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# Deconstructing credibility: The breaking of monetary policy rules in Brazil



Gustavo S. Cortes a,\*, Claudio A.C. Paiva a,b,1

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#### ABSTRACT

Can political interference deconstruct credibility that was hardly-earned through successful stabilization policy? We analyze the recent switch in the conduct of monetary policy by the Central Bank of Brazil (BCB). Brazil is the largest Emerging Market Economy to formally target inflation, having adopted the Inflation Targeting (IT) regime in 1999. In the early years of IT, the BCB engaged in constructing credibility with price setting agents and succeeded to anchor inflation expectations to its target even under adverse conditions such as exchange rate crises. We argue that this effort to maintain IT rules-based policy ended in 2011, as a new country president and BCB board came to power. We then discuss the consequences of this credibility loss. Our main results can be summarized as follows: (i) we provide strong empirical evidence of the BCB's shift toward looser, discretionary policy after 2011; (ii) preliminary evidence suggests that this shift has affected agents' inflation expectations generating social and economic costs.

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One basic task of the Central Bank of Brazil has been to build credibility as a monetary authority committed to price stability in the context of large inflationary shocks. This requires actions consistent with the inflation-targeting framework combined with high levels of transparency and communication with the public. — Minella et al. (2003), In: "Inflation Targeting in Brazil: Constructing Credibility under Exchange Rate Volatility."

#### 1. Introduction

The Central Bank of Brazil (BCB) has formally followed an Inflation Targeting (IT) Regime since 1999. Even under adverse conditions such as heightened exchange rate volatility in the early 2000s, the BCB was able to keep inflation expectations in check, construct credibility with price-setting agents, and significantly lower inflation. A textbook example of good economic

a University of Illinois, Urbana-Champaign, United States

<sup>&</sup>lt;sup>b</sup> California State University, Channel Islands, United States

<sup>\*</sup> Corresponding author at: Department of Economics, University of Illinois at Urbana-Champaign, 214 David Kinley Hall, 1407 W. Gregory Dr., Urbana, IL, United States.

 $<sup>\</sup>textit{E-mail addresses:} \ Gustavo Cortes Goncalves@gmail.com \ (G.S.\ Cortes),\ claudio.paiva@csuci.edu \ (C.A.C.\ Paiva).$ 

URLs: http://sites.google.com/site/cortesgustavos (G.S. Cortes), http://www.csuci.edu/academics/faculty/bios/paiva1.htm (C.A.C. Paiva).

<sup>&</sup>lt;sup>1</sup> California State University Channel Islands, and University of Illinois at Urbana-Champaign. Address: One University Drive, Sage Hall, 2039, Camarillo, CA 93012, United States.

policy, the Brazilian experience with inflation targeting is seen as a successful case study among Emerging Market Economies (EMEs) (Agénor and Pereira da Silva, 2013). The BCB's success in taming inflation and building credibility has been discussed in the pioneering article by Minella et al. (2003) and later by Aragón and Medeiros (2015), among others. Both studies estimate the reaction function of the BCB and conclude that it followed the *Taylor principle* (Taylor, 1993) in reacting more than proportionally to deviations of inflation expectations from the target. By doing so consistently, the BCB ended up establishing good reputation with price-setting agents and gradually making the official inflation target an effective anchor for inflation expectations, as shown by Bevilaqua et al. (2008).

A source of concern for monetary policy in EMEs is that hardly-earned credibility may be reverted due to changes in political preferences of elected governments. In the case of Brazil, this is of special significance since the Central Bank does not possess full and formal independence from the executive branch of the government. This increases the importance of the Central Bank to remain consistent in enacting policy rules to keep inflation expectations aligned with the target, especially after a government transition.

Policy-makers in EMEs may need to exert a relatively higher effort than their peers in Advanced Economies to construct credibility, i.e. convince market agents of their resolve to consistently pursue an inflation target above all other policy objectives. The need for higher effort to construct credibility is mainly due to weaker institutions of EMEs, which favor the perception that rules may be broken by political interference (Mishkin, 2008; Mishkin, 2004; Fraga et al., 2004; Calvo and Mishkin, 2003). An obvious consequence of this disadvantage in EMEs is that shifts toward discretionary behavior can quickly erode confidence, destabilize expectations, and deconstruct credibility. In other words, the long-run efforts from past administrations to increase macroeconomic stability and to enhance the credibility of policy-making institutions could be wasted due to a new administration with different, non-stabilizing objectives.

In this paper, we analyze evidence of credibility deconstruction in Brazil, the largest emerging economy formally adopting IT. Our analysis begins with some background on how the BCB succeeded in introducing and consolidating IT and managing inflation expectations until altering its behavior following the election of President Dilma Rousseff. We argue that the new administration, which changed in the entire Board of Governors of the BCB as it came to power in 2011, reversed a long-term effort of credibility construction in Brazil dating back to the 1990s. Based on the results of a simple theoretical model showing that credibility deconstruction bears welfare costs, we empirically analyze the problem by applying standard Markov-Switching Regression techniques to detect changes in the forward-looking reaction function of the BCB. We argue that the BCB switched toward an excessively loose monetary policy regime during the starting year of the first Rousseff administration (2011–2014) and remained in this excessively dovish regime throughout most of that period.

Having detected a policy regime change through the Markov-Switching exercise, we then use Taylor Rule estimations to confirm and assess the magnitude of BCB's deviations from past behavior. We first restrict our sample to the period before President Rousseff in order to capture the standard inflation-targeting behavior of the BCB and use these parameters to predict the policy interest rate (SELIC) during 2011–2014. This exercise allows for a comparison between the actual SELIC rate and its counterfactual, i.e. the SELIC that would have prevailed had the BCB maintained its previous monetary policy strategy. We find that deviations from the Taylor principle accumulated throughout the 2011–2014 period and widened the gap between the counterfactual, Taylor Rule-predicted interest rates and the actual SELIC rate. The degree of undershooting of the SELIC implied by the different models ranges from about 3 3/4 percentage points to 4 3/4 percentage points. The results are shown to be robust to alternative model specifications and estimation techniques.

We conclude our results with an empirical counterpart of the theoretical prediction that interrupting credibility-building policies bears social welfare costs in the form of higher inflation and product volatility. We find preliminary evidence that the dovish bias of monetary policy during Rousseff's first term contributed to a deterioration in inflation expectations and dynamics, which have become more sensitive to inflationary shocks. Moreover, we calculate widely used macroeconomic loss functions (e.g. Okun's *Sacrifice Ratio*) to show how actual inflation and unemployment have deteriorated sharply following the policy regime change under President Rousseff. <sup>2</sup> More specifically, loss functions recorded their worst performance in 12 years, with both inflation and unemployment reaching double digits in 2015–2016. Finally, we argue that this result is not an artifact of a general worsening of global economic conditions, but rather of domestic economic policy mismanagement. A comparison with the median macroeconomic loss function of the G20 countries show that Brazil has widened the gap toward worse macroeconomic conditions.

This paper's contributions to the literature fall into two main categories. First, we add to the empirical literature of the BCB's reaction function and its impact on inflation dynamics. Our strategy incorporates the critique in Siklos and Wohar (2005) by estimating a Vector Error-Correction Model (VECM) in order to account for the presence of stationary and non-stationary time series. While our baseline results are generally consistent with previous estimates of the Brazilian Taylor Rule, we identify a regime change and a break in the behavior of the BCB that took place within a broader context of heightened economic interventionism ushered in by President Rousseff's ascension to power in 2011.

Second, to the extent that our paper shows the risks and costs of political interference in rules-based monetary policy, it could be viewed as a case study for the importance of Central Bank Independence (CBI). Since at least the work of Cukierman et al. (1992), it is generally accepted that CBI is negatively correlated with inflation rates across countries. Acemoglu et al. (2008) refined this argument by conditioning the success of CBI reforms to the development level of preexisting institutions.

<sup>&</sup>lt;sup>2</sup> For an application of similar loss functions for the Federal Reserve Bank, see Nikolsko-Rzhevskyy et al. (2014).

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