Latin America's Road to Inflation Targeting: Lessons and Highlights

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Chief Economist Office
Latin America and the Caribbean Region
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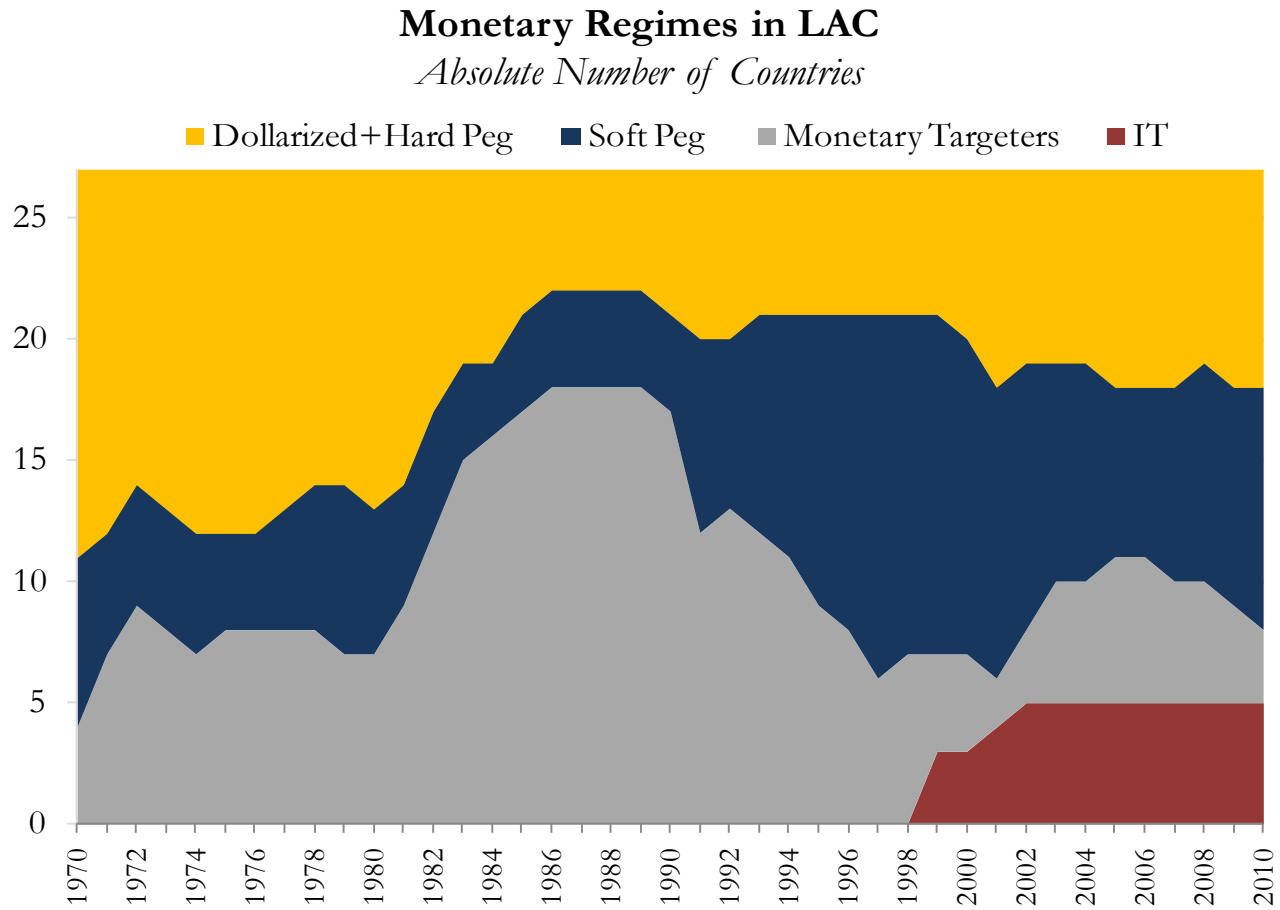
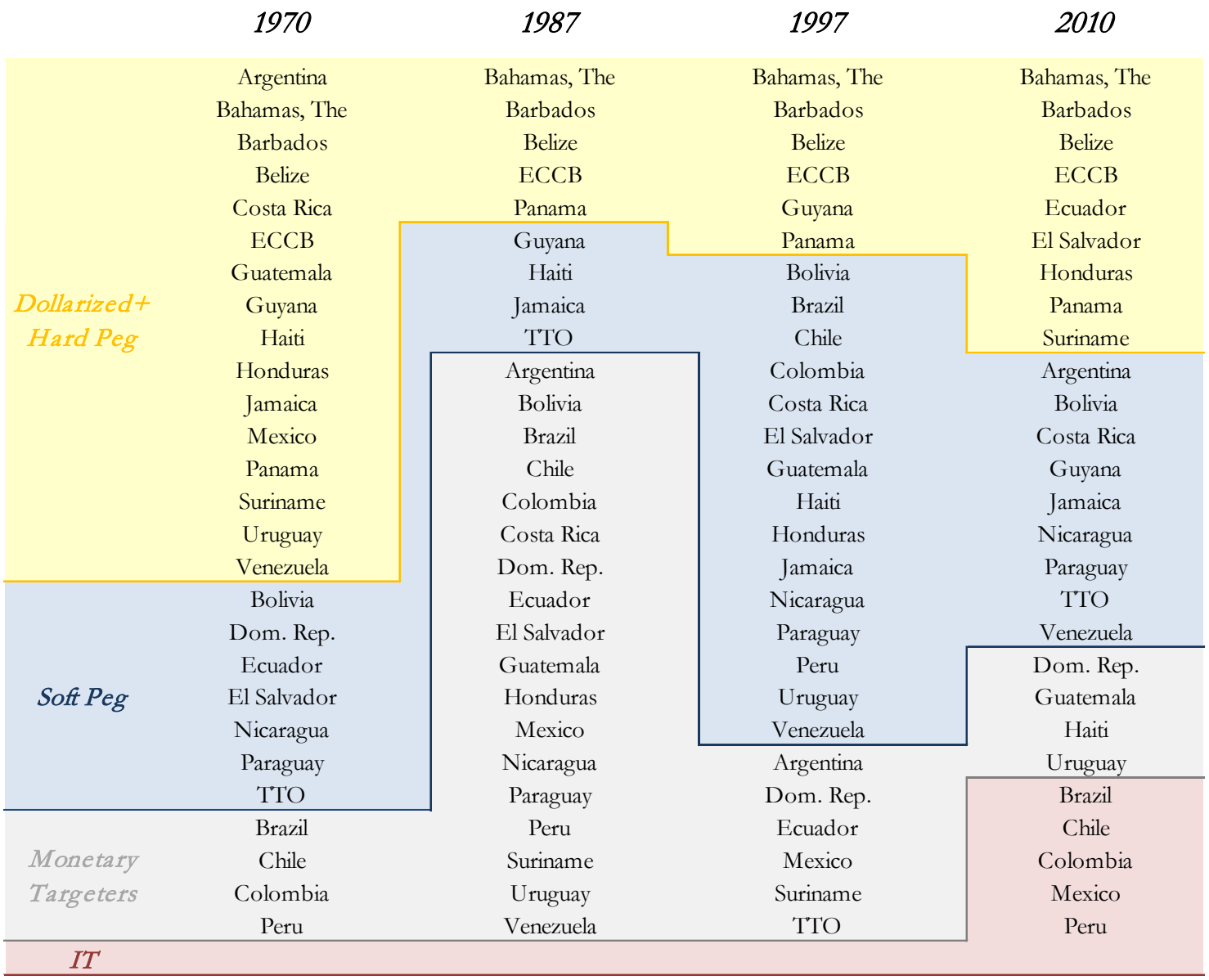
Why is LAC's experience relevant to countries pondering whether to adopt inflation targeting?

- Extremely rich and diverse history of trials, failures, and successes
  - Remarkable achievements in strengthening monetary control over the past two decades
- LAC currently at the frontier of inflation targeting
  - Including the incorporation of macro-prudential objectives
- Key challenges remain, especially as regards the broadening of objectives/concerns

LAC has been a laboratory of monetary policy frameworks



Source: Ilzetxki, Reinhart and Rogoff (2011) and LAC Chief Economist calculations.



Source: Ilzetxki, Reinhart and Rogoff (2011) and LAC Chief Economist calculations.

Outline of this presentation

- Domestic follies and world shocks – the roots of perdition
- Regaining control – the road to redemption
- How well has inflation targeting worked in LAC?
- Moving towards and consolidating IT – lessons from LAC

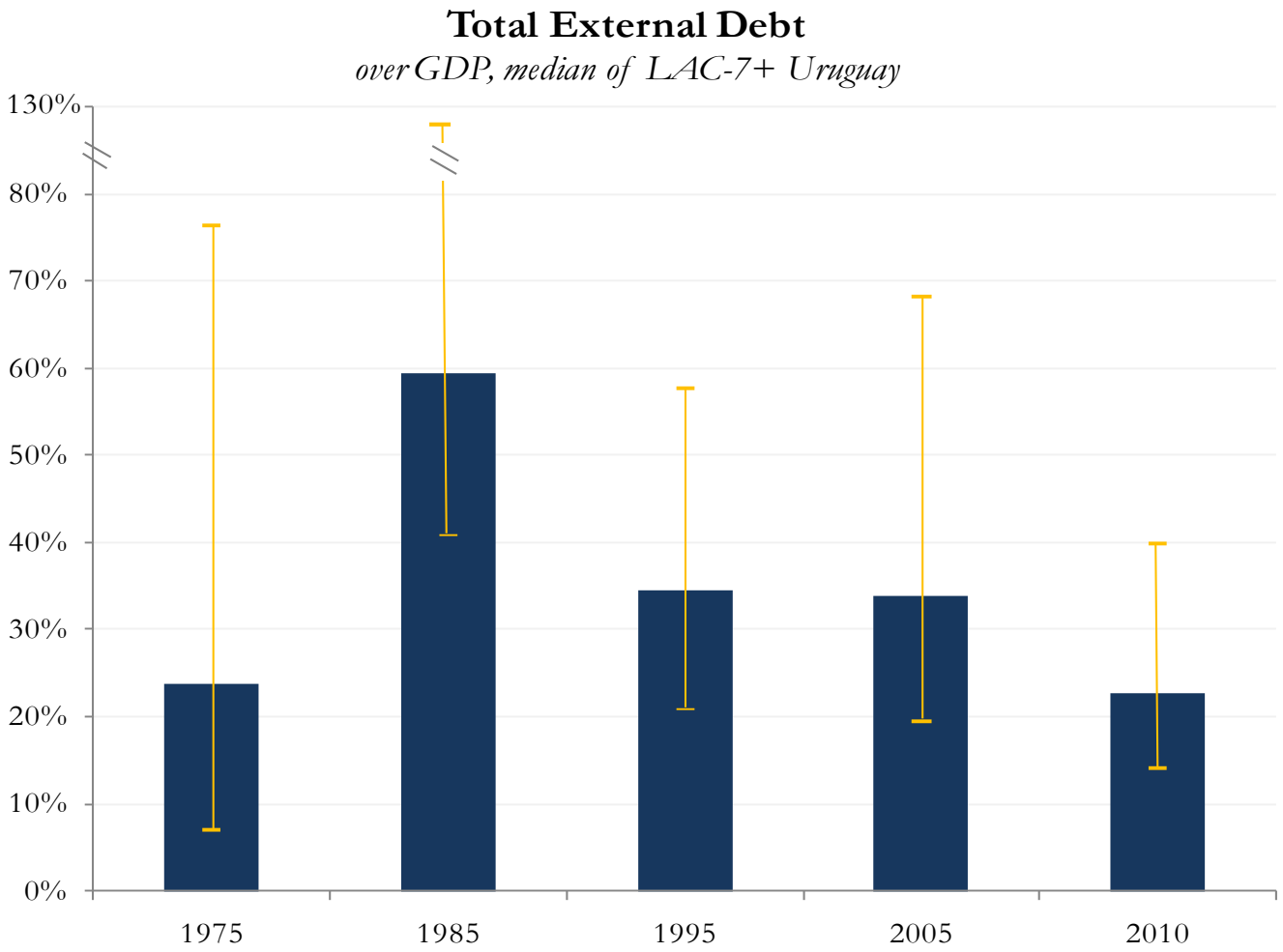
Domestic follies and world shocks

The roots of perdition

LAC's tumultuous monetary history

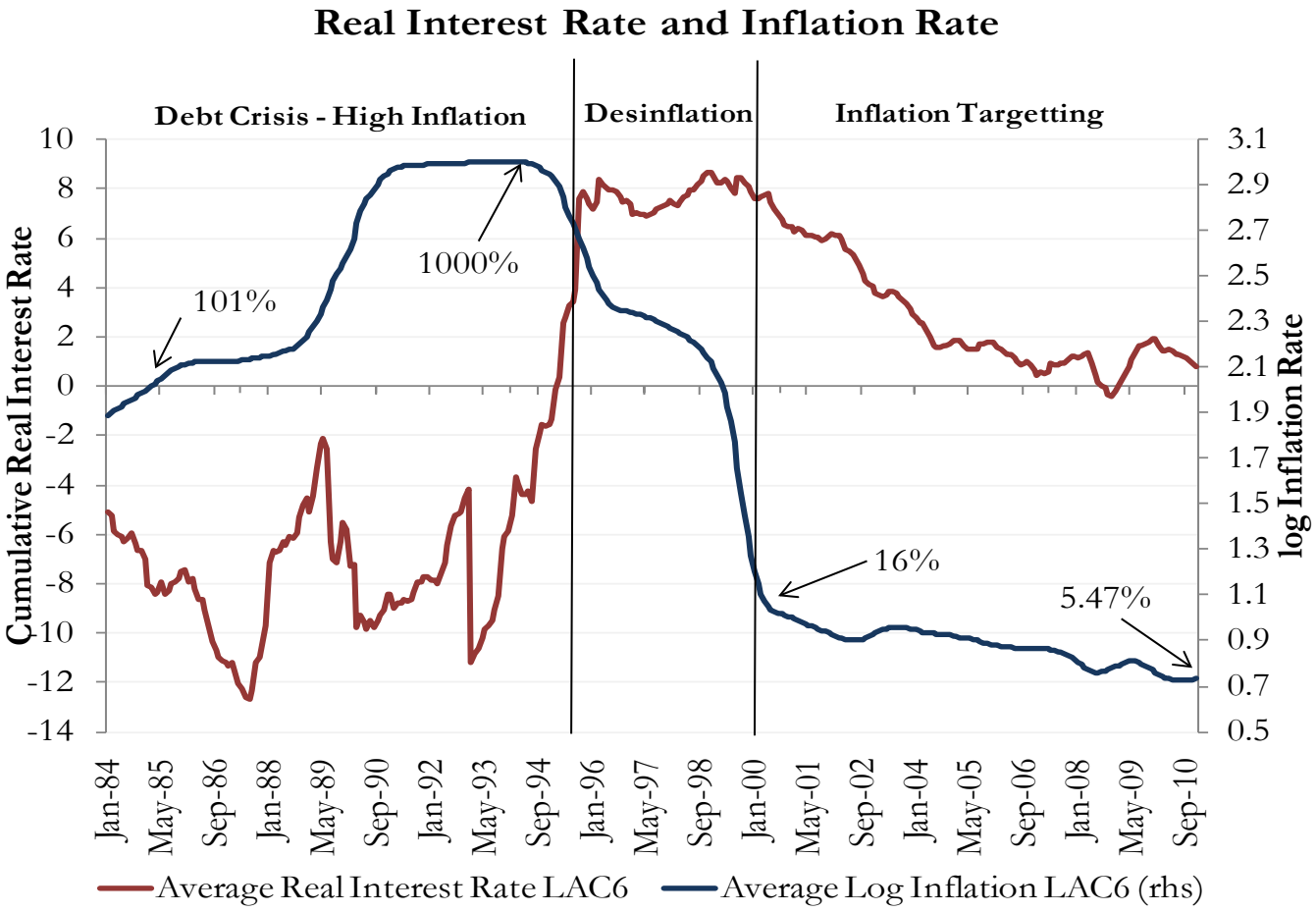
- The pre-80s monetary and external frameworks …
  - Dollar anchoring with occasional step devaluations
  - An unstable mix of protectionism and open capital accounts
- … were shaken by three big inter-related shocks
  - *An intellectual shock*: ECLAC structuralism – an early manifestation of supply side economics where money follows cost-pushed inflation
  - *A fiscal shock*: an expanding (supply-promoting) but unfinanced state leading to fiscal dominance
  - *A world shock*: easy credit (oil boom) fueling fiscal expansion, followed by tight money (Volcker's stabilization) leading to sovereign debt crises
- The outcomes: runway inflations, debasement of currencies, financial meltdowns, dollarization

The advent of fiscal dominance in the 1980s



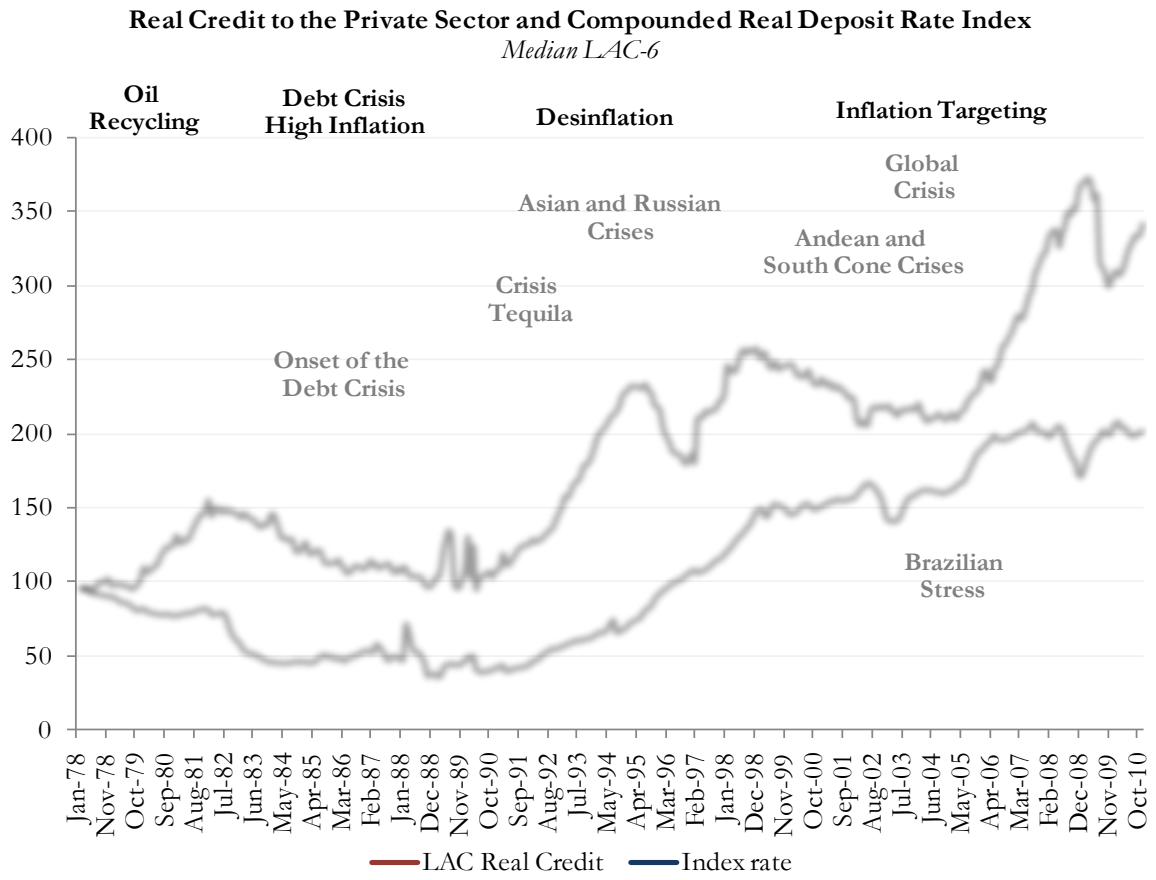
Sources: WDI.

The loss of a nominal anchor in the 80s and early 90s



Notes: LAC6 includes Argentina, Brazil, Chile, Colombia, Mexico and Peru. Inflation is a 5-year rolling, year-on-year rate. Source: IFS

Financial instability and financial intermediation crashes



Note: the Index Rate is the compounded real deposit interest rate applied to 100 base at the beginning of the period (Jan 1978). The plotted variable (in blue) thus reflects the evolution over time of the real value of the initial deposit base. Source: de la Torre, Ize, Schmuckler (2012).

Systemic financial crises, especially in the 1990s

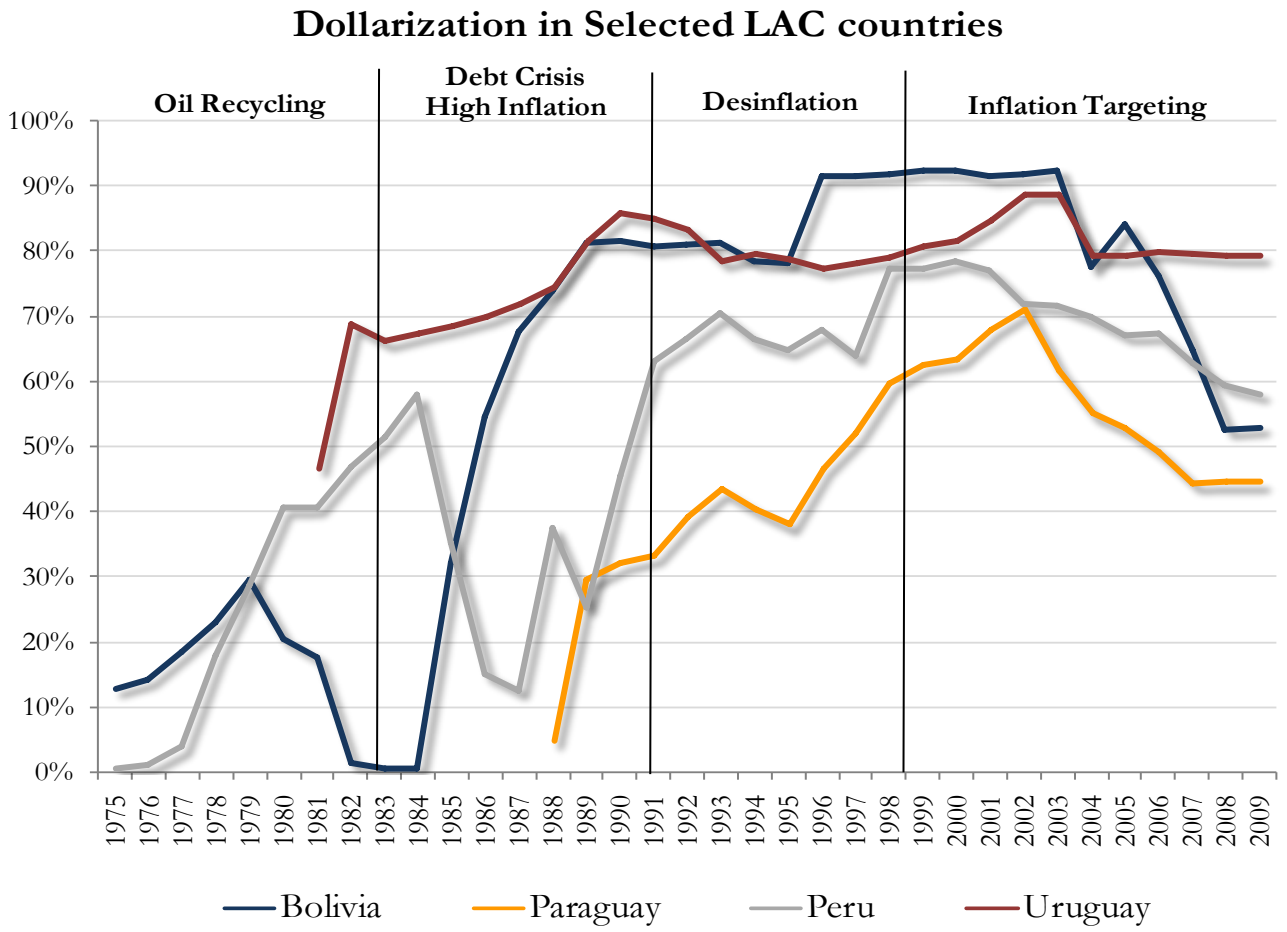
	Systemic Banking Crisis			Currency crises	
	2007-2008	*1994-1998*	*1980-1985*	*2007-2008*	*1994-1998*
No. Of Crises-hit Countries					
High Income	19	6	-	4	2
OECD only	18	4	-	4	1
Middle east & N. Africa	0	1	-	0	2
South Asia		0		0	0
Sub-Saharan Africa	0	9	-	6	31
East Asia & Pacific	1	6	-	0	7
Europe & Central Asia	3	9	-	3	17
Latin America & Caribbea	0	11	8	0	3
Total	**13**	**42**	**-**	**13**	**62**

LAC Countries

Systemic Banking Crisis			Currency crises	
1994-2002		*1980-1985*	*2007-2008*	*1994-1998*
Argentina (95)(01)	Mexico (94)	Argentina (80)		Mexico (94)
Bolivia (94)	Paraguay (95)	Brazil (85)		Suriname (94)
Brazil (94)	Uruguay (02)	Chile (80)		Venezuela (94)
Colombia (98)	Venezuela (94)	Colombia (82)		
Costa Rica (94)		Ecuador (80)		
Ecuador (98)		Mexico (81)		
Haiti(94)		Peru (83)		
Jamaica (96)		Uruguay (81)		

Source: Laeven and Valencia (2008), Reinhart and Rogoff (2008) and LAC Chief Economist Office.

Financial dollarization – a common response to runaway inflation that persisted during the disinflation period…



Source: Levy Leyati and IMF data.

… but in Brazil, *indexed money* was the coping mechanism

Brazil Optimal Hedges: DI indexation versus Dollar indexation

Normalized covariance by decade

Normalized covariance between (a) and (b)		80s	90s	00s
(a)	*(b)*			
Hedge	*Dollar indexation*	0.92	0.89	-0.5
	DI indexation	0.89	0.96	0.19
Safe Haven	*Dollar indexation*	-0.25	-0.38	-0.09
	DI indexation	-0.25	-0.57	-0.01

Note: "Hedge" stands for the Minimum Variance Portfolio (MVP), which equals the covariance of the real exchange rate (or indexed money) with the price level, divided by the variance of the real exchange rate (or indexed money). The safe haven effect equals the covariance between the index (exchange rate or DI) and the industrial production index divided by the variance of the index. Sources: Ize and Levy-Yeyati (2003); LAC Chief Economist Office.

Regaining control

The road to redemption

A gradual shift towards full-fledge inflation targeting

- Clear benefits to announcing explicit inflation targets
  - Directly anchors inflation expectations
    - Facilitates coordination – wage and price setting, fiscal budgeting, etc.
    - Helps develop longer-term financial instruments
  - Promotes transparency and accountability
  - Allows for a good mix of rules (commitment) and discretion (depending on shocks)
  - ⇒ Reduces sacrifice ratios (the output cost of inflation stabilization)

- But effective commitment to an inflation target hinges on how implemented, which depends on macro-financial conditions

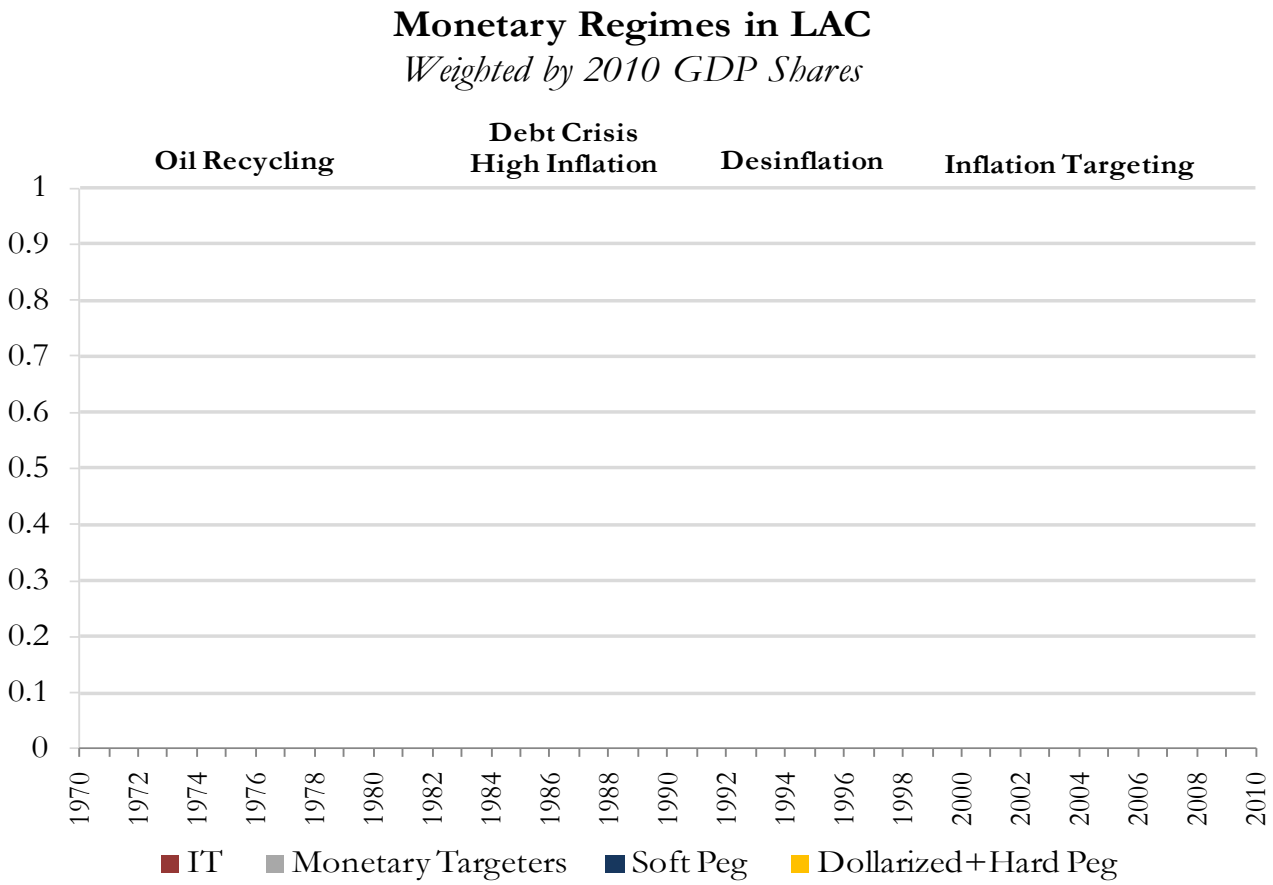
Putting the inflation genie back into the bottle

Three stages of inflation targeting

Towards full-fledge inflation targeting

	Stage I	Stage II	Stage III
Final target	Inflation	Inflation	Inflation
Operational target	Exchange rate	Bank reserves	Interest rate
Primary shock absorber	International reserves	Interest rate	Exchange rate
Secondary shock absorber	Interest rate	Exchange rate	International reserves

The rocky road towards inflation targeting in LAC



Source: Ilzetxki, Reinhart and Rogoff (2011) and LAC Chief Economist Office calculations.

Stage 1: exchange rate-based disinflation

- Benefits
  - Where inflation is very high and unstable, the exchange rate becomes the only remaining credible, visible anchor
  - A pre-determined nominal exchange rate path limits financial stress in dollarized systems
  - Simple to implement, even in the absence of money and bond markets, as money demand endogenously determines money supply
- Limitations
  - Risk of consumption/credit booms and exchange rate overvaluations leading to twin crises (MX 1995, ECU 1999, ARG 2001, URU 2002)
  - Promotes e-rate passthrough, wage indexation, and dollarization
    - This exacerbates inflationary inertia and fear of floating
  - The loss of monetary policy independence is plainly inadequate for the larger, more closed economies

Stage 2: money-based inflation stabilization

- Benefits
  - Controlling a monetary aggregate (e.g., bank reserves) is a way to recover monetary policy independence
  - The interest rate as the primary shock absorber helps limit exchange rate volatility and thus (under a high passthrough) inflation volatility
  - Can function even under relatively thin money and bond markets
- Limitations
  - Sluggish transmission, less transparent signaling and communication
  - Complications that arise from unstable money demand
    - "*We did not abandon monetary aggregates, they abandoned us*" (John Crow)
    - Targeting bank reserves during re-monetization episodes introduces a contractionary bias (through a high i-rate and an appreciated e-rate)
  - Fear of floating remains, limiting the easing of passthrough & dollarization
  - Short-term interest rate volatility hinders financial development

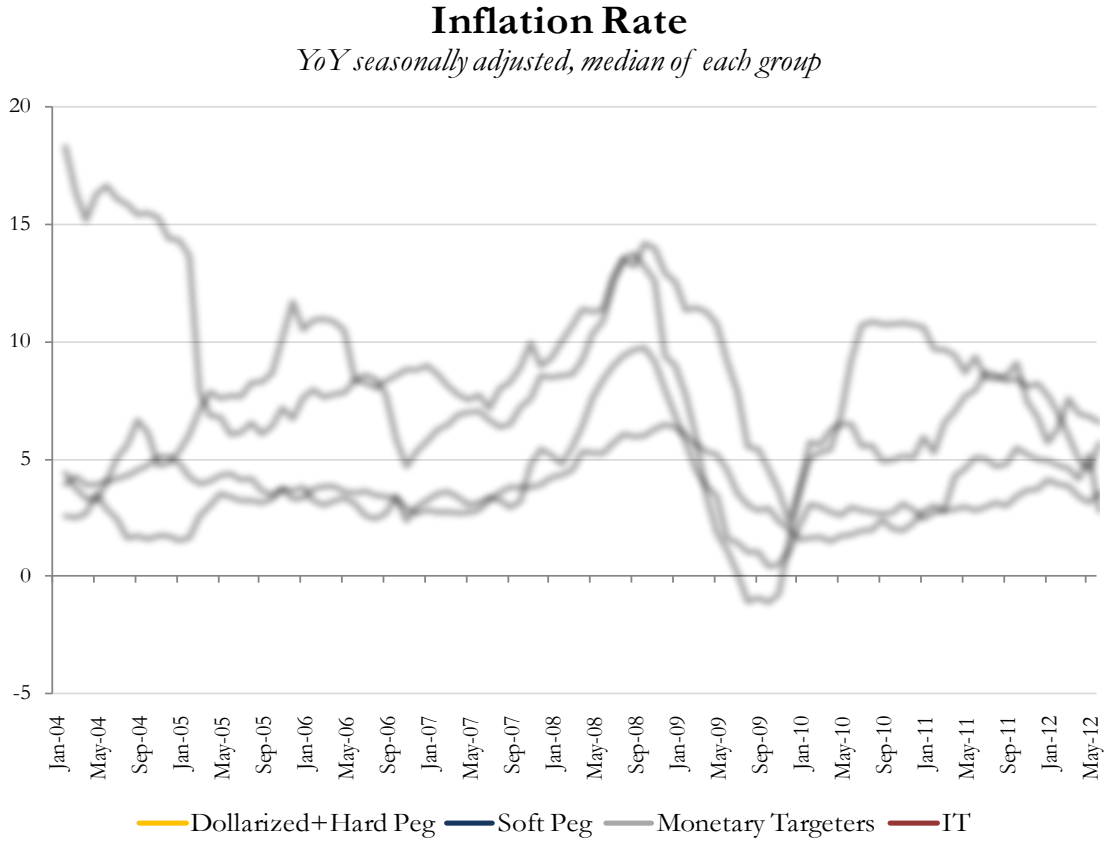
Stage 3: full-fledge inflation targeting

- Benefits
  - Provides the most transparent (hence effective) monetary signal
  - Enhances monetary policy transmission
  - Promotes de-dollarization
  - Facilitates financial deepening (yield curve)

- Limitations
  - May not be appropriate for high inflation countries or countries that lack a sufficiently developed money market
  - Comes under stress in times of high capital inflows and/or supply shocks

How well has IT worked in LAC?

The full-fledge inflation targeters have outperformed the rest in keeping inflation low and stable…

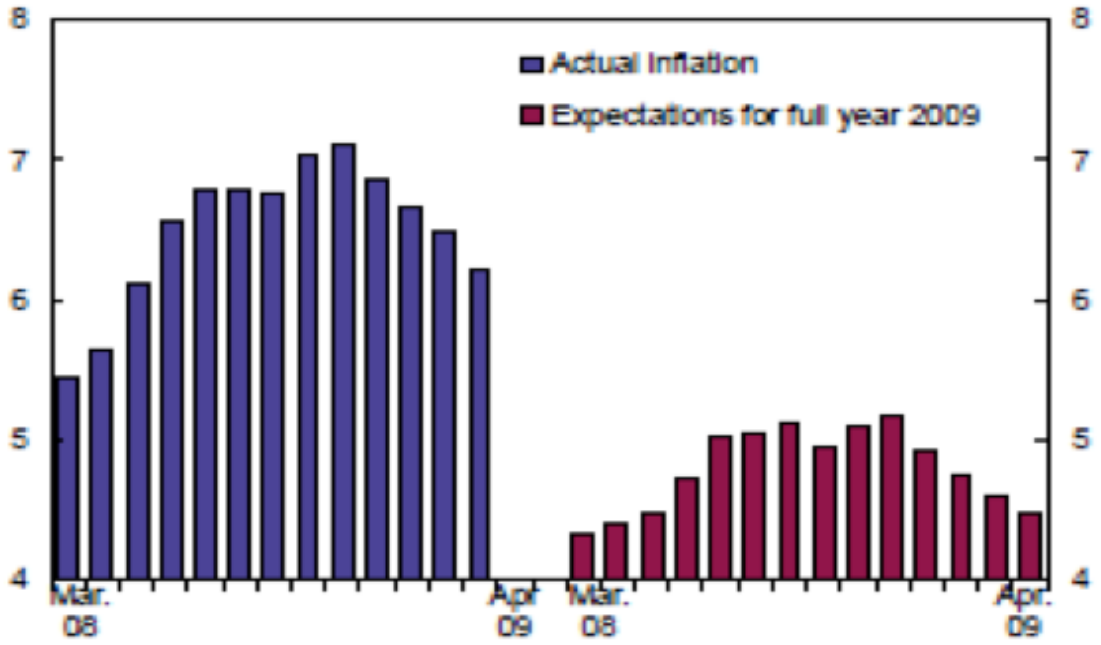


Notes: To plot this variable, we use country groupings consistent with the monetary regime that was in effect in 2010. Source: GEM.

… in stabilizing inflation expectations, despite the shocks …

Inflation-Targeting Countries: Actual and Expected Inflation 1/

(12-month percent change)



Notes: PPP-GDP weighted average for Brazil, Chile, Colombia, Mexico and Peru. Sources: Consensus Economics, Consensus Forecast, Haver Analytics, IMF

… in significantly reducing the passthrough …

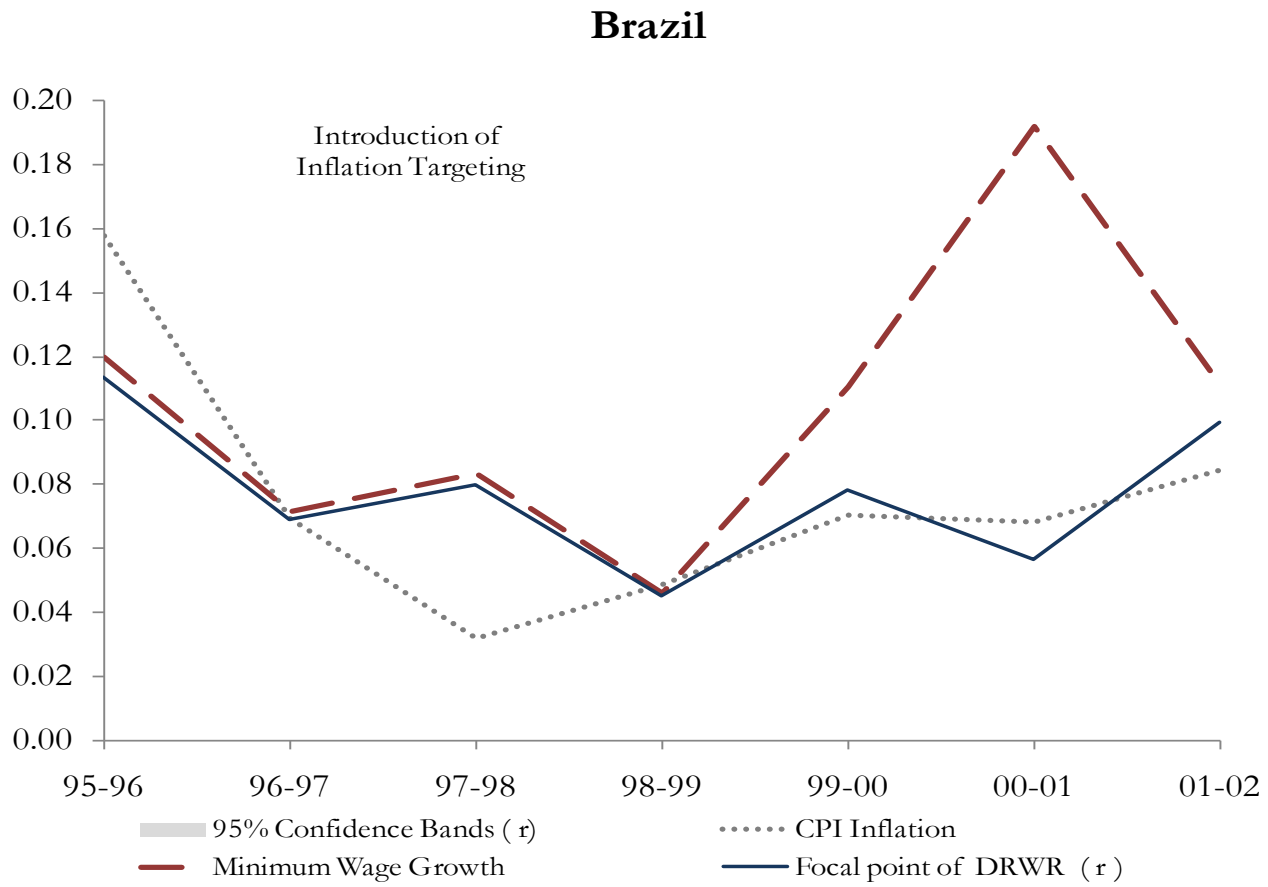
Pass-through estimates

PPI inflation

	Before Inflation Targeting		After Inflation Targeting		Change in pass-Though	
	Short-run	*Long-run*	*Short-run*	*Long-run*	*Short-run*	*Long-run*
Brazil	0.451*	1.295	0.081*	0.599*	-0.370*	-0.696*
	(0.166)	(0.360)	(0.021)	(0.320)		
Mexico	0.076*	1.0138*	0.154*	0.261*	0.078*	-0.758*
	(0.009)	(0.065)	(0.022)	(0.103)		

Source: Pinto Nogueira (2007)

… in altering wage formation …

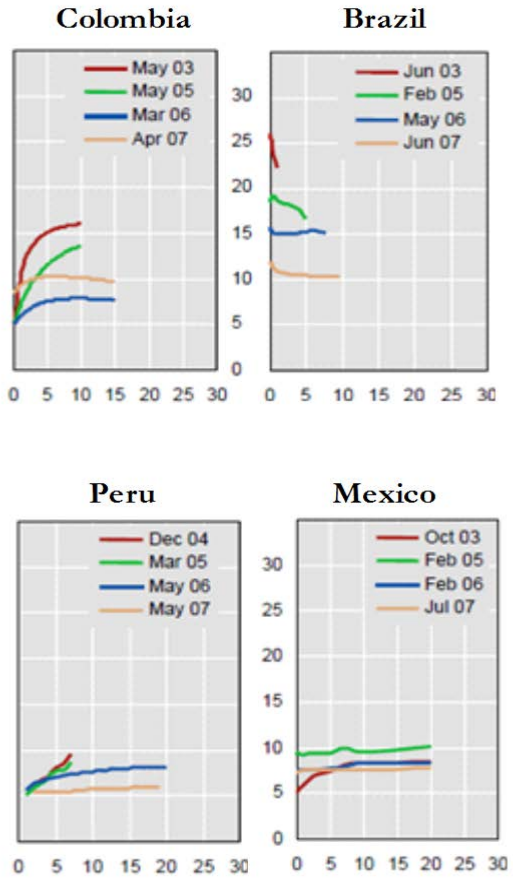


Source: Messina and Sanz-de-Galdeano (2011)

… in promoting financial deepening …

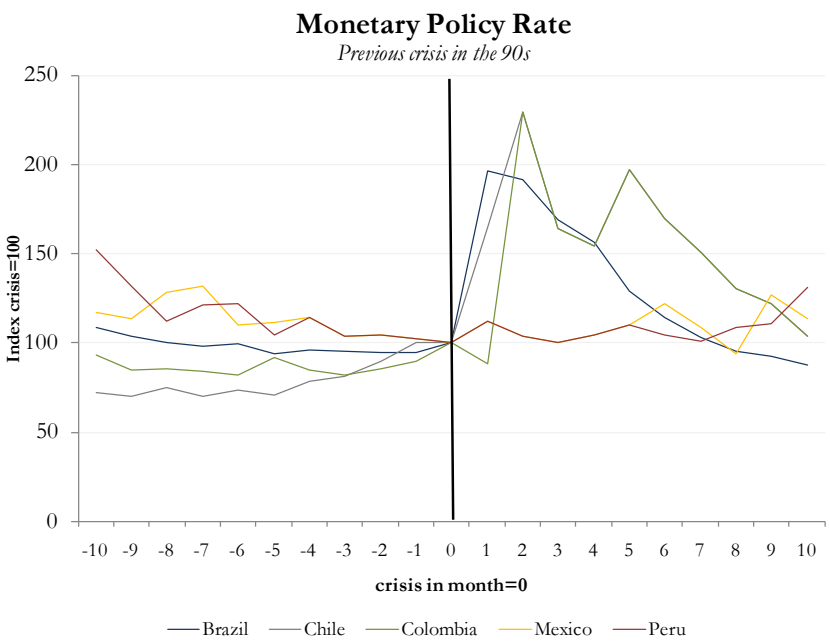
Yield curves of domestic fixed rate local currency government bonds

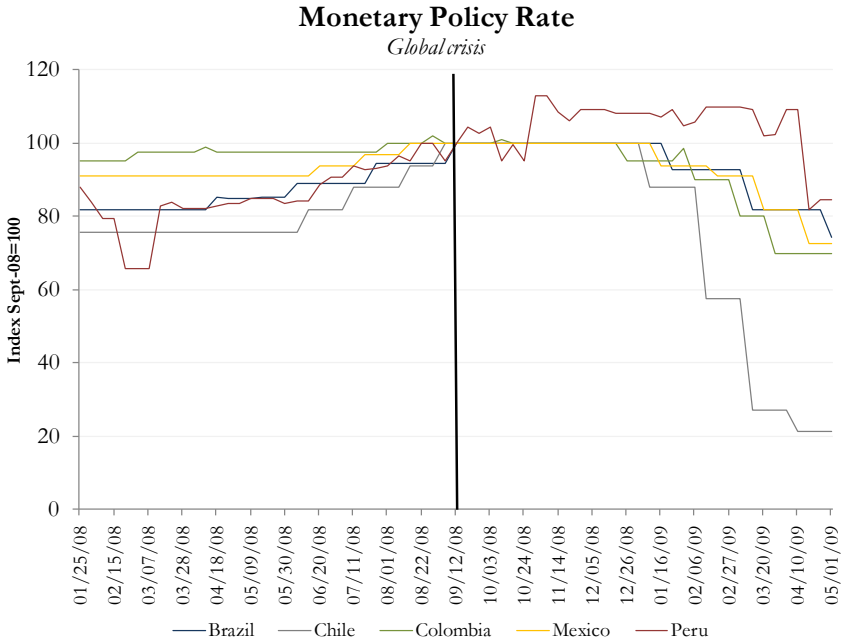
in %



Notes: Graphs represent the remaining maturities in years. For Brazil, swap rates long-term government bonds (NTN-F) are plotted; for Colombia, zero coupon yield curves; for Mexico, Cetes and government bonds; and for Peru, government bonds of the secondary market. Source: National data and BIS

… and in providing a countercyclical capacity

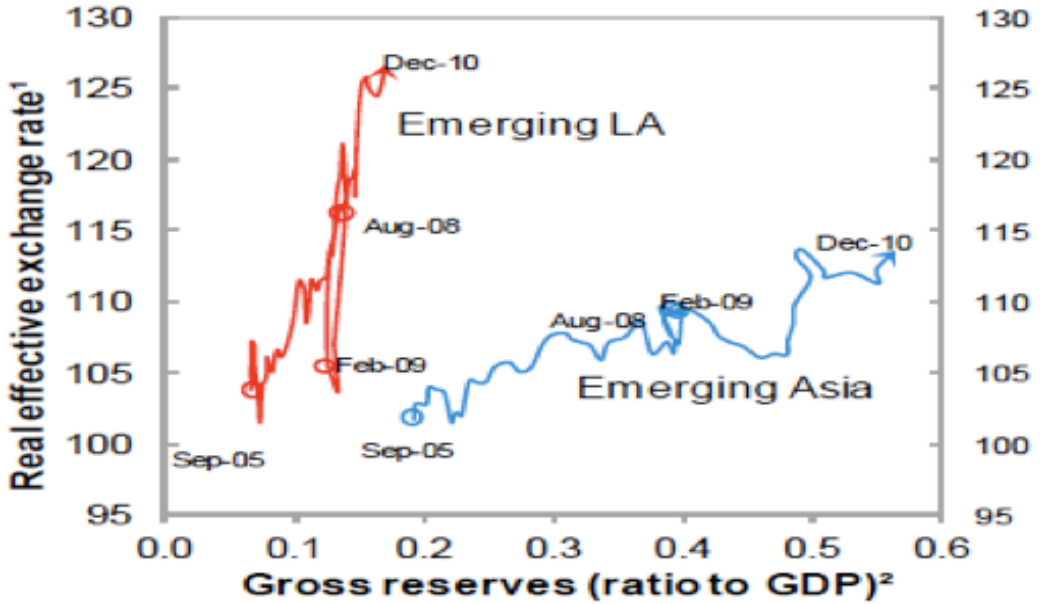




Notes: We used for the left panel the interest rate of the money market as reported for Brazil, Colombia, Mexico and Peru. For Brazil, the selected crisis is October 1997; for Chile and Colombia, April 1998; for Mexico, February 1995; and for Peru, August 1998. Source: IFS and Bloomberg

But, has full-fledge IT promoted real appreciation?

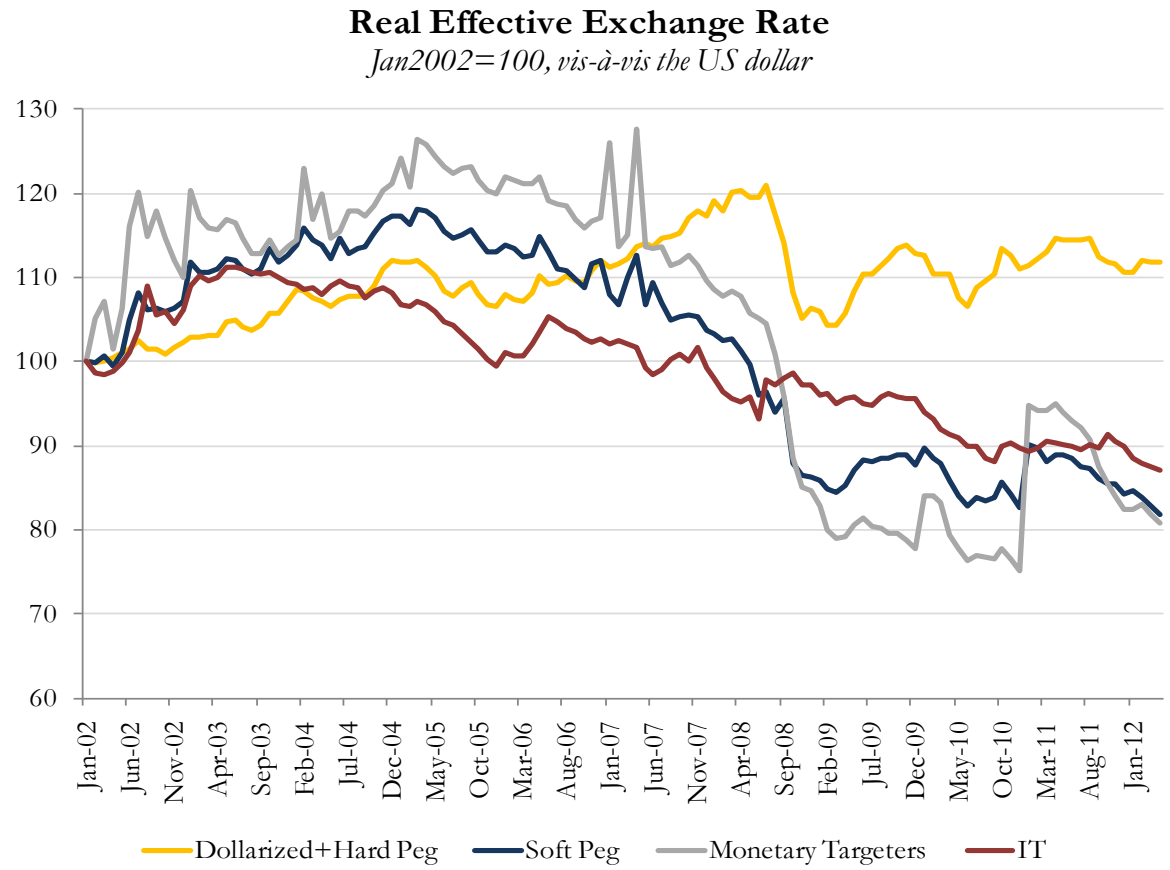
Emerging Latin America and Asia: Real Exchange Rates and Reserves, 2005–10



Note: Weighted averages of 15 Latin American and 10 Asian economies.
¹Index 2005=100.
²Gross international reserves as a share of 2006–08 average GDP.

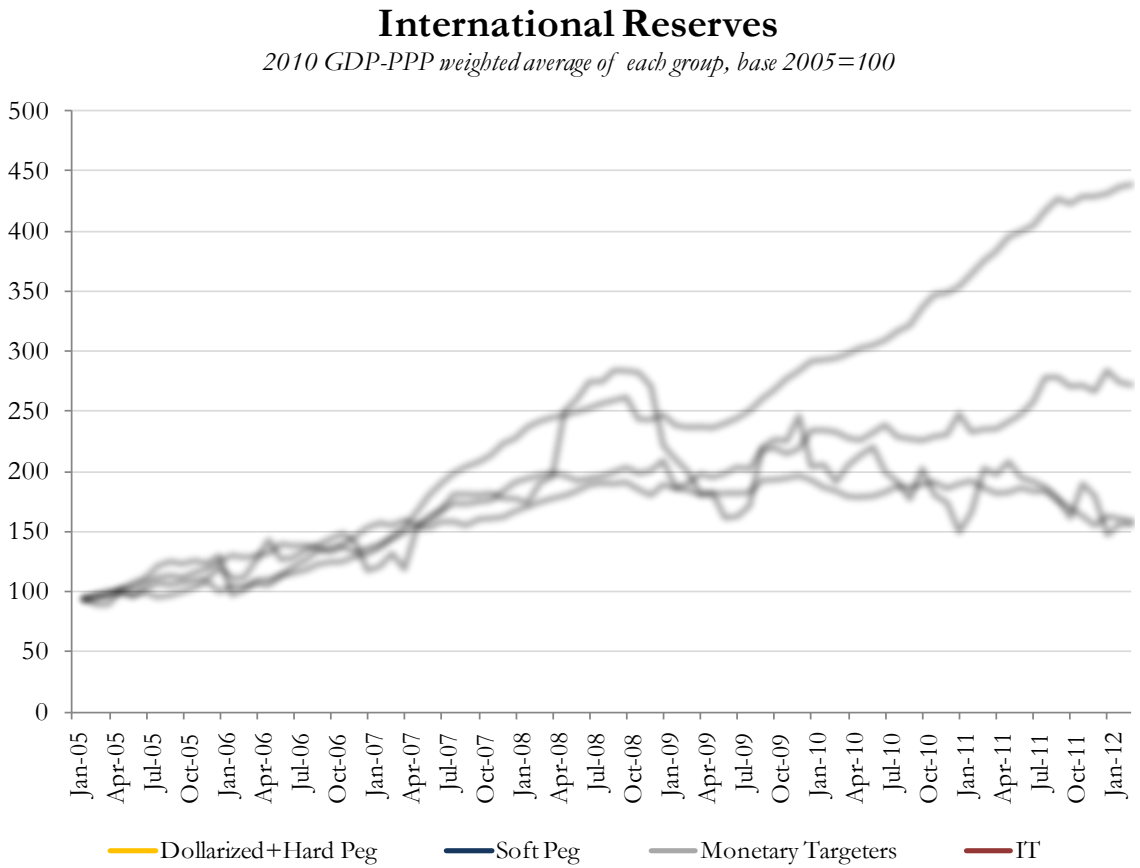
Source: IFS

The real appreciation trend was stronger for full-fledge inflation targeters until the Lehman collapse…



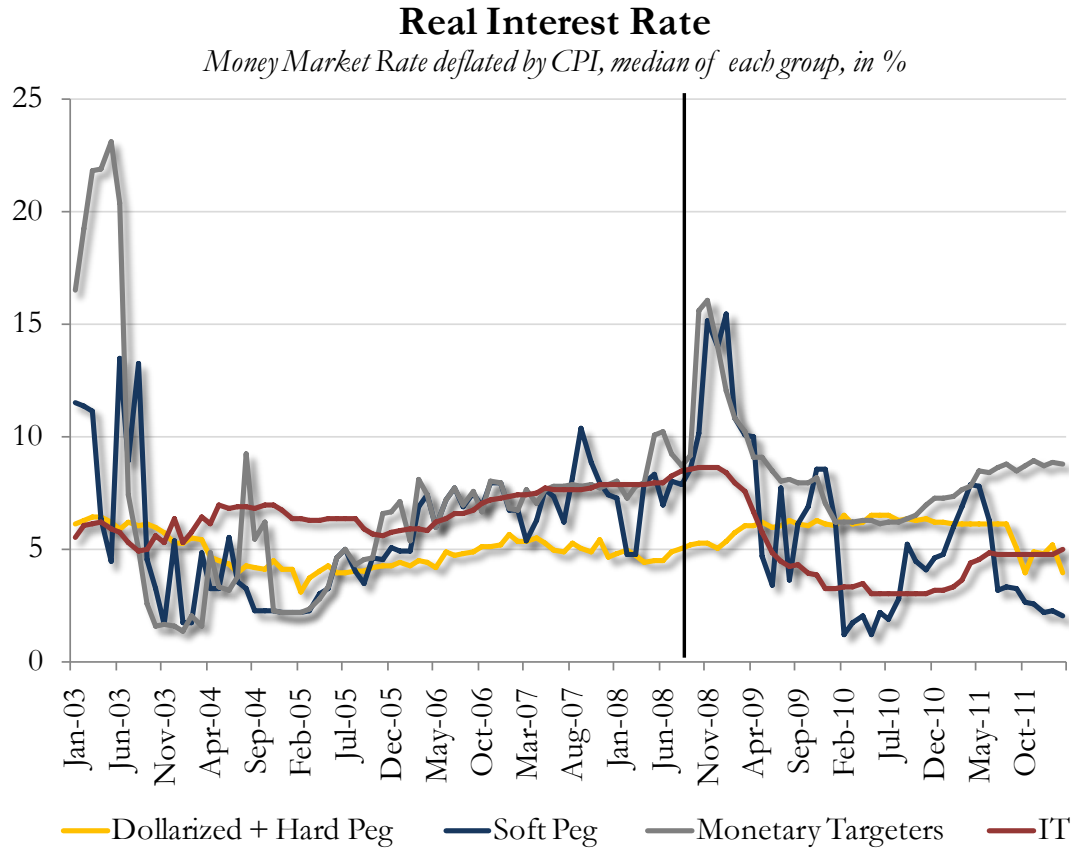
Notes: To plot this variable, we use country groupings consistent with the monetary regime that was in effect in 2010. Sources: IFS.

… despite intense intervention …



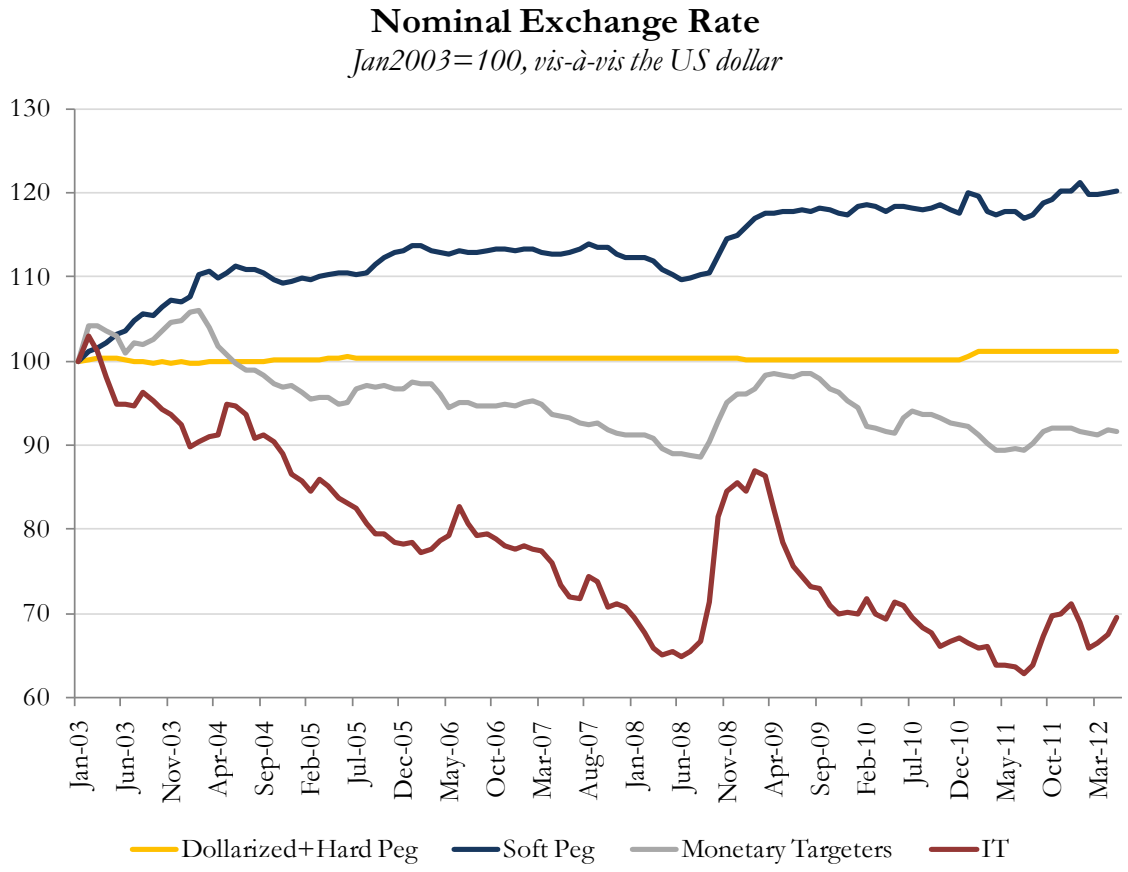
Notes: To plot this variable, we use the country grouping that results from the monetary regime in effect in 2010. Sources: IFS and WDI.

… and partly due to high real interest rates



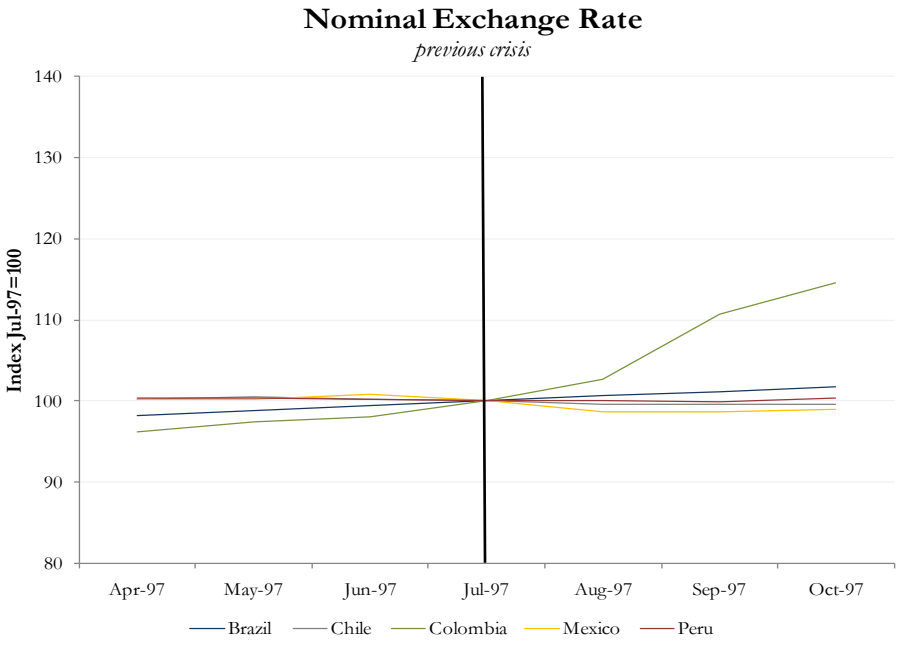
Notes: To plot this variable, we use country groupings consistent with the monetary regime that was in effect in 2010. For Chile, the money market rate has been deflated by wholesales prices. Source: IFS.

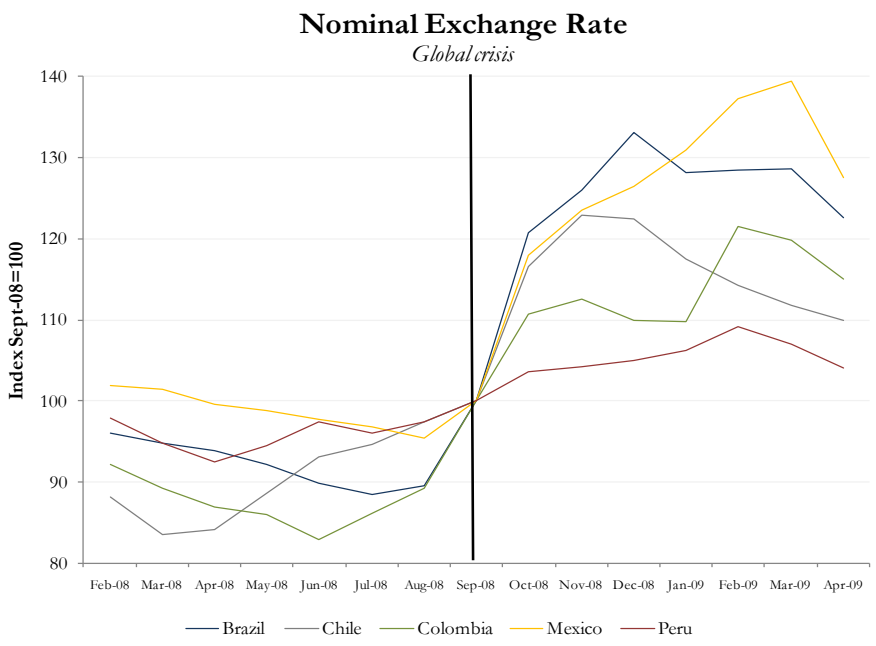
But full-fledge IT has provided a significantly greater shock absorption capacity via the nominal exchange rate…



Notes: To plot this variable, we use country groupings consistent with the monetary regime that was in effect in 2010. Sources: IFS and WDI.

… in sharp contrast with the pre-IT era





Sources: World Bank Indicators and Bloomberg.

Moving towards and consolidating IT

Lessons from LAC

Pre-conditions for launching single objective IT

- Inflation cannot be too high
- Fiscal dominance must have ceased
- Central banks must have minimum independence and capability (statistics, analysis, communication, etc.)
  - Basic systems to conduct open-market operations
- Foreign currency, interbank, and money/repo markets must have a minimum depth
- Countries must be large enough to have their own currency

⇒ The time may not be the right one

⇒ IT may not be the right regime

Looking forward, a gradual shift towards multiple objectives is unavoidable yet challenging

- Output stability
  - With supply shocks (where there is no "divine coincidence"), some short-term output targeting is unavoidable
  - As credibility improves, output stabilization can acquire a larger weight
- Exchange rate competitiveness
  - Most IT countries care about the exchange rate and many intervene
  - But how to pursue it without clashing with the impossible trinity?
- Financial stability
  - The global financial crisis has shown that monetary policy must be more concerned about financial stability
  - But where to draw the line and ensure complementarity between monetary and macro-prudential policies?

Thank you