Global Liquidity and Reserves

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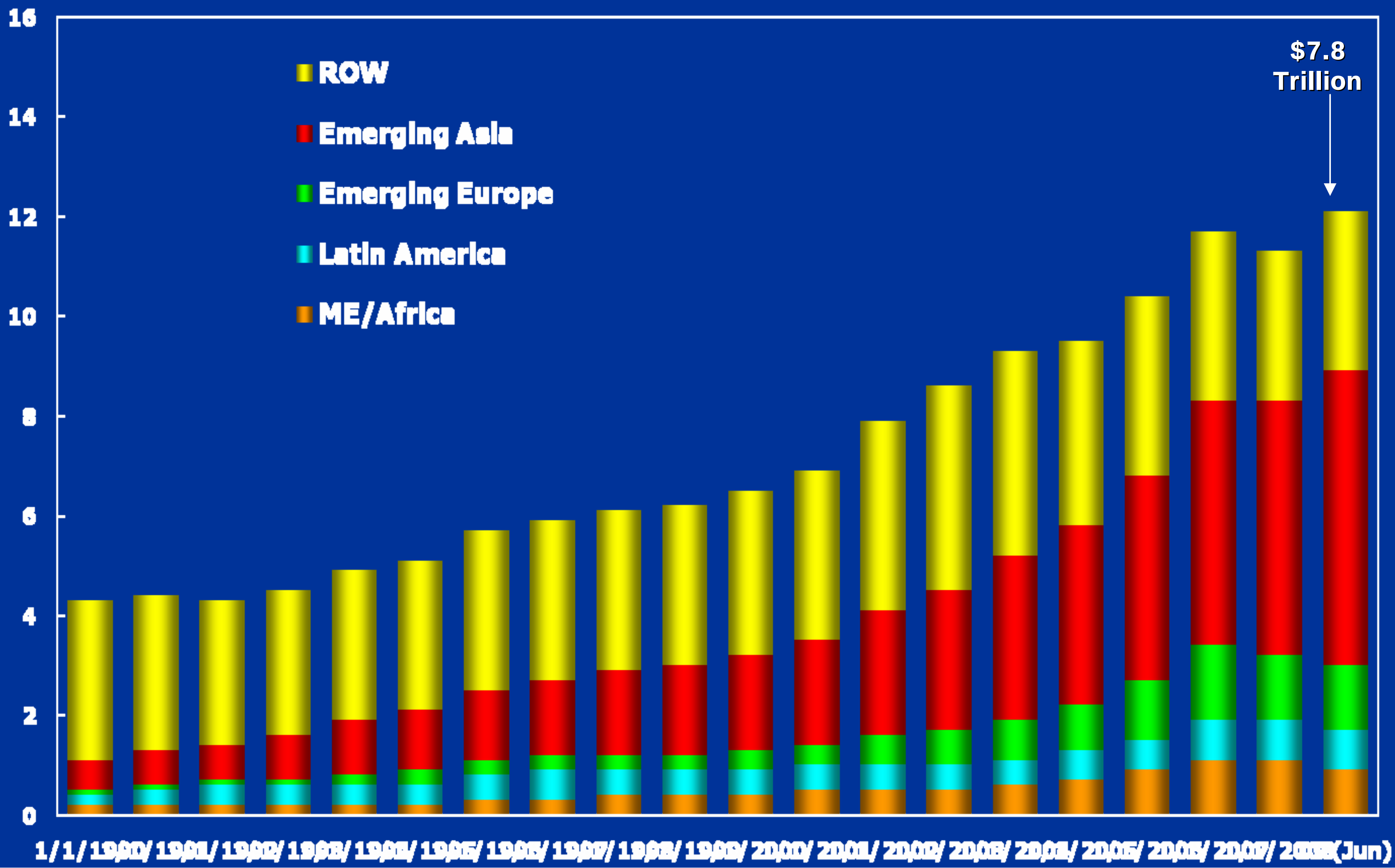
November 2009

1. The Evolution of Reserves

Evolutions Since 1990

Emerging Economies: Reserves

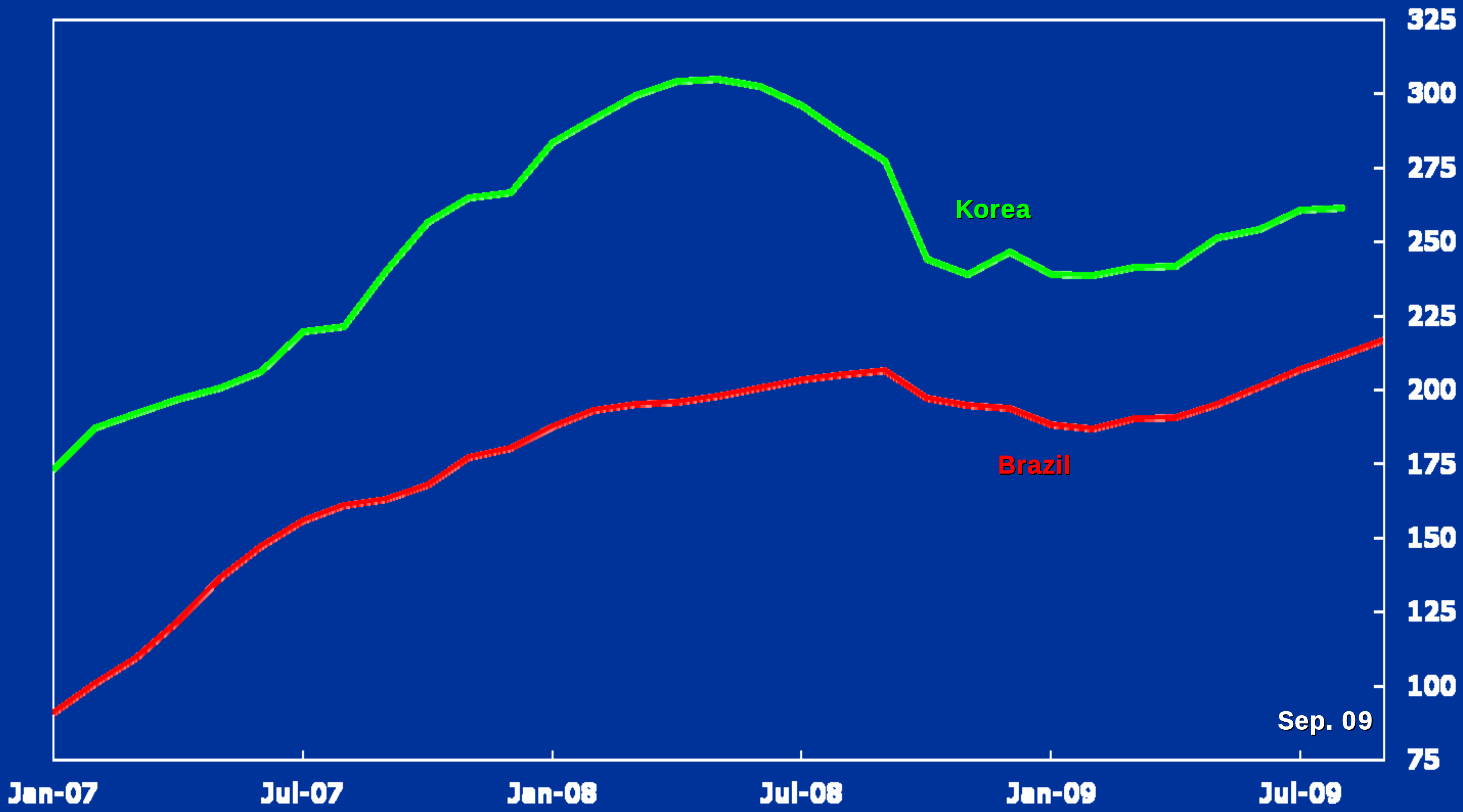
(in percent of Global GDP)



Recent Evolutions

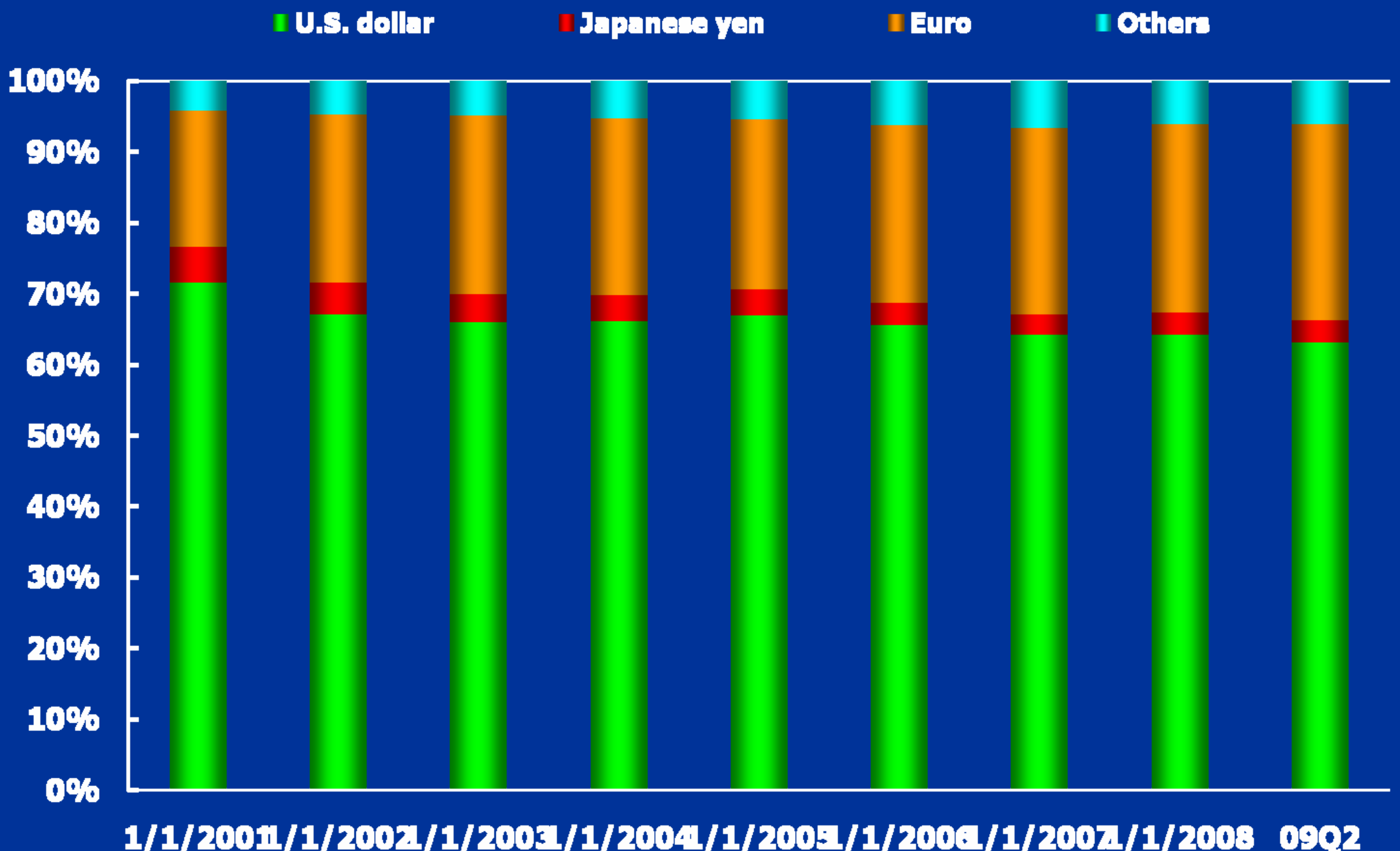
Reserve Accumulation

(US$ in billions; total)



Currency composition of Global Reserves

(in percent of Global Reserves 1/)



1/ Total allocated reserves; based on 33 advanced and 107 emerging and developing economies.

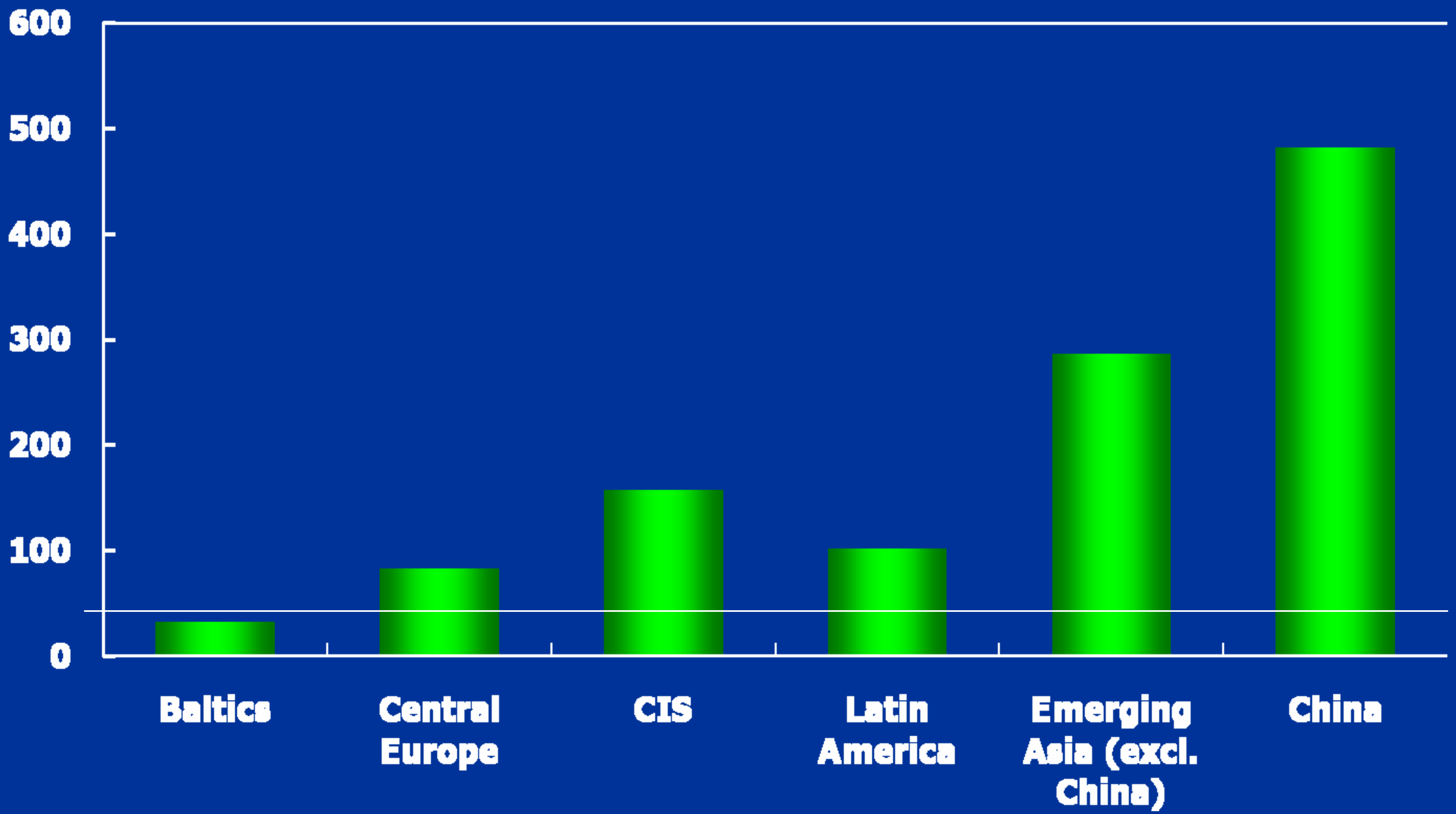
2. Why Do Countries Accumulate Reserves?

- Precautionary saving against trade shocks or capital outflows (private markets can mostly handle the first)?

- Or as an unintended consequence of an export-led growth/ low exchange rate strategy?

Reserves to Short-Term External Debt

(in percent, average of 2002-07)

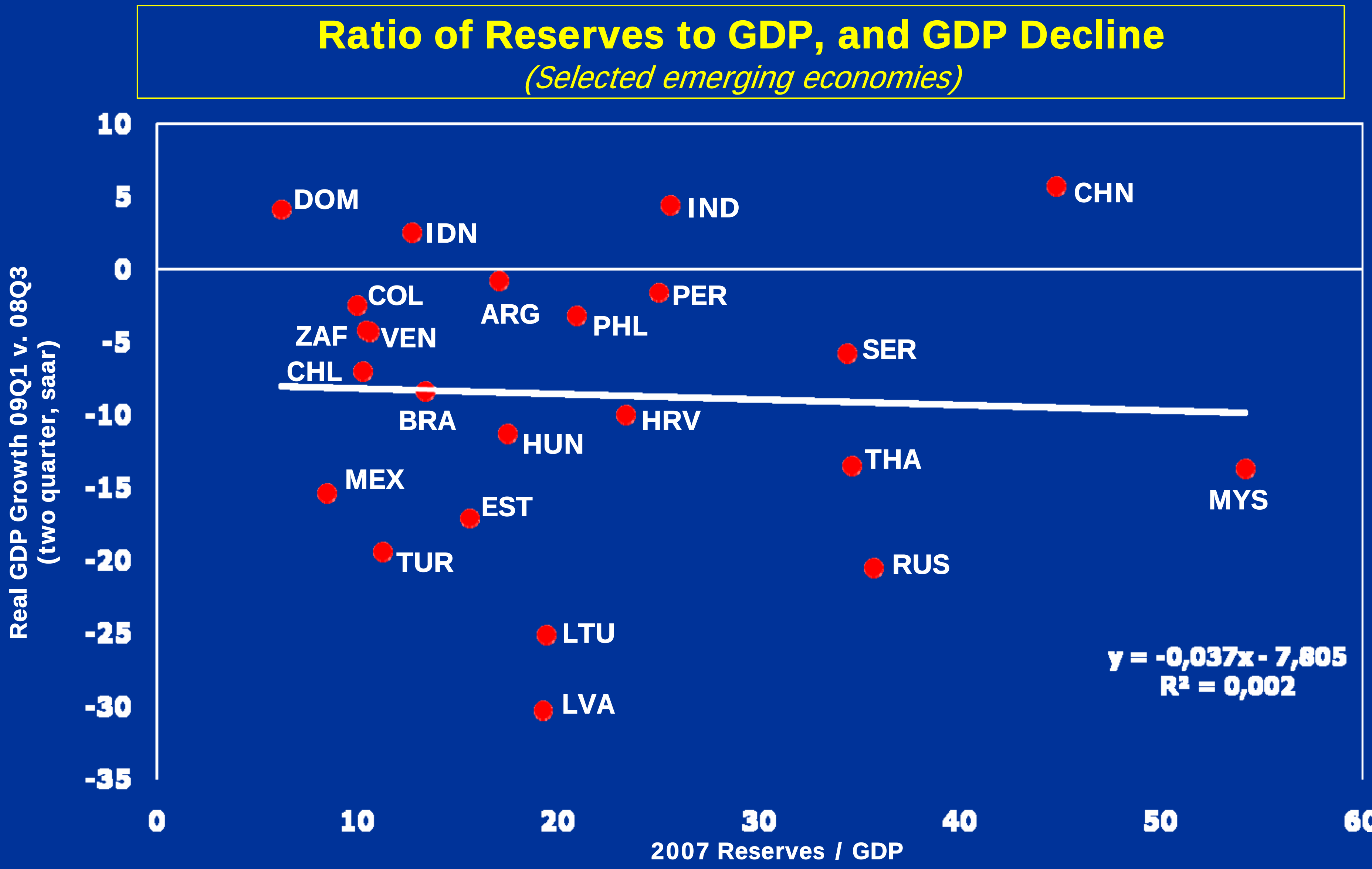


Some Basic Numbers:

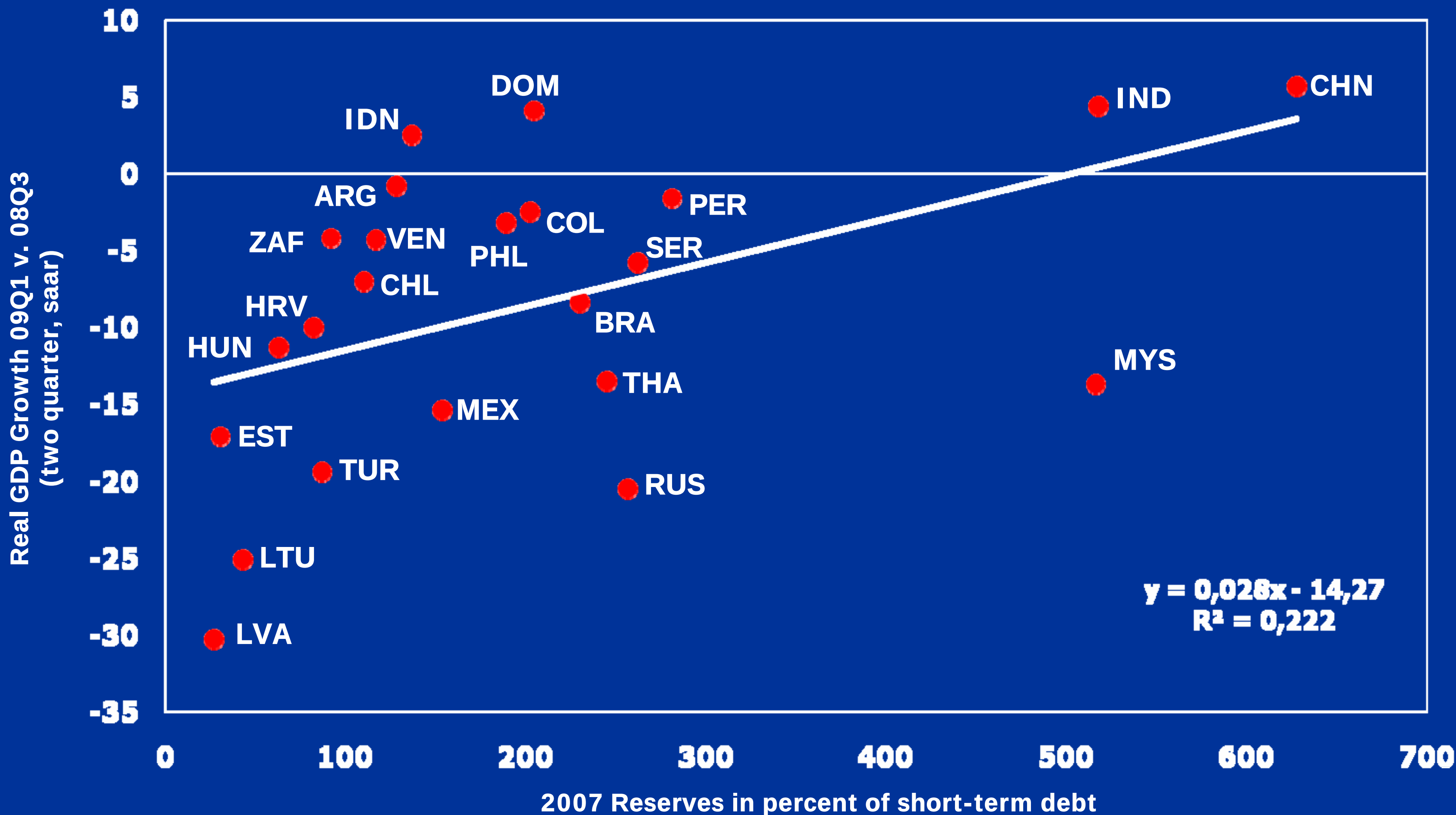
(in trillion U.S. dollars, 23 EM countries , 2007)

Total reserves	3.75
Total short term debt	1.03
Total M2	10.0
Sum (min (ST debt, reserves))	0.97
Sum (min (ST debt, 0.3*M2))	2.7

Did Reserves Help in this Crisis?

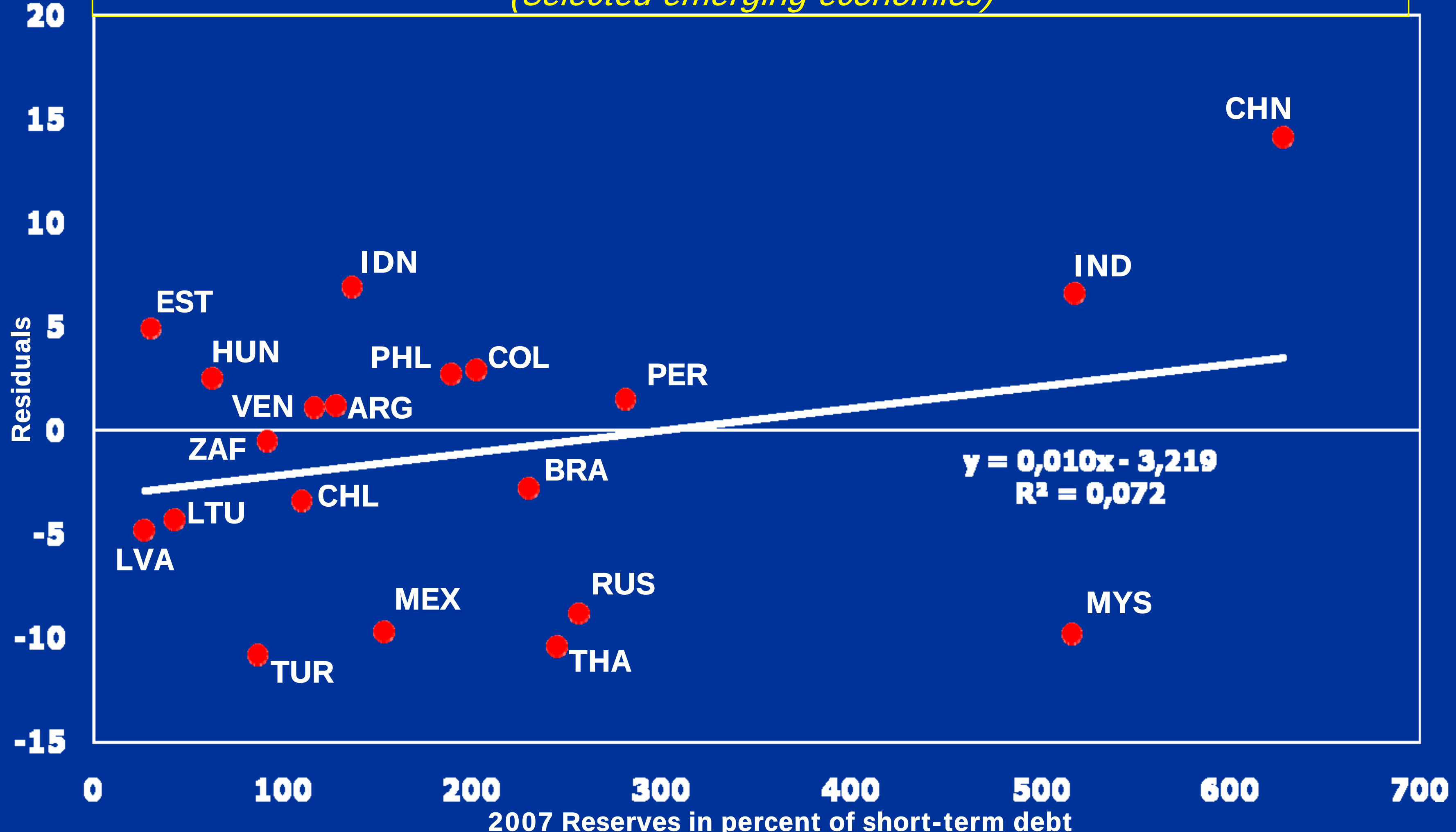


Ratio of reserves to ST debt (2007), and GDP decline
(Selected emerging economies)



Ratio of Reserves to ST debt (2007), and GDP decline, with controls

(Selected emerging economies)



GDP decline, controlling for foreign trade-weighted GDP growth

ST Debt or Reserves, or Both?

gy	log (R/ST)		R^2
2008Q4	5.2 (3.0)		0.27
2009Q1	8.5 (3.0)		0.29

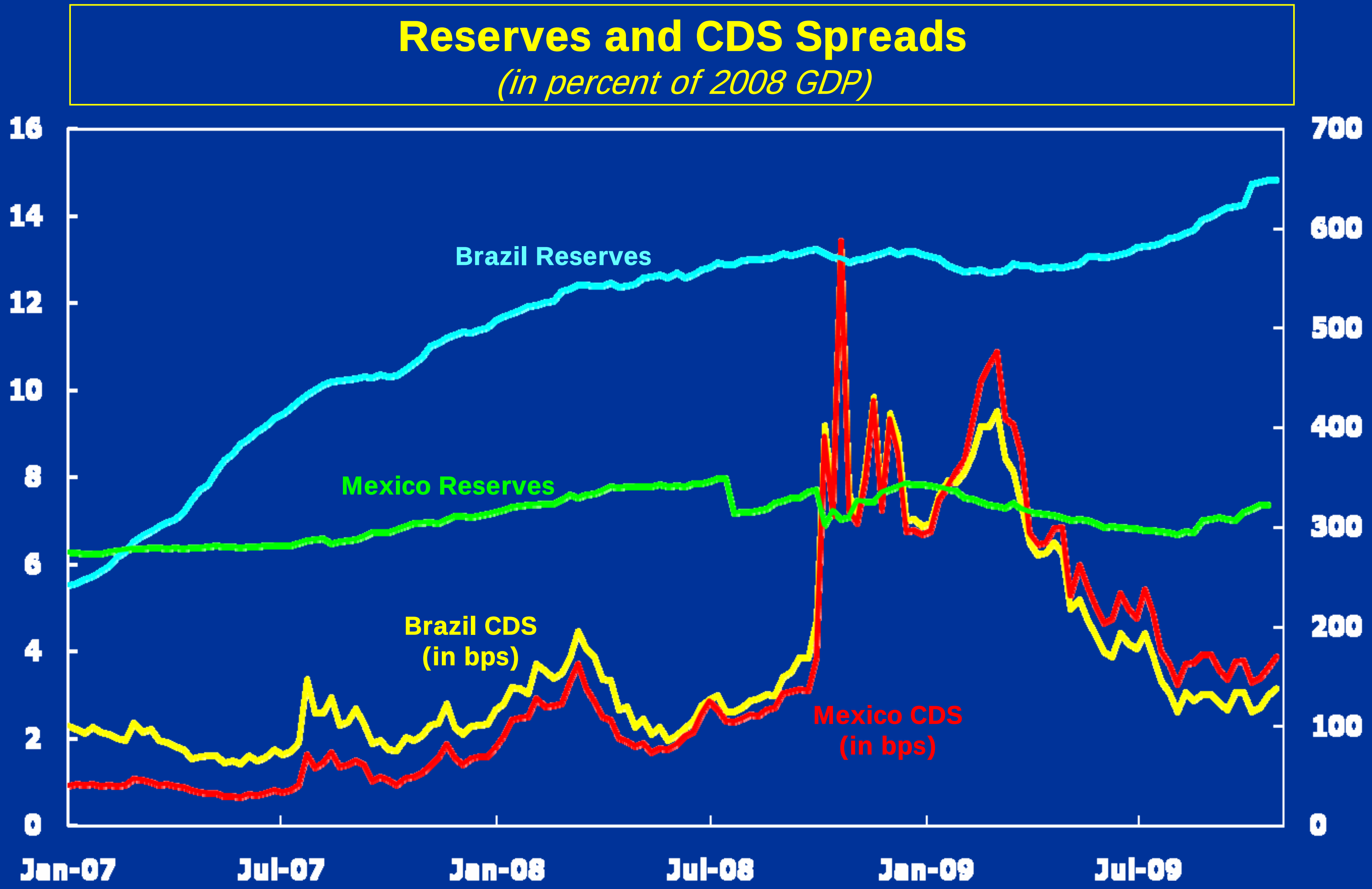
	log (R/Y)	log (ST/Y)	
2008Q4	1.8 (0.7)	-6.6 (-3.6)	0.34
2009Q1	1.3 (0.3)	-11.5 (-4.3)	0.46

ST Debt or Reserves, or Both? (continued, with control for trade)

gy	gy*	log (R/ST)	$\bar{R}^2$
2008Q4	1.0	3.3	0.28
	(1.2)	(1.4)	
2009Q1	2.5	2.6	0.44
	(2.5)	(0.8)	

		log (R/Y)	log (ST/Y)	$\bar{R}^2$
2008Q4	0.3	1.7	-5.8	0.30
	(0.3)	(0.7)	(-1.8)	
2009Q1	1.5	0.4	-6.8	0.46
	(1.2)	(0.9)	(-1.5)	

Brazil and Mexico Reserves and Spreads



3. Are High Reserves So Bad?

- Two separate arguments; one old, one new.
- Old: Precautionary saving: Inefficient.
- Better: Reserve pooling. Regional, cross regional. Monitoring issues.
- Even better: Contingent credit lines.
- Best: Country insurance? Why doesn't it happen? (Countries too large, moral hazard).

- Another, new, and central argument: Reserve accumulation and the global recovery.
- Private internal demand weak in advanced countries. Likely to remain so.
- Requires an increase in net exports in advanced countries (US) , thus a decrease in net exports in ROW.
- Smaller current account deficits in advanced, smaller current account surplus in EMs. Further accumulation of reserves goes the wrong way.

Would Better Liquidity Provision Substantially Decrease Reserves?

- Depends on the source of accumulation. Precautionary, or export led growth?
- Back to Brazil: accumulating reserves to limit appreciation, or as precautionary?

4. Liquidity Provision During the Crisis

1. Bilateral Credit Lines

- Fed swap lines (to EMs). October 2008 (Brazil, Mexico, Korea, Singapore), 30b each. 6 months, renewed for 9 months
- ECB and SNB repos. October, November 2008. (Hungary, Poland) 5, 10b
- China. Since September 2008 (Argentina, Hong Kong, Indonesia, Korea, Malaysia, Belarus)
- Chiang Mai. Regional (ASEAN plus Korea, China, Japan)

- Bilateral credit lines partly deal with moral hazard, through choice of country.

  Based on economic/political choices.

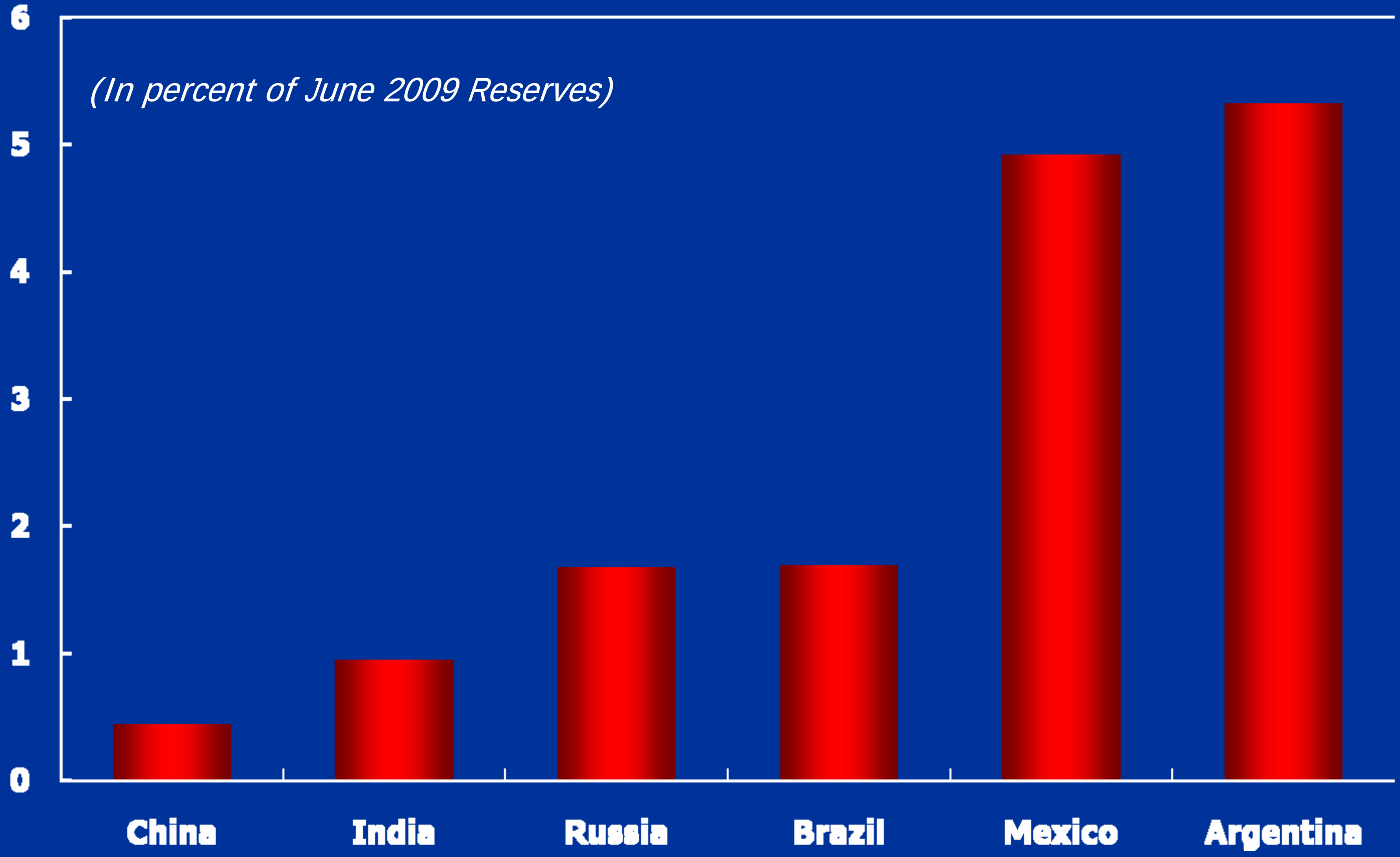
- Effect on reserves?   A very partial substitute.
  - Not a substitute for countries out.
  - For countries in. Limited duration, explicit and implicit.

2. SDRs

- Increase in SDR allocation of 250 b (August 2009)
- Multilateral credit line, available to all members, in proportion to quotas
- Out of 250, (3% of global reserves), 100 to emerging and developing countries. For example: 3.5 for Korea, 2.5 for Argentina.

- Available to all members. Unconditional. Does not deal with moral hazard issue.
- Limited size, relative to reserves. Because of moral hazard, may not want to increase it much more.
- Effect on reserves? Close to 1 for 1, but for limited amounts.

SDRs as a Proportion of Reserves



3. The Flexible Credit Line (FCL)

- Contingent credit line. Introduced in March 2009. Prequalification, no conditionality.
- Precautionary. Open for 6 months or 1 year (mid term review). Commitment fee (25bp for 500-1000% of quota)
- Repayment period 3.5 to 5 years. Interest rate: SDR + 100 basis points, (300 bp on more than 3 times quota)
- Mexico 47b, Poland 21b, Colombia 11b. (not drawn)

- Choice of country based on (tough) economic criteria (Platinum club). Largely deals with moral hazard issue.
- Potentially large size
- Effect on reserves? Because of 0-1 prequalification and limited qualification period, cannot be sure to have it in the future: Poor substitute for reserves.

5. Can We Do Better? Explorations

- FCL looks like a good starting point. Multilateral, largely deals with moral hazard, potentially large.
- Simple idea, building on the FCL: Change 0-1 to more of a continuum, or to a set of ranges. How?
- Variable premium. Continuous access, at changing terms.
- Premium based on solvency risk, not liquidity risk.

Are there Issues? Yes, Many…

Among them:

- Effects on liquidity choice. Incentives for countries to borrow short term. Necessarily bad?
- Who assesses solvency risk? Based on Article IV findings? On regional EM entities?
- Interaction with standard Fund programs? Continuum?
  - No ex-post conditionality (FCL+) .
  - Light ex-post conditionality (HAPAs)
  - Heavier ex-post conditionality (SBAs)

Conclusions

- Crisis has shown the need for global liquidity provision.
- Reserves second best.
- Bilateral credit lines second best
- FCL provides a useful start. Time to explore how to improve it.
- Connection to regional arrangements. Chiang Mai?