



BANK FOR INTERNATIONAL SETTLEMENTS

The international monetary and financial system: Its Achilles heel and what to do about it

Claudio Borio*

Bank for International Settlements, Basel

Institute for New Economic Thinking (INET)

"2015 Annual Conference: Libert ,  galit , Fragilit "

Paris, 8-11 April 2015



* Head of the Monetary and Economic Department. The views expressed are those of the author and not necessarily those of the BIS.

Introduction

- Questions
 - What is the Achilles heel of the international monetary and financial system (IMFS)?
 - What can be done about it?

- Achilles heel: IMFS amplifies weakness of domestic monetary and financial regimes:
 - “Excess (financial) elasticity”: inability to prevent the build-up of financial imbalances (FIs)
 - FIs= unsustainable credit and asset price booms that overstretch balance sheets leading to serious financial crises and macroeconomic dislocations
 - Failure to tame the procyclicality of the financial system
 - Failure to tame the financial cycle (FC)
 - Manifestations
 - Simultaneous build-up of FIs across countries
 - often financed across borders
 - Overly accommodative aggregate monetary conditions for global economy
 - Easing bias: expansionary in short term, contractionary longer-term
 - Focus should be more on FIs than current account imbalances



Introduction (ctd)

- What to do?
 - 1. Keeping one's own house in order:
 - Putting in place adequate anchors in individual jurisdictions
 - Monetary (MP), prudential Policy (PP) and fiscal policy (FP)
 - 2. Keeping the global village in order:
 - Putting in place adequate anchors on their interaction
 - Internalising the externalities of individual countries' policies

- What has been done?
 - Some progress regarding step 1
 - Step 2 is much harder and elusive

- Structure of remarks
 - Nature of the weakness (excess elasticity), domestically and globally
 - Way forward



I. Sources of excess elasticity: domestic policy regimes

- Excess elasticity ultimately arises from limitations in economic agents'...
 - Perceptions of risk/value
 - Loosely anchored
 - Incentives to take on risks
 - Wedge between what makes sense at individual level and in the aggregate
- ...and their self-reinforcing interaction with weak financing constraints
 - Leading to strong procyclicality (financial system and real economy)
 - FCs that are much longer than traditional business cycles
- Excess elasticity depends critically on policy regimes: it is amplified by...
 - Liberalised financial markets
 - Weaken financing constraints
 - MP frameworks focused on (near-term) inflation control
 - Provide less resistance to build-up of FIs
- ...and, paradoxically, by positive supply side developments
 - ↑ financial boom; ↓ inflation



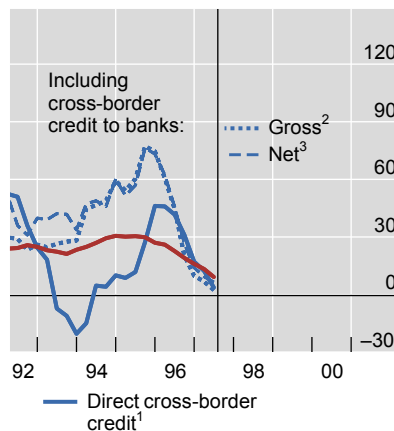
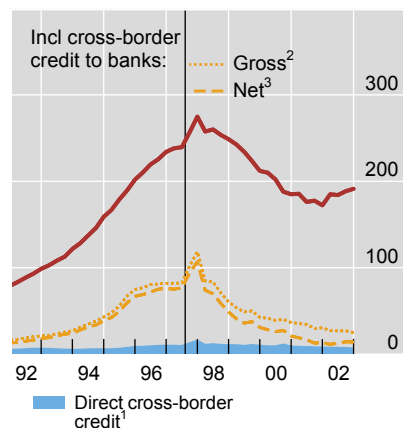
I. Sources of excess elasticity: the IMFS

- Interaction of financial regimes: mobile financial capital across currencies and borders
 - Adds external (marginal) source of finance
 - External credit tends to outpace domestic credit during booms (Graph 1)
 - Makes exchange rates subject to overshooting
 - Like domestic asset prices
- Interaction of monetary regimes: generalises easing bias from core economies to RoW and hence risk of build-up of FIs
 - Directly: currency areas extend beyond national jurisdictions (eg, US Dollar)
 - More direct influence on financial conditions elsewhere
 - Indirectly: through resistance to exchange rate appreciation
 - Keep policy rates lower than otherwise
 - Impact on domestic interest rates
 - Intervene in FX markets and invest proceeds in reserve currency assets
 - Impact on foreign bond yields
- Together result in surges and collapses in «global liquidity»



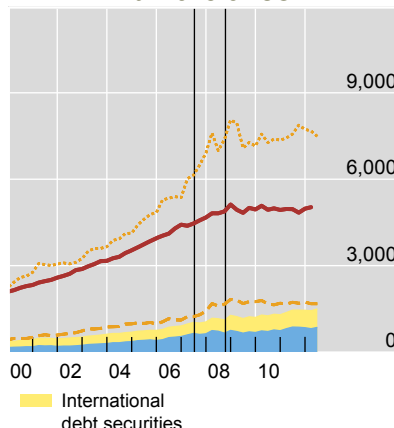
Graph 1: Credit booms and external credit: selected countries

Thailand in the 1990s

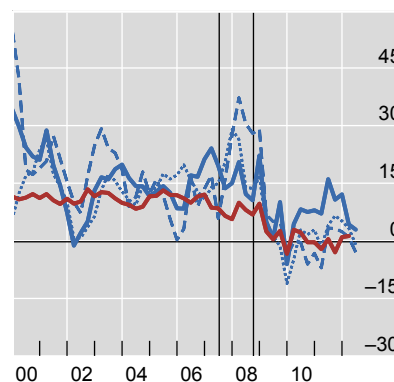


United Kingdom

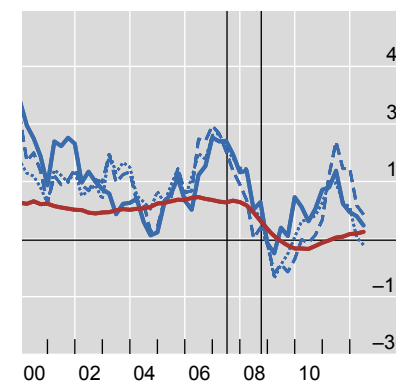
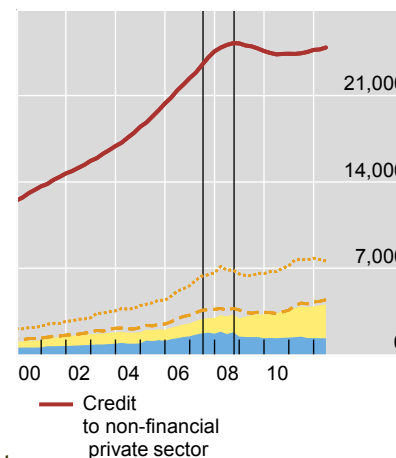
In billions of USD



Year-on-year growth, in per cent



United States



The vertical lines indicate crisis episodes end-July 1997 for Thailand and end-Q2 2007 and end-Q3 2008 for the United States and the United Kingdom. For details on the construction of the various credit components, see Borio et al (2011).

¹ Estimate of credit to the private non-financial sector granted by banks from offices located outside the country. ² Estimate of credit as in footnote 1 plus cross-border borrowing by banks located in the country. ³ Estimate as in footnote (2) minus credit to non-residents granted by banks located in the country. Source: Borio et al (2011).

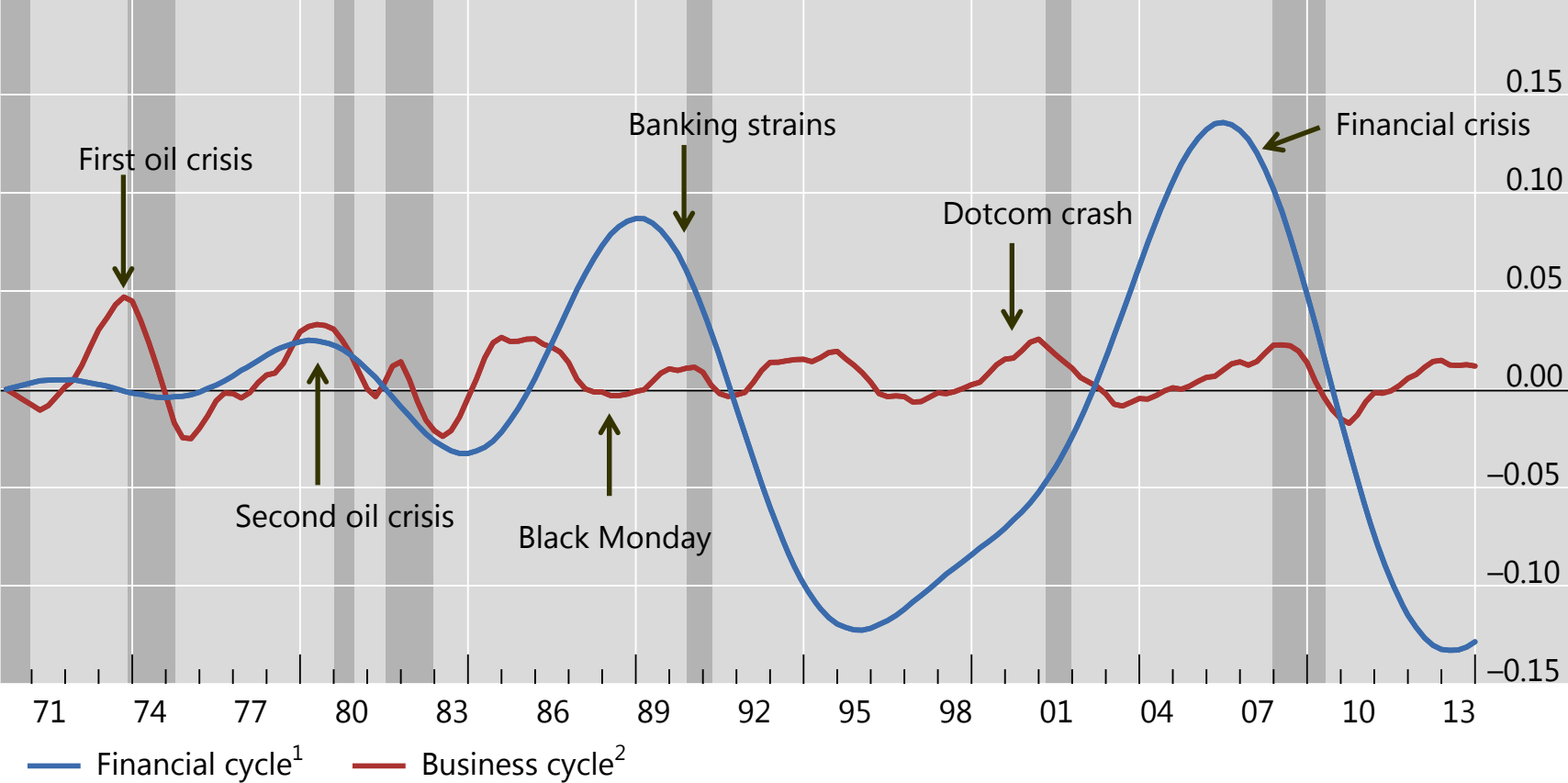


I. Excess elasticity: historical record

- Size of FCs has grown as policy regimes have become more supportive (early 1980s)
 - Financial liberalisation
 - Establishment of credible anti-inflation regimes
 - Entry of China and former communist regimes in world trade system
 - Eg, US experience (Graph 2)
- Financial imbalances: some pre- and post-crisis differences
 - Pre-crisis: build-up mainly in some large advanced countries
 - Reflected also in aggregate cross border credit growth (Graph 3)
 - Post-crisis: build-up in some countries less affected by the crisis (Table 1)
 - Again supported by external credit (Graph 4)
 - and strong US dollar credit growth (Graph 5)
 - Since 2009, from \$6 to over 9 trillion
 - Shift from banks to market financing (Graph 6) – 2nd phase of global liquidity
- Monetary conditions: common feature pre- and post-crisis
 - Unusually accommodative globally (Graphs 7)
 - and strong FX reserve accumulation



Graph 2: The financial grows bigger (the US example)

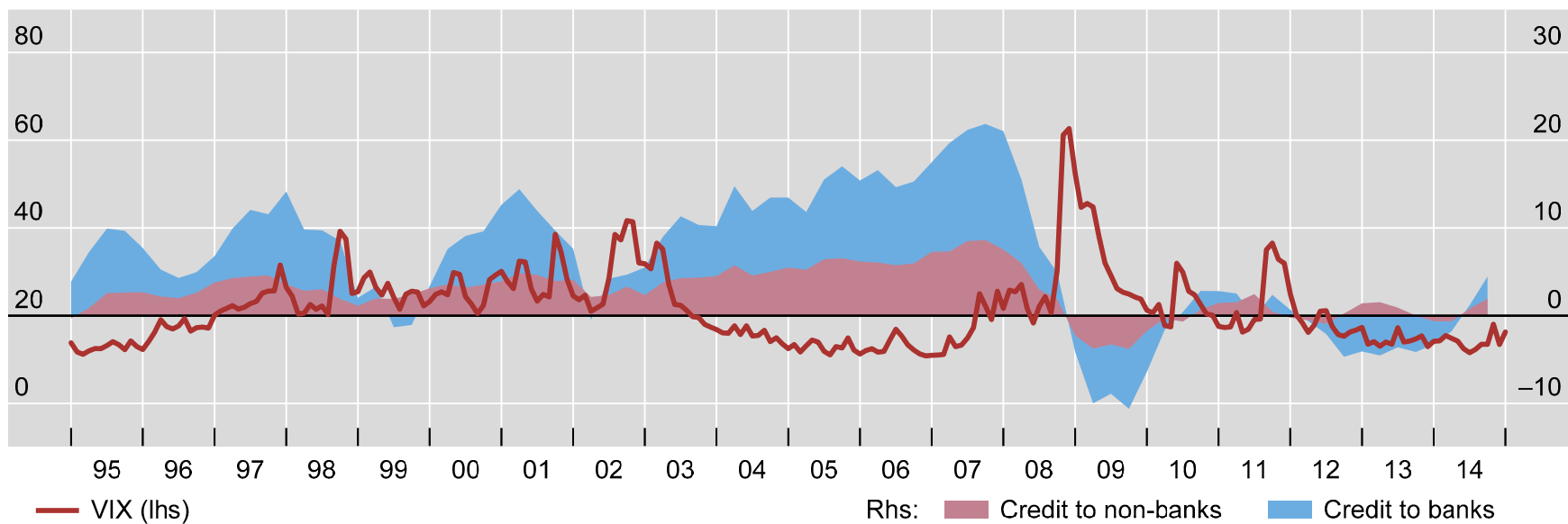


¹ The financial cycle as measured by frequency-based (bandpass) filters capturing medium-term cycles in real credit, the credit-to-GDP ratio and real house prices. ² The business cycle as measured by a frequency-based (bandpass) filter capturing fluctuations in real GDP over a period from one to eight years.

Source: Drehmann et al (2012).



Graph 3: International bank claims and volatility



Bank claims include all BIS reporting banks' cross-border credit and local credit in foreign currency.

Source: BIS Quarterly Review (2015).

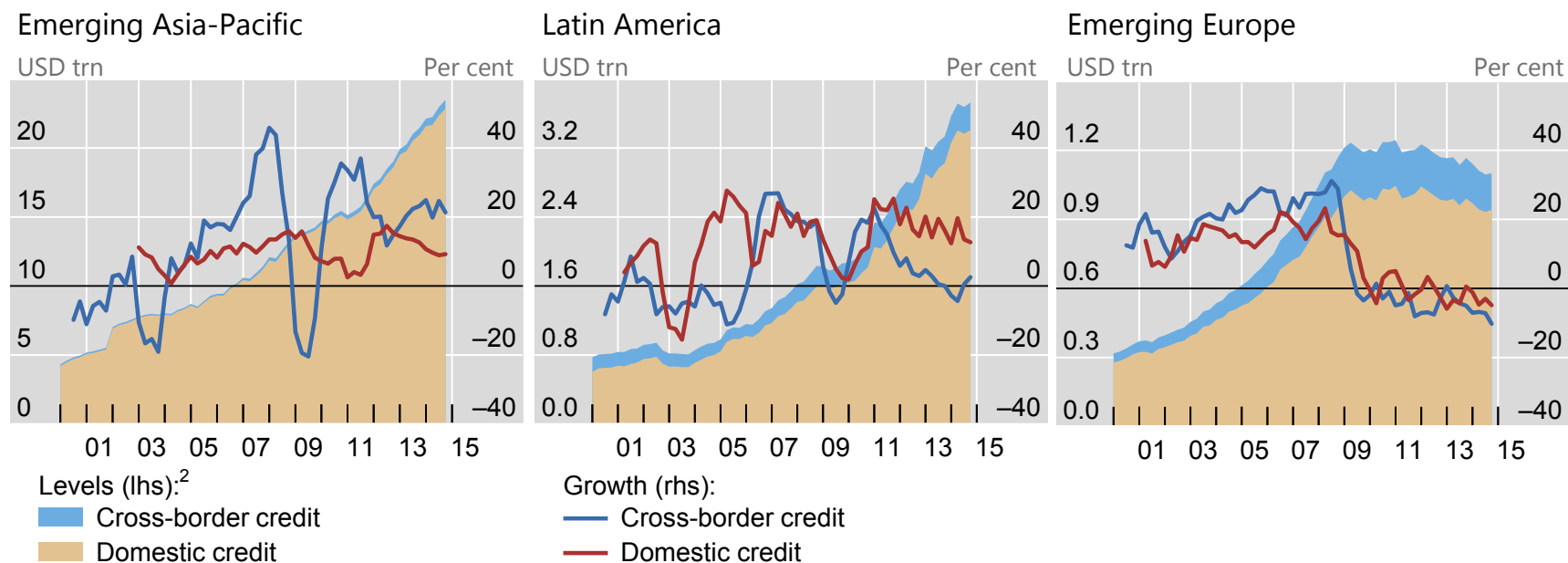


Table 1: Early warning indicators for banking distress – risks ahead

	Credit-to-GDP gap ²	Property price gap ³	Debt service ratio (DSR) ⁴	Debt service ratio if interest rates rise by 250 bp ^{4, 5}
Asia ⁶	18.9	10.6	3.6	5.7
Australia	-12.3	0.9	0.4	3.7
Brazil	11.7	-0.6	5.0	6.5
Canada	3.8	2.6	2.6	6.1
China	21.7	0.5	9.5	12.4
Central and Eastern Europe ⁷	-12.3	7.4	1.2	2.6
Germany	-8.2	8.3	-2.4	-0.6
Greece	-16.1	0.7		
France	3.2	-9.8	0.8	3.8
India	-5.8		2.7	3.7
Italy	-7.7	-17.0	-0.1	1.9
Japan	4.7	2.6	-2.8	-0.1
Korea	2.2	4.2	2.4	5.7
Mexico	3.3	-0.8	0.4	0.9
Netherlands	-17.6	-21.2	1.5	6.2
Nordic countries ⁸	-0.7	0.5	2.5	6.5
Portugal	-28.3	7.4	-3.6	-0.3
South Africa	-3.8	-5.8	-0.8	0.2
Spain	-38.4	-29.3	-2.9	0.0
Switzerland	11.5	10.9	1.5	4.5
Turkey	13.4		4.9	6.2
United Kingdom	-30.6	-4.2	-1.4	1.4
United States	-14.4	-3.6	-1.9	0.4
<i>Legend</i>	<i>Credit/GDP gap > 10</i>	<i>Property gap > 10</i>	<i>DSR > 6</i>	<i>DSR > 6</i>
	<i>2 ≤ Credit/GDP gap ≤ 10</i>		<i>4 ≤ DSR ≤ 6</i>	<i>4 ≤ DSR ≤ 6</i>

Source: BIS Quarterly Review (2015).

Graph 4: Bank credit aggregates by borrower region¹

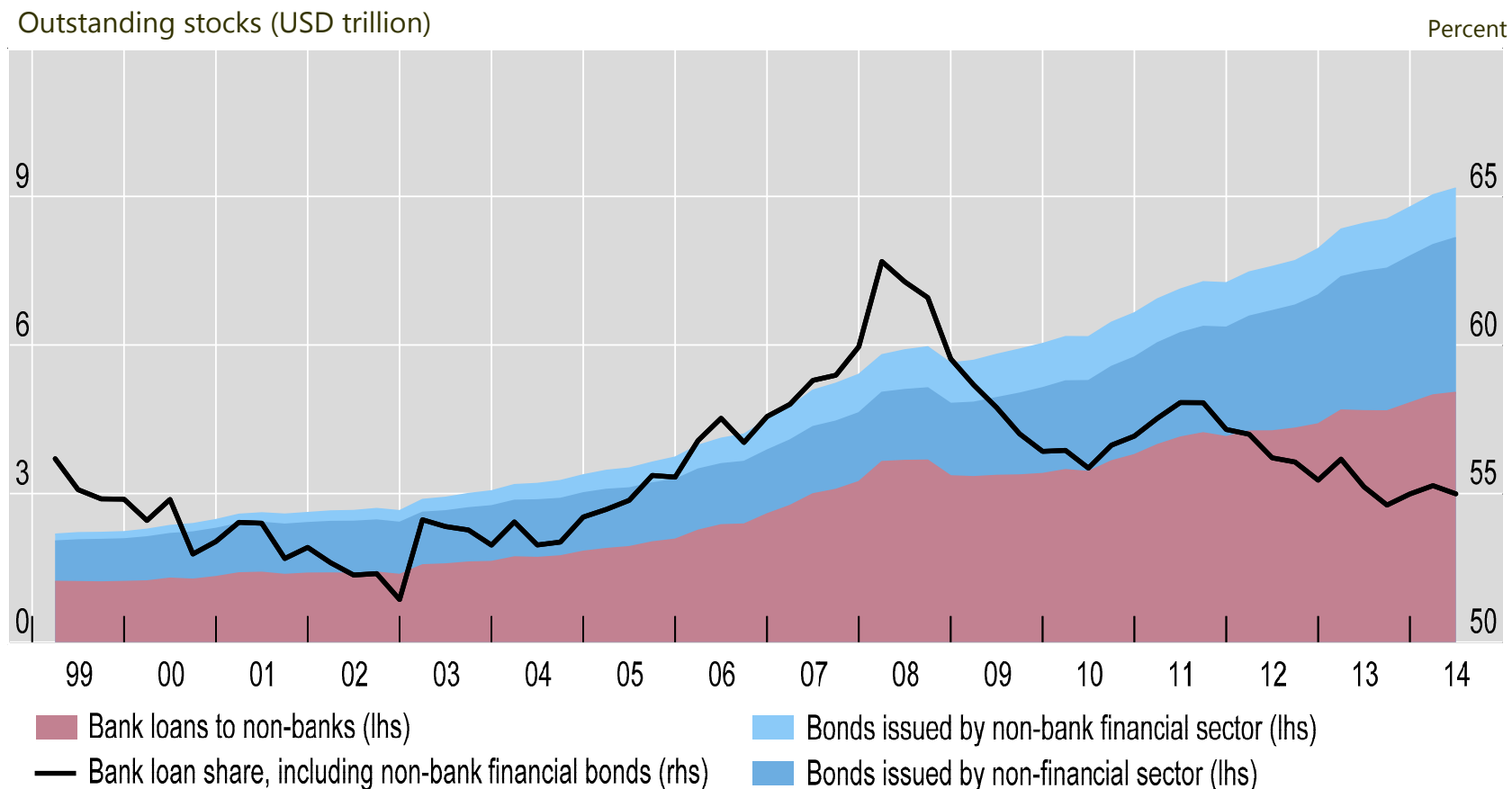


¹ Aggregate for a sample of 56 reporting countries. ² Total bank credit to non-bank borrowers (including governments), adjusted using various components of the BIS banking statistics to produce a breakdown by currency for both cross-border credit and domestic credit.

Source: BIS Quarterly Review (2015).



Graph 5: Surge in US dollar credit to non-banks outside the United States

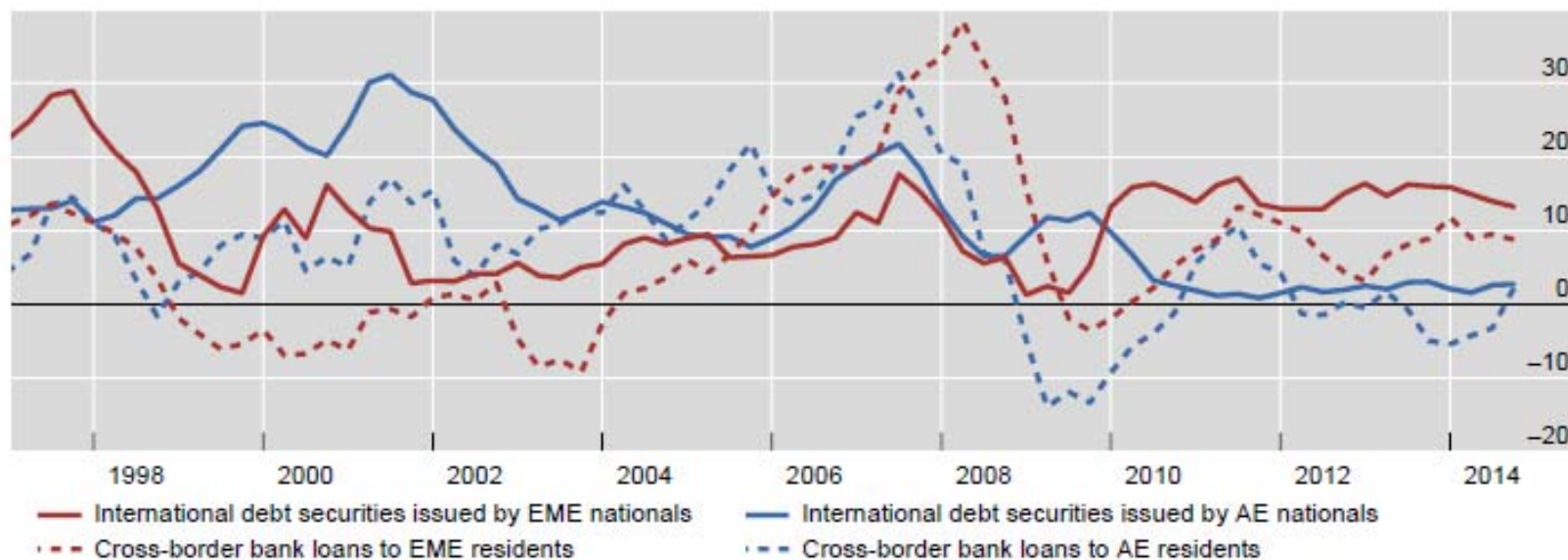


Notes: Bank loans include cross-border and locally extended loans to non-banks outside the United States. For China and Hong Kong SAR, locally extended loans are derived from national data on total local lending in foreign currencies on the assumption that 80% are denominated in US dollars. For other non-BIS reporting countries, local US dollar loans to non-banks are proxied by all BIS reporting banks' gross cross-border US dollar loans to banks in the country. Bonds issued by US national non-bank financial sector entities resident in the Cayman Islands have been excluded.

Sources: IMF, *International Financial Statistics*; Datastream; BIS international debt statistics and locational banking statistics by residence; authors' calculations.

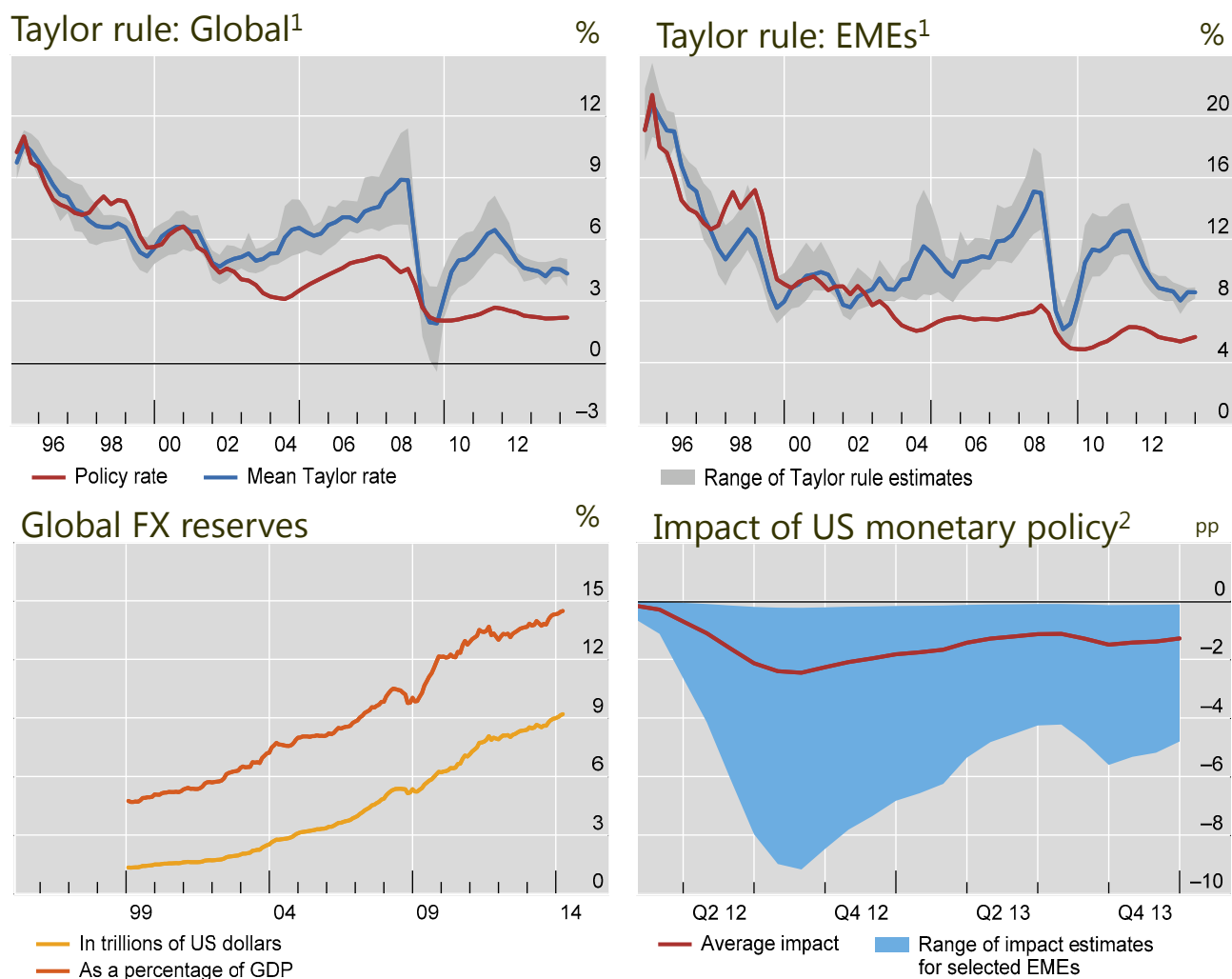
Graph 6: Post-crisis credit shifts to EMEs and markets

International credit to non-banks, year-on-year growth, in per cent



Sources: BIS debt securities statistics; BIS locational banking statistics by residence.

Graph 7: Unusually easy monetary policy spreads globally



1 See B Hofmann and B Bogdanova, "Taylor rules and monetary policy: a global 'Great Deviation'?", BIS Quarterly Review, September 2012, pp 37–49. 2 The component of the augmented Taylor equation driven by the shadow US policy rate when it is significant at the 5% level. Data are for Brazil, China, Colombia, the Czech Republic, Hungary, India, Indonesia, Israel, Korea, Mexico, Peru, the Philippines, Poland, Singapore (overnight rate), South Africa and Turkey. Source: Borio (2014b)



I. Excess elasticity: The role of current accounts (C/A)

- C/A deficits are not necessarily correlated with build-up of FIs
 - Major FIs have also built up and unwound in surplus countries
 - most spectacularly: US before Great Depression; JP in 1980s-90s; China now?
- Relationship is more nuanced
 - A deterioration in C/A can reflect the build-up of FIs
 - Large and persistent C/As better seen as reflection of free capital flows
 - eg, Gold standard period, including 1920s
- Policy implications
 - Focus more on gross (and corresponding stocks) than net capital flows
 - Net are the tip of the iceberg
 - Beware of recommending expansion in surplus countries exhibiting FIs
 - eg, JP in late 1980s; China post-crisis
 - One should care about C/A imbalances because
 - They can represent a major protectionist threat
 - Large C/A deficits may increase cost of the unwinding of FIs



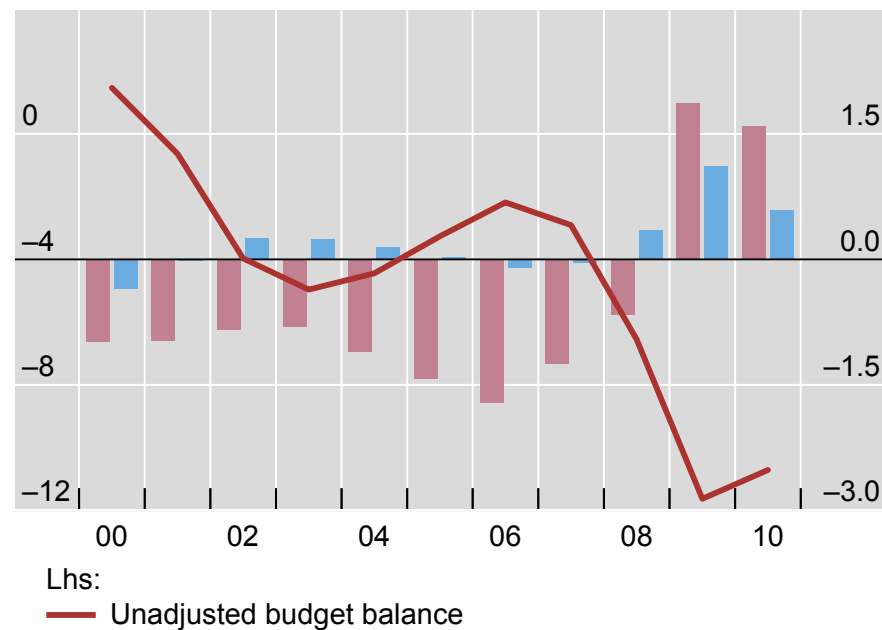
II. Towards a solution: Domestic anchors

- What to do?
 - PP: tackle procyclicality of the financial system through macroprudential (MaP) measures
 - MP: lean against build-up of FIs even if near-term inflation is under control («lean option»)
 - FP: extra prudence, fully recognising hugely flattering effect of financial booms on fiscal accounts
 - Overestimation of potential output and growth (Graph 8)
 - Revenue-rich nature of financial booms (compositional effects)
 - Large contingent liabilities needed to address the bust
- Progress? Not enough
 - PP has adjusted most
 - Basel III (countercyclical capital buffer) and MaP frameworks
 - MP has adjusted less
 - Some shift but very timid and little done in practice
 - Temptation to rely exclusively on MaP measures
 - FP has adjusted least, if at all
 - Little recognition of flattering effect of booms (Graph 8)

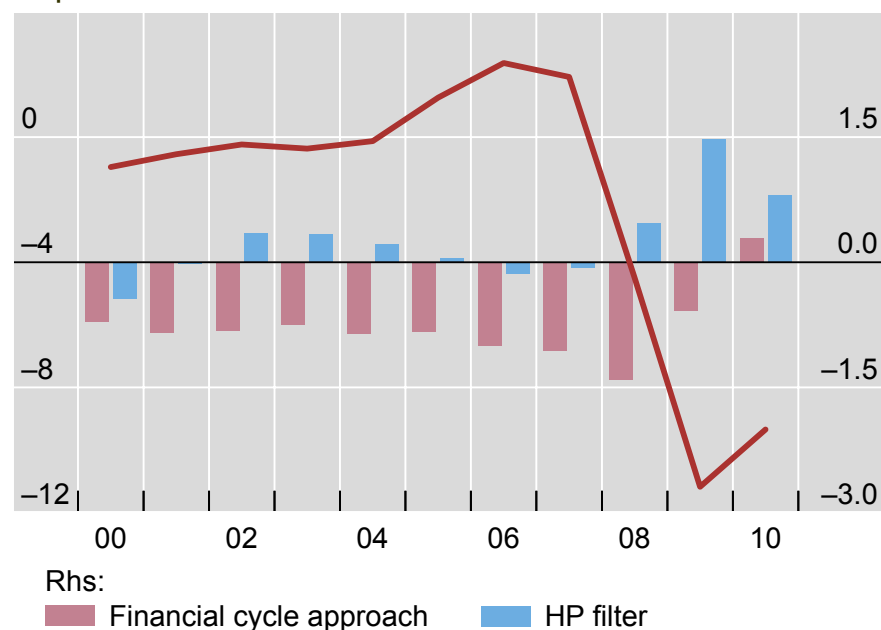


Graph 8: Overestimating cyclically-adjusted fiscal strength in booms

United States



Spain



Note: Estimates of cyclically-adjusted fiscal balances (bars) based on information available at the time the forecasts are made (one-sided or real-time) using, respectively, a traditional statistical approach (Hodrick-Prescott (HP) filter) and one based on proxies for the financial cycle (credit and house price growth). Approaches based on production functions, as used by eg, international financial institutions, would show a similar picture to that of the HP filter.

Source: Borio et al (2013).

II. Towards a solution: international anchors

- What to do?
 - Move towards stronger cooperative arrangements
 - Precondition 1: better recognition of externalities of individual countries' policies
 - Analogous to shift from micro- to macro-prudential perspective
 - Replace term «financial institution» with «country»
 - More top-down approach to analysis of global economy...
 - Importance of shared vulnerabilities
 - Common exposures, spillovers and reaction functions
 - Recognition of endogeneity of global sources of risk with respect to collective behaviour of countries
 - Precondition 2: systematic incorporation of financial factors into macroeconomics
 - Better model
- Progress? Extremely elusive
 - Some success in PP
 - Harmonisation of minimum regulatory standards
 - Explicit co-ordination of operation of countercyclical capital buffer
 - But proving much harder in macroeconomic field
 - Eg, G20 has been losing steam; too much focus on C/As

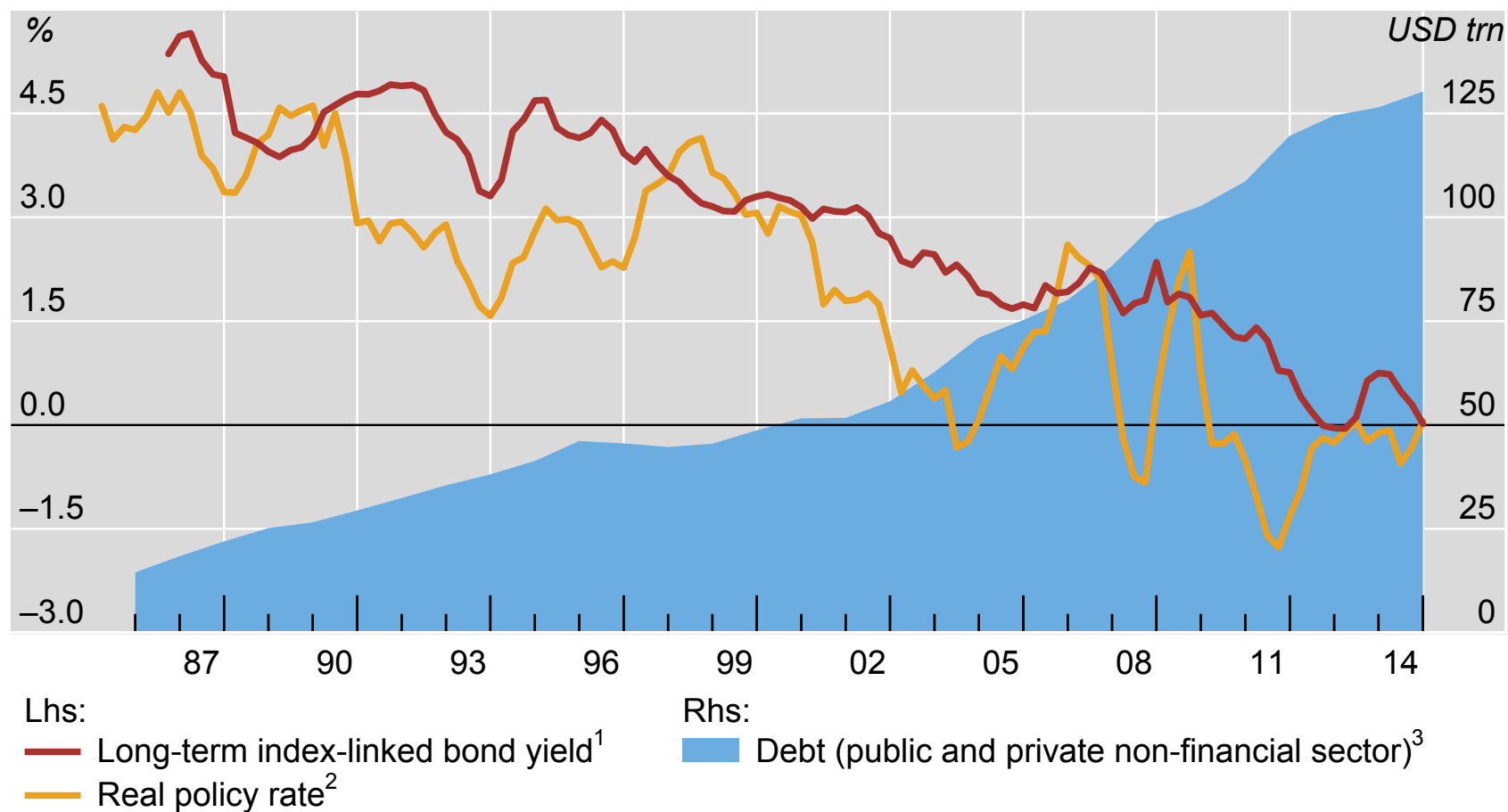


II. Towards a solution: three risks

- **R1:** Entrenching instability and chronic weakness in the system?
 - Asymmetric policies, sequence of financial crises and loss in policy ammunition
 - Symptoms
 - Build-up of FIs
 - Monetary policy testing outer limits
 - Fiscal trajectories unsustainable in a number of jurisdictions
 - Looming debt trap? (Graph 9)
 - Downward bias in interest rates and upward bias in debt
 - Hard to raise rates without causing damage (form of “time inconsistency”)
 - Low interest rates become self-validating
- **R2:** Competitive depreciations?
 - Similar to interwar years
 - Seek to boost demand in a context of limited monetary policy domestic traction
 - Term “currency wars” all too common
- **R3:** Rupture in the open global economic order?
 - Temptation for nation states to withdraw
 - Financial and trade protectionism
 - Temptation to inflate debts away



Graph 9: Global debt and interest rates: signs of a debt trap?



¹ From 1998; simple average of France, the United Kingdom and the United States; otherwise only the United Kingdom. ² Weighted averages for G7 economies based on 2005 GDP and PPP exchange rates. ³ Includes: Australia, Canada, China, Germany, France, Japan, Italy, Ireland, Greece, Portugal, Spain, United Kingdom and the United States debt, converted in USD at market exchange rates.

Source: Borio (2014b), updated.

Conclusion

- Achilles' heel of the IMFS
 - Amplification of excess elasticity of domestic policy regimes
 - Not global current account imbalances but financial imbalances
- Solution requires putting in place strong anchors on
 - Domestic policy regimes
 - Their interaction (international arrangements)
- Some but insufficient progress has been made domestically
 - Mostly in PP; some in MP; hardly any in FP
- Very limited progress internationally
 - Little recognition of need to change analytical perspective
 - Own-house-in-order doctrine is not sufficient
 - Policy adjustments largely confined to PP
- Stakes are very high: risks
 - Entrenching instability and chronic weakness in the global economy
 - Rupture in the current open trade and financial global order



References (to BIS and BIS-based Committees work only)

- Bank for International Settlements (2014): [84th BIS Annual Report](#), June.
- _____ (2015): [BIS Quarterly Review](#), March 2015.
- Borio, C (2010) : ["Implementing a macroprudential framework: blending boldness and realism"](#), *Capitalism and Society*, vol 6 (1), Article 1.
- Borio, C (2012): ["On time, stocks and flows: Understanding the global macroeconomic challenges"](#), lecture at the Munich Seminar series, CESIfogroup and Sueddeutsche Zeitung, 15 October, *BIS Speeches*. Also in *National Institute Economic Review*, 2013, August.
- _____ (2014a): ["The financial cycle and macroeconomics: what have we learnt?"](#), *Journal of Banking & Finance*, vol 45, pp 182–198, August. Also available as *BIS Working Papers*, no 395, December 2012.
- ——— (2014b): ["The international monetary and financial system: its Achilles heel and what to do about it"](#), *BIS Working Papers*, no 456, September.
- Borio, C and P Disyatat (2011): ["Global imbalances and the financial crisis: Link or no link?"](#), *BIS Working Papers*, no 346, May.
- ——— (2014): ["Low interest rates and secular stagnation: Is debt a missing link?"](#), *Vox EU*, 25 June.
- ——— (2015): "Capital flow puzzles and the current account: taking financing seriously", mimeo, forthcoming *BIS Working Paper*.
- Borio, C, P Disyatat and M Juselius (2013): ["Rethinking potential output: embedding information about the financial cycle"](#), *BIS Working Papers*, no 404, February.
- Borio, C, R McCauley and P McGuire (2011): ["Global credit and domestic credit booms"](#) *BIS Quarterly Review*, September, pp 43-57.
- Borio, C and H Zhu (2011): ["Capital regulation, risk-taking and monetary policy: a missing link in the transmission mechanism?"](#), *Journal of Financial Stability*, December. Also available as *BIS Working papers*, no 268, December 2008.
- Bruno, V and H Shin (2014): ["Cross-border banking and global liquidity"](#), *BIS Working Papers*, no 458, September.
- Caruana, J (2010a): ["Monetary policy in a world with macroprudential policy"](#), speech delivered at the SAARCFINANCE Governors' Symposium 2011, Kerala, 11 June.
- ——— (2012a): ["International monetary policy interactions: challenges and prospects"](#), Speech at the CEMLA-SEACEN conference on "The role of central banks in macroeconomic and financial stability: the challenges in an uncertain and volatile world", Punta del Este, Uruguay, 16 November.
- ——— (2012b): ["Assessing global liquidity from a financial stability perspective"](#) at the 48th SEACEN Governors' Conference and High-Level Seminar, Ulaanbaatar, 22-24 November
- CGFS (2011): ["Global liquidity - concept, measurement and policy implications"](#), no 45, November.
- Drehmann, M, C Borio and K Tsatsaronis (2012): ["Characterising the financial cycle: don't lose sight of the medium term!"](#), *BIS Working Papers*, no 380, November.
- Drehmann, M and M Juselius (2013): ["Evaluating early warning indicators of banking crises: Satisfying policy requirements"](#), *BIS Working Papers*, no 421, August.
- Hofmann, B and B Bogdanova (2012): [Taylor rules and monetary policy: a global "Great Deviation"?](#) *BIS Quarterly Review*, September, pp 37–49.
- McCauley, R, P McGuire and V Sushko (2015): ["Global dollar credit: links to US monetary policy and leverage"](#), *BIS Working Papers*, no 483, January.

