The Monetary and Fiscal History of Brazil: 1960–2016

Márcio Garcia
PUC-Rio, CNPq, FAPERJ

João Ayres
Inter-American Development Bank

Diogo Guillén
Itaú-Unibanco Asset Management

Patrick Kehoe
Stanford University, Minneapolis Fed, University College London

Conference on The Monetary and Fiscal History of Latin America
September 24th, 2018
Figure: Real GDP per capita and inflation

Pre–1961: high growth, increasing inflation.
Figure: Real GDP per capita and inflation

Pre–1961: high growth, increasing inflation.
  • Pre–1961: high growth, increasing inflation.
  • 1961–1964: recession, increasing inflation.
  • 1964–1973 (after PAEG): decreasing inflation, and high growth.

- BOP crisis and sequence of default episodes.
- Hyperinflation.
- Six failed stabilization plans before the Real Plan in 1994.

- Controlled inflation and adoption of fiscal and monetary rules.
- Crisis in 2002 (elections).
- Deep recession starting in 2014.
1960-1980: macroeconomic instability with high growth
Pre 1964

- Creation of state-owned enterprises (SOEs).
- Surge of state banks to finance deficits of subnational governments.
- Implementation of development plans at the national level.
  - Targets Plan (1956–1961):
    - Development of highway systems.
    - Construction of Brasilia.
- High growth rates until 1961. After that:
  - rising primary deficits,
  - rising inflation,
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- 1964: Military coup and a stabilization plan (PAEG).
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Figure: Seigniorage, inflation, and monetary base

The diagnosis of inflation and recession in 1964: seigniorage revenues to finance the deficit, constraints to debt financing (deficits and regulation), government could not maintain or boost investment.
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**Figure:** Deficit and seigniorage

- **PAEG:**
  - fiscal reform to reduce primary deficits,
  - financial reform to increase access to debt financing,
  - indexation to circumvent legal limits on nominal interest rates.
Figure: Deficit and seigniorage

\[ \text{debt issuance} + \text{seigniorage} = \text{interest} + \text{primary deficit} + \text{transfers (residual)} \]
Gradual decline in deficits until 1973. Then, after 1st Oil Crisis:

- rising fiscal deficits (mostly through SOEs),
- rising seigniorage,
- rising inflation and money growth rates (around 100% in 1980).
Large current account deficits between 1st Oil Crisis and Debt Crisis.

- Investment of SOEs financed through external borrowing.
- Increasing interest payments on external debt.


1982–1994: sequence of defaults until agreement with creditors (Brady Plan).
1981-1994: macroeconomic instability with no growth
Increasing importance of “orthodox” measures such as active fiscal and monetary policies vis-à-vis price and wage freezes.
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Cruzado Plan
February 1986

- Froze prices and wages.
- Changed currency (cut 3 zeros).
- Pegged exchange rate to the dollar.
- No effective fiscal policy.
- In 10 months, back to double-digit monthly inflation.
- It was followed by:
  - Bresser Plan (July 1987).
  - New Constitution (October 1988).
  - Summer Plan (January 1989).
• Collor I (March 1990):
  • froze 80% of private assets for 18 months.
  • froze prices and wages.
  • started privatizations.
• Collor II (January 1991): froze prices, fixed the exchange rate, opened up the economy, kept privatizations, tried to reduce the size of the government.
Real Plan: planned in advance

- June 1993: Program for Immediate Action.
- November 1993: debt renegotiation of states and municipalities.
- Real Plan:
  - February 1994: URV, parallel currency pegged to the dollar.
Real Plan: planned in advance

- May/94–May/95: primary surpluses compensated for drop in seigniorage.
- May/95–May/96: domestic debt compensated for drop in primary surpluses.
1995-2016: macroeconomic stability with moderate growth
1995-2016: SUMMARY

• Following the Real Plan:
  • Privatizations.
  • 1999: Inflation Target Regime.

• Confidence crisis during elections in 2002.

• After 2002, fiscal surpluses (increasing taxes) and a reduction in external debt.

• Most recently:
  • Fiscal deterioration (fiscal deficit around 7% of GDP in 2016).
  • Use of SOEs and public banks to hide deficits.
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\theta^r_t - \theta^r_{t-1} &+ \xi_t \left( \theta^*_t - \theta^*_{t-1} \right) + m_t - m_{t-1} + m_{t-1} \left( 1 - \frac{1}{g_t \pi_t} \right) = \\
\theta^r_{t-1} \left( \frac{r_{t-1}}{g_t} - 1 \right) &+ \xi_t \theta^*_{t-1} \left( \frac{r^*_{t-1}}{g_t \pi_t W} - 1 \right) + d_t + T_t
\end{align*}
\]

\[
\begin{array}{cccccccc}
60-64 & 65-72 & 73-80 & 81-94 & 95-02 & 03-11 & 12-16 \\
(1) \text{ domestic debt} & 0.0 &  &  &  &  &  \\
(2) \text{ external debt} & 0.0 &  &  &  &  &  \\
(3) \text{ real monetary base} & -0.4 &  &  &  &  &  \\
(4) \text{ seigniorage} & 4.1 &  &  &  &  &  \\
(5) \text{ int. dom. debt} & 0.1 &  &  &  &  &  \\
(6) \text{ int. ext. debt} & 0.0 &  &  &  &  &  \\
(7) \text{ primary deficit} & 2.9 &  &  &  &  &  \\
(8) \text{ transfers} & 0.7 &  &  &  &  &  \\
(9) = (1)+(2)+(3)+(4)-(5)-(6)-(7) &  &  &  &  &  &  \\
(9) = (7)+(8) & 3.6 &  &  &  &  &  \\
\end{array}
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\theta^r_t - \theta^r_{t-1} + \xi_t (\theta^*_t - \theta^*_t) + m_t - m_{t-1} + m_{t-1} \left(1 - \frac{1}{g_t \pi_t}\right) = \\
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domestic interest external interest primary deficit transfers (residual)

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\[(9) = (7) + (8)\]

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\[
\frac{\theta_r - \theta^*}{t} + \xi_t \left( \frac{\theta^* - \theta^*}{t-1} \right) + \frac{m - m_{t-1}}{m_{t-1}} + \frac{m_{t-1} \left( 1 - \frac{1}{\pi_t g_t} \right)}{seigniorage

\frac{\theta_{t-1}}{r_{t-1}} \left( \frac{r_{t-1}}{g_t} - 1 \right) + \xi_t \frac{\theta^*_{t-1}}{\left( \frac{r^*_{t-1}}{g_t} - 1 \right)} + \frac{d_t}{primary deficit} + \frac{T_t}{transfers (residual)}
\]

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<thead>
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</tr>
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<tr>
<td>(1) domestic debt</td>
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<td>0.8</td>
<td>-0.2</td>
<td>0.5</td>
<td>-0.2</td>
<td>1.1</td>
<td>3.4</td>
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<td>2.6</td>
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<td>(4) seigniorage</td>
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<tr>
<td>(5) int. dom. debt</td>
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The Brazilian Hyperinflation
**Weak institutions and fiscal deficits**

- **Pre–1945:** Bank of Brazil (BB) and Treasury.
  - No clear distinction between fiscal and monetary authorities.

- **1945–1964:** SUMOC (still BB), Bank of Brazil, and Treasury.
  - SUMOC: first step towards establishing a Central Bank.

- **1964–1988:** Central Bank of Brazil (CBB) was established.
  - Also operating as a development bank.
  - National Monetary Council (CMN).
  - Bank of Brazil kept indirect access to the printing press.
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  - Also operating as a development bank.
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• After 1994:
  • Real Plan: smaller CMN council (from 21 to 3 members).
  • Greater autonomy of the central bank.
  • Fiscal and monetary rules.
Multiple monetary authorities

Balance sheet of the Central Bank of Brazil

**ASSETS**
- reserves
- government bonds
- accounts at BB

**LIABILITIES**
- monetary base
- government funds

Conta movimento: account between the central bank and BB. Automatic transfers to Bank of Brazil (BB) in case it had losses. Should average zero...
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Figure: Transfers from CBB to Bank of Brazil and/or Treasury

- Average variation between 1965 and 1987:
  - BB accounts: 2.8% of GDP.
  - monetary base: 2.6% of GDP.
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Maílson da Nóbrega (2005):

“... in 1983, some newly elected state governors realized that their banks could overdraw cash from their accounts at Bank of Brazil (which held the reserves). It would take more than a month for the Central Bank of Brazil to realize that through its financial statements. There was no system that could provide that information in real time. The first one was the governor of Rio de Janeiro. The governors of Goiás, Santa Catarina, and Paraíba followed. The governor of Paraíba, Wilson Braga, was kind enough to let me know about his overdraft, given that we are friends and from the same state. I warned him that it was very serious and that he should not do that. But he replied to me saying that he needed to pay public employees and that the overdraft had already occurred.”
Inflation inertia with passive monetary policy

- Widespread indexation of wages, prices, and exchange rate to past inflation.

- Passive monetary policy.

- Both ingredients would have created inflation inertia:
  - Agents expect higher inflation, increase demand for money, and that increase in demand is satisfied by the (passive) monetary authority.

- Problem:
  - depends on a sequence of positive inflationary shocks.
  - not formalized, hard to quantify.
Conclusions

- Off-budget transactions are important to compute deficits:
  - SOEs,
  - public banks.

- High-inflation period was characterized by:
  - fiscal deficits,
  - passive monetary policy,
  - constraints to debt financing.

- Transition to low inflation showed improvements in all those instances, but was followed by moderate growth.

- Recent period: old threats remain.
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• PAEG and Real Plan: end of high inflation with improvement in primary balance and increase in debt financing.
  
  • Credible fiscal reforms were important for their success.
  • Improvement of weak institutions.
  • End of indexation with Real Plan.
APPENDIX
State-owned enterprises accounted for large fraction of debt in 1981:
- 72% of external debt.
- 45% of domestic debt.
debt issuance + seigniorage = interest + primary deficit + transfers

Fiscal deficit

**Figure:** Fiscal deficit

- Fiscal deficits + transfers are higher in the first sub-periods.
- Investment by SOEs explain the higher transfers in 1970–1980.
- After 1982, transfers are zero by construction (CBB statistics using PSBR).
Figure: Debt maturity
Figure: Indexation of government domestic debt securities
**Figure:** Government domestic debt securities

- **debt securities**
- **debt securities out of CBB**
- **share of securities at CBB (right axis)**

**PERCENTAGE OF GDP**

**SHARE (%)**

Time span: 1965 to 2015
Figure: Foreign reserves and net debt
**Figure:** Real exchange rate

![Real Exchange Rate Graph]

INDEX (JULY 1994 = 1)

Jan-60, Jan-70, Jan-80, Jan-90, Jan-00, Jan-10
1982: Brazil approached IMF. 7 letters of intent in the following years.

Nationalization of the external debt (at CBB).

November 1993: agreement with creditors (Brady Plan).

March 1994: securitization of defaulted debt.
Fiscal deterioration in recent years

- Revenues around 36% of GDP.
Figure: Monetary base and inflation
**Figure:** Inflation and seigniorage

- **Color Legend:**
  - Blue: seigniorage
  - Red: inflation rate (right axis)

- **Axes:**
  - Y-axis: SEIGNIORAGE (% GDP)
  - X-axis: 1960 to 2010
  - Right Y-axis: ANNUAL INFLATION RATE (%)

- **Graph Description:**
  - The graph shows the trend of seigniorage and inflation rate over the years 1960 to 2010.
  - Seigniorage has fluctuated significantly, peaking around 1990 and dropping sharply in the 2000s.
  - The inflation rate, indicated on the right axis, is shown with a dotted line for reference.
**SUMMARY: GOVERNMENT BUDGET CONSTRAINT (% OF GDP)**

**IPC-Fipe**

\[
\begin{align*}
\theta_t - \theta_{t-1} + \xi_t (\theta_t^* - \theta_{t-1}^*) + m_t - m_{t-1} + m_{t-1} \left( 1 - \frac{1}{g_t \pi_t} \right) &= \\
\theta_{t-1} \left( \frac{r_{t-1}}{g_t} - 1 \right) + \xi_t \theta_{t-1} \left( \frac{r_{t-1}^*}{g_t \pi_t W} - 1 \right) + d_t + T_t &= \\
\end{align*}
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\[= (1) + (2) + (3) + (4) - (5) - (6) - (7)\]