at the peak of the crisis, with the bottom of the abyss nowhere in sight, emerging markets in general and Latin America in particular, for the most part performed surprisingly well. True, following the Lehman Brothers debacle, stock and bond prices tumbled, currencies depreciated sharply and growth came to a halt as the region slipped into a recession in 2009. However, the region avoided currency and debt crises and bank runs so typical of previous episodes of global financial turbulence (1982, 1998 and 2001). The ability of the region to withstand an extremely severe shock without major financial crises was truly remarkable and begs an explanation.

The prevalent opinion points toward the strength of macroeconomic fundamentals as the source of the region's resilience, i.e., low inflation, twin external and fiscal surpluses, a sound banking system, a large stock of international reserves and more flexible exchange rate regimes. These underlying strengths allowed governments to respond with standard countercyclical monetary, fiscal and credit policies to mitigate the adverse impact of the global crisis. This reaction contrasts sharply with past episodes of global financial turbulence, when countries in the region responded pro-cyclically by raising interest rates and tightening fiscal and credit policies.

Part I of this report dwells on the causes of the region's surprisingly strong performance in the midst of the worst global financial crisis since the Great Depression. The report provides empirical evidence that although stronger fundamentals played a very important role, the *key innovation* in this episode of global financial turbulence

was the readiness of the international community to act as international lender of last resort by providing timely, unconditional, preventive, and sizeable assistance to emerging markets at the height of the financial crisis, and preventing otherwise sound economies from entering into financial distress. This stands in stark contrast to past episodes of global financial turbulence, e.g. during the Russian/LTCM crisis, when support by the international community was slow-moving, conditional, and curative rather than preventive and of smaller magnitude.

These findings have very important implications regarding the international financial architecture vis-à-vis emerging markets. Strong fundamentals at the country level may not be enough. As a result, and in the context of the momentum generated by the international community in response to recent global financial turmoil, there is a clear opportunity to strengthen the international financial architecture in order to provide effective insurance mechanisms for emerging markets against systemic liquidity crises.

The report proposes a two-pronged strategy: the first element is the institutionalization, improvement and expansion of existing international lender of last resort mechanisms, mainly driven by the International Monetary Fund (IMF), which the report argues proved to be critical at a time of major financial distress. The second element is country implementation of policies—with substantial support from Multilateral Development Banks (MDBs)—to meet eligibility criteria to access international lender of last resort facilities. These policies would likely include the adoption of sound macroeconomic liquidity policies, as well as sound fiscal, monetary and exchange rate regimes that respond efficiently to shocks.

These two components could constitute the basis for an incentive-compatible "Long-Term Stability Pact for Emerging Markets." In line with the IMF's recently implemented Flexible Credit Line, the benefits of access to international lender of last resort facilities would only be enjoyed by those who pre-qualify, based on previous efforts to attain sound macroeconomic policy frameworks, thus preventing moral hazard. Within this Pact, the IMF and MDBs would play complementary roles, the former acting as lender of last resort for emerging markets, and the latter focusing on the structural reform agenda that is indispensable for Latin America and the Caribbean to achieve faster and more equitable growth. Even if it is assumed that the world economy is on a sustained recovery path, complacency is unwarranted. Having avoided a major collapse, this is the time for bold action, both at the level of individual countries in the region, and of the IMF and MDBs. Thus, the IMF and MDBs should be endowed with adequate resources for the task.

Part 1 of the report elucidates the role played by fundamentals and access to international liquidity in the outcome of the crisis. Since stronger macroeconomic fundamentals in the region played a significant role in preventing financial distress at the peak of the global crisis, the report suggests directions in which these could be further improved. For example, the institutionalization of monetary, fiscal and financial regimes

would consolidate these improvements in macro fundamentals and go a long way toward enhancing policy credibility and building crisis resilient economies. Although for many countries this is still work in progress, several countries in the region have already moved forward in adopting these regimes. However, significant progress in macroeconomic fundamentals has not gone hand-in-hand with progress in the region's relative long-run growth performance vis-à-vis the developed world and other emerging regions due to lagging total factor productivity. Based on the IDB's 2010 edition of its flagship publication, *Development in the Americas*, this report argues that macroeconomic stability on its own will not deliver faster growth, and that policies aimed at raising productivity are indispensable. The improved global scenario could offer a window of opportunity for the region to address this vital issue.

The dramatic turnaround in the global outlook has now shifted the emphasis of immediate macroeconomic policy challenges away from recessionary pressures and international liquidity concerns due to precarious access to international capital markets, to dealing with renewed capital inflows, booming asset prices and credit, appreciating currencies and loss of competitiveness. Thus, the emphasis of short-term macroeconomic management has increasingly focused on preventing overheating (i.e., avoiding "excessive" current account deficits, credit growth, inflationary pressures and currency appreciation), while strengthening international liquidity positions by taking advantage of today's favorable tailwinds in international financial markets. These often conflicting short-term macroeconomic policy objectives pose serious dilemmas for policymakers. Part II of this report focuses on these issues.

In order to provide a framework for macroeconomic policy analysis, the report constructs two alternative post-financial crisis global scenarios. These scenarios are not intended as a forecasting exercise, which is better left to market experts, but rather as analytical devices to provide a coherent context in which to evaluate appropriate policy responses.

The first scenario depicts an optimistic global context that brings about a new expansionary phase in the region, as tighter monetary policy in the US is associated with a shrinking US current account deficit and excess saving pours into emerging markets, thereby supporting large and persistent inflows of capital. In the second scenario, the removal of expansionary monetary policies, coupled with large financing requirements of public deficits in industrial countries, lead to higher interest rates, eventually crowding out capital flows to emerging markets. In other words, the second scenario differs from the first in that the favorable global context is interrupted by a partial reversion in capital flows to emerging markets due to monetary tightening cum high fiscal deficits in industrial countries.

Although isolated episodes of financial distress, such as Dubai World's Default and lingering problems in Europe, add uncertainty to the consolidation of the global

recovery, throughout this report, the possibility that these latent risks trigger major financial distress will be disregarded. The implications of such a possibility were already discussed in last year's report. Moreover, preparing to deal with the macroeconomic consequences of more benign scenarios is useful not only because the region may currently be facing exactly that situation, but also because appropriate policies in good times are key to reduce the likelihood of future crises.

On the subject of short-term macroeconomic management, the report concludes that taking advantage of favorable international financial conditions while dealing with the undesired consequences of large inflows of capital confronts policymakers with difficult dilemmas. The report argues that the instruments available to confront these dilemmas are of questionable efficacy. This inherent weakness must be acknowledged upfront in favor of a more eclectic view, meaning that policymakers must be prepared to mobilize the whole set of macro policy instruments—exchange rate/monetary policy, fiscal policy, credit policy and capital controls—in varying degrees depending on idiosyncratic country characteristics.

The analysis of this report is carried out from a regional perspective. Given data limitations, the group analyzed in more detail in this report and frequently referred to as "the region" consists of the seven largest Latin American countries, namely, Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela (henceforth LAC-7), which together account for 91 percent of the region's GDP.[3] This has proved to be a useful abstraction since it calls attention to common trends and systemic patterns that are easily lost when the analysis is pursued from an individual country perspective, and it serves as a useful benchmark to gauge the behavior of individual countries either by contrast or by similarity. In the words of Levitt and Dubner (2009): "…while there are exceptions to every rule, it's also good to know the rule. In a complex world where people can be atypical in an infinite number of ways, there is great value in discovering the baseline. And knowing what happens on average is a good place to start. By so doing, we insulate ourselves from the tendency to build our thinking—our daily decisions, our laws, our governance—on exceptions and anomalies rather than on reality".

Nevertheless, the report separately focuses on the challenges faced by countries in Central America and the Caribbean, which have structural characteristics and macroeconomic vulnerabilities that in some dimensions differ substantially from those of the LAC-7 group, implying different policy recommendations.

In closing, the hope is that policymakers both in the region and the international community will find this material stimulating and provocative enough to precipitate a fruitful debate.

[3] LAC-7 is constructed as the simple average of the seven major countries in the region except where otherwise noted. This group of countries counts with detailed information to pursue the type of analysis presented in this report.

Part I

Understanding Emerging Markets' Resilience to the Global Crisis: Policy Implications

Assessing Emerging Markets' Resilience at the Peak of the Global Crisis[4]

One of the most intriguing puzzles following the Lehman debacle is that in spite of its global nature, the current crisis dealt a much smaller blow to emerging markets (EMs) than its predecessor, the Russian/LTCM crisis of 1998.[5] Exogenous measures of financial risk vis-à-vis EMs would suggest that in several dimensions the current shock was larger. For example, the US high yield bond spreads, which belong to the same asset class as EMs, increased much more significantly following Lehman's collapse than in the Russian/LTCM crisis (1200 Basis Points trough to peak in the former, 300 Basis Points in the latter).[6]

Moreover, the real shock was much larger during the current crisis. For example, while at the time of the Russian debacle advanced economies *grew* at a rate of 2.6 percent, this time around their output *fell* by 3.4 percent. Total investment in advanced economies grew more than 5 percent at the time of the Russian/LTCM crisis, while it fell by more than 12 percent during the current crisis; and, even more significantly for EMs, their imports increased by more than 6 percent in 1998, while they fell by almost 14 percent in 2009 (see Figure 1).

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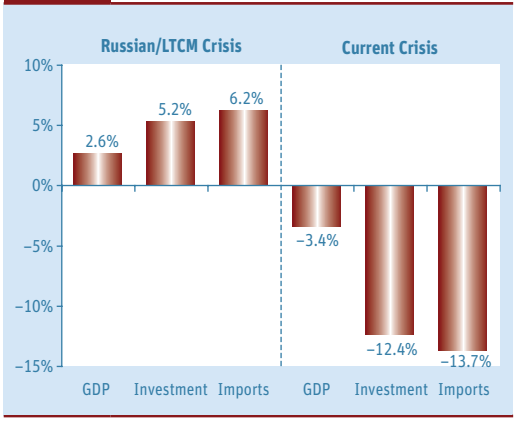
4 This section draws on Izquierdo and Talvi (2009).

5 Long-Term Capital Management (LTCM) was a US hedge fund that in 1998 lost US$ 4.6 bn in less than four months following the Russian financial crisis.

6 This indicator may not be fully telling of the magnitude of the shock at the time of the Russian/LTCM crisis, as that crisis represented in and of itself a shock to the EM asset class as a whole, and not necessarily a shock to US high yield spreads (although both types of assets have typically been quite correlated). However, the Federal Reserve was swift in extending support to LTCM at that time, and effectively acted as a lender of last resort, stopping any potential contagion into the US—a policy that was not made available to EMs, in contrast to the recent global crisis. Nonetheless, a key characteristic that separates both events is the fact that the recent crisis was global in nature, while the Russian/LTCM crisis was limited to EMs.

However, in contrast to the Russian/LTCM crisis, at no point in time following the Lehman crisis did Emerging Markets Bond Index (EMBI) spreads cross the 1000 basis point (bps) critical mark, usually considered by the markets as a threshold at which countries are rationed out of credit and priced at default levels (see Figure 2). So what was different this time? Was it stronger *fundamentals* in EMs, or the *readiness* of the international community to provide financial support to EMs?

FIGURE 1 **Russian/LTCM Crisis versus Current Crisis: Real Impact on Advanced Economies**
(Changes in %, 97–98 and 07–08)

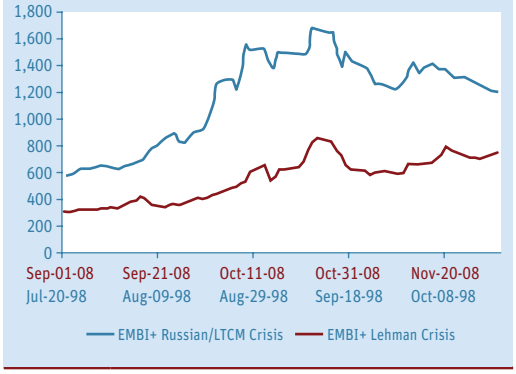


Data source: WEO.

Competing Explanations

A first explanation is that EMs had stronger fundamentals during the current crisis and thus were better positioned to resist the storm in international financial markets.[7] In fact, if EM credit ratings are taken as a proxy for fundamentals, then fundamentals were actually stronger: the year before the Lehman debacle, EMs had an average rating of BB+ (closer to investment grade levels), whereas they scored an average rating of BB the year before the Russian/LTCM crisis, according to Standard and Poor's scale.[8]

FIGURE 2 **EMBI Spreads Reaction: The Lehman Crisis 2008 versus the Russian/LTCM Crisis 1998**
(EMBI+ spread, in bps)



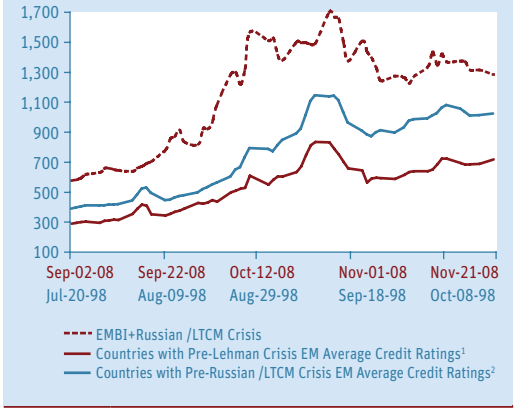
Data source: Bloomberg.

[7] Throughout this section, calculations are made using a sample of 37 EMs included in JP Morgan's EMBI Global Index.

[8] Credit ratings are taken as a proxy for fundamentals because they are a synthetic measure that subsumes a set of macroeconomic variables taken into account in their determination and are closely followed by the markets. An alternative is to explicitly choose other sets of economic fundamentals different from those subsumed in credit ratings. However, such an alternative may also be subject to critique based on the bias in the selection of the variables. Nonetheless, credit ratings are quite correlated with usual measures of fundamentals such as fiscal balance (0.50), current account balance (0.33) and international liquidity ratios (0.25)—defined as the ratio of international reserves to

To analyze the impact of improved fundamentals on spread variations, changes in EMBI spreads are analyzed in the 60-day window starting on September 1st, two weeks prior to the collapse of Lehman Brothers, all the way to the apex of US high yield spreads by end-October, 2009, i.e., the period of maximum uncertainty about the fate of the global crisis. Two groups were constructed, one including EM countries with pre-Lehman crisis average credit ratings and a second group of EM countries with pre-Russian/LTCM crisis average credit ratings.[9]

FIGURE 3 **The Role of Fundamentals in the Lehman Crisis** *(EMBI spread, in bps)*



Data source: Bloomberg.
[1] Includes countries with Pre-Lehman crisis credit ratings: Brazil, Colombia, Egypt, El Salvador, Kazakhstan and Peru.
[2] Includes countries with Pre-Russian/LTCM crisis credit ratings: Indonesia, Panama, Philippines, Turkey, Ukraine, Uruguay and Venezuela.

Not only was EMBI spread performance of the second group expected to be worse than the first—which was indeed the case—but EMBI spreads of this second group were also expected to perform worse than EMBI spreads in the Russian/LTCM crisis—something that did not happen (see Figure 3). The maximum increase in EMBI spreads within the 60-day window of the Lehman crisis was 545 bps for countries in the first group and 755 bps for countries in the second group. However, they are both much lower than the increase of 1042 bps that took place in the equivalent window of the Russian/LTCM crisis. Thus, although fundamentals were relevant and did make a difference, they do not seem to tell the whole story.

A second competing explanation for the differences in spread behavior is related to the readiness of the international community to provide financial support to EMs facing liquidity problems. Given the global nature of the current crisis and the perception that EM countries were innocent bystanders, the international financial community displayed early on a predisposition to act swiftly as International Lender of Last Resort (ILOLR) for EMs, providing timely, unconditional, preventive, and sizeable assistance. The earliest indication came in April 2008, with Japan's announcement of liquidity swap lines for Indonesia (two months later also extended to India). Shortly after the Lehman downfall the US Federal Reserve offered swap lines for systemically relevant countries such as Brazil, Korea, Mexico and Singapore, and the IMF launched a short-term

short-term financing needs. In fact, both fiscal balances and international liquidity ratios turn out to be significant when regressed against credit ratings. These results are consistent with Cantor and Packer (1996), where they find that credit ratings are broadly consistent with macroeconomic fundamentals.
[9] Pre-Lehman ratings are as of December 2007, while pre-Russian ratings are as of December 1997.

liquidity facility (SLF). In addition to official initiatives, academic circles and other fora were calling for emergency lending facilities for EMs to deal with the global crisis.[10] All these announcements, actions and/or calls for action may well have influenced investor expectations about the willingness of the international community to provide ILOLR-type facilities this time (see Table 1 for a complete list of announcements). The most forceful response came in April 2009 when the G-20 decided to triple the resources of the IMF, and the IMF launched its Flexible Credit Line (FCL) to assist—unconditionally and at longer maturities—countries with sound policies facing liquidity constraints. In contrast, during the Russian/LTCM crisis, support by the international community was slow-moving, conditional, curative rather than preventive and of smaller magnitude.

To assess the impact of access to ILOLR facilities on EM spreads, once again two groups of countries were constructed. The first group includes EM countries that were not expected to have access to ILOLR facilities during the current crisis, namely, Argentina, Ecuador, and Venezuela.[11] To control for fundamentals, the second group includes countries with the same credit ratings as those of the first group, but with access to ILOLR facilities.

As expected, among countries with the same level of fundamentals, those with no access to ILOLR facilities had much larger spread spikes than those with access. EMBI spreads in no-access countries rose by a maximum of 1537 bps within the 60-day window of the Lehman crisis and 811 bps in countries with the same credit ratings but with access to ILOLR facilities (see Figure 4). Even more remarkable is the fact that EMBI spreads of no-access countries in the 60-day window of the Lehman crisis performed worse than EMBI spreads of EM countries with similar credit ratings during the Russian/LTCM crisis equivalent window—yet another control group. Thus, when controlling for access to ILOLR facilities—which were essentially absent during the Russian/LTCM crisis—and fundamentals, EMBI spreads perform worse during the current crisis, in line with what could have been expected given the larger magnitude of the current crisis.

These stylized exercises accounting for the impact of fundamentals vis-à-vis that of access to ILOLR facilities can be conducted formally by regressing changes in sovereign spreads of the 37 EMs included in JP Morgan's sovereign EMBI spreads index (in the 60-day window described above) on measures of credit ratings, as well as a binary variable indicating no access to ILOLR facilities. Results show that both variables are significant in explaining spread changes, confirming that both fundamentals and ac-

[10] See for example, CLAAF (2008) and IDB (2008). For an early proposal of ILOLR to prevent contagion in EMs see Calvo (2005).

[11] Countries with no access to ILOLR facilities are defined as those with no Article IV consultations with the IMF for the last two years, and/or in arrears with the IMF, and/or in default with bondholders.

TABLE 1 **Measures of the International Community to Ensure Liquidity Provision for Emerging Markets**

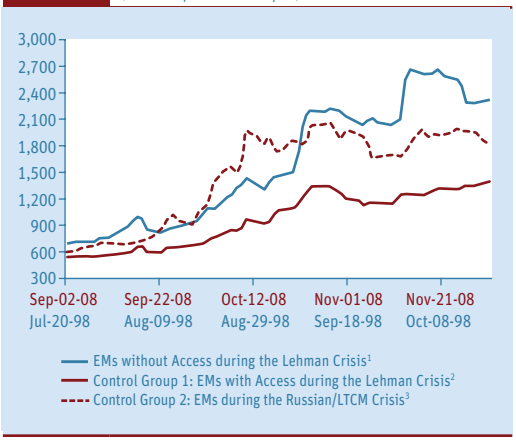
Before G-20 London Summit	
2008	
April	– Japan signs swap agreement with Indonesia for a total of US$6 billion
June	– Japan signs swap agreement with India for a total of US$3 billion
October	– The US Federal Reserve opens US$120 billion swap lines with Brazil, Mexico, South Korea, Singapore – IMF creates Short-Term Liquidity Facility
November	– G-20 Meeting in Washington, leaders agree to "review the resources available to the IMF and other institutions" – Hungary received a rescue package from IMF, WB and EU (total of US$25 billion) – IMF signed Stand-by Agreements with Ukraine, Iceland, Pakistan and Seychelles (total of US$30 billion)
December	– Bank of Japan and The People's Bank of China signed swap agreements with South Korea for a total of US$43 billion
2009	
January	– The People's Bank of China signs swap agreement with Honk Kong (US$29 billion)
February	– The People's Bank of China signs swap agreement with Malaysia (US$12 billion)
March	– The People's Bank of China signs swap agreements with Belarus, Indonesia and Argentina (US$27 billion)
G-20 London Summit	
April	– Announcement of new recapitalization of the IMF (US$500 billion) – Announcement of new Special Drawing Rights allocation (US$250 billion) – Announcement of new recapitalization of Development Banks (US$100-300 billion) – New support for Trade Finance (US$250 billion) – IMF launched the Flexible Credit Line and the High-Access Precautionary Arrangements
After G-20 London Summit	
April	– Flexible Credit Line agreement between IMF and Mexico (US$47 billion)
May	– Effective increase in Asian Development Bank capital (US$110 billion) – Flexible Credit Line agreement between IMF and Poland and Colombia (US$31 billion) – Stand-by Agreement between IMF and Romania (US$17 billion)
August	– Effective allocation of new Special Drawing Rights (approximately US$250 billion)
September	– Effective recapitalization of the IMF (US$500 billion)

cess to ILOLR facilities matter during liquidity crises (see Appendix 1 for econometric exercises supporting this section).[12]

In order to compute whether lack of access becomes less relevant at higher credit ratings, an interaction term of credit ratings with the binary variable was also included in an alternative specification. This interaction term is also significant, indicating that access is particularly important for countries with relatively weaker fundamentals.

The previous results hold for different specifications, including an extensive set of additional control variables, such as political rights indicators, histories of sovereign default, economic freedom indices, measures of trend growth, financial integration, trade integration, as well as lags in changes in spreads, none of which turn out to be significant in the presence of the main explanatory variables.

FIGURE 4 **The Role of Access to ILOLR Facilities in the Lehman Crisis**
(EMBI spread, in bps)



Data source: Bloomberg.
[1] Includes Argentina, Ecuador and Venezuela.
[2] Countries with access to ILOLR during the Lehman Crisis with the same credit rating as countries without access during the Lehman Crisis. Includes Belize, Dominican Republic, Georgia, Ghana, Indonesia, Jamaica, Lebanon, Pakistan, Philippines, Serbia, Sri Lanka, Turkey, Ukraine and Uruguay.
[3] Countries that during the Russian/LTCM Crisis had the same credit ratings as countries without access during the Lehman Crisis. Includes Brazil, Bulgaria, Lebanon, Ecuador, Russia, Turkey and Venezuela.

For further robustness tests, a second set of regressions was estimated using the percentage change in bond prices of EMBI sovereign bonds (in the 60-day window described above) as the dependent variable, and credit ratings, ILOLR access measures and their interaction as explanatory variables. Results also hold along the same lines as those presented above.[13] Both credit ratings and access to ILOLR facilities are significant in explaining percentage changes in bond prices.

To illustrate the relative importance of fundamentals versus access to ILOLR facilities for LAC-7, the following exercise was performed using the benchmark model in the first column of Table A1.1 in Appendix 1.[14] First, the effect of stronger average credit ratings–relative to those prevailing at the time of the Russian/LTCM crisis–on

12 It could be argued that countries with access to ILOLR facilities performed better than those that did not, not because of having access per se, but because access was given to countries that pursued the best policies and therefore had better fundamentals. However, under this hypothesis, the variable indicating access would not be significant because the impact of fundamentals would be captured through credit ratings.

13 Except for the interaction term, which does not turn out to be significant.

14 This exercise was performed for the LAC-7 group excluding Argentina (whose pre-Lehman crisis credit ratings are worse than those observed prior to the Russian/LTCM crisis).

average spread changes in the 60-day window following the Lehman crisis was computed. Second, the effect of access to ILOLR facilities on average spread changes was estimated also in the 60-day window following the Lehman crisis. Results show that in the aftermath of the Lehman debacle, stronger LAC-7 credit ratings (an improvement from BB in the pre-Russian/LTCM crisis to BBB– in the pre-Lehman crisis) reduced spread increases by 108 bps, while access to ILOLR facilities reduced spread increases by as much as 718 bps. Although at first glance the differences appear to be striking, on second thought they should come as no surprise. In periods of extreme international capital market illiquidity, having access to liquid resources is highly valuable. In fact, it could make the difference between "making it or breaking it."[15]

The interplay between multilateral financial support and stronger fundamentals can be analyzed following an alternative approach that complements the econometric exercises performed previously. This alternative approach is a case study of LAC-7 countries and focuses on the dynamics of international liquidity ratios (ILRs)—a robust predictor of financial crisis, measured as the ratio of international reserves to short-term financing requirements—for a multiyear period following the Lehman crisis, rather than on spread performance in the immediate aftermath of the Lehman debacle for the full sample of EMs included in the EMBI (see Appendix 2 for a complete discussion).[16]

The main conclusions of this alternative approach are as follows. With fundamentals as weak as those prior to the Russian/LTCM crisis of 1998, multilateral support would have shifted ILRs schedules towards safer territory, but would have remained close enough to critical levels, thus not completely eliminating uncertainty at the peak of the crisis. In turn, stronger fundamentals, although a first line of defense for a short duration global crisis, would have been insufficient on their own in the case of a more protracted global crisis to prevent ILRs from sliding towards dangerous financial territory without multilateral support. It is only when both multilateral support and stronger fundamentals are combined that ILRs remain comfortably above the danger zone even in a protracted global crisis.

Having established through different approaches that both multilateral support and strong fundamentals played a key role in explaining LAC-7 resilience to the global crisis—with varying degrees of relative importance—this report turns next to their policy implications. First, the focus is set on systemic policy implications regarding

15 Moreover, the observed increase in credit ratings was not that remarkable (only two notches in the scale) and thus the impact should not be expected to be large. In fact, had LAC-7 improved its credit ratings to current Chilean levels, spread increases would have declined by an additional 342 bps.

16 For our purposes, ILRs are defined as in the IDB (2009) macro report as a modified version of the Guidotti-Greenspan rule, i.e., the ratio of international reserves to short-term debt obligations of the public sector debt coming due within one year—both domestic and external and including the stock of Central Bank sterilization instruments—plus the financing needs arising from projected fiscal deficits, as well as short-term external debt obligations of the corporate sector coming due within one year.

international financial arrangements for emerging markets, and second, a tentative agenda is suggested to further strengthen the region's macroeconomic and microeconomic fundamentals.

Systemic Policy Implications[17]

The evidence presented above suggests that access to ILOLR facilities played a key role in preventing EMBI spreads from skyrocketing and potentially leading to financial distress and severe economic contractions.[18] Thus, it has major implications for the design of a new international financial architecture for EMs and the future actions of the IMF and MDBs.

It is not yet clear whether the resources and the instruments displayed during this crisis will be available when EMs face the next systemic financial crisis, particularly if it does not originate in the industrialized North. Moreover, there is room for expanding the set of instruments—as well as amending the characteristics of existing ones—in order to deal with several remaining issues inherent to ILOLR functions. As part of the new financial architecture that emerges from the current crisis, these uncertainties and implementation gaps should be dealt with sooner rather than later, making use of the momentum generated by the international response to the global crisis. As a result, the first order of business is the institutionalization and improvement of ad-hoc ILOLR mechanisms used during the global crisis.

Design Issues

A natural way of analyzing the ideal characteristics that any ILOLR facility should possess is to depart from well-known Lender of Last Resort (LOLR) principles at the national level and evaluate to what extent these principles can be emulated in view of the limitations faced in an international context.

A LOLR should be effective in avoiding a liquidity crisis (the interruption of normal access to financing of solvent institutions), thus deactivating its destructive power over otherwise solvent institutions. In principle, a credible LOLR will diffuse liquidity crises caused by panic without even disbursing, as other lenders realize that solvency will not be at risk. To obtain the desired effects, speed, certainty, and power are of the essence to bridge the financial gap and remove unnecessary lack of investor confidence.

[17] This section draws on Izquierdo and Talvi (2009) and Fernandez-Arias (2010).

[18] For systematic evidence on the adverse impact of periods of international financial turmoil on EM macroeconomic performance and the anatomy of the subsequent recovery, see Calvo, Izquierdo and Talvi (2006).

Bahegot (1873) and subsequent authors have stressed that, in the context of banking crises, lending to solvent institutions should be established ex-ante (and followed ex-post automatically), should be available in large amounts (on demand) at terms steeper than market terms in normal times, and should be issued against any marketable collateral priced at its value in normal times.

Moreover, the LOLR should also stand ready to deal with cases in which insolvent institutions' normal access to financing is interrupted. In this case, calling for restructuring, the LOLR should support crisis mitigation and resolution with power and speed, by supporting bankruptcy proceedings as a senior lender (in lieu of lending freely against collateral at penalty terms) and coordinating crisis management while insolvent institutions are sold or liquidated. The participation of the LOLR should also be established ex-ante (and followed ex-post automatically).

The first practical difficulty faced by the LOLR is to establish whether a crisis hinges on liquidity or solvency. If a liquidity crisis is wrongly assessed as a solvency crisis, there will be lost value as viable entities (with LOLR support) will be unnecessarily restructured at great cost. On the other hand, if a solvency crisis is wrongly assessed as a liquidity crisis, there will be lost value as bankruptcy proceedings are postponed, eventually resulting in losses to the lender.

Another less obvious cost of this practical difficulty of diagnosing the type of crisis is moral hazard. In order to deal with moral hazard resulting from misdiagnosing a solvency crisis for a liquidity crisis, the LOLR traditionally relies on prudential regulation and the design of incentives to promote private sector monitoring in order to control the risk that moral hazard begets. The very design of a LOLR stipulating good collateral and lending at a penalty rate can be interpreted as a first defense against moral hazard by increasing the expected cost to institutions that use the facility, therefore inducing less risk taking.

When moving to an international context, an ILOLR faces a key additional issue, namely that of sovereignty, as the ILOLR will be unable to put in place prudential regulation and solvency proceedings on sovereign governments—an option that is available to the LOLR. This is where conditionality comes in as a principle to be added to the list for an effective ILOLR, as conditionality can be considered a substitute in lieu of regulation (to deal with crisis prevention risk) and bankruptcy processes (to deal with crisis mitigation and resolution risk).

However, for conditionality to remain a deterrent to moral hazard, it must be accompanied by clear and credible rules regarding ILOLR removal of committed financial support when a country deviates from agreed ex-ante conditionality.[19] This issue, and in particular, the challenges faced by the ILOLR in removing support—due to the costs

[19] See, for example, Arozamena and Powell (2003).

it can inflict on borrowing governments—is a key element to consider when designing practical ILOLR arrangements.[20]

In sum, an ideal ILOLR should possess:

- Ex-ante eligibility: Country eligibility on the basis of pre-arranged conditions of soundness of policy regimes in place.
- Certainty: Automatic (i.e. non-discretionary) liquidity assistance according to pre-arranged mechanisms and conditions with an adequate repayment period to match extraordinary financial need.
- Speed: Timely, immediate disbursements to prevent crises rather than cure their consequences or, if already underway, mitigate them at minimal cost.
- Power: Sufficient support to meet short-term financial obligations and avoid a collapse in aggregate demand.
- Focus: Lending at penalty rates without prepayment impediments and with no or low commitment fees to reduce incentives to use the facility when not in a financial crisis, but to incentivize the preventive use of the facility.
- Catalytic role: Pre-arranged financial agreement with official and private lenders not to work at cross-purposes and help configure a coherent financial package.

Pre-arranged conditions included in ex-ante eligibility would cover ex-ante prudential conditions. For example, such eligible policy framework aimed at promoting stability would include the following set of policies:

- Prudent liquidity policies such as international reserve coverage of maturing debt, or liquidity rules (as those described in Part II).
- Frameworks for financial system stability according to international standards.
- Sound monetary and exchange rate policy regimes to respond efficiently to shocks.
- Sound fiscal policies, i.e., countercyclical fiscal rules cum fiscal targets consistent with convergence to prudent public debt levels.

Supporting the ILOLR

The natural institution at the center of ILOLR functions is obviously the IMF. The establishment of the IMF's FCL has definitely been an improvement in international financial arrangements. However, an element of concern is the fact that while the FCL

[20] See Fernández-Arias (2010) for a detailed discussion of this issue.

has been well endowed by the G-20 to confront this crisis, most of the new funds have an element of temporariness (to be approved every five years) and are contingent on the occurrence of a (potential) crisis, which adds an undesirable element of uncertainty.[21] This financial endowment and support to the ILOLR should continue if the LOLR function is to remain effective and lead countries to adopt arrangements with the ILOLR, instead of following less efficient self-insurance policies through international reserve accumulation.

Another element to consider is the supporting role of MDBs. Guided by a development purpose that makes them more willing to lend in riskier environments when social returns are high, MDBs have played in the past a counter-cyclical lending role when private creditors retrench. The question is what their role should be in the presence of an ILOLR as described above.

MDBs should first of all be key players in helping countries achieve the stability-promoting policy frameworks (which are consistent with the structural policies discussed in the next section) required for access to the ILOLR.

Moreover, ILOLR functions apply mostly to extreme financial situations, leaving out cases of less severe financial market volatility and natural financial demand fluctuations resulting from the normal economic cycle of countries. Until ILOLR functions are perfected, an ILOLR may miss a good number of extreme situations, either because of country eligibility, stigma or mistrust, in which international financial support from MDBs may be justified.[22]

Additionally, MDBs are called upon in times of difficulty to participate in the reassignment of public sector activities through project and policy-based loans. They support the development integrity of key aspects of the overall public expenditure framework, which may collapse under fiscal adjustment pressure, help in the design and protection of social programs to contain the effects of recessions on the poor and future generations, and safeguard investment projects and policy reforms that may be victims of disorderly adjustment due to lack of financing.

Where Do We Stand?

The FCL of the IMF was created in 2009 to respond to the current global crisis and, while still an evolving process, shares the spirit of many of the ILOLR principles described above, and has a much wider scope than the SLF created in 2008 and dis-

[21] A discussion on additional potential problems, such as political pressures on the ILOLR to be more flexible with certain countries with more political clout, how to disqualify a country that ceases to comply with eligibility criteria, as well as the so-called stigma of joining a program designed to provide emergency financing signaling weakness, is provided in Fernández-Arias (2010).

[22] See Fernández-Arias, Powell and Rebucci (2009).

continued in 2009 without ever being used.[23] The FCL can also be used as a preventive arrangement (a pre-approved credit line) for any balance of payments shock, not necessarily a quick-reversing, self-correcting liquidity shock requiring no adjustment as in the SLF. In retrospect, the FCL was meant to correct the defects of its precursor Contingent Credit Line (CCL), which did not include country prequalification and was therefore subject to a slow and uncertain process of approval and subject to ex-post conditionality.[24] [25]

Departing from the advantages and limitations of current arrangements, the strategy moving forward should be two-pronged: the first element of such a strategy is the institutionalization and improvement of existing ILOLR mechanisms along the lines discussed above. The second element of that strategy is country participation in the design of policies oriented toward meeting eligibility criteria to access ILOLR facilities, with the support of MDBs.

These two components could constitute the basis for an incentive-compatible "Long-Term Stability Pact for EMs." In line with the IMF's FCL, the benefits of access to ILOLR facilities would only be enjoyed by those who pre-qualify, based on previous efforts to attain sound macroeconomic policy frameworks, thus preventing moral hazard. Within this Pact, as discussed above, the IMF and MDBs would play complementary roles, the former acting as ILOLR for EMs and the latter financing the macro-policy-framework reform agenda. Thus, the IMF and MDBs should be endowed with adequate resources for the task.

From the Mexican "Tequila" crisis in 1994 all the way through the Asian Crisis in 1997, the Russian/LTCM crisis in 1998, and the ENRON crisis in 2001/02, many EM countries with perfectly sound fundamentals were penalized by contagion, inflicting unnecessary pain on otherwise healthy economies. Had there been an ILOLR to prevent the virus from spreading into healthy bodies, a lot of suffering—both economic and human—could have been spared. The readiness of the international community during the current global crisis to put both the resources and the instruments at the disposal of EMs and the effectiveness of this intervention, have created the conditions for the institutionalization of ILOLR facilities for EMs to prevent future crises. The international community should seize this opportunity to solidify their support.

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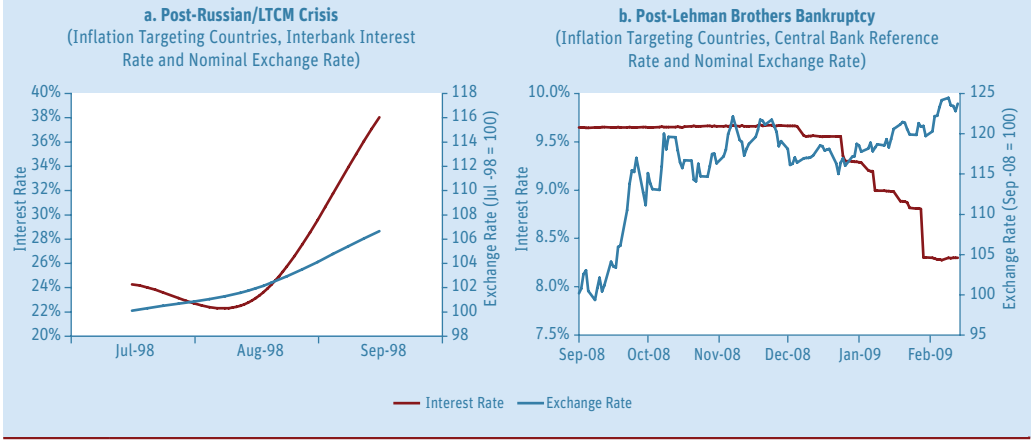
23 The IMF has described this achievement as "…the biggest change in how the IMF interacts with its members since the end of Bretton Woods". So far it has been joined by Mexico, Poland and Colombia.

24 The CCL expired in 2003 and was also never used.

25 Traditional Stand By Arrangements have also been made more flexible in 2009 in the direction of the principles above, in the form of High-Access Precautionary Stand-by Arrangements (HAPAs), catered to countries that would not qualify for the FCL. They remain traditional arrangements whose disbursements are subject to phasing and caps monitored through ex-post conditionality and review.

FIGURE 5 **Monetary Policy Response: *Russian/LTCM Crisis vs. Current Crisis***



Data sources: a. IMF; b. National statistics/Bloomberg.
Inflation Targeting Countries includes Brazil, Chile, Colombia, Mexico and Peru.

Domestic Policy Implications for LAC

The evidence presented above suggests that stronger macroeconomic fundamentals in LAC-7 countries also played a significant role in preventing financial distress at the peak of the global crisis. The institutionalization of monetary, fiscal and financial regimes would consolidate these improvements in macroeconomic fundamentals and go a long way toward boosting policy credibility and crisis resilience in these economies. Although for many countries this is still work in progress, several countries in the region have already moved forward in adopting these regimes.

Consolidating Macroeconomic Policy Credibility

Brazil, Chile, Colombia, Mexico and Peru have moved towards inflation targeting (IT) regimes that proved to be quite effective in controlling inflation and dealing with the global crisis. As illustrated in Figure 5, these countries responded to the global crisis with an expansionary monetary policy that was successful in lowering interest rates while substantially depreciating the exchange rate so as to buffer external shocks without wreaking financial havoc. This ability was largely due to the de-dollarization process that took place in the region and to the subsequent reduction in Central Banks' "fear of floating" the exchange rate.[26] Moreover, IT regimes in these countries were flexible

26 See Ortiz, Ottonello, Sturzenegger and Talvi (2009).

enough to accommodate temporary deviations from long-term inflation targets or to make use of reserves when international conditions changed drastically.[27] [28] Chile and Peru are good examples of the latter. Given heavy dollarization within the banking system, the Peruvian regime includes contingent rules indicating when the regime can switch to exchange rate intervention in the presence of large external pressures. The Chilean case relies on transparent announcements justifying the reasons for intervention, defining a clear timeframe and maximum magnitude for intervention.[29]

On the fiscal front, Chile has adopted a structural fiscal rule that has contributed significantly to tame pro-cyclical fiscal behavior, so pervasive in Latin American countries.[30] [31] Under this rule, Chile was able to accumulate large fiscal surpluses in the years preceding the global crisis and to pursue active countercyclical fiscal policies when the global crisis erupted, without compromising sustainability (see Figure 6, panels a and b). Moreover, under the operation of the rule, which targeted a structural surplus of one percent of GDP per year, Chile's public debt levels were reduced to 15 percent of GDP in 2007 (see Figure 6, panel c), the lowest in the region and well within the safety levels estimated by the IMF (2003) and Reinhart, Rogoff and Savastano (2003).

On the financial front, a few countries in the region have adopted or are planning to adopt countercyclical prudential regimes based on the success of the Spanish model of dynamic provisions during the global crisis. In a nutshell, the Spanish system requires banks to increase their general provisions when their credit growth exceeds its historical average. Implicitly, this links provisions to the business cycle, given that in general, economic booms and credit booms go hand in hand. Peru's case is an example of a variant of the Spanish rule in which the counter-cyclical rule is activated at the country level instead of at a bank-specific level. In November 2008, Peru adopted a counter-cyclical

27 For a rationalization of the optimality of contingent IT regimes see Caballero and Krishnamurthy (2003), and more recently, Benigno, Chen, Otrok, Rebucci and Young (2009), and for the use of reserves in times when international conditions changed drastically see Calvo (2006), and Cespedes, Chang and García-Cicco (2009).

28 It is fair to acknowledge that the recent global crisis made it relatively easy to follow expansionary policies within an IT context without hurting credibility of the regime for two reasons. First, the fact that the crisis originated in industrial countries and turned global made it absolutely clear that the trigger was external to LAC-7 economies. Second, the global crisis sent commodity prices plummeting, making it easier for central banks to remain within inflation targets despite large devaluation. However, future external fluctuations may not be as clear-cut as the global crisis, opening the door for credibility issues unless rule contingency is specified ex-ante.

29 See De Gregorio, Tokman and Valdes (2005).

30 For a detailed discussion of the Chilean fiscal rule see Marcel, Tokman, Valdés and Benavides (2003) and García, García and Piedrabuena (2005).

31 In fact, the average LAC-7 country spent 85% of the increase in fiscal revenues from December 2003 to March 2008, in sharp contrast with the 33% increase observed in Chile. For evidence on pro-cyclicality in Latin America see, for example, Cerisola and Singh (2006) and IDB (2008).

provisioning regime based on GDP fluctuations. The rule is activated when GDP growth exceeds its long-term average and, in contrast to the Spanish methodology, applies to all banks regardless of their own credit growth performance. Other countries, such as Colombia, are expected to implement a system similar to Spain's in 2010.[32]

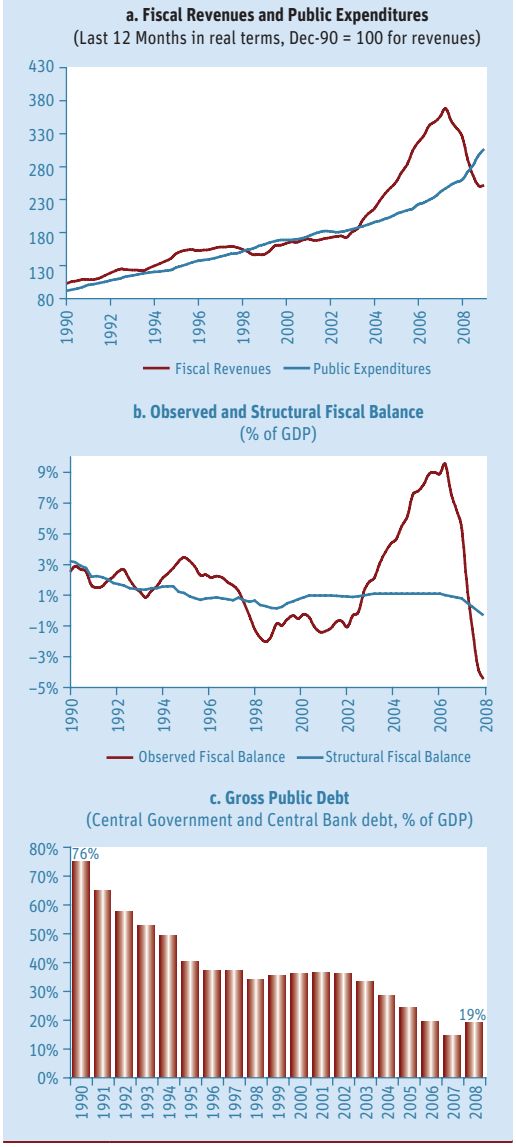
The adoption of policy regimes along the lines described above would not only enhance financial stability per se, but would also increase the chances of having access to ILOLR facilities in the future, thus solidifying long-term financial insurance mechanisms.

Unleashing Productivity

Notwithstanding the significant progress in strengthening macroeconomic policy fundamentals for long-term financial stability, the region's relative long-run growth performance vis-à-vis the developed world and other emerging regions has been quite unsatisfactory.

Figure 7, panel a, shows an index of the relative performance of GDP per capita in Latin America vis-à-vis that of the US. It shows that by 2005, the share of GDP per capita in Latin

FIGURE 6 Chilean Structural Fiscal Rule



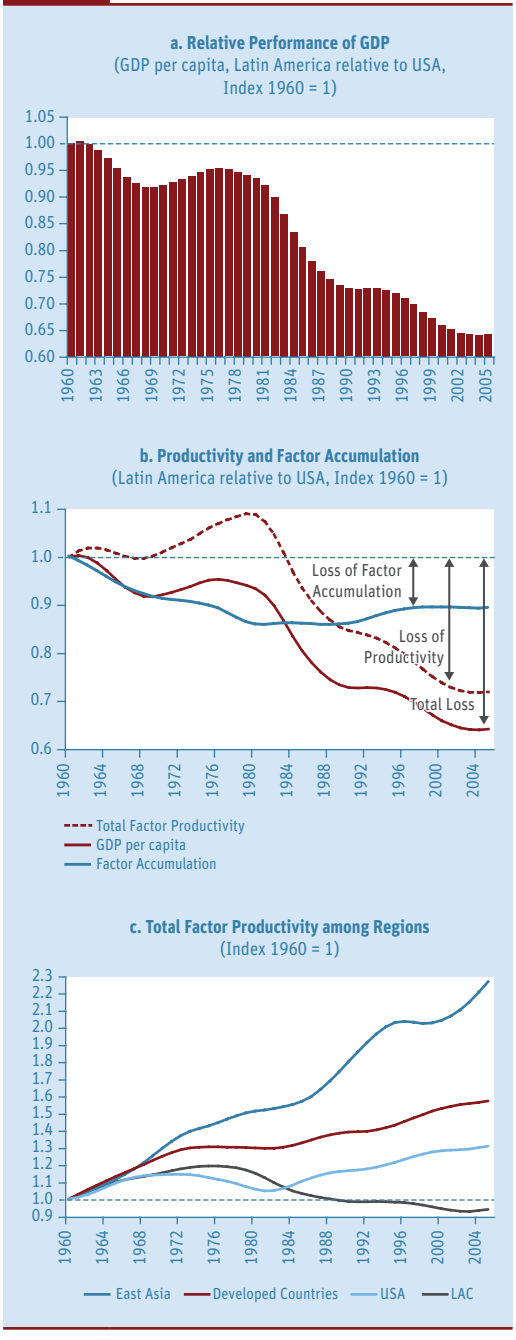
Data source: National statistics.

32 The possibility of including counter-cyclical elements in prudential regulation through capital requirements has not reached a consensus, and ways to implement them are currently being debated globally. Implementing counter-cyclical capital requirements would require sorting out some points currently being discussed, such as whether all assets should be treated equally regardless of their risk profile, as well as how to avoid excessive penalization of banks that are growing safely. To a certain extent, the decision for Latin American countries is somewhat easier than in advanced economies, given that the complexity of the balance sheets of financial institutions is much lower. In countries where credit dominates bank assets, the difference between adopting either counter-cyclical component—i.e., provisioning or capital requirements—is smaller.

America relative to US GDP per capita has fallen by about a third compared to that prevailing in 1960. As a matter of fact, average income per capita in the region was one quarter that of the United States in 1960 and is now only one sixth. Rather than catching up to the developed world, Latin America and the Caribbean have distanced themselves even farther.

Which factors lie behind such weak performance? The IDB's 2010 Development in the America's report on productivity analyzes this issue in detail and establishes that, contrary to popular belief, factor accumulation is not necessarily to blame for this disappointing track record. Slow productivity growth—rather than impediments to factor accumulation—provide a better explanation for Latin America's income-per-capita divergence with respect to developed economies. Figure 7, panel b, decomposes relative GDP per capita performance in Latin America vis-à-vis the US into relative factor accumulation and relative total factor productivity (TFP) performance. It clearly shows that roughly 75 percent of the gap can be explained by lagging relative productivity.[33] According to research estimates in IDB (2010), Latin America's productivity is about half its potential and is not catching up with the frontier. Closing the productivity gap with the frontier would actually close most of

FIGURE 7 **Economic Activity and Income per capita in Latin America: A Long Run Perspective**



Data source: Penn Wold Table

[33] In line with calculations in Daude and Fernández-Arias (2010)

the income per capita gap with developed countries. Viewed in a comparative global context, slower productivity growth is responsible for slower growth in Latin America. Figure 7, panel c, displays an index of TFP for Latin America and other countries or groupings around the world. It starkly conveys how the region has lagged behind: while East Asia has more than doubled TFP levels relative to those prevailing in 1960, Latin America has remained stagnant.

For a region starved for growth, diagnosing the causes of this poor productivity and attacking their roots is a high development priority. IDB (2010) identifies several characteristics of the Latin American productive landscape that serve as a departure point for policy analysis, and it highlights the complexity of effectively attaining aggregate efficiency gains, indeed an intricate problem that goes well beyond technological growth. This process requires incentives to be aligned, fair competition for resources, and the opportunity for firms with good ideas to thrive and grow. Low productivity is often the unintended result of a myriad of market failures and poor economic policies that distort incentives for innovation, prevent efficient companies from expanding, and promote the survival and growth of inefficient firms.

Raising productivity also requires substantial coordination to identify appropriate policies, understand the conflicts between different objectives, secure the resources to implement the policies, deal with those who would prefer the status quo or other policies, and maintain sustained efforts in complementary areas until they bear fruit. Such an effort depends on the capacity of the State and the political system to maintain stable and credible policies that enable the private sector to invest and innovate with a long-term horizon, adapt policies to changes in economic circumstances, and coordinate the policies of different areas—economic, social and institutional—taking into account their effects on each other.

So far, the region has not been able to deal with the effective implementation of a productivity enhancing agenda because it needed to devote substantial attention to the resolution of long-standing macroeconomic issues. However, to the extent that recent international financial arrangements evolve into a "Long-Term Stability Pact" as described above, several countries in Latin America and the Caribbean may be able to address the microeconomic challenges ahead in order to overcome remaining long-standing productivity hurdles in a context of stability. Policymakers' abilities and political capital could be fully devoted to deal with the fundamental obstacles to productivity growth, rather than to deal with the next macroeconomic crisis.

Measures to enhance productivity based-growth should also be a priority for multilateral institutions, which should provide substantial support given their experience in backing this type of activities in other countries or regions, as well as their capacity to provide lending for long-term development. And just as much as macroeconomic concerns should be fundamentally addressed by the IMF, enhancing productivity growth

is the task of MDBs. In this light, the diagnosis and prospects contained in the IDB's 2010 report on productivity are meant as a contribution to help address what, arguably, is the region's greatest development challenge.

Part II

The Aftermath of the Global Crisis: Policy Challenges for LAC Countries

Life After Lehman

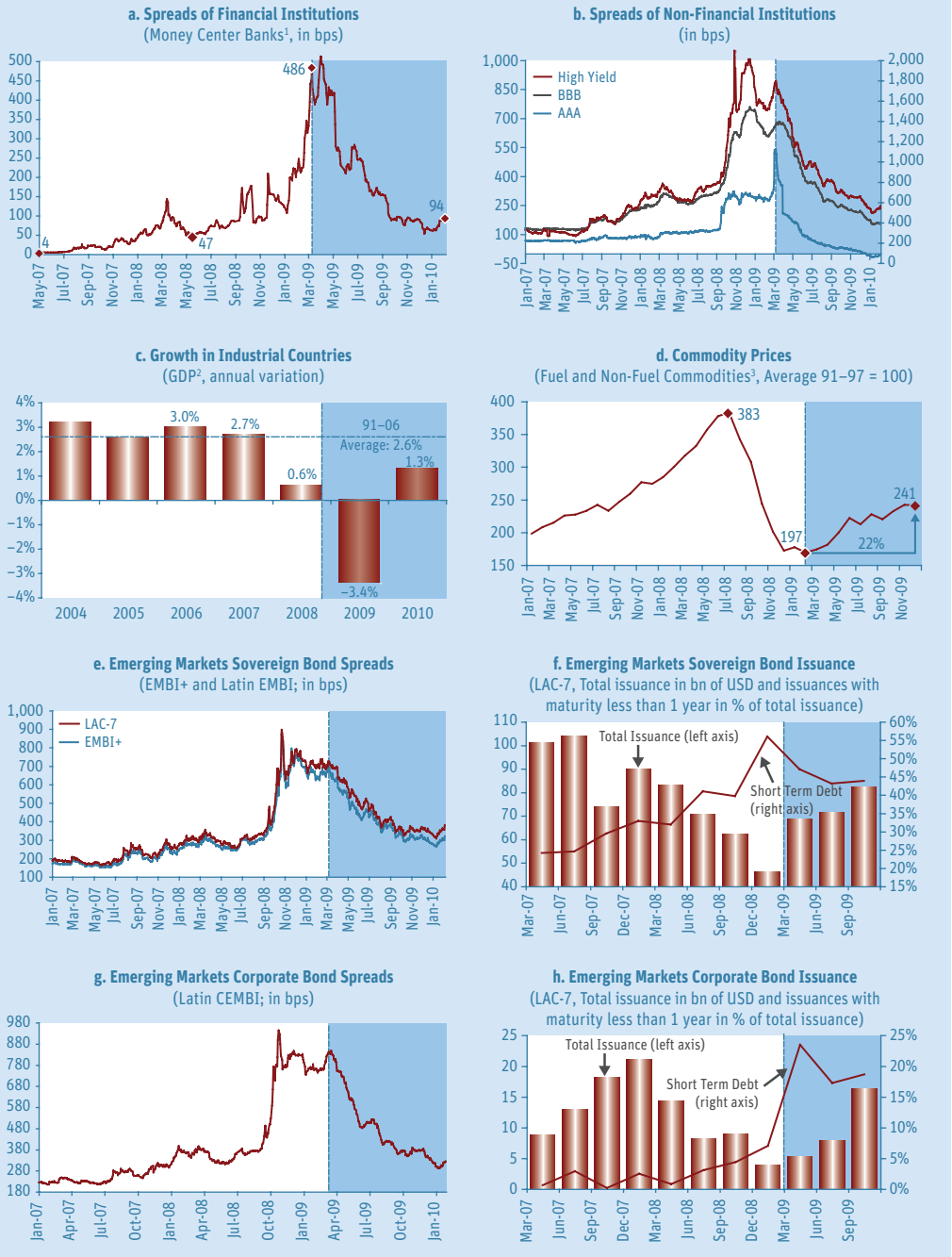
By end-March 2009 the free fall triggered by the global financial crisis was finally contained, giving way to a recovery period. On the US front, the crisis hit a trough as overnight indexed swap (OIS) rates, as well as bank and corporate spreads declined sharply, in some segments of the market back to pre-crisis levels by September of 2009 (see Figure 8, panels a and b). Moreover, as discussed in Part I, the heavy liquidity support provided by the international community to EMs deactivated potentially severe international liquidity problems.

The improvement in global financial conditions and the support of the international community significantly changed the outlook for EMs in general and for Latin America in particular. The recession in industrial countries bottomed out in the second quarter of 2009, commodity prices posted a significant recovery, and EMs regained access to international capital markets. Both EM sovereign and corporate spreads declined very sharply and issuance picked-up significantly. In particular, corporate issuance, which had almost come to a halt by the quarter ending in December 2008, was back to pre-crisis levels by September 2009. Maturities, which had moved swiftly towards the short-term side of the spectrum, were gradually extended (see Figure 8, panels c to h).

These sharp improvements in external factors led to a swift change in the direction of capital flows. Following the huge collapse in capital inflows to LAC-7 in excess of 4 percent of GDP that followed the global crisis, a quick recovery to pre-crisis levels was reached in the third quarter of 2009. This new influx led to a sharp recovery in credit flows and asset prices, a significant appreciation of exchange rates in spite of heavy intervention by Central Banks, the expectation of a strong rebound in economic activity for 2010, and a halt in disinflationary pressures (see Figure 9, panels a to f).[34] [35]

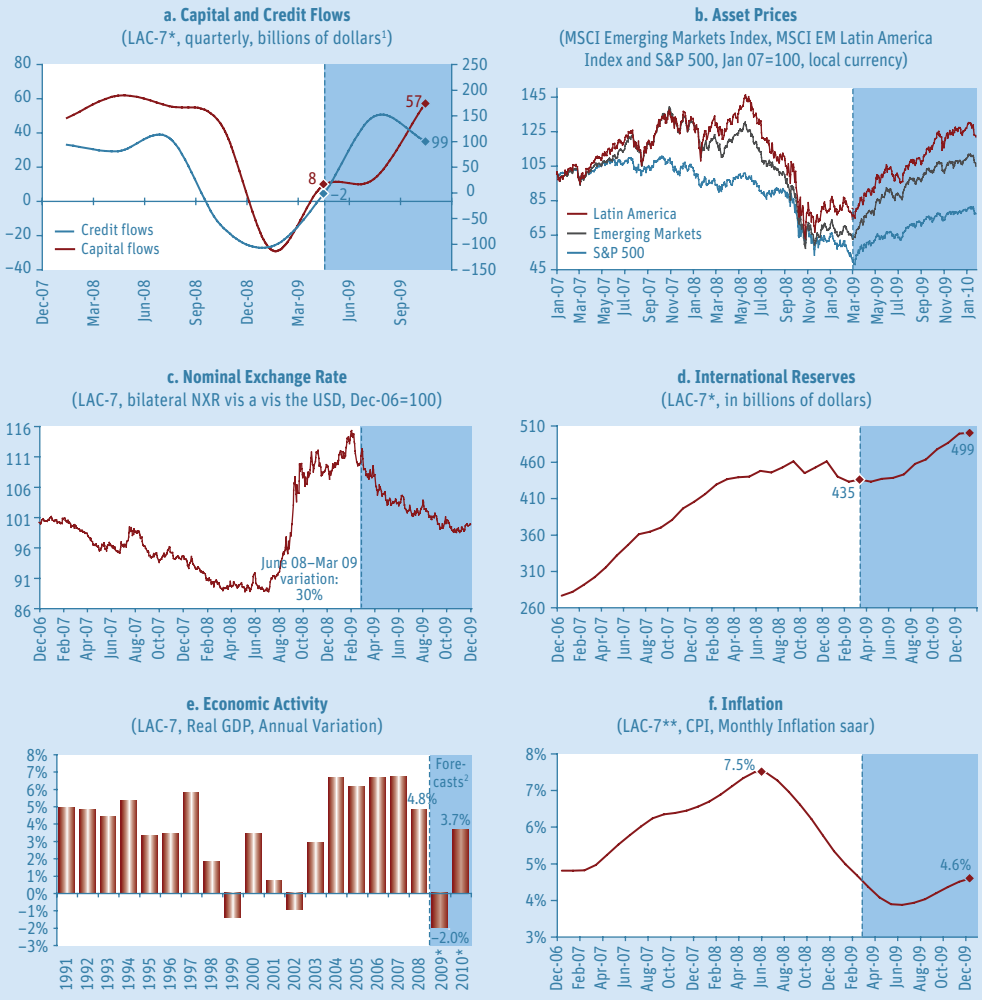
[34] The situation is slightly different in non-inflation-targeting countries (i.e. Argentina and Venezuela) where, in spite of the recovery in capital inflows, credit flows, asset prices and international reserves,

FIGURE 8 **Global Recovery and External Factors in Latin America**



Data sources: a. Bloomberg; b. Bloomberg; c. WEO; d. IMF; e. Bloomberg; f. Bloomberg; g. Bloomberg; h. Bloomberg.
LAC-7 is the simple average of the seven major Latin American countries, namely Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. These countries represent 91% of Latin America's GDP.
[1] Capital weighted average of JP Morgan, Bank of America, Citibank and Wells Fargo.
[2] Source: WEO (Oct–09).
[3] Source: IMF.

FIGURE 9 **Global Recovery and Macroeconomic Outcomes in Latin America**



Data sources: a. National statistics/IFS; b. MSCI / Bloomberg; c. Bloomberg; d. National statistics; e. National statistics/JP Morgan; f. National statistics.
[1] Since Mar.09 proxied with Reserve Accumulation – Trade Balance.
[2] Source: JP Morgan.
LAC-7 is the simple average (*sum, **median) of the seven major Latin American countries, namely Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. These countries represent 91% of Latin America's GDP.

The improvement in global financial conditions also brought about a major improvement in international liquidity ratios (ILRs) for LAC-7 countries. ILRs are defined—as in IDB (2009) macro report—as a modified version of the Guidotti-Greenspan rule,

there was no substantial appreciation in the nominal exchange rate, and in the case of Venezuela markets expect negative growth in 2010.

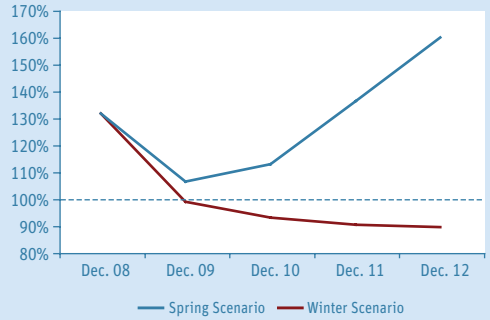
35 This is not necessarily the situation in some Central American and Caribbean countries, where, as it will become clear in Box 1, different structural characteristics and vulnerabilities pose different challenges.

i.e., the ratio of international reserves to short-term debt obligations of the public sector debt coming due within one year—both domestic and external and including the stock of Central Bank sterilization instruments—plus the financing needs arising from projected fiscal deficits, plus short-term external debt obligations of the corporate sector coming due within one year.

As was analyzed in the IDB (2009) macro report, under global conditions prevailing in the first quarter of 2009 when a protracted crisis could not be ruled out (defined as the Winter Scenario shown in Appendix 2), ILRs could have evolved towards critical levels that might have triggered liquidity crises and severe financial distress, given that international reserve holdings would not have sufficed to cover upcoming financing needs (see Figure 10, where the average ILR falls below 100 percent under the Winter Scenario). This was due to the combined effect of precarious access to international capital markets, i.e., difficulties rolling over maturing debts, and the adverse fiscal impact of a protracted recession and/or an anemic recovery and depressed commodity prices.[36]

The improvement in the global outlook resulted in a major shift of ILRs, strong enough to bring liquidity indicators back to safe levels—i.e., levels at which existing reserves are sufficient to cover short-term financial obligations (see Figure 10). This was due to the combined effect of improved access to international capital markets and the bottoming out of the global recession with a recovery in commodity prices that considerably improved the fiscal outlook (defined as the Spring Scenario).[37] [38]

FIGURE 10 **International Liquidity Ratios in Latin America: The Impact of the Improvement in Global Financial Conditions**
(ILR, LAC-7)



Data source: National statistics.
LAC-7 is the simple average of the seven major Latin American countries, namely Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. These countries represent 91% of Latin America's GDP.
[1] Multilateral support includes 23.2% of GDP to Brazil, Colombia, Mexico and Peru.

[36] The Winter scenario is almost identical to the L-Shaped scenario presented in IDB (2009). It differs in that actual data was used up to the first quarter of 2009, but projections for external variables (i.e. G-7 industrial country growth, terms of trade and spreads) are basically the same as those used in that macroeconomic report. G-7 GDP was assumed to hit a trough in June 2009, and from then on grow sluggishly to pre-crisis levels by June 2012. Commodity prices were assumed to remain stable at March 2009 levels until June 2009, and then gradually recover to December 2006 levels (when G-7 plus China GDP reaches pre-crisis levels), remaining stable thereon. EMBI spreads were assumed to remain at March 2009 levels until June of 2009, and then gradually fall to 300 bps in June 2012, remaining stable thereafter.
[37] The Spring scenario, a more benign scenario than the Winter, reflects what was in fact observed during 2009 and assumes that this trend will continue. More specifically, G-7 plus China GDP is assumed

With the improvement in the global outlook, the emphasis of policy challenges for LAC-7 countries has now shifted away from international liquidity concerns to dealing with renewed capital inflows, booming asset prices and credit, appreciating currencies and loss of competitiveness. What then lies ahead for EMs? Will Summer follow Spring? What are the likely macroeconomic policy challenges the region will face in light of this new wave of capital inflows?

Alternative Global Scenarios

As of the writing of this report, markets were generally expecting that Summer will follow Spring, i.e., a scenario in which financial markets continue to improve and the global economy continues its recovery. However, isolated episodes of financial distress, such as Dubai World's default or the ongoing problems in Greece, add uncertainty to the consolidation of the global recovery.[39] While it is possible to conceive of a return to financial turbulence and/or a double dip recession, throughout this report the possibility that these latent risks will revert the region back into the "Winter Mode" of the financial crisis is disregarded. This assumption is made because first, according to market forecasts this scenario is highly unlikely to materialize; and second, policy proposals for such a scenario were already discussed at length in IDB (2009). Moreover, preparing to deal with the macroeconomic consequences of more benign scenarios is useful not only because the region is currently facing exactly those challenges, but also because appropriate policies in good times are key in reducing the likelihood of future crises.

Before discussing alternative global scenarios in more detail, it is important to make clear that these scenarios are not intended as a forecasting exercise, which is

to grow at historical rates. Commodity prices are assumed to continue growing at the average rate observed during the 2002–2006 period, assuming that strong growth in China poses upward pressures in commodity demand. Finally, as capital continues flowing to EMs, EMBI spreads decline until they reach December-2006 levels—their prevailing levels before the short-run bonanza that lasted well over a year into the US financial crisis that started in 2007—by December 2010, and then remain stable.

38 However, it should be stressed once again that the faster and stronger than expected improvement in the global outlook was not the only factor that helped LAC-7 countries to avoid financial distress. As discussed in Part I, both the readiness of the international community to perform the function of ILOLR as well as stronger macroeconomic fundamentals played a key role during the most critical phase of the global crisis, when the bottom of the abyss was still far out of sight.

39 On November 26, 2009, Dubai World—an investment company that manages businesses for the Dubai government— proposed delaying for six months debt payments on US$ 26 bn, causing markets to plummet. Since early 2010, financial markets feared a likely Greek default on its sovereign debt. Total public debt coming due this year rises to US$ 75 bn (23 percent of Greek GDP). However, in mid February, Euro-area member states announced determined and coordinated actions to safeguard financial stability in the euro area. If in fact the European Union decides to assist Greece in tackling its debt crisis, the bailout of Greek sovereign loans coming due in 2010 would represent 2.2 percent of German GDP and 0.5 percent of EU-15 GDP.

better left to market experts. Rather, they are constructed as analytical devices aimed at providing a framework in which to evaluate the formulation of appropriate policy responses.

What appears to be beyond doubt is the fact that the US Federal Reserve will lay out at some point an unwinding course to exit from Quantitative Easing and lax monetary policies that it implemented to combat the financial crisis.[40] How this unwinding will affect international financial conditions for EMs is still unclear. For this reason, two alternative post-financial crisis global scenarios are constructed. The first scenario depicts an optimistic global context that brings about a new expansionary phase in LAC-7, as tighter monetary policy in the US is associated with a shrinking US current account deficit and excess saving pours into emerging markets, supporting large and persistent inflows of capital. In the second scenario, the removal of expansionary monetary policies, coupled with large financing requirements of public deficits in industrial countries, lead to higher interest rates, eventually crowding out capital flows to EMs, partially reverting the current trend. In other words, the second scenario differs from the first in that the favorable global context is interrupted by a partial reversion in capital flows to EMs due to monetary tightening cum high fiscal deficits in industrial countries. The next section describes in detail the scenarios that serve as the basis for the macroeconomic policy analysis that ensues.

From Spring to Summer into a New Expansionary Phase

The first scenario assumes that due to very high levels of international liquidity, Spring is followed by Summer, i.e., international capital keeps flowing into LAC-7 countries, and commodity prices continue to recover, creating the conditions for a sustained bonanza. This scenario, roughly in line with market expectations as of the writing of this report, is consistent with a situation in which the US continues with its deleveraging process, closing its current account deficit as private sector savings exceed public sector deficits, while EM countries reduce their current account surpluses. Thus, in spite of monetary tightening in industrial countries, excess world savings, coupled with low long-run real interest rates and global current account adjustment, lead to high capital inflows into EMs.

In this scenario, growth for G-7 countries is assumed to hover around 2 percent, while China is expected to maintain double-digit growth.[41] Commodity prices

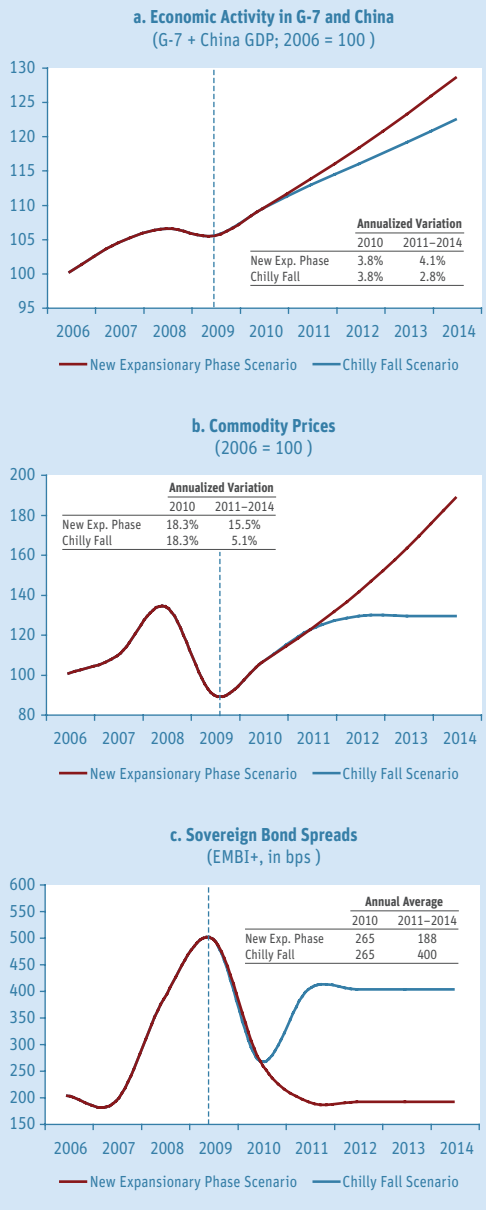
[40] This was made clear by Chairman Bernanke's speech on February 10, 2010 before the Committee on Financial Services, US House of Representatives, Washington DC., and the recent increase in the discount rate.

[41] For the relevance of China for Latin America see Cesa-Bianchi, Hashem Pesaran, Rebucci, Tamayo and Xu (2009).

are assumed to continue growing at the average rate observed during the 2002–2006 period, since strong growth in China buoys demand for commodities. As capital continues flowing to EMs, spreads continue their decline until they reach December-2006 levels—their prevailing levels before the short-run bonanza that lasted well over a year into the US financial crisis that started in early 2007—by December 2010, remaining stable thereafter (see Figure 11).

Such a favorable international scenario translates into a sustained bonanza for the region. Using the econometric framework developed in Izquierdo, Romero and Talvi (2008), the behavior of external variables depicted above can be mapped into LAC-7 growth as shown in Figure 12. Average GDP growth for LAC-7 would be close to 3 percent in 2010 and would then increase continuously to an average yearly rate close to 5 percent for the 2011–2014 period.

FIGURE 11 **Alternative Global Scenarios: External Factors**

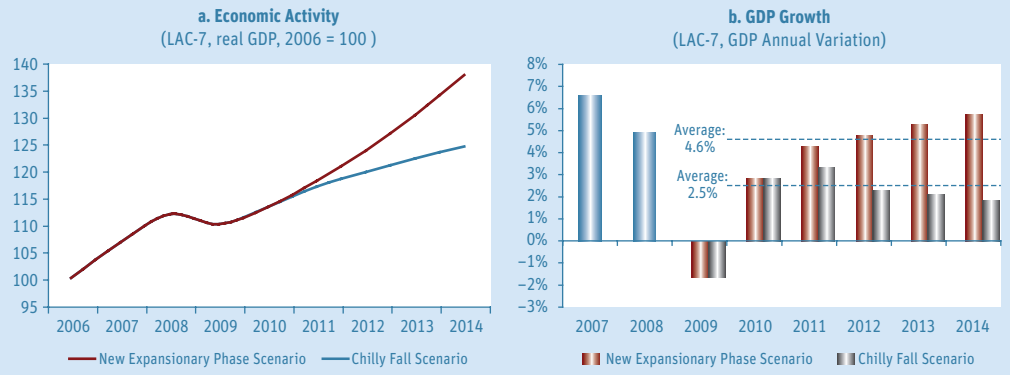


Data sources: a. National statistics; b. IMF; c. Bloomberg.

From Spring to Summer into a Chilly Fall

This scenario, a chillier version of the previous one, assumes that Spring is followed by Summer and then by a Chilly Fall due to higher interest rates in industrial countries and tighter financial conditions for EMs as stronger private sector demand in industrial countries and inflationary pressures trigger an aggressive withdrawal of Quantitative Easing and tighter monetary policy. Tighter monetary policy coupled with heavy financing requirements of public sector deficits lead to

FIGURE 12 **Alternative Global Scenarios: Economic Activity in Latin America**



Data source: Own calculations.
LAC-7 is the simple average of the seven major Latin American countries, namely Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. These countries represent 91% of Latin America's GDP.

substantially higher real interest rates in industrial countries. As a result of crowding out, capital flows revert back to industrial countries and international financial conditions deteriorate for EMs putting an end to the Summer season.

In this alternative scenario, the transition from Spring into Summer is assumed to last until end-2010. Through that period, external variables are assumed to evolve identically as in the first scenario. However, as the unwinding of expansionary policies takes place in 2011 and beyond, higher US and industrial countries interest rates lead to tighter credit conditions for EMs, and a cooling off in capital inflows. Growth in China decelerates in response to this new scenario. G-7 country growth, on the other hand, remains stable because capital flows partially revert back to industrialized economies as the private sector consolidates its recovery process and increases its demand for credit. Slower growth in China brings the growth rate in commodity prices to a halt and spreads are assumed to increase to 400 bps as the US and other industrial countries raise their interest rates and crowd-out EMs (see Figure 11).

Such a jagged international scenario implies a first phase of capital inflow bonanza and growth acceleration for LAC-7 countries, followed by a second phase of growth slowdown. The behavior of external variables depicted above can be mapped into LAC-7 growth as shown in Figure 12. Average GDP growth would be 3 percent in 2010—and peak in 2011, tracing dynamics that are qualitatively similar to that of the previous, more optimistic scenario. However, from 2012 onwards, growth in LAC-7 declines persistently to slightly below 2 percent by 2014 as external conditions for EMs deteriorate. Such a scenario, though far from dire, implies that the bonanza could be relatively short-lived and countries should take advantage of this opportunity to prepare for a less friendly external environment.

In summary, both scenarios share similar short-term dynamics for LAC-7 in 2010 and 2011. As a result, LAC-7 countries will face similar macroeconomic policy challenges in the immediate future under both scenarios. It is these immediate challenges for LAC-7 countries that the report takes up in the next section. However, should the New Expansionary Phase Scenario become more likely and countries gain financial latitude, the challenge of implementing long-run macro-financial stability and productivity enhancing policies along the lines described in Part I should be made a top priority.

The macroeconomic outlook and policy challenges facing Central America and the Caribbean are different in many respects from those of the LAC-7 group, the main focus of this report. These differences in outlook, vulnerabilities, and policy challenges require a separate analysis, which is carried out in detail in Box 1. As a matter of fact, the challenges ahead for Central America and the Caribbean are likely to be more demanding given their stronger ties to the US, as evidenced by existing trade, remittance and tourism flows.

Policy Challenges

Under both scenarios the region could be facing a capital inflow bonanza in the immediate future and thus, the emphasis of short-term macroeconomic management should be placed on preventing overheating, i.e., avoiding "excessive" current account deficits, credit growth, inflationary pressures and currency appreciation, while strengthening international liquidity ratios by taking advantage of currently favorable tailwinds in international financial markets. These often conflicting short-term macroeconomic policy objectives pose serious dilemmas for policymakers.

Short-Term Macroeconomic Management

Taking advantage of, while at the same time dealing with, the undesired consequences of large inflows of capital, requires both art and the use of the complete arsenal of policy instruments at the disposal of government authorities. In this section, five key elements of the policy tool kit to deal with large inflows of capital are reviewed, including liquidity management, monetary and exchange rate policy, capital controls, credit policy and fiscal policy.

Liquidity Management

The emergence of ILOLR-type facilities made available by the international financial community during the global crisis calls for a reevaluation of reserve accumulation

policies. However, for these facilities to replace reserve accumulation, they must be sufficiently institutionalized—a topic that was discussed in detail in Part 1. Until this occurs and ILOLR facilities gain sufficient long-term credibility, it is most likely that EMs will want to rebuild their liquidity positions—weakened during the Winter phase of the crisis—through reserve accumulation, re-profiling debt maturities and maintaining a fluent relationship with the IMF and MDBs to improve their ILRs.

Thus, LAC-7 countries should take advantage of currently favorable tailwinds in international financial markets and the associated capital flow bonanza to strengthen their international liquidity position. As a matter of fact, ILRs in LAC-7 deteriorated substantially during the global crisis and are currently still below pre-crisis levels (120 percent in December 2009 compared to 132 percent in December 2008) despite the fact that the region has already increased international reserves by 14 percent since April 2009. Rebuilding a liquidity position similar to that of end-2008 will require further reserve accumulation, equivalent on average to an increase of 10 percent in the current stock of international reserves. Moreover, countries that found their reserves to be insufficient during the current crisis will have incentives to accumulate at a faster pace.

The recent global financial crisis, as well as previous episodes of financial turmoil, together with the absence of a full-fledged ILOLR, support the usefulness of a strong international liquidity position. Recent research shows that international reserve accumulation reduces the probability of a Sudden Stop in capital flows.[42] Several early-warning indicator models also tend to find the stock of international reserves to be a good in-sample predictor of crisis avoidance. Thus, adopting self-insurance policies by increasing the stock of international reserves becomes relevant in preventing financial crises and economic collapses.[43] Recent research also suggests that reserve accumulation cannot be motivated solely by trade or short-term debt liquidity factors, but that it must also consider financial stock aspects such as the size of the banking system, a finding that points towards further reserve accumulation in cases in which this dimension was not previously taken into account.[44]

However, reserve accumulation per se may not be enough. Many argue in favor of policies that complement reserve accumulation with other types of policies, such as swap agreements with major central banks, as well as external debt management policies that force external borrowers to internalize the consequences of external bor-

42 These results stem from a recent extension of Calvo, Izquierdo and Mejia (2008). In their terminology, reserve accumulation contributes to reducing net domestic liability dollarization.

43 Recall the relevance of reserve accumulation depicted through ILRs for the region's resilience to the global crisis highlighted in Part 1 of this report.

44 See, for example, Obstfeld, Shambaugh and Taylor (2009), and Calvo (1995) for an earlier discussion.

rowing.[45] However, as discussed below, many of these policies—such as an external borrowing tax, or capital controls—may be difficult to implement.

Finally, if reserve accumulation is going to be beneficial, reserves must be used at the time of the crisis.[46] At the height of the crisis, countries such as Brazil forcefully implemented policies to tap previously accumulated reserves. However, recent studies show that during the recent global crisis, many EMs showed "Fear of Losing Reserves," partly because the duration of the crisis was uncertain, and because depleting reserves too quickly might have exposed them to the risk of abrupt adjustment should the crisis have turned out to be deeper and longer lasting.[47]

Monetary and Exchange Rate Policy

In the current global financial juncture, countries may experience "Fear of Appreciation," i.e., in the face of large capital inflows, they may be tempted to postpone the appreciation of local currency for competitiveness reasons, a strategy that is consistent with the reserve buildup described above. However, this may be at odds with the goal of preventing rapid credit growth, large deterioration in the current account and containing inflationary pressures to meet inflation targets.[48] What are the options for policymakers confronting these dilemmas?

No intervention in exchange rate markets, i.e., allowing the exchange rate to appreciate in response to improved global conditions and large inflows of capital, is one policy prescription to prevent overheating. The drawback is that exchange rate appreciation hampers the competitiveness of the export sector, especially if other EMs do not allow their currencies to appreciate at a similarly rapid pace. However, in highly dollarized economies, exchange rate appreciation may reduce the real value of foreign currency liabilities, partially neutralizing its dampening effects on the economy.

At the other extreme, countries could intervene in the foreign exchange market to prevent the exchange rate from appreciating abruptly. If the intervention is unsterilized, it would result in a large injection of liquidity that would turn into inflation and, eventually, in gradual erosion of competitiveness.

Sterilized intervention is usually considered a better alternative. However it has pitfalls of its own. If effective—i.e., Central Bank sterilization bills are not close substitutes of money and sterilization operations lead to high domestic interest rates—it is

45 See, for example, Aizenman (2009a), Aizenman (2009b) and Aizenman (2009c).
46 See Calvo (2006).
47 See Aizenman and Sun (2009).
48 For emerging market experience with "Fear of Appreciation" policies, see Levy Yeyati and Sturzenegger (2007).

usually fiscally very costly and difficult to maintain for long periods of time when capital inflows are large. In fact, sterilization itself may contribute to perpetuate large capital inflows. In contrast, if Central Bank sterilization bills are close substitutes for money, or quasi-money, then sterilized intervention would be ineffective to keep liquidity in check and would have effects similar to unsterilized intervention.

In the face of large capital inflows, dealing with these trade-offs using only monetary/exchange rate policy instruments is close to an impossible task. Additional instruments are needed to deal with conflicting objectives, such as capital controls, quantitative restrictions on credit growth and tighter fiscal policies.

Capital Controls

The difficult policy dilemmas presented above have led some countries to attempt to deal with the problem at the source by introducing some type of control on capital inflows, i.e., liquidity requirements, taxes or outright bans on certain kinds of transactions. Brazil, for instance, imposed a 2 percent entry tax on foreign inflows to both equity and bond markets in October 2009 in order to contain short-term capital inflows (excluding FDI). Recently, IMF (2010) suggests that capital controls could be used under certain conditions by emerging market governments as a shield from unwanted capital flows, and to provide stability to fragile economies.[49]

Evidence on the effectiveness of capital controls is still inconclusive. While some studies have found that they have been effective in shaping the composition of short-term versus long-term capital flows, evidence is much more controversial in terms of affecting the volume of net capital flows, and therefore on their effectiveness of fighting real exchange rate appreciation.[50] Studies specific to countries in the LAC-7 group argue in the same direction: capital controls were not successful in fighting exchange rate appreciation, though they did alter the maturity composition of capital flows.[51]

Given that available evidence is inconclusive, it is probably sensible to keep an open mind regarding the use of capital controls as a tool to deal with large capital inflows, while taking into account that they may either be ineffective or if effective engender distortions.[52] Ultimately the trade-off will depend on country specifics.

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49 However, the use of capital controls is justified if the economy is operating at near potential, the level of reserves is adequate, the exchange rate is not undervalued and capital inflows are likely to be transitory.

50 See, Reinhart and Smith (1998), and Magud, Reinhart and Rogoff (2005).

51 See De Gregorio, Edwards and Valdes (2000) for the case of Chile, and Cardenas and Barrera (1997), Rocha and Mesa (1998) and Concha and Galindo (2009) for the case of Colombia.

52 See, for example, Rodrik (2009).

Credit Policy

Recent evidence suggests that the credit channel–i.e., the impact of credit on economic activity–appears to be stronger in Latin America than in advanced countries.[53] This implies that if monetary policy were left on its own to deal with positive credit shocks, the monetary response would have to be substantial.[54] This fact calls for additional instruments to deal with potential credit booms resulting from the Spring-into-Summer phase, in particular to the extent that the increase in asset values eases access to credit.

During the global crisis several countries in the LAC-7 group have made use of alternative instruments—as they engaged in expansionary credit policies that were set in motion during the Winter phase—namely changes in reserve requirements and/or active credit policies by first and second tier public banks.

Among LAC-7 countries, Brazil, Chile and Colombia are examples in which reserve requirements were used actively as a policy instrument to smooth the cycle. The case of Colombia is notorious. In May 2007, during a phase of rapid credit expansion, the Central Bank chose to increase reserve requirements to slow down credit and combat inflationary pressures. Later in October 2008, when the international financial crisis was at its peak, reserve requirements were lowered significantly as a means to stimulate credit growth.

Lending by public and development banks was the counter-cyclical instrument most used throughout the crisis. Figure 13 shows the average real growth rate of credit in LAC-7 since 2007 and up to the third quarter of 2009. In 2007 credit was growing on average at real rates of 25 percent. This was led mostly by private banks. As the crisis developed in 2008, the growth rate of credit supplied by private banks started to diminish and was accompanied by an important rise in lending from first tier public banks. By the third quarter of 2009, credit from private banks was contracting in real terms while the supply of credit from public banks was booming.[55]

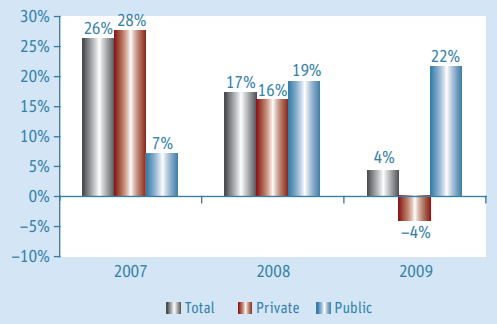
53 See Catao and Pagan (2009).

54 Catao and Pagan (2009) estimate that a one-standard-deviation shock to credit requires roughly a one-standard-deviation response from the monetary authority (or about 100 bps).

55 The desirability of public bank lending as a counter-cyclical instrument is an issue under substantial discussion. On the one hand, these banks could represent a vehicle for international reserve transfers to the private sector at a time when international private credit dries up. On the other hand, there is abundant evidence showing that lending from public banks tends to be of poor quality and is frequently assigned inefficiently. Moreover, credit from public banks throughout the global crisis was largely awarded at below-market interest rates, in opposition to effective lender of last resort rules. For these reasons, rapidly expanding the balance sheet of public banks could lead to higher delinquency rates and losses to public banks that could eventually turn into a fiscal burden.

Unwinding expansionary credit policies set in motion at the height of the global crisis by raising reserve requirements and capping growth of credit by public banks would make economic sense at this juncture. First, they would have a cooling effect that could in principle contribute to offset the expansionary impulse of massive capital inflows to the region and the concomitant recovery in private sector activity. Second, tightening credit growth of public banks could diminish the potential future impact of delinquencies.

FIGURE 13 **Credit Growth in Latin America**
(LAC-7, bank credit annual growth rate in real terms)



Data source: Bankscope.
LAC-7 is the simple average of the seven major Latin American countries, namely Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. These countries represent 91% of Latin America's GDP.

Will tightening credit policy be effective to cool off the pressures of large capital inflows? Experience suggests that in periods of abundant international credit, measures to clamp down on credit growth can be relatively easily undone by the markets. For example, lower credit by public institutions could be taken over by private banks, while disintermediation could compensate for higher reserve requirements in the banking system while making financial risks more opaque.

Moving forward, there are strong advantages to using countercyclical rules in prudential financial regulation, either through provisions or capital requirements, or through a combination of both, to tame the cycle. On the one hand, they entail no fiscal cost that could stem from the risk of delinquent loans, while on the other, regulatory buffers are amenable to ex-ante contingent rules.

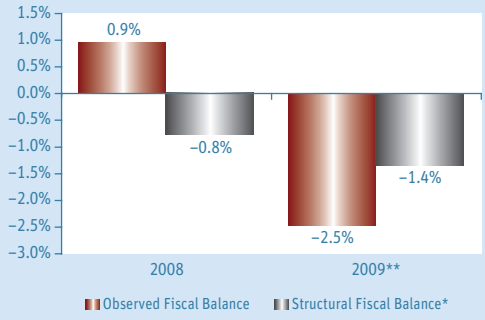
Fiscal Policy

Tighter fiscal policy could contribute to reduce overheating pressures stemming from a favorable external environment while at the same time reducing the pressure on the real exchange rate. Since most countries in the LAC-7 group pursued expansionary fiscal policies to contain the effects of the global crisis, it would be natural to unwind them as the global outlook improves and expansionary forces take over. As a matter of fact, Figure 14 shows the extent of the expansionary fiscal impulse implemented by LAC-7 countries by looking at the evolution of structural balances. It shows that indeed, both observed and structural fiscal balances deteriorated between 2008 and 2009—the former by 3.4 percent of GPD, the latter by 0.6 percent of GDP—indicating

that expansionary policies were actually implemented throughout 2009.[56] [57]

Unwinding expansionary policies set in motion at the height of the global crisis would make economic sense. First, they could have a cooling effect that could in principle contribute to offset the expansionary impulse of massive capital inflows to the region and the concomitant recovery in private sector activity. Second, unwinding previous expansionary policies is relevant to avert any concerns regarding long-term sustainability, especially in a region that still exhibits high levels of public debt. This consideration is particularly relevant in the scenario in which the bonanza turns out to be temporary. Third, in the current global context it may be preferable to first proceed with unwinding expansionary fiscal policy, since aggressively unwinding expansionary monetary policies would lead to higher interest rates that may spur even higher capital inflows.

FIGURE 14 **Expansionary Fiscal Policies in Latin America during the Global Crisis**
(LAC-7, % of GDP)



Data source: National Sources/Own Calculations.
LAC- 7 is the simple average of the seven major Latin American countries, namely Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. These countries represent 91% of Lati n America's GDP.
* Calculated using Hodrick Prescott Filter on Fiscal Revenues.
** Year ending in September 2009.

Unwinding expansionary fiscal policy is a politically difficult task. Just how difficult depends in part on how the expansion of government expenditure was allocated. Between 2008 and 2009, 39 percent of the increase in public spending was concentrated in capital expenditure.[58] This plays in favor of the ability of countries to unwind their countercyclical response to the crisis as capital outlays are usually more flexible than other expenditures such as wages and entitlements.[59] However, a remaining 61 percent of the increase was spent in difficult to reverse expenditure items. As of the writing of this report, available data suggest that the unwinding of expansionary fiscal policies has not yet begun. This is an issue that countries need to follow very closely.

Finally, there is a last issue that must be addressed. Even if feasible, will tightening fiscal policy be effective to cool off the pressures of large capital inflows? The avail-

56 Structural surpluses were constructed by adjusting revenues to trend using a Hodrick-Prescott filter.
57 Venezuela, unlike other LAC-7 countries, adjusted fiscal expenditures to improve its structural fiscal position, instead of pursuing expansionary fiscal policies.
58 Excluding Colombia due to data availability.
59 The unwinding of capital expenditures, although perhaps easier to do than the unwinding of other expenditures (many of them related to wages and entitlements), goes against the need for increasing long-run public investment from currently low levels.

able evidence is not very promising. Gavin and Perotti (1997) suggest that although the private sector in Latin America tends to offset, on average, about 60 cents on every dollar saved by the public sector, this figure increases to about 80 cents on the dollar in periods of ample access to international capital markets. Thus, much of the fiscal saving could be undone by the private sector. Although this result is somewhat discouraging in terms of the efficacy of fiscal policy in times of abundant credit, it is important to stress once again that unwinding previous expansionary policies might still be necessary to minimize fiscal risks by lowering debt to prudent levels.

In sum, taking advantage of favorable international financial conditions while dealing with the undesired consequences of large inflows of capital is no easy task. It presents policymakers with difficult dilemmas that must be dealt with using a set of macroeconomic policy instruments, none of which on their own are sufficiently effective for the task at hand. This inherent weakness must be acknowledged upfront in favor of a more eclectic view, meaning that policymakers must be prepared to mobilize the whole set of macro policy instruments—exchange rate/monetary policy, fiscal policy, credit policy and capital controls—in varying degrees depending on idiosyncratic country characteristics. While the worst has been avoided, many uncertainties remain; macroeconomic policy in Latin America and the Caribbean faces important challenges ahead.

BOX 1 Policy Challenges for Central America (CAC) and the Caribbean (CAR)

Short-term macroeconomic challenges for Central America and the Caribbean differ from those of LAC-7 countries for two reasons: (i) structural characteristics of CAC and CAR that will influence the pace of recovery and (ii) macroeconomic vulnerabilities.[a]

Structural Characteristics and Growth Forecasts

CAC and CAR countries differ with respect to LAC-7 countries in four key dimensions: i) they are much more open to trade and thus more exposed to the US and other industrial countries (see Figure 1.1, panel a); ii) they are much more dependent on remittances, especially from the US (see Figure 1.1, panel b); iii) in contrast with LAC-7 countries, commodity prices are negatively correlated with terms of trade in CAC and CAR (see Figure 1.1, panel c).[b] iv) They rely much more heavily on tourism revenues (see Figure 1.1, panel d).

As a result of these differences, growth in CAC and CAR is expected to be sluggish in 2010 (CAC-7 and CAR-4 are expected to grow 1.8 and 0.3 percent, respectively), in contrast with LAC-7 countries where growth is expected to rebound significantly and reach 3.7 percent. Sluggish growth in the US and industrial countries, weak labor markets and the failure of remittances to recover significantly, as well as adverse terms of trade due to rising commodity prices, and lower revenue from tourism from industrial countries, all combine to dampen the outlook for growth. Moreover, increasing competition from China will add an additional burden to the recovery process.

Macroeconomic Vulnerabilities

Several statistics indicate that both CAC and CAR are in a more vulnerable macroeconomic position than LAC-7. Fiscal conditions are weaker than in LAC-7 countries: Figure 1.2, panel a shows that fiscal deficits are higher in CAC and CAR than in LAC-7. Moreover, when measured as a percentage of revenues, which is a more accurate measure of the tax increase that would be required to eliminate the budget deficit, CAC and CAR fiscal deficits are twice and three times larger than in LAC-7. In turn, public debt levels in CAC and CAR are much larger than in LAC-7 when measured as a percentage of revenues, a better indicator of ability to pay (see Figure 1.2, panel b). Given sluggish growth expectations in the near future, particular attention should be given to keeping public accounts under control.

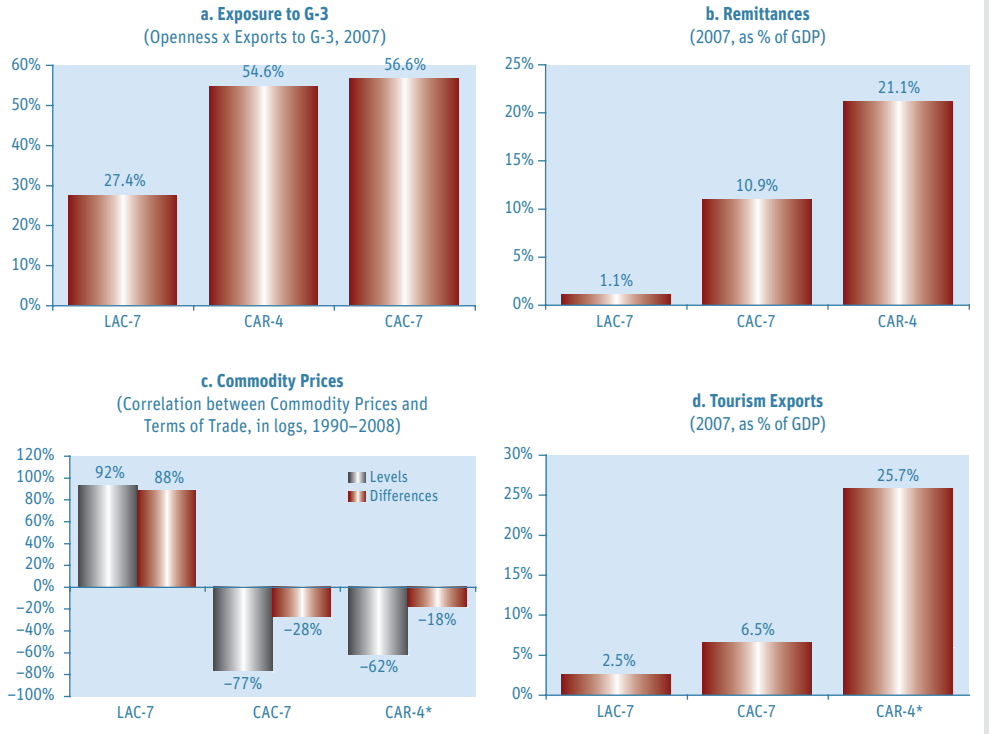
(continued on next page)

[a] Throughout this analysis CAC will be represented by CAC-7 which consists of the simple average of Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua and Panama, whereas CAR will be represented by CAR-4 which consists of the simple average of The Bahamas, Barbados, Jamaica and Trinidad & Tobago. Haiti, the other major country of the Caribbean, is excluded from the analysis since, given the earthquake suffered in early 2010, it faces completely different policy challenges.

[b] With the exception of Trinidad & Tobago which is an oil-exporting country.

BOX 1 Policy Challenges for Central America (CAC) and the Caribbean (CAR) *(continued)*

FIGURE 1.1 Central America and Caribbean: Structural Differences



Data sources: a. IMF-National Statistics; b. World Bank; c. IMF; d. World Travel and Tourism Council.
LAC-7 is the simple average of the seven major Latin American countries, namely Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. These countries represent 91% of Latin America's GDP.
CAC-7 is the simple average of Costa Rica, Dominican Republic, El Salvador, Guatemala , Honduras, Nicaragua and Panama.
CAR-4 is the simple average of The Bahamas, Barbados , Jamaica and Trinidad & Tobago.
*Excludes Trinidad and Tobago.

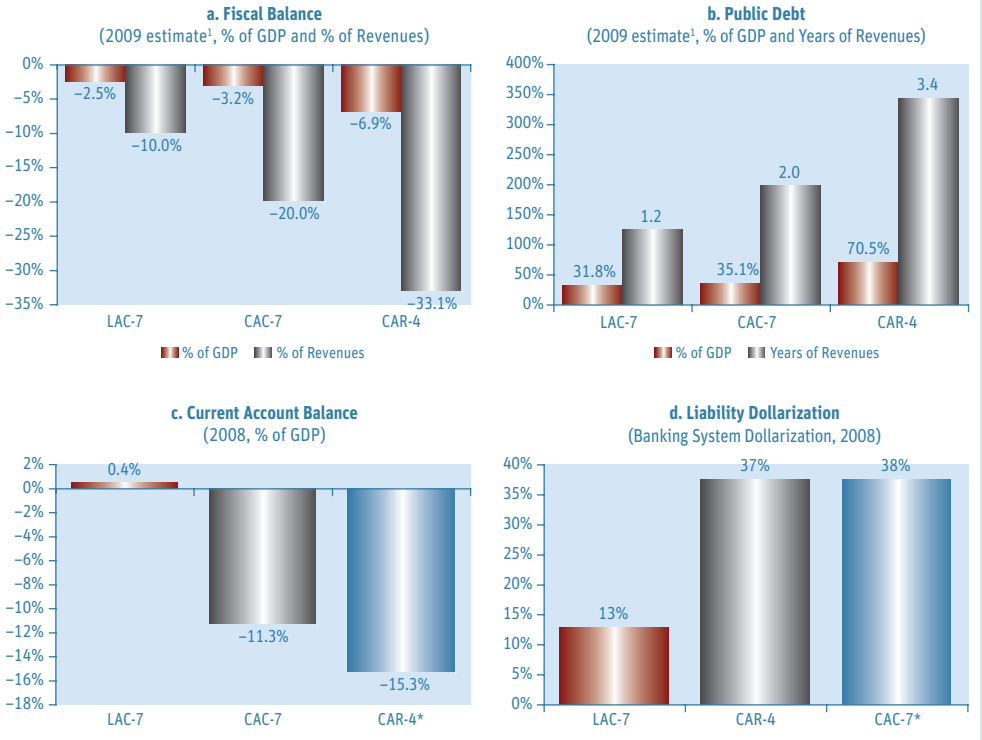
Current account deficits as of 2008 are very large in CAC and in CAR, 11.3 percent and 15.3 percent of GDP, respectively, compared to an almost balanced current account in LAC-7 (see Figure 1.2, panel c). Moreover, liability dollarization is much larger than in LAC-7 countries (see Figure 1.2, panel d).[c] Empirical work has shown that large current account deficits and liability dollarization can be a dangerous cocktail, as an abrupt adjustment in the current account can trigger large real exchange-rate depreciation, which combined with large liability dollarization could result in adverse balance sheet effects and in financial distress.[d] In fact, calculations based

(continued on next page)

[c] Liability dollarization is defined as the share of domestic banking system credit to the private sector handed in foreign currency.
[d] See Calvo, Izquierdo and Mejía (2008).

BOX 1 Policy Challenges for Central America (CAC) and the Caribbean (CAR) *(continued)*

FIGURE 1.2 Central America and the Caribbean: Macroeconomic Vulnerabilities



Data source: National statistics.
[1] Own calculations based on ECLAC and WEO.
LAC-7 is the simple average of the seven major Latin American countries, namely Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. These countries represent 91% of Latin America's GDP.
CAC-7 is the simple average of Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua and Panama.
CAR-4 is the simple average of The Bahamas, Barbados, Jamaica and Trinidad & Tobago.
* Excludes Trinidad & Tobago, the only oil exporter of the region.
** Excludes El Salvador and Panama.These two countries are explicitly excluded since their economies are fully dollarized, and thus deserve a different treatment.

on the methodology developed by Calvo, Izquierdo and Talvi (2003) indicate that should CAC or CAR be required to abruptly close the current account gap, required real depreciation would be significant (see Table 1.1).

These calculations, however, may overestimate the need for real exchange rate realignment. Several countries in CAC and CAR finance a large share of their current account through FDI (see Table 1.1). This peculiarity may reduce the effective vulnerability to disruption in financing the current account deficit. In many cases, imports are the counterpart of a large share of foreign direct investment (FDI). FDI to the region comes largely from the US, and most likely FDI will be cut back given lower expected consumption in the US than before the global crisis. However, this

(continued on next page)

BOX 1 Policy Challenges for Central America (CAC) and the Caribbean (CAR) *(continued)*

means that the demand for imports will fall proportionately, exerting less pressure on the real exchange rate. The last column of Table 1.1 displays the same exercise shown in the first one, but this time assuming an extreme (favorable) case in which the fall in FDI is fully offset by a fall in imports. It shows significant reductions in the current account deficit, and therefore, on the required real exchange rate depreciation. This result is consistent with the historical stability of the real exchange rate in CAC and CAR relative to LAC (since 1990 the observed volatility in CAC and CAR is on average half that of LAC). Therefore, although lower FDI will bring a slowdown in economic activity, it may not have as strong an impact on the real exchange rate as a loss in financing of import demand of domestic residents. However, even in this more benign scenario, real exchange rate depreciation could be substantial for regional standards.

TABLE 1.1 FDI Financing and Real Exchange Rate (RXR) Adjustment

	CAC-7	CAR-4*
Current Account (2008, % of GDP)	–11.3%	–15.3%
RXR Required Depreciation (in %)	37.5%	57.2%
FDI Financing (2008, % of GDP)	6.4%	8.5%
Non FDI Current Account (2008, % of GDP)	–4.9%	–6.8%
Adjusted RXR Required Depreciation (in %)	18.3%	36.6%

Data source: Own calculations.
* Excludes Trinidad & Tobago.

Policy Challenges

Given the macroeconomic vulnerabilities described above, the emphasis in CAC and CAR of short-term macroeconomic management should be to prevent abrupt adjustments in financing. Both regions currently face a difficult policy dilemma: sluggish prospects for growth will not favor improvements in fiscal accounts, and there will be incentives for governments to keep an expansionary stance. However, given that some countries in both regions already have vulnerable fiscal positions, a protracted period of lax fiscal policy may well lead to debt sustainability concerns.

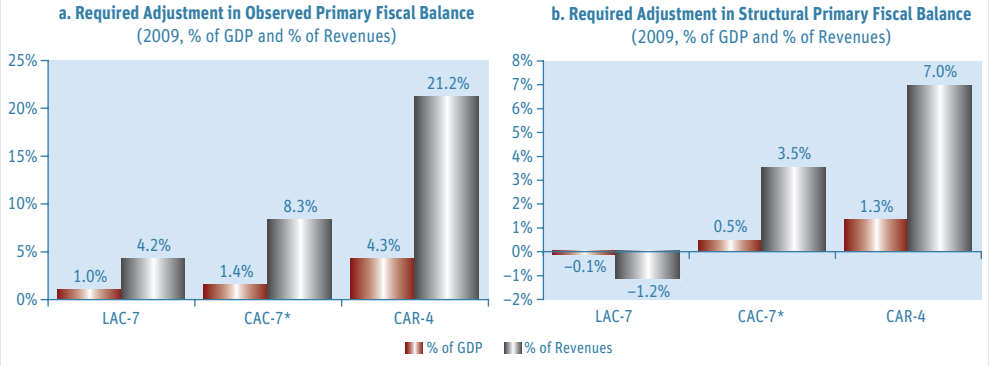
As a matter of fact, currently observed primary balances are, on average, well below required primary surpluses to ensure long-term sustainability (see Figure 1.3, panel a), raising the need for fiscal adjustment.[e] However, this deviation from required surpluses could be due to the fact that CAC and CAR countries are currently in the downward phase of the cycle. For

(continued on next page)

[e] Required primary surpluses are those that stabilize debt-to-GDP ratios at 2008 levels.

BOX 1 Policy Challenges for Central America (CAC) and the Caribbean (CAR) *(continued)*

FIGURE 1.3 Central America and the Caribbean: Public Debt Sustainability Analysis



Data source: Own Calculations
LAC-7 is the simple average of the seven major Latin American countries, namely Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. These countries represent 91% of Latin America's GDP.
CAC-7* is the simple average of Costa Rica, El Salvador, Guatemala, Dominican Republic, and Panama. Honduras and Nicaragua are excluded because they are *Heavily Indebted Poor Countries* (HIPC).
CAR-4 is the simple average of The Bahamas, Barbados, Jamaica and Trinidad & Tobago.

this reason, deviations of structural primary surpluses from required primary surpluses were computed, and are shown in Figure 1.3, panel b.[f] These figures still indicate a need for adjustment, all the more so if private-sector demand in the US does not pick up. This is particularly clear when looking at deviations of observed and structural primary surpluses from required primary surpluses as a share of revenues (see Figure 1.3, panels a and b), where both CAC and CAR countries distance themselves further from LAC-7 countries.

Thus, a first order of business is to ensure fiscal sustainability to prevent interruptions in international credit flows. For those countries in relatively more solid positions, it may be beneficial to enter programs that commit to adjustment in the near future—once the recovery in economic activity is under way—while ensuring financing from multilateral institutions. However, for countries where sustainability concerns are high, a prompt adjustment of public finances with the financial assistance of multilaterals may well be a less dire option than being forced into an abrupt adjustment by financial markets.

Moreover, corrections in fiscal policy should contribute to the adjustment of current account deficits, as evidence suggests that the offsetting of public sector savings with private sector increases in expenditure is much lower in bad times, when access to credit is in general more restricted.[g] This should help alleviate pressures in the financing of the current account.

[f] Structural surpluses were constructed by adjusting revenues to trend using a Hodrick-Prescott filter.
[g] See Gavin and Perotti (1997).

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Appendix 1. Assessing EMs' Resilience to the Global Crisis: Empirical Evidence

The basic econometric exercise performed to evaluate the relevance of fundamentals vis-à-vis that of access to ILOLR facilities in affecting EMBI spreads consists of regressing changes in sovereign spreads of the 37 EMs included in JP Morgan's sovereign EMBI Global Index on measures of credit ratings, as well as a binary variable indicating no access to ILOLR facilities—defined as either having no Article IV consultations with the IMF for the last two years, and/or being in arrears with the IMF, and/or in default with bondholders. The period of analysis of sovereign spreads is the 60-day window starting on September 1, 2009, two weeks prior to the collapse of Lehman Brothers, all the way to the apex of US high yield spreads in end-October, 2009, i.e., the period of maximum uncertainty about the fate of the global crisis. Thus, the equation being estimated is:

$$\Delta S_i = \beta_0 + \beta_1 CR_i + \beta_2 NA_i + \varepsilon_i \qquad (1)$$

where ΔS is the change in spreads, *CR* represents pre-Lehman crisis credit ratings and *NA* is a dummy variable indicating lack of access to ILOLR facilities. Credit ratings correspond to those prevailing the year before the crisis in order to reduce potential endogeneity issues that may arise between spreads and credit ratings. Credit ratings are transformed into a numerical scale as in Afonso et al (2007), with a higher value indicating a better credit rating. Regression results using this benchmark are presented in the first column of Table A1.1. They show that all variables are significant at the 5 percent level.

In order to control for the possibility that lack of access becomes less relevant at higher credit ratings, an interaction term of credit ratings with the binary variable was also included. The interaction term was also significant at the 5 percent level, confirming the fact that access becomes more important for countries with weaker fundamentals. Results are shown in the second column of Table A1.1.

TABLE A1.1 **Regressions on Change in Spreads: Estimation Results**

			Regression Controlled by							
	Benchmark Regression	Regression With Interaction Term	Political Rights Index	Economic Freedom Index	Historic Defaults		Trend Growth	Financial Integration	Trade Integration	Lagged Change in Spreads
					Sum	Present Value				
Constant	1286**	1222**	1430**	2222**	1219**	1191**	1308**	1326**	1275**	1088**
Credit Rating (CR)	–65**	–59**	–67**	–55**	–59**	–59**	–57**	–56**	–57**	–51**
No Access Dummy (NA)	718**	3421**	3310**	3698**	3406**	3243**	3469**	3347**	3437**	3135**
Interaction Term (NA*CR)	n.a.	–350**	–342**	–406**	–349**	–334*	–361**	–344**	–355**	–317*
Control Variable	n.a.	n.a.	–16	–17*	2.3	37	–2637	–80	–0.83	1.37
R^2	45%	53%	56%	58%	53%	53%	54%	55%	53%	56%

Data source: Own calculations.
* Significant at 10%; ** Significant at 5%.

This benchmark regression does not control for other potentially relevant explanatory variables. For robustness, a set of additional regressions was estimated using the first three explanatory variables described above, but controlling for additional explanatory variables, such as:

- *Political rights indicators.* In order to account for the possibility that changes in spreads were in part determined by a country's willingness to pay during periods of financial turmoil, a Democracy Index of the Economist Intelligence Unit was included as a control variable. This variable rates the democracy of each country; one would expect that the more consolidated a democracy is, the more likely the country is willing to pay its debt.
- *Economic freedom indices.* Heritage's Index of Economic Freedom was included as a control variable to test whether more repressed countries are perceived as more unlikely to pay their debt in difficult times, and may thus display a higher increase in spreads.
- *Histories of sovereign default.* It could happen that a country's history of default may be reflected in changes in spreads during periods of financial distress. For that reason, two synthetic measures of history of defaults were constructed using Laeven and Valencia's (2008) database: the first measure is the arithmetic sum of the number of defaults, whereas the second is the present value of the number of defaults (accounting for the possibility of a finite memory process in punishing previous defaults).
- *Trend growth.* The historical GDP trend growth rate was also included as a control variable linked to a country's ability to pay.
- *Financial integration.* It could be argued that the level of market liquidity may influence the decision to dispose of certain bonds first, i.e., investors will tend to sell liquid assets first in order to ensure liquidity while minimizing the possibility of incurring fire-sale costs. Hence, it could be expected that spreads increase more in countries with liquid financial markets. For that reason, a variable measuring financial integration of each country as in Lane and Milessi Ferretti (2003) was included as a control variable (measured as the absolute sum of a country's foreign financial assets and liabilities as a share of GDP).
- *Trade integration.* In order to capture the fact that a more integrated economy through trade is likely to be more vulnerable to a global crisis, a variable measuring openness to trade was also used as a control.

Each one of these variables was introduced individually due to lack of degrees of freedom for joint estimation. Results are shown in Table A1.1, columns 3 through 9. They indicate that none of the additional controls are significant at the 5 percent level,

and that both the coefficients accompanying credit ratings and the no-access indicator remain significant at the 5 percent level (the interaction term is significant at the 5 percent level in most specifications and always significant at the 10 percent level).[60]

It could be argued that the benchmark results may be driven by the lack of control for serial correlation. In order to address this issue, a lag of changes in spreads was introduced. Benchmark results are not altered significantly after the inclusion of this additional control. Results are displayed in Table A1.1, column 10.

The robustness of the abovementioned results was also tested in another direction by using percentage changes in the bond-price equivalent of EMBI sovereign bonds in the same 60-day window described above as the dependent variable (instead of changes in spreads), and credit ratings and ILOLR access measures as explanatory variables.[61] [62] This time the interaction term was excluded because it is no longer significant. The same set of additional explanatory variables is also used for control. Results are shown in Table A1.2.

Results also hold along the same lines as those presented above for changes in spreads. Credit ratings are significant in explaining percentage changes in bond prices, but their impact is outdone by access to ILOLR in times of crisis. Both variables remain significant after adding any of the additional explanatory variables used as controls in previous specifications, shown above for changes in spreads.

60 An alternative specification in which all explanatory variables, except the no-access dummy, are in logs was also estimated and results remain the same.

61 Bond prices are calculated assuming an 11 percent coupon and a 10-year maturity.

62 The benefit of using a bond-price equivalent measure is that it is related to *yields*, a better measure than spreads at the time of measuring percentage increases in the cost of financing.

TABLE A1.2 Regressions on Change in Bond Prices: Estimation Results

		Regression Controlled by							
	Benchmark Regression	Political Rights Index	Economic Freedom Index	Historic Defaults		Trend Growth	Financial Integration	Trade Integration	Lagged Change in Bond Price
				Sum	Present Value				
Constant	0.490**	−0.554**	−0.757**	−0.483**	−0.472**	−0.525**	0.521**	−0.505**	−0.467**
Credit Rating (CR)	0.0219**	0.0252**	0.0211**	0.0219**	0.0216**	0.0213**	0.0212**	0.0214**	0.0199**
No Access Dummy (NA)	−0.17**	−0.152**	−0.130*	−0.159*	0.143*	−0.156**	−0.162**	−0.164**	−0.162**
Control Variable	n.a.	0.0033	0.0045	−0.006	−0.020	1.016	0.0233	0.0002	0.614
R^2	43%	49%	47%	43%	44%	45%	45%	43%	45%

Data source: National statistics and own calculations
* Significant at 10%; ** Significant at 5%

Appendix 2. LAC-7 Resilience to the Global Crisis from a Liquidity Approach: A Case Study

This appendix analyzes the interplay between international financial support and stronger fundamentals by focusing on the dynamics of LAC-7 international liquidity ratios (ILRs) for a multiyear period following the Lehman crisis. This analysis complements that of Part I, which concentrated on the immediate impact on bond spreads following the Lehman debacle and for a larger sample of emerging economies.

A useful rule of thumb for liquidity analysis used in IDB (2009) is the Guidotti-Greenspan (GG) rule, which states that countries should hold at least enough international reserves to cover short-term (less than one year maturity) obligations coming due.[63] This rule gained acceptance in policy circles in the aftermath of the East Asian-Russian/LTCM crises. Empirical work by Rodrik and Velasco (1999) suggests that the reserves-to-short-term-debt ratio is a robust predictor of financial crises, and that greater short-term exposure is associated with more severe crises when capital flows reverse.

This appendix focuses on ILRs, which are a modified version of the GG rule that include under short-term debt obligations all public sector maturing debt coming due within one year—both external and domestic, including the stock of Central Bank sterilization instruments—plus the financing needs arising from projected fiscal deficits.[64] Moreover, this measure also includes short-term foreign liabilities of the corporate sector. Given the observed loss of access of corporates to international credit markets during the global crisis and the initiatives of key Central Banks to support corporates with their own international reserves, this version of liquidity is preferred because it

63 See Greenspan (1999).

64 The original GG rule emphasizes coverage of all foreign-currency debt obligations coming due within one year. Domestic currency obligations are also included in the liquidity ratios analyzed here, under the assumption that countries will keep current commitments to implicit or explicit inflation targeting policies, thus avoiding financing of domestic obligations through monetary expansion that could quickly trigger inflationary pressures and a potential run on reserves.

incorporates the fact that the coverage of liquidity needs of this other key player was relevant to reduce the likelihood of a liquidity crisis.

For the analysis carried out in this appendix, the dynamics of ILRs under a gloomy, so-called "Winter" Scenario are considered. This scenario was constructed to represent the prevailing mindset at the peak of the crisis, as captured in IDB (2009). The Winter Scenario is almost identical to the L-Shaped scenario presented in IDB (2009). It differs in that actual data was used up to the first quarter of 2009, but projections for external variables—i.e. G-7 industrial country growth, terms of trade and spreads—are basically the same as those used in that macroeconomic report. G-7 GDP was assumed to hit a trough in June 2009, and from then on grow sluggishly to pre-crisis levels by June 2012. Commodity prices were assumed to remain stable at March 2009 levels until June 2009, and then gradually recover to December 2006 levels (when G-7 plus China GDP reaches pre-crisis levels), remaining stable thereon. EMBI spreads were assumed to remain at March 2009 levels until June 2009, and then gradually fall to 300 bps in June 2012, remaining stable thereafter.

In order to assess the role of stronger fundamentals and international financial support in explaining LAC-7 resilience to the global crisis, three counterfactual exercises are performed. First, the isolated effect of stronger fundamentals is considered by comparing ILR dynamics using departing fundamentals at pre-Russian/LTCM crisis levels with ILR dynamics using departing fundamentals at pre-global crisis levels. Second, the isolated effect of international financial support is analyzed by comparing ILR dynamics with and without international support, using departing fundamentals at pre-Russian/LTCM crisis levels. Finally, the joint impact of stronger fundamentals and international financial support on ILR dynamics is also considered.

The Role of Macroeconomic Fundamentals

When a country is faced with an international credit crunch, working on long-run fundamentals may provide little help in avoiding a liquidity crisis, as uncertainty about the future increases in times of crisis, and enforcement of long-run arrangements typically takes time to materialize. Thus, under the liquidity approach, the analysis should focus on a specific set of fundamentals that are key at the time of the crisis in terms of their ability to influence liquidity profiles, namely: international reserves, outstanding debt amortization profiles and financing needs arising from fiscal deficits. International reserves serve as a cushion against liquidity distress.[65] The fact that outstanding debt amortization profiles affect the path of ILRs implies that both debt levels and their ser-

[65] However, when their purchases are made against short-term liabilities (e.g., sterilization bonds) it tends to net out completely the impact of reserve accumulation on ILRs.

TABLE A2.1 **Macroeconomic Fundamentals in Latin America: Russian/LTCM Crisis vs. Global Crisis**
(LAC-7, % of GDP)

	Russian/LTCM Crisis Dec-98	Global Crisis Dec-08
International Reserves	10.0%	13.9%
CB Monetary Liabilities	5.9%	4.3%
Short Term External Debt*	3.8%	3.3%
Public Debt Dollarization	64.8%	38.5%
Fiscal Balance	–2.6%	0.9%
Adjusted Fiscal Balance**	0.1%	0.9%

Data source: National statistics and own calculations.
* Maturity Less Than One Year.
** Fiscal Revenues Adjusted at 2008 Commodities Prices.
LAC-7 is the simple average of the seven major Latin American countries, namely Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. These countries represent 91% of Latin America GDP.

vice schedule are key elements to consider. Finally, given that several factors lie behind fiscal deficit outcomes, the impact of external factors on output, and indirectly on tax collection, has to be considered as well.

Table A2.1 reviews fundamentals involved in the liquidity framework by contrasting the differences between pre-Russian/LTCM crisis levels and pre-global crisis levels for the LAC-7 group. A first element worth highlighting is the fact that the region was able to stash away a substantially higher amount of reserves. By 2008, international reserves stood on average at about 14 percent of GDP, four percentage points of GDP higher than in 1998. Short-term Central Bank liabilities involving sterilization operations were about 1.6 percentage points of GDP lower, and with lower debt-to-GDP levels and a better maturity profile, short-term obligations stemming from outstanding debt were lower in 2008 by about half a percentage point of GDP. Moreover, public debt dollarization levels were substantially lower by 2008. While by 1998 about 65 percent of public debt was issued in dollar terms, only 39 percent was issued in dollar terms by 2008. This de-dollarization process gave room for much greater exchange rate flexibility. Observed fiscal overall balances had also improved substantially, from a deficit of 2.6 percent of GDP in 1998 to a surplus of 0.9 percent in 2008.[66] However, in

66 These figures should not be judged at face value as representing structural improvements (e.g., it is clear that debt-to-GDP ratios are heavily influenced by temporary real exchange rate fluctuations, and maturity profiles can be extended more easily in periods in which expectations tilt towards lower interest rates in the future, as it occurred throughout the 2003–2007 period. This was discussed in IDB´s macroeconomic report "All That Glitters May Not Be Gold"). However, at the time of a liquidity crisis, and from a cash basis perspective, they are representative of differences in resources at hand and upcoming liabilities.

fairness, much of that surplus was due to substantially higher commodity prices prevailing in 2008. The average balance in 1998 obtained by valuing revenues derived from commodities at 2008 prices yields a balanced fiscal account—much closer to that of 2008.

Given this stronger set of fundamentals, ILRs departing from fundamentals prevailing at the time of the Russian/LTCM crisis are compared with ILRs departing from current fundamentals, both under the Winter scenario—which assumes precarious access to international credit markets, i.e., difficulties rolling over maturing debt and/or having to place it at very short maturities and very high rates.[67]

Thus, this exercise was carried out by computing ILRs with reserve levels, amortization profiles, and fiscal deficit positions at pre-Russian/LTCM levels, yielding a counterfactual liquidity profile that could be contrasted against ILRs with departing fundamentals at pre-Lehman crisis levels.[68] Figure A2.1, panel a shows ILRs for both sets of fundamentals. The first thing to notice is that ILRs with pre-Russian/LTCM fundamentals always remain below safety levels, i.e. levels at which international reserves are enough to cover short-term financial needs. When introducing the observed improvement in fundamentals, ILRs initially escape from critical levels; in fact, in December 2008 ILRs jump from 94 percent to 132 percent, indicating that the improvement in fundamentals was an important first line of defense. However, after the second year of a protracted crisis, ILRs would have likely returned to dangerous levels, even with stronger fundamentals.[69]

The Role of International Financial Support

The international financial community made an unprecedented move in its role as a lender of last resort for EMs during the 2008–2009 crisis, both in terms of the speed of its responsiveness and the massive support offered (see Table 1 in Part I for a detailed list of international support announcements).

Could support from the international community have shifted ILRs for LAC-7 countries to safety levels? To answer this question netting out the effect of improved

[67] In IDB (2009), the importance of market access precarization (defined as a shortening in the maturity of debt issuance and higher borrowing costs) is highlighted.

[68] Given that commodity prices were substantially lower in 1998 than in 2008, and that in many cases government revenues rely strongly on commodity prices, fiscal deficit figures prevailing in 1998 were adjusted to reflect the impact of higher commodity prices in 2008. Otherwise, the fall in commodity prices that is implicit in the Winter Scenario would have impacted on the 1998 fiscal figures that do not account for the previous improvement in commodity prices throughout 2003-2007, thus adversely biasing the impact on ILRs with 1998 fundamentals vis-à-vis ILRs with current fundamentals.

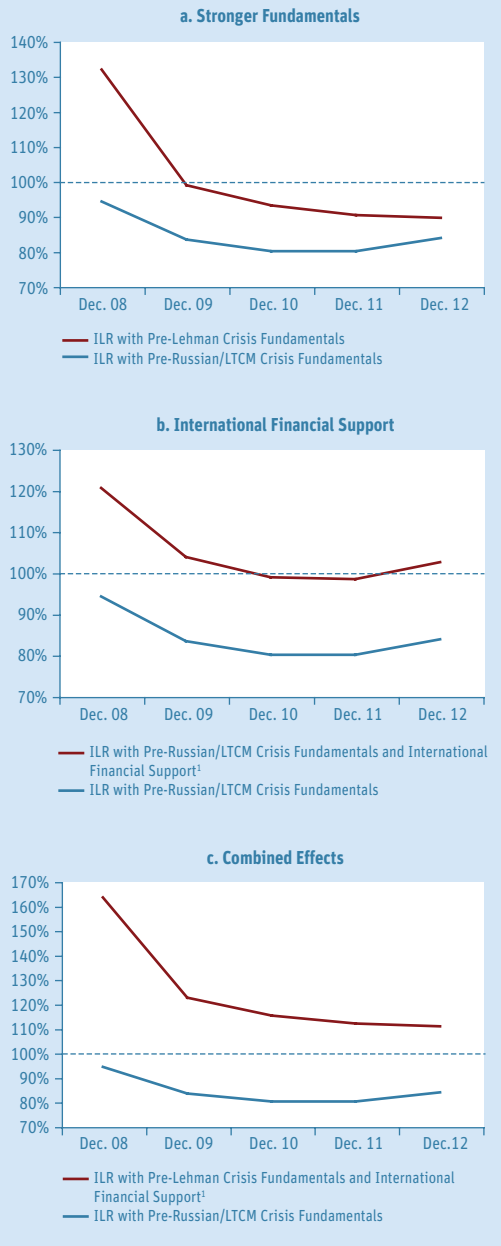
[69] It is worth mentioning that this analysis does not incorporate the effects that domestic policies may have had on the evolution of ILRs.

fundamentals, ILRs are analyzed with and without international support at pre-Russian/LTCM crisis fundamentals. Figure A2.1, panel b shows the dynamics of ILRs under the Winter Scenario with and without international financial support. The latter includes swap lines provided by the Federal Reserve by October 2008 to Brazil and Mexico (US$30bn for each country), as well as Flexible Credit Line (FCL) support from the IMF to Colombia (US$10 bn) and Mexico (US$47 bn), and potential FCL support that Brazil and Peru would have been able to draw if they so desired.[75] Results indicate that this is a borderline call, as ILRs would linger around 100 percent levels since December 2009, indicating that although international support significantly enhanced ILRs, it may have not been enough to remove liquidity uncertainty at the peak of the crisis.

Combined Effect

Finally, it is worth analyzing the effect on ILRs that stronger fundamentals and international support would generate when put to work together. Figure A2.1, panel c presents ILR dynamics departing from pre-global crisis fundamentals and computing the resources available from the support of the international community. Clearly, the combined

FIGURE A2.1 **The Determinants of the International Liquidity Ratio in Latin America**
(ILR dynamics under Winter Scenario, LAC-7)



Data source: Own calculations
LAC-7 is the simple average of the seven major Latin American countries, namely Argentina, Brazil, Chile, Colombia, Mexico, Peru and Venezuela. These countries represent 91% of Latin America's GDP.
ILR = $Reserves_t$/(Public Debt $Amortizations_{t+1}$ + Private External Debt $Amortizations_{t+1}$)
[1] International Financial Support includes USD 112bn to Brazil, Colombia, Mexico and Peru (2008 dollars)

[70] It was assumed that FCL withdrawals equivalent to 1000 percent of quota could have been made available to Brazil and Peru.

effect changed significantly the dynamics of ILRs of LAC-7 countries, shifting ILR schedules comfortably above the danger zone throughout the horizon extending to 2012.

Conclusion

Both multilateral support and stronger fundamentals played a key role in eliminating uncertainty at the peak of the crisis. Stronger fundamentals without multilateral support would have been insufficient to remove ILRs from dangerous financial territory. Multilateral support with fundamentals as weak as they were prior to the Russian/LTCM crisis of 1998 could have shifted ILR schedules towards safer territory, but they would have remained close enough to critical levels that the risk of a liquidity crisis could not have been completely eliminated. It is only when both multilateral support and stronger fundamentals are combined that IRLs remain comfortably above the danger zone even in a protracted global crisis.

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