

The Contagion Effect of Public Debt on Monetary Policy: The Brazilian Experience

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1. Introduction

Lucas began his Nobel lecture making the following statement: “The work for which I have received the Nobel Prize was part of an effort to understand how changes in the conduct of monetary policy can influence inflation, employment and production. So much thought has been devoted to this question and so much evidence is available that one might reasonably assume that it had been solved long ago: It had not been solved in the 1970s when I began my work on it, and even now this question has not been given anything like a fully satisfactory answer.”[Lucas(1996), p.661]. My understanding of the meaning of a **fully satisfactory answer** is that money is still a headache from a theoretical point of view. Both workhorse frameworks of modern macroeconomics, the Arrow-Debreu and Samuelson overlapping-generation general equilibrium models, have no room for money as a medium of exchange. This is at variance with the empirical evidence available, which cannot reject the hypothesis that money is essential for the functioning of a market economy. The only way out of this problem is to use some short cut, and to conduct empirical research based on it. Lucas’s statement notwithstanding, there has been great progress in the last half-century about the effects and how monetary policy works.

There is no doubt that money does matter, for good or for evil. In the short run money, in general, affects real output, but in the long run it affects only the price level. The mechanisms through which monetary policy are transmitted into changing nominal variables can be divided into two channels. The direct channel affects the inflation rate through the expectation mechanism, as in the work reported by Sargent (1986) about the end of several hyperinflation episodes. The recent experiences of Argentina and Brazil ending hyperinflation overnight, with the Convertibility and Real Plans, can be added as additional evidence supporting the direct channel of monetary policy transmission. The indirect channel encompasses a very rich menu, suitable for different tastes, and it is natural for economists writing on this

subject to try to differentiate their products, as in a monopolist competitive firm.

I will not address the issues involved in the transmission mechanism of monetary policy, since there are excellent surveys [see the papers presented at the 1995 Journal of Economic Perspectives Symposia and at the 1995 Federal Reserve Bank of St. Louis Conference] available in the literature and I regard those issues a matter to be settled by hard econometric work. Since I have no empirical evidence on this subject to report, I will take this opportunity to address a problem that is rather peculiar to the Brazilian monetary policy environment: the interplay between monetary policy and public debt management policy. This interrelation helps one to understand the reasons why the basic rate of interest of the economy, the Selic overnight rate of interest for Central Bank funds, is so high in real terms.

The goal of this note is not to give a fully articulated answer of how to disentangle, in the short run, the Central Bank reserves interest rate from the treasury bill interest rate, because I do not have one, but just to raise some questions that could help in providing solutions that can improve the operational procedures of the Brazilian Central Bank. I think that the new monetary policy regime introduced one year ago, after a smooth and successful transition from the exchange rate crisis to the floating exchange rate system in 1999, will have to deal with some issues inherited from the past. Otherwise, lack of public support can jeopardize the hard work of building an independent and strong central bank.

2. The Contagion Effect

The contagion effect of public debt on monetary policy will be defined as the risk premium(ρ) built into the nominal rate of interest of central bank reserves,

$$i_t = r_t + \rho_t + \pi_t$$

where r is the risk-free real interest rate and π is the expected rate of inflation. This risk premium is indeed the risk of Brazilian government securities, which are not considered by the market to be risk-free. To understand the reasons for the contagion effect, we have to go back to the very beginning of the current framework of monetary policy, and to highlight some facts that were very important in shaping its development.

The Brazilian open market and Central Bank reserves market were created in the early 1970s. At that time there was no secondary market for treasury bills, because this type of security was not issued by the Treasury. Because the indexed bonds (ORTN) issued by the Treasury were not suitable for open market operations, the Brazilian Central Bank, through its public debt management, decided to create a bill (LTN), nominally issued by the Treasury, but as a matter of fact managed by the Central Bank, to carry out open market operations. With this instrument, the Central Bank was entitled to create quasi-fiscal deficits, as can be verified by looking at its balance sheets over the years.

Since the early 1980s, with the introduction of a new system of clearance and settlement of government securities (SELIC), the exchange of securities for Central Bank funds occurs on the same business day the trade is agreed upon. Therefore, government securities and Central Bank reserves have become perfect substitutes, and the banks would not hold excess reserves because they are dominated by government securities.¹

The high leverage ratio of Brazilian financial institutions during the 1980s compelled the Central Bank Public Debt Director, the official name of the director in charge of monetary policy at that time, to create a Central Bank bill indexed to the overnight interest rate in 1986.² Since then, the Brazilian Central Bank has issued bills and notes, some of them indexed to the American dollar, to provide a hedge against exchange rate risk.

The flexibility allowed by the Central Bank charter imposed no limits to the amount of international reserves the Central Bank could buy, due to the fact that it could always sterilize it by issuing bills and notes, at a price. If it were not for this institutional arrangement, it would have been impossible to sustain for so long the former regime, adopted during the first term of President Fernando Henrique Cardoso, which collapsed in January of 1999.

This whole set up, which allowed the Central Bank to issue not only money but bills, notes and bonds, was very important to avoid the dollarization of the Brazilian economy during the hyperinflation period, because it allowed the banking system to create money funds, backed by government securities, with full liquidity in Central Bank reserves. These money funds worked as indexed money since their yield followed very closely the rate of inflation. Thus, in that environment government securities did not

¹ Barbosa(1991) presents an analysis of this operational procedure and its implications for the central bank reserves market. For a very interesting description of the American securities market see Fleming(1997).

² This indexed bill is free of price variation risk, and the market would be willing to buy it when the rate of interest is expected to go up.

have to pay a risk premium, owing to the fact that they provided a full hedge against inflation.

After the successful stabilization under the Real Plan and the adoption of the inflation target system, there is no need for a system that distorts the whole yield curve or term structure of interest rates, contaminating the private sector on account of public debt risk. The hard task is how to disentangle the Central Bank reserves market from the government securities market. The first best solution is to have a fiscal regime in which government securities become risk free. However, this solution is not at hand, because the primary fiscal surplus implemented in 1999, and to be followed through President Cardoso's second term, is not based on institutions but on the personal commitment of Mr. Cardoso. The market has full information about this fiscal weakness and demands a risk premium on government securities, which increases as its maturity reaches the next presidential term.

The fragility of the Brazilian fiscal system has been decreasing, but it will take some time for fiscal discipline to become embedded in our institutional environment. One important step in this direction was the approval of the Fiscal Responsibility Law by the Congress in May 2000. According to this law, the Brazilian Central Bank will be prohibited from issuing bills, notes or bonds in two years' time, and will be free to be concerned with its fundamental job, which is to issue money.

The question that has to be raised, within the arrangements that have to be carried out to implement this new legal framework, is whether or not the time has come for the Central Bank to introduce major changes in its operational procedures, in such a way that the rate of interest on Central Bank reserves would be free of government securities risk. The answer to this question is not very simple because it is very likely that there is a trade-off between the risk of government securities and that of Central Bank funds. The price that has to be paid to transform the Central Bank overnight rate into a risk-free rate is to increase the premium risk on government securities. Is the benefit to society resulting from eliminating this distortion worth the fiscal cost involved? As I stated earlier in this note, I have no answer to this question, but I am convinced that it is worthwhile for the Brazilian Central Bank to carry out research that would clarify this issue.

3. Conclusion

With hindsight, based on our historical experience, we can state that it was a mistake for the Brazilian Central Bank to introduce open market

operations in the beginning of the 1970s, trying to copy the American institutions. The U.S. Treasury securities secondary market is very large and one of the most liquid markets in the world. Here, there was no treasury bill issued. The Brazilian market was created in a very artificial fashion without due considerations of the costs involved from such a course of action.

It is also true that during the hyperinflation years, this environment protected the Brazilian economy from the scourge of dollarization, because government securities were used to back indexed money issued by the financial system. This arrangement saved us from a currency board, which is a very primitive and straightjacket institution to deal with real shocks that affect the economy.

As a by-product of the close interrelationship between government securities and Central Bank funds, the basic rate of interest in the economy, the Central Bank funds rate, has a built-in risk premium. The contention of this note is that it is worthwhile to change this state of affairs, after the success of the Real Plan with the implementation of the inflation target system, because this is no longer a desirable policy. Removing the premium risk of Central Bank reserves would eliminate a very special type of a distortionary tax in the price system, which affects the whole economy, providing a welfare gain for society, and would give more transparency to the fiscal regime.

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