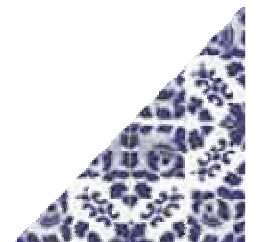


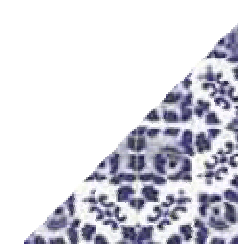
Macroeconomic Volatility and Policy Response: the case of Brazil

Viviane Luporini
Universidade Federal do Rio de Janeiro

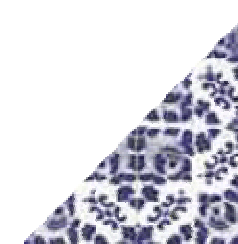


Context

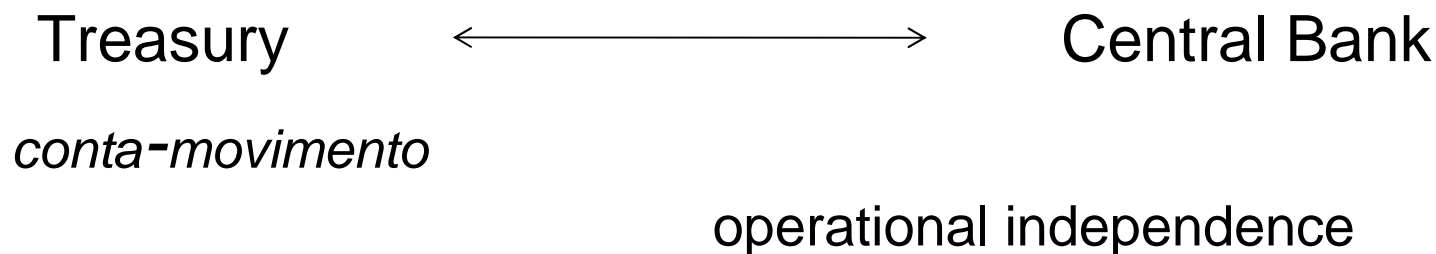
- Fiscal volatility is higher for LA than for industrialized countries: average 3.3% vs 1.6% (Gavin and Perotti, 1997); for Brazil, 3.4%
- Why volatility is important?
- The main question is: how have the restrictions to fiscal space affected the country's capacity to respond to crises?



- Fiscal space depends on:
 - Fiscal variables: expenditures, revenues and debt
 - Institutions: public sector organization and legal framework for fiscal policy



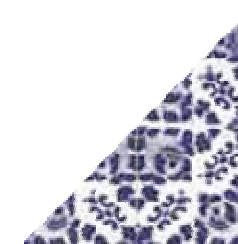
Institutional Framework



Lei 9496/97

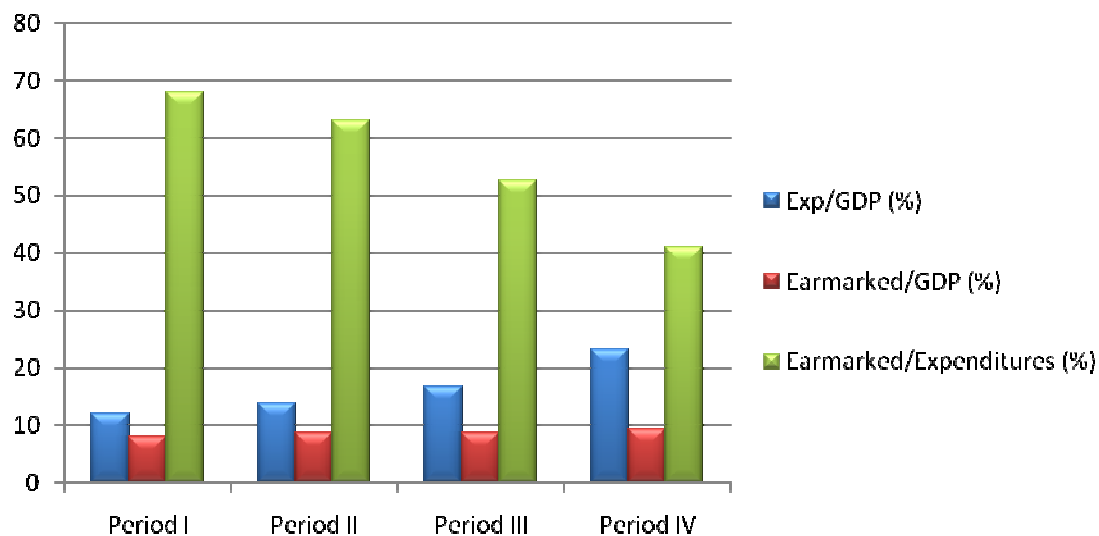
Fiscal Responsibility Law

- Limits on payroll expenditures
- Limits on public debt (Resolution 40/01)



Earmarked Expenditures

1991- 2009

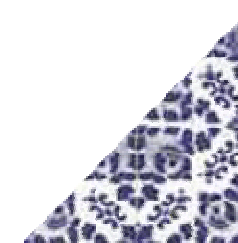


Period I (1991:01 – 1994:06): *high inflation*
Period II (1994:07 – 1998:12): *crawling-peg*
Period III (1999:01 – 2000:04): *stabilization, floating, before LFR*
Period IV (2000:05 – 2009:03): *Law of Fiscal Responsibility*

Note: Average values based on a centered MA(12),

Source: Central Bank, series “Despesas do Tesouro Nacional”

Earmarked: “Pessoal e encargos”, “Transferências” e “Outras vinculações”

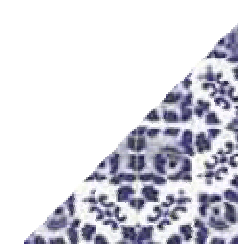


Investment Rates, averages in % of GDP

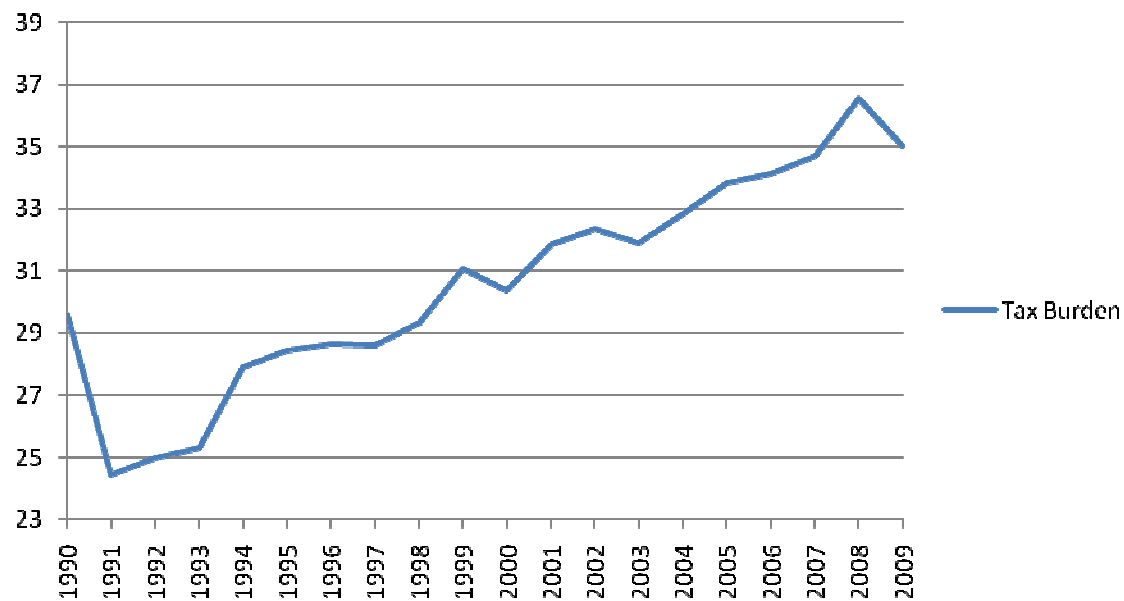
	Public Administration	Total	Public/Total
1970-1980	3.58	21.60	16.82
1981-1995	2.93	20.94	14.10
1996-2001	1.90	16.78	11.29
2002- 2008	1.84*	16.61	11.45

a/ Source: Ipeadata.

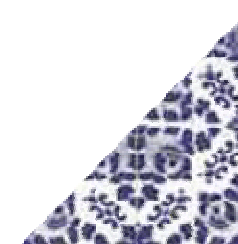
* Average of values for 2004, 2005 and 2006



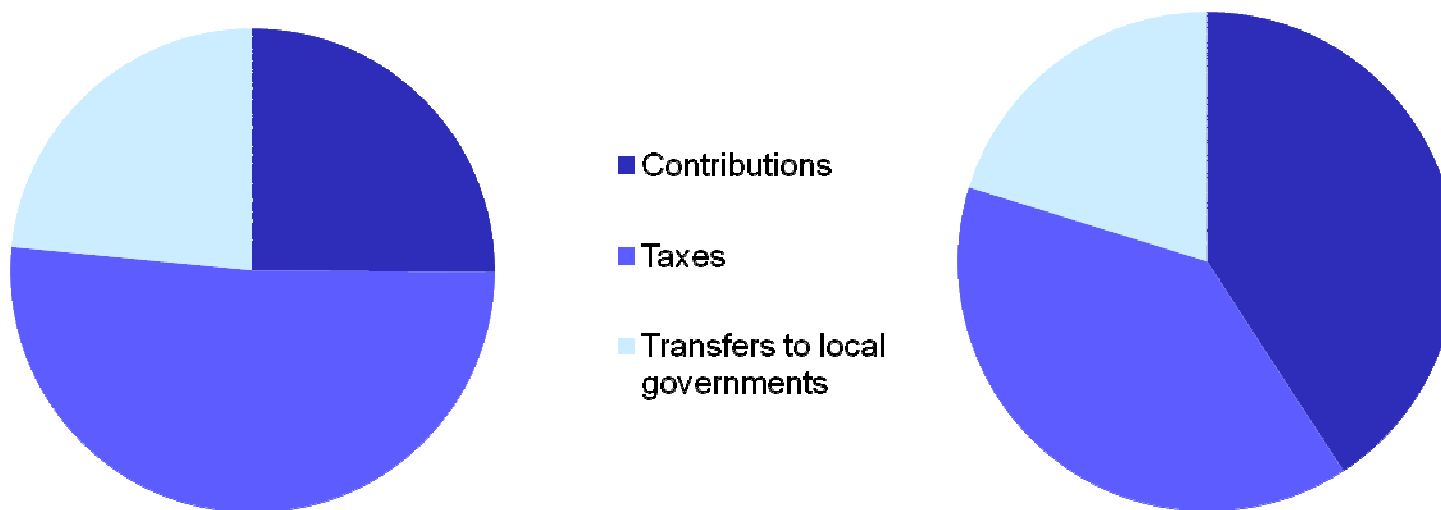
Evolution of the tax burden (% of GDP)



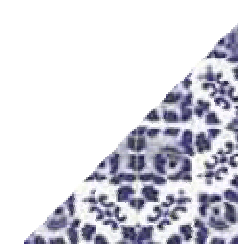
Source: Ipeadata (IBGE and Receita Federal)



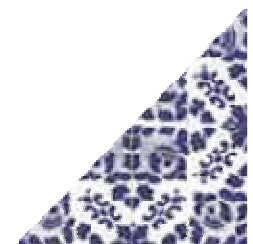
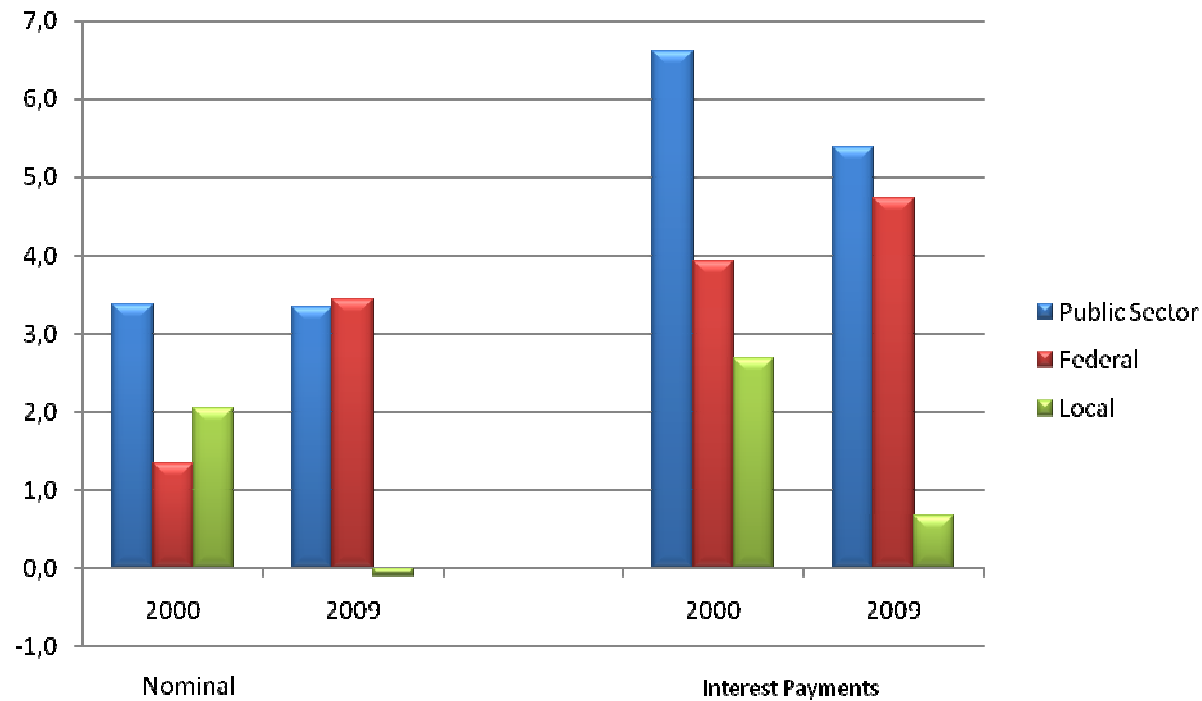
Federal Revenues



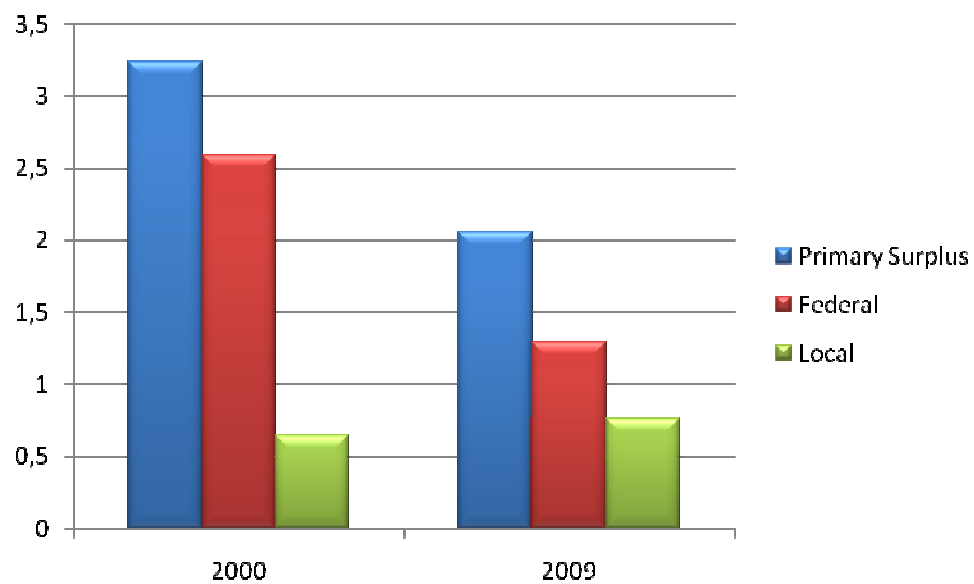
Source: Banco Central do Brasil, based on average values of monthly data.



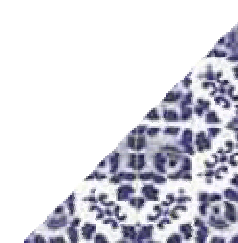
Borrowing Requirements of the Public Sector (% of GDP)



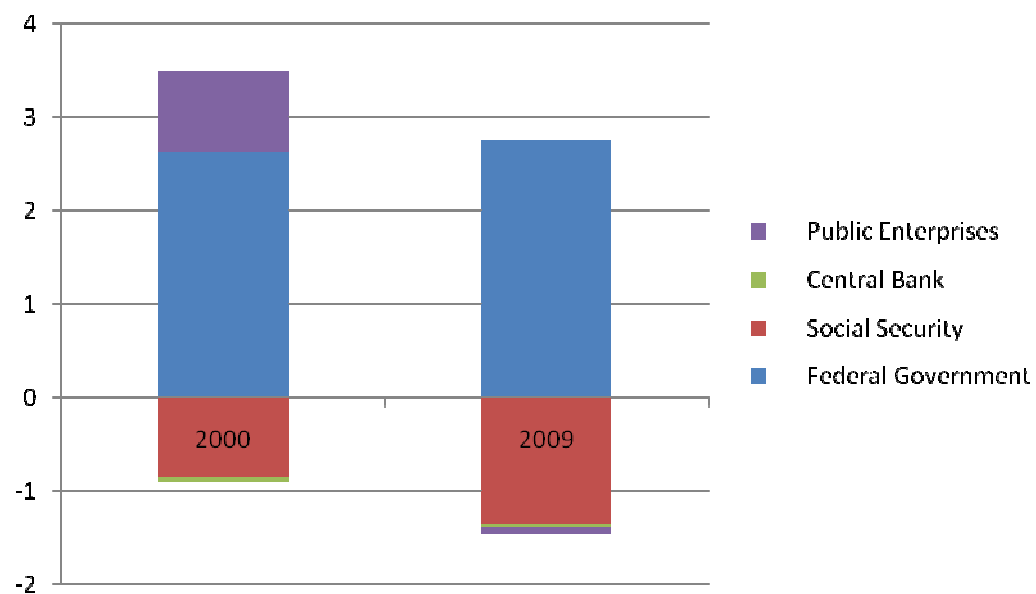
Primary Surplus: Public Sector (% of GDP)



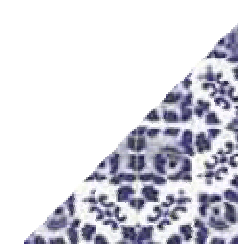
Source: Boletim do Banco Central, Central Bank of Brazil.



Primary Surplus: Federal Level (% of GDP)



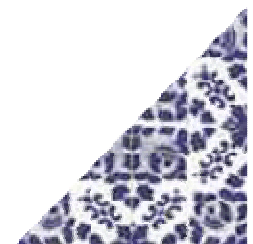
Source: Boletim do Banco Central, Central Bank of Brazil.



Net public debt of the consolidated public sector (% of GDP)



Source: Central Bank



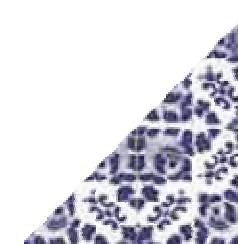
Federal Securities, Relative Participation by Correction Clause (%)

	Indexed	Exchange Rate	Interest Rate	Price and Others	Fixed Rate	Total	Maturity b/	Duration b/
2002	94.5	19.8	61.8	12.9	5.5	100.0	21.82	11.10
2003	85.7	9.9	61.7	14.1	14.3	100.0	23.99	10.88
2004	77.4	4.8	55.9	16.7	22.6	100.0	20.59	11.40
2005	71.3	2.6	51.2	17.5	28.7	100.0	21.80	12.22
2006	66.2	1.2	37.4	27.6	33.8	100.0	26.73	18.41
2007	60.5	0.8	34.1	25.6	39.5	100.0	33.09	24.35
2008	68.7	0.8	38.7	29.2	31.3	100.0	36.31	24.98
2009 c/	69.7	0.5	39.9	29.3	30.3	100.0	38.41	26.69

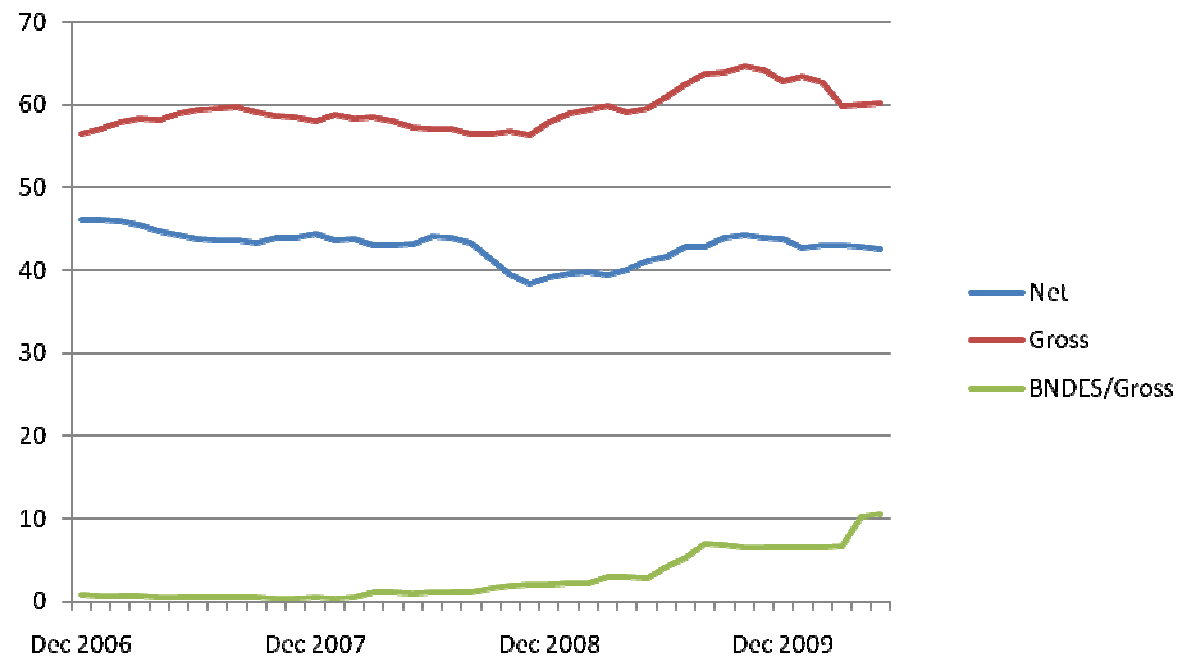
a/ Source: Central Bank.

b/ Average, in months.

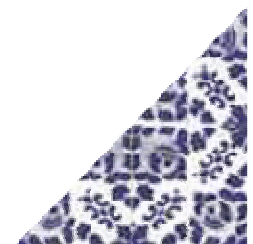
c/ Value of October.



Gross and Net General Government Debt (%) of GDP

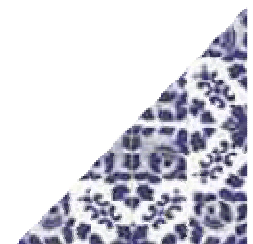


Source: Central Bank

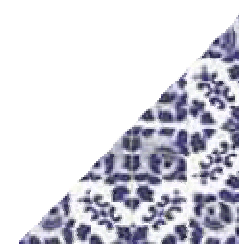


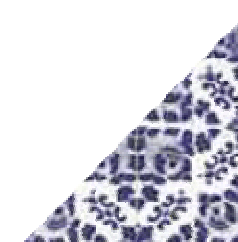
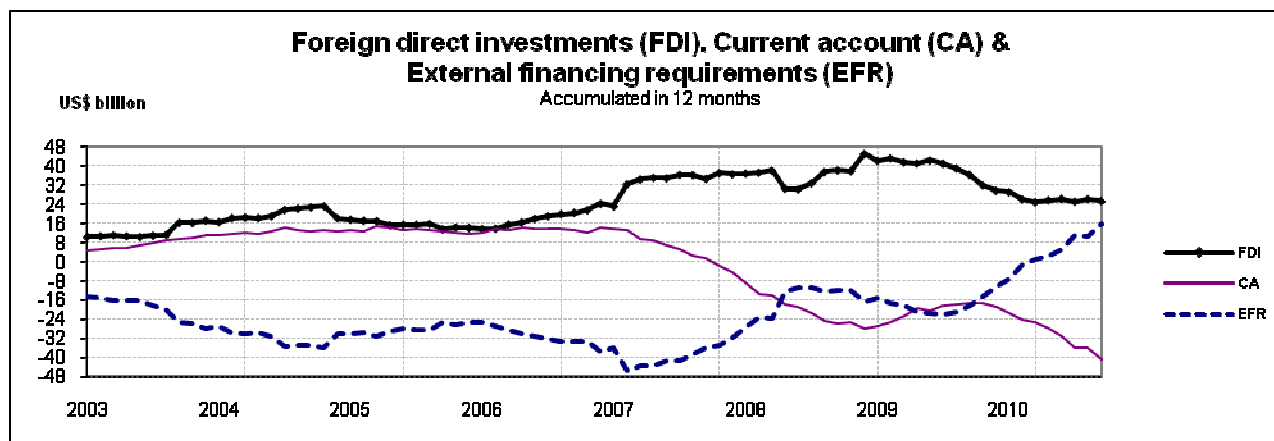
Fiscal space and potential sources of risk to the budget

- Reliance on tax revenues for fiscal consolidation
- Expenditures rising faster than GDP and highly earmarked; importance of “contributions” for revenues
- Public debt composition: monetary policy has strong fiscal effects
- Fiscal Responsibility Law: limits on expenditures as a ratio to current revenue; “technically sound” revenue forecasts
- Automatic stabilizers: limited role
- Credit operations between government entities (BNDES)



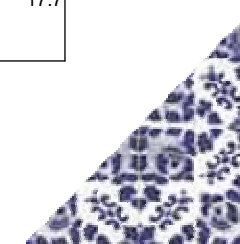
End



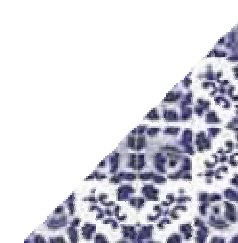
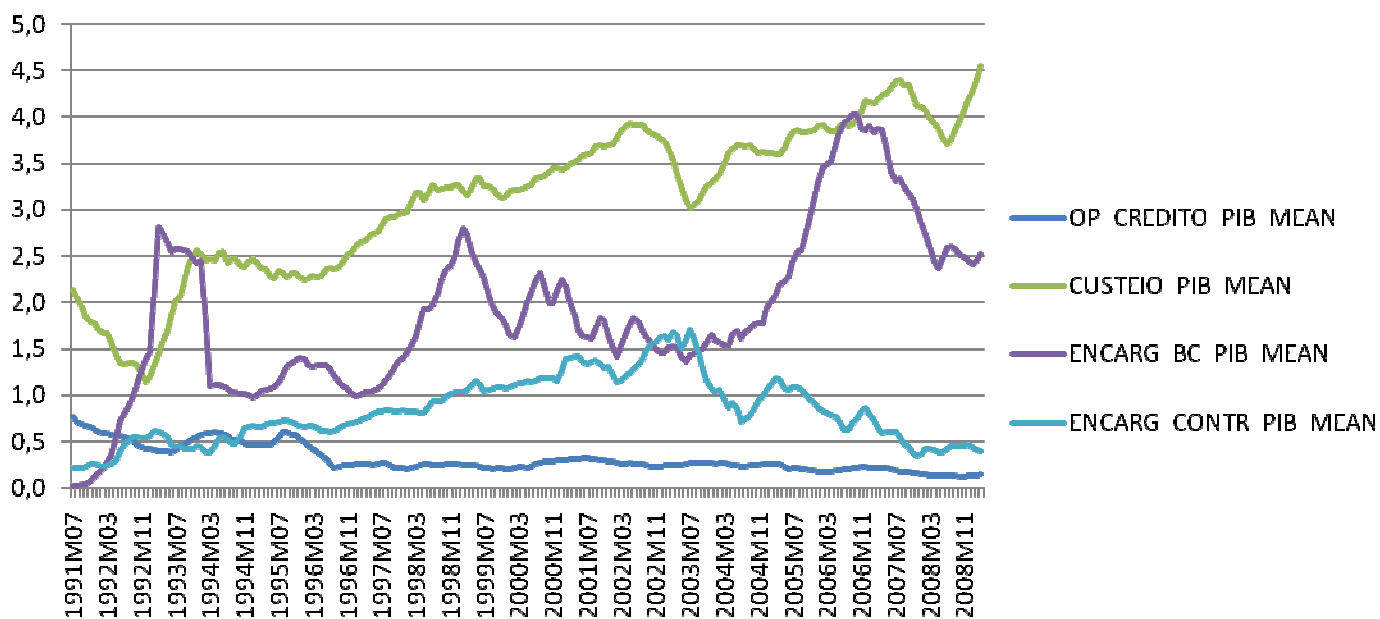


V.26 - External indebtedness indicators^{1/}

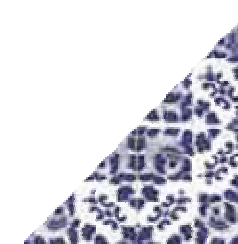
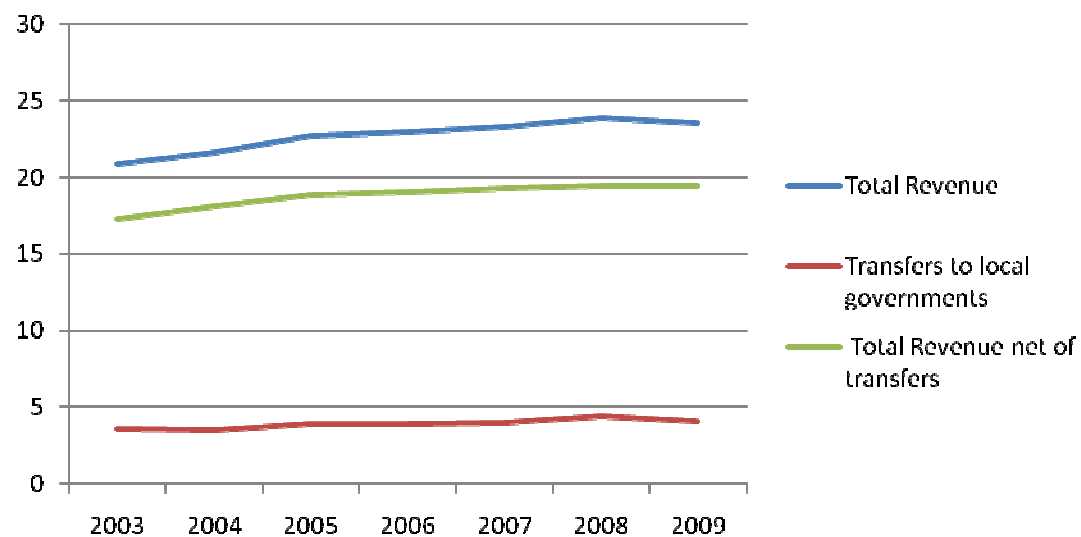
Itemization	US\$ million							
	2005	2006	2007	2008	2009			2010
					Jun	Sep	Dec	Mar
Indicators								
Debt service/exports (%)	55.8	41.3	32.4	19.0	21.9	26.0	28.5	29.4
Debt service/GDP (%)	7.5	5.2	3.8	2.3	2.7	2.8	2.8	2.7
Interest/exports (%)	12.2	10.8	9.5	7.9	8.3	9.3	9.1	8.5
Total external debt/GDP (%)	19.2	15.9	14.1	12.1	13.7	13.9	12.6	12.0
Total public sector external debt/total external debt (%)	59.2	51.7	44.5	42.4	43.5	45.5	48.2	46.4
Nonfinancial public sector external debt/total external debt (%)	51.7	44.2	36.4	34.0	34.5	36.6	38.9	37.4
Net total external debt/GDP (%)	11.5	6.9	- 0.9	- 1.7	- 1.9	- 2.6	- 3.9	- 2.8
International reserves (liquidity)/total external debt (%)	31.7	49.7	93.3	104.3	104.7	109.4	120.6	115.3
Total external debt/exports	1.4	1.3	1.2	1.0	1.1	1.3	1.3	1.3
Net total external debt/exports	0.9	0.5	- 0.1	- 0.1	- 0.2	- 0.2	- 0.4	- 0.3
International reserves (liquidity)/debt service	0.8	1.5	3.5	5.5	5.4	5.4	5.5	5.2
International reserves (liquidity)/interest	3.7	5.8	11.8	13.3	14.2	15.2	17.2	17.7



Other Expenditure Outlays (% of GDP)



Federal Revenue

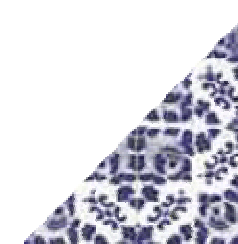


Fiscal Results for the Central Government (% of GDP)

	2000-2003	2004	2005	2006	2007	2008	2009
I.Total Revenue	20.8	21.6	22.7	22.9	23.3	23.8	23.5
II. Transfers to local governments	3.6	3.5	3.9	3.9	4.0	4.4	4.1
III. Total Revenue net of transfers	17.3	18.1	18.8	19.0	19.3	19.4	19.5
IV. Total Expenditures	15.3	15.6	16.4	17.0	17.1	16.6	18.2
IV.1. Payroll and Social Security Benefits	4.7	4.3	4.3	4.5	4.4	4.4	4.8
IV.2. Pensions	5.9	6.5	6.8	7.0	7.0	6.6	7.2
IV.3. Current Exp and Investment	4.6	4.7	5.2	5.4	5.7	5.5	6.1
V. Sovereign Wealth Fund		-	-	-	-	0.5	-
Primary Result Central Government*	2.0	2.7	2.6	2.2	2.2	2.4	1.4
Nominal Interest Payments	-4.1	-4.1	-6.0	-5.3	-4.5	-3.2	-4.8
Nominal Result Central Government	-2.1	-1.4	-3.4	-3.1	-2.2	-0.8	-3.4

* Calculated "bellow the line", Central Bank, includes "discrepância estatística".

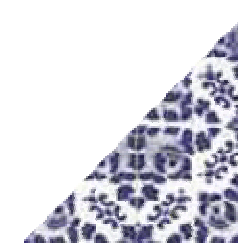
Source: STN/Ministério da Fazenda; Banco Central do Brasil



Fiscal Results for the Government

	Government	Federal	States	Municipalities d/
I. Total Revenue	39.00	24.06	13.58	8.08
I.1. Tax Revenue e/	18.74	8.57	8.58	1.59
IPI	1.26	1.26	0	0
ICMS	7.31	0.0	7.31	0
Import taxes	0.58	0.58	0	0
ISS	0.79	0	0.02	0.76
IOF	0.68	0.68	0	0
IPTU	0.43	0	0.01	0.42
IPVA	0.56	0	0.56	0
IR	6.03	6.03	0	0
Other taxes	1.10	0.02	0.67	0.41
I.2. Contributions	13.60	12.81	0.57	0.23
Social Contributions	13.27	12.57	0.55	0.15
Economic Contributions	0.33	0.23	0.02	0.08
I.3. Other Revenue	6.66	2.68	4.43	6.26
II. Total Expenditure	35.55	21.64	12.69	7.95
Payroll	14.31	4.40	6.29	3.62
Intergovernmental Transfers (1)	0.00	4.48	2.22	0.02
Transfers to Social Security and social programs	6.75	6.72	0.01	0.02
Other expenditures (3)	14.50	6.04	4.17	4.30
III. Primary Result (I-II)	3.45	2.42	0.89	0.14
IV. Nominal interest payments (2)	5.87	3.65	1.87	0.34
V. Nominal Result (III-IV)	-2.42	-1.23	-0.98	-0.21

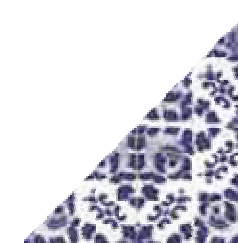
Source: Secretaria do Tesouro Nacional, Sistema FINBRA, "Resultado Nominal do Governo Geral".



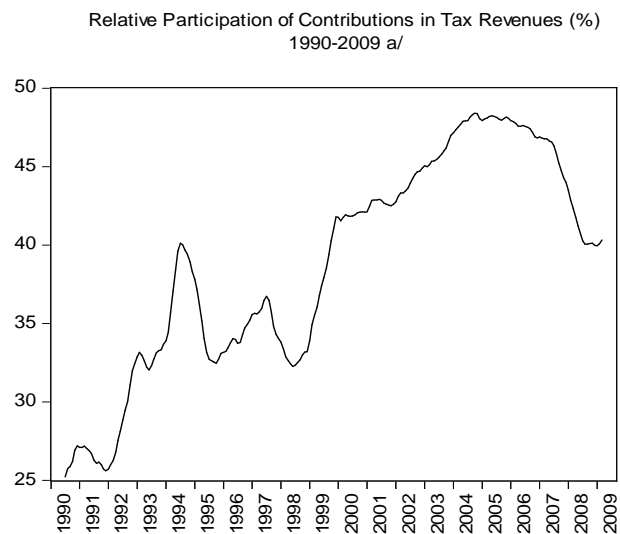
Fiscal Results for the Government, federal and local levels (% of GDP), 2008

	Government	Federal	States	Municipalities d/
I. Total Revenue	39.00	24.06	13.58	8.08
I.1. Tax Revenue	18.74	8.57	8.58	1.59
IPI	1.26	1.26	0	0
ICMS	7.31	0.0	7.31	0
Import taxes	0.58	0.58	0	0
ISS	0.79	0	0.02	0.76
IOF	0.68	0.68	0	0
IPTU	0.43	0	0.01	0.42
IPVA	0.56	0	0.56	0
IR	6.03	6.03	0	0
Other taxes	1.10	0.02	0.67	0.41
I.2. Contributions	13.60	12.81	0.57	0.23
Social Contributions	13.27	12.57	0.55	0.15
Economic Contributions	0.33	0.23	0.02	0.08
I.3. Other Revenue	6.66	2.68	4.43	6.26

a/ Source: Secretaria do Tesouro Nacional, Sistema FINBRA, "Resultado Nominal do Governo Geral".



Evolution of Contributions: Federal Government



a/ Twelve-month rolling mean.

Source: Author's calculation based on data from Banco Central do Brasil.

