
The Sub-Prime Crisis and Latin America's Immune System

LCSPE Brown Bag Lunch Seminar Series

10 December 2007

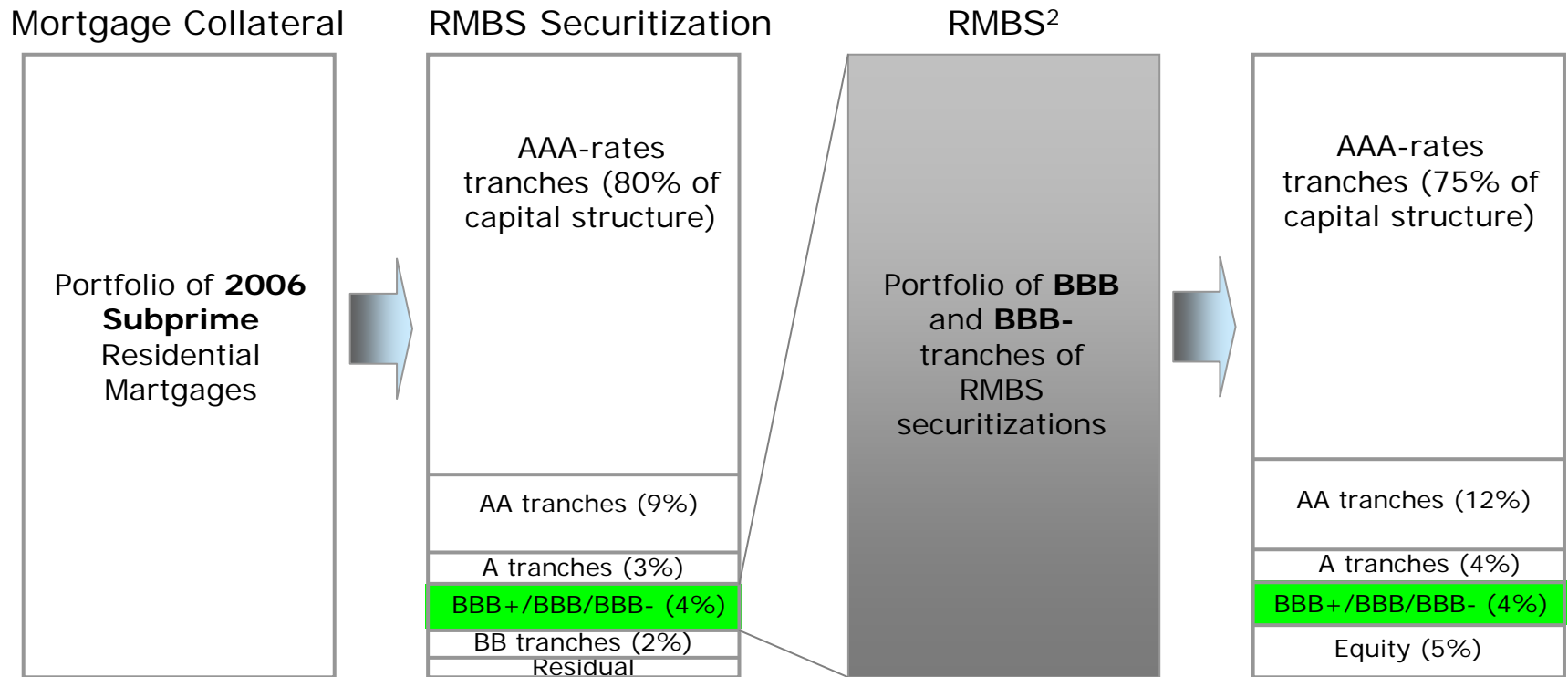
Washington, DC

***Chief Economist Office
Latin America and the Caribbean
The World Bank***

Structure of Presentation

- The source
 - Testing the immune system – key questions
 - The financial test
 - Credit
 - Currencies
 - Liquidity
 - Interest rates
 - The real test
 - Commodity prices
 - Export concentration and volatility
 - Global factors and growth in LAC
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The source: transgenic risk in the US



Lessons from market *and* regulatory failures for EMs – under development at CEO

Source: Gary Shilling (www.agaryshilling.com)

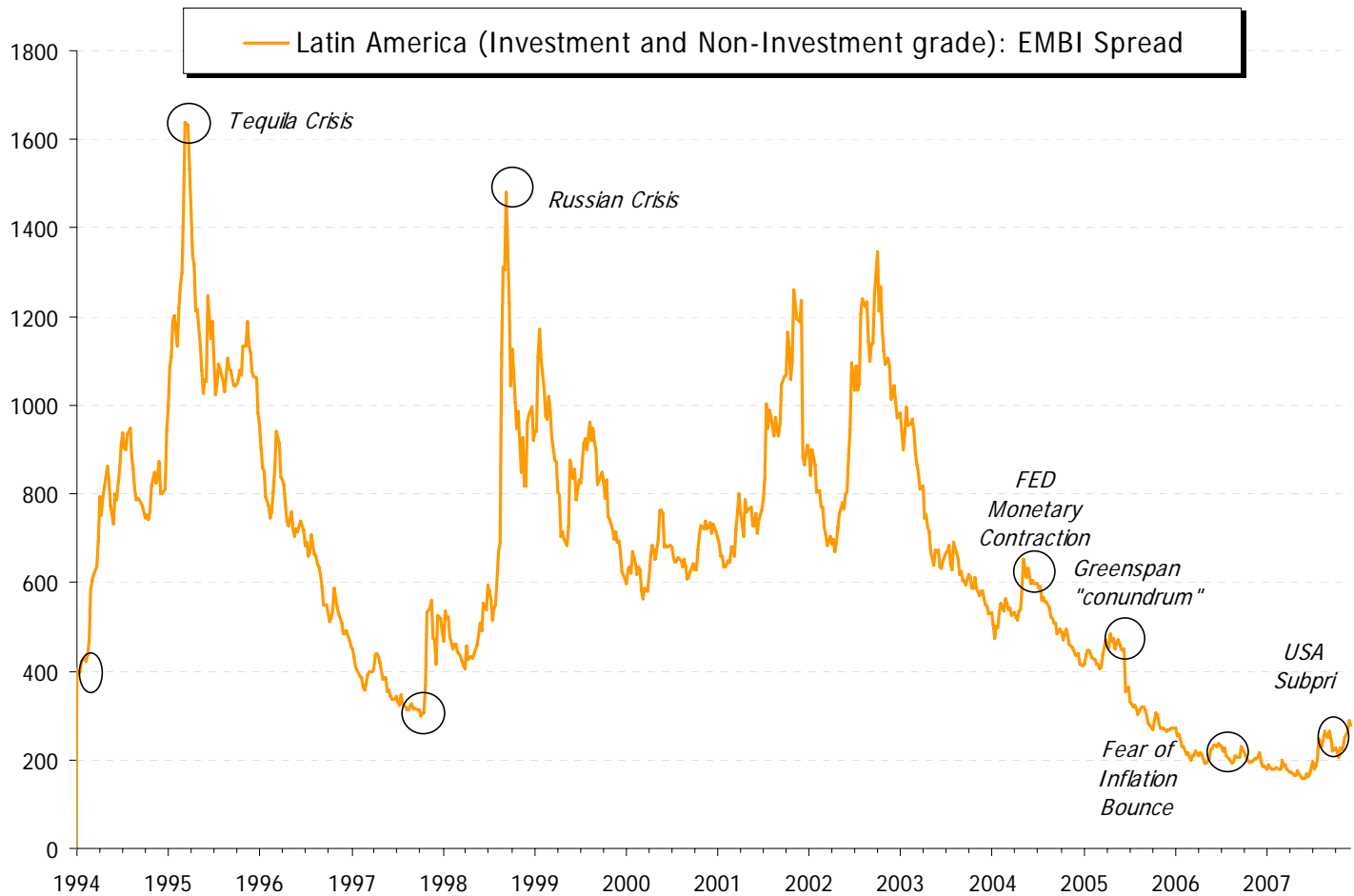
Sub-prime crisis – a test to LAC's new immune system?

- The new immune system
 - Robust monetary policy frameworks: IT & e-flexibility
 - Much less rollover & exchange rate risks in government debt
 - Substantial FX liquidity buffers
 - Stronger fiscal & external balances
 - → Much lower borrowing requirements
 - Is immune system for real? Is LAC fundamentally less vulnerable? Is LAC's deepening international integration safer?
 - Or does immune system only a reflection of good luck (endogenous to benign int'l environment – i.e., easily reversible)?
 - Is LAC capitalizing on favorable external circumstances to raise growth potential?
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The Financial Test

The financial test: Credit

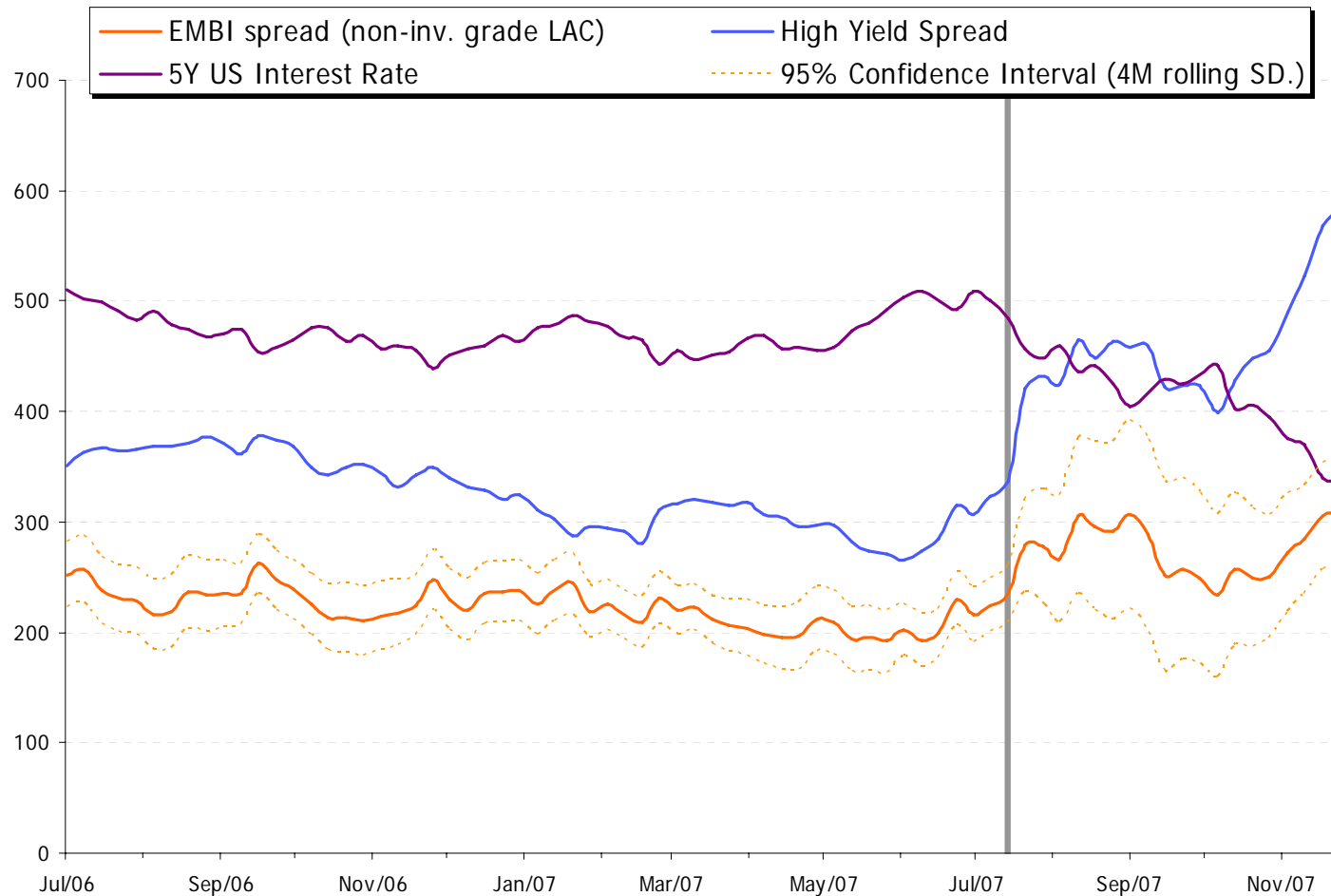
- LAC EMBI spread & volatility falling – approaching investment grade?



Source: Bloomberg - weekly data. JP Morgan Emerging Market Bond Index EMBI Global Performing Sovereign Spread

The financial test: Credit

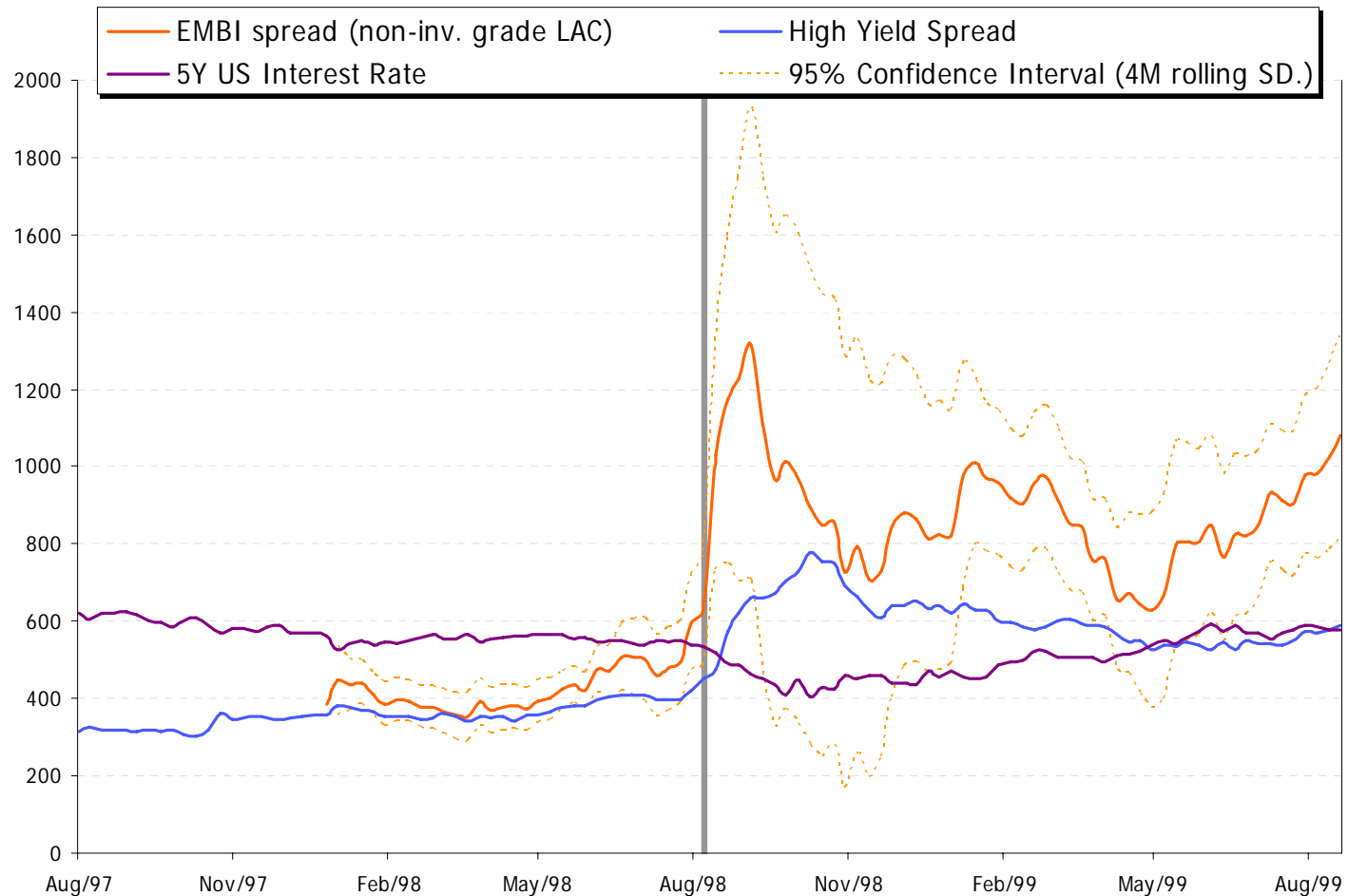
- LAC spreads still responsive to global risk aversion...



Source: Bloomberg - Credit Suisse High Yield Spread, JP Morgan EMBI Sovereign Spread (LAC excluding Chile &

The financial test: Credit

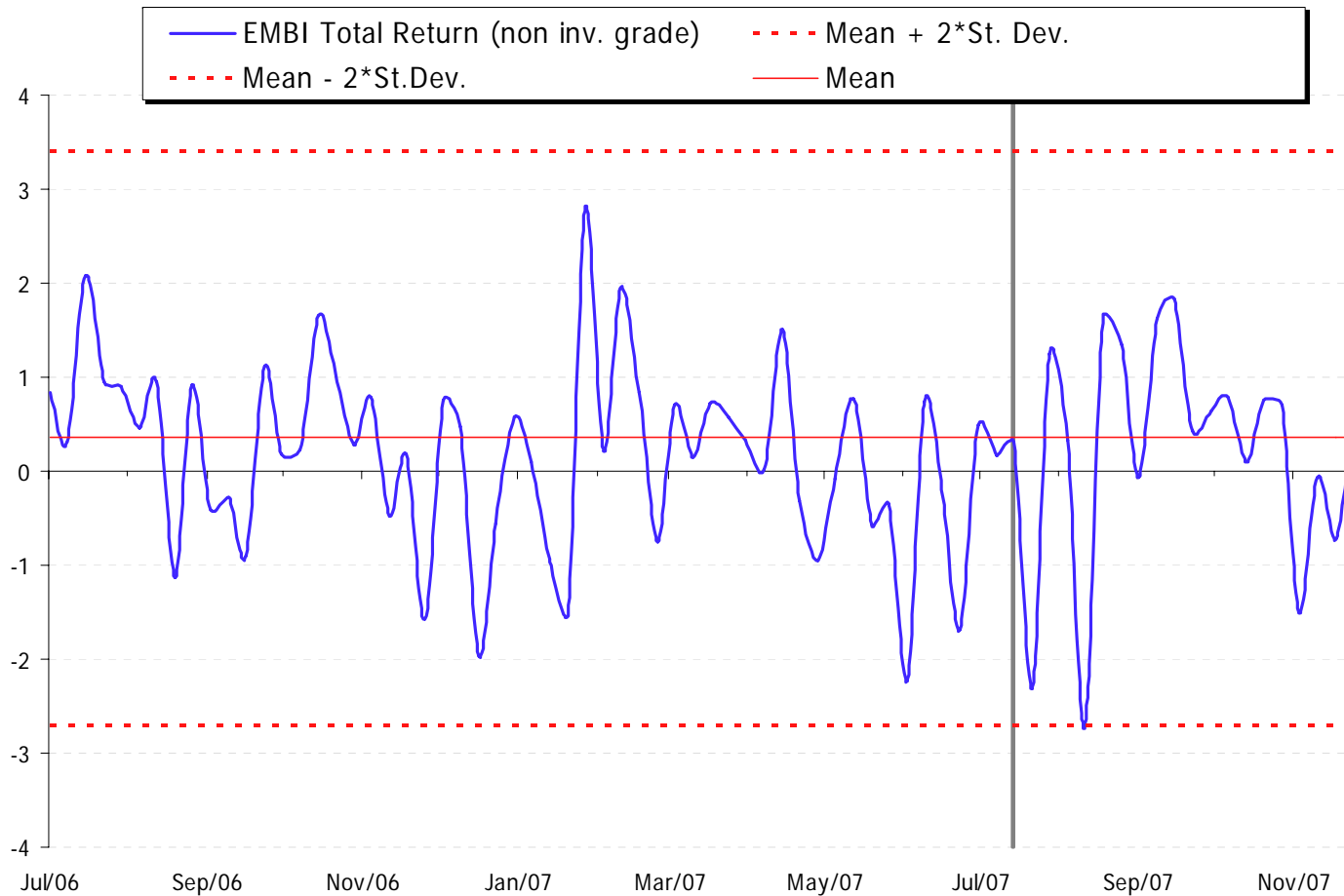
- ...but less than in previous episodes



Source: Bloomberg - Credit Suisse High Yield Spread, JP Morgan EMBI Sovereign Spread (LAC excluding Chile &

The financial test: Credit

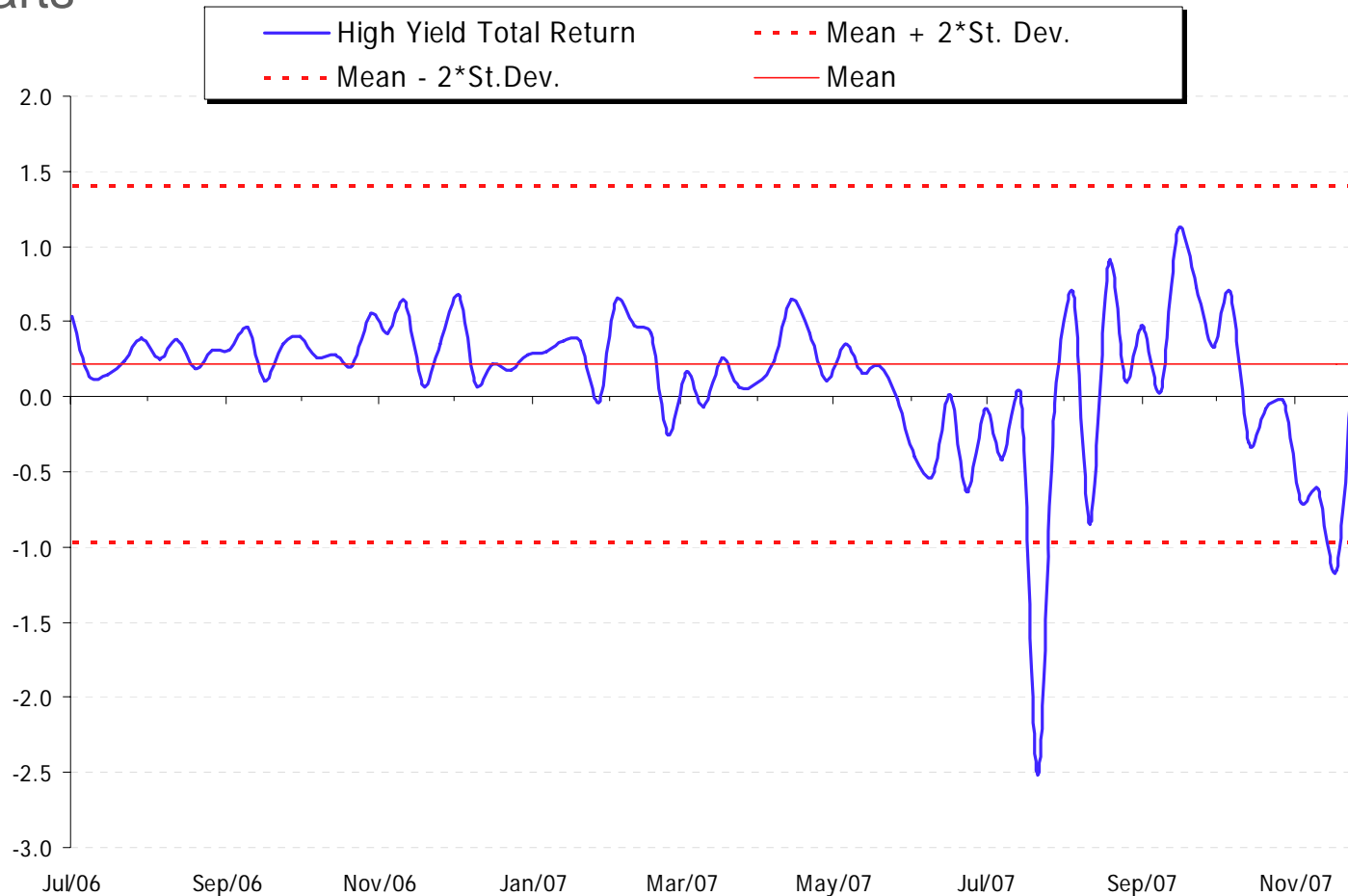
- While EMBI LAC weekly returns (losses) moved within historical bounds...



Source: Bloomberg - weekly data: JP Morgan EMBI Globa. Statistics base on 4 Year Window

The financial test: Credit

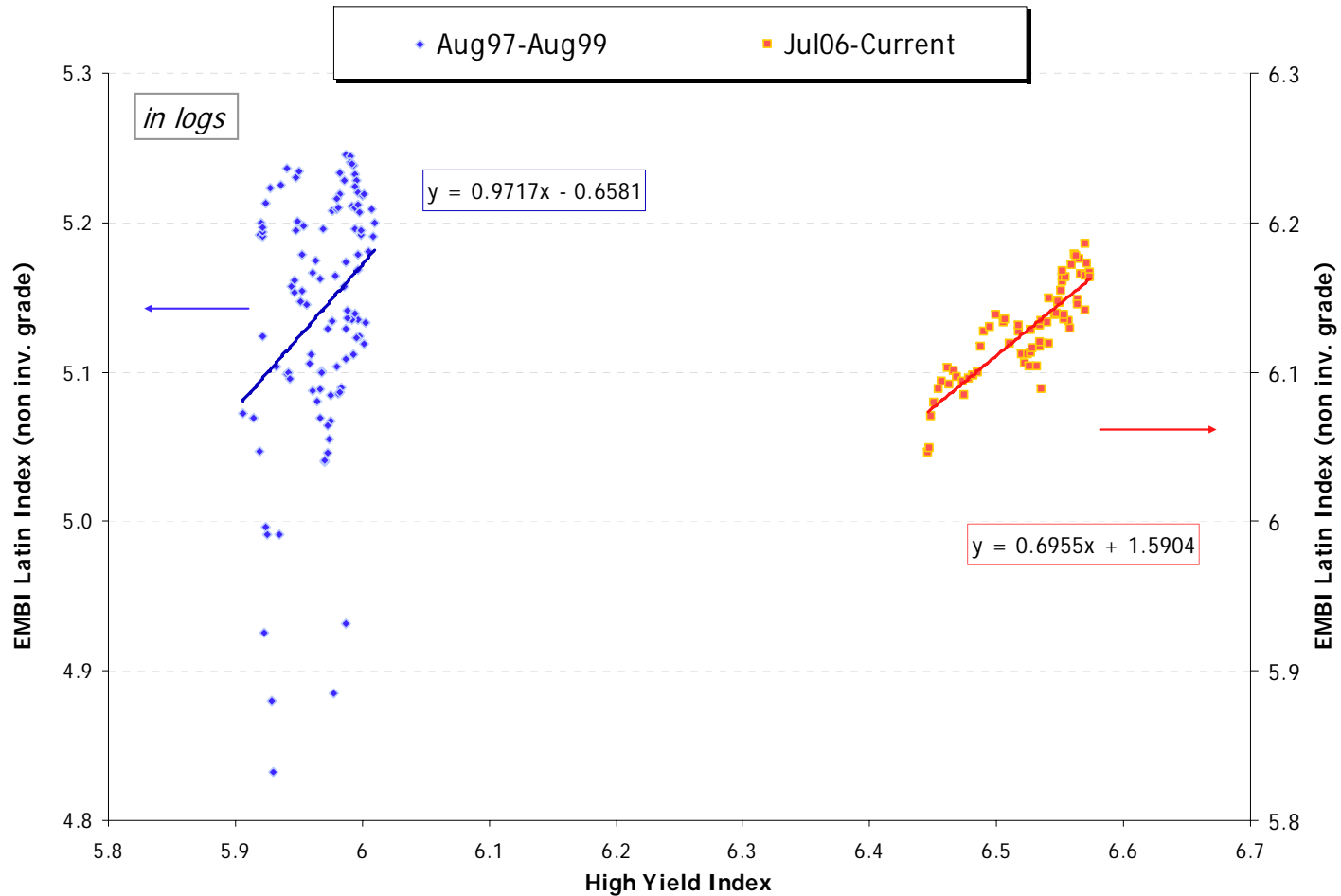
- ... weekly returns (losses) on U.S. high-yield bonds moved off the charts



Source: Bloomberg - weekly data: Credit Suisse High Yield Index. Statistics base on 4 Year Window

The financial test: Credit

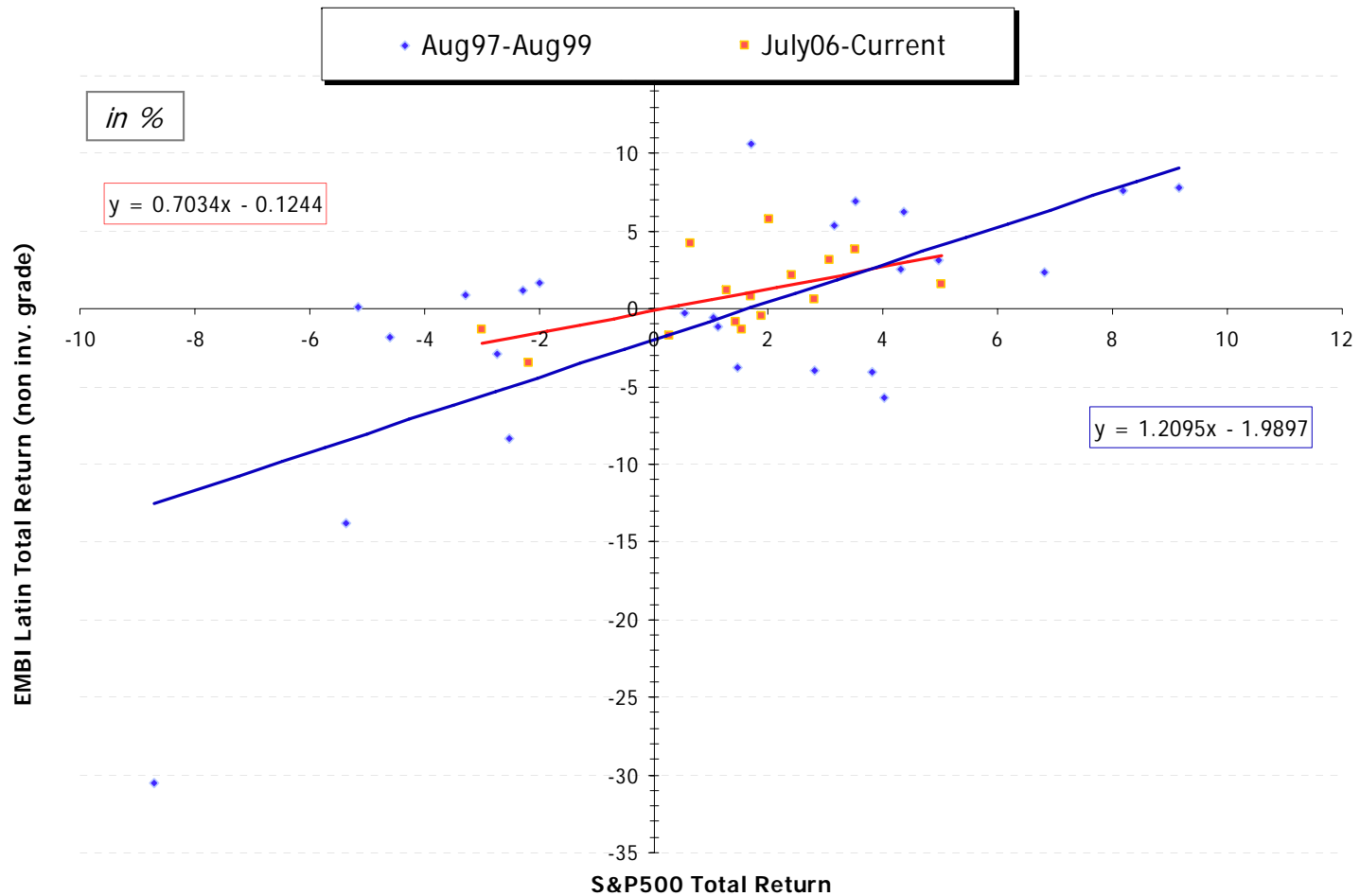
- Lower elasticity of LAC EMBI w.r.t. risk aversion (HY bonds)...



Source: Bloomberg - weekly data: Credit Suisse High Yield Index, JP Morgan EMBI Global

The financial test: Credit

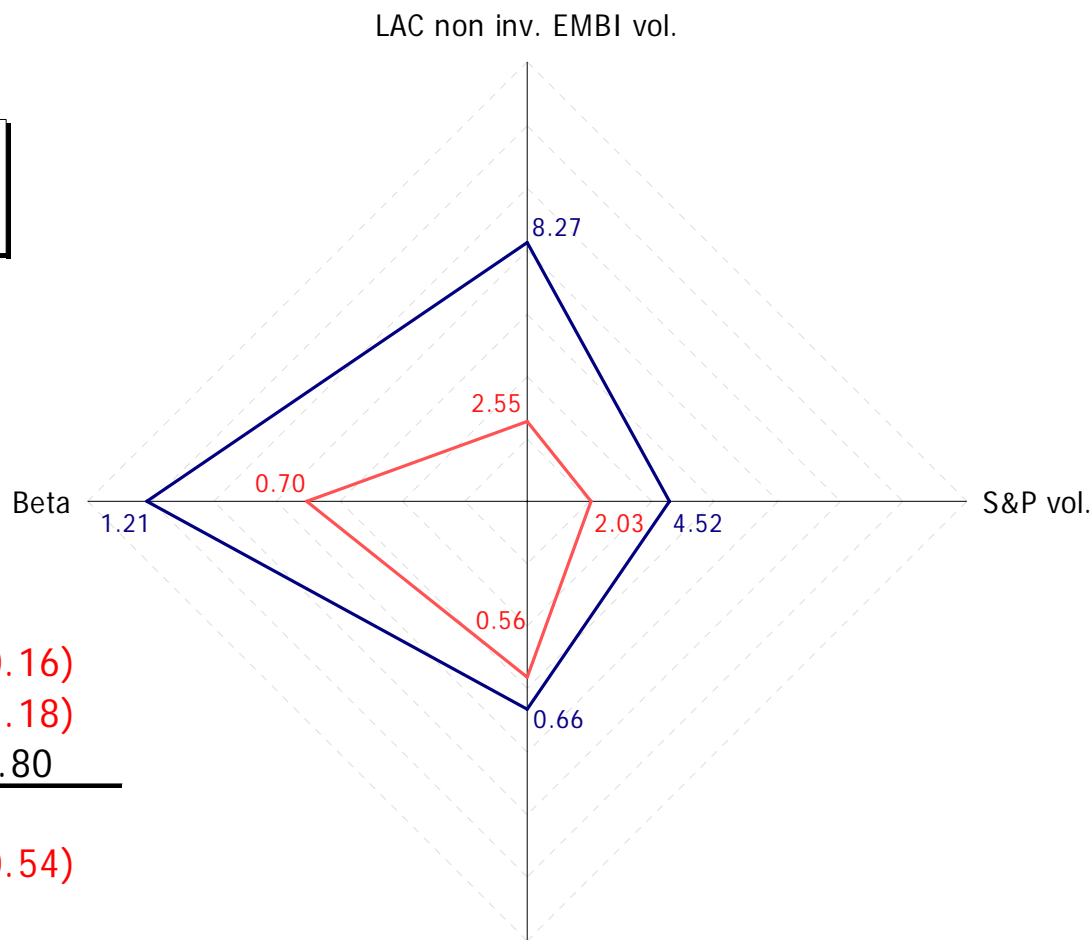
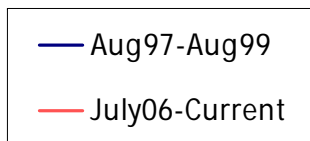
- ...and lower betas w.r.t. U.S. stock market portfolio



The financial test: Credit

- Changing nature of LAC asset class – lower riskiness

Beta decomposition



% Change

Correlation	(0.16)
LAC non inv. EMBI vol	(1.18)
S&P vol	0.80

Beta (0.54)

Source: Bloomberg - monthly data: JP Morqan EMBI Global. Volatility= St.Dev.

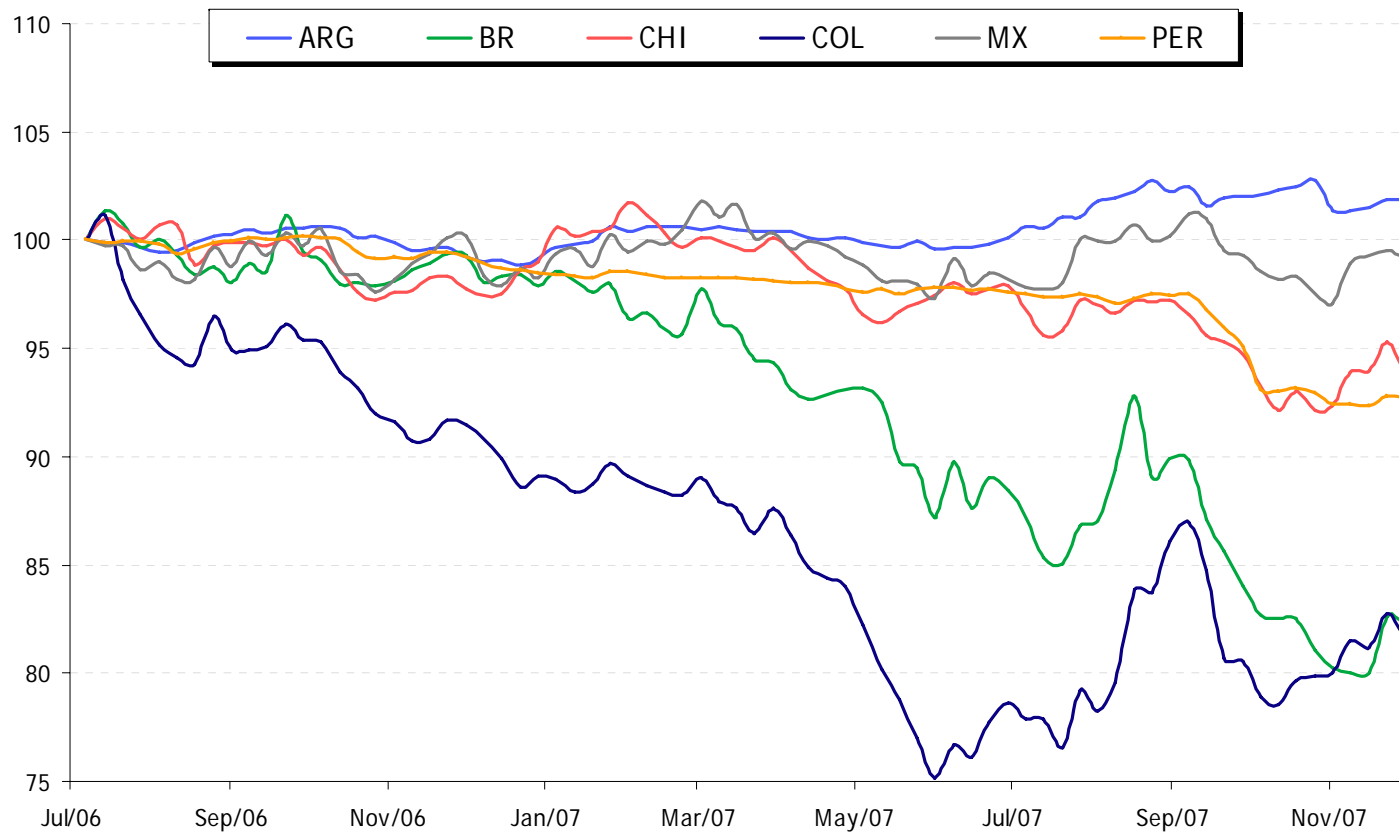
Correlation

The financial test: Currencies

- Nominal appreciation relative to the US dollar in LAC

Latin America Currencies

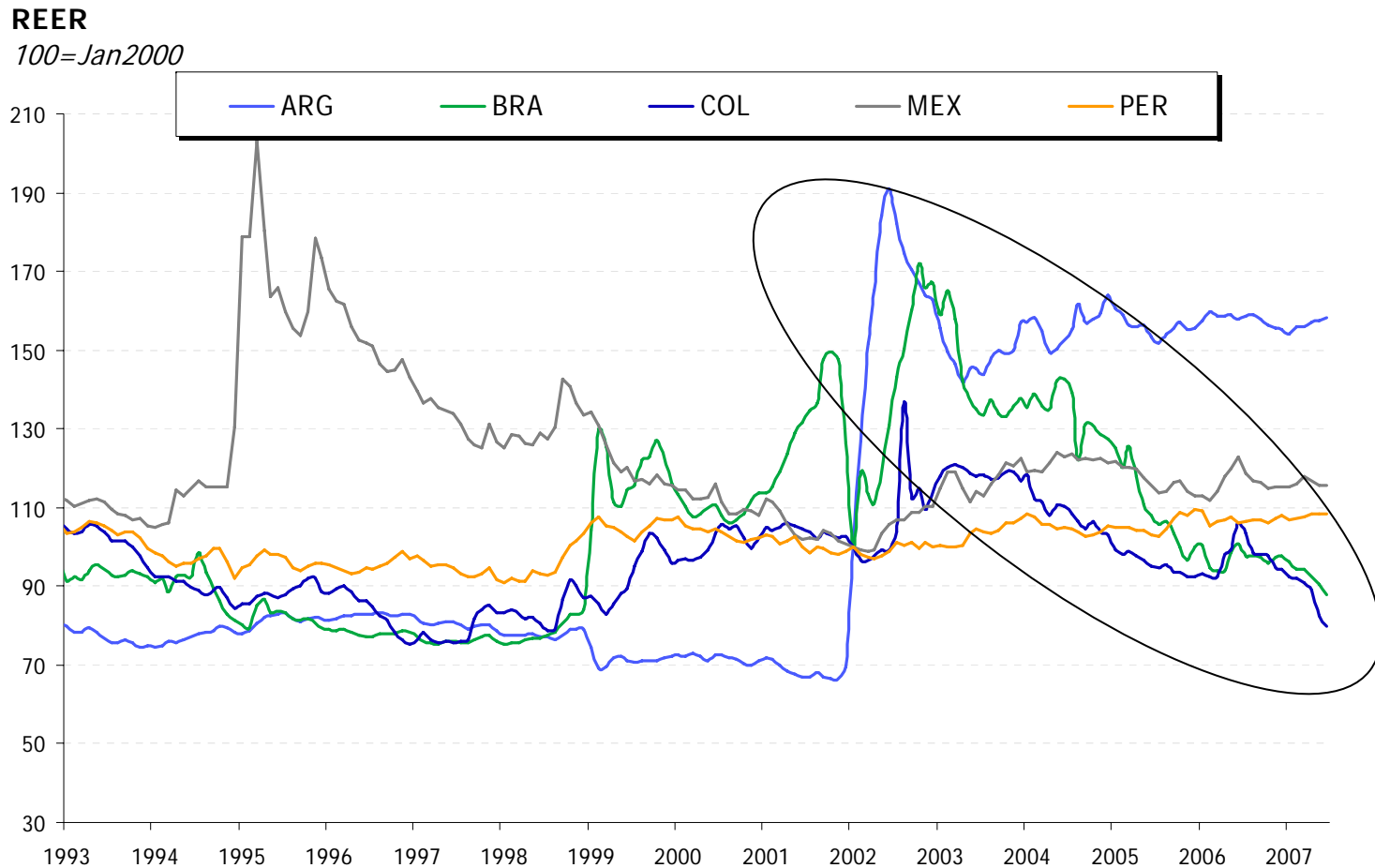
100=Jul2006



Source: Bloomberg

Exchange rate policy dilemmas?

- Nominal appreciation and real (trade weighted) appreciation.
- A rationale for leaning against the wind?



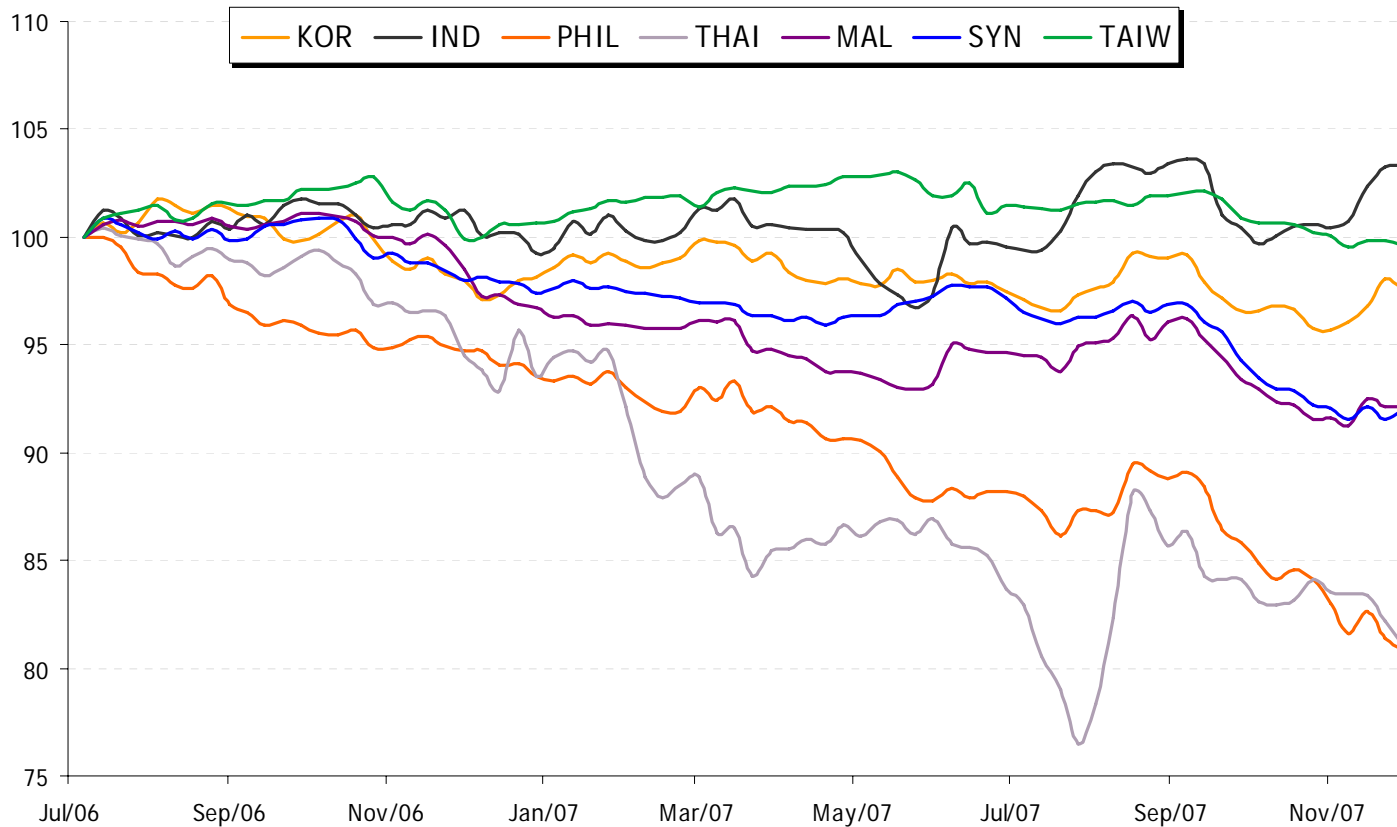
Source: IMF - Real Effective Exchange Rate

The financial test: Currencies

- Currency appreciation affecting EMs more generally

Asian Pacific Currencies

100=Jun2006



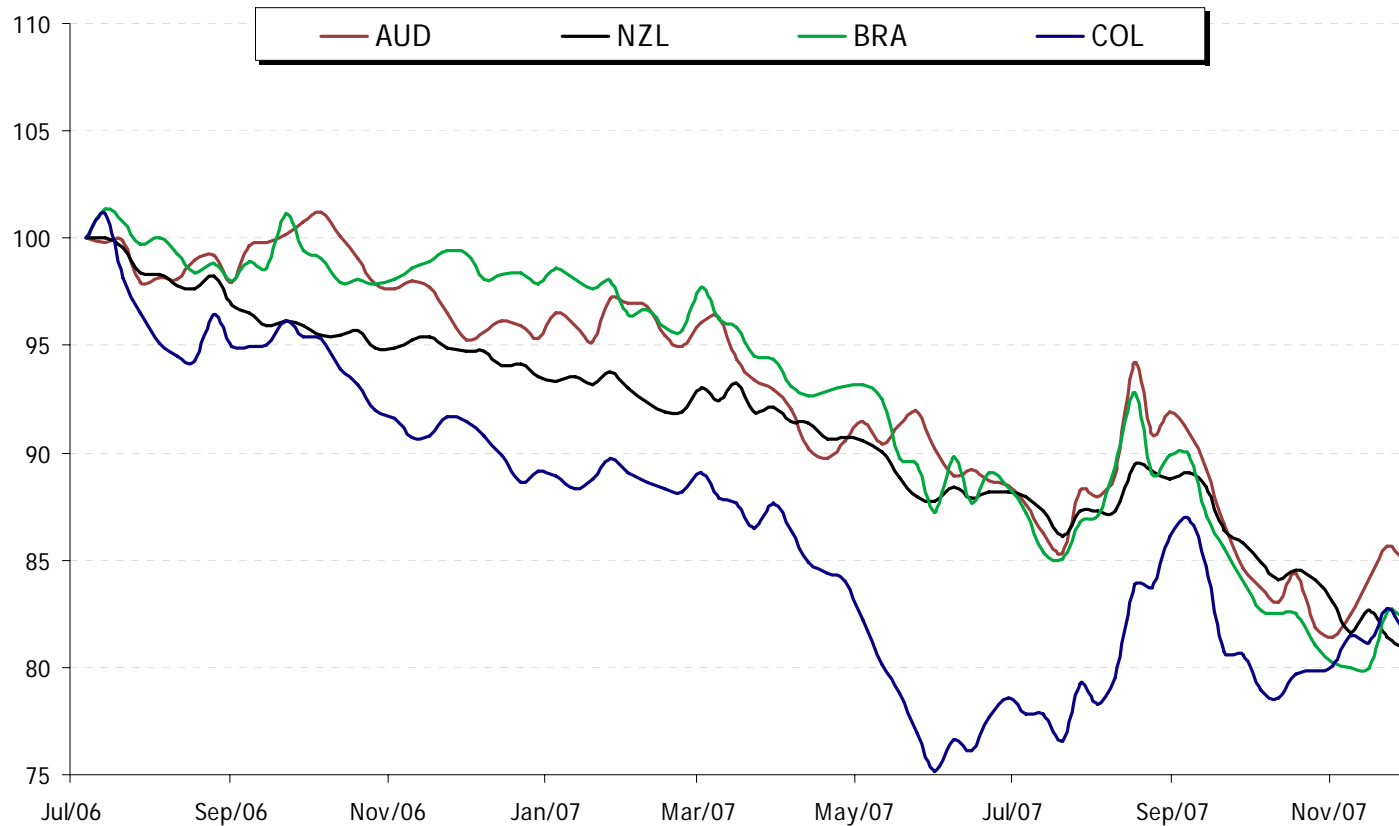
Source: Bloomberg

The financial test: Currencies

- Commodity exporters – a common syndrome?

Commodities Exporters Currencies

100=Jul2006



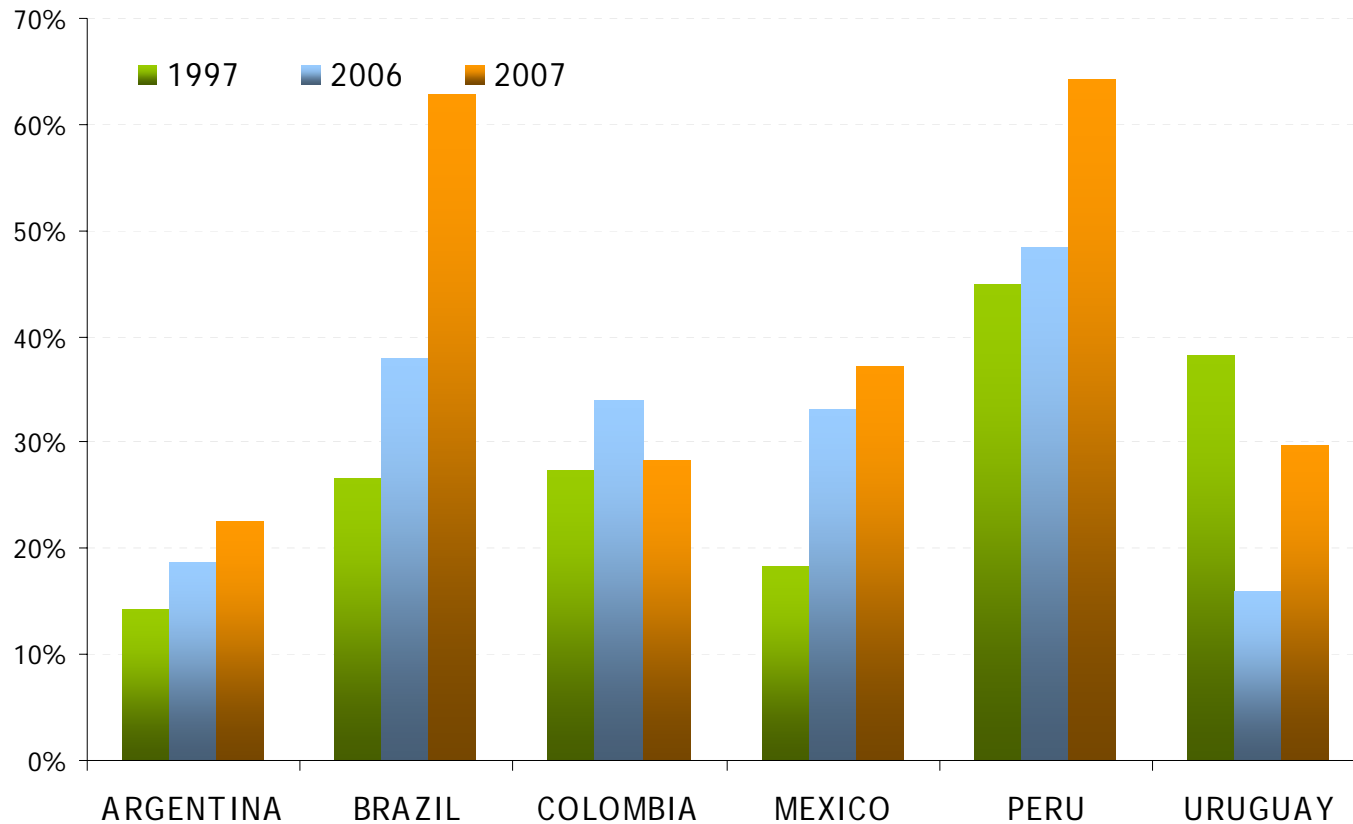
Source: Bloomberg

The financial test: Liquidity

- Growing FX debt coverage...

NET INTERNATIONAL RESERVES

as % Total External Debt



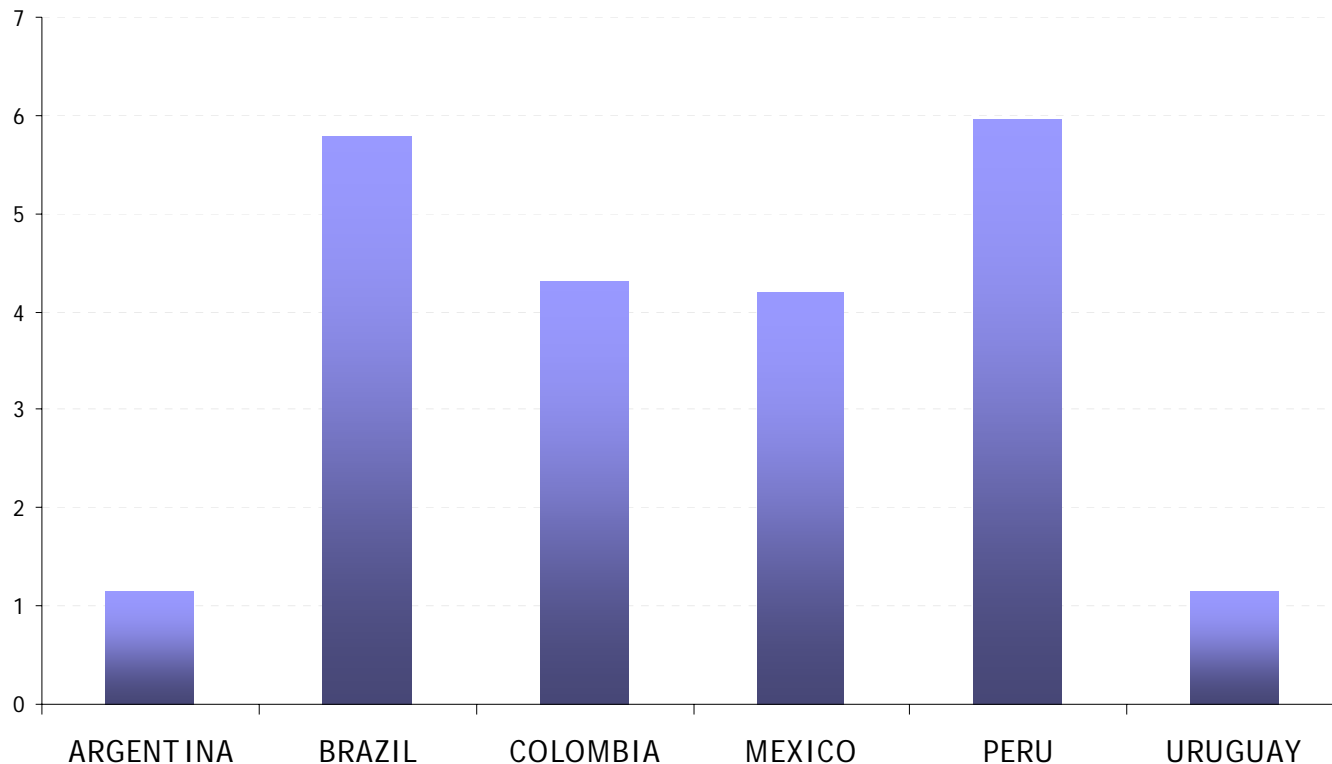
Source: Central Banks. Total External Debt.

The financial test: Liquidity

- ... especially relative to short-term FX debt

Debt Ratio

*(Net Reserves / Total Debt Maturities falling do in 2007-08
excluding Multilaterals)*



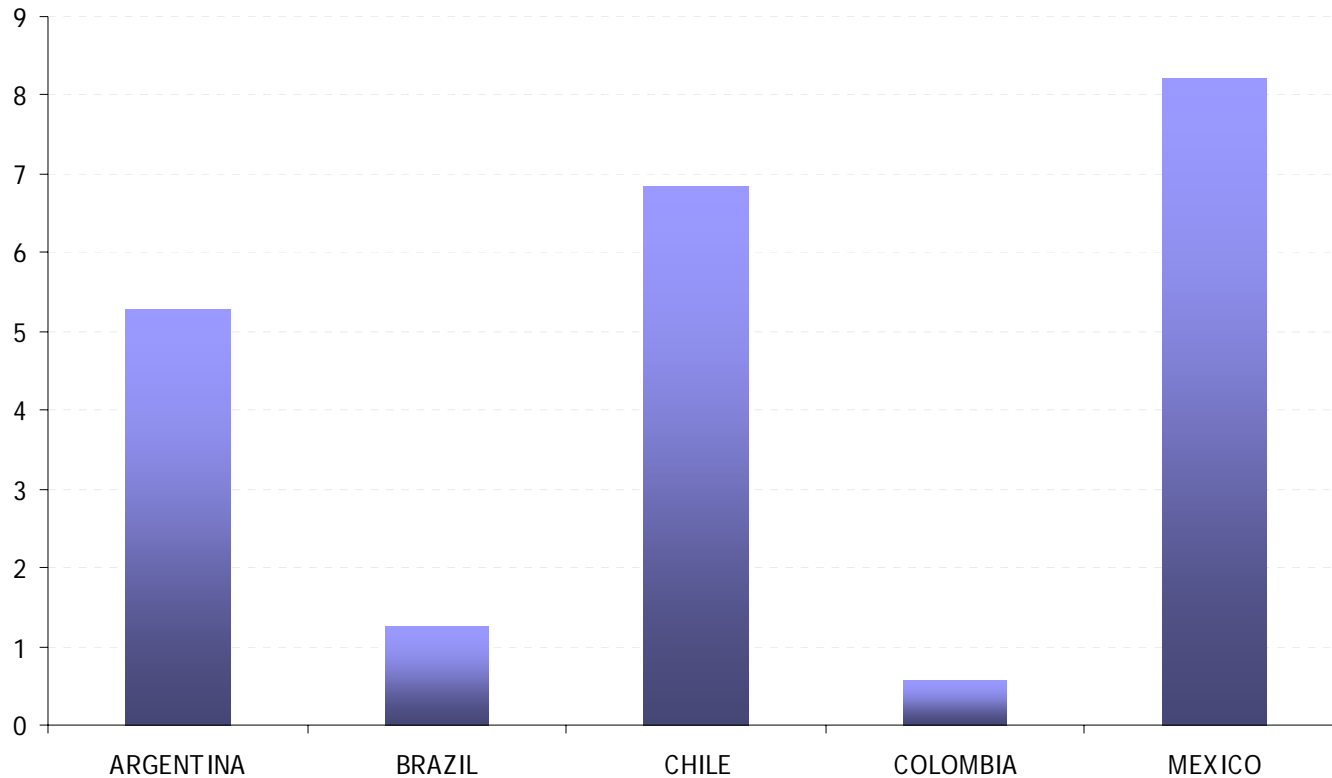
Source: Central Banks. International Reserves: Foreign Assets. Non Monetary Liabilities: Central Bank Short Term Debt in Local

The financial test: Liquidity

- ... and relative to public sector borrowing requirement

Debt Ratio

(Net Reserves / Primary Surplus plus Amortization falling do in 2007-08)



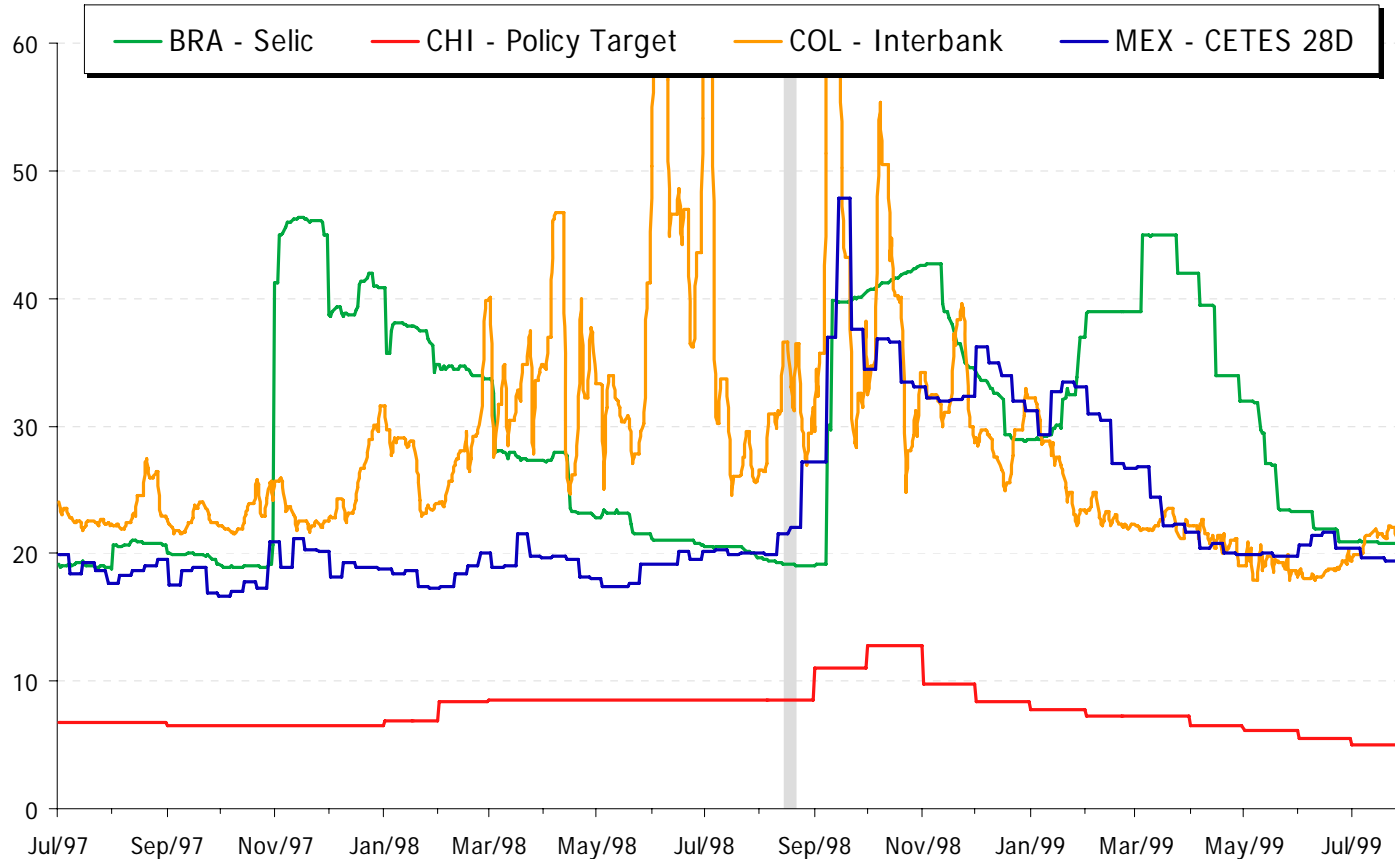
Source: Central Banks. International Reserves: Foreign Assets. Non Monetary Liabilities: Central Bank Short Term Debt in Local

The financial test: Rates

- Monetary policy was pro-cyclical in 1990s...

Policy Interest Rates

in %



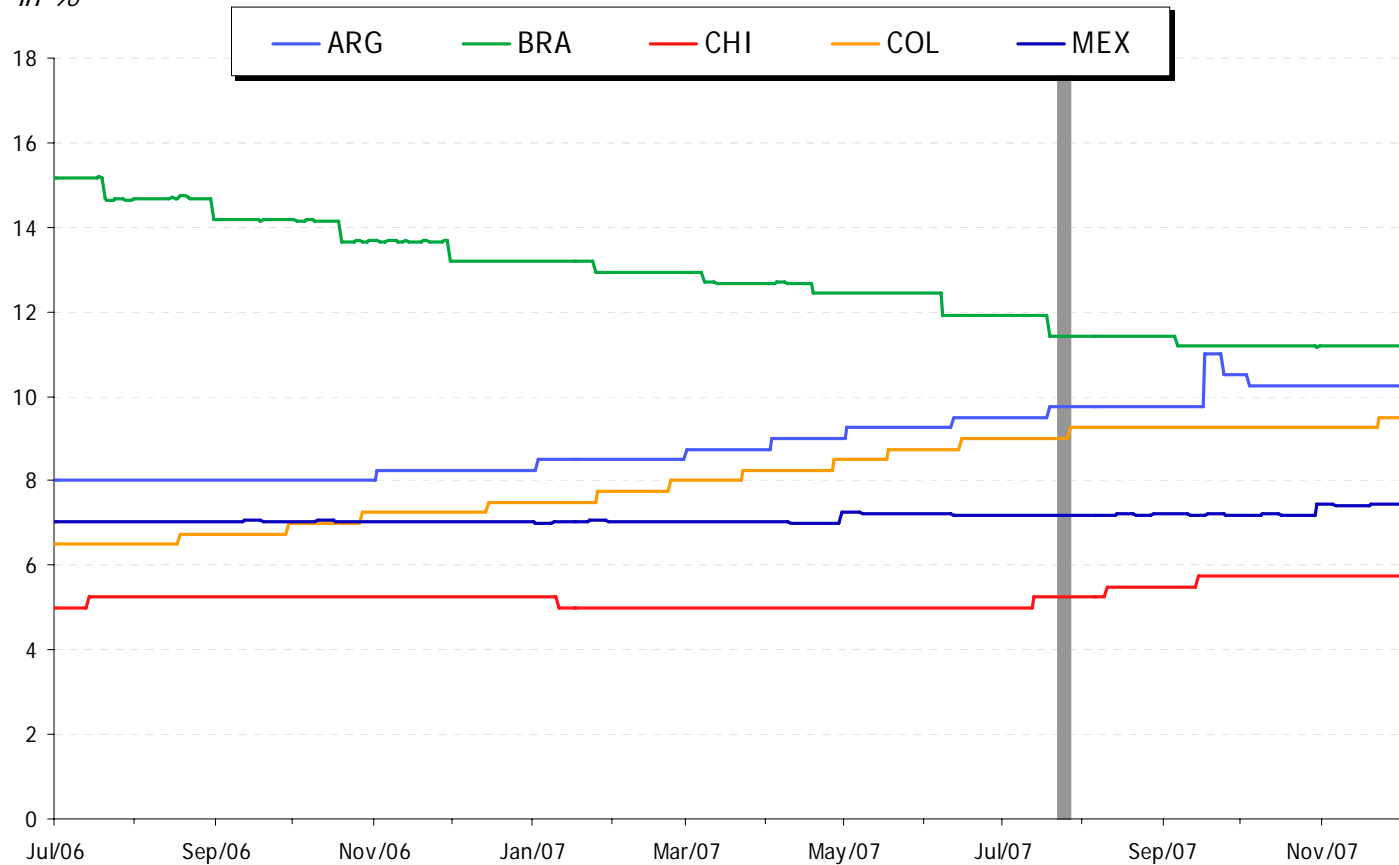
Source: Bloomberg

The financial test: Rates

- ...but not in 2007

Policy Interest Rates

in %



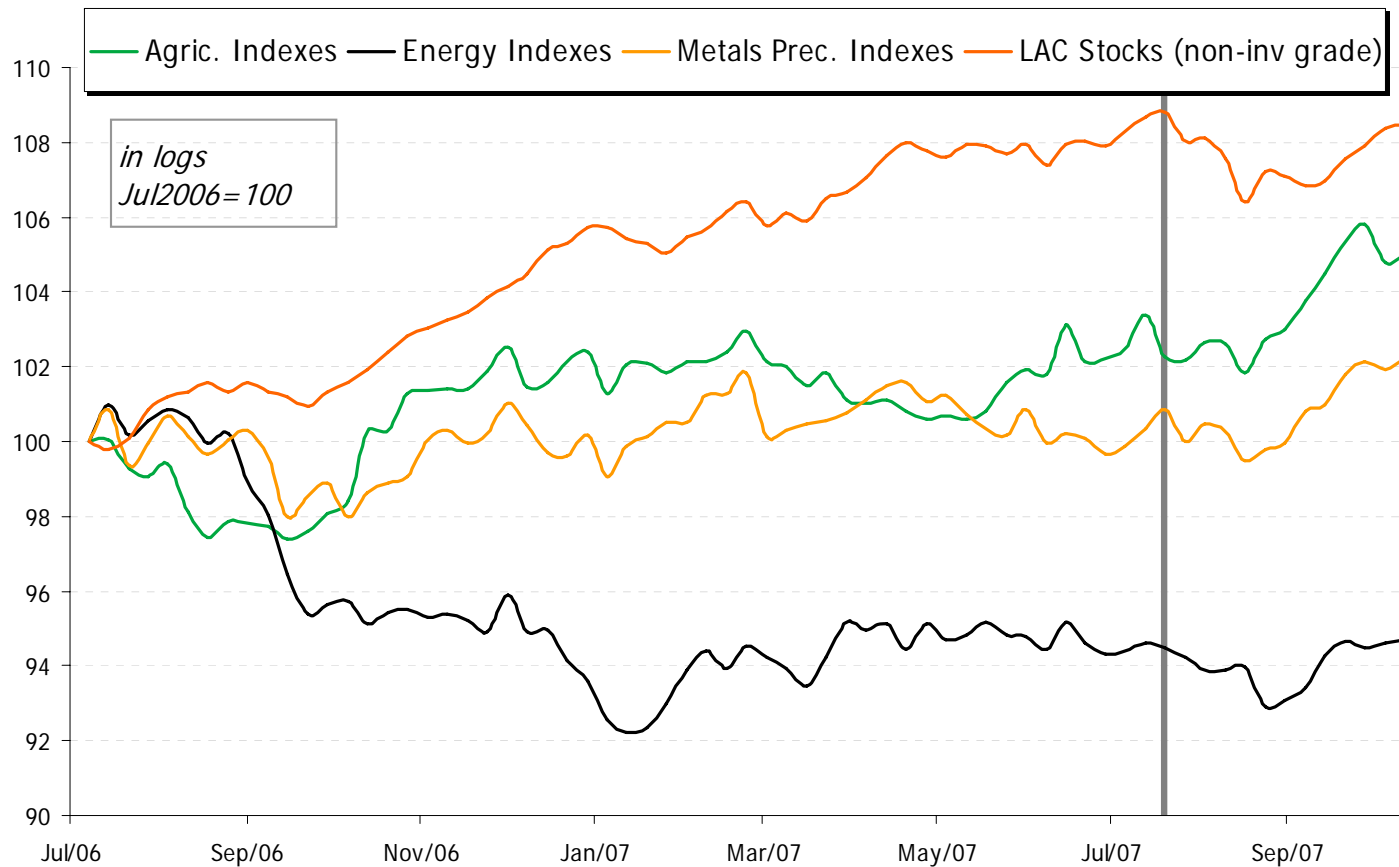
Source: Bloomberg

The Real Test

Commodities

- No sign of decline in prices... which seem uncorrelated with stocks

Commodity Indexes



Source: Bloomberg - Dow Jones-AIG Agriculture, Energy & Prec. Metals Sub-Indexes are quoted in USD.

Commodity prices

- What makes them tick? (quarterly data)

Agri Index	Energy Index	Ind. Met. Index	Pre. Met. Index	Soy Price	Copper	Oil WTI					
0.48	0.64	0.70	0.81	0.10	0.33	0.12	US\$ vs. EURO				
0.00	0.00	0.00	0.00	0.55	0.05	0.47					
0.34	0.15	0.13	0.09	-0.20	0.07	0.13	0.27	World %YoY			
0.02	0.29	0.38	0.51	0.17	0.62	0.37	0.12				
0.62	-0.23	-0.20	-0.17	-0.16	0.09	0.15	0.27	0.60	USA &YoY		
0.00	0.11	0.15	0.23	0.27	0.55	0.29	0.12	0.00			
0.05	0.44	0.66	0.75	0.30	0.31	0.17	0.84	-0.14	-0.09	China %YoY	
0.74	0.00	0.00	0.00	0.03	0.03	0.25	0.00	0.33	0.53		
0.19	-0.32	0.14	0.03	-0.02	-0.12	-0.07	-0.04	-0.03	0.30	0.02	Europe &YoY
0.17	0.02	0.34	0.81	0.87	0.42	0.65	0.82	0.84	0.03	0.92	

Source: Bloomberg, %YoY: Growth on the Real GDP (annual variation)

Commodity Indexes expressed in Total Returns. Commodity Prices expressed as variations

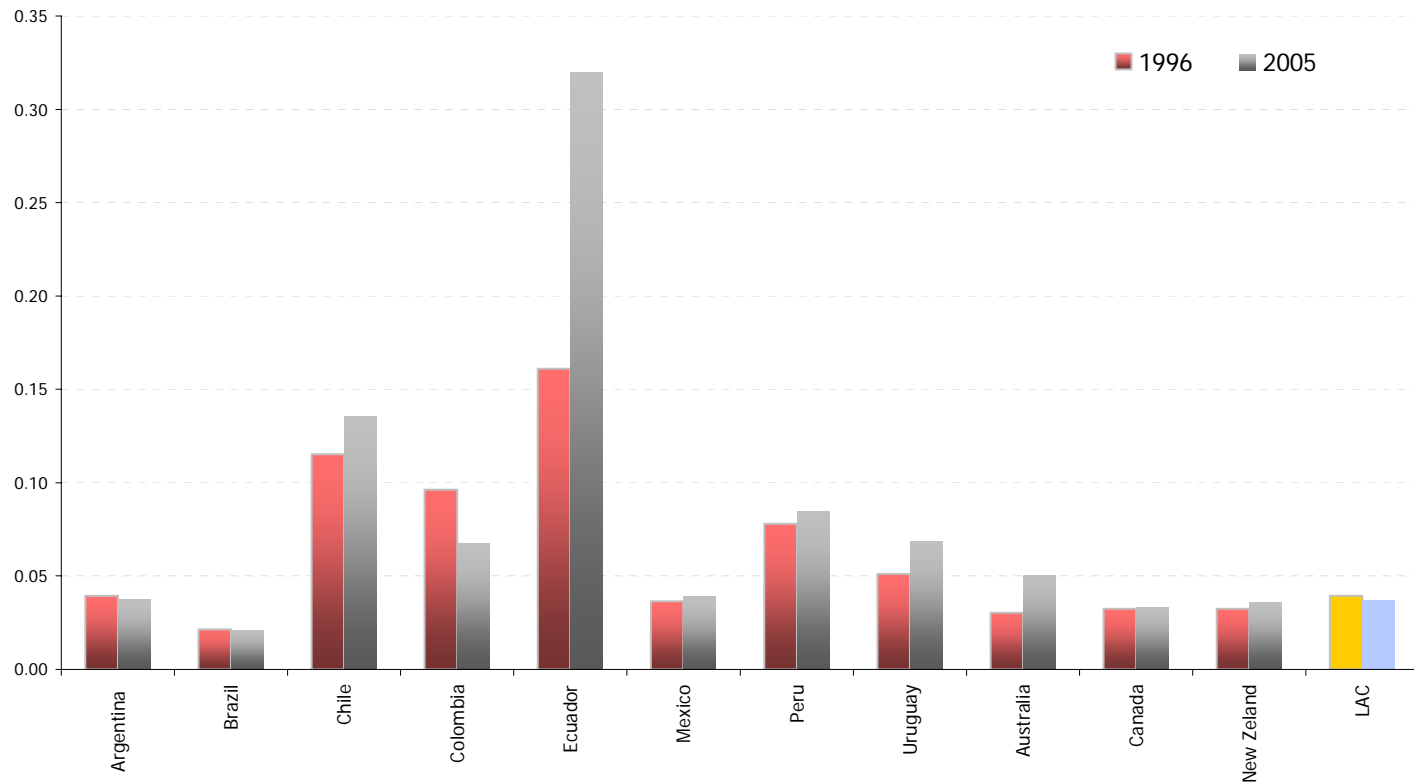
Sample: quarterly data, 1995q1-2007q2; averages

Export product (value) concentration

- Export product concentration has risen in several Latin countries...

Export Products Concentration

Herfindahl Index - ISIC 3



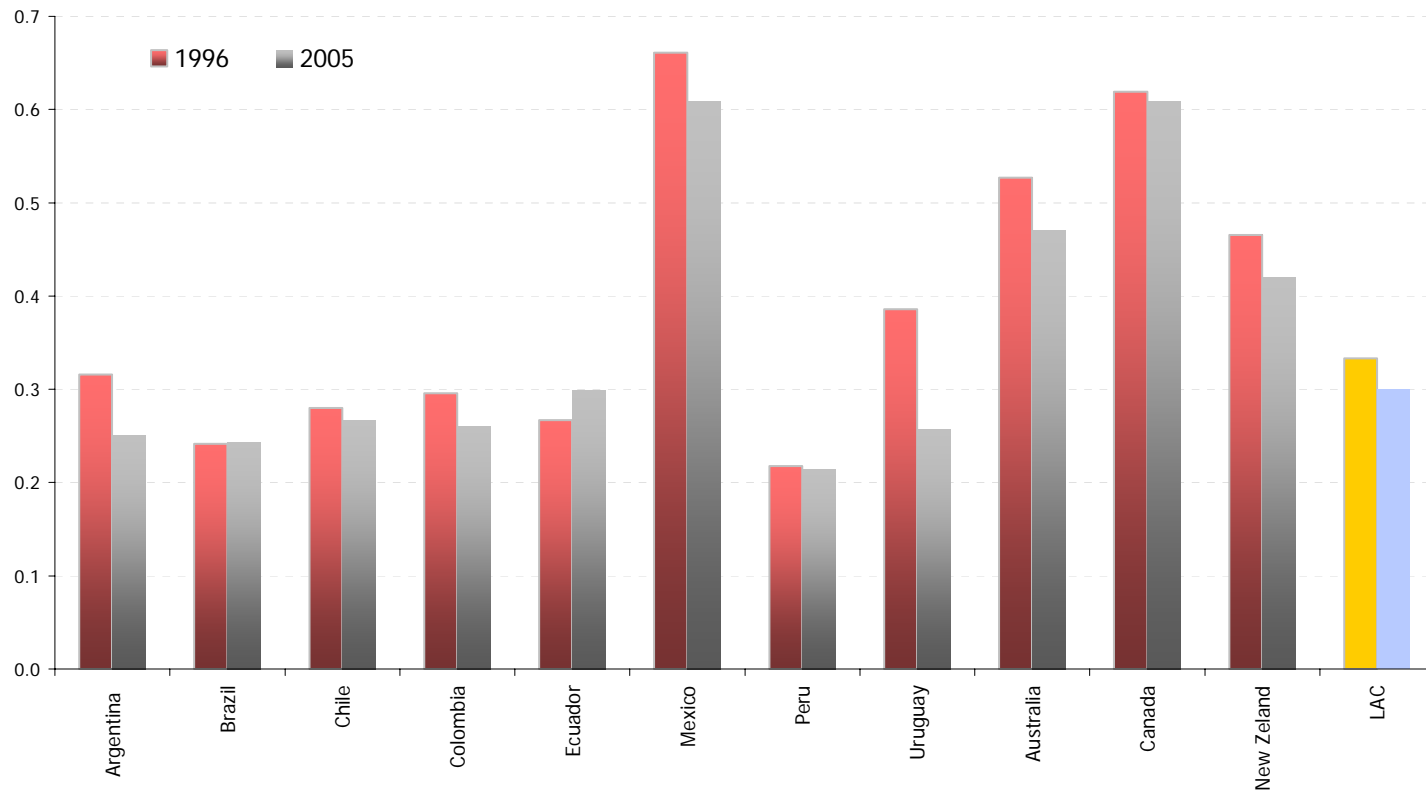
Source: WITS - ISIC Revision 3

Export market (value) concentration

- ...but export market (or partner) concentration has been falling

Export Partner Concentration

Herfindahl Index

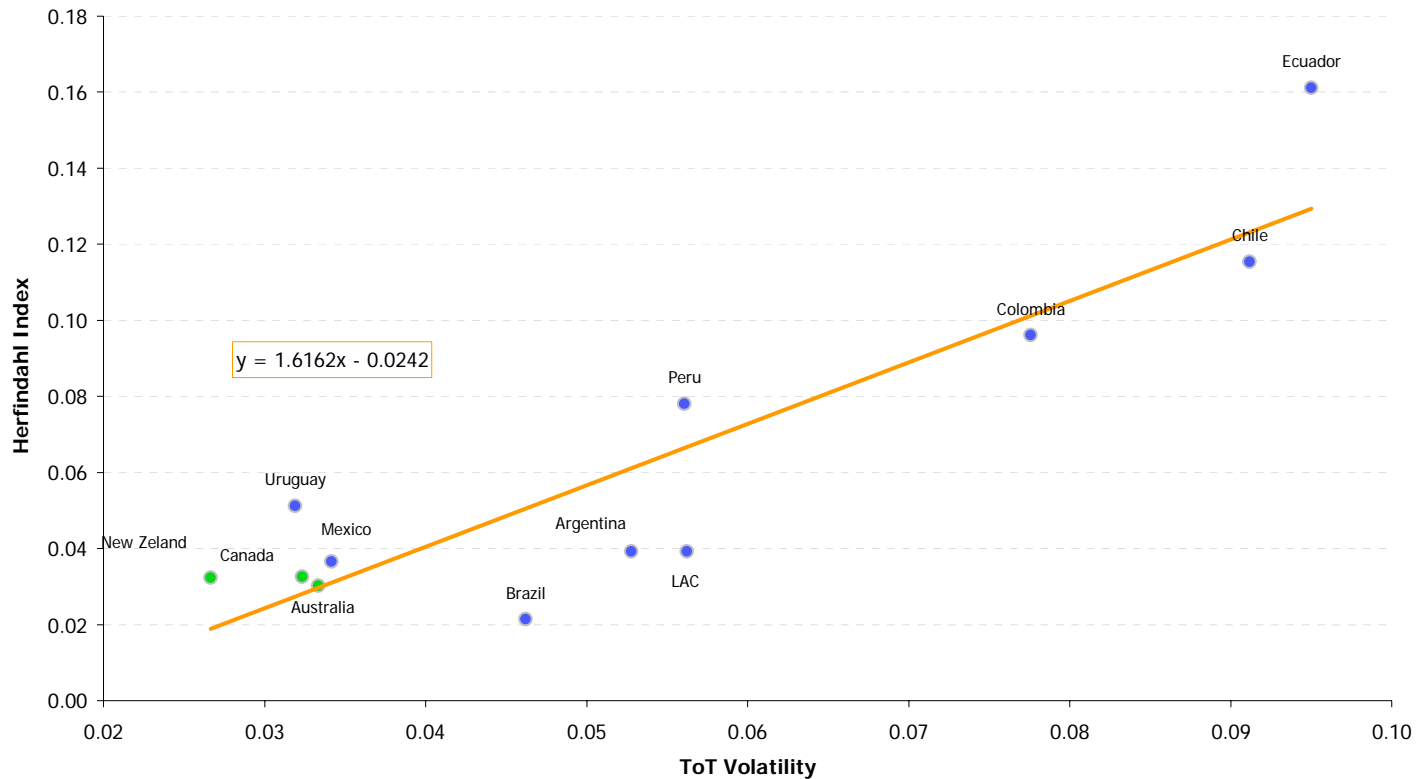


Source: WITS

Export concentration & TOT volatility

- Export product concentration seems destabilizing...

ToT Volatility and Export Product Concentration



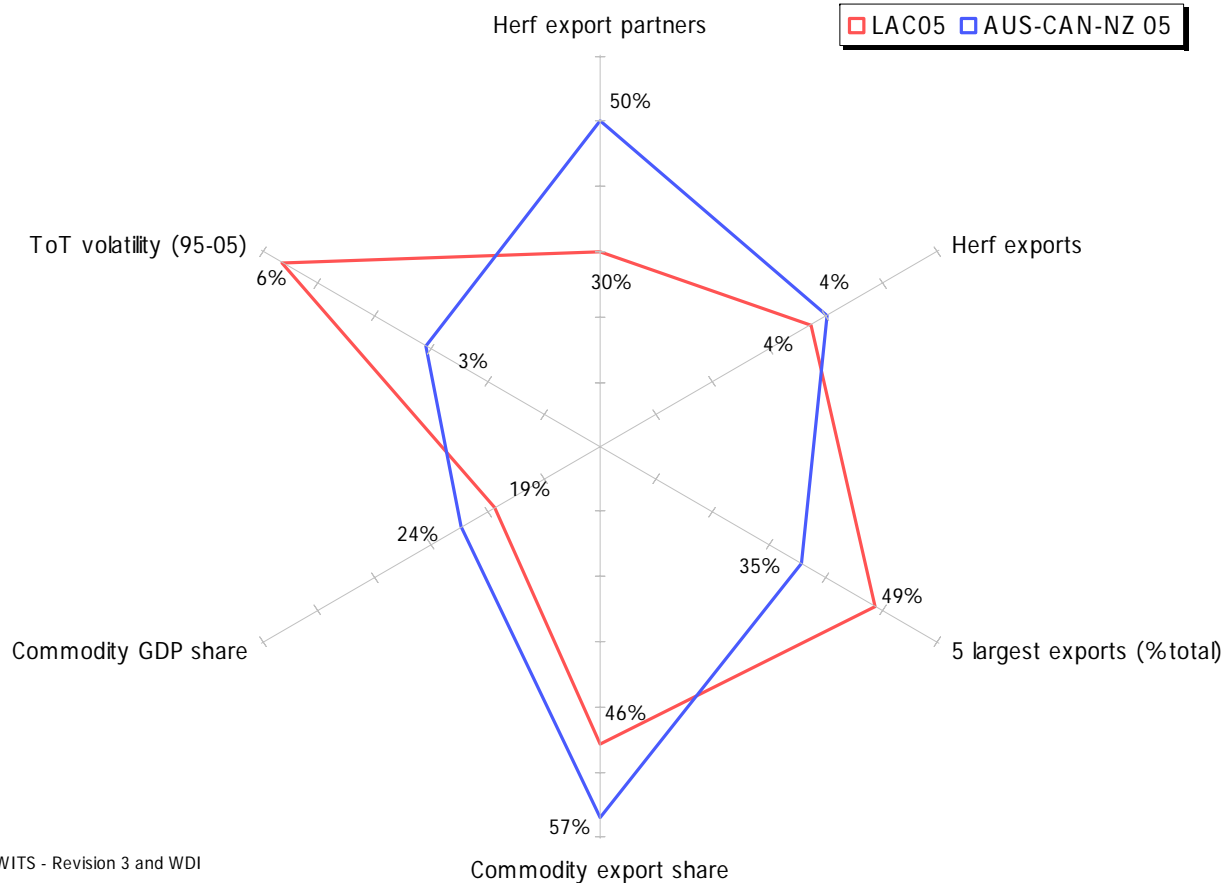
Note: Terms of Trade volatility as the St.Dev. of the growth of the ToT. Source: WDI & WITS Revision 3.

Export concentration & TOT volatility

- Not so different from model countries, yet LAC more volatile...

Real Fragilities and ToT volatility: 1996-2005

for average LAC countries and developed commodity exporters

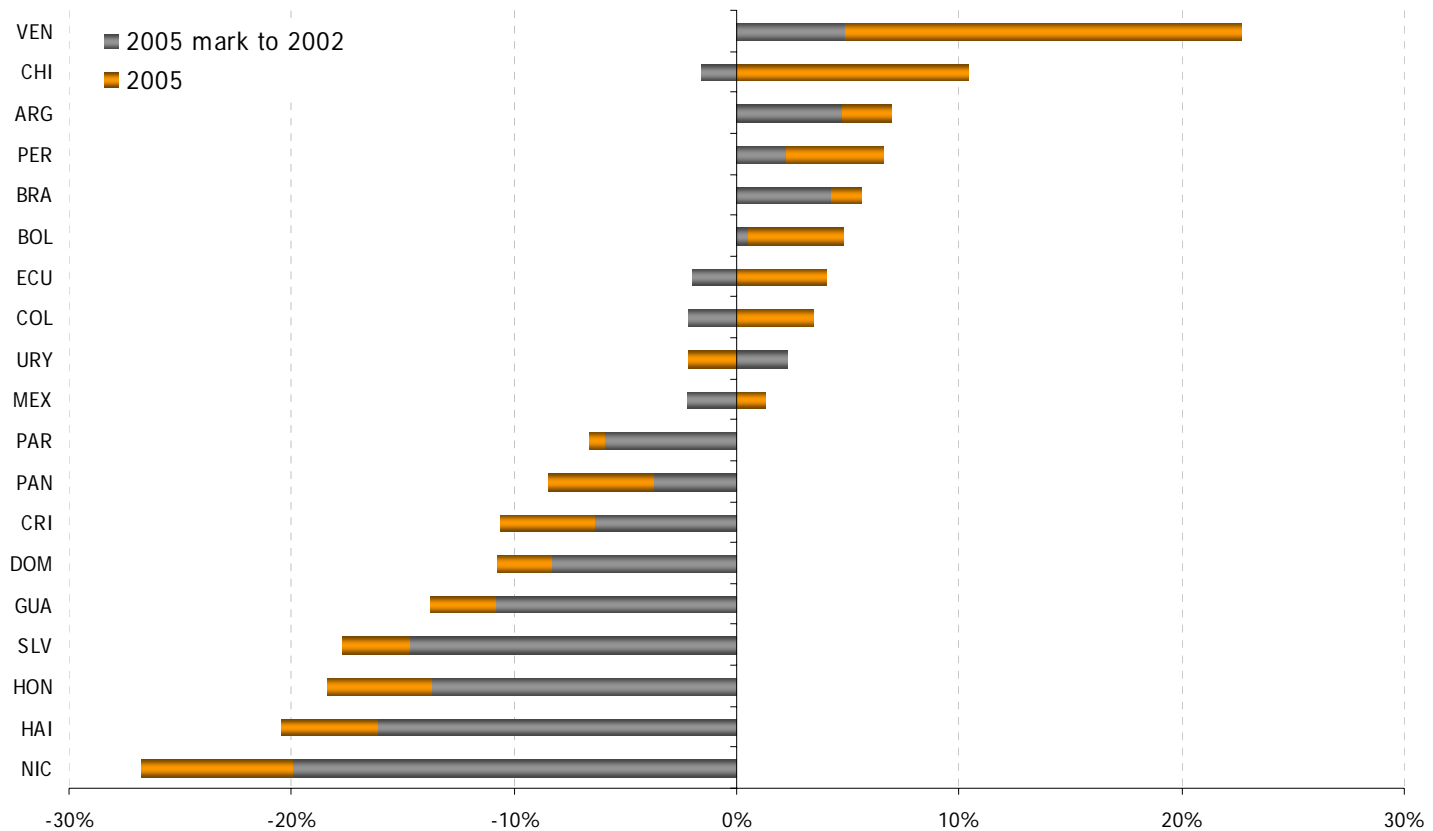


Source: WDI & WITS - Revision 3 and WDI

Terms of trade & trade balances

- TOT effects vary widely across Latin countries

2005 Trade Balance at 2002 implicit prices
% GDP

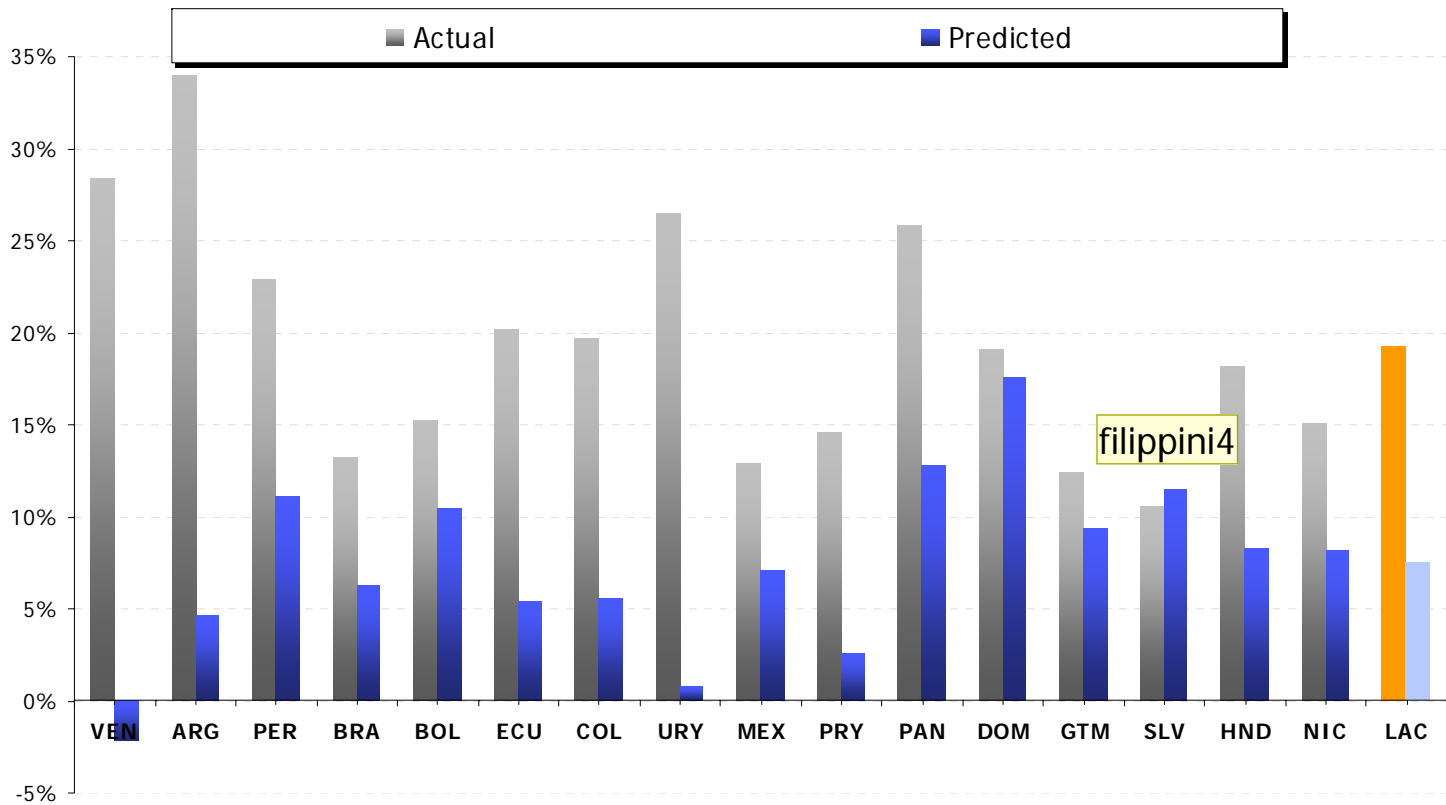


Source: CEPAL - GDP: 2002 Real GDP, implicit prices: Price Index 2002 / Price Index 2005

Recent growth – how much good luck?

- Growth much lower had external factors remained constant at 2002 level

Long Run Cumulative Growth- Actual and Predicted
% variation 2002/06



Source: WDI - Regression: $\text{dlog}(\text{gdp}) = f(\text{dlog}(\text{ToT}), \text{dlog}(\text{Ind. Prod. G7}), \text{dlog}(\text{US5Y}), \text{dlog}(\text{HighYield}))$; 1991-2002. Predicted: setting external factors to zero

filippini4

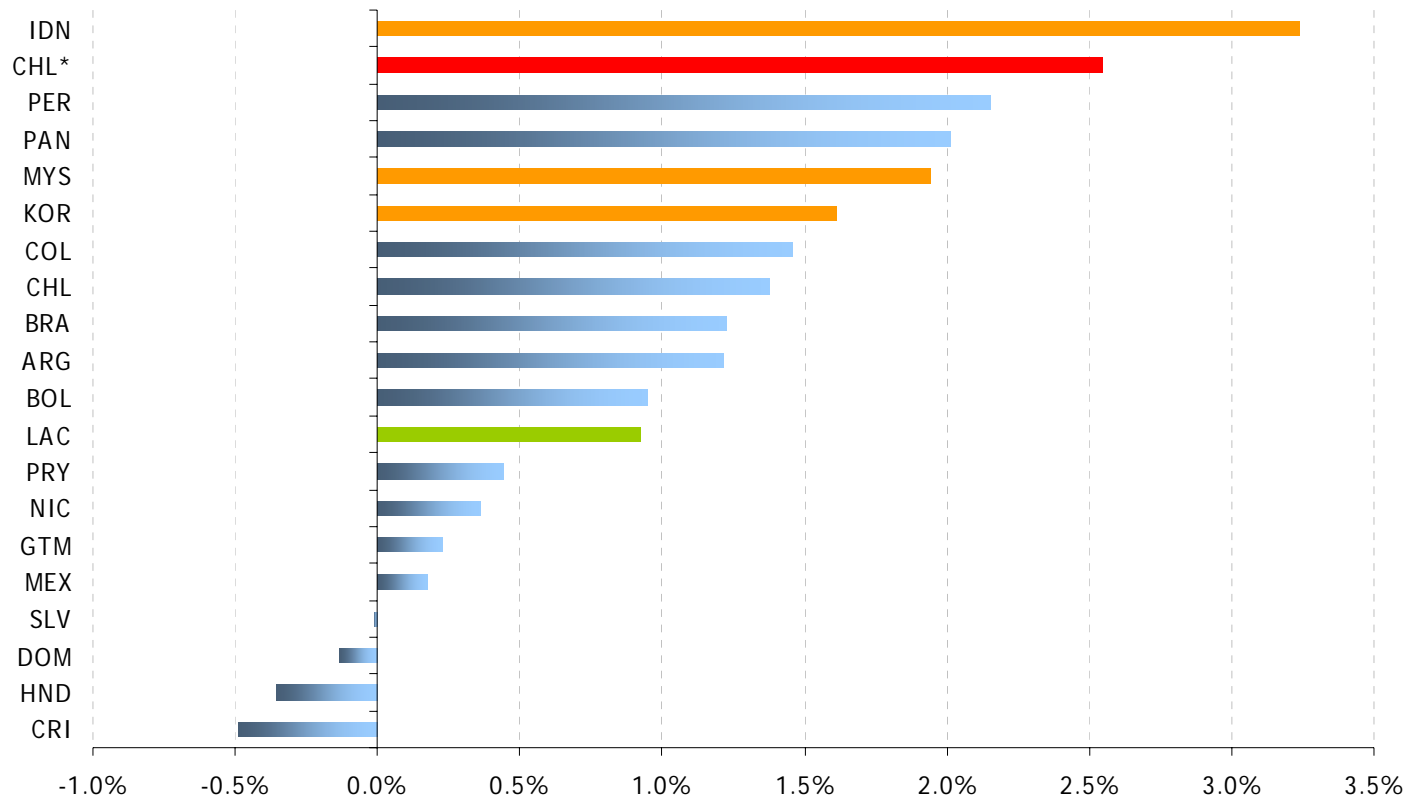
SLV= El Salvador

ffilippini, 10/04/2007

Is LAC capitalizing on good luck?

- Productivity growth is still an issue...

Productivity Growth
average of productivity growth for 2001-2006



Source: Summers, Heston: WDI. *Chile average : 1991-2000

CHL* = productivity growth in Chile during the 90s

Summing up

- LAC is, on average, less vulnerable
 - LAC has lower beta
 - Adverse consequences from sub-prime crises for LAC would come mainly through real channels
 - Lower remittances and external demand (e.g., arising from uncompensated US recession)
 - TOT deterioration
 - Jury still out on whether LAC is capitalizing on favorable external environment to raise growth path
 - Lower LAC beta but not necessarily higher alpha
-