

LACEA/LAMES 2007

“Policy Responses to Sudden Stops in
BRAZIL”

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Márcio Garcia

www.econ.puc-rio/mgarcia

Introduction (1/2)

Brazil suffered in 2002 a sudden stop. Capital flows fell by some USD 24 billion, around 6% of GDP, at the time. The 2002 Brazilian sudden stop is particularly interesting because:

- Brazil is the largest Latin-American country;
- Large turnaround of the current account for international standards;
- Successful case in view of sudden stop episodes— no meltdown case;
- Combination of high international risk aversion episode with domestic presidential elections that would elect a (then believed to be) non-market-friendly candidate;
- Very large increase of country risk and exchange rate devaluation;

Introduction (2/2)

- Excessive credit risk generates important and unusual effects in financial markets, as the futures exchange rate market in backwardation, i.e., “forecasting” appreciation of the BRL. This implies on-shore dollar rates below the international market ones, just the opposite of the normal case created by high country risk;
- The Brazilian Central Bank (BCB) used many non-orthodox anti-crisis tools to mitigate the effects of the confidence crisis: exchange rate derivatives, daily allowance of exchange rate directed to international trade financing, political negotiation to generate a statement of all candidates that if they won, they would not renege sensible economic policies;
- Non monetary liabilities of the government became dollarized to provide crisis insurance for the private sector, especially the banking sector, at a high cost to the government budget. Insurance against interest rate increases were also provided, in the form of zero duration bonds.

Contents

Section 2 - Sequence of events that lead to the 2002 sudden stop : first, the 1999 crisis that led to the floatation of the Brazilian currency is briefly reviewed, and then the flexible exchange rate period is analyzed, emphasizing the impact on asset prices;

Section 3 - policy responses and its effects;

Section 4 – discussion of important issues and constraints that shaped the macroeconomic policy reactions and outcomes;

Section 5 - policy lessons from the episode.

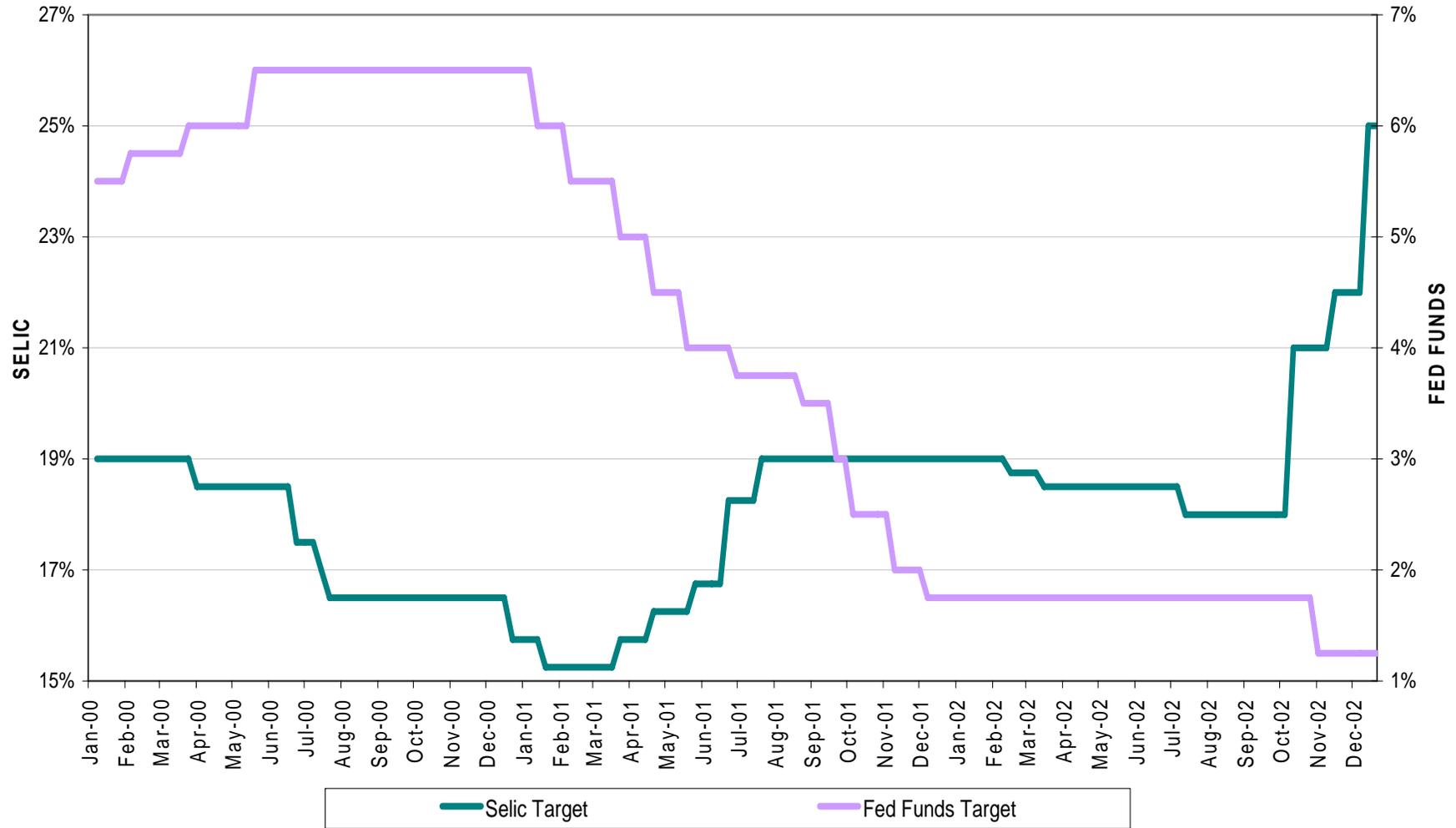
***Exit from the crawling peg and
the floating: facing old and new
crises***

Table 1: Macroeconomic Indicators of the Floating Period of the Real Plan				
	1999	2000	2001	2002
<i>GDP Growth</i>	0,3%	4,3%	1,3%	2,7%
<i>Inflation(CPI)</i>	8,9%	6,0%	7,7%	12,5%
<i>Exchange Rate Depreciation</i>	48,0%	9,3%	18,7%	52,3%
<i>Nominal Interest Rate (Selic)</i>	24,8%	17,6%	17,5%	19,2%
<i>Real Interest Rate</i>	14,6%	10,8%	8,9%	6.2%*
<i>Fiscal Surplus (%GDP)</i>				
<i>Primary</i>	3,3%	3,6%	3,8%	4,0%
<i>Nominal</i>	-5,8%	-3,6%	-3,5%	-4,7%
<i>Current Account</i>				
<i>USD Billion</i>	-25,30	-24,20	-23,20	-7,60
<i>%GDP</i>	-4,8%	-4,0%	-4,6%	-1,7%

* Due to the unexpected increase of inflation, the ex post real interest rate of 6.2% may be underestimating the ex ante real rate by 4.9%, i.e., the ex ante real rate would be around 11.1%.

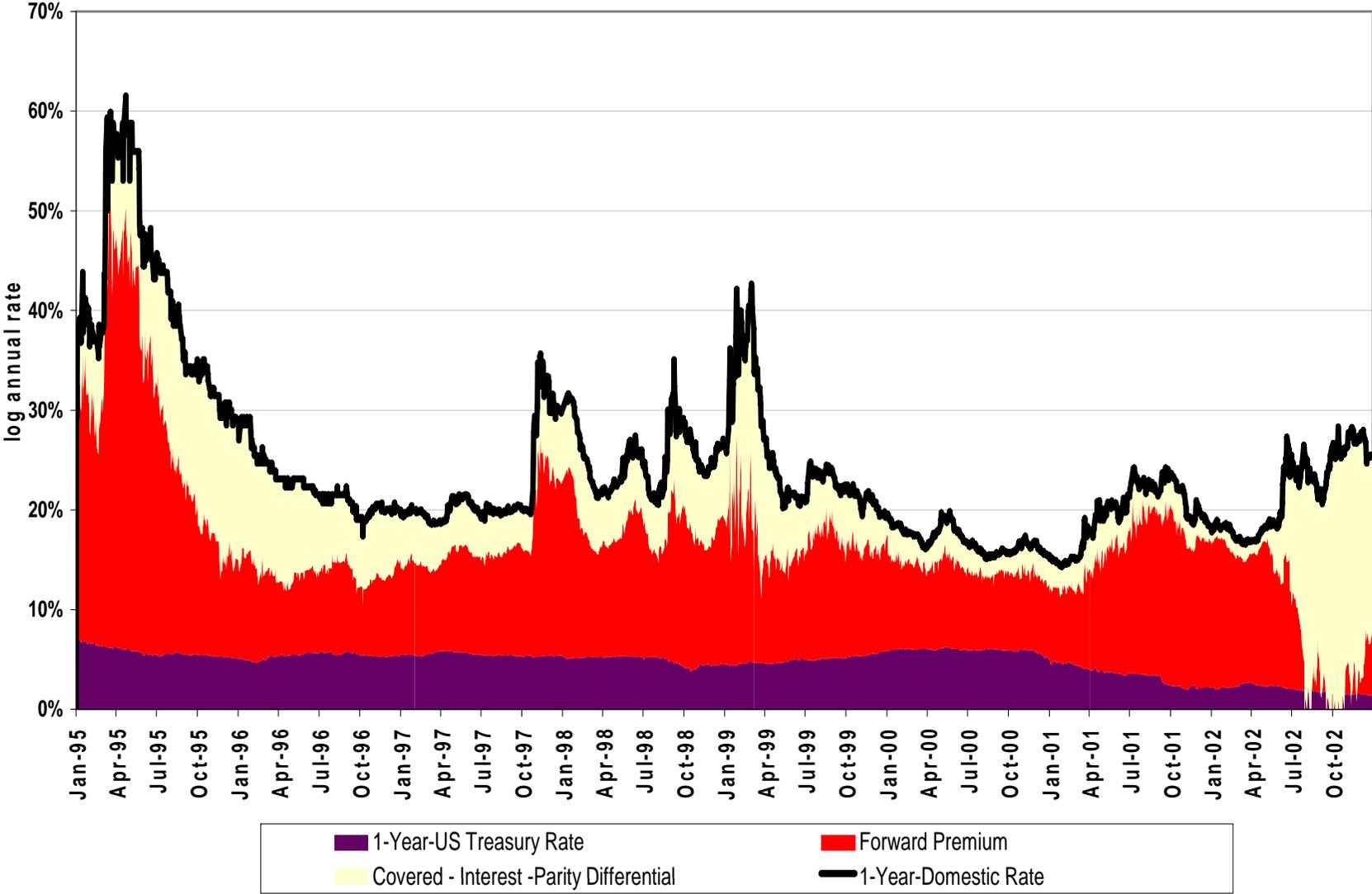
Source: Central Bank of Brazil

Fed Funds Target x Selic Target



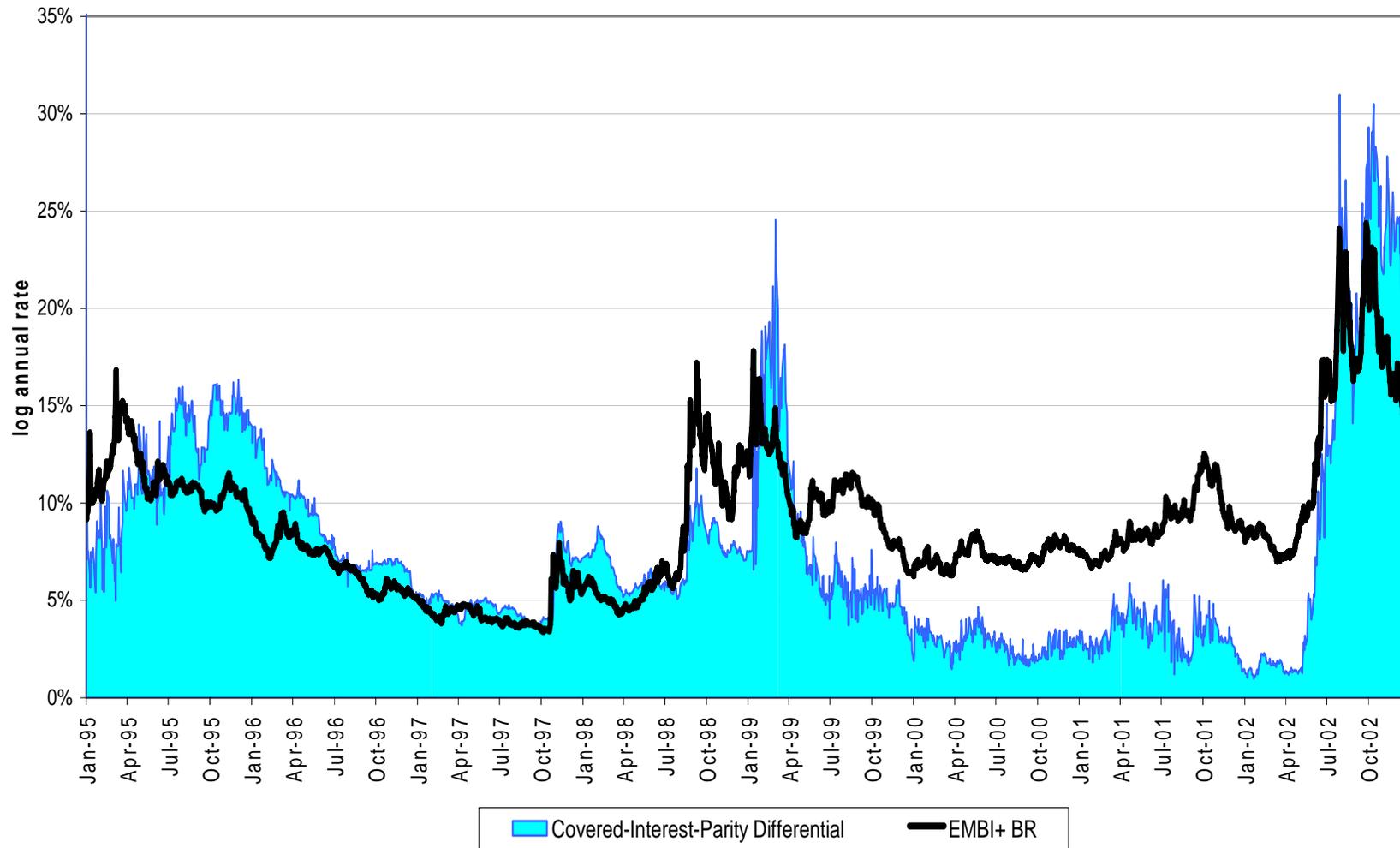
Source: Central Bank of Brazil

Interest Rate Decomposition



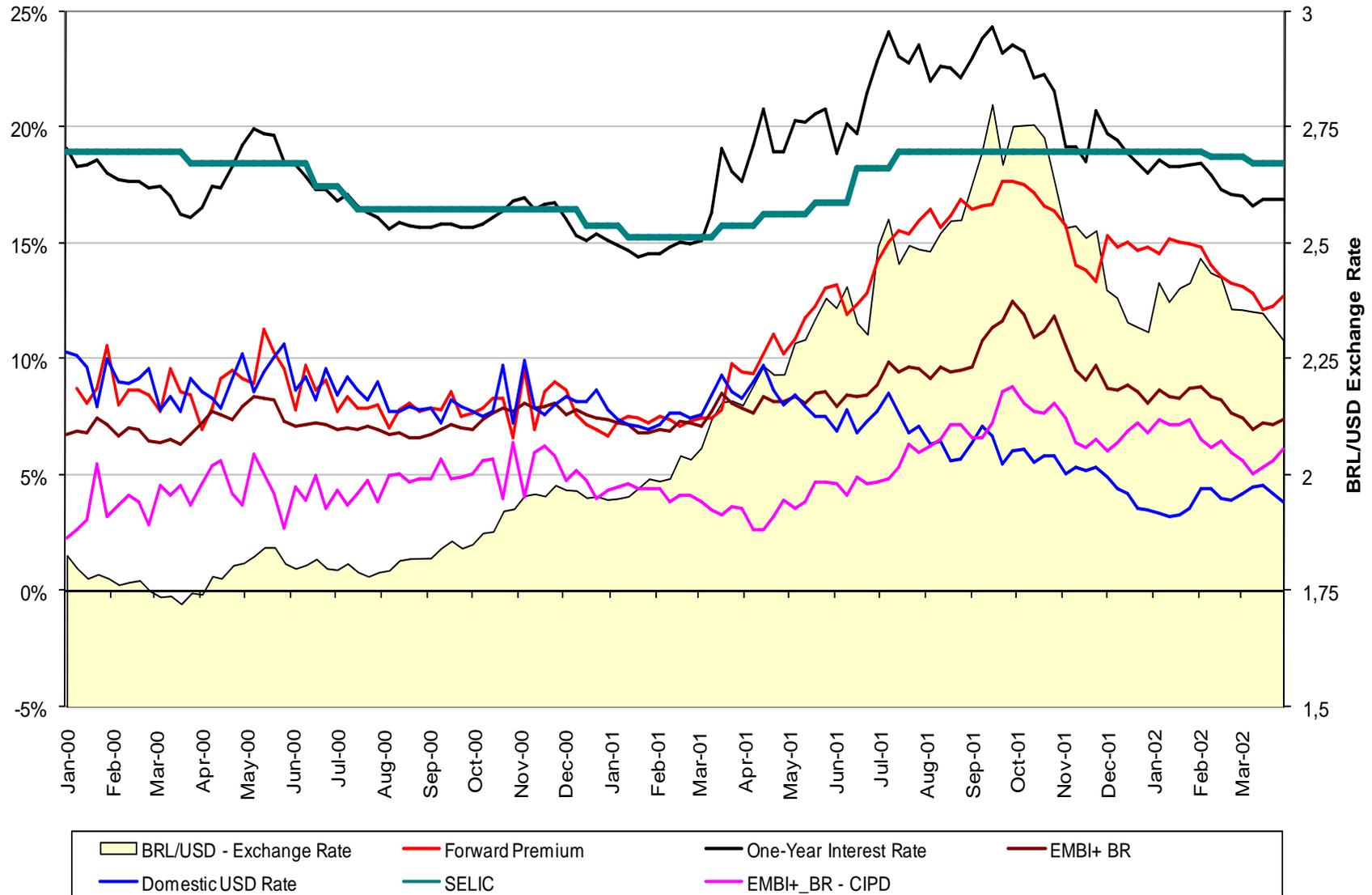
Source: Central Bank of Brazil

Interest Rate Decomposition



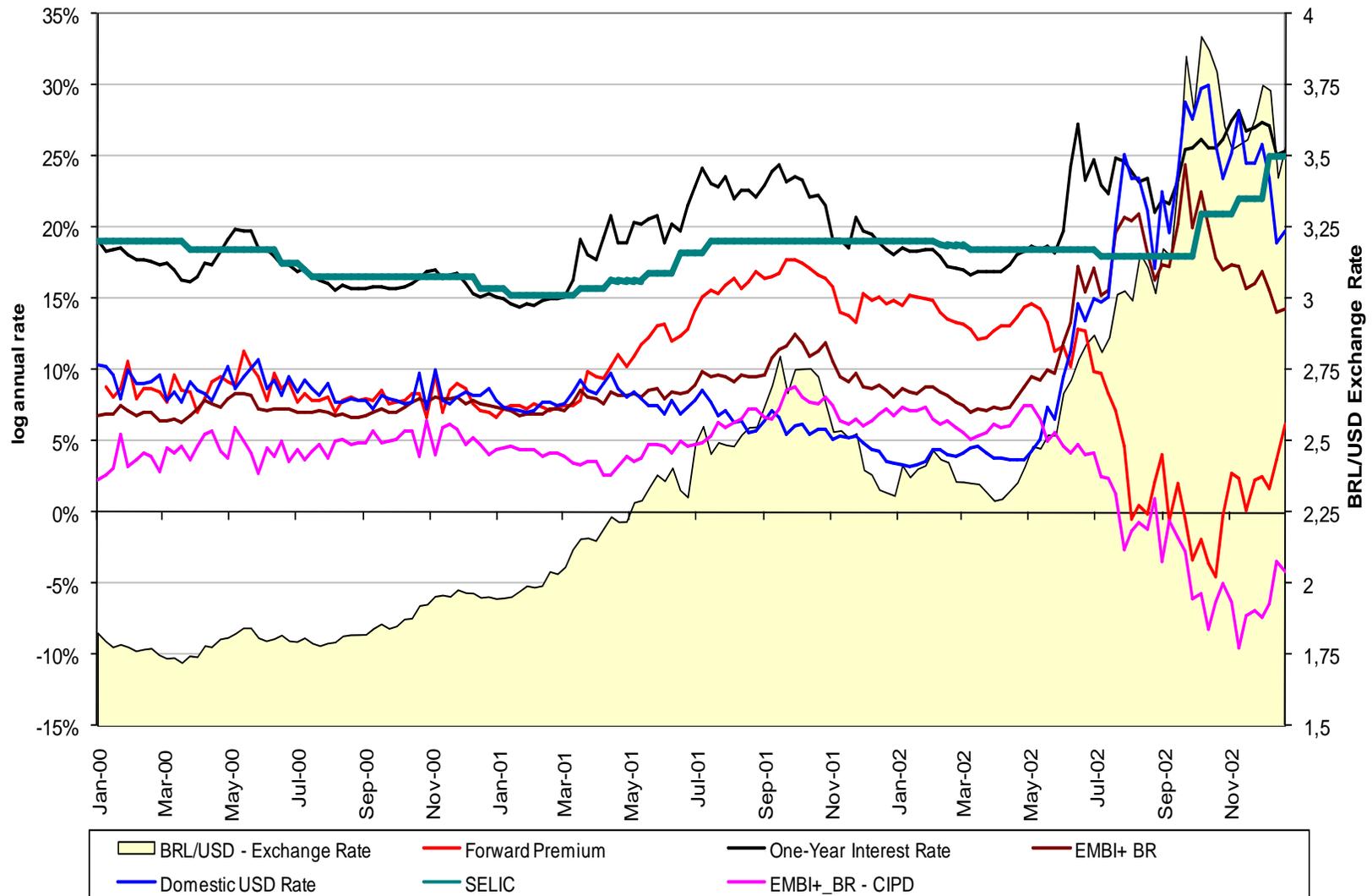
Source: Central Bank of Brazil

Interest and Exchange Rates: The first Crisis Bout



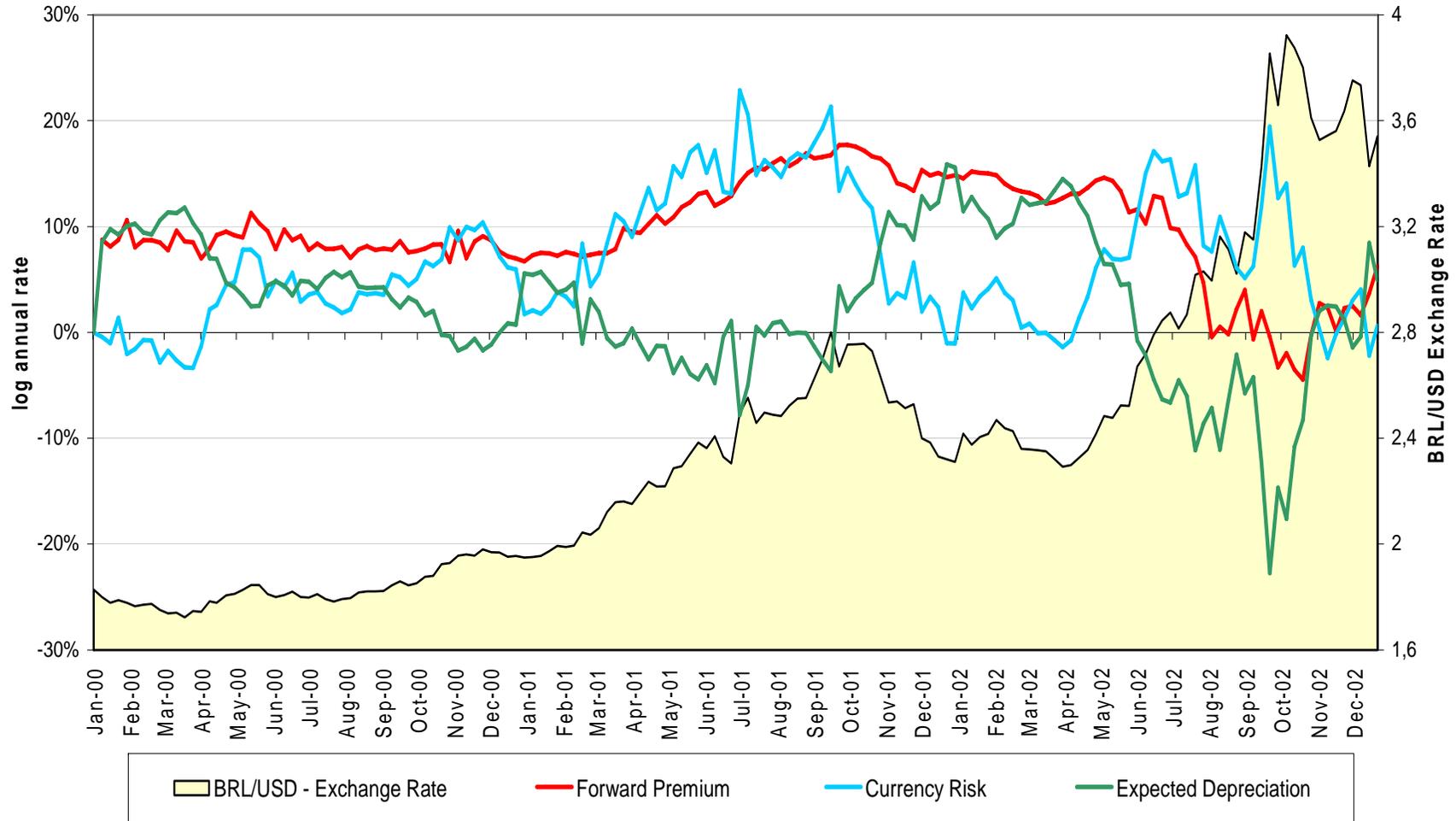
Source: Central Bank of Brazil

Interest and Exchange Rates: The second Crisis Bout



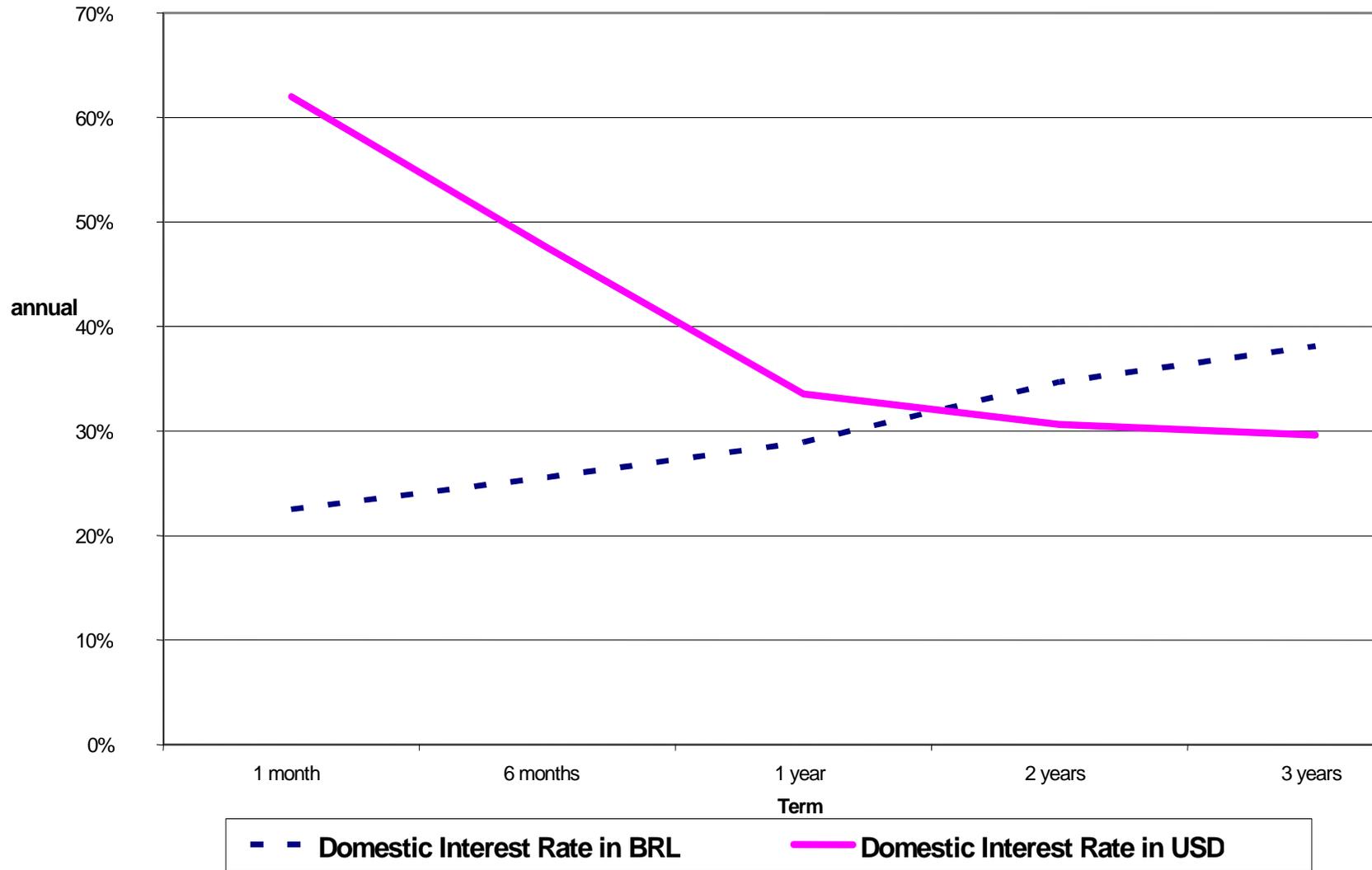
Source: Central Bank of Brazil

Forward Premium Decomposition: Expected Depreciation and Currency Risk



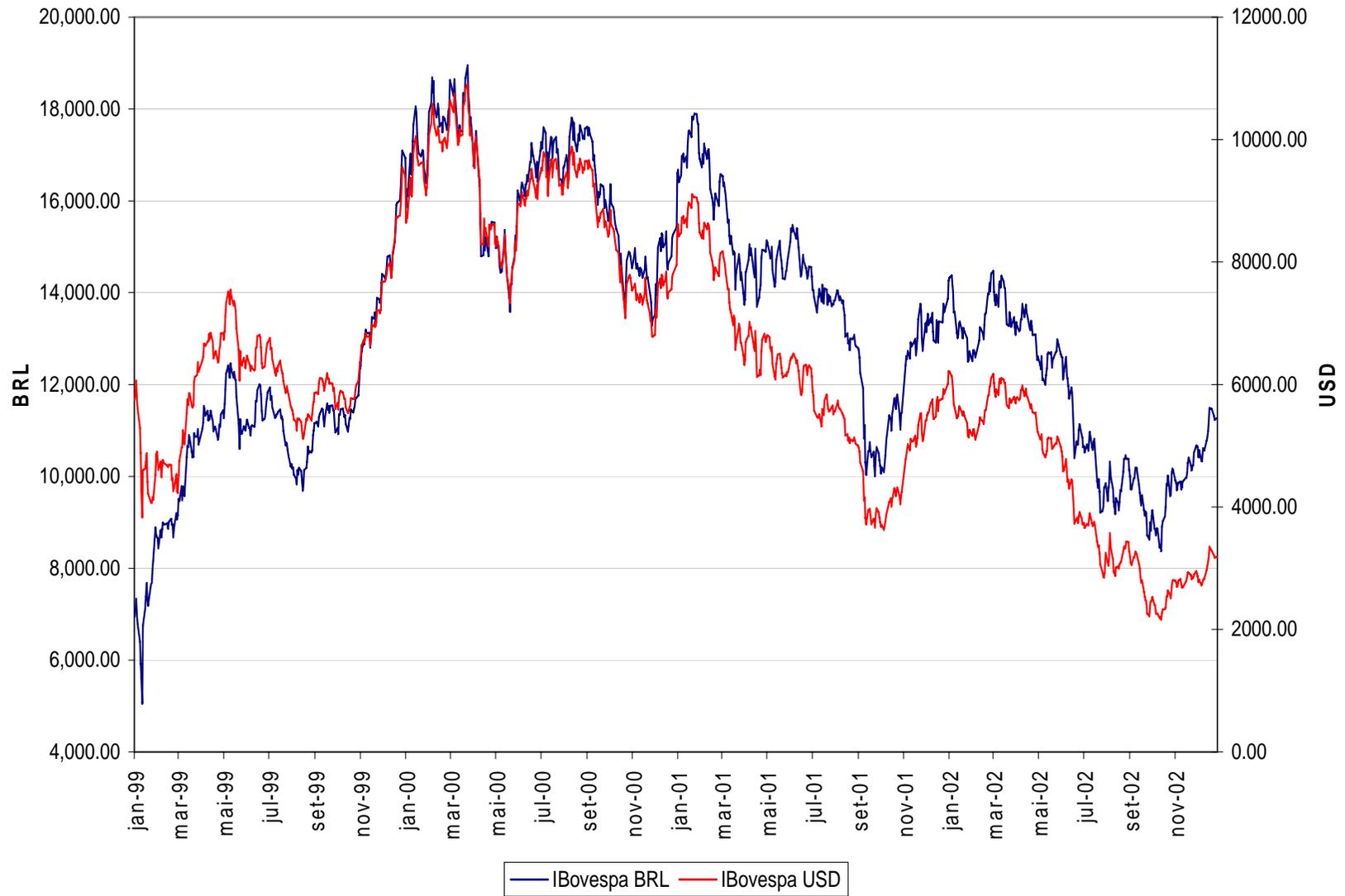
Source: Central Bank of Brazil

BRL and USD Domestic Yield Curves: 10/22/2002



Source: Central Bank of Brazil

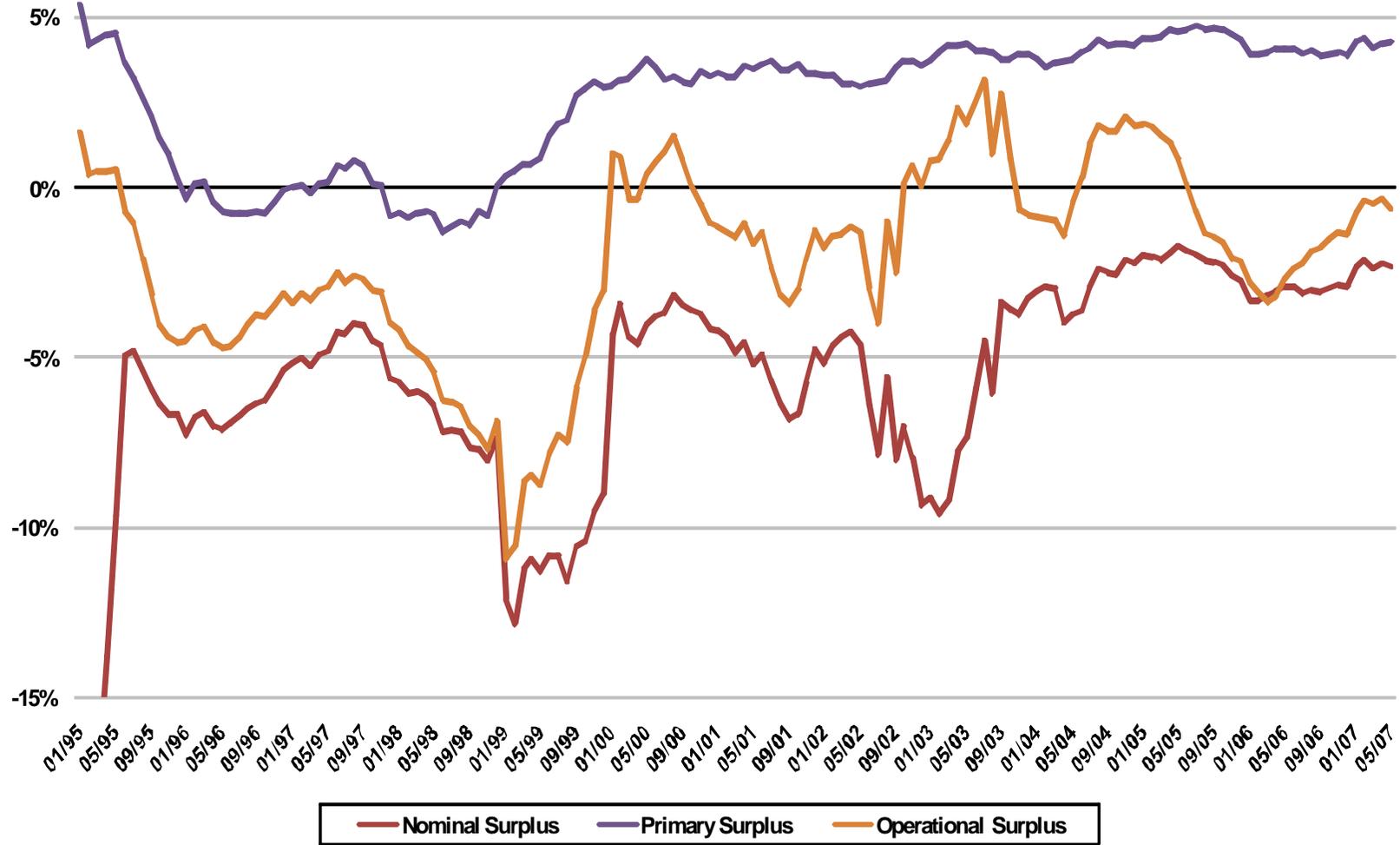
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Source: Central Bank of Brazil

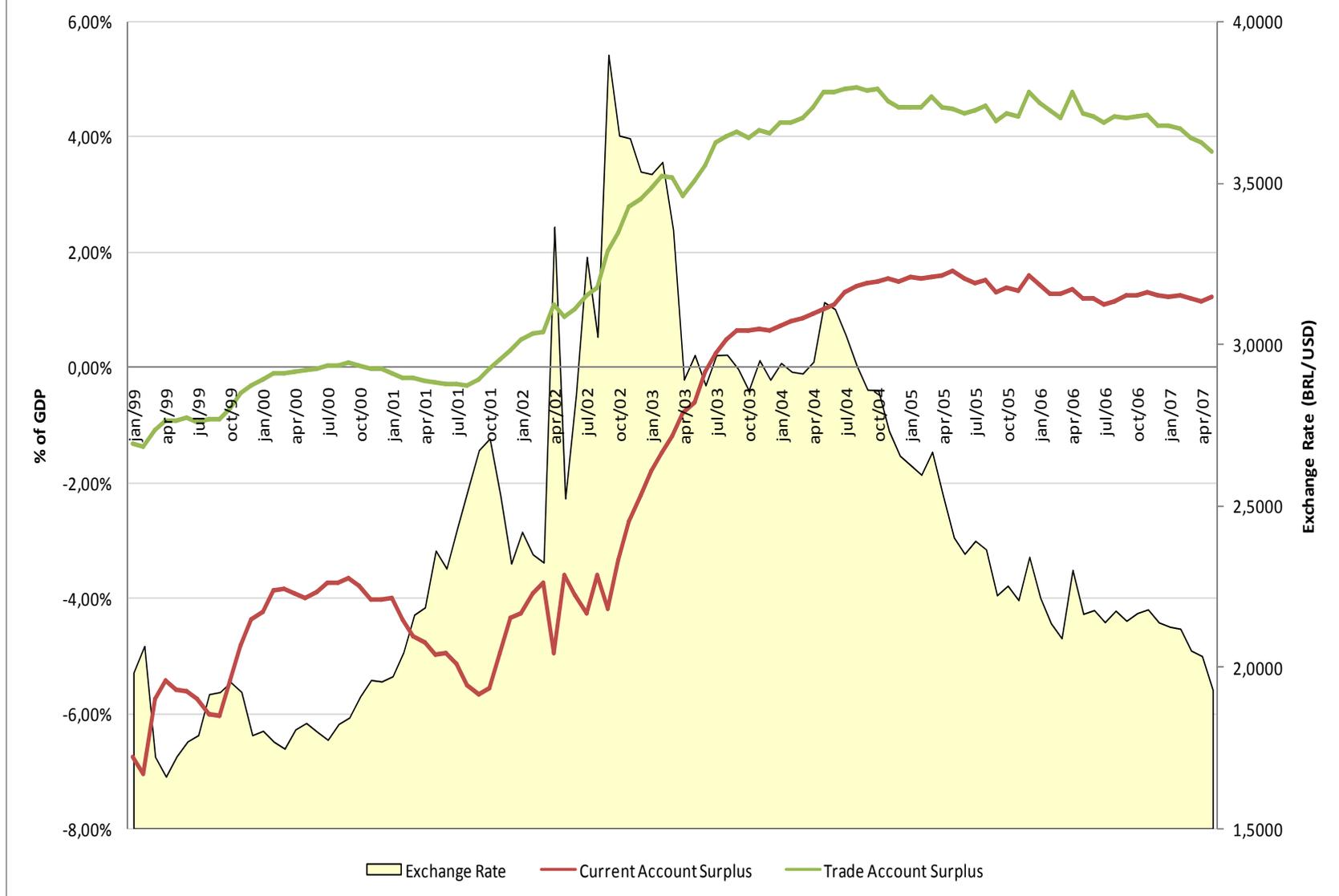
***Policy responses and
policy effects***

Public Sector Borrowing Requirements - % of GDP



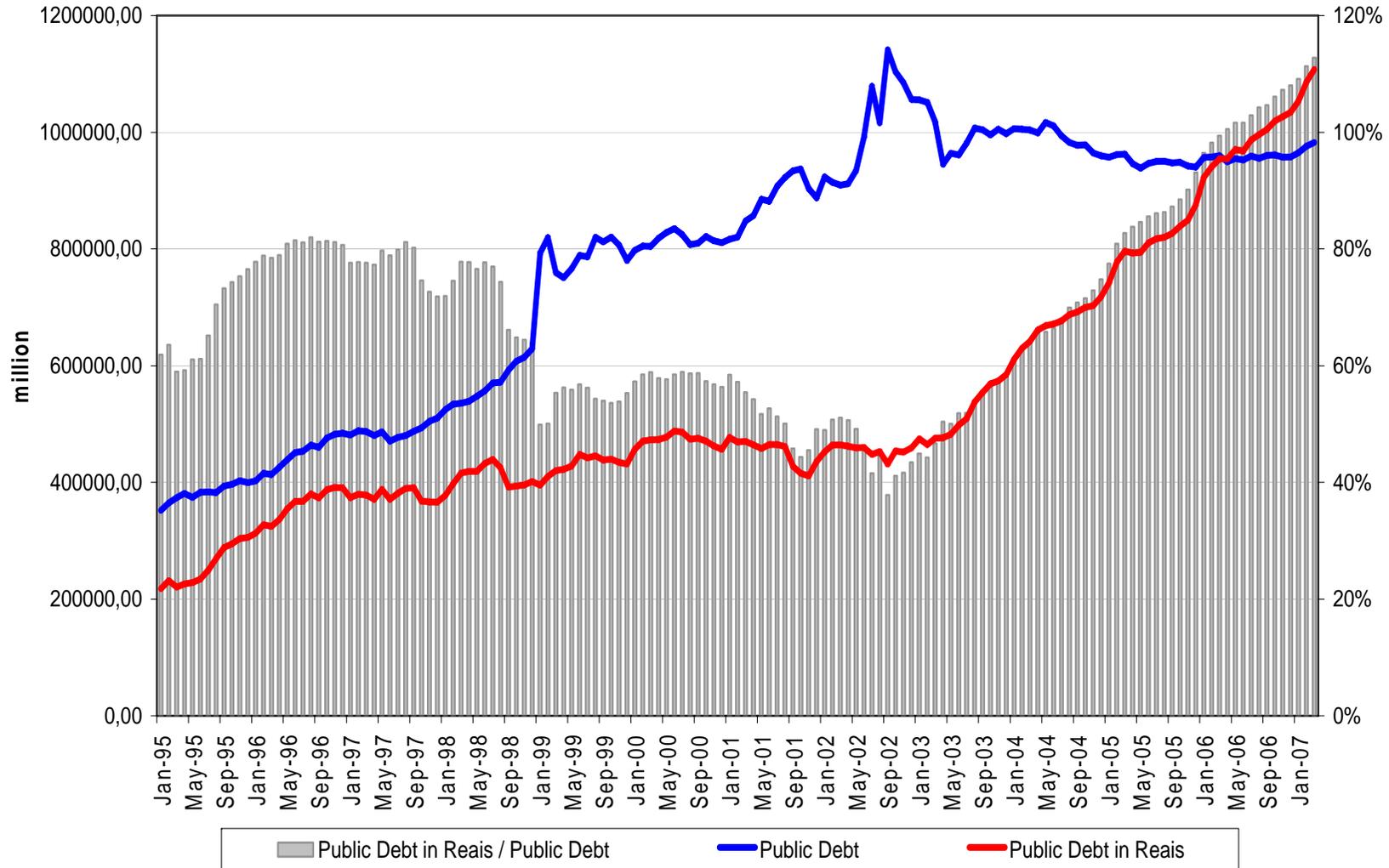
Source: Central Bank of Brazil

Current and Trade Accounts and The Exchange Rate



Source: Central Bank of Brazil

The Dedollarization of the Public Debt

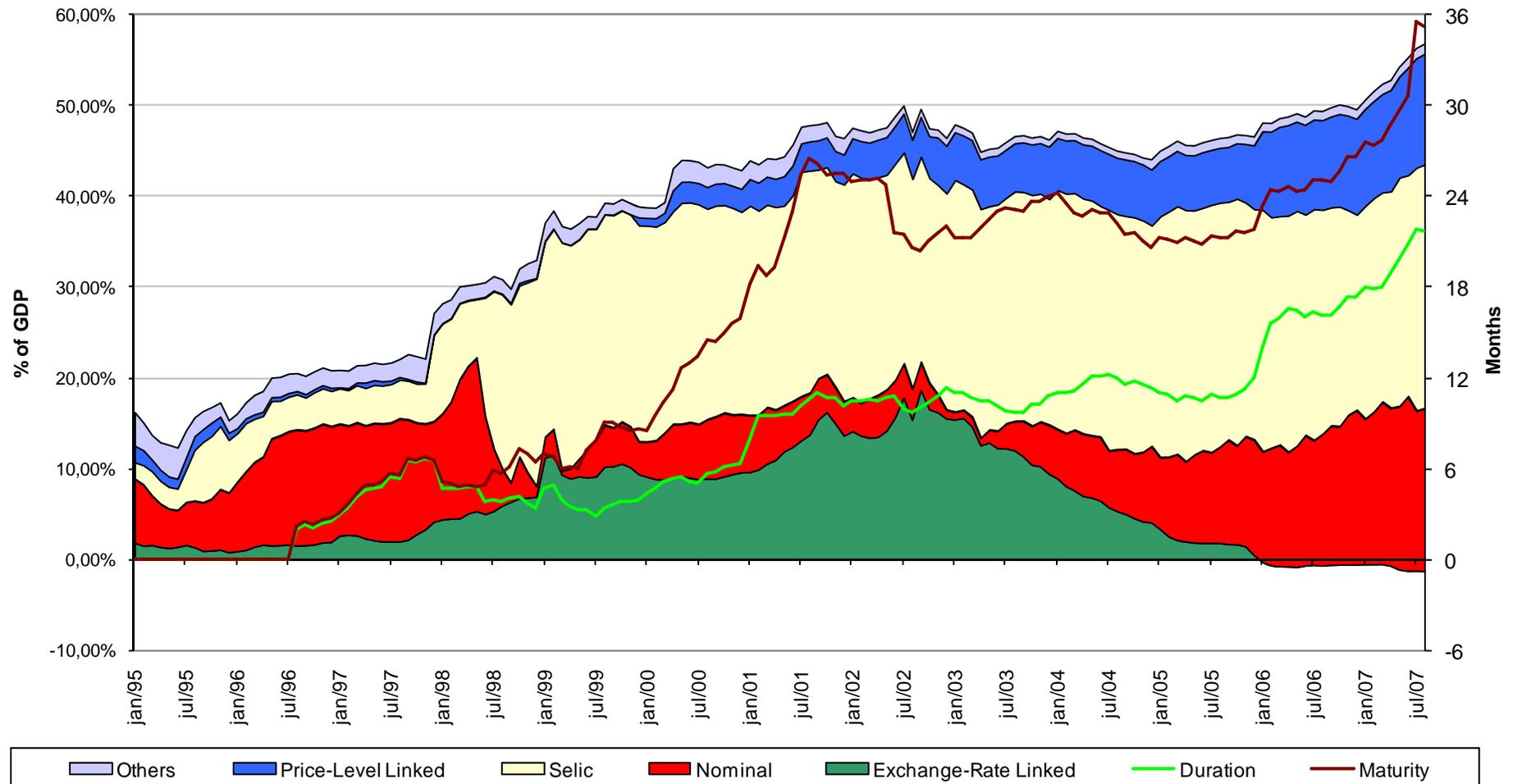


Source: Central Bank of Brazil

***Issues and constraints that shaped
the macroeconomic policy reactions
and outcomes***

*Resilience of the banking sector (and
the public sector)*

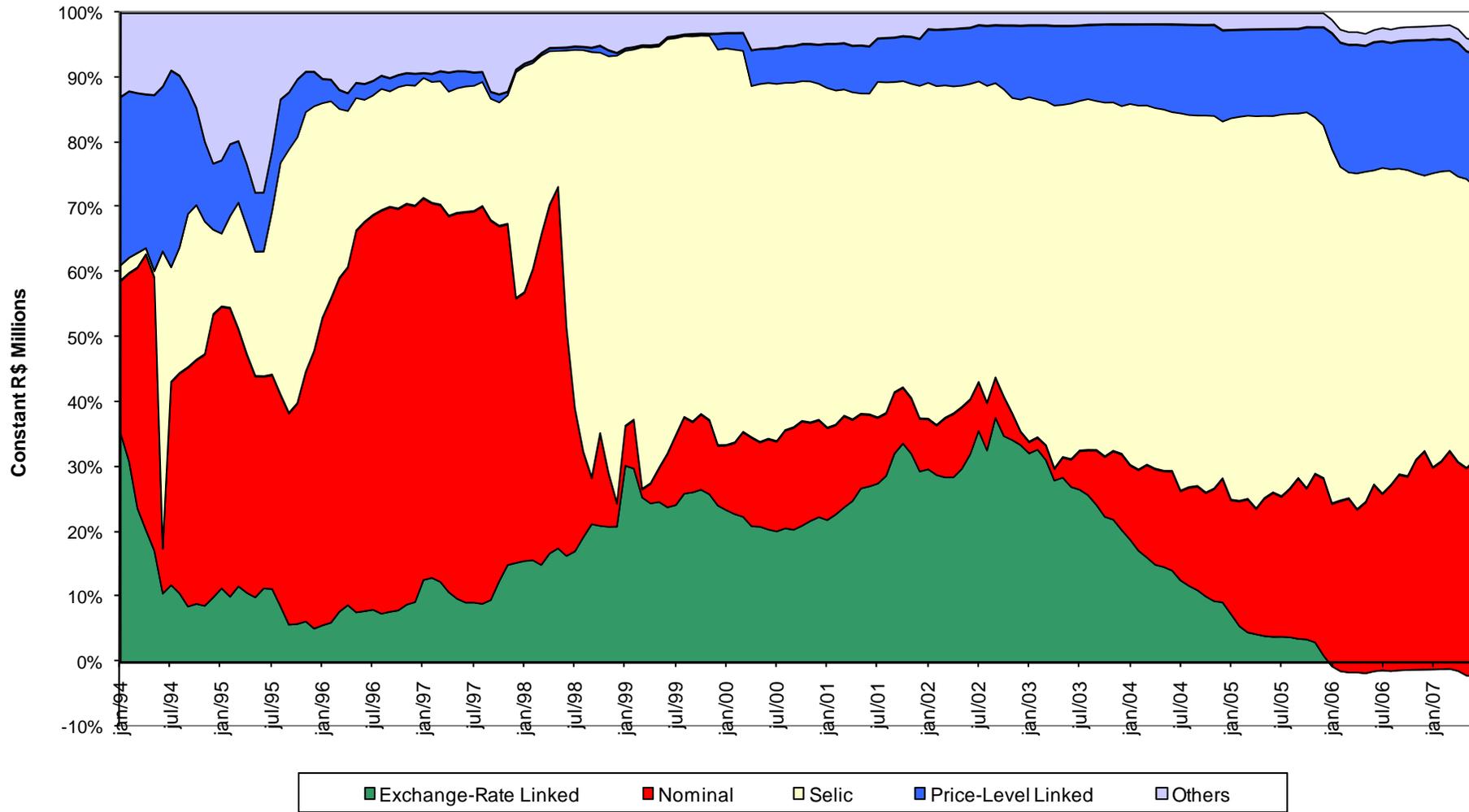
Federal Bond Debt: Composition and Maturity



Source: Central Bank of Brazil

Márcio G.P. Garcia
Economics Department PUC-Rio

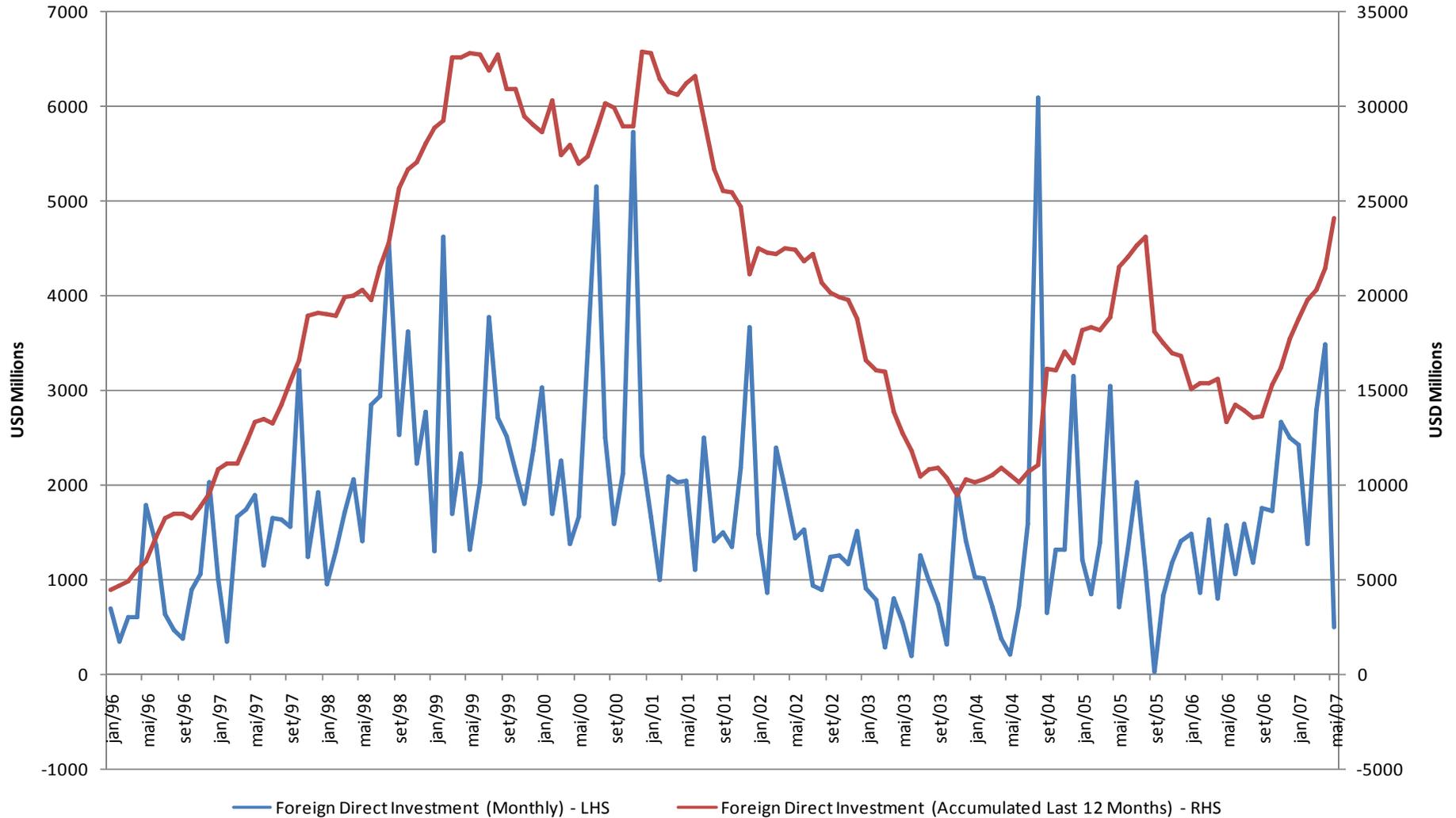
Federal Bond Debt: Composition



Source: Central Bank of Brazil

*Shock persistence and new sources of
financing*

Foreign Direct Investment



Source: Central Bank of Brazil

Financial account (US\$ Million)	1999	2000	2001	2002	2003	2004	2005	2006
Direct investment (net)	26888	30498	24715	14108	9894	8339	12550	-9420
Brazilian direct investment	-1690	-2282	2258	-2482	-249	-9807	-2517	-28202
Equity capital	-1110	-1755	1752	-2402	-62	-6640	-2695	-23413
Affiliated enterprise loans	-580	-527	505	-81	-187	-3167	178	-4789
Foreign direct investment	28578	32779	22457	16590	10144	18146	15066	18782
Equity capital	29983	30016	18765	17118	9320	18570	15045	15373
Direct investor loans	-1405	2763	3692	-528	823	-424	21	3409
Portfolio investment (net)	3802	6955	77	-5119	5308	-4750	4885	9573
Brazilian portfolio investment	259	-1696	-795	-321	179	-755	-1771	523
Foreign portfolio investment	3542	8651	872	-4797	5129	-3996	6655	9051
Financial derivatives (net)	-88	-197	-471	-356	-151	-677	-40	383
Other investments (net)	-13620	-18202	2767	-1062	-10438	-10806	-27521	14577
Other Brazilian investments (net)	-4397	-2989	-6585	-3211	-9752	-2085	-5035	-8914
Loan and financing (net)	-1278	-282	-1050	-1740	-811	-1489	-1840	-5015
Long-term	-724	-375	-1358	-1724	-665	-1217	-1872	-4979
Short-term (net)	-554	93	309	-16	-145	-272	32	-35
Currency and deposits (net)	-2301	-1774	-8001	-1300	-8579	-668	-2930	-3241
Other assets (net)	-817	-933	2465	-172	-363	73	-265	-658
Long-term (term)	-53	-105	2424	-122	-77	-38	-169	-198
Short-term (net)	-764	-828	41	-50	-286	111	-96	-460
Other foreign investments (net)	-9223	-15213	9353	2150	-686	-8721	-22486	23491
Trade credit - suppliers long- and short-term (net)	-7284	-6409	4233	1741	236	1181	3585	12314
Long-term	-4783	-2987	480	-1370	-959	-1387	-941	-841
Short-term (net)	-2501	-3422	3753	3111	1195	2568	4526	13155
Loans (net)	1342	-8774	5714	1031	-1549	-10421	-26753	9753
Monetary authority (net)	2803	-10434	6639	11363	4645	-4494	-23402	-138
Exceptional financing (net)	2966	-10323	6757	11480	4769	-4363	-23271	0
IMF	4059	-6876	6757	11480	4769	-4363	-23271	0
Other	-1094	-3446	0	0	0	0	0	0
Other long-term loans	-163	-111	-118	-118	-125	-132	-132	-138
Remaining sectors (net)	-1461	1660	-925	-10332	-6194	-5927	-3351	9891
Long-term	-2009	2736	951	-5321	-4751	-4743	-2291	10407
Short-term (net)	548	-1077	-1875	-5011	-1443	-1184	-1059	-516
Currency and deposits (net)	-3249	-33	-596	-621	625	517	567	1419
Other liabilities (net)	-32	4	2	0	3	1	115	5
Long-term (net)	6	4	3	0	3	1	0	0
Short-term (net)	-38	0	-1	0	0	0	115	5

Source: Central Bank of Brazil

Foreign reserves management

Interbank line of credit position						
						US\$ billion
Itemization		Trade credit			Others	Total
		Export	Import	Total		
2001	Dec	8.789	5.509	14.298	6.087	20.385
2002	Jan	8.811	5.620	14.431	5.789	20.220
	Feb	8.839	5.597	14.435	5.746	20.181
	Mar	8.610	5.530	14.140	5.471	19.611
	Apr	8.552	5.456	14.008	5.851	19.859
	May	8.883	5.265	14.148	5.779	19.928
	Jun	8.860	5.160	14.020	5.709	19.729
	Jul	8.240	4.826	13.066	5.532	18.598
	Aug	7.866	4.594	12.461	5.196	17.656
	Sep	7.320	4.370	11.690	4.835	16.525
	Oct	7.395	3.988	11.383	4.794	16.177
	Nov	6.940	3.710	10.650	4.757	15.408
	Dec	6.560	3.272	9.832	4.684	14.516
2003	Jan	6.690	3.139	9.829	4.941	14.771
	Feb	7.102	3.134	10.235	4.696	14.931
	Mar	7.270	2.908	10.178	4.849	15.027
	Apr	7.659	2.801	10.460	4.807	15.266
	May	7.784	2.528	10.312	4.407	14.719
	Jun	7.907	2.382	10.289	4.094	14.383

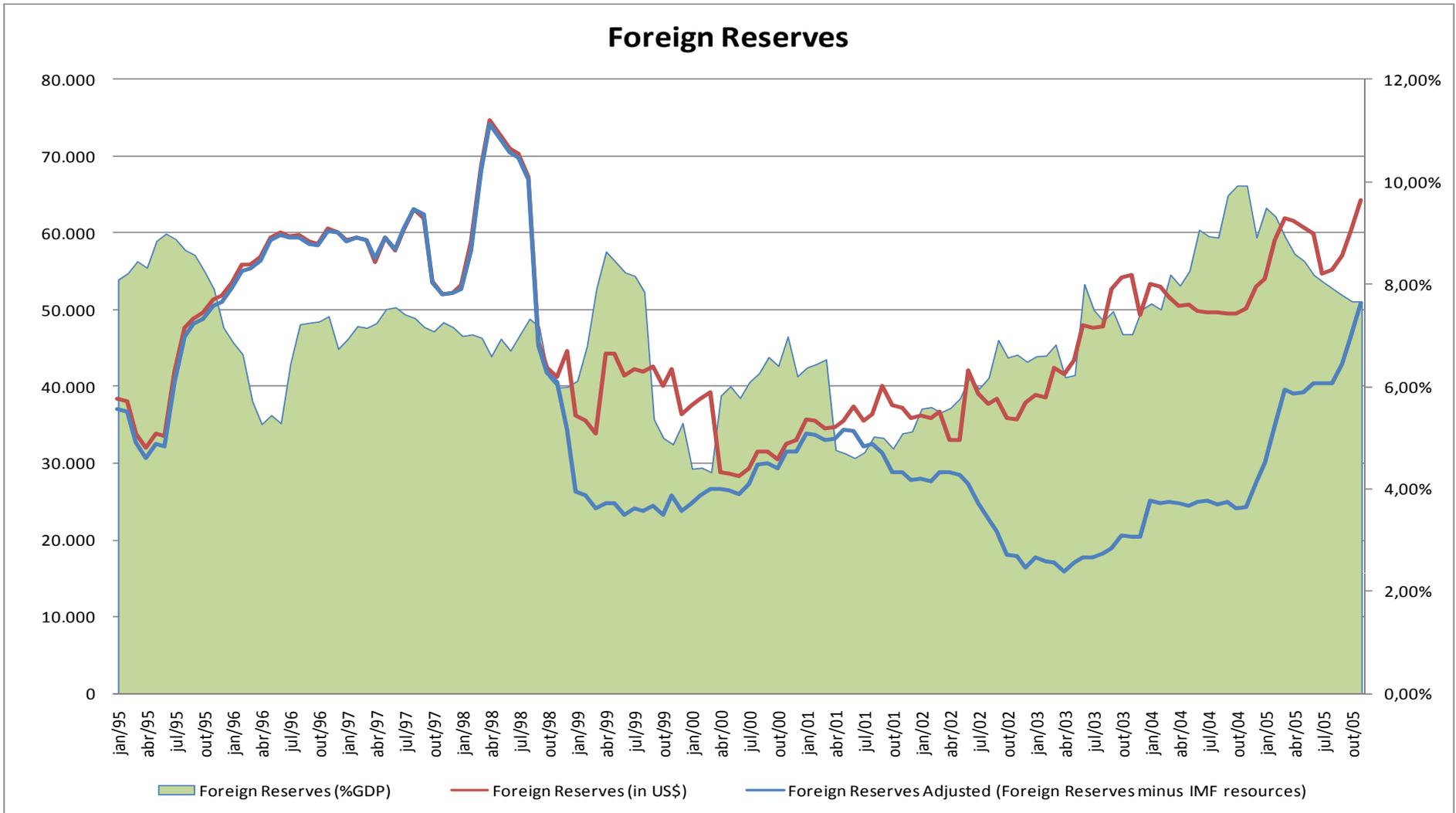
Source: Central Bank of Brazil

Statement of international reserves growth

		US\$ billion				
Itemization		Reserve Position (End of Previous Month)	NET PURCHASES (+)/ SALES (-) OF CENTRAL BANK (interventions)			
			Spot	Lines with repurchase	Export lines	TOTAL (Net purchases)
2001	Dec	37.234	-950	0	0	-950
2002	Jan	35.866	0	0	0	0
	Feb	36.167	0	0	0	0
	Mar	35.906	0	0	0	0
	Apr	36.721	0	0	0	0
	May	33.008	0	0	0	0
	Jun	32.889	-345	-755	0	-1.100
	Jul	41.999	-805	-700	0	-1.505
	Aug	39.060	-1.715	290	-439	-1.864
	Sep	37.643	-880	30	-524	-1.374
	Oct	38.381	-1.555	200	-470	-1.825
	Nov	35.855	-185	90	0	-95
	Dec	37.234	-950	0	0	-950
2003	Jan	37.823	-175	1.076	0	901
	Feb	38.772	-10	-175	0	-185
	Mar	38.530	0	347	0	347
	Apr	42.335	0	99	0	99
	May	41.500	0	429	0	429
	Jun	43.373	0	0	0	0

Source: Central Bank of Brazil

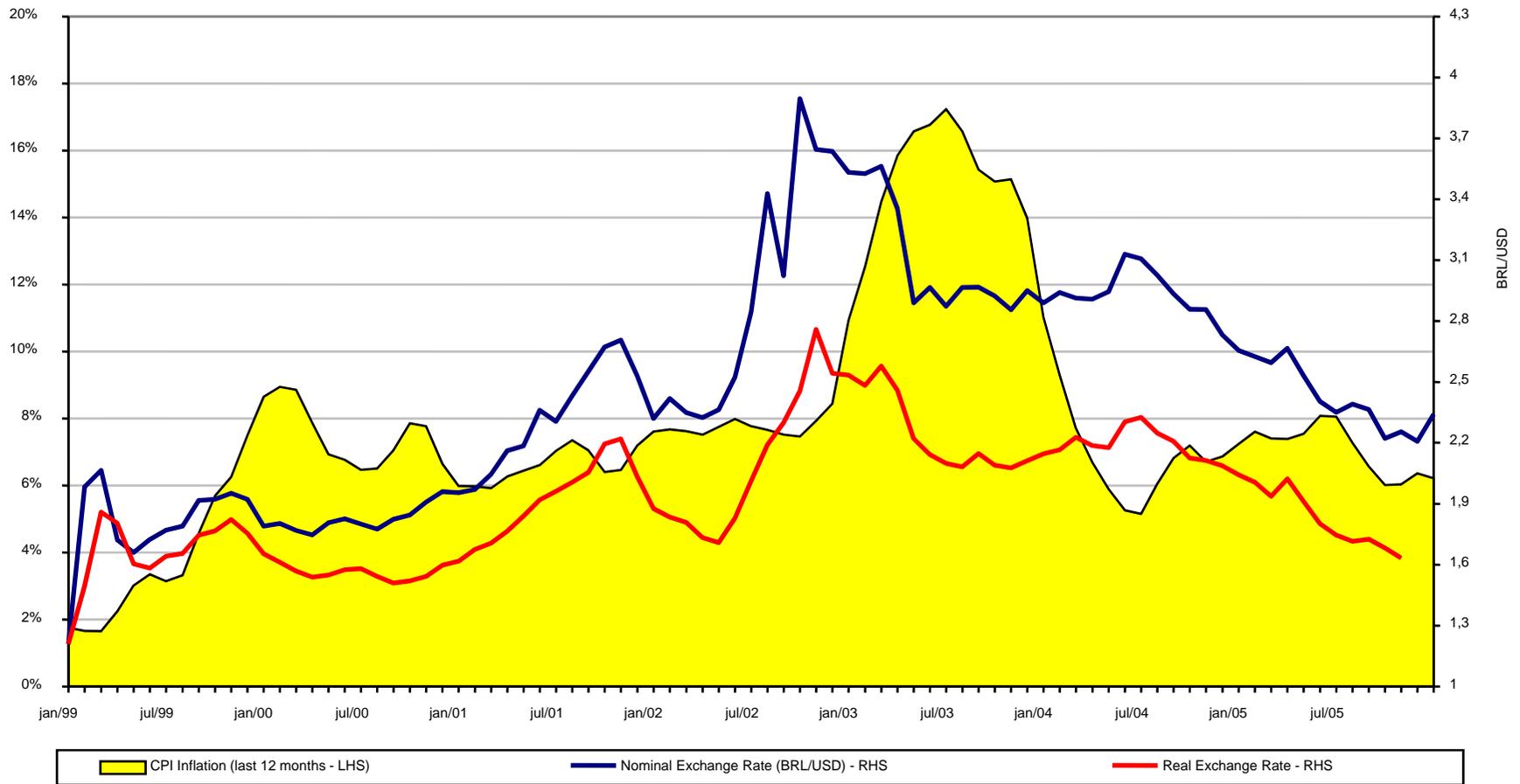
Foreign Reserves



Source: Central Bank of Brazil

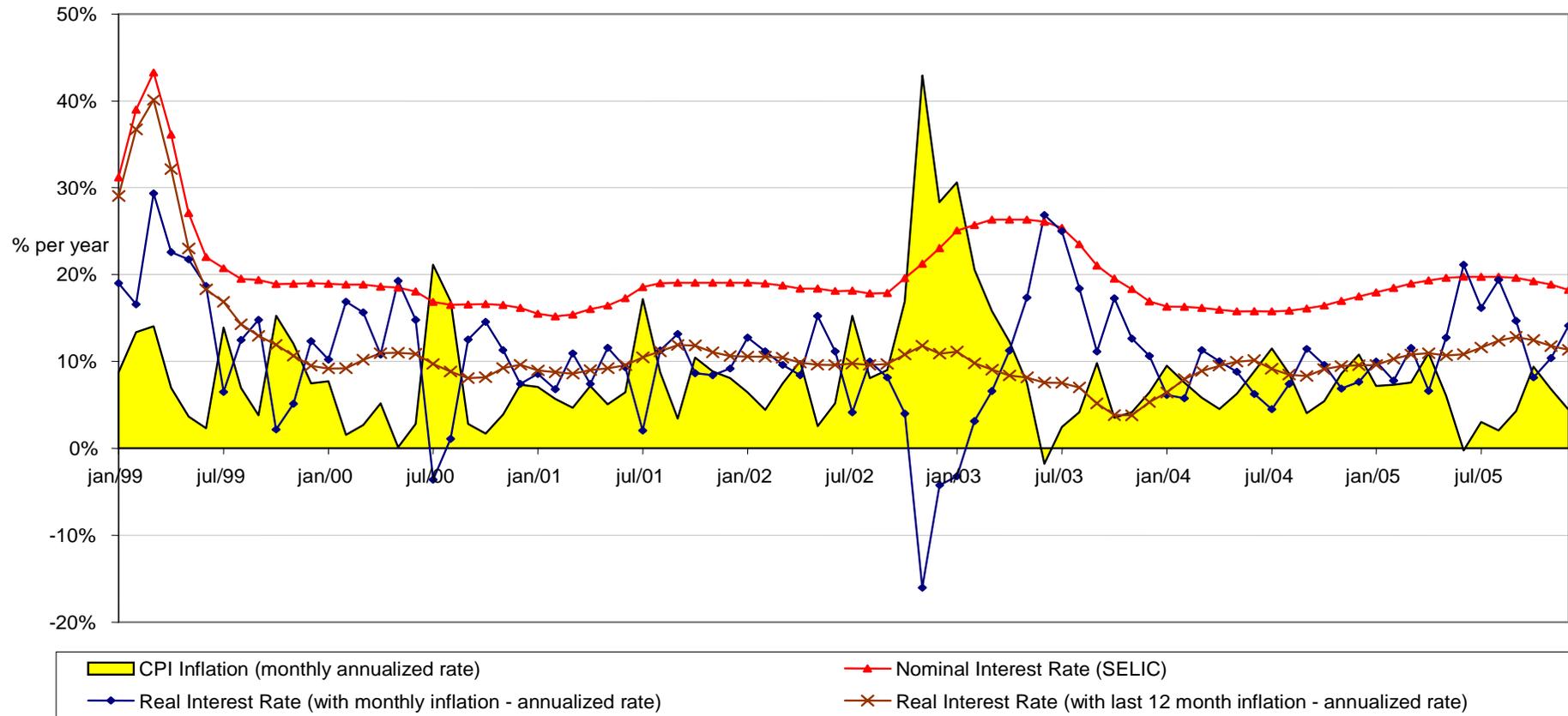
*Monetary policy: The Brazilian
Experience with Inflation Targeting*

NOMINAL AND REAL EXCHANGE RATES AND CPI INFLATION



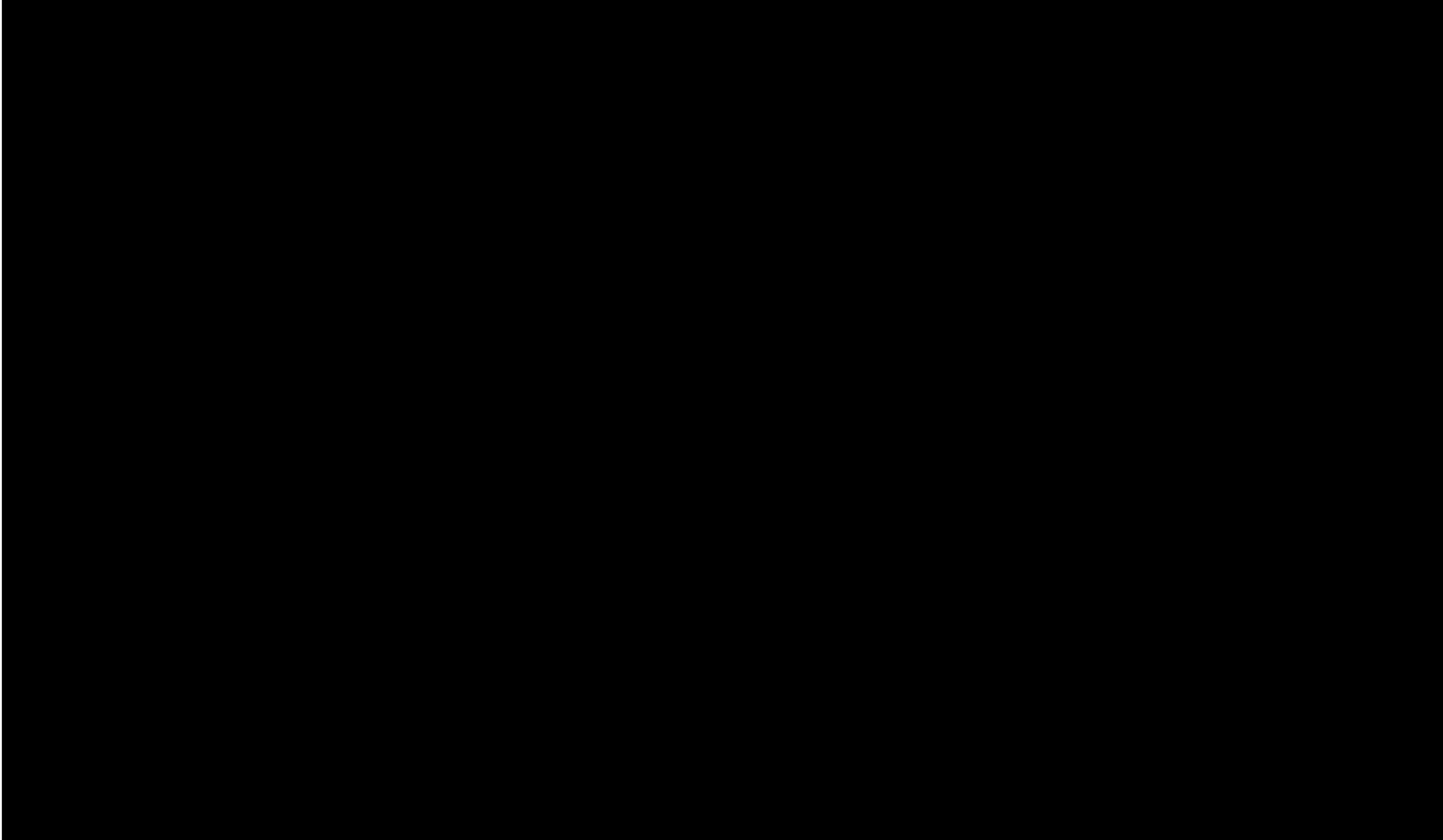
Source: Central Bank of Brazil

NOMINAL AND REAL INTEREST RATES AND CPI INFLATION

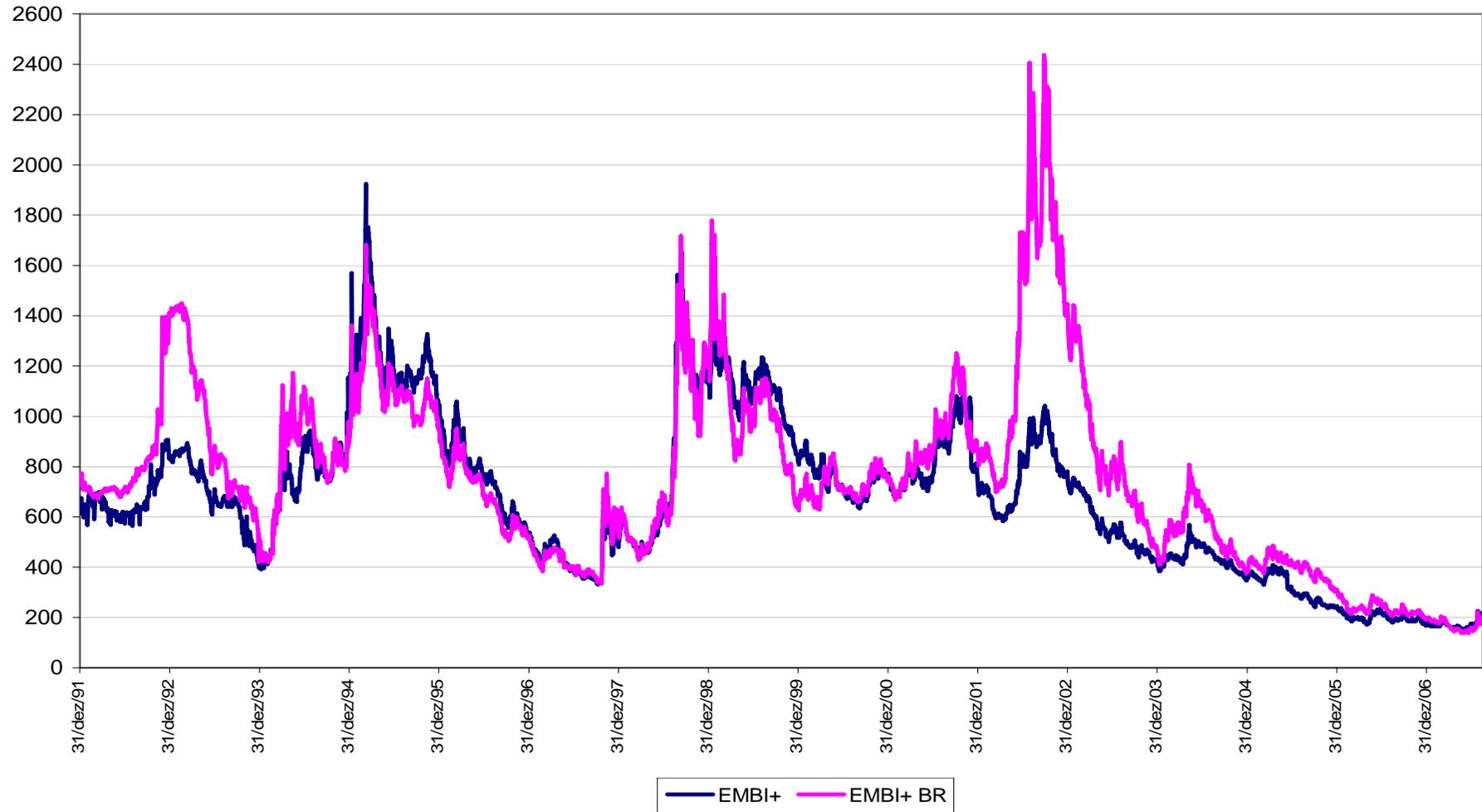


Source: Central Bank of Brazil

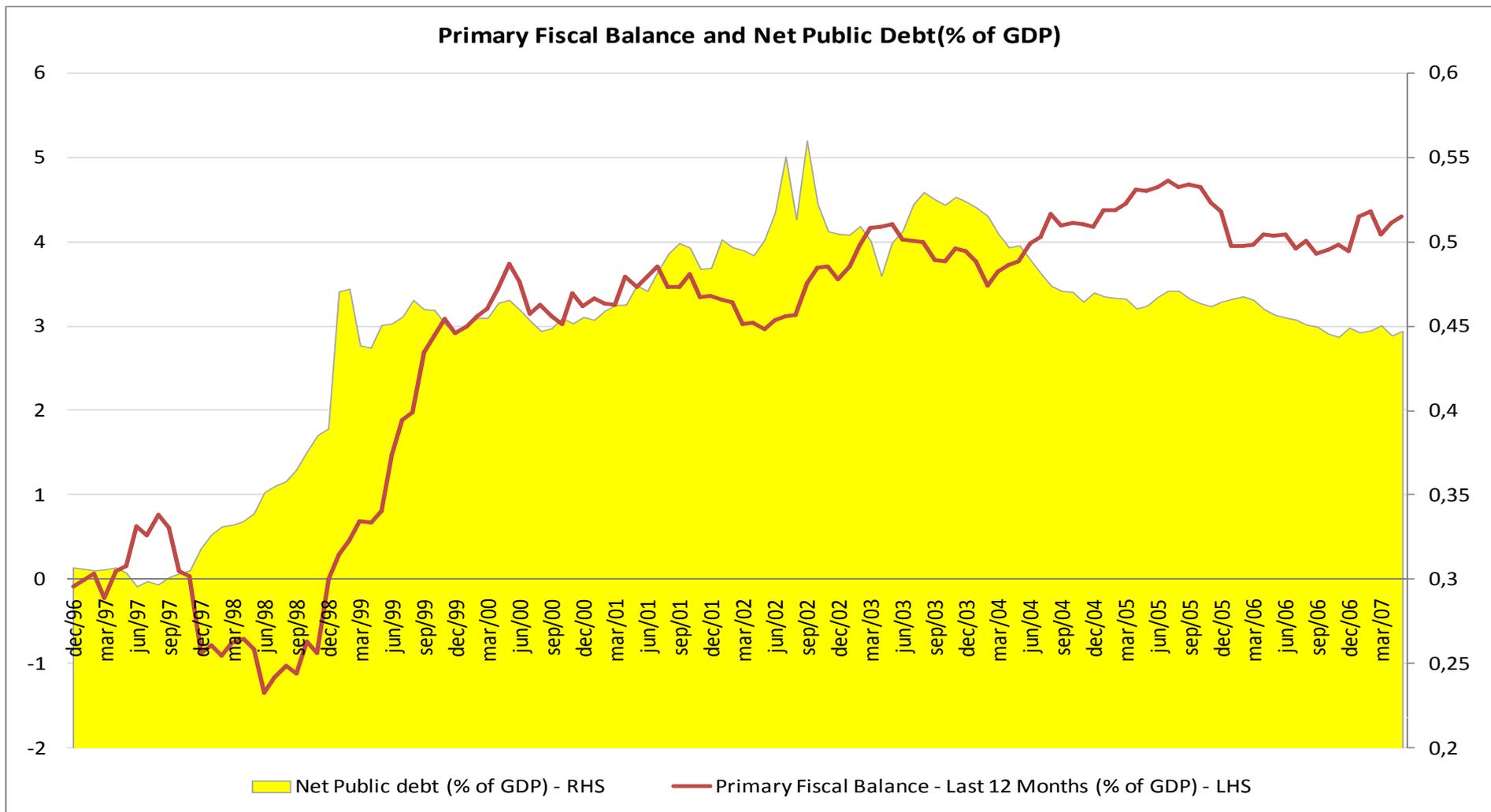
Brazilian Performance With Inflation Targeting



COUNTRY RISK: EMBI+ AND EMBI + BRAZIL



Source: Central Bank of Brazil



Source: Central Bank of Brazil

FLEXIBILITY IN FACE OF LARGE EXTERNAL SHOCKS

Line	Item	2003	2004
(a)	Inflation Target Determined by the N.M.C.	4,0	3,75
(b)	Shock of the Managed and Monitored Prices	1,7	1,1
(c)	Inertia To be Fought in the Following Years	2,8	0,6
	Inherited Inertia of the Previous Year (Total)	4,2	1,0
	On the Managed Prices	1,4	0,4
	On the Free Prices	2,8	0,6
(d)	Adjusted Target (= (a) + (b) + (c))	8,5	5,5

Obs: 1) For the calculation of the shock, the effect of inertia and exchange on the inflation of the managed and monitored ones leaves.

2) Inertia to be fought in the following years is equivalent the 2/3 of the inherited inertia of the previous year.

Policy Lessons

- Brazil improved its fiscal policy stance by the end of 1998, but decided to float.
- During the 2002 sudden stop, several non-orthodox measures were taken to avoid further damage to the economy: exchange rate derivatives, daily allowance of exchange rate directed to international trade financing, political negotiation to generate a statement of all candidates that if they won, they would not renege sensible economic policies. These measures were deemed successful, and prevented further damage, paving the way to the good times after 2003.
- Fiscal policy remains the Achilles heel of the economy. Although there is a substantial primary surplus, and the interest rate burden is falling, primary expenditures are rising fast, and social security is a major problem for the near future.

Muchas Gracias

- I thank Laura Macedo and Pedro Maia for superb research assistance. Eduardo Cavallo and Alejandro Izquierdo read carefully several versions and provided excellent comments. Of course, they are not responsible for the flaws and mistakes.