MACRO-LINKAGES, OIL PRICES AND DEFLATION WORKSHOP
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Latin America GPM Applications

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Inflation and Spillovers

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Outline of the presentation

1. Background and motivation
2. Estimation Results for Latin America
3. Applications
   - A. Inflation Targeting Under Stress
   - B. Spillovers from the U.S. Financial Crisis
4. Next steps

1. Background and motivation

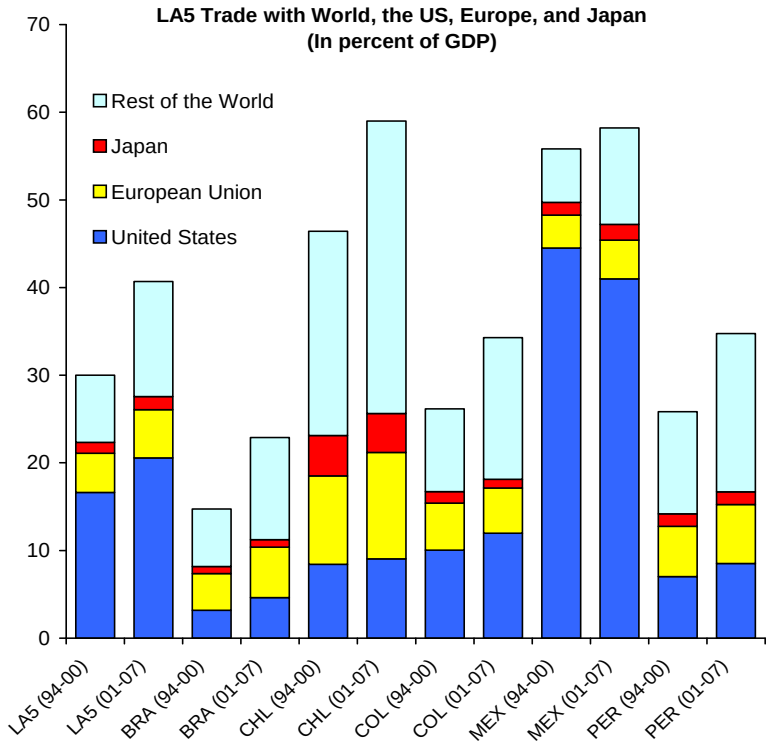
Why use the GPM?

- To build a first "regional model" that discuss both nominal and real variables in a multicountry setting
  - Five of the largest LA countries adopted inflation targeting at about same time
  - Regional average is built using weights based on GDP-PPP
  - Sample covers 2001.q4-2008.q2
- Use of same specification help us somewhat to compare the results across countries (including countries outside LA). However, we will incorporate specific country elements for the forecasting rounds.

1. Background and motivation

Growing importance of external linkages in recent years

- In the last decade LA countries have become more integrated to the global economy, which could expose them more to global shocks



Coverage of the GPM_LA5

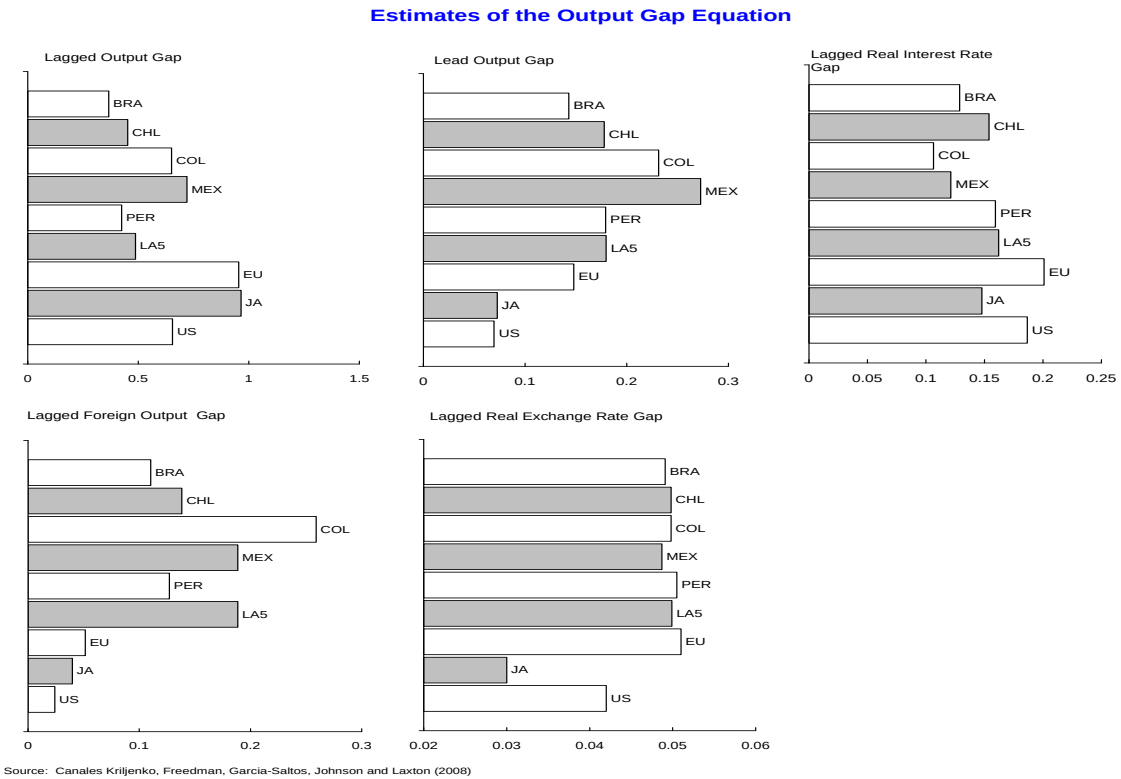
(share of World GDP)

	2007
BRA	2.8
CHL	0.4
COL	0.5
MEX	2.1
PER	0.3
Total LA5	6.1
US	21.4
EU	16.1
JA	6.6
Total	50.2

2. Estimation Results

Highlights Output Gap Equation: Importance of foreign output gap

$$y_{i,t} = \beta_{i,1} y_{i,t-1} + \beta_{i,2} y_{i,t+1} - \beta_{i,3} r_{i,t-1} + \beta_{i,4} \sum_j \omega_{i,j,4} z_{i,j,t-1} + \beta_{i,5} \sum_j \omega_{i,j,5} y_{j,t-1} + \varepsilon^y_{i,t}$$

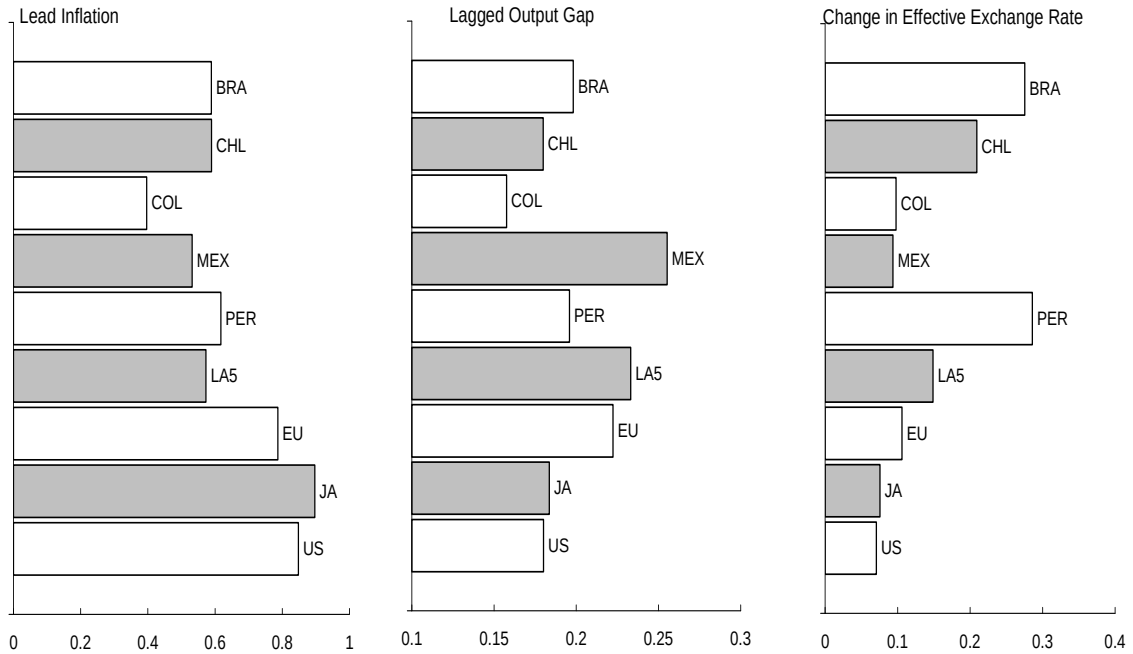


2. Estimation Results

Highlights Inflation Equation: Greater inflation inertia and exchange rate pass-through

$$\pi_{i,t} = \lambda_{i,1}\pi 4_{i,t+4} + (1-\lambda_{i,1})\pi 4_{i,t-1} + \lambda_{i,2} y_{i,t-1} + \lambda_{i,3}\sum_j \omega_{i,j,3}\Delta Z_{i,j,t} - \varepsilon^{\pi}_{i,t}$$

Estimates of the Inflation Equation



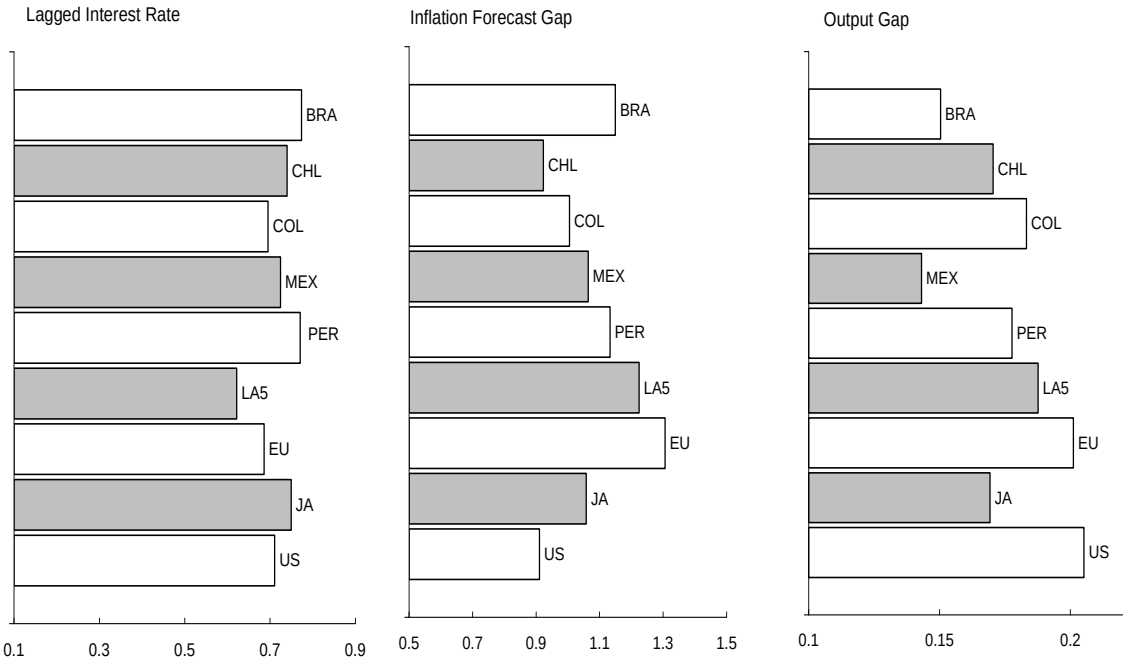
Source: Canales Kriljenko, Freedman, Garcia-Saltos, Johnson and Laxton (2008)

2. Estimation Results

Highlights Interest Rate Equation: The need to build credibility as inflation fighters

$$I_{i,t} = (1-\gamma_{i,1})\left[\overline{R}_{i,t} + \pi 4_{i,t+3} + \gamma_{i,2}(\pi 4_{i,t+3} - \pi_i^{tar}) + \gamma_{i,4} y_{i,t}\right] + \gamma_{i,1} I_{i,t-1} + \varepsilon_{i,t}^{I}$$

Estimates of the Interest Rate Equation



Source: Canales Kriljenko, Freedman, Garcia-Saltos, Johnson and Laxton (2008)

3. Applications

- Real life applications that shaped policy advice in WHD during early summer (REO October 2008) and in recent Art. IV discussions (Mexico)
  - A. Inflation targeting under stress
  - B. Spillovers from US financial crisis

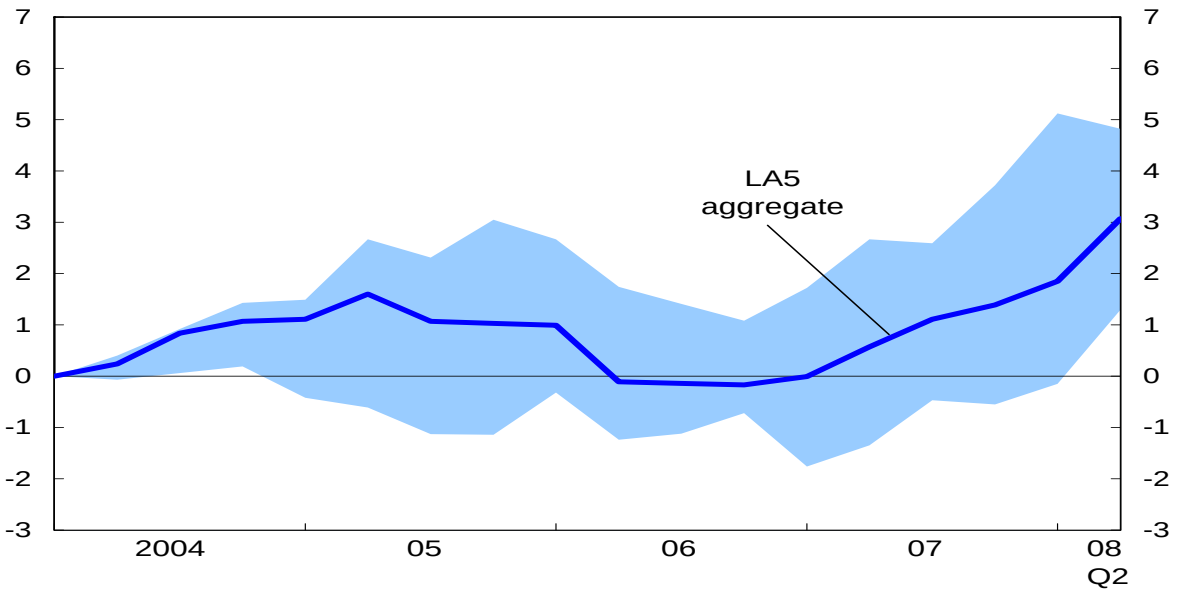
A. Inflation targeting under stress

- Inflation in 2008 was on the rise
  - First real test for the improved policy framework
  - Until recently the inflation surge was one of the leading policy issues in LAC
- The task: explaining the sources of inflation
  - Supply shocks vs. Overheating?
  - How was the monetary policy response?

A. Inflation targeting under stress

Historical decomposition of inflation pointed to significant cost push shocks!

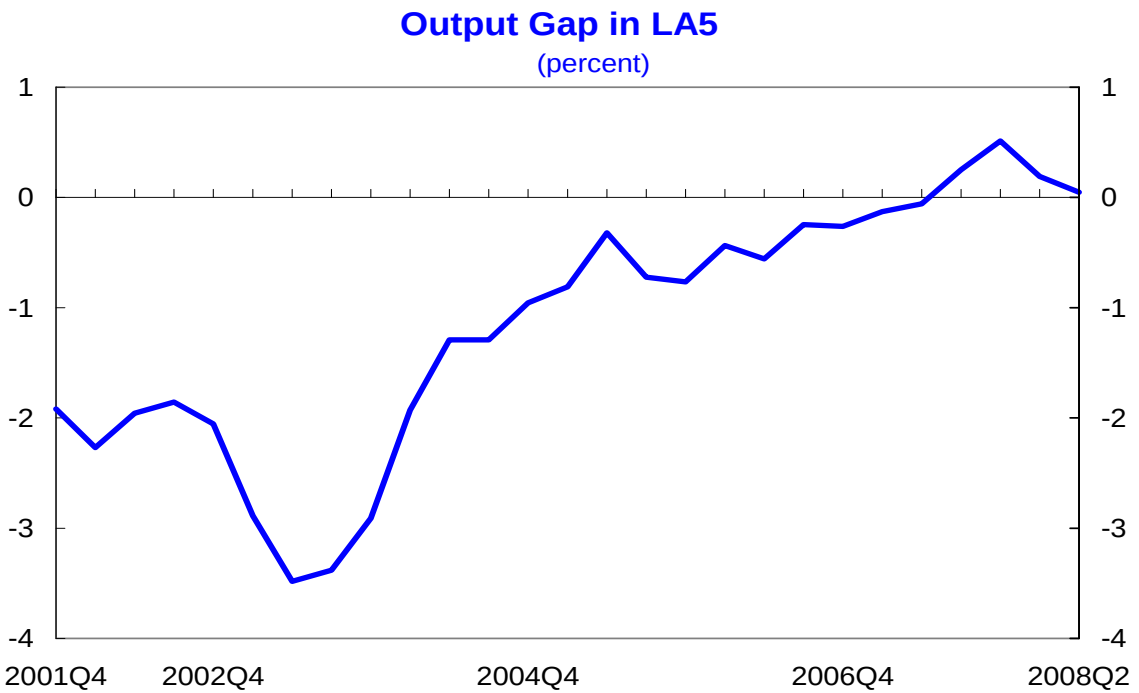
Contribution of Cost-Push Shocks to Headline Inflation 1/
(Percentage points)



Source: IMF staff calculations.
1/ Shaded area corresponds to the maximum and minimum contributions from individual countries' GPM's.

A. Inflation targeting under stress

The economic slack may have vanished by end 2007

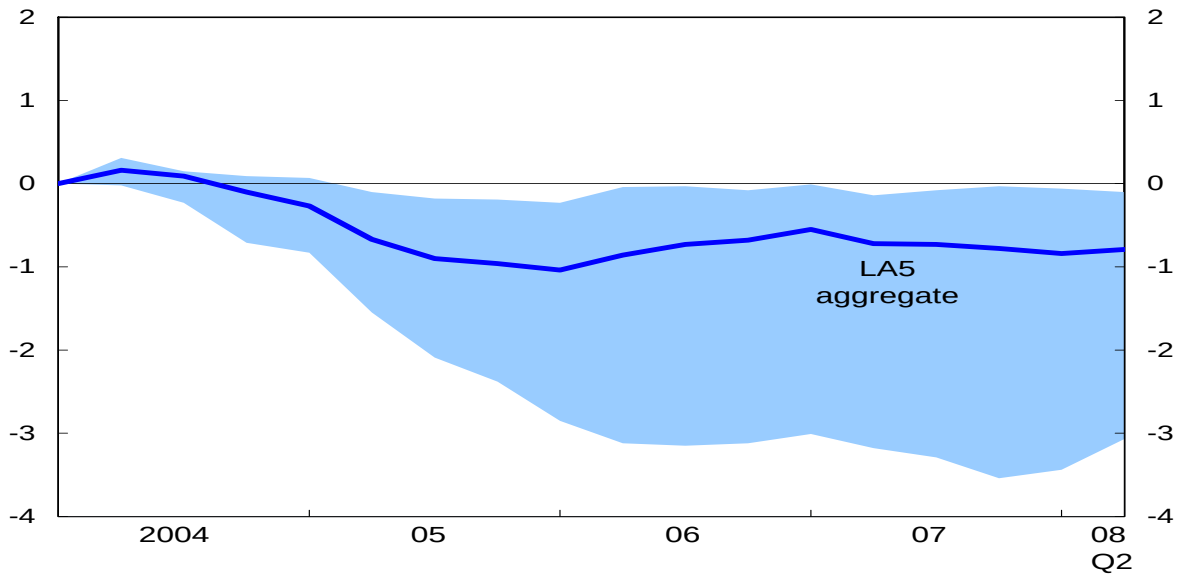


Source: Canales Kriljenko, Freedman, Garcia-Saltos, Johnson and Laxton (2008)

A. Inflation targeting under stress

Exchange rate flexibility played a crucial role in containing inflation

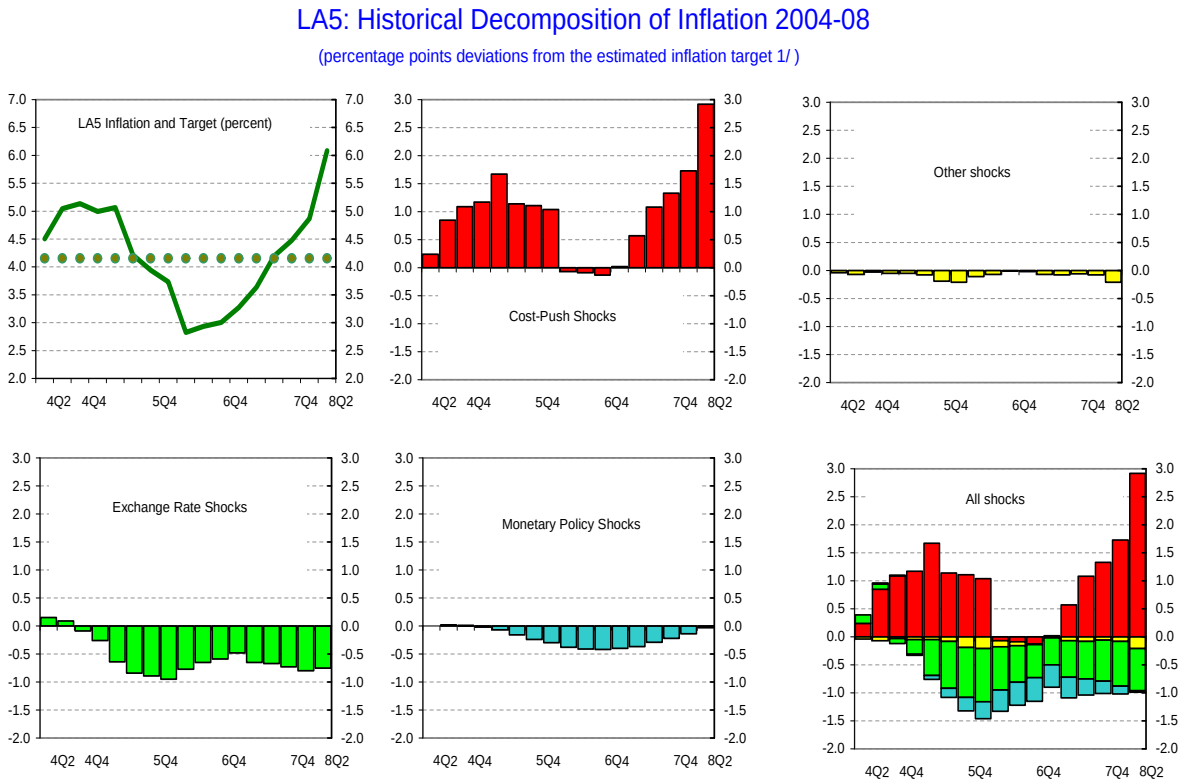
Contribution of Currency Appreciation to Headline Inflation 1/
(Percentage points)



Source: IMF staff calculations.
1/ Shaded area corresponds to the maximum and minimum contributions from individual countries' GPM's.

A. Inflation targeting under stress

Policy responses in these 5 IT countries: firmly geared to reduce inflation



B. Spillovers from the U.S. financial crisis

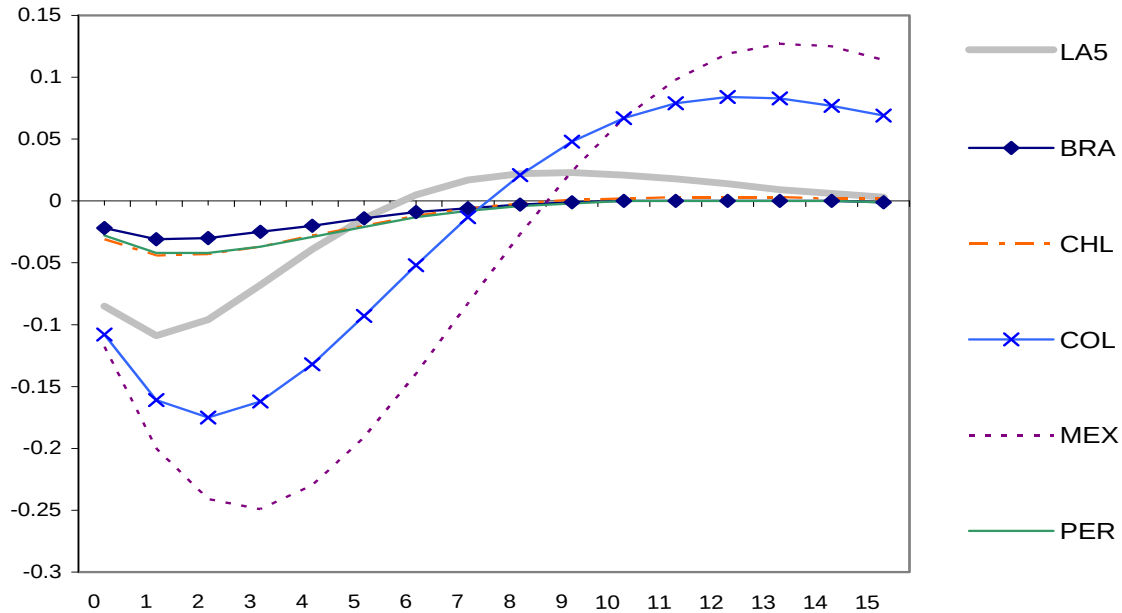
The region is and will be affected by the recession in the G3

- Identification of transmission channels at the country level is crucial
  - Trade effects from the U.S. reduced demand for exports important for countries with tighter linkages
  - Weaker commodity prices vs. exchange rate depreciation
  - Credit crunch is landing in the region
  - An important element is timing/composition of policy responses

B. Spillovers from the U.S. financial crisis

Output shocks in the U.S. tend to affect LA more than EU or JA in terms of size, speed and duration of impact

Domestic Output Gap Response to a one S.D. shock to US Output Gap
(Percent)

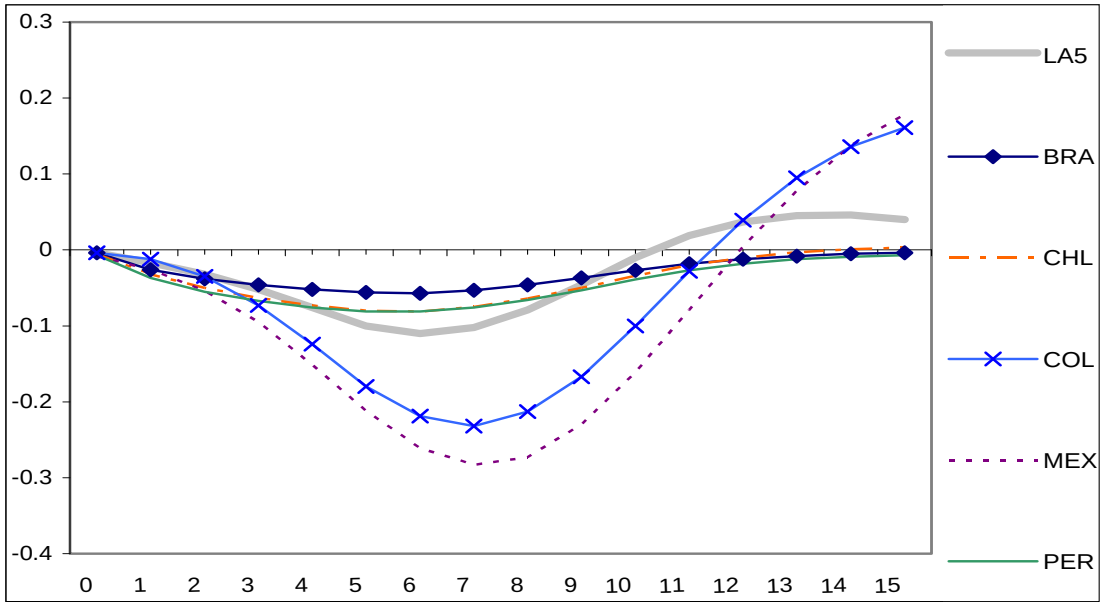


Source: IMF staff calculations, based on GPM_LA5

B. Spillovers from the U.S. financial crisis

Effects of shocks to the U.S. financial conditions are more persistent than U.S. output gap shocks

Output Gap Response to a one S.D. shock to US BLT
(Percent)



Source: IMF staff calculations, based on GPM_LA5

4. Next Steps

- Incorporate China to the external environment
- Model the role of commodities. For LA5 will proceed using a generic commodity price index
- How would the region operate under a “ZIRP" in the G3?
- Financial conditions in LA5 countries (endogenous risk premium)
- Compare forecast properties