

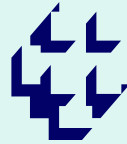


INFLATION TARGETING: BRAZIL'S EXPERIENCE

Paulo Vieira da Cunha
Deputy Governor

Presented at the High-Level Regional Seminar on Inflation Targeting
Hosted by the International Monetary Fund and Bank Al-Maghrib
Rabat, Morocco—April 4, 2007

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BANCO CENTRAL DO BRASIL

Inflation Targeting: Brazil's Experience

Seminar on Inflation Targeting

Bank Al Maghrib

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Outline

- I. Overview**
- II. Institutional Structure**
- III. Issues**
 - A. Shocks & Expectations**
 - B. Increasing Predictability**
 - C. Reducing External Vulnerability**
 - D. Reducing Fiscal Vulnerability**



I. Overview: Inflation Targeting Has Worked

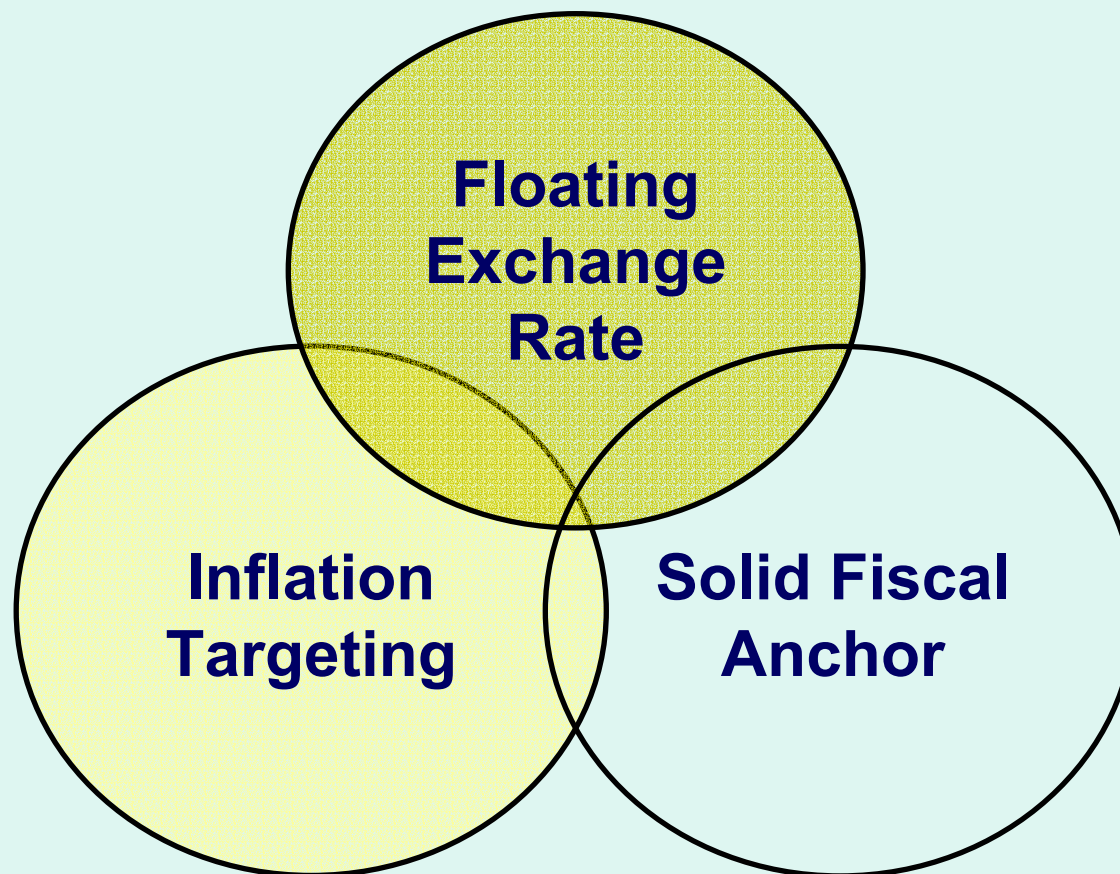


History

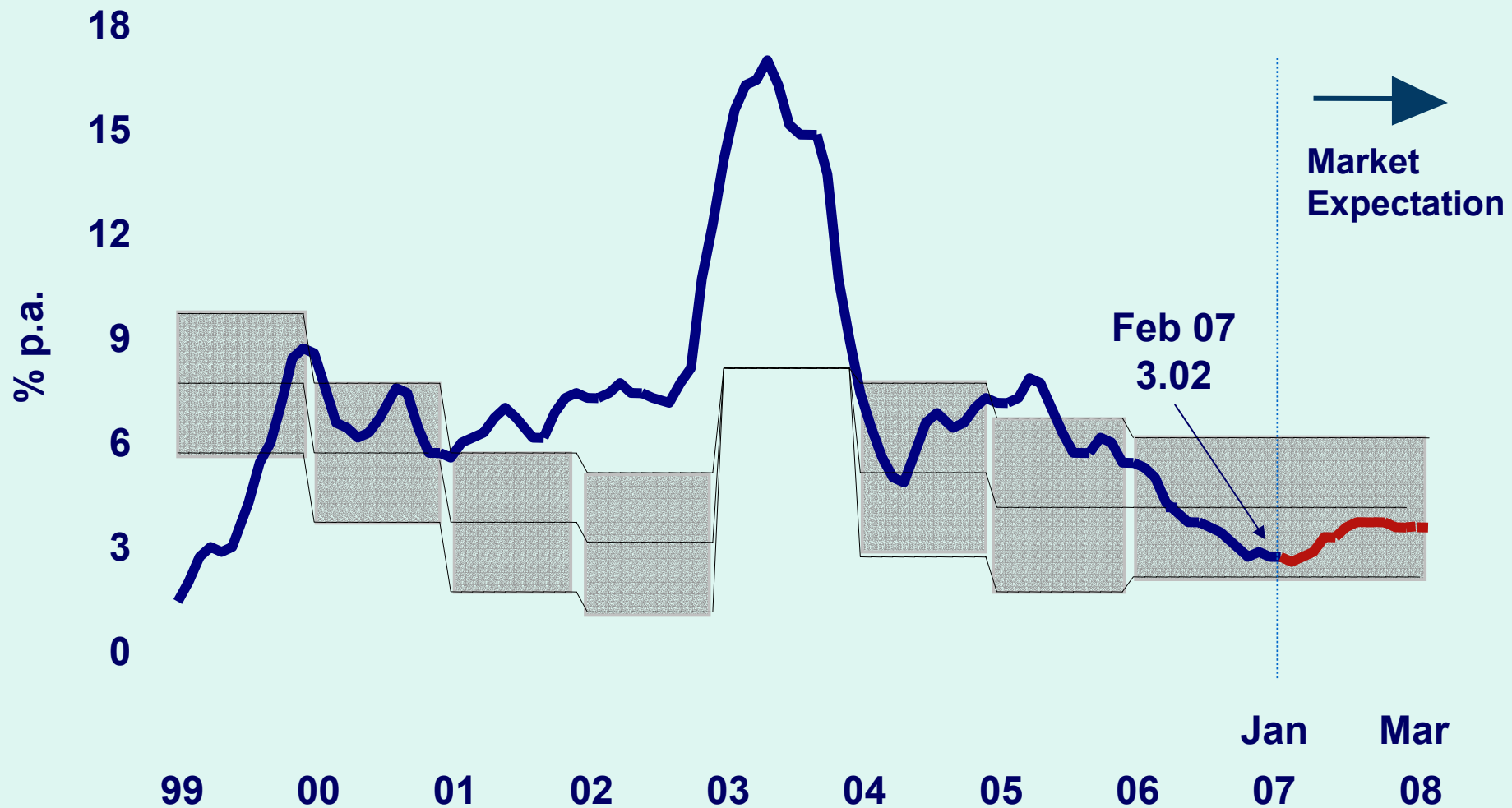
- **INFLATION TARGETING** was introduced in June 1999 at a time of great macroeconomic uncertainty — *but of low inflation*
- It followed critical economic reforms
 - Fiscal Responsibility Law
 - Social Security Reform (partial)
 - Privatization of SOE's
 - Trade and Capital Account Liberalization
 - Restructuring and Recapitalization of Private Banks (PROER)
 - Closure and/or Divestiture of Public Banks (PROES)



1999: The New Macroeconomic Regime



Targets vs. Consumer Inflation

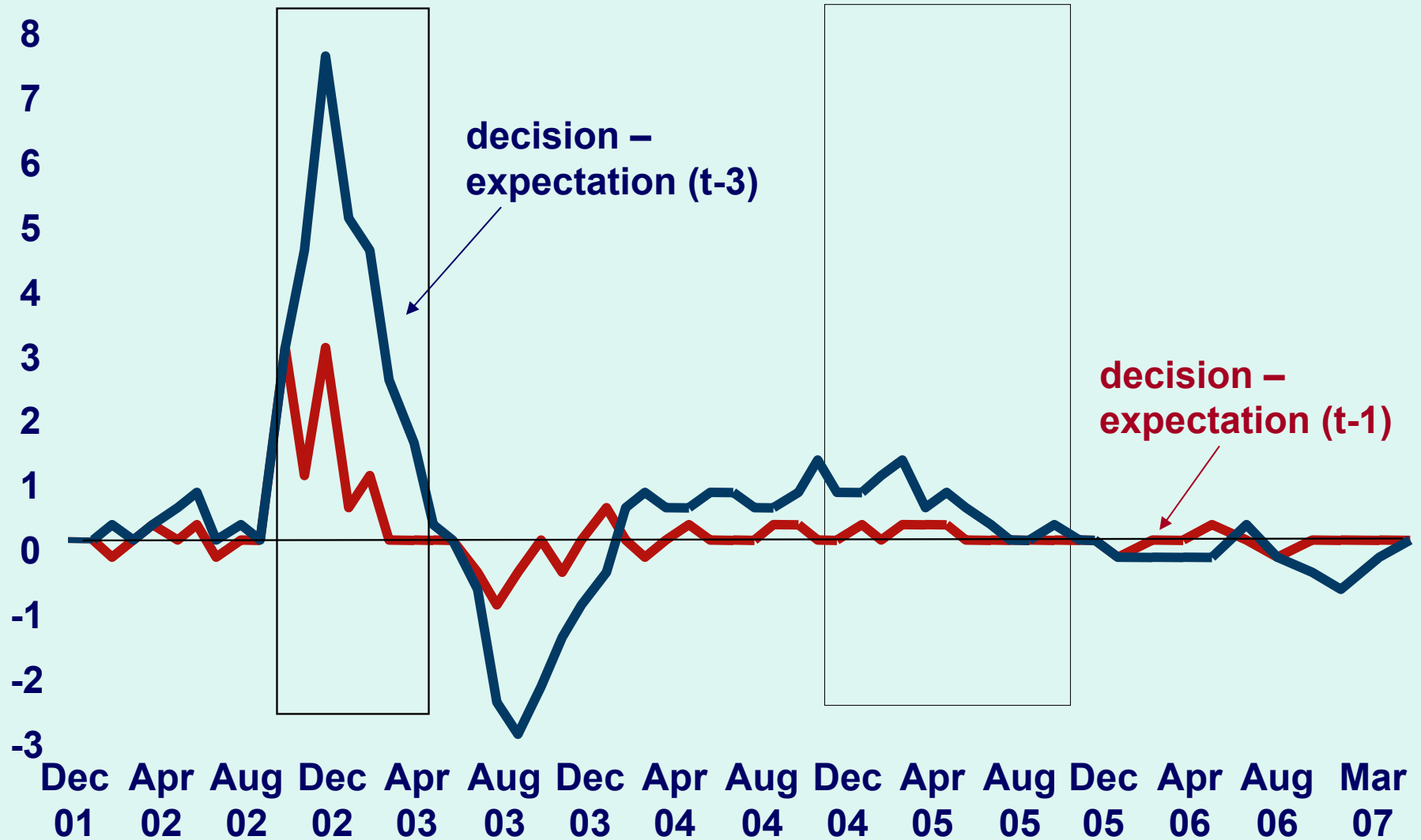


Volatility of Inflation, GDP & Policy Rate

Period	Inflation			GDP			Selic (Policy) Rate		
	Mean	S.D.	C.V.	Mean	S.D.	C.V.	Mean	S.D.	C.V.
<i>Prior to IT</i>									
4T94 – 2T99	10,4	9,9	95%	2,0	6,3	311%	35,4	14,1	40%
<i>IT</i>									
3T99 – 4T06	7,5	5,6	74%	2,5	3,5	139%	18,4	2,9	16%
<i>IT (excluding external shocks: 3T01 a 2T03)</i>									
3T99 – 4T06	6,0	3,3	55%	3,2	3,1	96%	17,5	2,2	12%
<i>IT (post external shocks)</i>									
3T03 – 4T06	5,4	2,3	42%	3,3	3,0	90%	17,4	2,5	14%

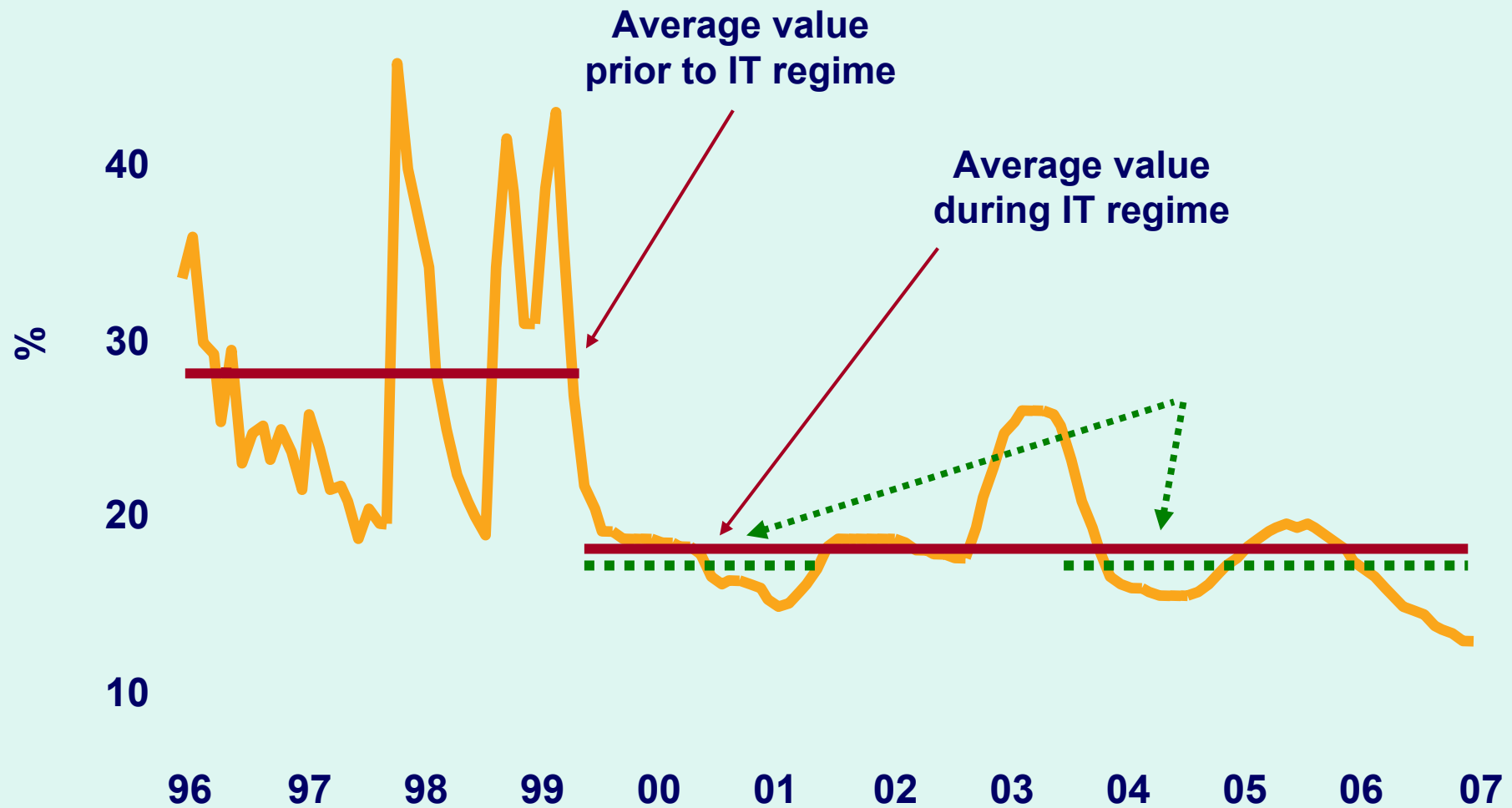


Predictability of Monetary Policy

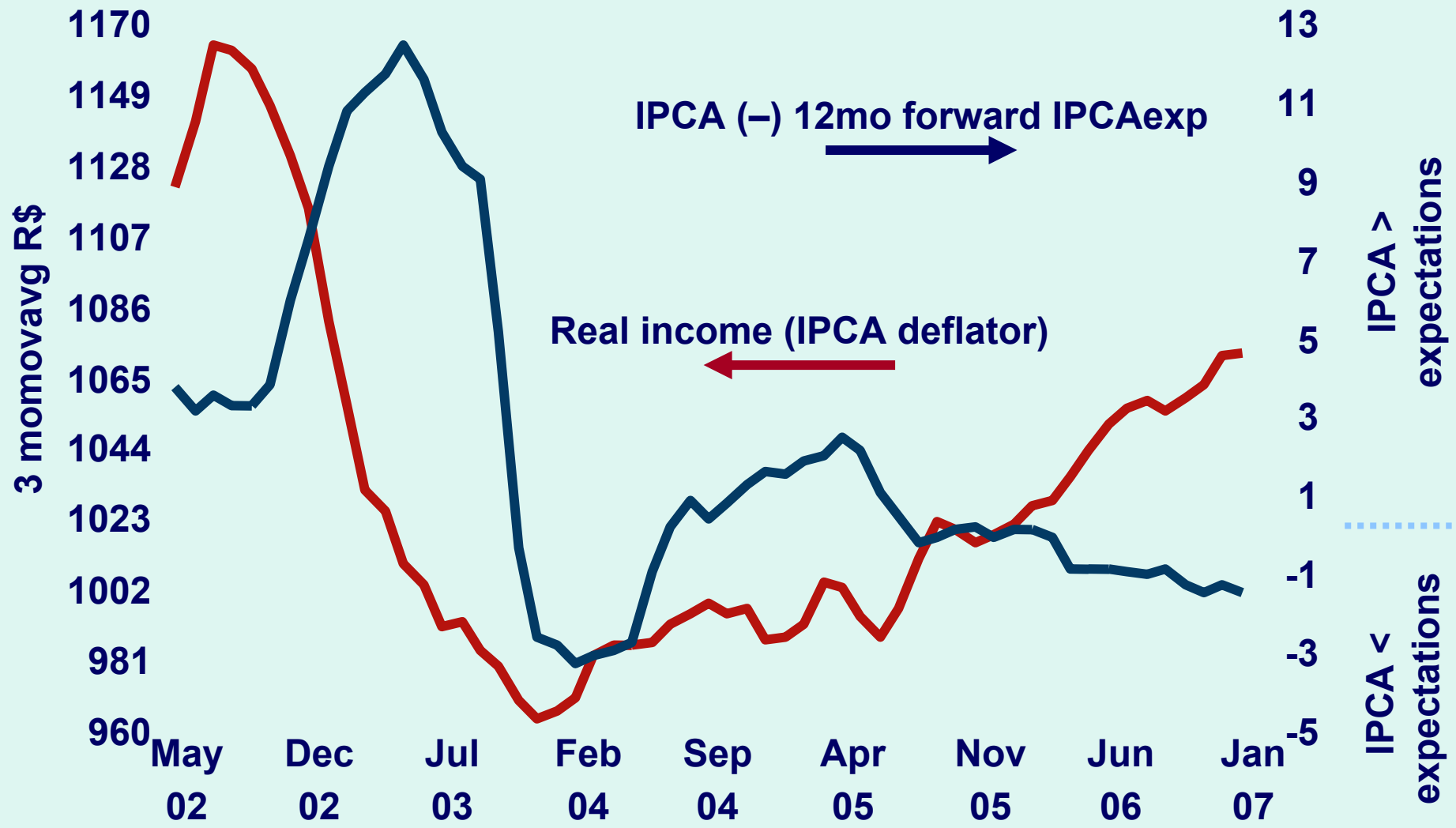


Shaded areas: cycles of rate hikes

SELIC (Policy) Rate



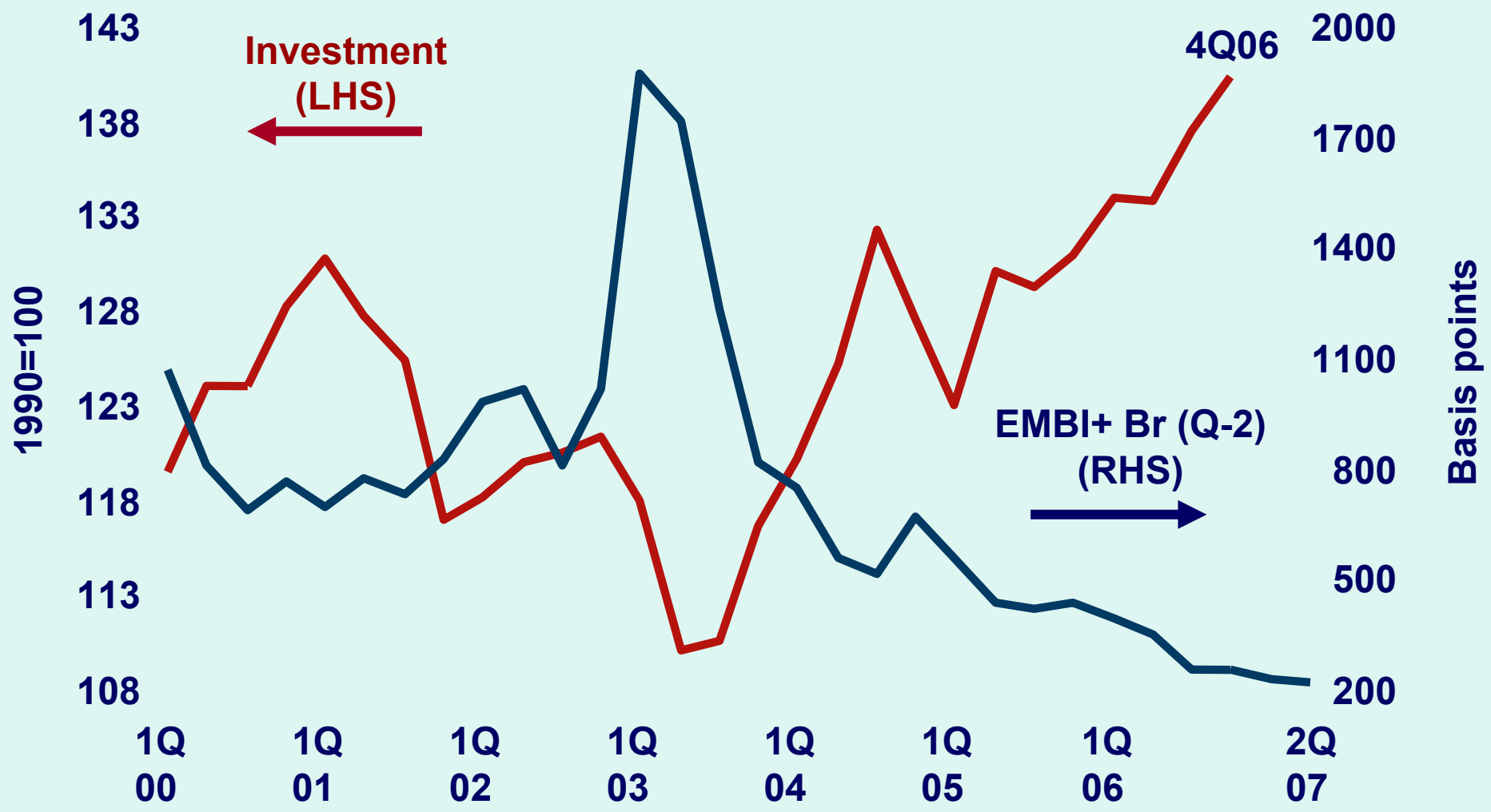
Real Income & Inflation “Surprises”



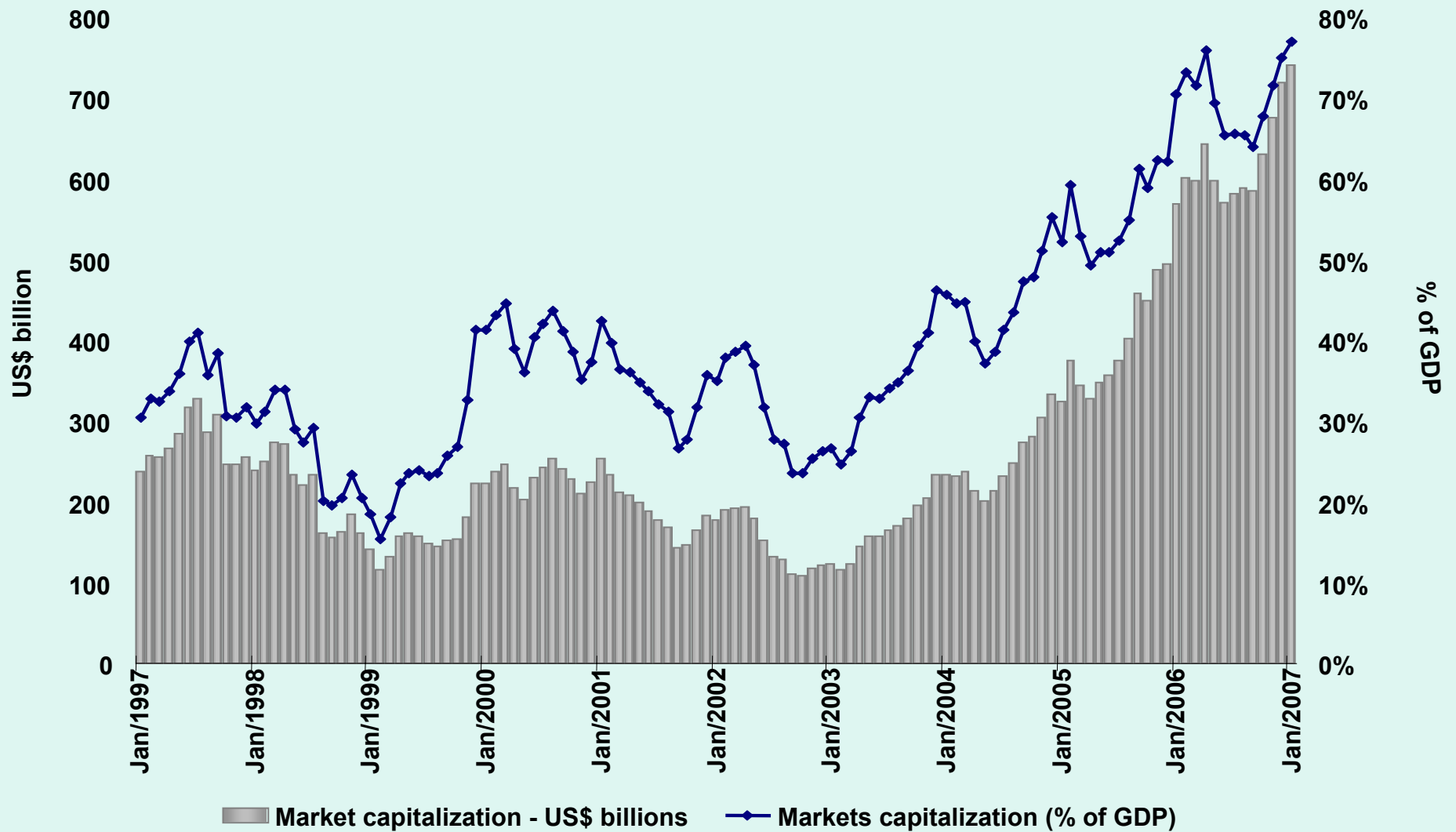
Credit to the Private Sector vs. Inflation



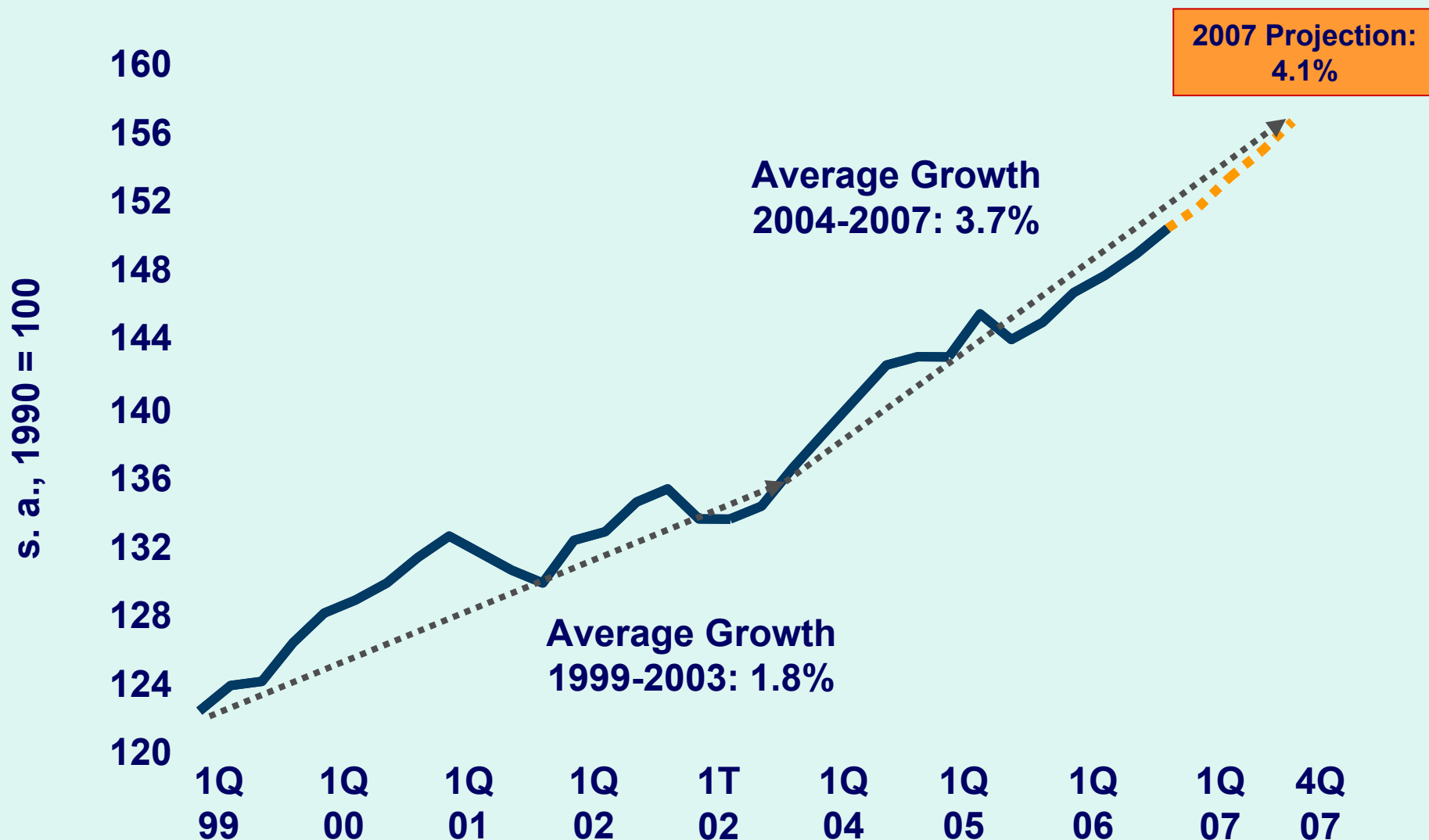
Risk and Investment



Stock Market (Bovespa) Capitalization

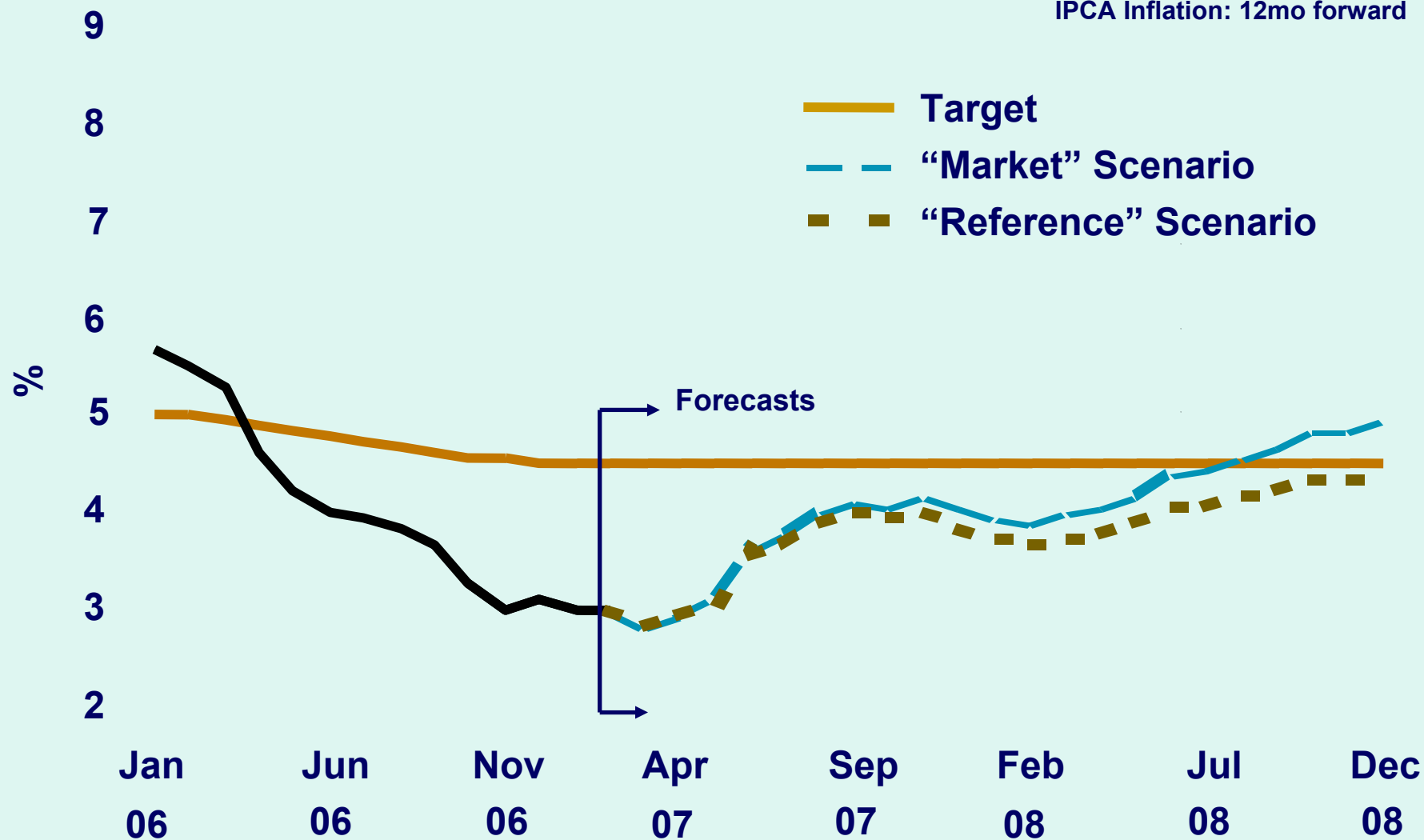


GDP Growth

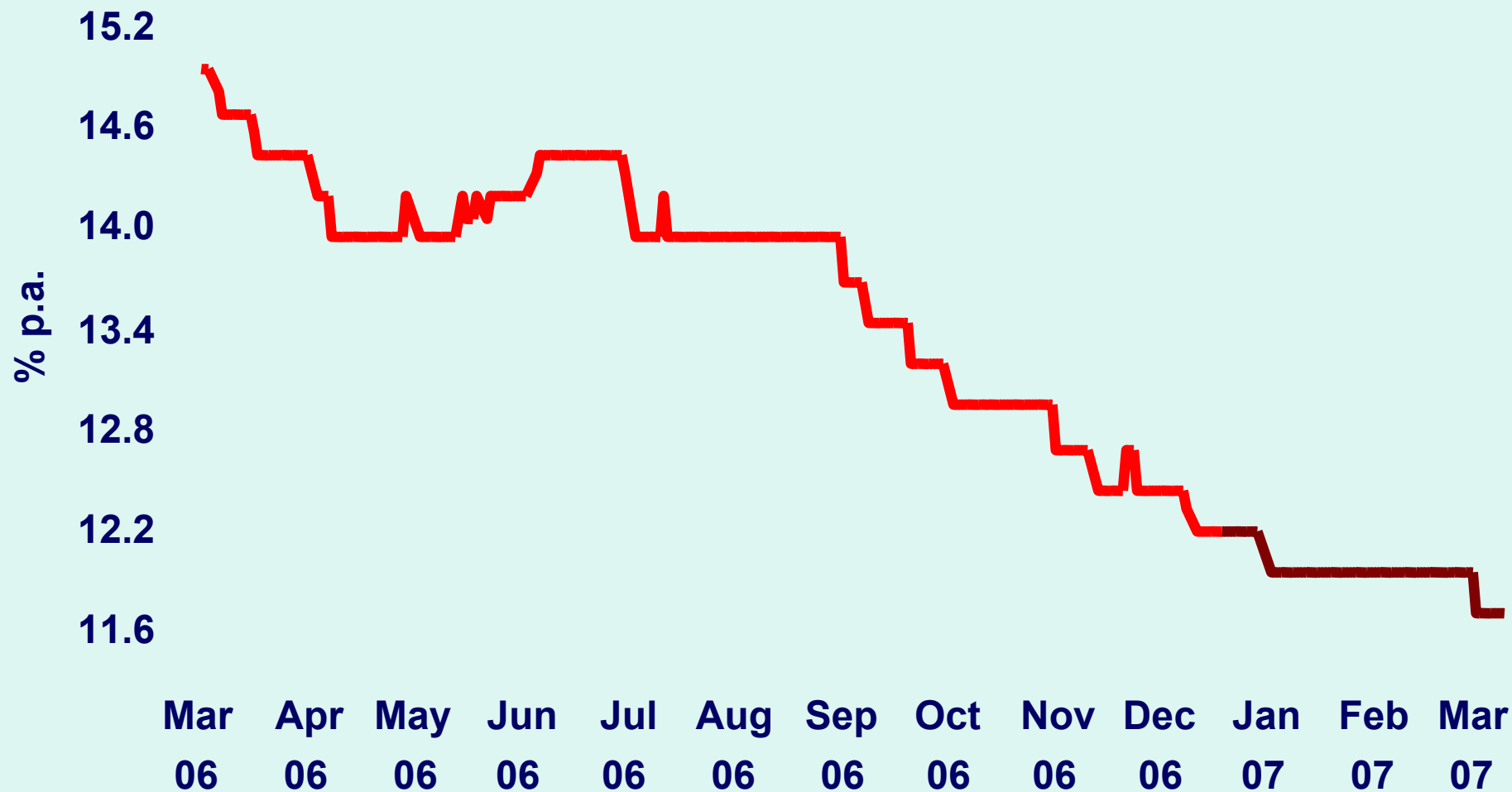


Target & Model-Generated Forecasts

IPCA Inflation: 12mo forward



Policy Rate: Expectations 6-mo Forward



II. Institutional Structure



Key Parameters

**National Monetary Council
sets the Inflation Target (Headline CPI-IPCA)
June of each year for 2 years ahead**

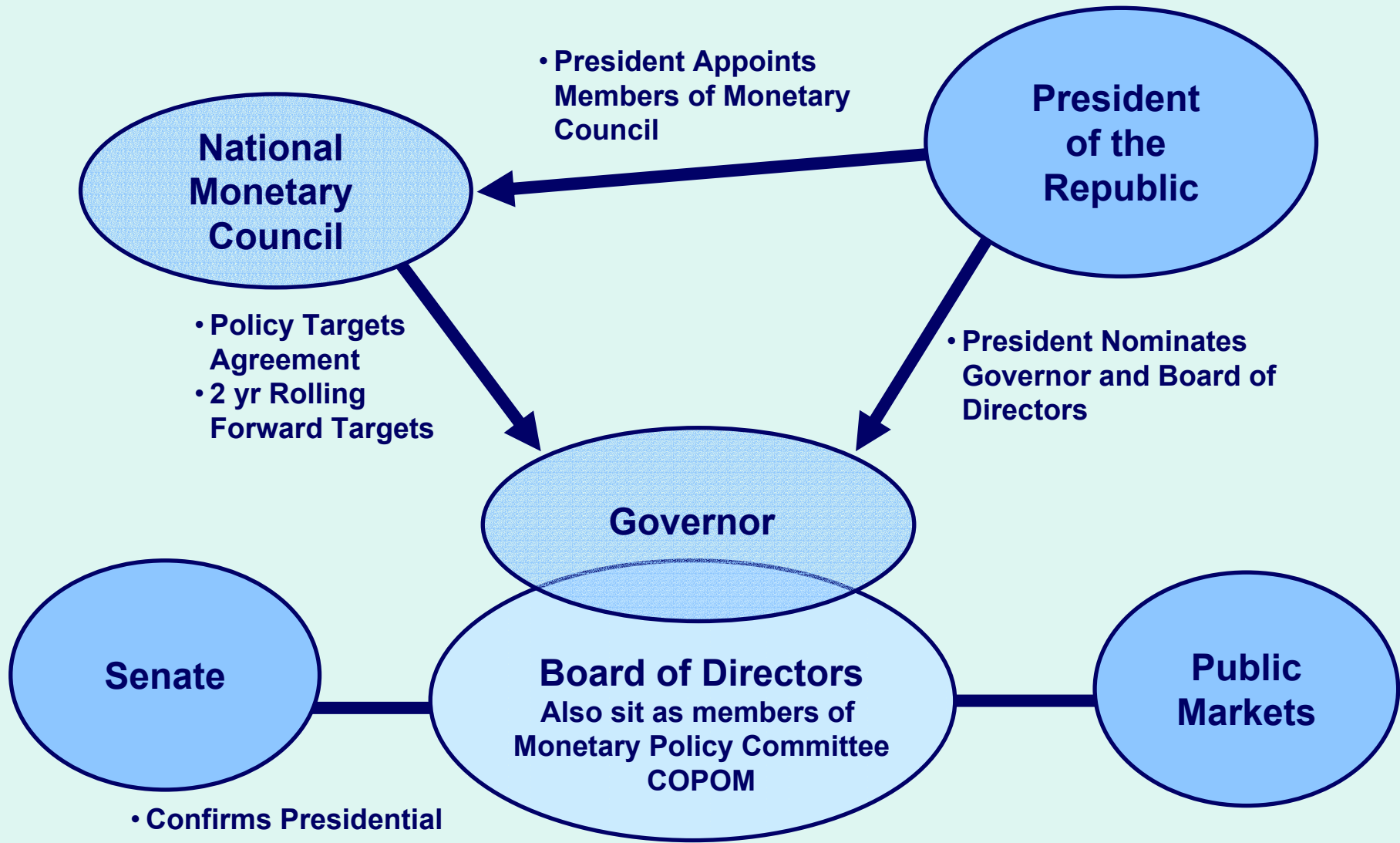
**Central Bank is charged with its
attainment
Band of $\pm 2\%$ w/o escape clause**

**The Monetary Policy
Committee (COPOM) sets
the policy interest rate
(SELIC)**

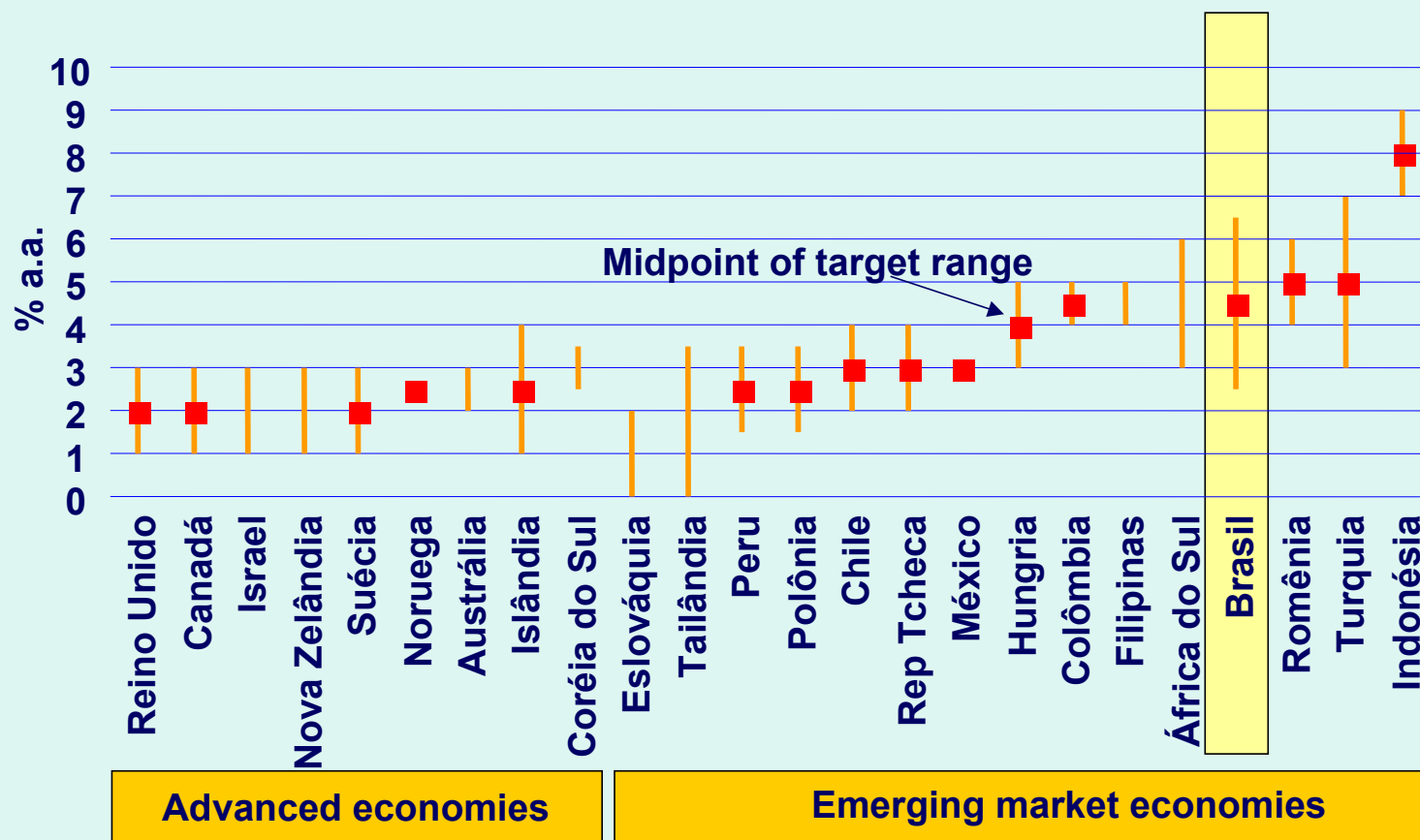
**The policy rate affects
inflation expectations and
actual inflation, with a lag**



Institutional Structure of IT



Inflation Targets & Bands: 2006



III. Issues



A. Shocks & Expectations

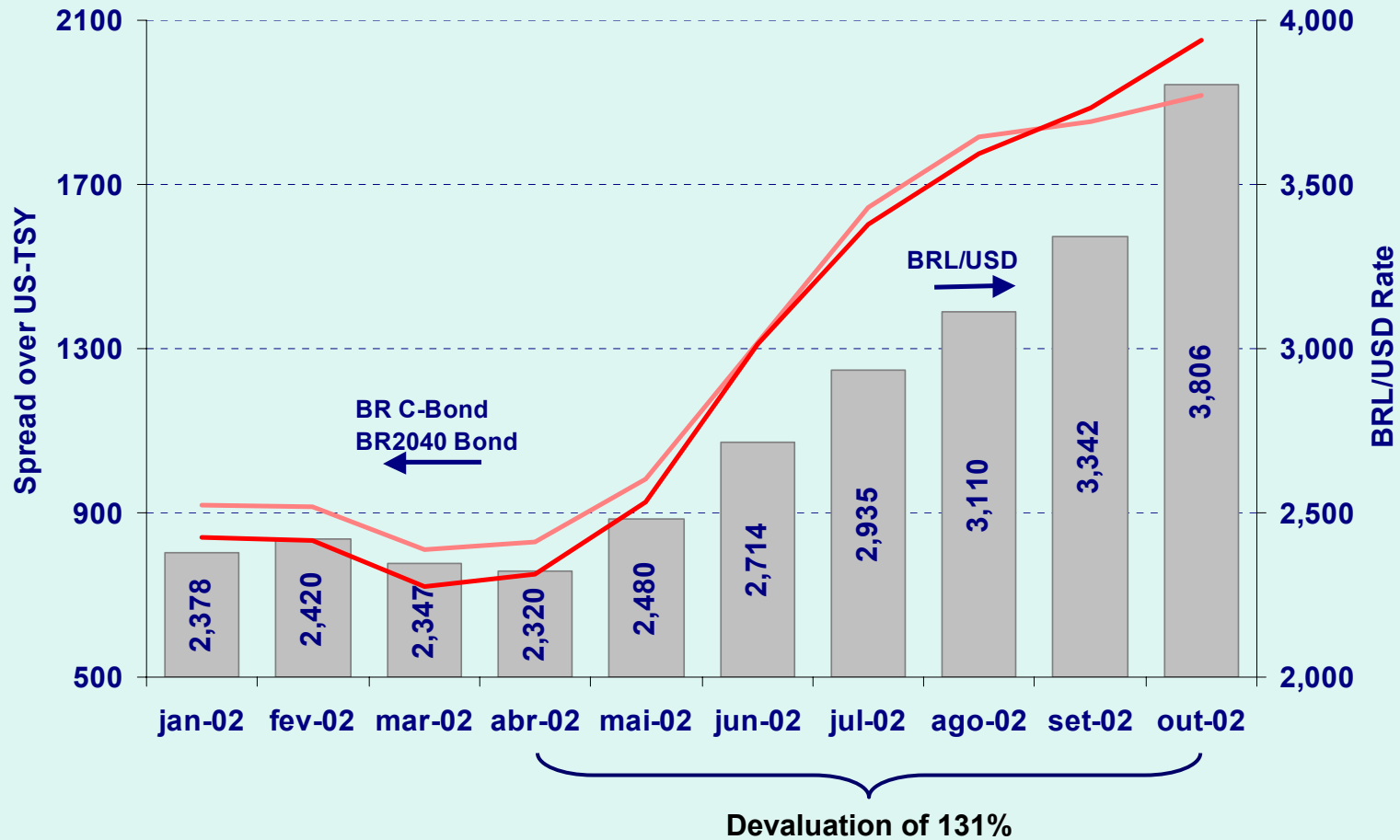


Price, Supply & Political Shocks: 2001-02

- **Domestic & external shocks:**
 - **Energy Crisis**
 - **Argentina-I**
 - **Argentina-II**
 - **Brazil's "fear of the left" political & risk aversion crisis**
- **Sudden stop in external capital flows and aversion to claims denominated in local currency**
- **Increase in country risk**
- **Exchange rate depreciation**
- **Pass-through to inflation (aggravated by backward-looking price setting rules for administered & regulated prices)**
- **Inflation at 7.7% in 2001 and 12.5% in 2002, missing the target ranges (4% + 2% in 2001 and 3.5% + 2% in 2002).**

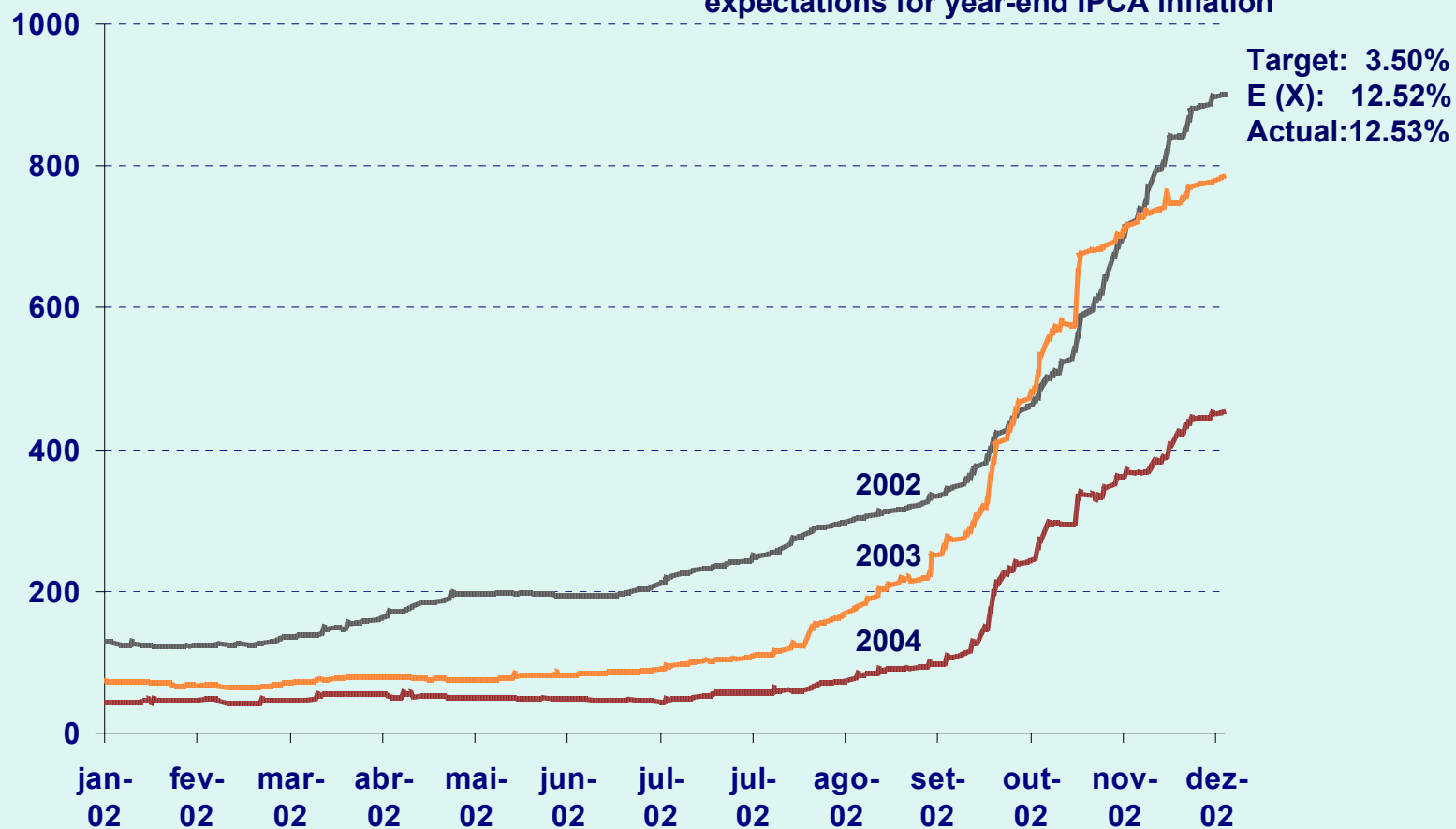


Political Shock: 2002



Expectations Deficit: 2002

Difference between measured expectations and the mid-point of the Inflation Target for the year
Based on the median of the sample of market expectations for year-end IPCA inflation

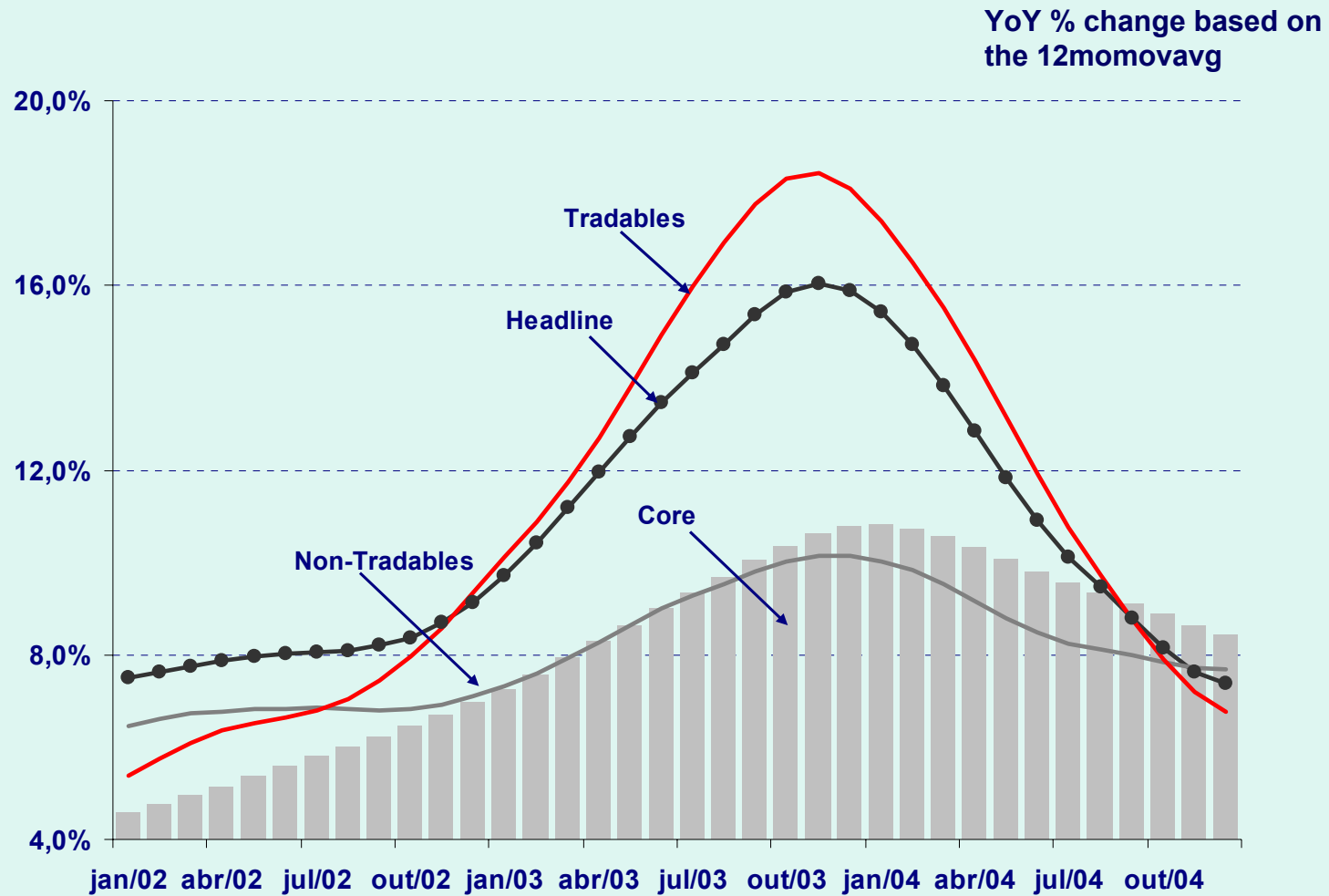


Rebuilding Confidence: 2003-2004

- **2002:** Inflation exceeded the target by a large margin
 - The disinflation trajectory lost credibility
 - Sharp increase in inflation expectations - medium term
- **2003:** Central Bank announced an adjusted target trajectory
 - The objective was to regain the lead over expectations, smoothing the cost of disinflation:
 - Adjusted targets trajectory proposed in 2003:
 - 2003 → 8.5% ± 2.5%
 - 2004 → 5.5% ± 2.5%



IPCA Inflation: 2002- 2004

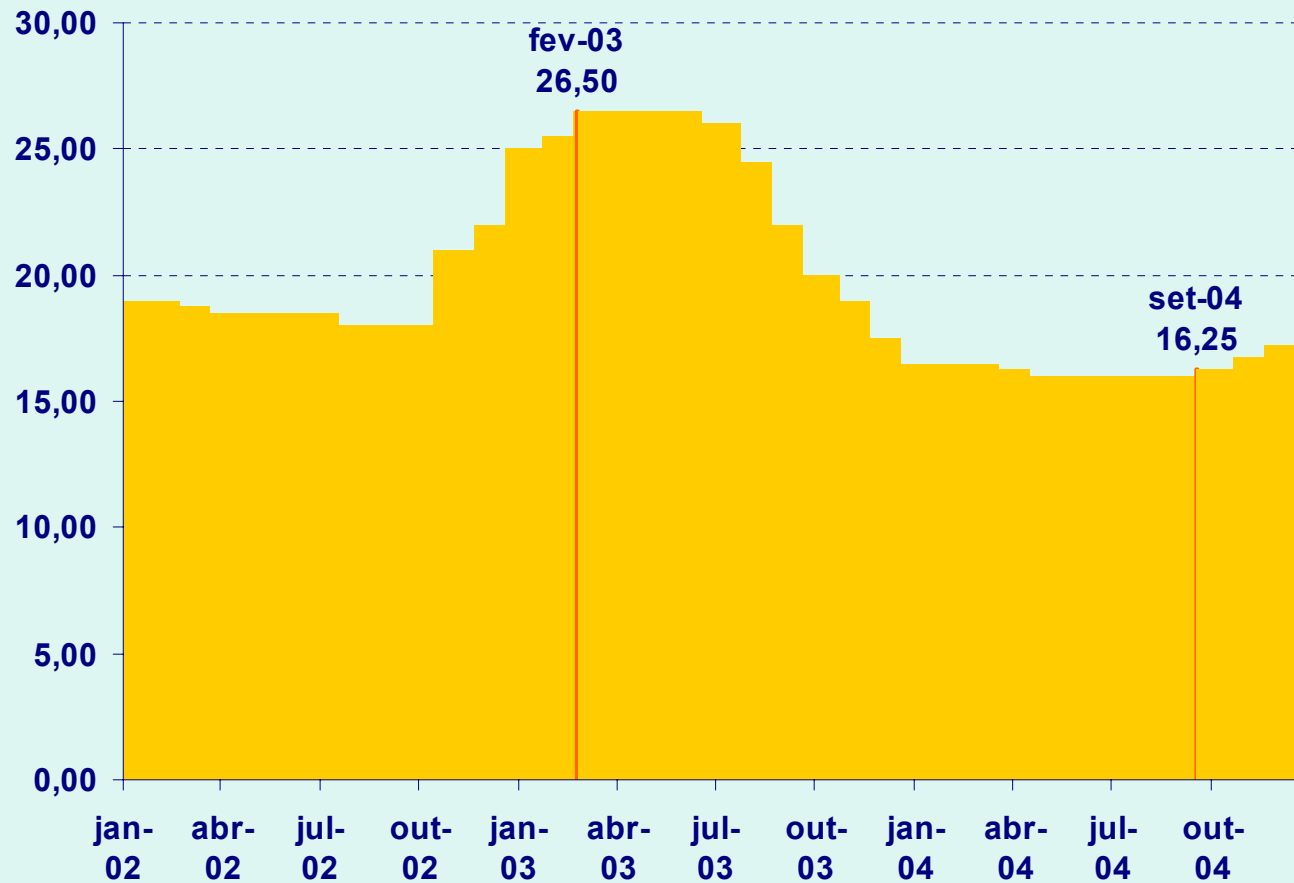


Rebuilding Confidence: 2003-2004

- In Feb/2003 the COPOM increased the policy rate to 26.50% and kept it at that level until May/2003
- Reaffirmed commitment to **fiscal** responsibility
- Increase in the consolidated primary surplus:
 - 4.25% of GDP in 2003
 - 4.50% of GDP in 2004
- Sharp FX depreciation from 1999 to 2002 produced a major **external** adjustment, with a significant increase in exports
- Benign external scenario contributed to exports surge and exchange rate appreciation



Policy Rate: 2002- 2004



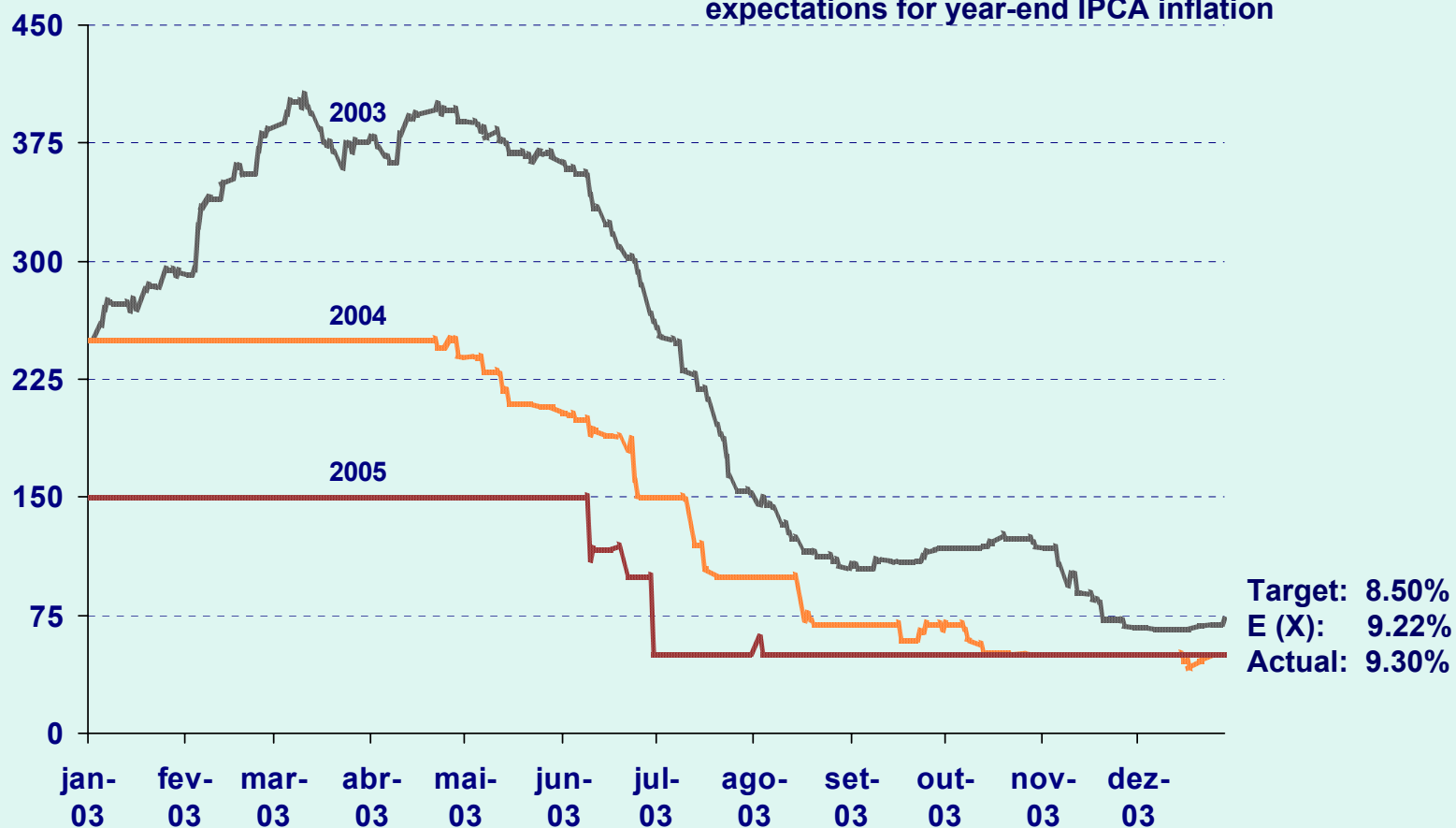
Rebuilding Confidence: 2003-2004

- Inflation fell to **9.3%** in 2003, from 12.5% in 2002
- It fell to **7.6%** in 2004
- Successful disinflation allowed a **return to the original targets** set for 2005-2007:
 - Target set in 2003:
2005 4.5% ± 2.5%
 - Target set in 2004:
2006 4.5% ± 2.0%
 - Target set in 2005:
2007 4.5% ± 2.0%



Expectations Deficit: 2003

Difference between measured expectations and the mid-point of the Inflation Target for the year
Based on the median of the sample of market expectations for year-end IPCA inflation



B. Increasing predictability



Consolidating the Regime: 2005-2006

- **Rapid pace of economic recovery post-2003, led by a large surge in exports, fueled domestic demand and together the growth in external and domestic demand threatened the inflation target in 2005 — especially after a sudden expansion in fiscal outlays in Q4/2004**
- **Consequently, starting in Sep-2004 the COPOM started on a tightening cycle that was to last one full year to Sep-2005, with an accumulated increase in the policy rate of 375bp**
- **Expectations and eventually inflation adjusted to retake the path of the inflation target**
- **Inflation expectations for 2006 were contained and approached the target. At end 2005 expectations for the next two years were in line with the target**



Inflation Expectations vs. Targets

	Expectation t+1	Target t+1	Expectation t+2	Target t+2
1999	7,0	6,0	4,0	4,0
2000	4,3	4,0	3,8	3,5
2001	4,8	3,5	4,0	3,25*
2002	11,0	4,0**	8,0	3,75**
2003	6,0	5,5	5,0	4,5
2004	5,7	4,5	5,0	4,5
2005	4,5	4,5	4,5	4,5
2006	4,0	4,5	4,1	4,5

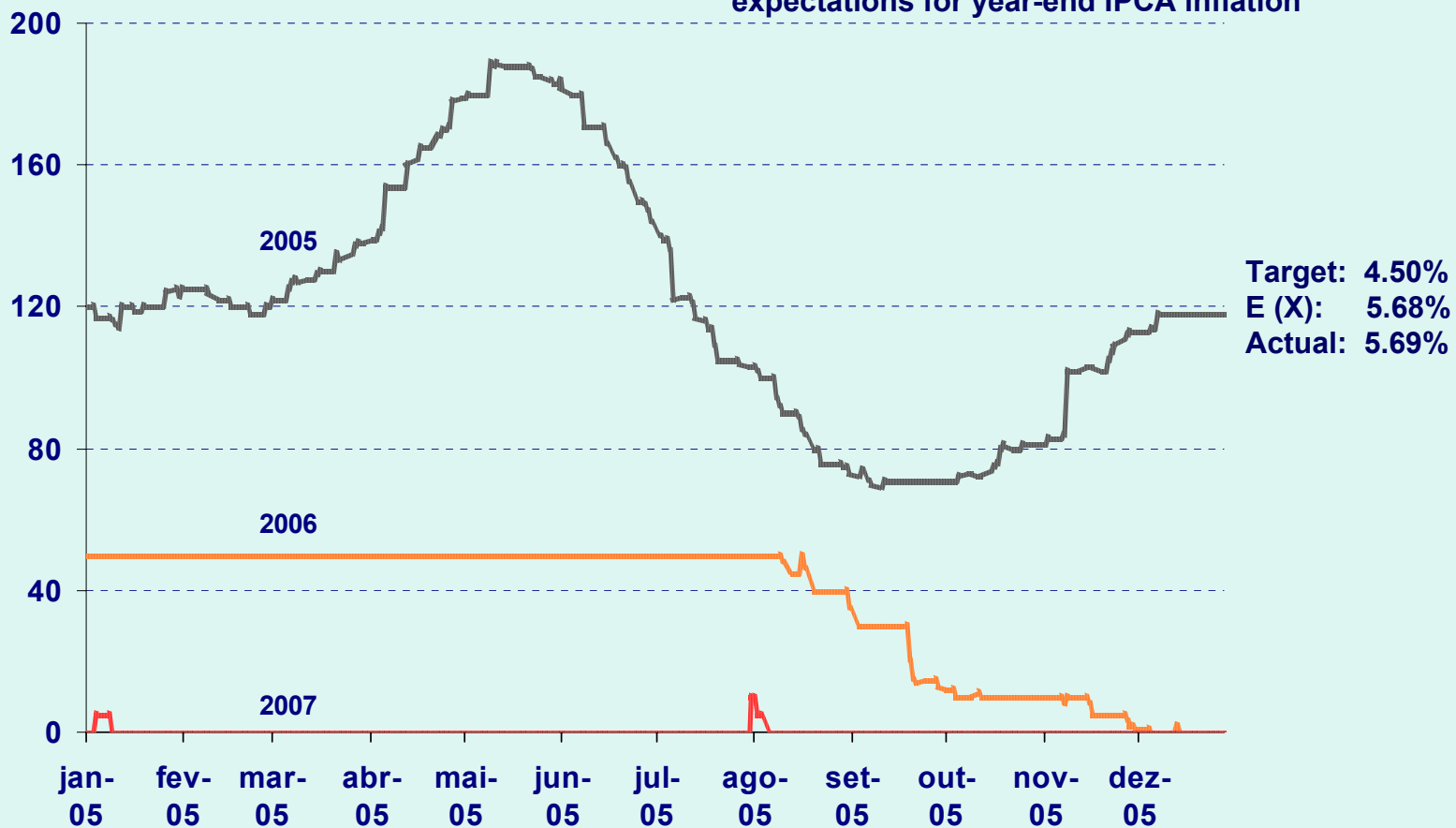
*CMN target: Jun/2001 (Resolução nº 2,842)

** CMN target: Jun/2002 (Resolução nº 2,972)

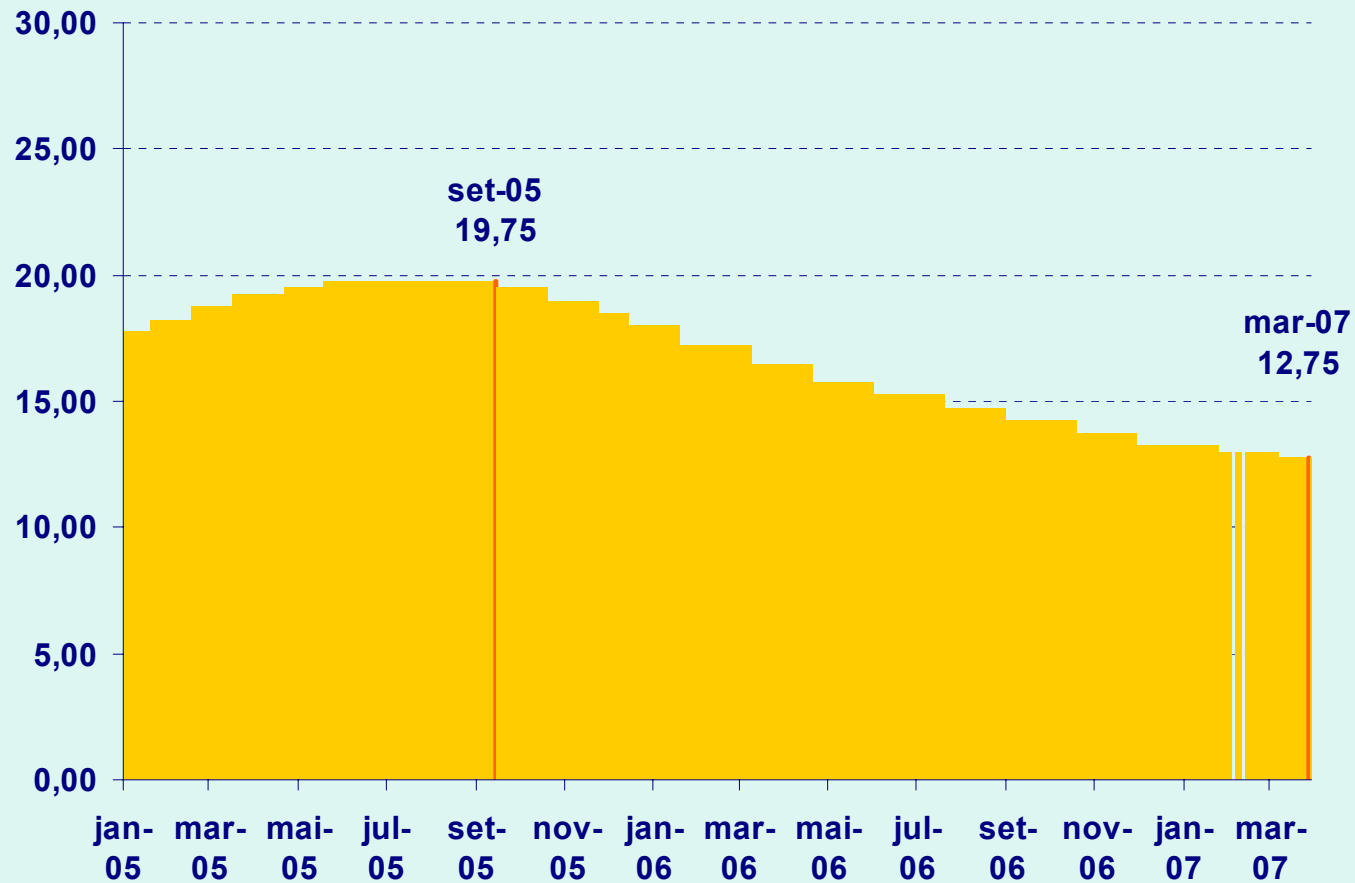


Expectations Deficit: 2005

Difference between measured expectations and the mid-point of the Inflation Target for the year
Based on the median of the sample of market expectations for year-end IPCA inflation

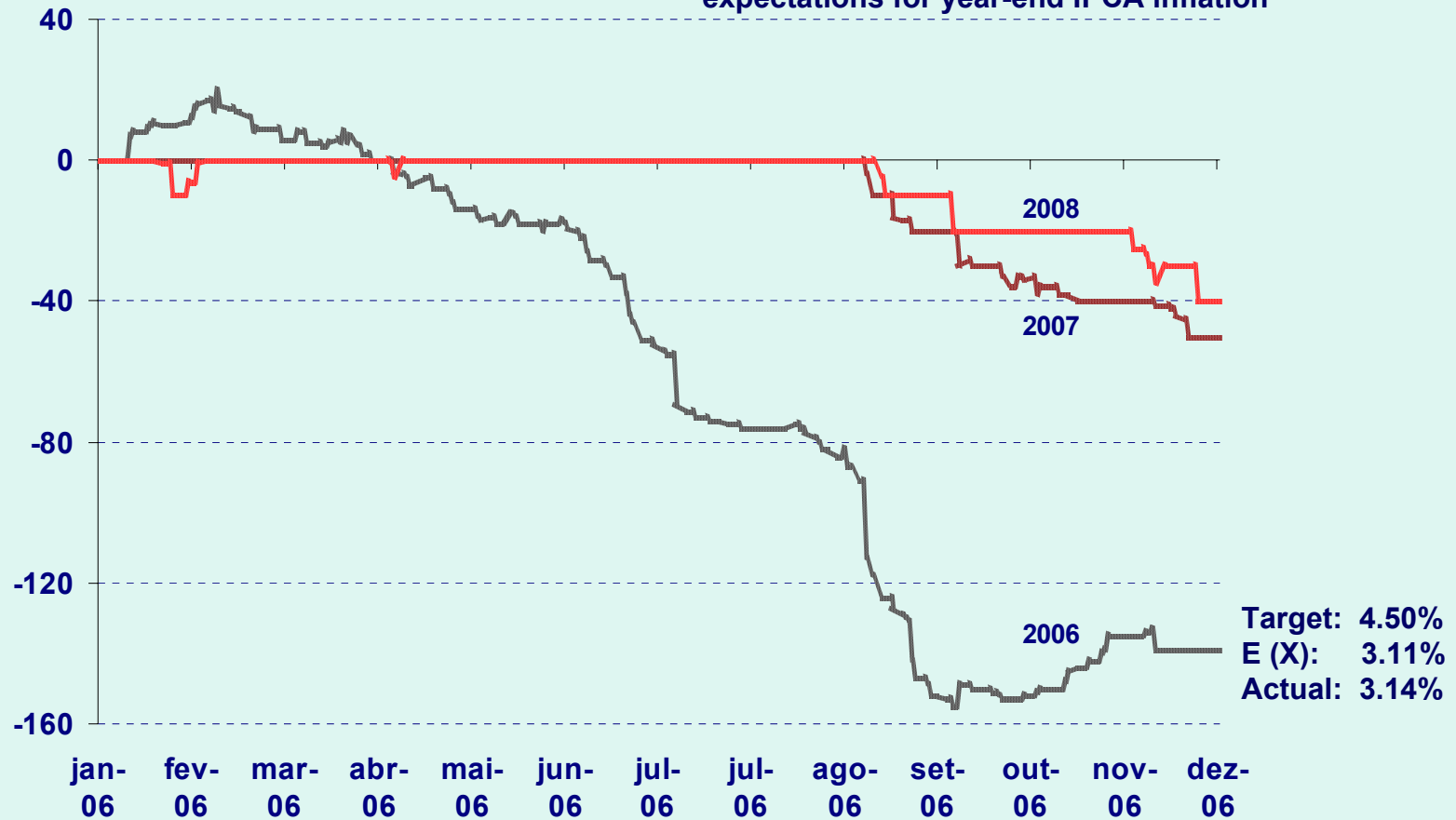


Policy Rate: 2005 - 2007



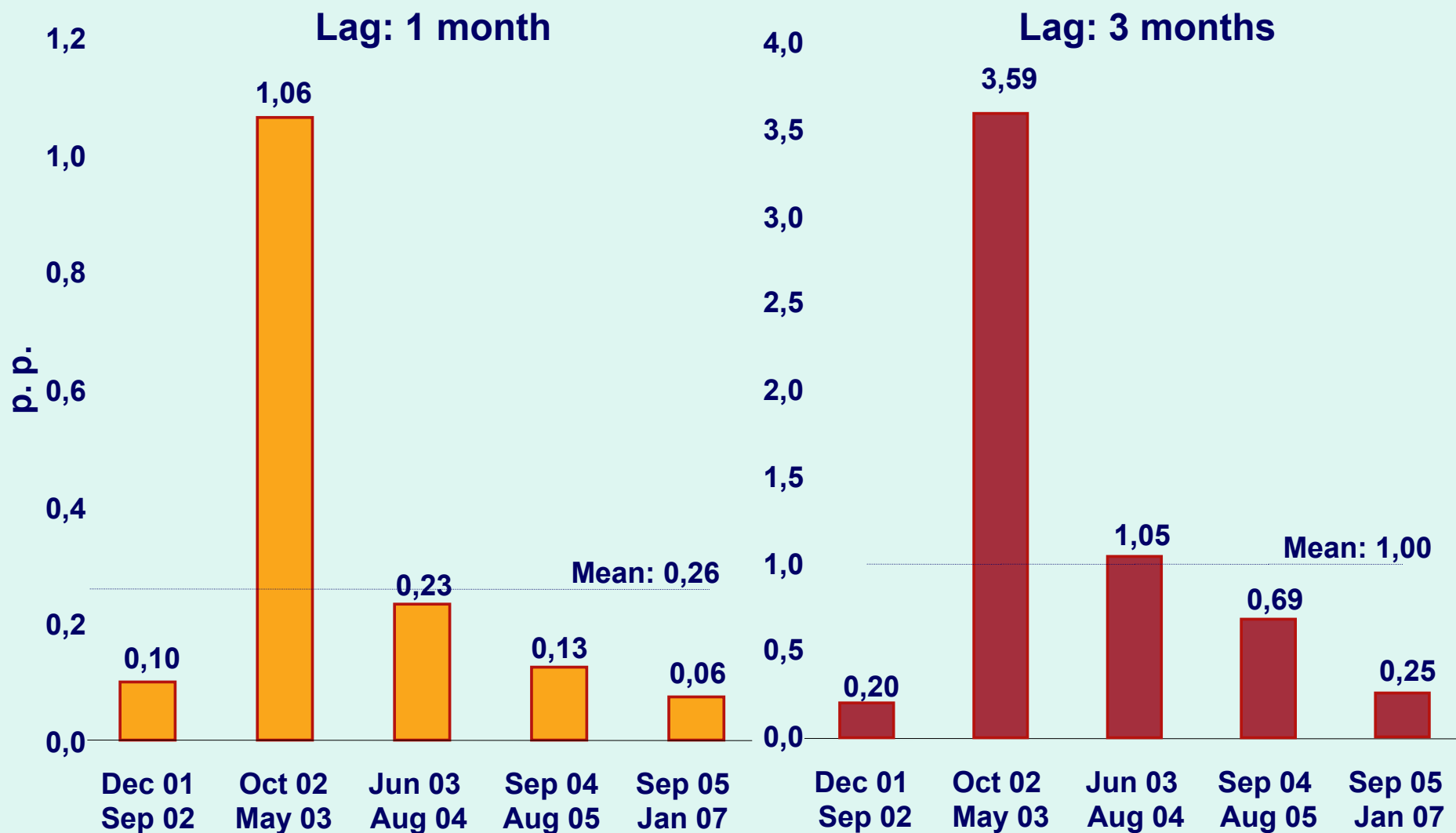
Expectations Surplus: 2006

Difference between measured expectations and the mid-point of the Inflation Target for the year
Based on the median of the sample of market expectations for year-end IPCA inflation



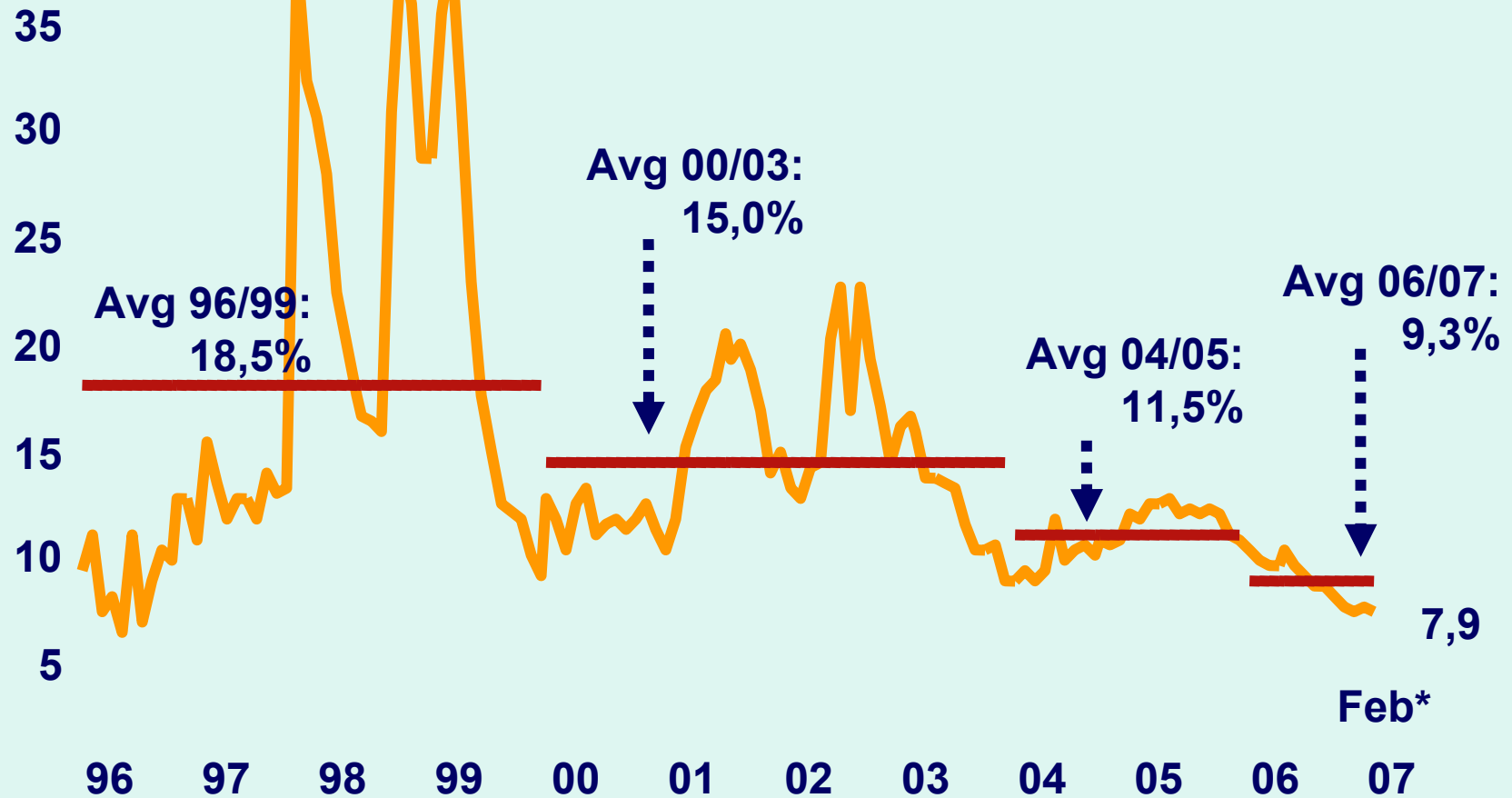
Predictability of Monetary Policy

Average Deviation: Actual vs. Expected Policy Rate Changes



Real Interest Rates

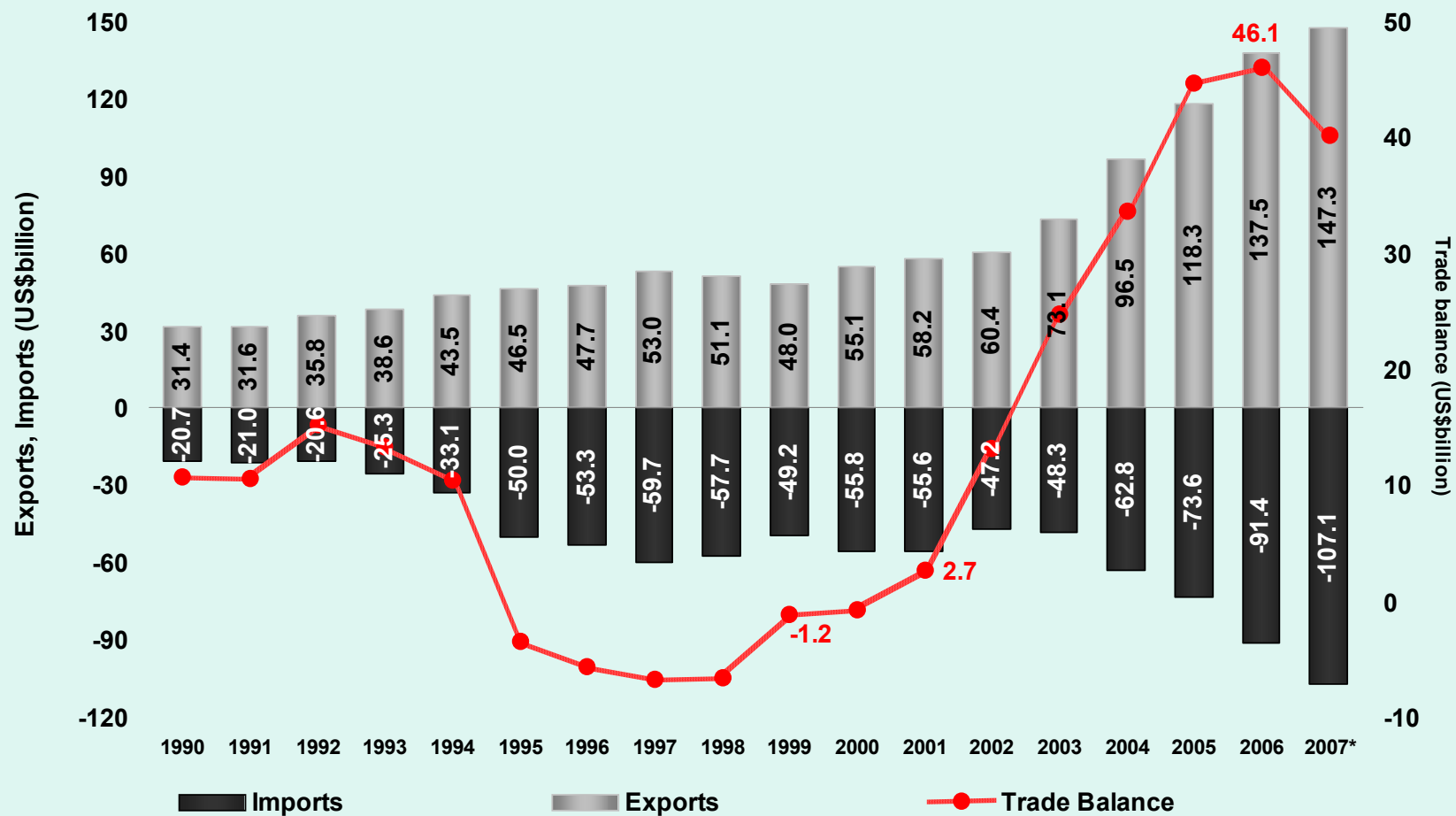
Rates for the 360d Fixed-to-Float Swap – BM&F



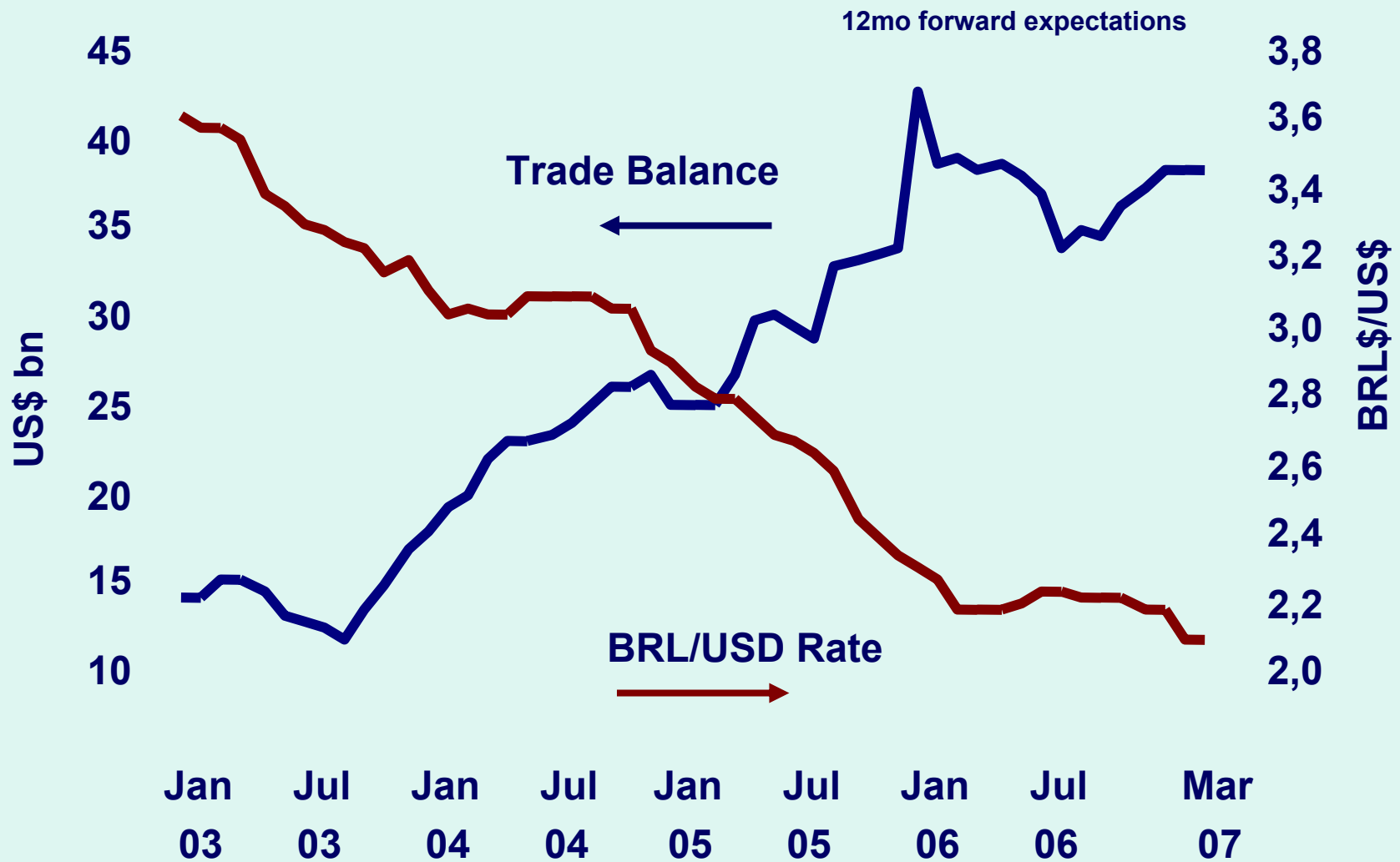
C. Reducing External Vulnerabilities



Trade Surplus

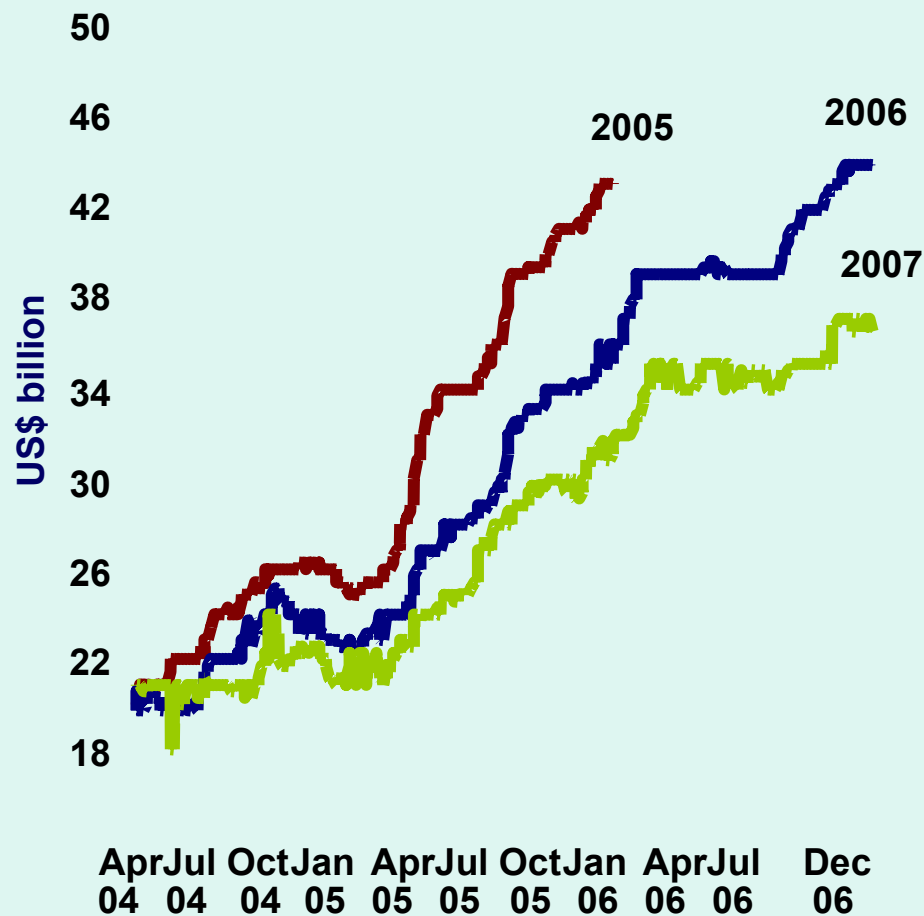


Trade Balance vs. Exchange Rate

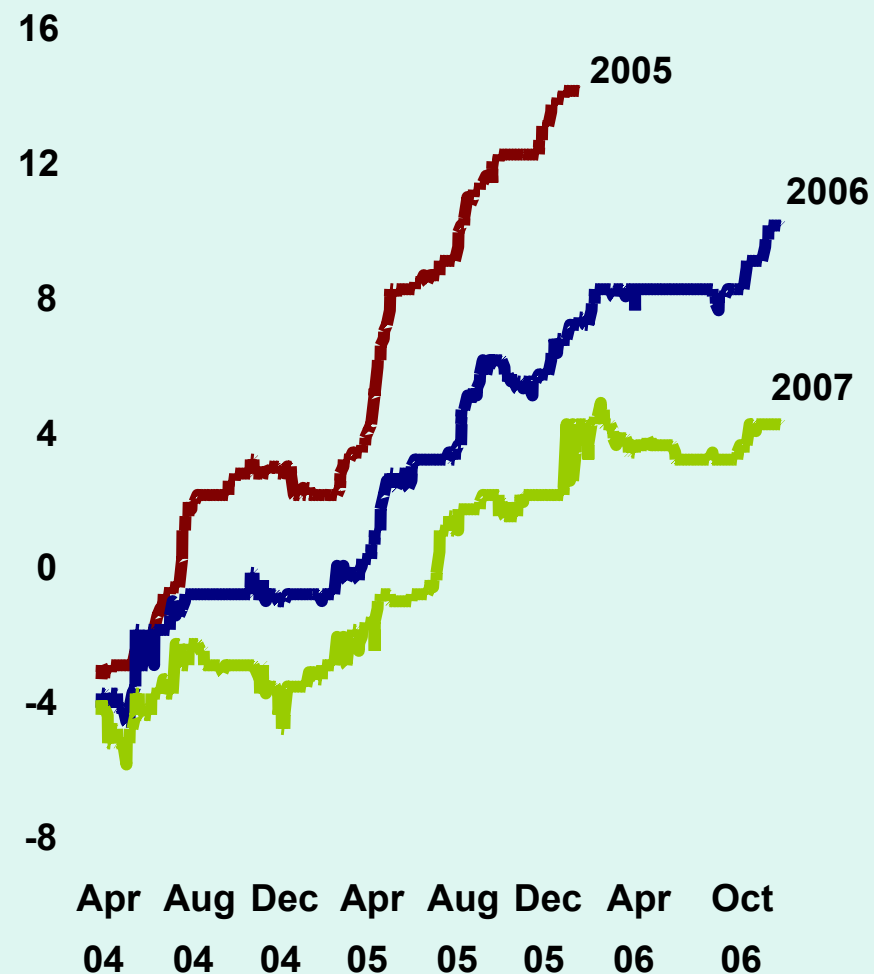


Expectations: Trade & Current Account

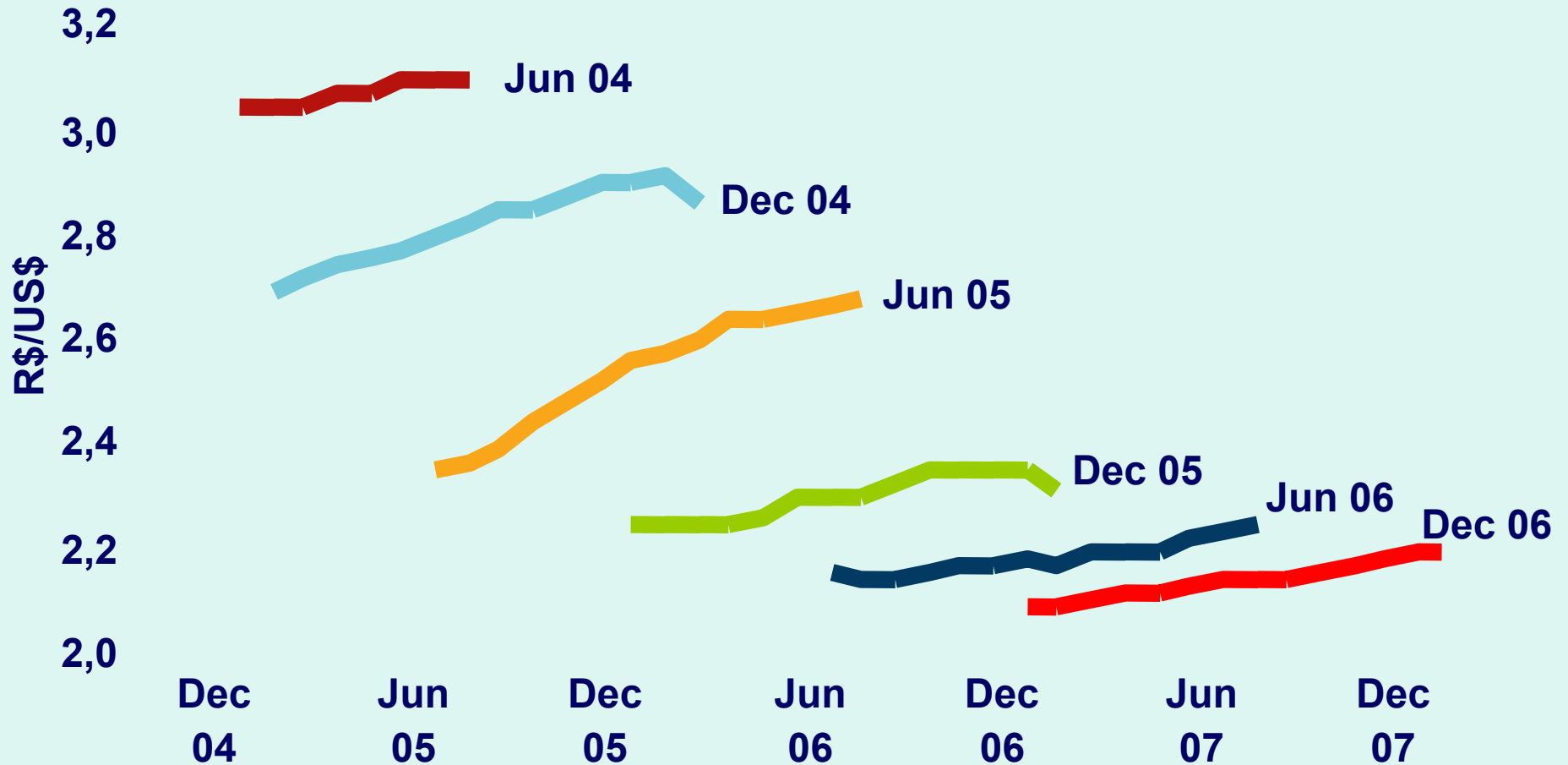
Trade Balance



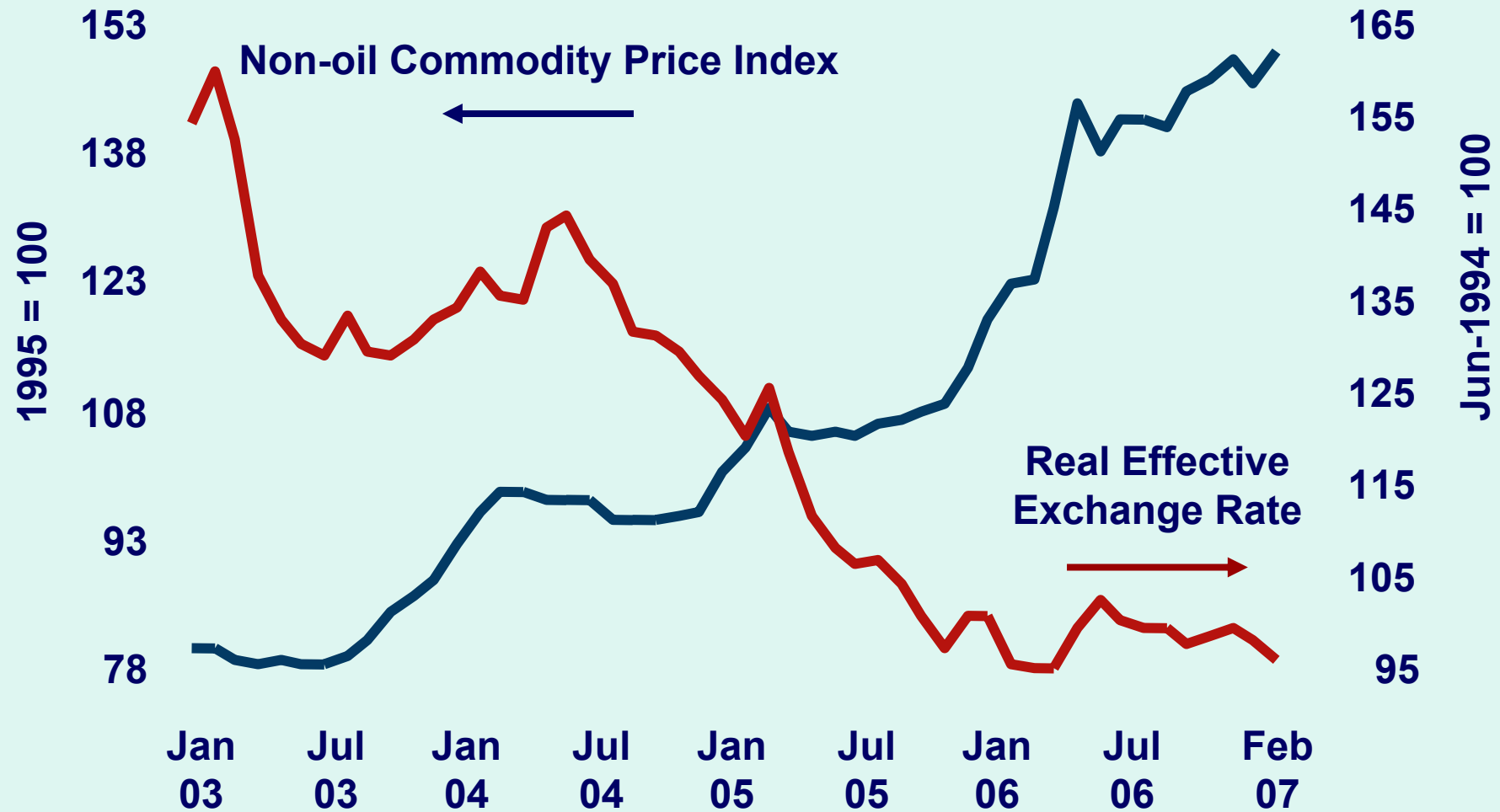
Current Account



Expectations: BRL/USD Rate



REER & Commodity Prices

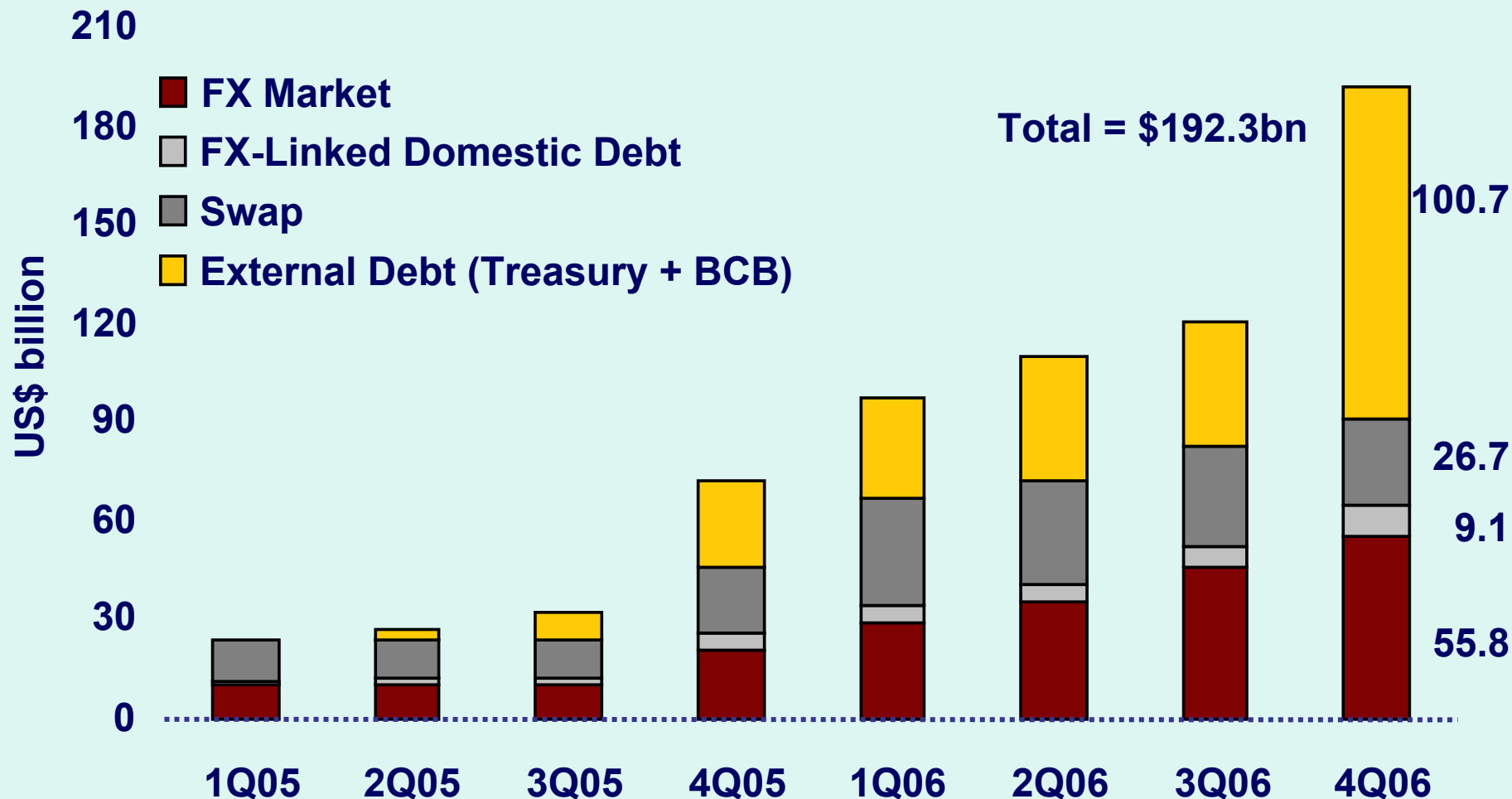


Buildup in Reserves

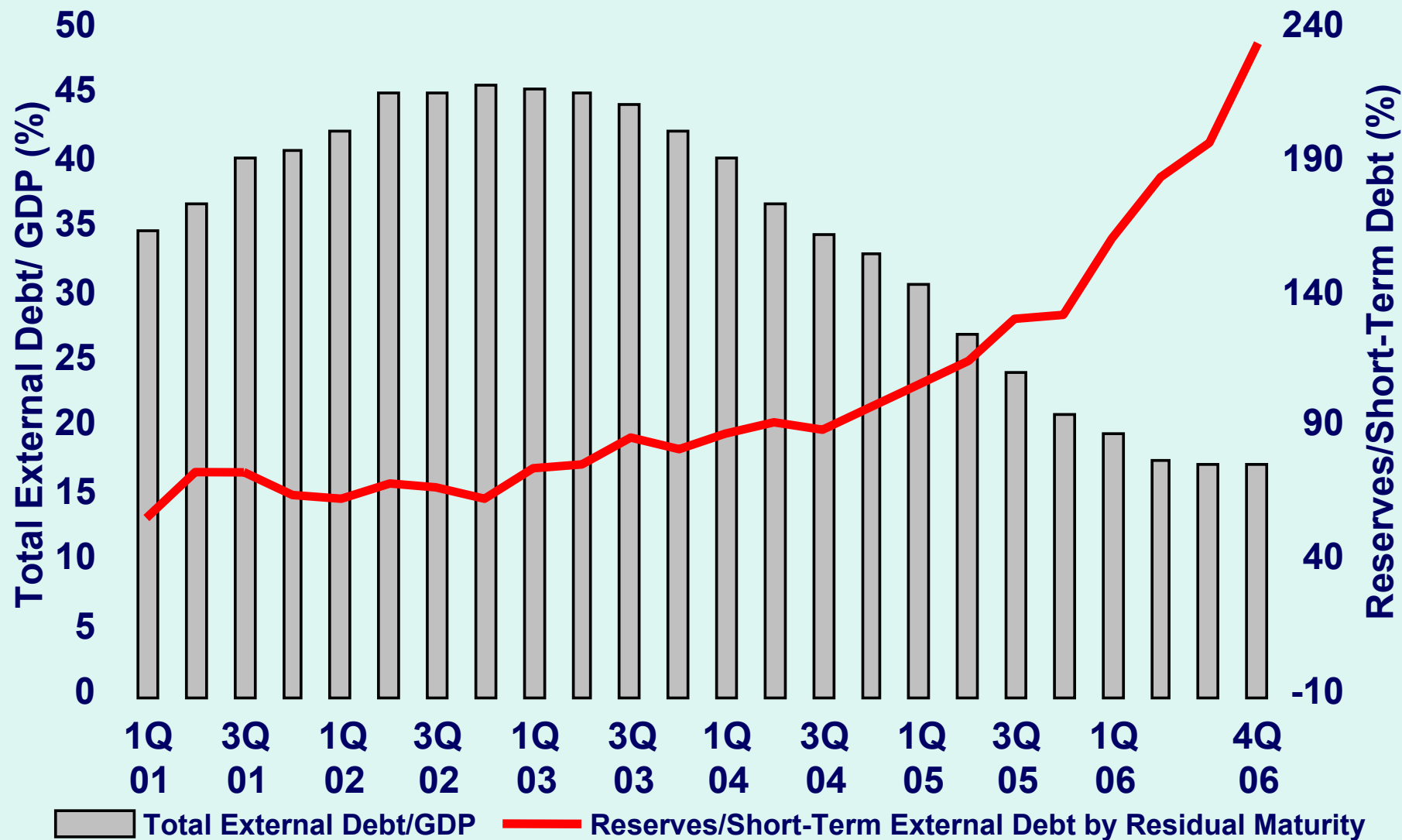


Reduced External Liabilities

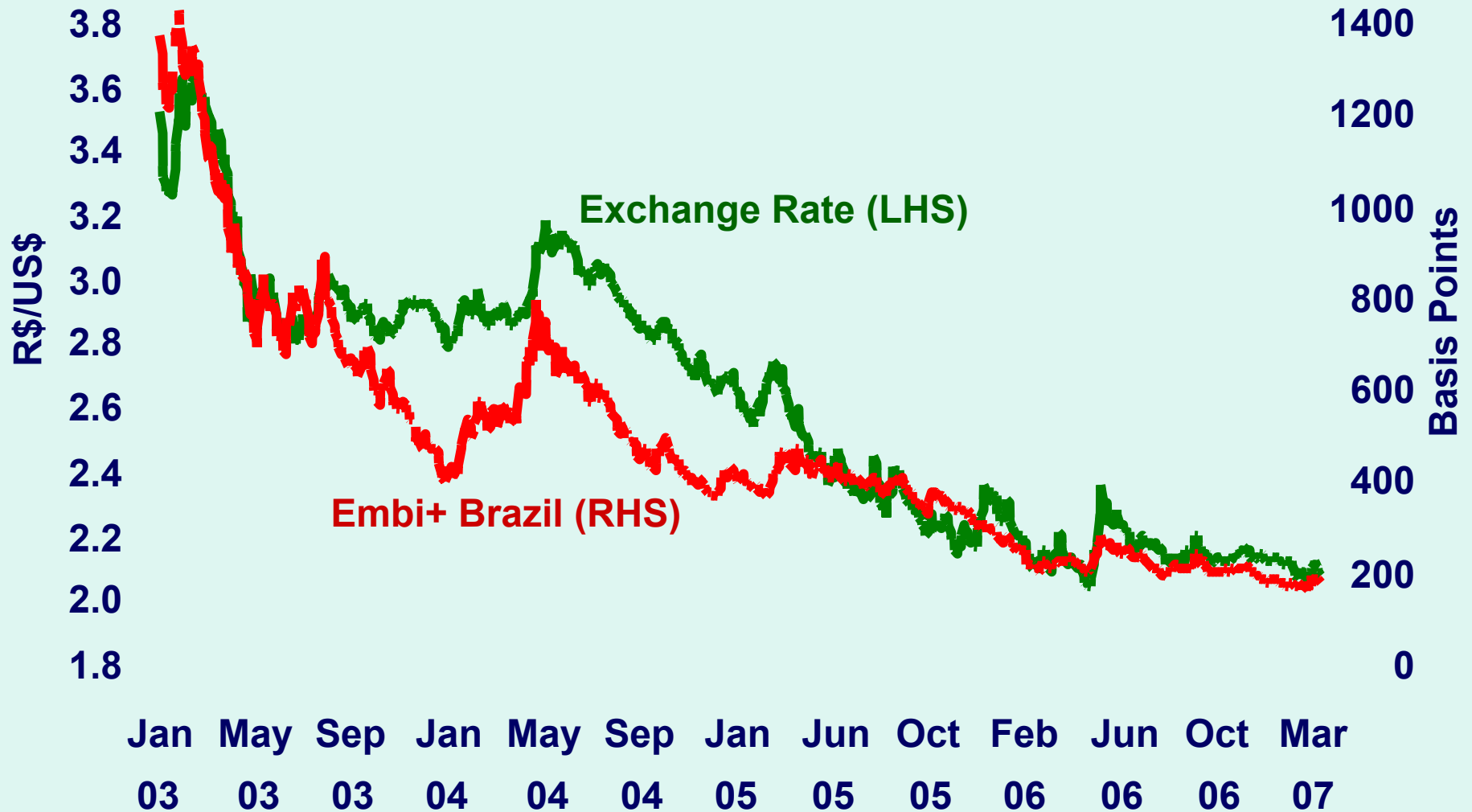
Cumulative Reduction in FX-Linked Debt and BCB's Accumulated Acquisitions in the FX Market since 1Q05



Declining External Debt



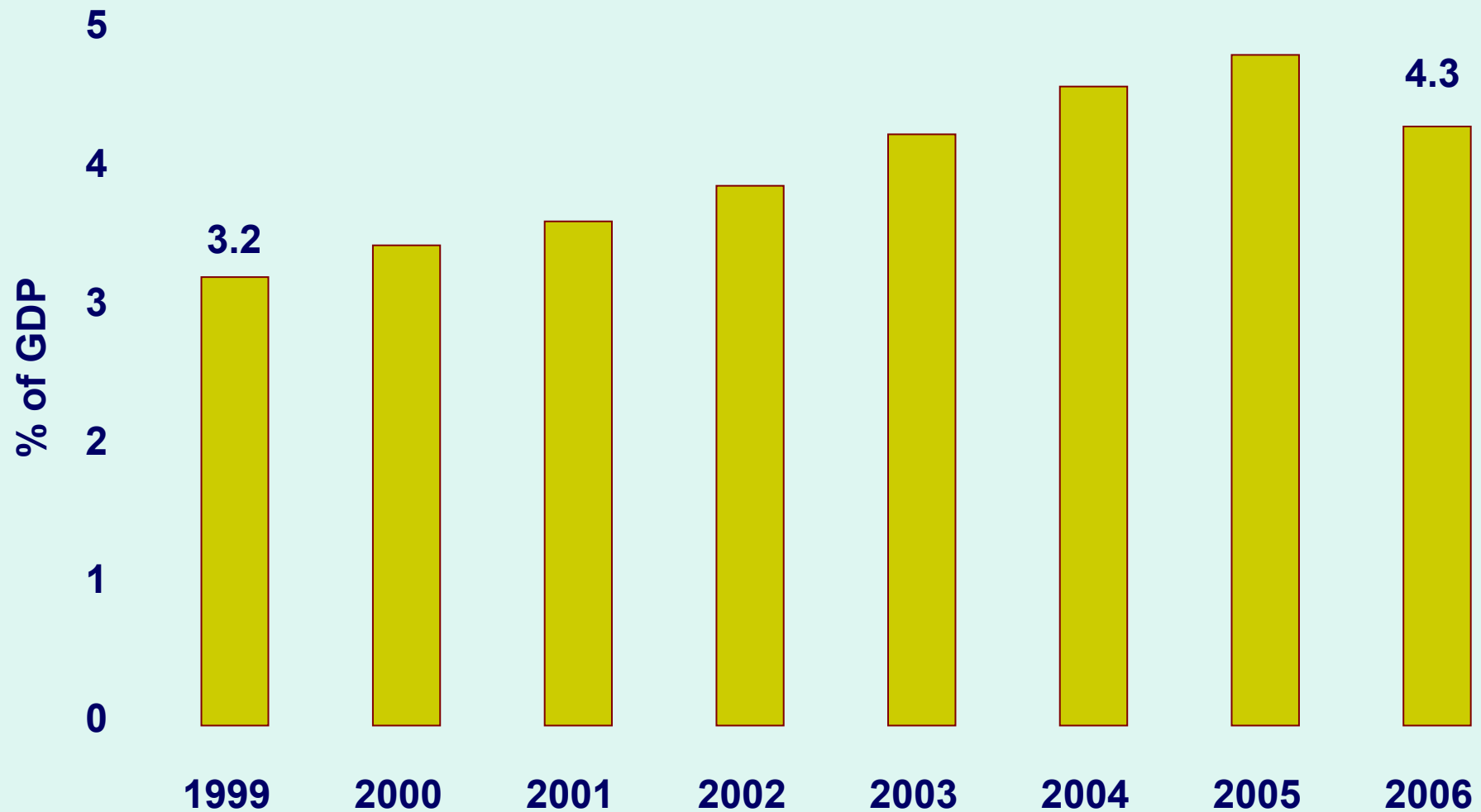
BRL/USD Rate & Risk Spread



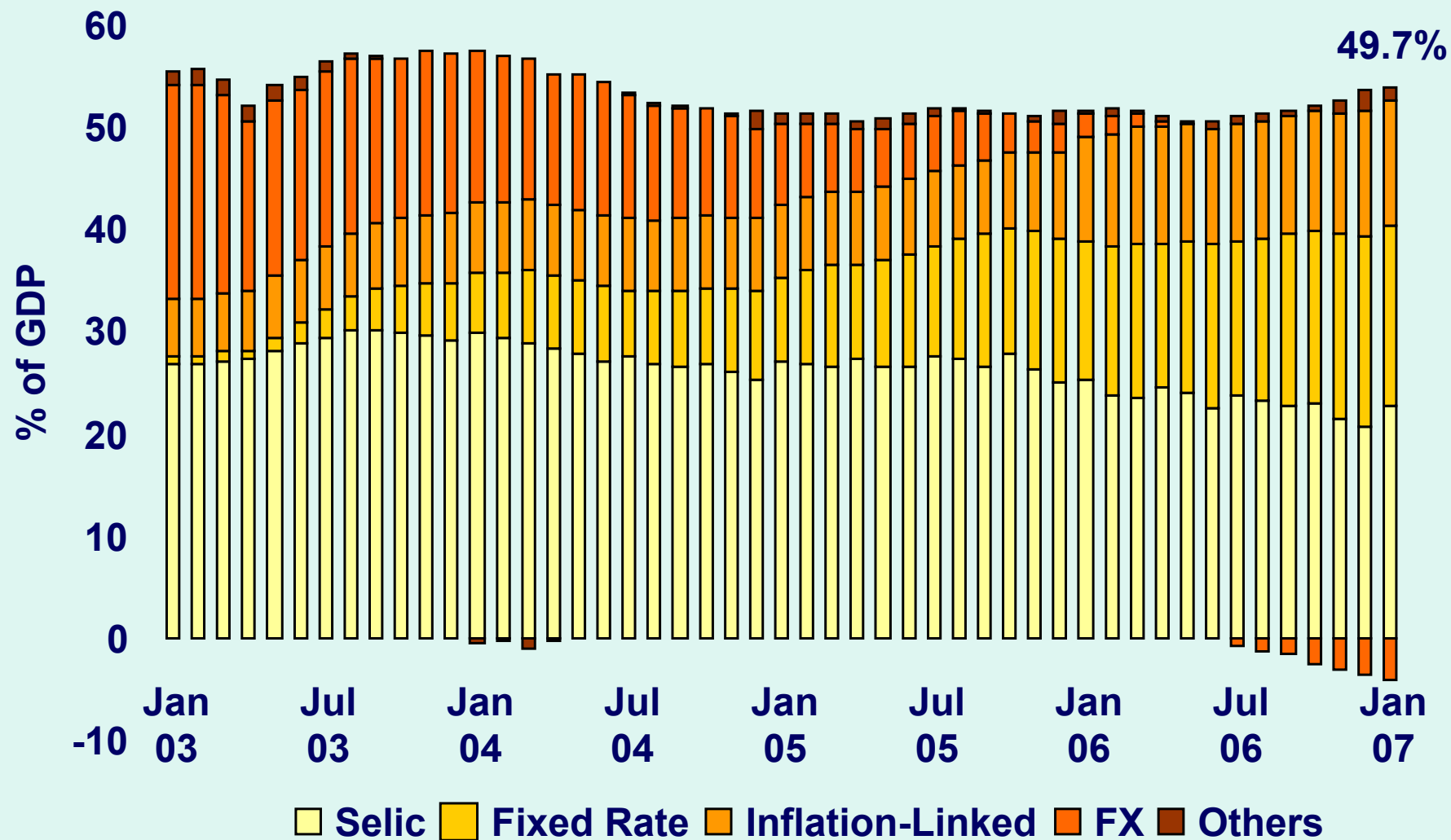
D. Reducing Fiscal Vulnerabilities



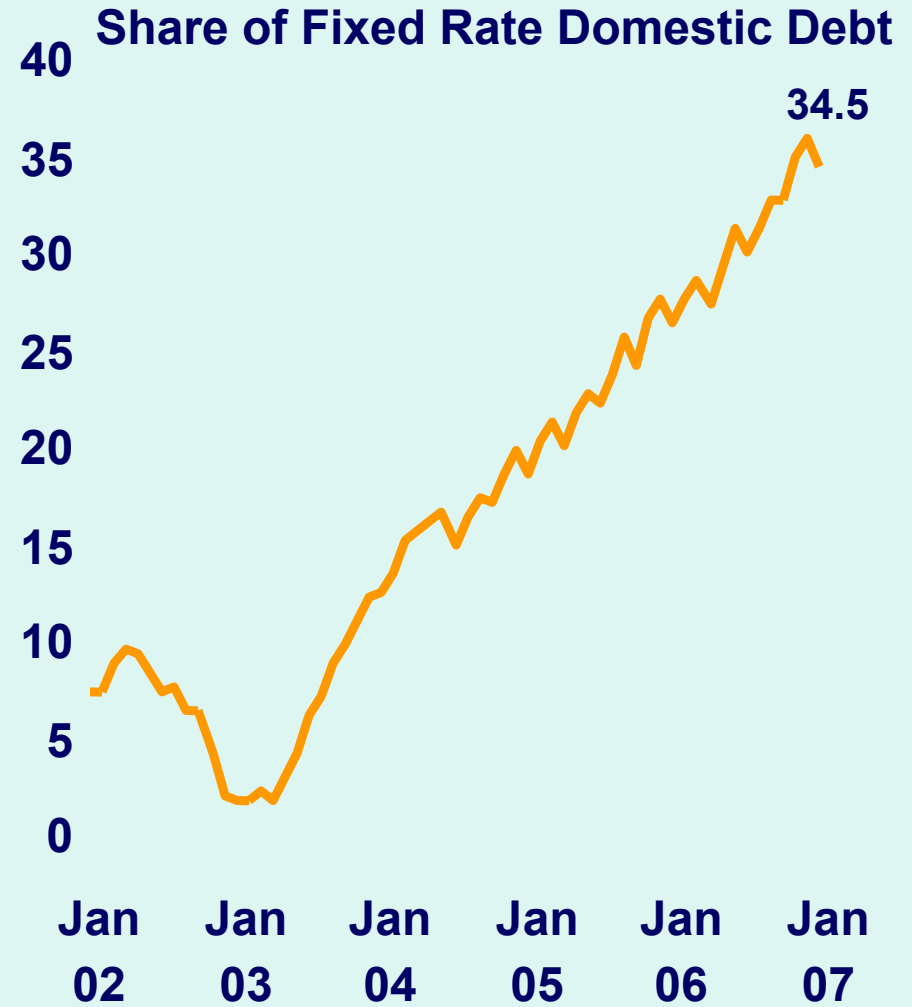
Public Sector: Primary Surplus



Public Debt: Stock



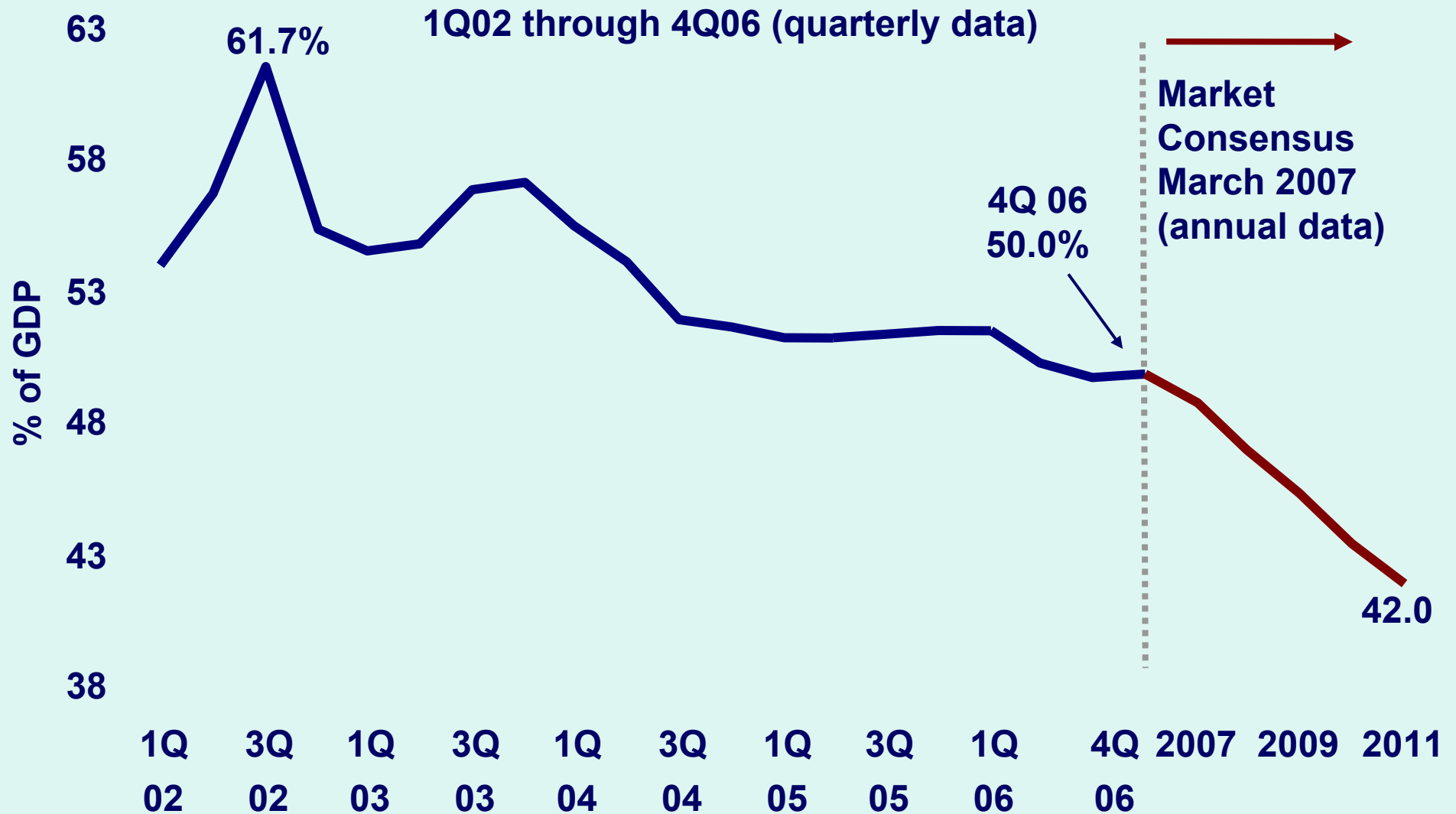
Public Debt: Composition



Public Debt: Impact of a 1% Devaluation



Public Debt: Expected Trend



Thank you!

