

The Papers

The papers presented to the second workshop close this special section of the *Brazilian Journal of Political Economy* on the Ford Foundation / Getulio Vargas Foundation project “Growth with Financial Stability and New Developmentalism”. The third and last phase of the project will be the March 24-25 conference in São Paulo.

Financial regulation and the Brazilian response to the 2008-2009 financial crisis

NELSON BARBOSA*

Brazil was frequently criticized for its interventionist and heavy financial regulation up until the 2008-2009 world financial crisis. According to the neo-liberal or pro-market view that predominated in academic and financial circles during the early 2000s, economic development came together with financial deepening, which in its turn could only be achieved through financial liberalization and deregulation.

The currency crises of the 1990s notwithstanding, by the mid-2000s Brazil's segmented financial market and its restrictive reserve and capital requirements were seen as a symbol of inefficiency and backwardness by most financial specialists. To the luck of the Brazilian population, most of the advices of such specialists were ignored by the Brazilian authorities, so that, when the 2008 financial crisis hit the world economy, Brazil still had powerful and efficient instruments to deal with the problem. The objective of this note is to present the mains aspects of the Brazilian

* Deputy Finance Minister of Brazil. E-mail: nhbarbosa@gmail.com.

financial regulation and how they helped the economy to deal with the consequences of 2008-2009 financial meltdown¹.

INTERNATIONAL RESERVES AND THE FOREIGN-EXCHANGE MARKET

The first crucial factor for Brazil's response to the financial crisis was the country's international reserves. Starting in 2005, the Brazilian government decided to reduce the economy's chronic vulnerability to international shocks by paying down its debt with the IMF and increasing its international reserves. It should be noted that this was done in a context of high domestic real interest rates, which meant that the buildup in international reserves had a high fiscal cost since the Central Bank's purchase of foreign exchange were sterilized through open market operations.

The high financial cost of carrying large international reserves led some economists to criticize the Brazilian government in 2007-2008, on the grounds that such a policy distorted the free floating of the currency and wasted fiscal resources. According to these critics the international financial markets were pretty capable of supplying liquidity to Brazil if and when the country needed, provided that the Brazilian government did its "homework" in terms of pro-market structural reforms. According to the Brazilian government at that time, the currency crises of the 1980s and 1990s clearly showed that international financial markets did not functioned as predicted in theory and, most importantly, it was necessary to build-up international reserves despite their high financial cost to obtain some autonomy in economic policy-making.

The events of 2008-2009 proved the Brazilian government to be right, since the sudden stop in foreign finance and the quick drop in world exports resulted in a substantial depreciation of the Brazilian currency (43%) at the end of 2008. However, in contrast to previous episodes of international liquidity constraint, in 2008-2009 the Brazilian government was able to offset part of the liquidity constraint in foreign currency by using part of its international reserves to finance domestic agents.

More specifically, the Brazilian Central Bank (BCB) used its international reserves to sell US dollars in the spot market and offer temporary credit facilities to Brazilian exporters. These two actions were complemented with swap operations, in which the BCB sold the foreign currency and bought domestic currency to alleviate the speculative pressures on the exchange rate. The combined actions of the BCB could not offset the massive movement of private capital flows during the worst period of the crisis, but they were successful in maintaining a minimum level of liquidity in foreign exchange for Brazilian firms.

In numbers, during the worst period of the crisis, the total foreign-exchange interventions of the BCB amounted to US\$ 14.5 billion in the spot market, US\$

¹ Part of this paper draws on Barbosa, N. (2010), "Counter-Cyclical Policy in Brazil: 2008-09", *Journal of Globalization and Development* 1 (1), Article 13, available at: www.bepress.com/jgd/vol1/iss1/art13.

24.4 billion in short-term finance to Brazilian exporters, and US\$ 33 billion in swap operations. It should be noted that Brazil could only adopt such a strategy because it had accumulated US\$ 210 billion in international reserves before the crisis and, as the situation improved and foreign capital returned to the economy, all temporary foreign-exchange operations were quickly reversed in the second half of 2009.

RESERVE REQUIREMENTS AND LIQUIDITY ASSISTANCE

The second crucial factor for Brazil's successful response to the 2008-2009 was, ironically, the country's high reserve requirements on banks. More specifically, the Brazilian financial system is characterized by reserve requirements as a way of to either finance the government at lower interest rates than market rates, or to direct credit to agriculture and housing also at lower interest rates than market rates. As a result of this financial repression, the BCB had a huge pool of liquidity at its disposal to alleviate the banks' liquidity constraint when the 2008-2009 crisis hit Brazil. Instead of using its discount window, the BCB could just free part of the banks' compulsory reserves "irrigate" the financial system.

In numbers, the BCB reduced the banks' reserve requirements and injected approximately 3.3% of GDP in the money market at the end of 2008. However, since the Brazilian base interest rate did not fall immediately after the crisis and the banks resisted lending in a climate of high economic uncertainty, most of this reduction in reserve requirements was initially absorbed back by the BCB through open market operations.

In fact, at first most of the newly free reserves were channeled to the large Brazilian banks, specially the Brazilian public commercial banks, which had most of the deposits and were backed by the federal government. To neutralize this flight to quality and spread the liquidity through the whole banking system, the BCB complemented the reduction in reserve requirements with temporary incentives for large banks to lend to small and medium banks, as well as with a special and temporary insurance to the deposits in small and medium banks. The two actions worked well and Brazil was capable to cross the worst period of the credit crunch without any bankruptcy in its financial markets.

PUBLIC COMMERCIAL BANKS AND COUNTER-CYCLICAL LENDING

As we mentioned above, the large Brazilian public commercial banks became safe havens for the public's bank deposits during the crisis. Since these banks were backed by the federal government, the general impression was that they would not go under during the liquidity constraint. Enter the third crucial component of Brazil's successful response to the 2008-2009 financial crisis: the existence of public commercial banks to keep liquidity within the domestic financial system and, more importantly, to act in a counter-cyclical way.

More specifically, the two large Brazilian public commercial banks, *Banco do Brasil* and *Caixa Econômica Federal*, received a huge inflow of demand and time deposits precisely when domestic credit demand went up and their private competitors could not or would not expand their credit supply. The obvious result was an increase in the market-share of these banks in the economy's total credit operations. These public commercial banks were also very important to guarantee the special credit facilities to agriculture (through *Banco do Brasil*) and housing (through *Caixa Econômica Federal*) during the worst period of the credit crunch.

As the financial situation improved, by mid-2009, both *Banco do Brasil* and *Caixa Econômica Federal* could reduce their interest-rate spreads quicker than their private competitors, which boosted their market-share a little further.

GOVERNMENT LOANS AND THE NATIONAL DEVELOPMENT BANK

The fourth reason of Brazil's relative success in dealing with the financial crisis comes from the existence of a National Development Bank, the BNDES, fully owned by the federal government and through which the Brazilian Treasury could finance private agents in periods of financial turmoil.

In an ordinary situation the BNDES receives part of a government indirect tax, the PIS-COFINS tax, on goods and services, and uses it to finance private and public enterprises. Most of BNDES credit goes to infra-structure and long-run investment, but part of it is also directed to regional development and circulating capital for small and medium enterprises. To make up for Brazil high real interest rates in market operation, most of BNDES's loans are usually done through subsidized interest rates and other favorable conditions. In Brazil's segmented credit market, BNDES does for long-run investment what *Banco do Brasil* does for agriculture and *Caixa Econômica Federal* does for housing.

Enter the 2008 financial credit crunch. As we mentioned earlier, the reduction in the commercial banks' reserve requirements was able to stop contagion in the money market, but it did not succeed much in alleviating the credit crunch on non-financial firms. The Brazilian solution was to create a penultimate lender of last resort through government loans to BNDES, which in its turn lent the resources to non-financial firms. This extraordinary credit facility reached 3.3% of GDP during the crisis and helped many firms to meet their needs of circulating capital at the end of 2008 and the beginning of 2009. As the worst part of the crisis, the special credit facility at BNDES was gradually redirected to finance investment, which resumed growing fast in the second half of 2009.

FINANCIAL REGULATION, LEVERAGE AND RISK EXPOSURE

Part of Brazil's success in dealing with 2008-2009 crisis came from the country's pre-existing financial regulation. We already mentioned the high reserve re-

quirements as a public asset during period of liquidity constraints. In addition to that, the Brazilian financial regulation is also characterized by high capital requirements and comprehensive bank supervision, especially when compared to what happened in advanced economies before the 2008 financial meltdown. To illustrate this point it is worthy to point out some features of Brazilian regulation that stands out in comparison to the US regulation before the crisis. First, the Brazilian regulation does not allow shadow insurance through credit default swaps. All credit insurance should be done through special government funds or the formal insurance market, with the adequate reserve requirements and limits to risk exposure. Second, the banks' minimum capital requirement in Brazil is higher (11%) than recommended by the Basel committee (8%), which results in lower leverage and higher capacity to deal with financial shocks. Third, the Brazilian requires a minimum down-payment in credit operations, especially in housing finance, so that the loan-to-value ratio remains well below 100%. Fourth, banks originating a securitization deal must retain a small portion of each transaction on its books, so that they have something at stake if the operation goes sour. Fifth, all banks' derivatives contracts must be registered in organized markets or reported to the BCB, and the net risk exposure of each institution is limited to a conservative fraction of its capital.

Finally, it should be noted that even though the Brazilian bank regulation was successful in preventing an excessive financial fragility in the banking sector, it did not prevent it from happening in the non-financial sector. More specifically, because of Brazil's high real interest rate in relation to the rest of the world, there is a high incentive for arbitrage operations between the real and foreign currencies (carry trade) for those with access to international financial markets. As a result, before the 2008-2009 crisis, some large exporting firms engaged in highly speculative foreign-exchange contracts, in which they bet heavily on the continuing appreciation of the Brazilian currency without proper hedging. Then, when the 2008 crisis came and the real depreciated, these firms faced a serious solvency problem and risked bringing some of their banks' counterpart down with them. At the end, the situation was solved through some of the government extraordinary credit facilities mentioned earlier, as well as through some mergers and acquisitions between private firms.