Incorporating Macroprudential Instruments into the Monetary Policy: The Case of Peru

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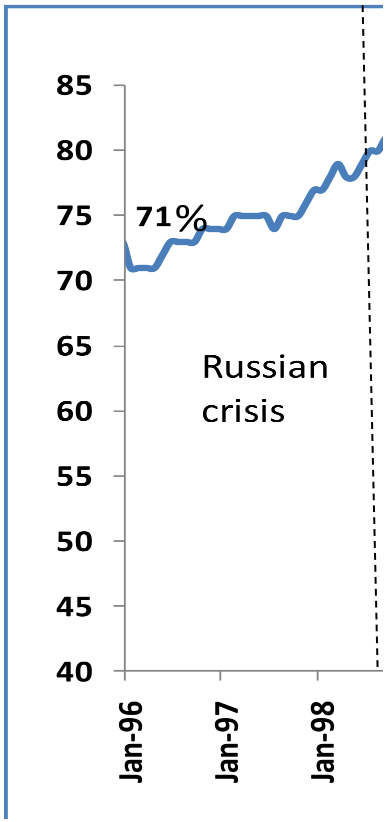
Agenda

- Dollarization: The Main Source of Financial Vulnerability
- Monetary Policy Framework
- Macroprudential Framework
- Conclusions

Dollarization: The main source of financial vulnerability in Peru



Vulnerabilities associated with financial dollarization

- Solvency Risk: Firms’ balance-sheets deteriorate after a sharp currency depreciation.

- Liquidity Risk: Stress created by runs on deposits and foreign credit lines.

- Bank credit tends to overreact with boom-and-bust episodes.

Financial crisis in Peru after the Russian debt default in 1998

- Sudden stop of short-term foreign liabilities: -50% in August 1999*
- Real currency depreciation: 13% in Aug.1999*
- Increase in non-performing loans in foreign currency: from 5% to 10%
- Credit crunch: growth of credit in foreign currency declined from 26% in Jul.1998 to -4% in Jul.1999. Banking credit started to pick up only in 2002
- Financial crisis: the number of banks fell from 26 to 14, and the number of firms that filled for bankruptcy procedures increased 400% between 1998 and 2001
- Recession: sustained per capita GDP growth resumed only in 2002.

* 12-month rate of change

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Hybrid Inflation Targeting Scheme

The monetary policy framework in Peru adds to the common features of an inflation targeting regime, a set of measures to deal with the risks of financial dollarization.

Inflation Targeting

<u>**Inflation target :** 2% +/- 1%</u>

- **Operational Target**: Overnight interest rate

\+

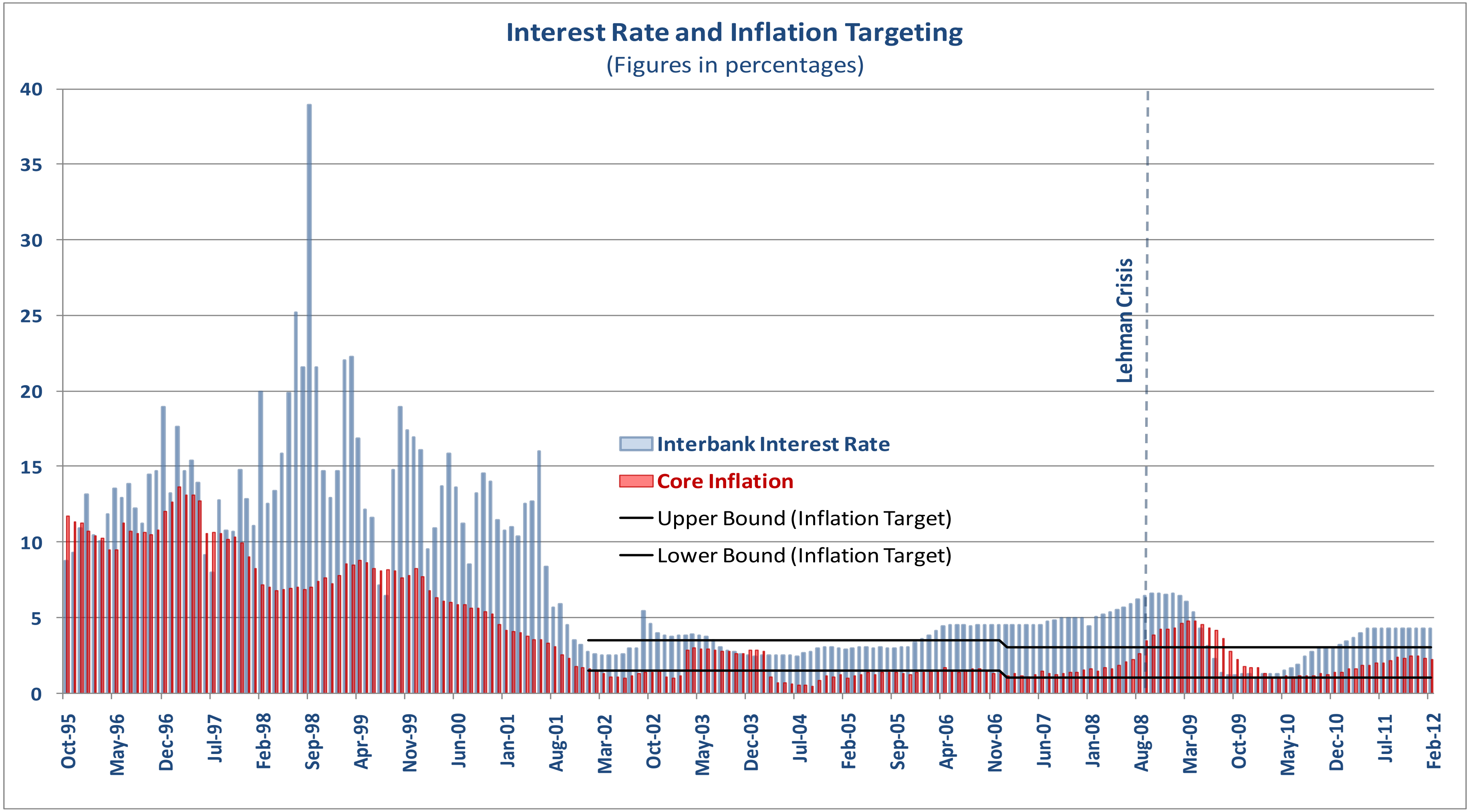
Control of Dollarization Risks

<u>**Normal Credit/GDP evolution**</u>

- **Liquidity Risk**
  - Preventive NIR accumulation
  - Reserve requirement on foreign currency liabilities
- **Exchange Risk (Balance Sheet Effect)**
  - Sterilized FX Intervention to reduce exchange rate volatility

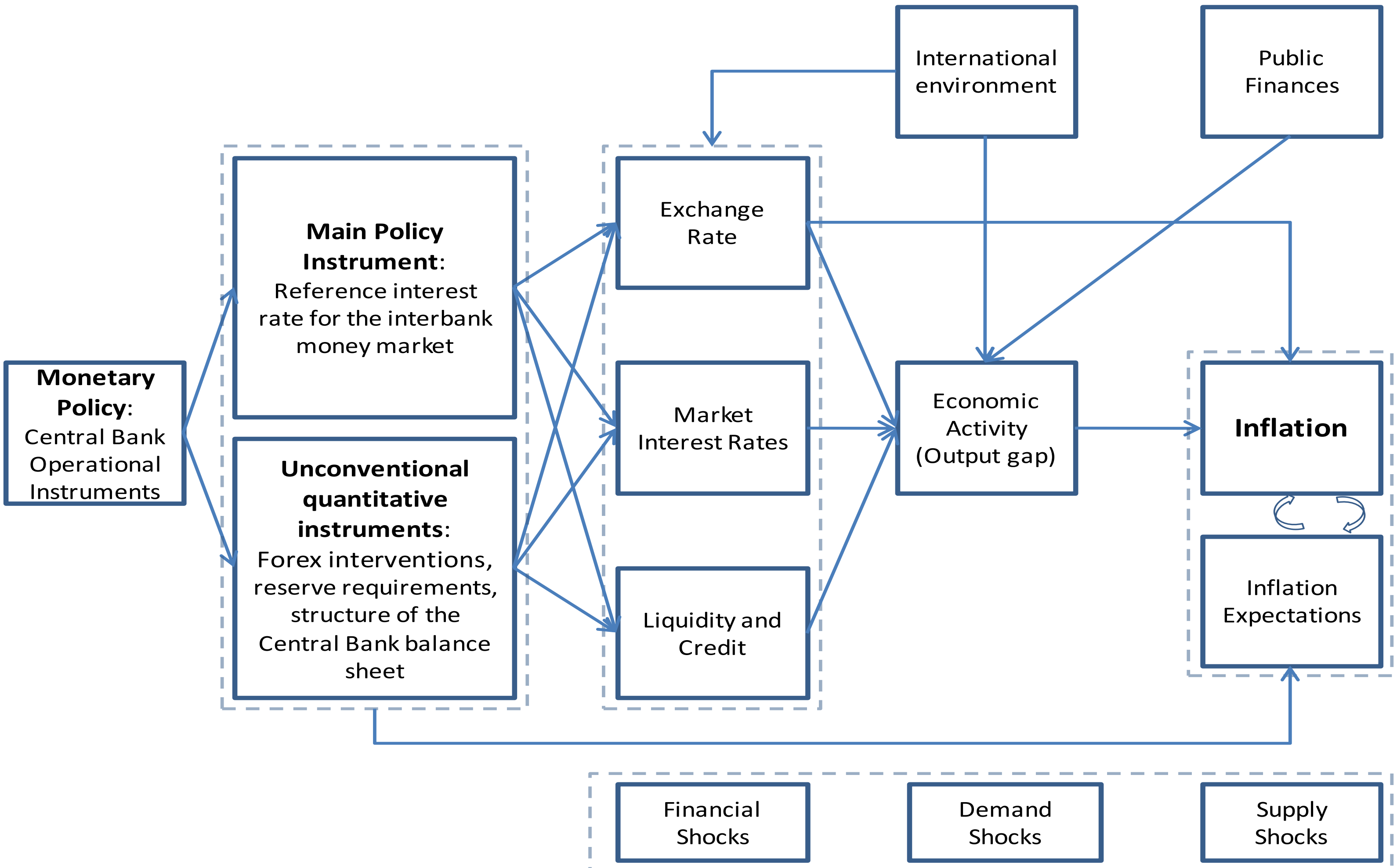
Inflation targeting: 2002

The CB recovered its ability to implement a countercyclical monetary policy, using the short-term interest rate as its main operational target. Also, the interbank money market became a reliable source of funding.



Transmission mechanisms of monetary policy

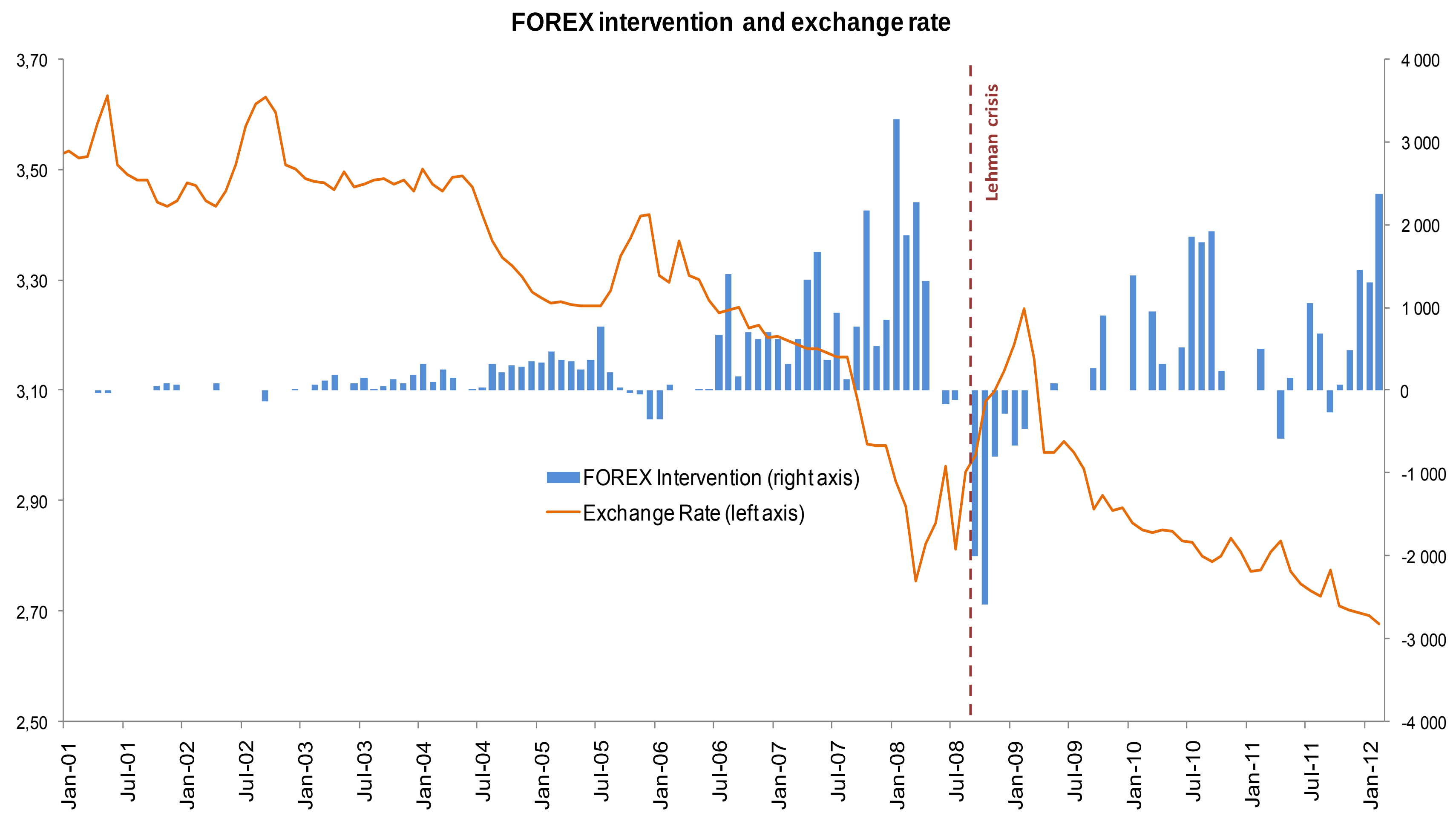
The CB revises every month its operational target and considers unconventional instruments in order to preserve the normal transmission mechanisms and to enhance macro-financial stability.



Central Reserve Bank of Peru

FOREX intervention

FOREX intervention aimed at reducing exchange rate volatility to prevent balance sheet effects, without a commitment to any specific exchange rate level or tendency.



Rationality of FOREX intervention

- Intervention is aimed at reducing exchange rate volatility without affecting its fundamental trend.

Foreign Exchange Rate Index
(December 2007=100)

Coefficient of Variation

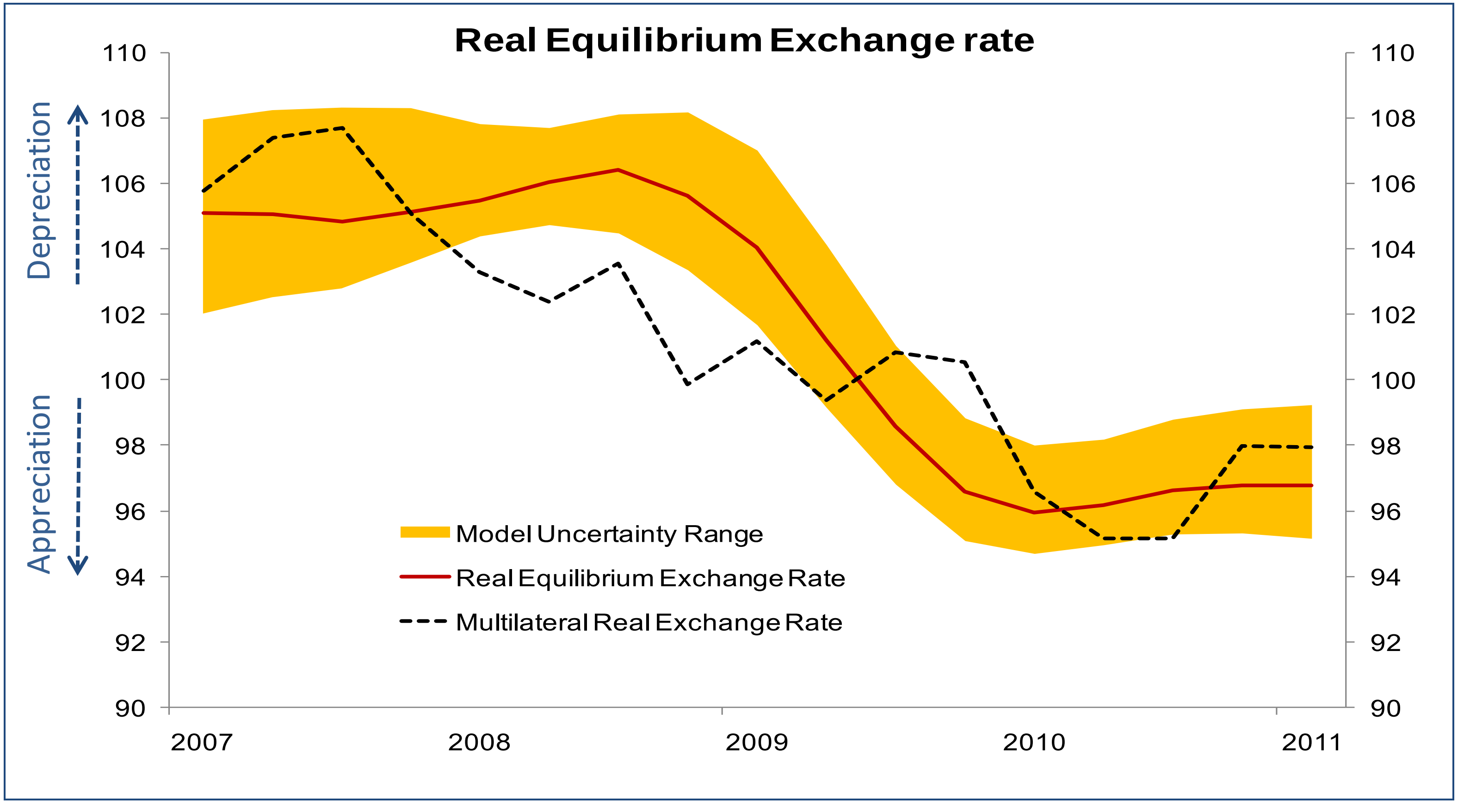
	2006	2007	2008	2009	2010	2011	2012*
Real Brasilero/Dolar	2,5	6,4	15,0	11,4	3,0	5,7	2,5
Peso Colombiano/Dolar	4,3	5,2	10,9	9,4	3,4	3,3	2,3
Peso Chileno/Dolar	1,7	2,8	14,3	6,6	4,4	4,2	2,3
Peso Mexicano/Dolar	2,3	1,1	10,5	4,5	2,1	6,6	2,8
Nuevo Sol/Dólar	1,7	2,4	4,2	4,0	0,8	1,3	0,3

*Data are as at 9 March 2012

* Average of nominal foreign exchange rates index of other LATAM countries.

Real exchange rate aligned with macroeconomic fundamentals

The CB follows indicators for the equilibrium real exchange rate to identify any buildup of financial mismatches (created by excessive short-term financing to non-tradable sectors) that can exacerbate the risk of asset bubbles.



Source: BCRP.

Sterilized FX intervention and CB Balance sheet

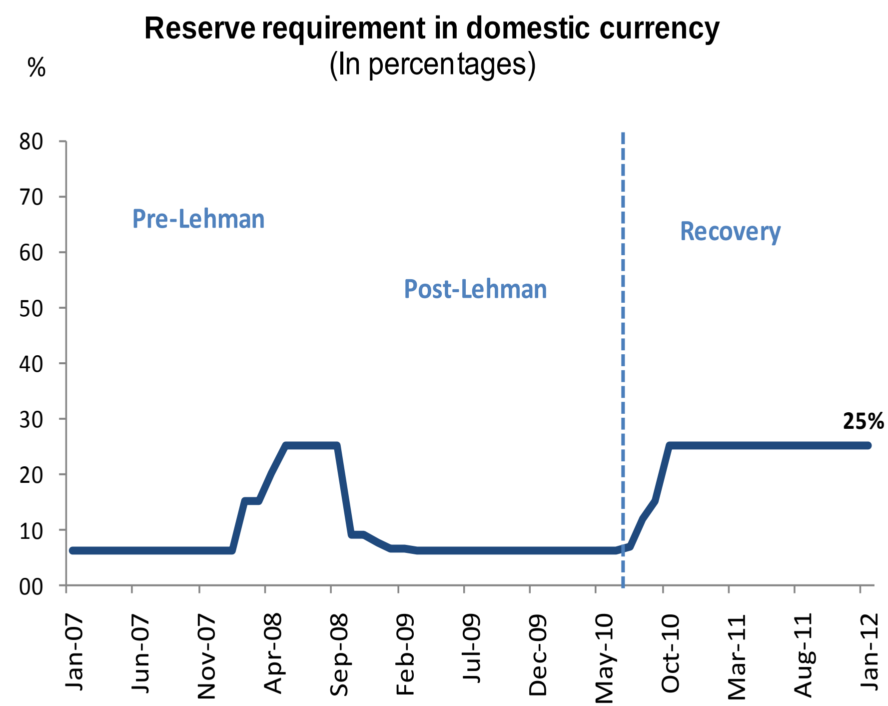
The increase in the CB balance sheet has been supported by public sector deposits, reserve requirements and, to a minor degree, CB securities.

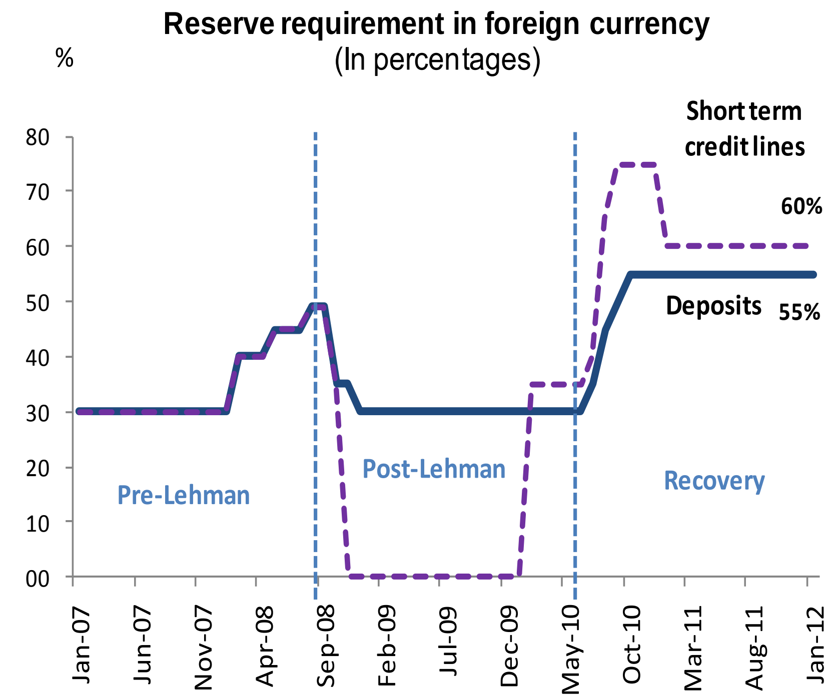
Peru: Central Reserve Bank Balance Sheet
(As percentages of GDP. December 31, 2011)

Assets			Liabilities
International reserves	**27,6**	**Public sector deposits**	**10,5**
		In domestic currency	6,7
		In foreign currency	3,8
		Reserve requirements	**7,6**
		In domestic currency	2,6
		In foreign currency	5,0
		Central Bank instruments	**3,6**
		Cash holdings	**5,7**
		Other liabilities	**0,2**

Reserve requirements on banking liabilities

Monetary policy includes, with less frequency, reserve requirement ratios as liquidity management tools to stabilize credit. Additionally, to contain the risks associated with financial dollarization, the CB applied higher reserve requirements to FX banks' liabilities (FX deposits and foreign short-term credit lines)





Pre-Lehman Policy Actions: August 2007 – August 2008

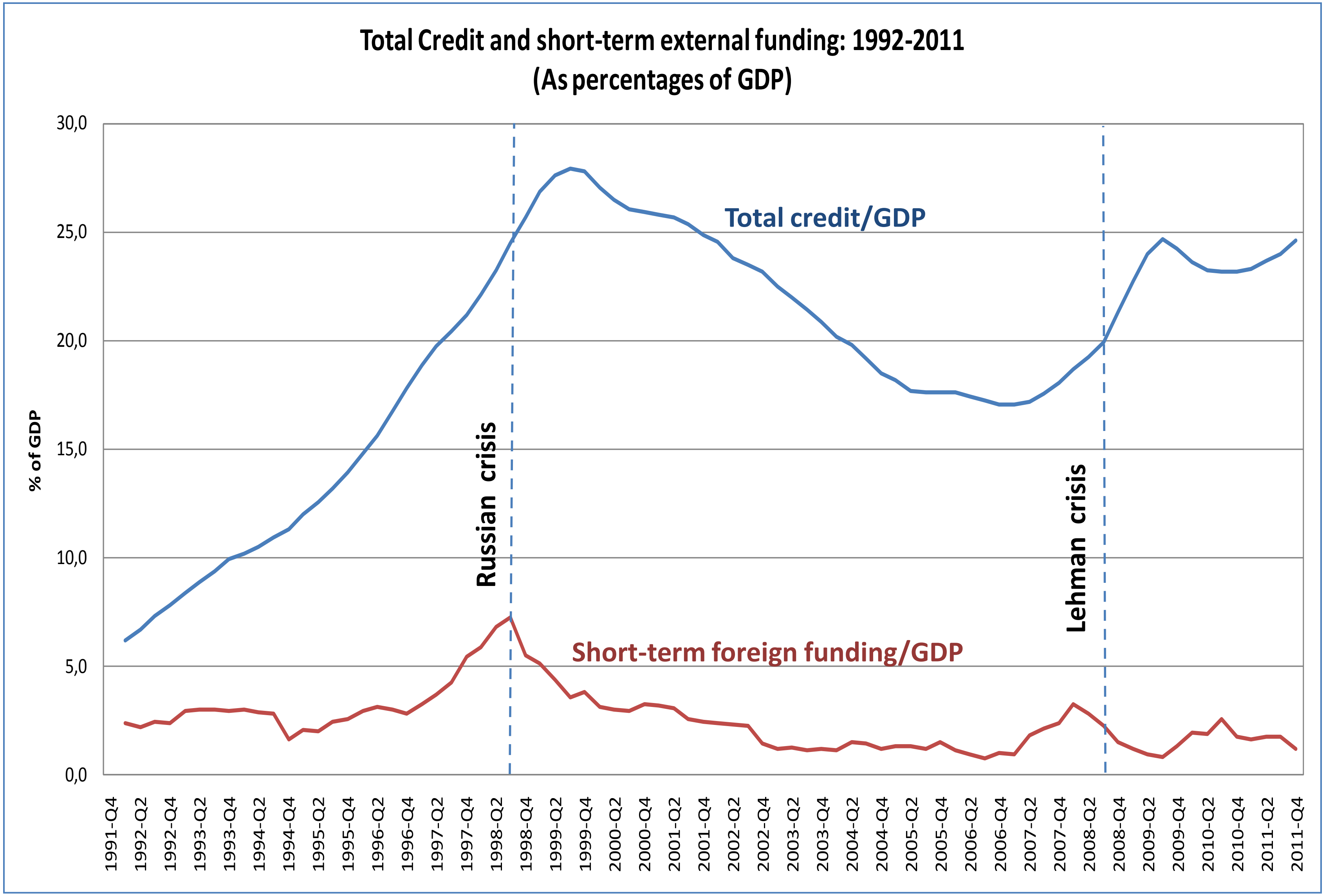
- Reserve Requirements as a first line of defense
  - Higher reserve requirements in domestic currency (from 6% in August 2007 to 25% in August 2008) and foreign currency (from 30% to 49% in the same period)
  - 120% marginal reserve requirement on liabilities in domestic currency of local banks with institutional non-resident investors
  - 4% fee on purchases or sales of BCR paper to participants other than local financial institutions
- Sterilized FX intervention
  - Purchases of USD 8,4 billion
  - Sterilization with central bank certificates and fiscal surplus
- Conventional monetary tightening
  - Increase of the policy rate by 200 bps to 6,5%

Operations of Non-resident Investors

	Pre-Lehman				Post-Lehman			
	Dec-07	**Mar-08**	**Jun-08**	**Sep-08**	**Dec-08**	**Dec-09**	**Dec-10**	**Dec-11**
1. Holdings of Central Bank Certificates (Percentage of total)	16,6%	37,6%	40,3%	40,7%	28,5%	1,7%	0,0%	0,0%
2. Holdings of Treasury Bonds in Domestic Currency (Percentage of total)	30,6%	36,4%	35,5%	32,4%	27,1%	19,3%	42,9%	45,4%
3. Investments in the stock exchange market (Percentage of total stocks)	36,5%	40,6%	40,8%	36,1%	34,0%	36,3%	35,0%	30,8%
4. Non-residents deposits in domestic currency in the banking system (12 months percentage variations)	17,6%	964,1%	237,6%	98,2%	-12,4%	2,8%	54,4%	-1,9%
5. Long PEN FWD position (In millions of US$)	-977	392	1 026	1 094	1 540	10	205	1 925
6. Total holdings (Percentage of GDP)	**21,4%**	**26,9%**	**22,8%**	**17,7%**	**13,6%**	**18,2%**	**22,5%**	**17,2%**

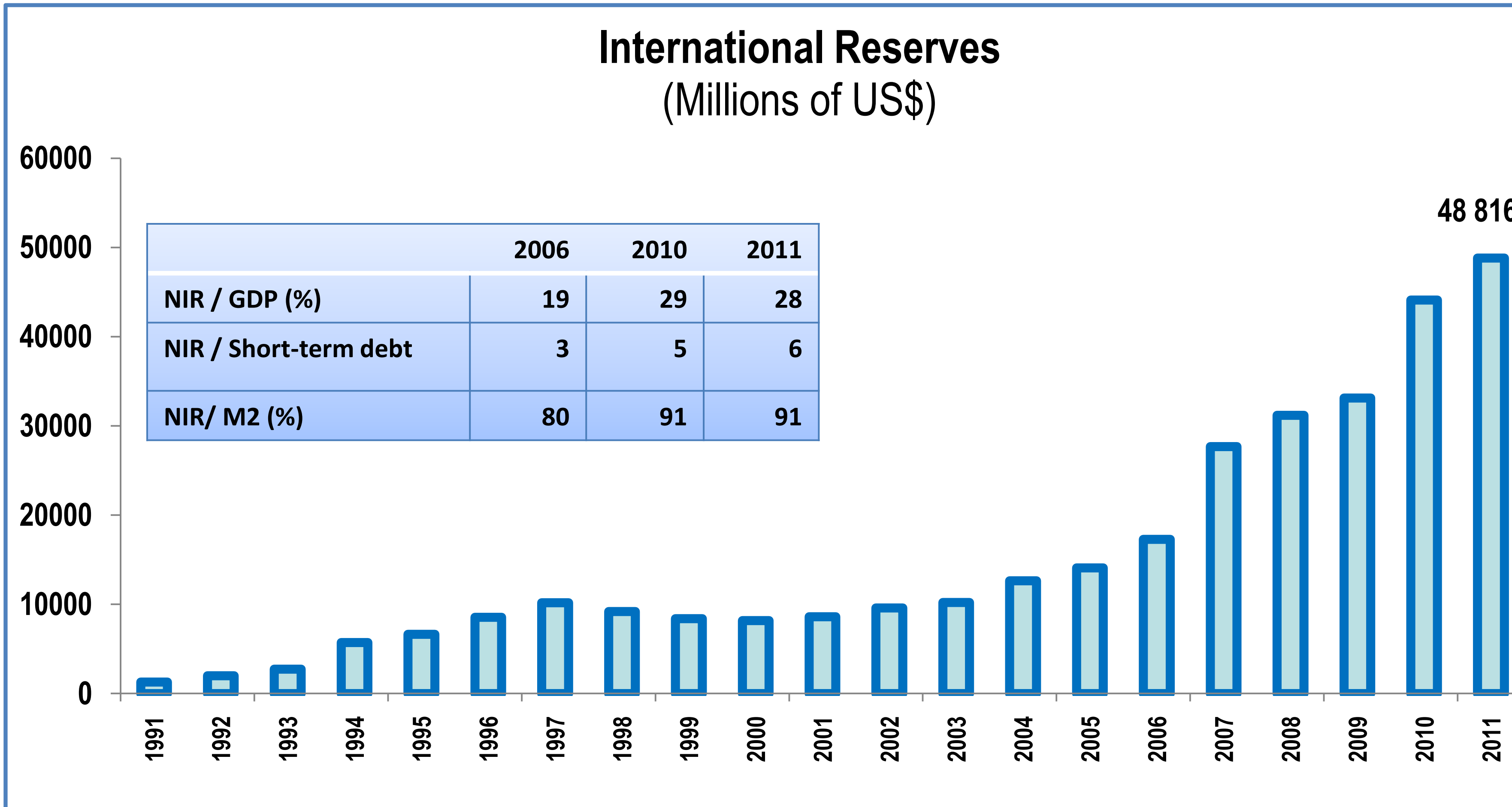
Reserve requirements

The reserve requirement policy favors long-term external funding



International Liquidity and a credible lender of last resort

Prevention is crucial to ring-fence risks. Accumulation of International Reserves provides a buffer against a sudden stop of external funding



	2006	2010	2011
NIR / GDP (%)	19	29	28
NIR / Short-term debt	3	5	6
NIR/ M2 (%)	80	91	91

Post-Lehman Policy Actions: Crisis management (2008)

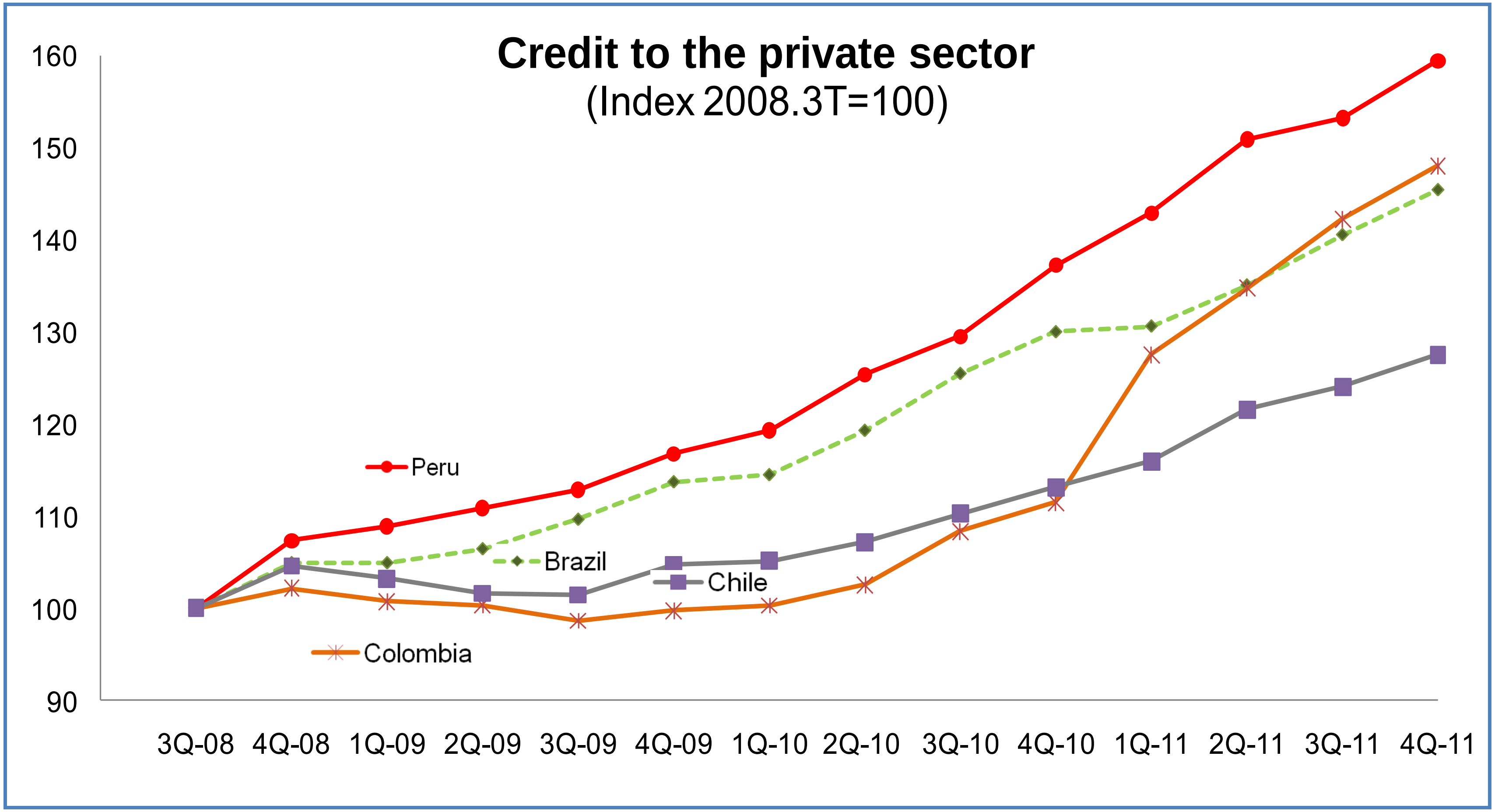
The effectiveness of the CB as lender of last resort and liquidity provider, in both local and foreign currency, is critical to the continuity of the payments system to avoid a credit crunch.

Peru: Monetary Operations of the Central Bank (Q_IV-2008)	
	As percentage of GDP
1. REPO (maturities up to 1 year)	1.5
2. FX Sales[1/]	6.2
3. FX Swaps	0.2
4. Reserve Requirements (reduction)	1.4
Total	**9.3**

[1/] Includes net issuances of exchange rate-indexed Central Bank CDs

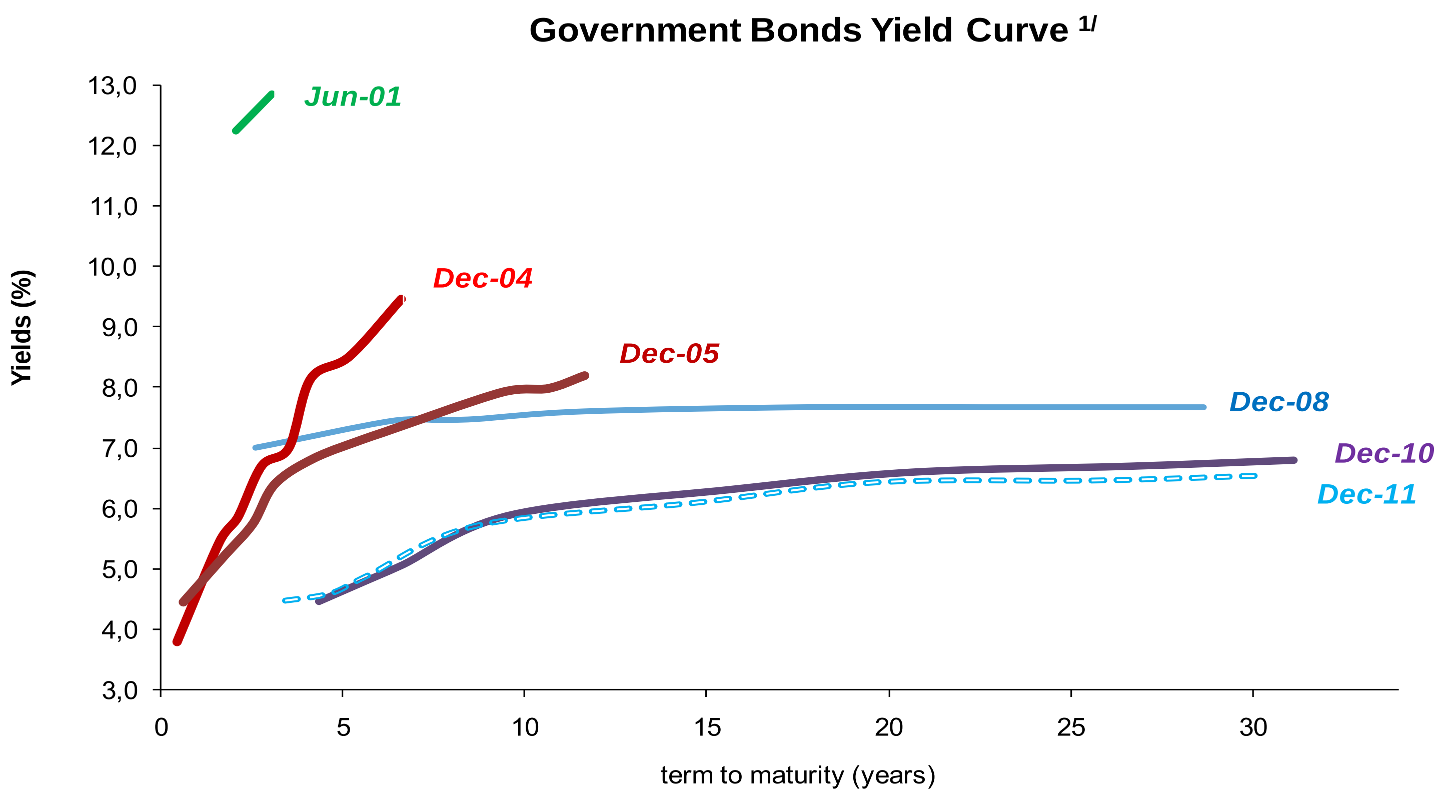
Avoiding a credit crunch

A massive CB liquidity injection in local and foreign currencies ensured normal credit flows after the Lehman crisis.



Fiscal Support to Macrofinancial stability

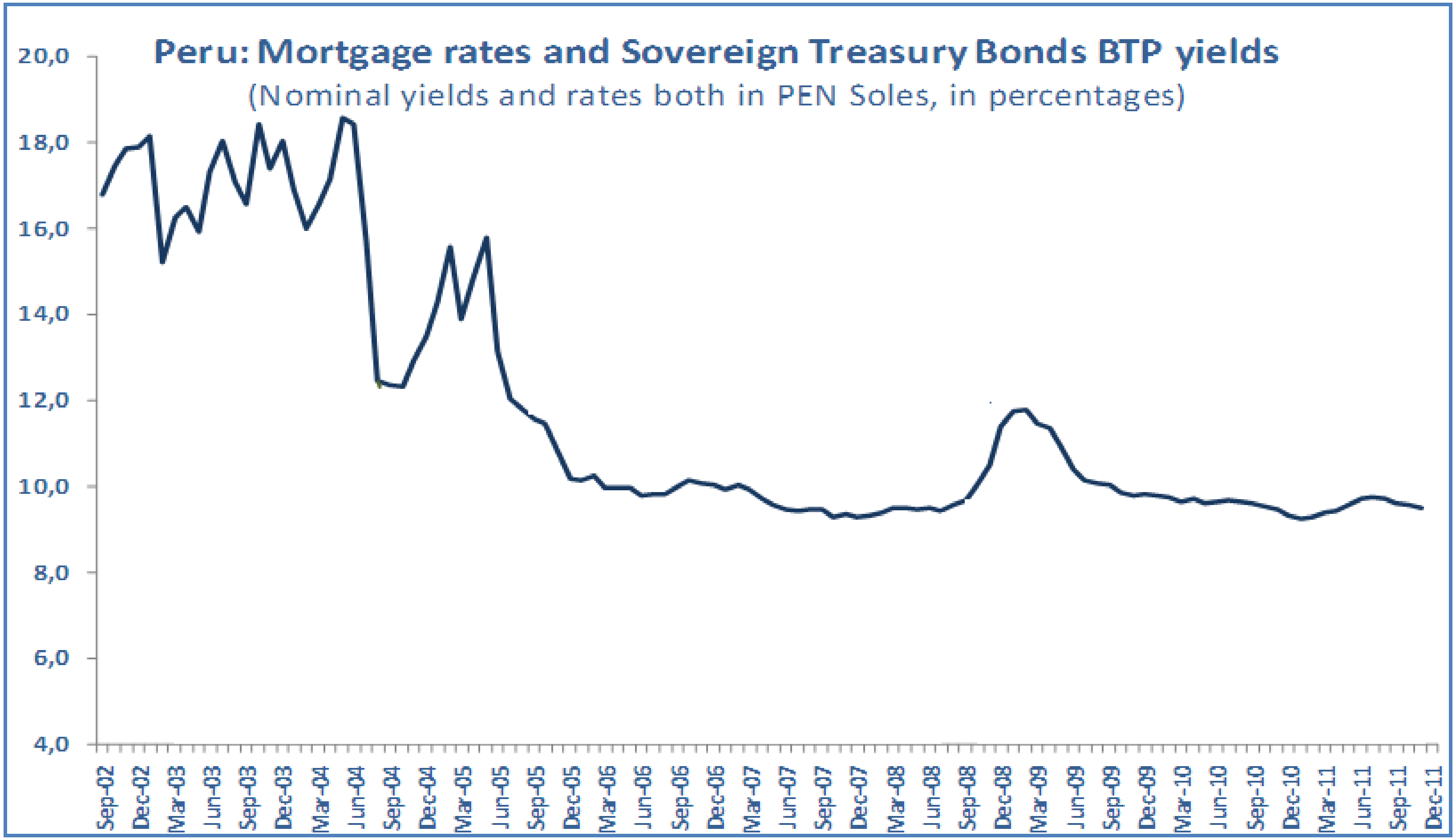
- Fiscal Policy and Public Debt management have contributed to the development of a local bond market in domestic currency and to an active liability management, increasing the share of domestic debt in local currency.



[1/] End of period figures

Benchmarking the interest rate of longer-term financing

The yield curve of public bonds is a benchmark to private issuances of longer-term debt at nominal and fixed interest rates, thus reducing the importance of dollar financing . The yields of public bonds in local currency has anchored mortgage rates.



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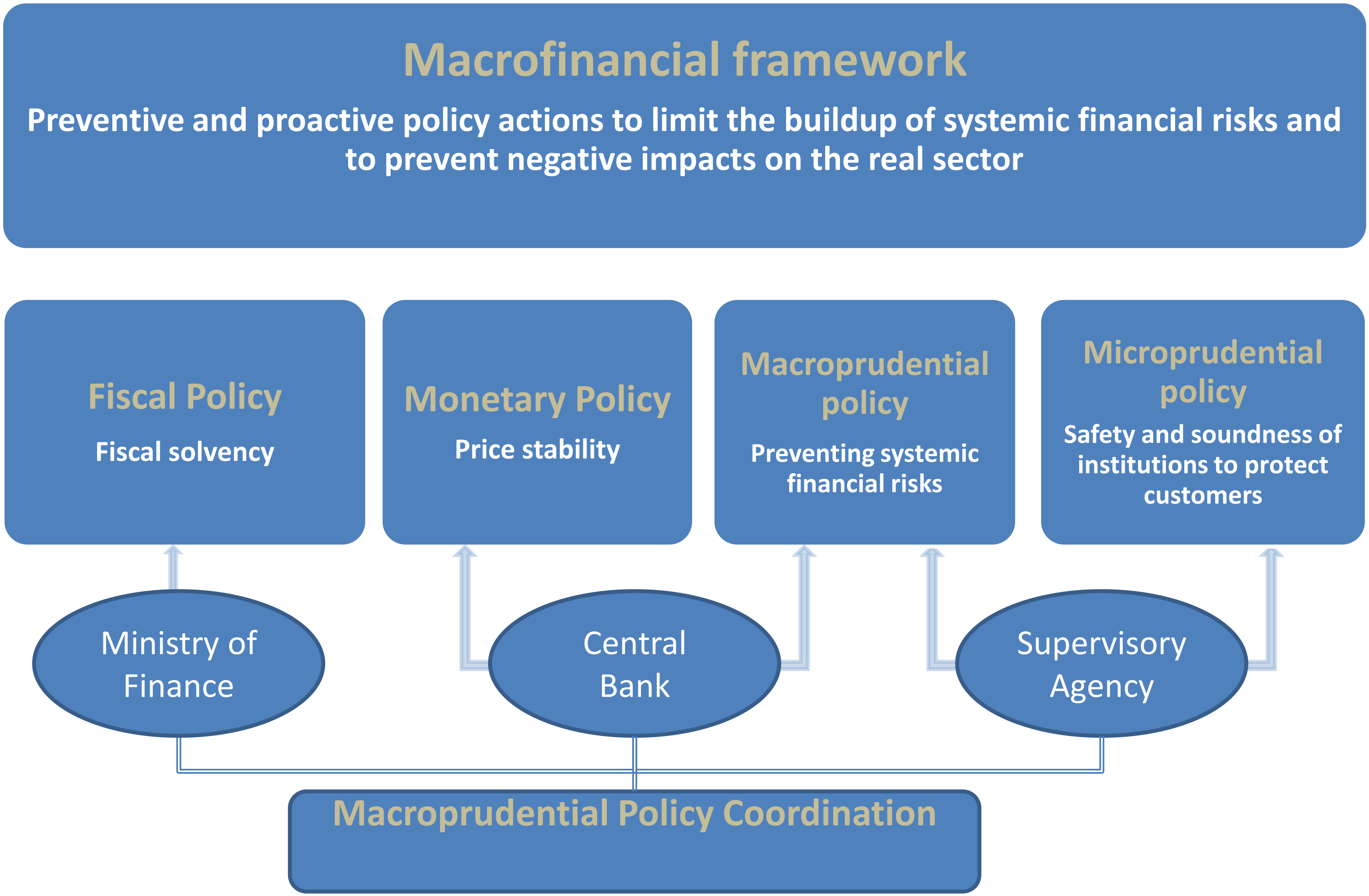


Macrofinancial framework
Preventive and proactive policy actions to limit the buildup of systemic financial risks and to prevent negative impacts on the real sector
Fiscal Policy
Fiscal solvency
Monetary Policy
Price stability
Macroprudential policy
Preventing systemic financial risks
Microprudential policy
Safety and soundness of institutions to protect customers
Ministry of Finance
Central Bank
Supervisory Agency
Macroprudential Policy Coordination

Macroprudential Framework: Some general characteristics

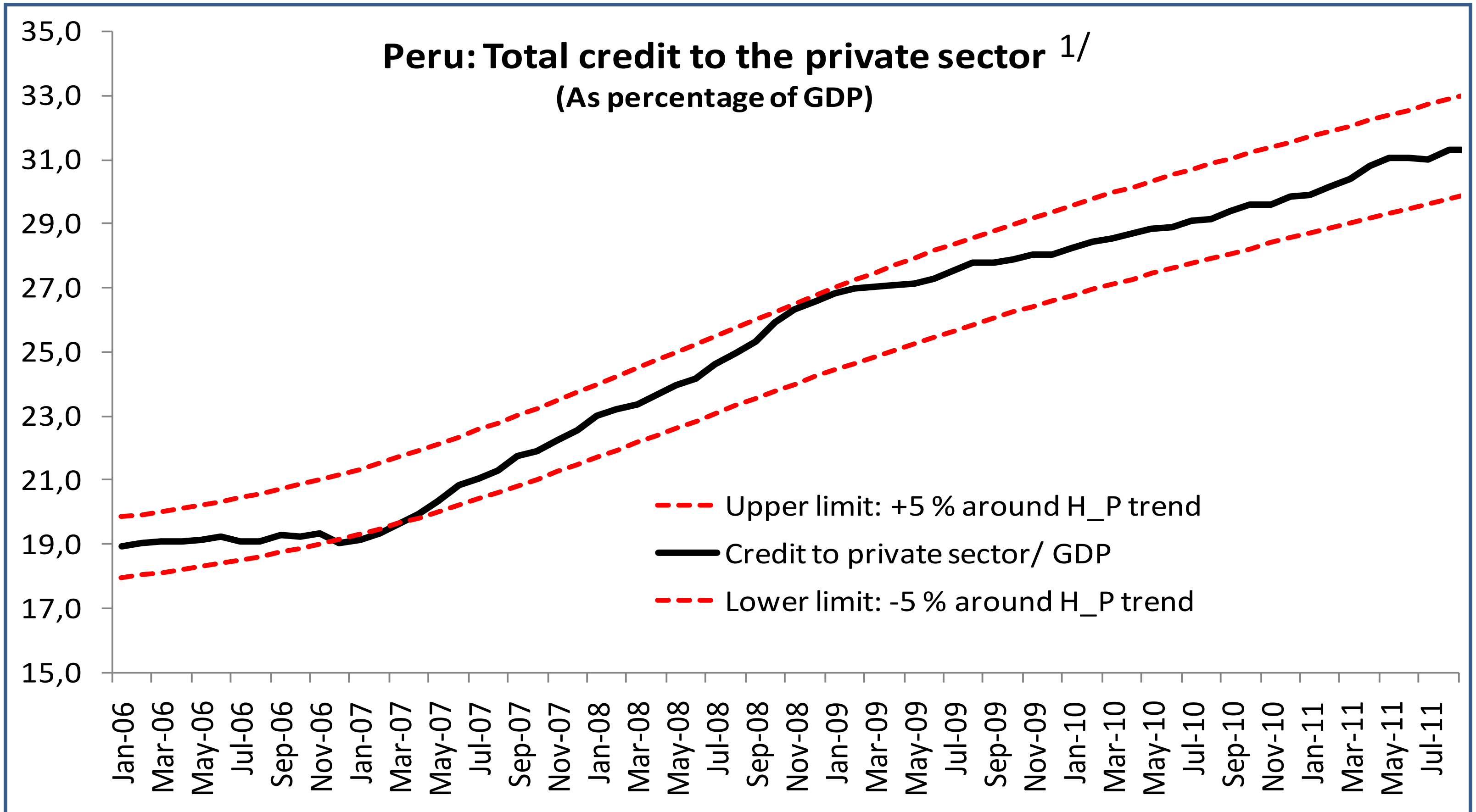
- Objective
  - Limiting the build up of **<u>systemic</u>** financial risks to prevent negative impacts on the real sector and the financial system as a whole
- Information, indicators and identification of systemic risks
  - Time series and cross sectional financial data
  - Credit/GDP, leverage indicators
  - Stress tests
- Instruments to ring-fence systemic risks and to manage residual risks
  - Reserve requirements, dynamic provisioning, countercyclical risk weights and capital buffers, time varying LTV ratios, Debt-to-Income and Loan-to-Income caps, time varying limits on currency mismatches, accumulation of international liquidity, and management of the balance sheet of the Central Bank
  - Risk of deviating the scope of macroprudential policy tools to other objectives
- Governance
  - Establishment of a clear mandate on preventing systemic financial crisis
  - Shared or an independent responsibility: risk of coordination failure
  - Prominent role of the Central Bank, given its system-wide view to identify systemic risks associated with its role in the payment system, the money market an the access to financial information
  - Without jeopardizing the operational autonomy and independence of the Central Bank

Macroprudential Institutional Framework in Peru

- The macroprudential policy tools are managed by different and independent public agencies
- The CB has as a single aim to attain monetary stability and has a limited set of policies to prevent a systemic financial crisis.
- Informal macrofinancial coordination meetings among the Minister of Finance, Heads of Supervisory Agencies and the Governor of Central Bank, with support of a Committee of deputies from these institutions.
- Quarterly presentations of the superintendent of banks in the Board of the CB about financial conditions and risks
- The CB, through its Financial Stability Report, identifies systemic risks and proposes preventive actions to enhance macrofinancial stability, including initiatives to develop and enhance the financial infrastructure.
- Residual risk: Coordination failure (information sharing, different perceptions about macrofinancial risks, shifting of responsibilities) because of the lack of a clear mandate to preserve macrofinancial stability

Macroprudential indicators

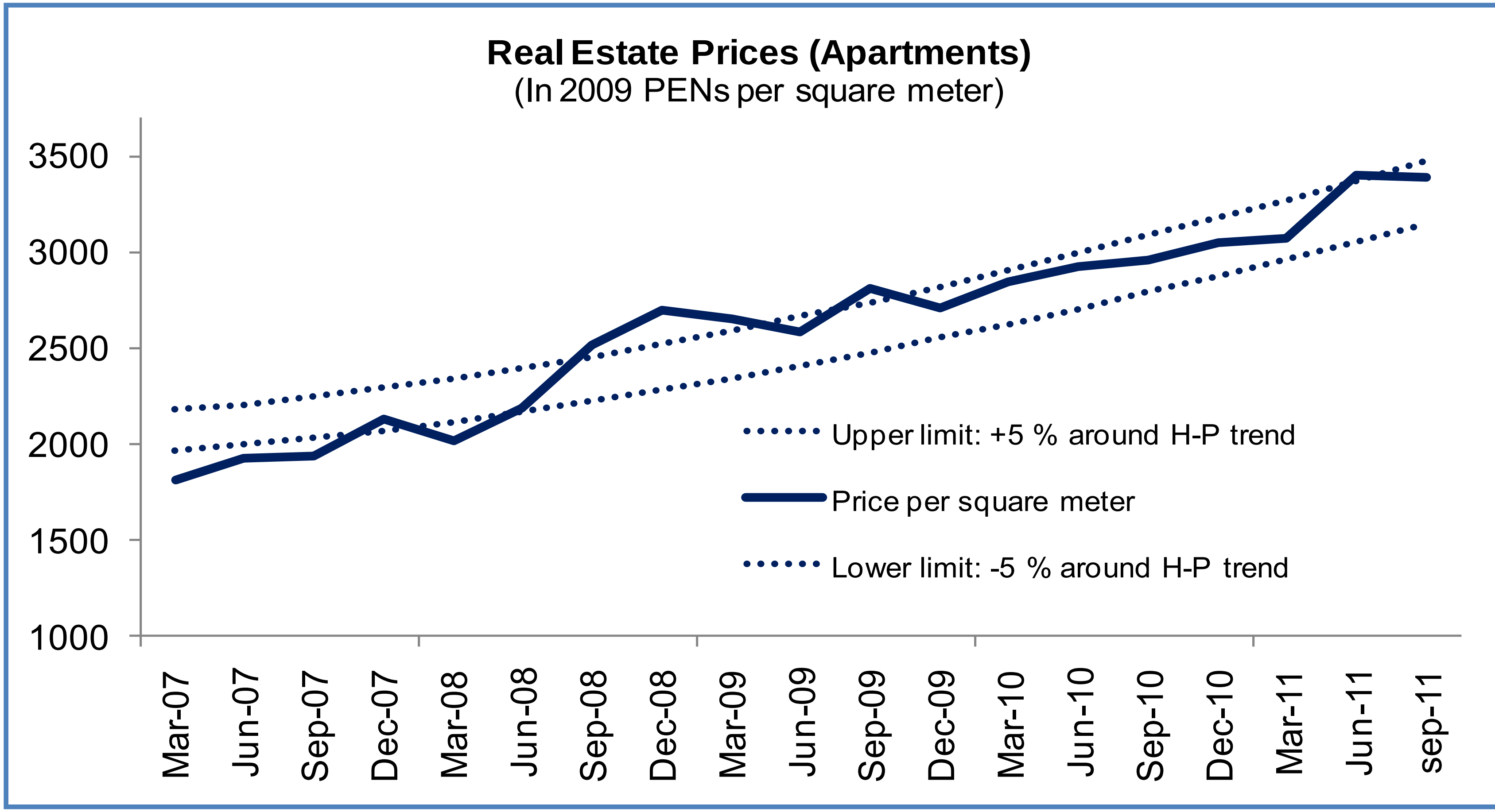
To avoid unsustained trends in the Credit/GDP ratio, the CB acts modifying the reserve requirement ratios.



1/ The trend is calculated unig Hodrick Prescott filter

Macroprudential Indicators

The CB also follows trends in the housing market.



Price/Income ratio (PIR) in the housing market				
Argentina	Brasil	Colombia	Perú	Uruguay
30	30	30	21	13

Source: Global Property Guide, 2011 for all countries except for Peru, which comes from the Central Bank

Actions by the Supervisory Agency contain elements of macro-prudential stability

- Cyclical provisions based on GDP growth: November 2008
- Additional capital requirements to limit exchange-risk of credits in dollars: 2005
- Limits to open FX positions of banks and pension funds
- Stress tests under adverse macroeconomic scenarios to assess credit contraction.
- "War-Games" to assess the degree of coordination among agencies under stress scenarios.
- Possible action: additional capital requirement on the excess of L/V ratios.

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Conclusions

- The macrofinancial stability framework reflects the country's specific characteristics.
- A proper functioning of the transmission mechanisms of monetary policy requires a sound functioning of the financial system.
- Financial dollarization in Peru warrants the adoption of a macro-financial approach to policy design.
- Further work is needed to institutionalize the coordination framework among independent public agencies to identify systemic risks, adopt preventive measures, react promptly to control residual risks during crisis events, and develop measures to build a solid financial infrastructure.