The Aftermath of the Global Crisis: Policy Lessons and Challenges Ahead for Latin America

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I. The Aftermath of the Global Crisis: Outlook and Macro Policy Challenges for LAC

II. EMs Resilience to the Global Crisis: Towards a New International Financial Architecture for EMs?
External Factors and Economic Fluctuations in Latin America: A Benchmark Model*

Estimation Strategy

Vector Error Correction Model (VECM):

$$\Delta y_t = c + \alpha \beta' y_{t-1} + \Gamma \Delta y_{t-1} + \ldots + \Gamma_{p-1} \Delta y_{t-p+1} + \varepsilon_t$$

where

$$y_t = (GDP_{LAT_t}, G7IP_t, TOT_{LAT_t}, US\ T-BOND_t, HYS_t)'$$

External Factors and Economic Fluctuations in Latin America: A Benchmark Model*

(LAC-7; Real GDP; Annual Growth Rate)

External Factors

Growth in Industrial Countries and China

Commodity Prices

International Financial Conditions

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.

External Factors: World Growth and Commodity Prices

Industrial Countries Growth
(GDP, Annual Variation)

Source: WEO.
*Estimate

China Growth
(GDP, Annual Variation)

Source: WEO and JP Morgan.
*Estimate

Commodity Prices
(Index of Fuel and Non-Fuel Commodities, Average 91-97=100)

Source: IMF and National Sources
* TOT LAC-7 Variation Mar.09 vs Dec.09

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External Factors:

*International Financial Conditions*

**Sovereign Bond Spreads**
(EMBI+ and Latin EMBI; in bps)

**Sovereign Bond Prices**
(EMBI+, Bond Price Equivalent*; 01-Jan-07 = 100)

*Assumes an 11% coupon and 10 year maturity*
Real Impact of the Global Crisis:

**Economic Activity**

(LAC-7, Real GDP, Annual Variation)

- **Russian/LTCM Crisis**
  - 1991: 4.8%
  - 1992: 1.7%
  - 1993: 4.1%
- **Beginning of the Boom**
- **US Financial Crisis**
  - 1991: 5%
  - 1992: 5%
  - 1993: 5%
  - 1994: 5%
  - 1995: 5%
  - 1996: 5%
  - 1997: 5%
  - 1998: 5%
  - 1999: 5%
  - 2000: 5%
  - 2001: 5%
  - 2002: 5%
  - 2003: 5%
  - 2004: 5%
  - 2005: 5%
  - 2006: 5%
  - 2007: 5%
  - 2008: 5%
  - 2009: 4.1%
  - 2010: 4.1%

**Forecast**

- 2009: 6%
- 2010: -1.7%


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ALTERNATIVE GLOBAL SCENARIOS: ASSUMPTIONS

Strong Recovery / Strong Growth in the US with Excess World Savings Scenario (EWS)

- The US displays a strong recovery and continues with the deleveraging process of the private sector, closing its current account deficit as private sector savings exceed public sector deficits.

- Reallocation of world demand sustains a high global growth equilibrium with strong growth in China, recovery in commodity prices and remittances.

- Excess world savings lead to high capital inflows to EMs and declining spreads.

US Current Account (Last 4 quarters, % of GDP)
### ALTERNATIVE GLOBAL SCENARIOS: ASSUMPTIONS

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>➢ The US displays a strong recovery and continues with the deleveraging process of the private sector, closing its current account deficit as private sector savings exceed public sector deficits</td>
<td>➢ The US displays a strong recovery followed by sluggish growth, while it continues with the deleveraging process of the private sector, closing its current account deficit as private sector savings exceed public sector deficits</td>
</tr>
<tr>
<td>➢ Reallocation of world demand sustains a high global growth equilibrium with strong growth in China, recovery in commodity prices and remittances</td>
<td>➢ Slower growth in China, cooling-off in commodity prices and weaker remittances as reallocation of world demand fails to sustain a high global growth equilibrium</td>
</tr>
<tr>
<td>➢ Excess world savings lead to high capital inflows to EMs and declining spreads</td>
<td>➢ Excess world savings is eliminated mainly through slower growth in China leading to declining capital inflows to EMs and higher spreads</td>
</tr>
</tbody>
</table>
ALTERNATIVE GLOBAL SCENARIOS: ASSUMPTIONS

EXTERNAL FACTORS

World Growth

Commodity Prices

International Financial Conditions

G-7 and China Economic Activity
(2006 = 100)

Global Commodity Prices
(2006 = 100)

Sovereign Bonds Spreads
(EMBI +, bps)

EXTERNAL FACTORS

EWS: Excess World Savings Scenario
SWS: Shrinking World Savings Scenario
Medium Term Outlook for Latin America Under Alternative Global Scenarios

GDP Growth
(LAC-7, annual growth rate)

Average 2003-2007: 5.8%

Excess World Savings

Shrinking World Savings

Growth Forecasts
(LAC-7)

EWS: Excess World Savings Scenario
SWS: Shrinking World Savings Scenario

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# Short-Term Macro Management

## Inflation and RXR Management

<table>
<thead>
<tr>
<th>Policy Actions</th>
<th>EWS</th>
<th>SWS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Policy</strong></td>
<td>New Expansionary Phase</td>
<td>Short Run Bonanza</td>
</tr>
<tr>
<td><strong>Liquidity Management</strong></td>
<td>Gradually rebuild optimal levels of international reserves</td>
<td>Rebuild optimal levels of international reserves throughout the bonanza</td>
</tr>
<tr>
<td><strong>Intertemporal Fiscal Management</strong></td>
<td>Manage the new bonanza by:</td>
<td>Save the bonanza for a “rainy day”</td>
</tr>
<tr>
<td></td>
<td>- Increasing expenditure</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Reducing tax rates</td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Reducing debt accumulation or retiring debt</td>
<td></td>
</tr>
<tr>
<td><strong>Inflation and RXR Management</strong></td>
<td>Control Inflation and ensure gradual convergence to the new equilibrium RXR</td>
<td>Control Inflation and avoid excessive RXR appreciation</td>
</tr>
<tr>
<td><strong>SWS Scenario</strong></td>
<td>Reserve accumulation</td>
<td>Contain expenditure growth</td>
</tr>
<tr>
<td></td>
<td>Reprofiling of debt maturities</td>
<td>Avoid premature tax reductions</td>
</tr>
<tr>
<td></td>
<td>Fluent relationship with the IMF and MDBs</td>
<td>Sterilized Intervention</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tighter fiscal policy</td>
</tr>
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<td></td>
<td></td>
<td>Tighter credit policy</td>
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<tr>
<td></td>
<td></td>
<td>Capital Controls</td>
</tr>
</tbody>
</table>

EWS: Excess World Savings Scenario  
SWS: Shrinking World Savings Scenario
Crisis in the Euro-Area Scenario (CEA)

- The global recovery is interrupted by the fiscal crisis in Europe with systemic implications that revert the world back to a ‘Lehman Crisis Mode’

- Severe drop in commodity prices and remittances as a result of global demand contraction

- Flight to quality, sudden stop in capital inflows to EMs and rising spreads as a result of global financial distress

Growth Forecasts (LAC-7)

- EWS: 4.1% in 2010, 4.1% in 2011-2014
- SWS: 4.1% in 2010, 4.0% in 2011-2014
- CEA: 5.7% in 2010, 3.4% in 2011-2014
- LatinMacroWatch
I. The Aftermath of the Global Crisis: Outlook and Macro Policy Challenges for LAC

II. EMs Resilience to the Global Crisis: Towards a New International Financial Architecture for EMs?
Assessing EM’s Resilience at the Peak of the Global Crisis: Russian/LTCM Crisis versus Lehman Crisis

Real Impact on Advanced Economies
(Changes in %, 97–98 and 08–09)

<table>
<thead>
<tr>
<th></th>
<th>GDP</th>
<th>Investment</th>
<th>Imports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russian/LTCM Crisis</td>
<td>-2.6%</td>
<td>5.2%</td>
<td>6.2%</td>
</tr>
<tr>
<td>Lehman Crisis</td>
<td>-3.4%</td>
<td>-12.4%</td>
<td>-13.7%</td>
</tr>
</tbody>
</table>

US High Yield Spreads Reaction
(US High Yield spread, in bps)
EMBI Spreads Reaction:
*Russian/LTCM Crisis versus Lehman Crisis*

(EMBI+ Spread, in bps)
The Role of Fundamentals in the Lehman Crisis

Emerging Markets’ Fundamentals: Russian/LTCM Crisis vs. Lehman Crisis
(Emerging Markets*, Credit Rating, Numerical Scale)

Spreads Reaction: The Role of Fundamentals
(EMBI Spreads, in bps)

1 Includes countries with Pre-Global 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.

* Emerging markets include emerging countries included in JP Morgan’s EMBI.
Measures of the International Community to Ensure Liquidity Provision for Emerging Markets

### Before G-20 London Summit

**2008**
- **April-June**: Japan signs swap agreement with Indonesia (US$6 bn) and India (US$3 bn)
- **October**: The US Federal Reserve opens swap lines with Brazil, Mexico, South Korea, Singapore (US$120 bn)
  - IMF launches the Short-Term Liquidity Facility
- **November**: Bank of Japan and the People’s Bank of China signed swap agreements with South Korea (US$43 bn)

### G-20 London Summit

**2009**
- **April**: Recapitalization of IMF (US$500 bn) and Development Banks (US$100-300 bn)
  - IMF launched the Flexible Credit Line and the High-Access Precautionary Arrangements
  - New Special Drawing Rights allocation (US$250 bn)
  - New Support for Trade Finance (US$250 billion)

### After G-20 London Summit

- **April**: IMF Flexible Credit Line agreement with Mexico (US$47 bn)
- **May**: Effective recapitalization of the Asian Development Bank
- **August**: Effective allocation of new Special Drawing Rights
- **September**: Effective recapitalization of the IMF
The Role of International Lender of Last Resort (ILOLR) in the Global Crisis

No Access to Multilateral Financial Support

- No Article IV Consultation for the last two years
- In arrears with the IMF
- In default with bond holders

Control Group 2: EMs during the Russian/LTCM Crisis

Spreads Reaction: The Role of Access to ILOLR Facilities (EMBI +, in bps)

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.
**Econometric Estimations**

**Benchmark Equation**

\[ \Delta S_i = \beta_0 + \beta_1 CR_i + \beta_2 NA_i + \varepsilon_i \]

Where:
- \( \Delta S \) is the change in spreads in the 60-day window following the Lehman crisis
- CR represents pre-Lehman crisis credit ratings (Dec.07)
- NA is a dummy variable indicating lack of access to ILOLR facilities

**Estimation Results**

<table>
<thead>
<tr>
<th></th>
<th>Benchmark Regression</th>
<th>Regression with Interaction Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant (C)</td>
<td>1286**</td>
<td>1222**</td>
</tr>
<tr>
<td>Credit Rating (CR)</td>
<td>-65**</td>
<td>-59**</td>
</tr>
<tr>
<td>No Access Dummy (NA)</td>
<td>718**</td>
<td>3421**</td>
</tr>
<tr>
<td>Interaction Term (NA*CR)</td>
<td>n.a.</td>
<td>-350**</td>
</tr>
<tr>
<td>R²</td>
<td>45%</td>
<td>53%</td>
</tr>
</tbody>
</table>

**Regression Controlled By:**

Assessing the Relevance of Stronger Fundamentals and Access to ILOLR in Latin America

Latin America’s Fundamentals:
Russian/LTCM Crisis vs. Lehman Crisis
(LAC-7², Credit Rating, Numerical Scale)

EMBI Spread Reaction during the Lehman Crisis: A Decomposition¹
(LAC-7², EMBI Spread, in bps)

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 For a formal discussion of this exercise see IDB (2010)

² Excludes Argentina

* Includes error prediction
The Role of International Liquidity in Latin America during the Global Crisis

International Financial Support

- Prevent a Liquidity Crisis
- Promote Expansionary Fiscal and Monetary Policies
- Mitigate Recessionary Pressures
Monetary Policy in Latin America: 
*Russian/LTCM Crisis versus Current Crisis*

*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.

### Russian/LTCM Crisis

<table>
<thead>
<tr>
<th>Date</th>
<th>Interest Rate</th>
<th>Exchange Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jul-98</td>
<td>22%</td>
<td>98</td>
</tr>
<tr>
<td>Ago-98</td>
<td>24%</td>
<td>100</td>
</tr>
<tr>
<td>Sep-98</td>
<td>26%</td>
<td>102</td>
</tr>
</tbody>
</table>

### Current Global Crisis

<table>
<thead>
<tr>
<th>Date</th>
<th>Interest Rate</th>
<th>Exchange Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>16-sep-08</td>
<td>8.0%</td>
<td>95</td>
</tr>
<tr>
<td>16-oct-08</td>
<td>8.5%</td>
<td>100</td>
</tr>
<tr>
<td>16-nov-08</td>
<td>9.0%</td>
<td>105</td>
</tr>
<tr>
<td>16-dic-08</td>
<td>9.5%</td>
<td>110</td>
</tr>
<tr>
<td>16-ene-09</td>
<td>10.0%</td>
<td>115</td>
</tr>
</tbody>
</table>

*Excludes Argentina and Venezuela*
Fiscal Policy in Latin America: 
**Russian/LTCM Crisis versus Current Crisis**

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*Excludes Venezuela*
Conclusions

- Stronger macroeconomic fundamentals in the region played a significant role in preventing financial distress at the peak of the global crisis.

- However, 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.

- The combination of stronger fundamentals with access to international financial support allowed countries to pursue expansionary monetary and fiscal policies - that according to empirical evidence are useful to mitigate recessionary pressures - without risking a liquidity crisis.

- These findings have far-reaching implications for the future of EMs with sound macroeconomic fundamentals and access to ILOLR facilities.
TOWARDS A NEW FINANCIAL ARCHITECTURE FOR EMERGING MARKETS?

- At the multilateral level, institutionalization and improvement of ILOLR mechanisms used during the global crisis, with the following features:
  - Ex-ante eligibility
  - Automaticity
  - Speed
  - Power

- At the country level, adoption of macroeconomic policy frameworks to promote stability and gain ex-ante access to ILOLR facilities, such as:
  - Flexible Inflation Targeting regimes, that allow temporary deviations from long-term inflation targets as well as exchange rate intervention, during episodes of global financial turmoil
  - Structural fiscal rules to tame pro-cyclical behavior and target prudent levels of public debt
  - Countercyclical prudential regulation in line with the Spanish model of dynamic provisioning

- The IMF and MDBs are endowed with adequate resources for the task

- These features would constitute the basis for a *de facto* incentive-compatible ‘Long-Term Stability Pact’ for EMs
TOWARDS A NEW FINANCIAL ARCHITECTURE FOR EMERGING MARKETS?

Implications

- Reduction of the risk of contagion from other EM crises, for EM with sound fundamentals and access to ILOLR facilities
- Reduction of the probability of disruptive liquidity crises in otherwise fundamentally sound economies (so prevalent in the past)
- Significant improvements in long-term prospects as the incidence of disruptive liquidity crises diminishes
- Reallocation of world capital in favor of EM with sound fundamentals and access to ILOLR facilities
- Massive inflows of capital that will pose severe challenges for EM policy makers
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