Monetary Institutions and Macroeconomic Performance in Brazil from 1999 to 2016

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Objective and Hypothesis

Objective

To analyse, theoretically and empirically, the relationship between monetary institutions and macroeconomic performance in Brazil, after the Inflation Targeting Regime (ITR).

Hypothesis

Monetary institutions have inhibited economic growth, deteriorated the fiscal deficit and the public debt and contributed to the balance of payments disequilibrium, rather than being effective at controlling inflation.

Outline

The Brazilian Central Bank (BCB) model and its experience with ITR

Internal and external imbalances resulting from the ITR

Empirical effects of monetary shocks in Brazil

Concluding remarks and policy implications

The BCB model of ITR

Brazil's ITR follows the recommendations of the New Consensus Macroeconomic (NCM) in Monetary Policy, which implies:

(i) Monetary policy's goal is to maintain price stability;

(ii) Interest rate is the main instrument of monetary policy;

(iii) "Policy rule"? Interest rate must be high enough to prevent inflation from staying above the target or the output growth being above the potential level.

Internal and external imbalances resulting from the ITR

1. **Inflation** still remains at relatively high levels (6.8%);

2. **Interest rates** have registered extremely high levels;

3. **Economic growth** has been low and unstable;

4. Due to high interest rates, **fiscal deficit** and **public debit** have increased;

5. Several imbalances in the **external sector**.

Table 1. Inflation Targets and Inflation Rates (IPCA), Selic and Growth Rates, %: 1999 to 2016

Year	Point Targets	Tolerance Intervals	Inflation Rate (IPCA)	Annual Interest Rate (Selic)[1]	Annual Real Interest Rate[2]	Annual Growth Rate
1999	8	6 to 10	8.94	19.0	9.2	0.3
2000	6	4 to 8	5.97	15.75	9.2	4.3
2001	4	2 to 6	7.67	19.0	8.5	1.3
2002	3.5	1.5 to 6.5	12.53	25.0	11.1	3.1
2003	4	1.5 to 6.5	9.3	16.5	6.6	1.3
2004[3]	5.5	3.5 to 8	7.6	17.75	9.4	5.7
2005	4.5	2.5 to 7.5	5.69	18.0	11.6	3.1
2006	4.5	2.5 to 7.5	3.14	13.25	9.8	4.0
2007	4.5	2.5 to 6.5	4.46	11.25	6.5	6.0
2008	4.5	2.5 to 6.5	5.9	13.75	7.4	5.0
2009	4.5	2.5 to 6.5	4.31	8.75	4.3	- 0.2
2010	4.5	2.5 to 6.5	5.91	10.75	4.6	7.6
2011	4.5	2.5 to 6.5	6.5	11.0	4.2	3.9
2012	4.5	2.5 to 6.5	5.84	7.25	1.3	1.8
2013	4.5	2.5 to 6.5	5.91	10.0	3.9	2.7
2014	4.5	2.5 to 6.5	6.41	11.75	5.0	0.1
2015	4.5	2.5 to 6.5	10.67	14.25	3.2	- 3.8
2016	4.5	2.5 to 6.5	6.3	13.75	7.0	- 3.6[4]

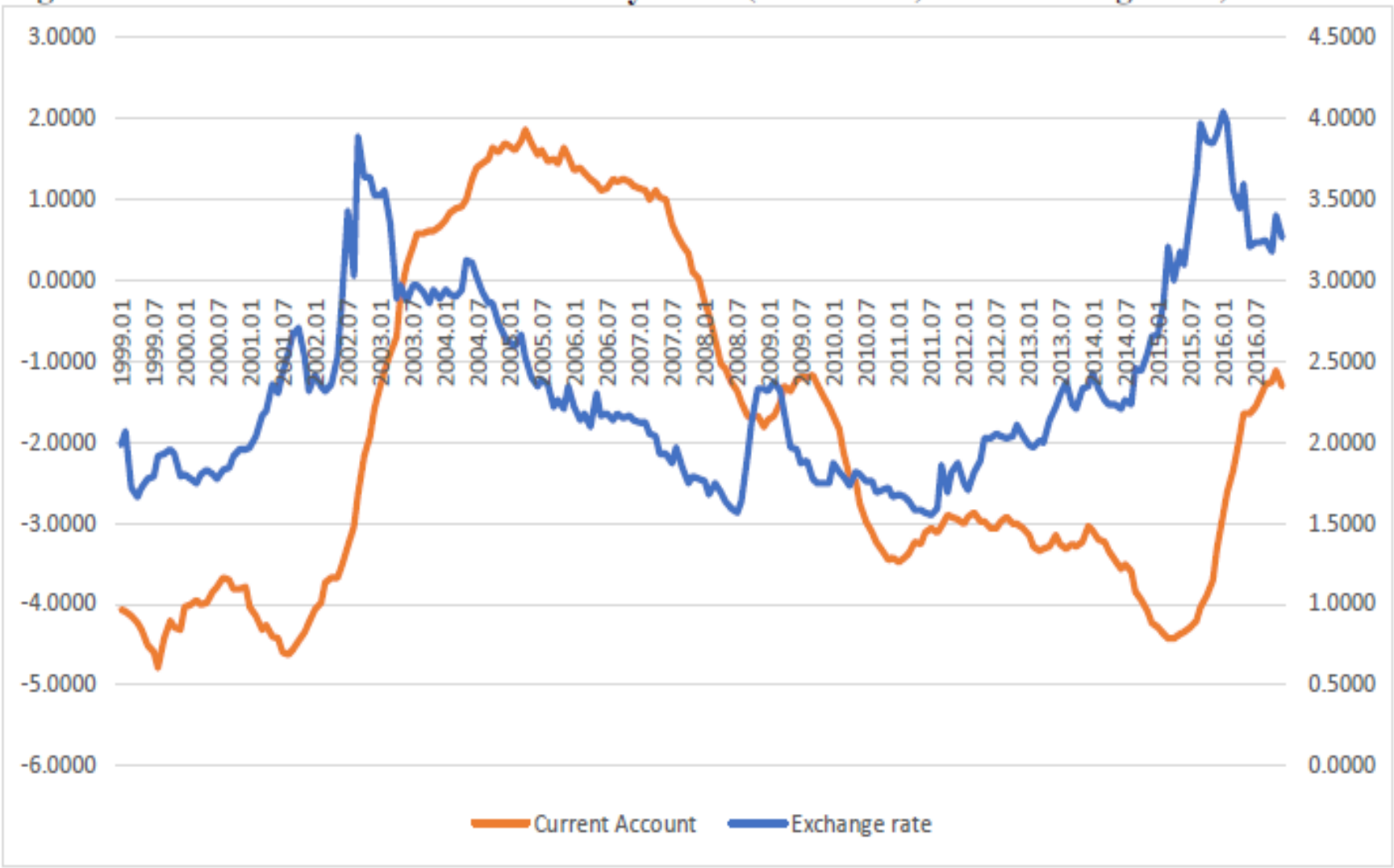
Source: Author's elaboration based on BCB (2017a).

Table 2: Indicators of Net Public Debt in Brazil, 1999-2016

Year	Primary Result	Nominal Result	Net Public Debt
1999	3.19	-5.78	35.10
2000	3.46	-3.61	36.50
2001	3.64	-3.57	42.40
2002	3.22	-4.58	44.70
2003	3.39	-5.42	43.30
2004	3.50	-3.61	42.63
2005	3.90	-3.10	43.13
2006	3.29	-3.78	46.30
2007	3.36	-2.84	50.15
2008	3.63	-2.08	49.76
2009	1.89	-3.19	48.95
2010	2.20	-2.82	48.06
2011	3.08	-2.24	47.16
2012	2.52	-2.40	46.18
2013	1.76	-2.70	44.55
2014	0.94	-3.82	44.67
2015	-0.79	-8.23	54,80
2016	-2.48	-8.95	61,30

Source: Author's elaboration based on BCB (2017a).

Figure 3: Current Account Balance of Payments (% of GDP) and Exchange rate, 1999-2016



Source: BCB (2017b). Authors' own elaboration.

Note: Current account balance of payments on the right axis.

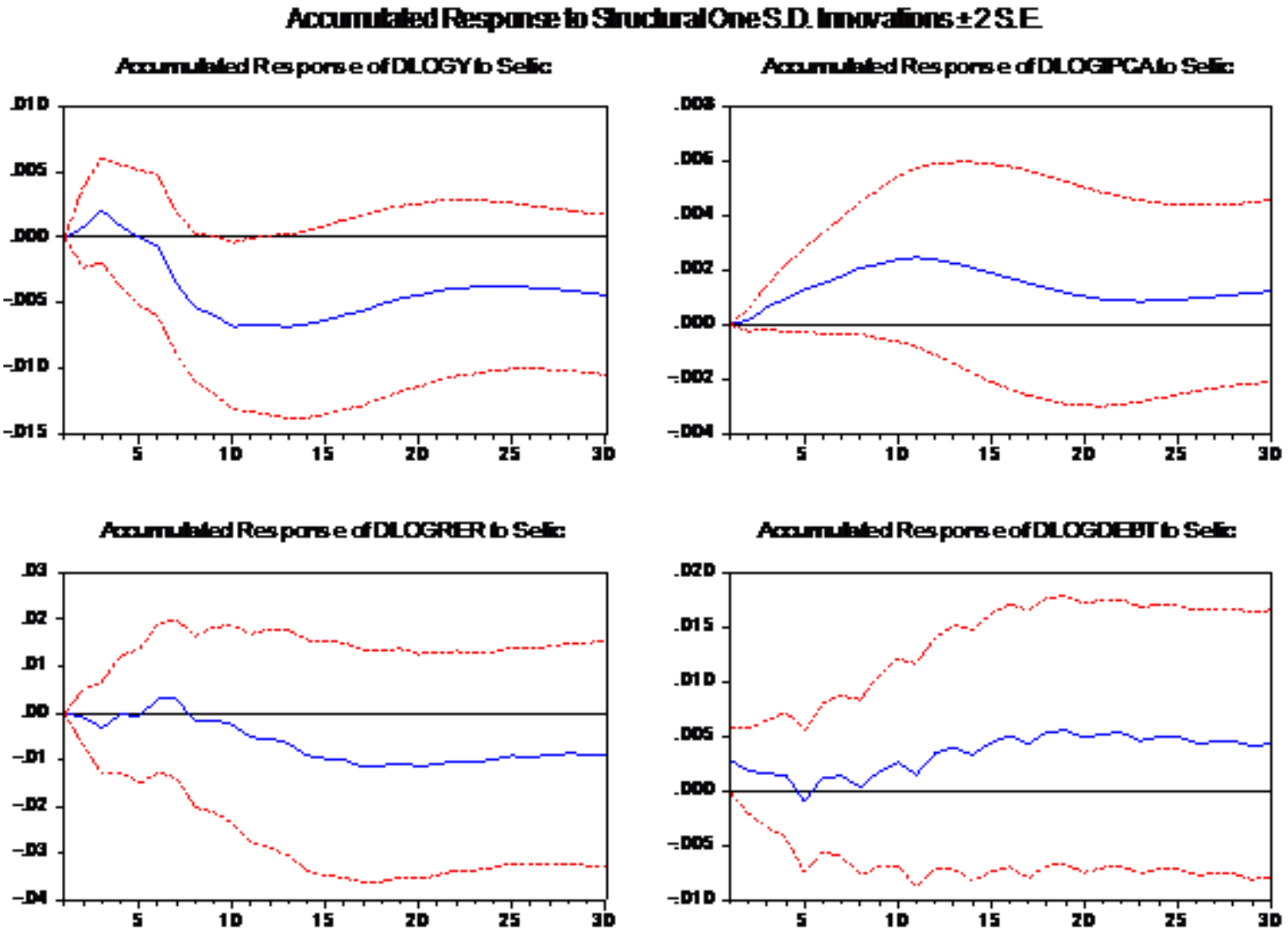
Empirical effects of monetary policy in Brazil

$$i_t = a_0 + a_1 i_p + a_2 y_p + a_3 \pi_p + a_4 debt_p + a5 er_p,$$

where *i* is the interest rate (Selic), π is inflation (IPCA), *y* is the physical production index (*quantum*) of general industry (seasonally adjusted) and it is a proxy for GDP, *debt* is the internal federal security debt as a proportion of GDP, *er* is the nominal exchange rate and *p* is the lag.

The methodology employed is the VAR which is used to capture the effects of the monetary shocks in the economy.

Effects of Cumulative Monetary Shocks



Main results?

(i) Interest rate and industrial production $\rightarrow$ i $\uparrow$ implies private investment $\downarrow$ and GDP $\downarrow$;

(ii) Interest rate and inflation $\rightarrow$ i $\uparrow$ has a positive impact on inflation (in the short-run), due to production costs $\uparrow$;

(iii) Interest rate and exchange rate $\rightarrow$ i $\uparrow$ promotes capital inflows, exchange rate appreciation and balance of payments disequilibrium;

(iv) Interest rate and fiscal deficit and public debt $\rightarrow$ i $\uparrow$ increases the fiscal deficit (public bonds are indexed to Selic) and the public debt.

There are two problems regarding the *modus operandi* of ITR:

(i) There are important transmission mechanisms of monetary policy, such as **asset prices channel** (wealth effect to the holders of public bonds) and **credit channel** (financial system prefers liquidity and, as a result, there is a credit squeeze). Moreover, the interest rate needs to be high and the exchange rate (the main transmission channel of monetary policy) has to be low to reach relatively low inflation;

(ii) The Brazilian inflation is not essentially a phenomenon of demand. The main causes are: indexation (inertia of some prices – public and administered), supply (or shocks) costs, and changes in expectations.

Conclusions and policy recommendations

The paper suggests that the existing institutional framework, embodied in the highly restrictive monetary policy, implied negative effects in the Brazilian economy;

Revisions in the monetary institutions would be essential to improve the results of the ITR, both in terms of actual inflation and economic performance. For this purpose, we consider:

1. The monetary policy has to keep inflation under control and to maintain output stabilization;

2. To adopt a broader period of convergence to establish inflation targets or substitute Nominal GDP target for inflation target;

3. To combine price stability with a policy to preserve exchange rate and financial stability;

4. To implement a new round of de-indexation of the Brazilian economy.