

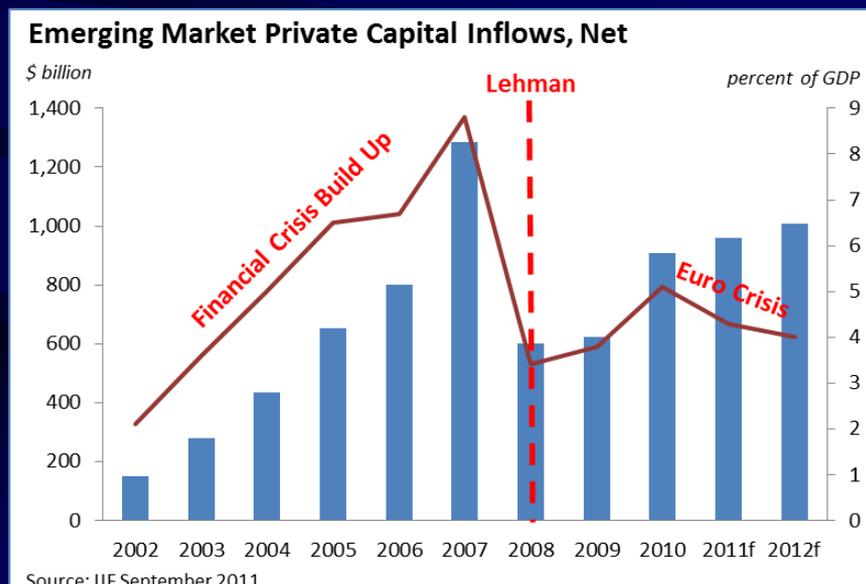
Threats to Financial Stability in Emerging Markets: The New (Very Active) Role of Central Banks



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Chicago, November 2011

Currently, the Major Threats to Financial Stability in Emerging Markets (EM) come from Developments in Advanced Economies (AE)

- I fully agree with Ron McKinnon's view regarding the challenge to Emerging Markets (and their Central Banks) from policy inadequacies in advanced economies
- Since the early 2000's, EM have been exposed to the capital inflow/outflow problem, which to a large extent has been driven by the building up/resolution of crises in AE.



- Loose monetary policy in AE combined with sharp changes in investors' risk aversion have been the driving forces of capital flows behavior

Different Financing Growth Models in EM do not Insulate countries from Adverse External shocks in AE...

	Financial Openness Index ^a 2008	Trade Openness Indicator ^b (X+M)/GDP 2009	Savings/GDP ^c (average 2009-2010)
Latin America	1.1	48	22
Emerging Asia	0.6	163	34
Emerging Europe	2.2	113	21

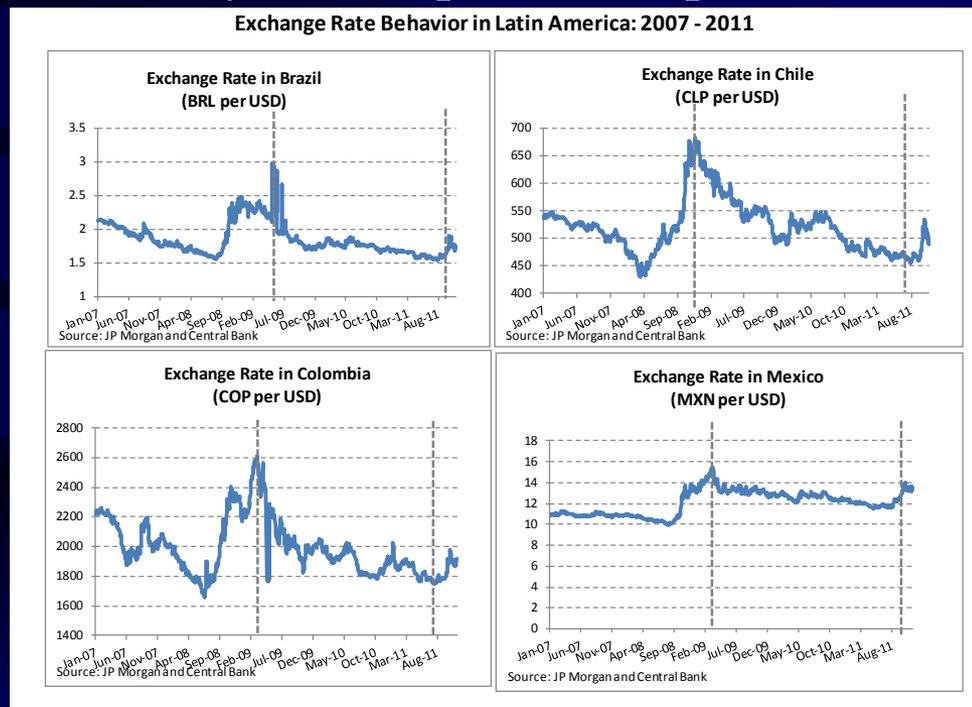
Sources: a. Chinn and Ito, b. WDI and c. WEO

- Latin America is highly financially-open; the least-open region in terms of trade; and displays extremely low rates of savings
- Emerging Asia stands opposite to Latin America: the least financially-open; the most-open region in terms of trade; and shows the highest savings rate
- Emerging Europe stands closer to Latin America in their degree of financial-openness and very low savings ratio; but it's closer to Asia in terms of trade openness.

The strong linkages between the trade channel and the financial channel (including through trade finance) implies that EM are quite vulnerable, albeit with diverse intensities, to adverse external financial shocks from AE

...But these Differences Can Result in Huge Distinctions regarding the Appropriate Management of Monetary/Exchange Rate Policies

For example, after decades of recurrent crises, Latin America Central Bankers recognized that high openness to international capital markets is incompatible with fixed exchange rates (if they want to pursue independent monetary policy)



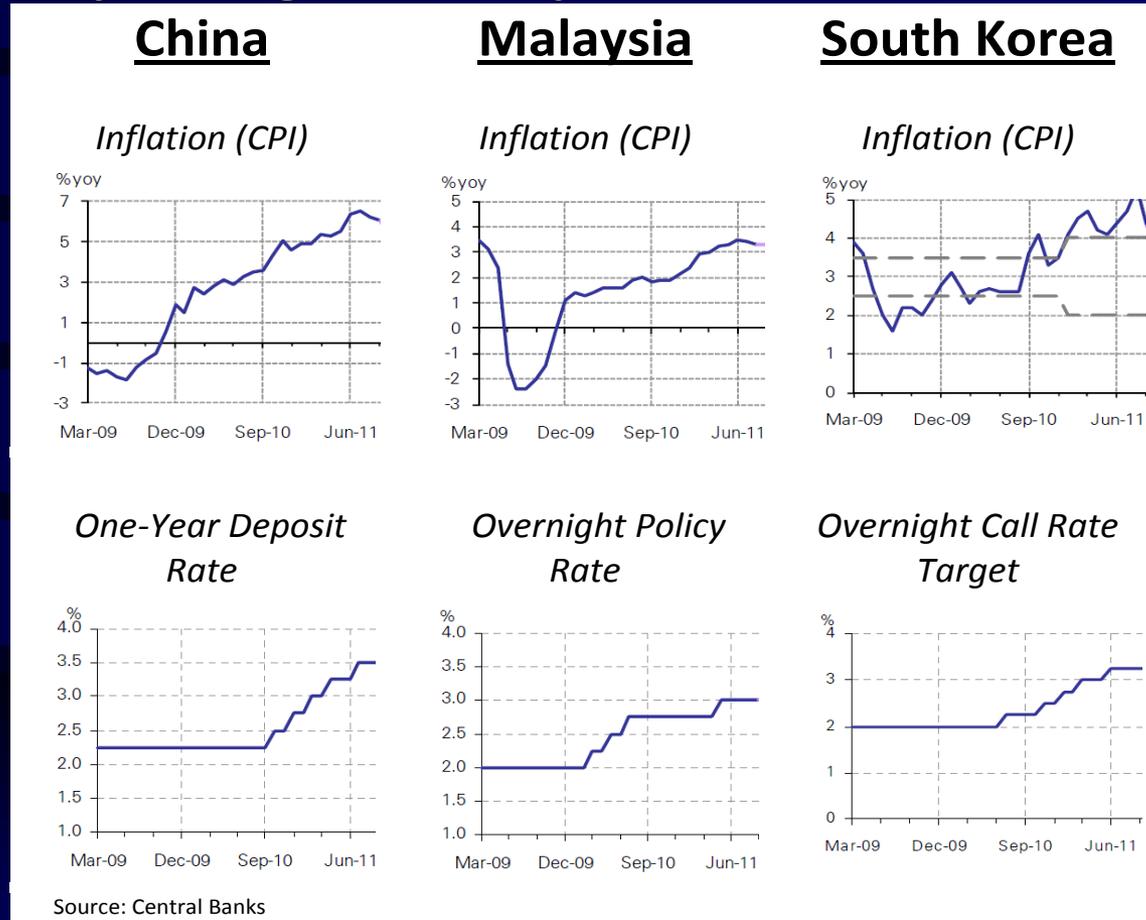
Thus, in sharp departure from the past, Central Banks let their currencies depreciate during the global financial crisis (2008) and more recently (since August 2011) following the Europe-induced increase in investors' risk aversion.

However, despite differences, Central Banks from EM agree that a fully flexible exchange rate model is not in their best interest

- A large number of EM economies are characterized by their large accumulation of foreign exchange reserves (especially in Asia and Latin America)

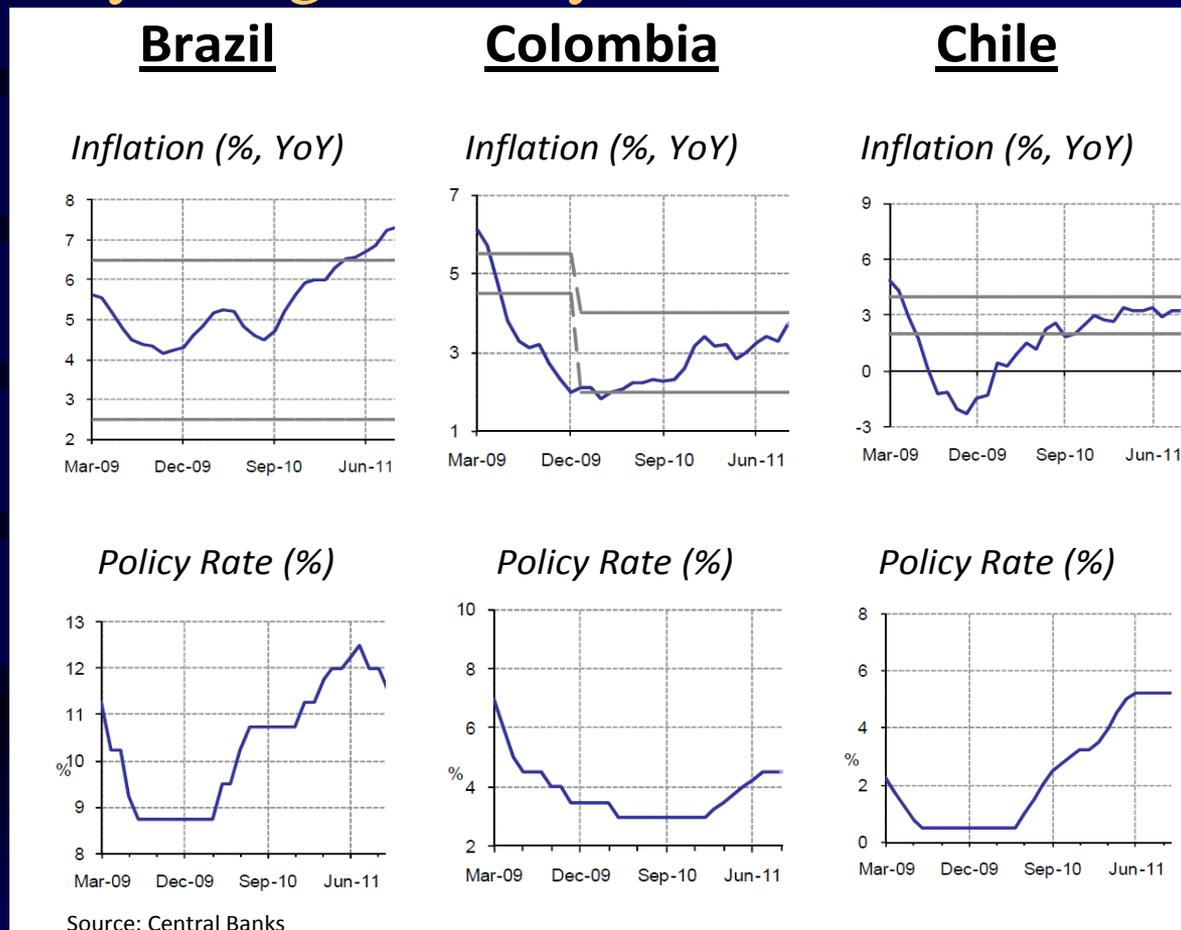
Lacking the capacity to issue “hard currency” EM hold large amounts of “hard currency liquidity” both in the Central Banks and in local banks as self-insurance mechanism against adverse external shocks.

In the Context of this Framework and Facing Large Volatility of Capital Flows, Central banks from EM are simultaneously using a variety of instruments



Albeit large differences between countries, Central Banks in EM are using changes in the policy rate to control inflationary (deflationary) pressures; interventions in foreign exchange markets to limit currency appreciation...

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...and a combination of macroprudential regulations – especially reserve requirements – (to limit formation of asset price bubbles or credit crunches) and capital controls (to limit capital inflows)

Reserve Requirements by Type of Deposit

percent

	May 07	May 08	May 09	May 10	May 11
Chile	-	-	-	-	6.6
China	11.5	16.5	15.5	17.0	21.0
India	6.5	8.3	5.0	6.0	6.0
Indonesia	7.3	9.1	5.0	7.5	10.5
Korea	-	7.0	7.0	7.0	7.0
Mexico	0.0	0.0	0.0	0.0	0.0
Poland	3.5	3.5	3.5	3.0	3.5
Brazil					
Time	18.0	18.0	23.0	18.0	32.0
Demand	48.0	48.0	53.0	47.0	55.0
Columbia					
Current Account	13.0	8.3	11.5	11.0	11.0
Savings Account	6.0	8.3	11.5	11.0	11.0
CD	2.5	6.0	4.5	4.5	4.5
Russia					
Time	3.5	4.5	1.0	2.5	4.0
Demand	3.5	4.5	1.0	2.5	4.0
FX	3.5	5.0 to 5.5	1.0	2.0	4.0 to 5.5
Turkey					
Time	6.0	6.0	6.0	5.0	5 to 16
Demand	6.0	6.0	6.0	5.0	16.0
FX	11.0	11	9.0	9.5	11 to 12

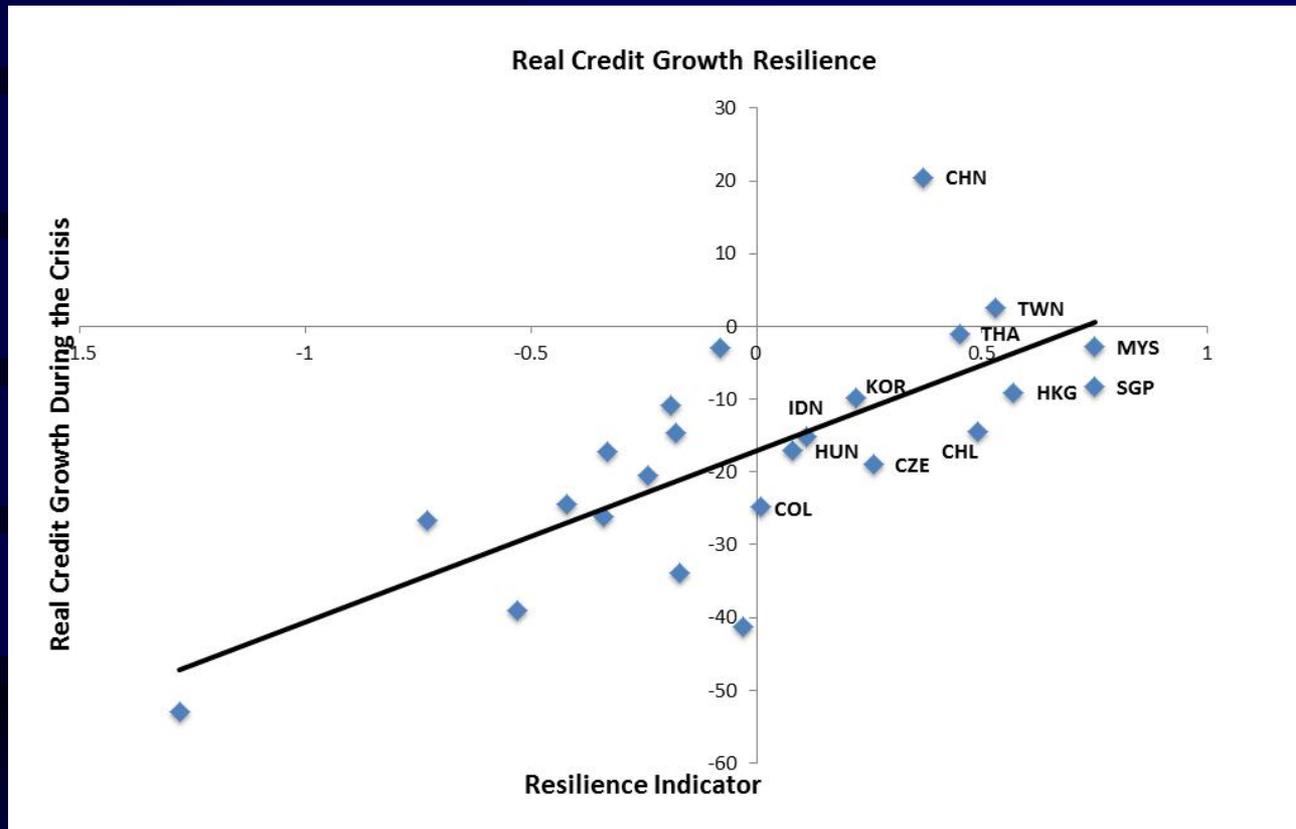
Source: IIF Research Note June 1, 2011

In the Context of this Framework and Facing Large Volatility of Capital Flows, Central banks from EM are simultaneously using a variety of instruments

- In the context of inflationary pressures, it's very costly for central banks to lose control of monetary policy (associated with interventions in forex markets). Thus, sterilized interventions through the use of reserve requirements have increased in a number of EM
- Notwithstanding current efforts, the simultaneous use of many instruments generates trade-offs in the pursuit of desired objectives

The challenges faced by Central Banks in EM will continue to be large as long as problems in AE remain unresolved.

And...Can EM Financial Systems Withstand the Adverse Impact of a New Adverse External Shock?



New research (Montoro, Rojas-Suarez, 2011) Brings Hope. Analysis for the 2008-09 Crisis Shows that Countries With the Highest Value of a RESILIENCE Indicator in the *Pre-Crisis Period* Experienced the Least Decline in Real Credit Growth.

The Resilience Indicator at Work During the Global Crisis

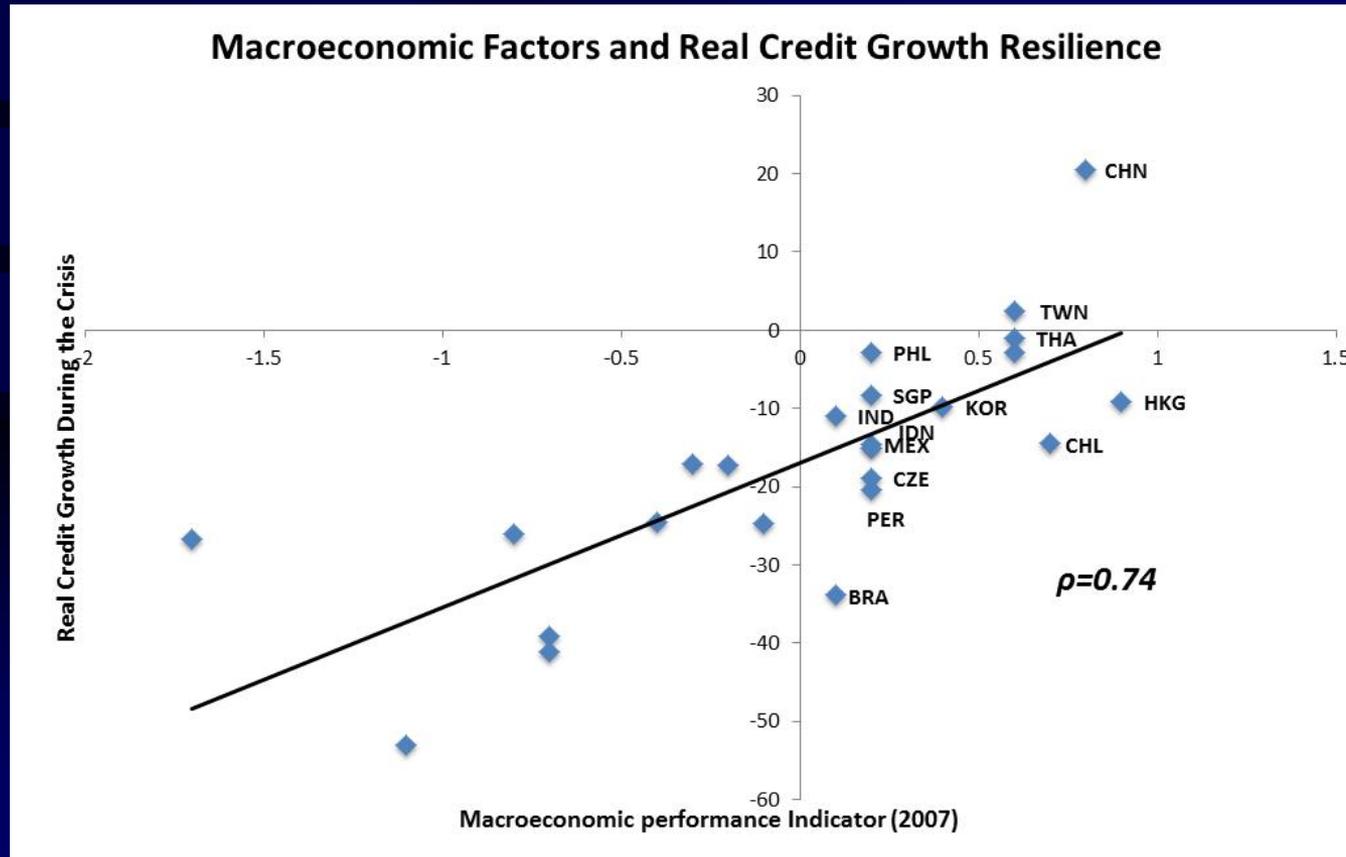
A simple index of “Resilience” formed by three components shows that in 2007 (the Pre-Crisis Year) many Latin American and Asian Countries were in a relative stronger position than those in Emerging Europe.

Resilience Indicator -- 2007

(Real Credit Growth Resilience to an External Shock)

	Ranking	Macro Indicator	Financial Soundness Indicator	Regulatory – Institutional Indicator	Global Indicator
Singapore	1	1.17	-0.2	2.2	1.06
Malaysia	2	0.61	0.4	1.3	0.77
Hong Kong	3	1.17	1.1	-0.3	0.66
Chile	4	0.67	-0.2	1	0.49
Taiwan	5	0.56	-0.7	1.6	0.49
Thailand	6	0.54	0	0.7	0.41
China	7	0.82	1	-0.7	0.37
Czech Republic	8	0.15	-0.1	0.8	0.28
Korea	9	0.50	0	0.2	0.23
Indonesia	10	0.19	0.3	-0.2	0.10
Colombia	11	-0.08	0.2	-0.1	0.01
Lithuania	12	-0.62	-0.3	0.9	-0.01
Hungary	13	-0.64	-0.5	1	-0.05
Peru	14	0.51	0	-0.9	-0.13
Philippines	15	0.10	0.4	-0.9	-0.13
Brazil	16	0.17	0.3	-0.9	-0.14
Mexico	17	0.25	0.8	-1.5	-0.15
India	18	0.16	-0.2	-0.5	-0.18
Poland	19	-0.18	-0.2	-0.6	-0.33
Estonia	20	-0.82	-0.1	-0.1	-0.34
Argentina	21	-0.46	0.2	-1.1	-0.45
Bulgaria	22	-0.55	-0.3	-0.6	-0.48
Latvia	23	-1.55	-0.5	0.1	-0.65
Romania	24	-0.78	-1.3	-1.4	-1.16

But the Correlations Between the Macroeconomic Components and Real Credit Growth was much Stronger ($\rho=0.74$) than the two other components of the index: Regulatory ($\rho=0.35$) and Financial Soundness ($\rho=0.46$)



Moreover, consistent with Demirque-Kunt et al., among different indicators of bank capital, only the leverage ratio was significant in an econometric analysis explaining the behavior of real credit growth in Latin American countries during the global crises.

Explaining Real Credit Growth During the Global Crisis ¹						
Equation number	1	2	3	4	5	6
Variable 'X'	General government fiscal balance / GDP	Total external debt / GDP (-1)	Short-term external debt / Gross international reserves (-1)	Current account balance / GDP	Mismatch ratio (-1)	Financial-Pressures-Adjusted Monetary variable
Variable	coefficient (p-value)					
lagged real credit growth	-2.65 (0.00)	-2.63 (0.00)	-2.62 (0.00)	-2.62 (0.00)	-2.65 (0.00)	-2.64 (0.00)
foreign	-49.96 (0.00)	-49.14 (0.00)	-48.41 (0.00)	-48.11 (0.00)	-50.36 (0.00)	-49.79 (0.00)
Brazil dummy	60.55 (0.00)	38.97 (0.00)	44.11 (0.00)	54.04 (0.00)	50.38 (0.00)	61.30 (0.00)
Mexico dummy	52.37 (0.00)	34.49 (0.00)	38.09 (0.00)	46.09 (0.00)	42.38 (0.00)	50.57 (0.00)
Peru dummy	32.69 (0.00)	28.83 (0.00)	22.45 (0.00)	32.63 (0.00)	34.70 (0.00)	32.58 (0.00)
X	0.92 (0.07)	0.80 (0.00)	0.35 (0.01)	-1.02 (0.45)	0.13 (0.00)	0.15 (0.16)
Leverage Ratio	2.63 (0.00)	2.68 (0.00)	2.66 (0.00)	2.62 (0.00)	2.64 (0.00)	2.62 (0.00)
liquidity	0.01 (0.00)	0.01 (0.00)	0.01 (0.00)	0.01 (0.00)	0.01 (0.00)	0.01 (0.00)
efficiency	0.10 (0.00)	0.10 (0.00)	0.09 (0.00)	0.09 (0.00)	0.10 (0.00)	0.10 (0.00)
constant	7.86 (0.56)	37.60 (0.00)	29.38 (0.00)	10.91 (0.38)	23.31 (0.04)	7.81 (0.57)
N	129	129	129	129	129	129
R2 ²	0.20	0.20	0.20	0.20	0.20	0.20

¹ Dependent variable: change in real credit growth during the crisis; estimation method: instrumental variables (two stage least squares); instrumented variable: 2007 real credit growth; instrument: 2006 real credit growth; regressors: 2007 values; standard error correction: cluster (cluster variable is country). ² Generalized R2.

Indeed, in EM Macroeconomic Strength Translates into Real Credit Growth Resilience

Where the Macro components includes measures of:

- External Financing Needs:
Current Accounts / GDP
- External Solvency Position:
External Debt / GDP
- External Liquidity Position:
Short Term External Debt / GDP
- Overall Currency Mismatch
- Fiscal Space to allocate resources to the Financial System
- Monetary Stance in the presence (or absence) of asset bubbles

Real Credit Growth Resilience to an External Shock -- 2007

The Macroeconomic Indicator

Countries	Ranking	Macro Indicator
Singapore	1	1.17
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Chile	4	0.67
Malaysia	5	0.61
Taiwan	6	0.56
Thailand	7	0.54
Peru	8	0.51
Korea	9	0.50
Mexico	10	0.25
Indonesia	11	0.19
Brazil	12	0.17
India	13	0.16
Czech Republic	14	0.15
Philippines	15	0.10
Colombia	16	-0.08
Poland	17	-0.18
Argentina	18	-0.46
Bulgaria	19	-0.55
Lithuania	20	-0.62
Hungary	21	-0.64
Romania	22	-0.78
Estonia	23	-0.82
Latvia	24	-1.55

If a Shock Where to Materialize in the Near Future?

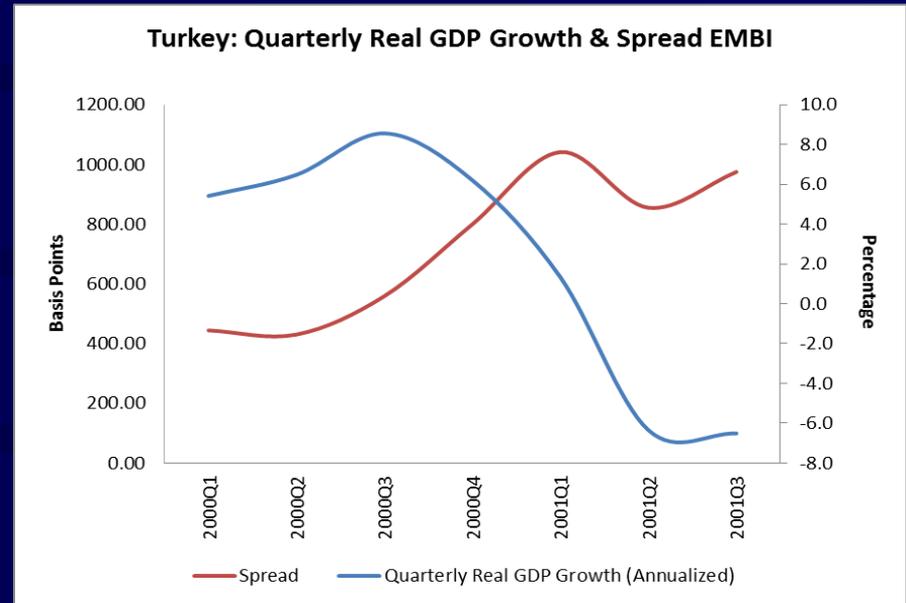
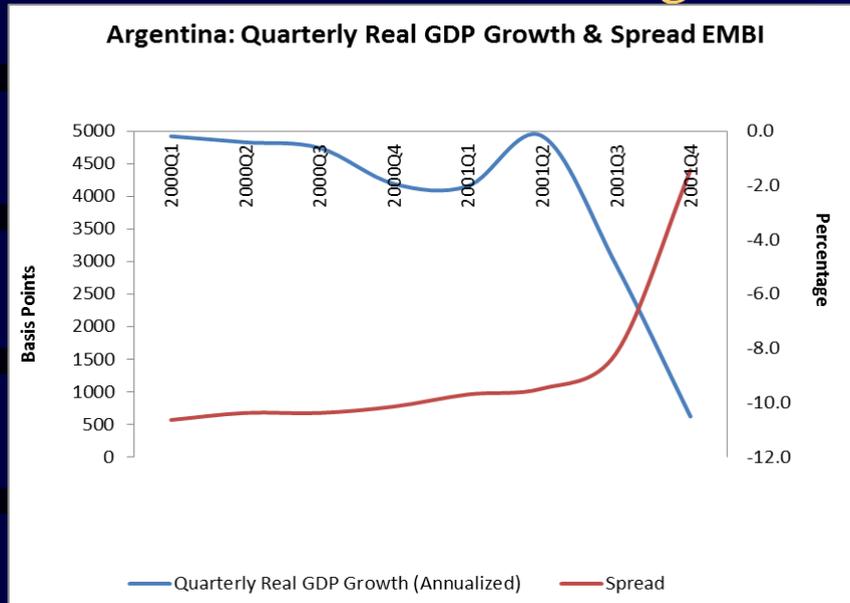
- If the Macroeconomic Indicator is recalculated using 2010-11 data, a number of countries increase their relative vulnerability, while others are now in a stronger position
- Of note are the relative weakening of the relative positions of India and Brazil. On the other hand, China remains relatively strong.

Real Credit Growth Resilience to an External Shock -- 2010-2011

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Countries	Ranking	Macro Indicator
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Indonesia	10	0.11
Mexico	11	0.05
Philippines	12	0.03
Brazil	13	0.02
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India	15	-0.18
Colombia	16	-0.25
Poland	17	-0.48
Lithuania	18	-0.52
Hungary	19	-0.35
Romania	20	-0.71
Bulgaria	21	-0.41
Argentina	22	-0.30
Estonia	23	-0.84
Latvia	24	-1.22

A Final Word on the Giancarlo Corsetti paper: Evidence from EM provides support to the hypothesis that in periods of acute stress, the sovereign-risk channel matters a lot



- In Argentina's and Turkey's pre-crisis period, bank lending rates fully reflected the risk of sovereign bonds (as represented by the EMBI spreads). This led to lower economic growth, which in turn aggravated debt/GDP ratios.
- However, I derive a different conclusion from the authors: When such a point is reached a full-fledged crisis is unavoidable since the economic vicious circle reinforces political weaknesses.

EM experiences deliver bad news to the evolution of the current European Crisis.