The Brazilian Economy After the Global Crisis: An Assessment of the Economic Slowdown in 2011-2012[+]

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Abstract: This chapter aims at assessing the reasons of the recent economic slowdown in Brazil, and in particular to contribute for the understanding of why countercyclical policy succeeded to face the contagion of Lehman Brothers crisis but did not succeed to face the contagion of the Euro crisis. For this purpose, it focuses on the economic policies (monetary, fiscal and exchange rate ones) adopted in each period and their results.

1. Introduction

Brazilian economy grew only 1.8% p.a. on average in 2011-2012, in contrast with growth of 3.6% p.a. in 2001-2010. In spite of the change in the mix of economic policy – with sharp reduction in the interest rate and the currency devaluation – and the fiscal stimulus to manufacturing firms (reduction of the tax on manufacturing products on some durables goods, exemption of the payroll in various manufacturing sectors, etc.), economic growth dropped in 2012 (0.9%). Such performance has arisen some criticism from orthodox economists related to the efficacy of activist economic policy to boost a sustained growth in Brazil.

This chapter aims at assessing the reasons of the recent economic slowdown in Brazil, and in particular to contribute for the understanding of why countercyclical policy succeeded to face the contagion of Lehman Brothers crisis but did not succeed to face the contagion of the Euro crisis. For this purpose, it focuses on the economic policies (monetary, fiscal and exchange rate ones) adopted in each period and their results, as well as the respective economic environment.

The chapter is divided in three sections, besides this Introduction. Section 2 analyses the contagion of two crises on the Brazilian economy and policy responses: Lehman Brothers crisis (2008-09) and Euro crisis (2011-12). Section 3 focuses

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[+] In: Pereira, A.W.; Mattei, L. (ed.). *The Brazilian Economy Today: Towards a New Socio-Economic Model?*. Londres: Palgrave Macmillan, 2016, v. , p. 43-73.

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specifically on the monetary policy, exchange rate and fiscal policy during the contagion of the two crises. Finally, section 4 summarizes and concludes the chapter.

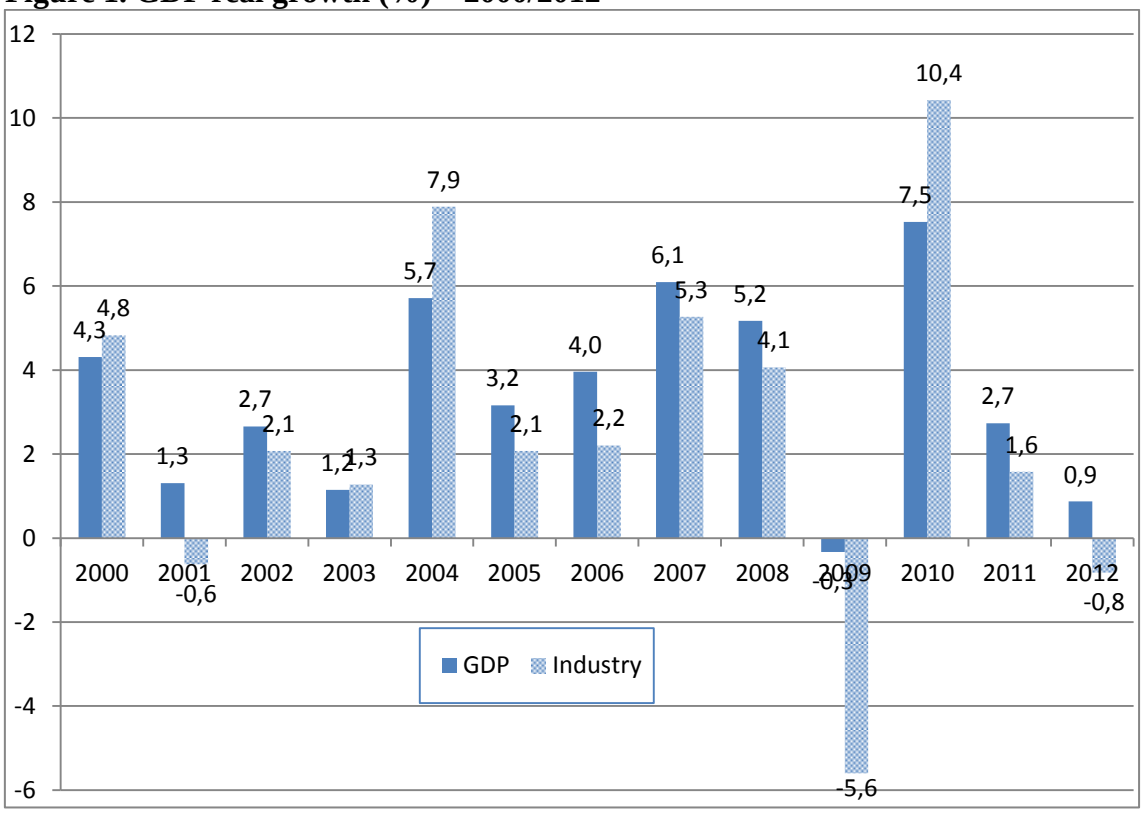
2. Brazilian economy and policy responses during the contagion of the two crises

Since the 1980s Brazilian economy has shown a stop-go pattern of growth, with short periods of growth followed by abrupt slowdown in most cases related to the high external vulnerability of the economy under an environment of a *de facto* capital account convertibility – as Brazil has undergone a gradual process of financial liberalization since the beginning of the 1990s. Indeed, while in 1947-1980, a period characterized by the import substitution industrialization, average real GDP growth was 7.5% p.a., economic growth reduced to 1.7%p.a. in 1981-1990, and to 2.5% in 1991-2000. During the 2001-2010 period, GDP average growth was 3.6%, higher compared to the two former decades, but in 2010-12 it reduced to 1.8% on average.

After the economic downturn in 2001-2003 (GDP growth of 1.7% p.a. on average) – in 2002 there was an confidence crisis due to the imminent election of the leftist candidate, Mr. Lula da Silva – economy recovered in 2004, in spite of the fact that the new government implemented a conservative and restrictive economic policy mix (very high interest rate and high primary fiscal surplus).

The recovery was pushed up by the strong boom in the commodities' exports that resulted from the greater global economic growth – conducted by China and other Asian emerging economies. It was followed by the increase of the household consumption, due to both government stimulus to credit (with the implementation of "payroll-deductible credit operations" in September 2003) and the increase in the purchase power of the households (due to the increase in the minimum wage in real terms and in the government's income transferences). On the other hand, investment rate increased in 2006-2008– from 15.9% of GDP in 2005 to 19.1% in 2008 – following the rise in the capacity utilization rate. All these factors together eventually resulted in a miniboom in 2004-2008, when the GDP grow 4.8% on average (Figure 1). Until the Lehman Brothers contagion, economic growth was followed by industrial output growth as selling retail was growing sharply in the period.

Figure 1. GDP real growth (%) – 2000/2012



Source: Central Bank of Brazil - BCB

Due to the increase of trade surplus, economic growth during the first years was not followed by a balance of payments constraint– indeed current account balance over GDP ratio had positive figures until 2007 in spite of the currency appreciation trend[1]. Additionally government adopted two initiatives since 2005 that contributed a great deal to the reduction of the external vulnerability of the economy: accumulation foreign reserves[2] and the restructuration of public external debt (re-buying Brady bonds and paying IMF loans) that reduced debt stock and its costs. As a result, public sector shifted from a net debt balance of 15% of GDP by the end of 2002 to a net credit balance of around 10% of GDP by the end of 2007 (Coutinho and Borges, 2009, p.208).

In 2009 the Brazilian economy suffered a recession due to the effects of the Lehman Brothers contagion: there was a decline of 0.3 in GDP, pushed down by the sharp reduction in industrial output (-5.6%), and a consequent deep fall in industrial capacity utilization. Aggregate expenditure in its turn was pushed down by the abrupt reduction in fixed capital and exports (Figure 1 and 2).

[1] Current account balance over GDP that was 1.4% on average in 2003-2006 dropped to 0.1% in 2007 and -1.8% in 2008.
[2] Foreign reserves rose from US$ 53 billion in December 2005 to roughly US$ 200 billion in June 2008.

The immediate impact of the 2008 crash on the Brazilian economy was the capital flight related to the portfolio investments and other investments (foreign loans) – that changed sharply from high surplus until September 2008 to a big deficit in the fourth quarter of 2008 – under an environment of increasing risk aversion of foreign investors and banks. On one hand, the transmission of capital flight to the stock market was immediate, with a sharp fall in equities prices traded in the secondary market, in consequence of the important participation of foreign investors in this market. On the other hand, the reduction in foreign credit lines to resident banks and firms increased the liquidity constraints on domestic agents, including some main Brazilian exports firms that had been benefiting from interest-rate arbitrage before the crisis together with the bet on the continuity of the currency appreciation (with the use of foreign exchange derivatives).

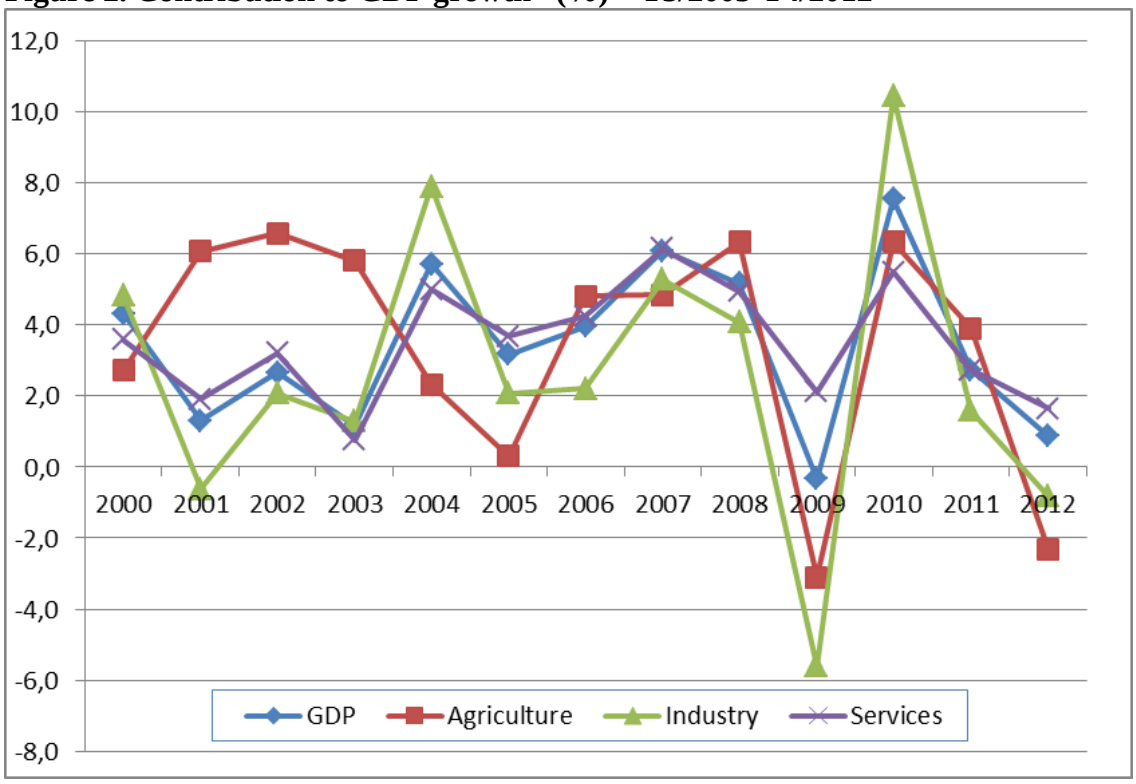
Furthermore, the 2008 financial crisis also affected the current account's balance of payment due to its impact on the income investments, in consequence of the rise in the remittance of profits and dividends by subsidiaries of multinational firms and foreign banks to their headquarters – in order to compensate losses in other markets (IEDI, 2009). A further determinant of the deterioration of the current account (deficit of 1.8% of GDP in 2008) was the decline in the price of commodities since mid-2008 due to the prospect of the fall in the world demand. The reversal in the capital flows – the amount of the outflows was of US 22 billion in the last quarter of 2008 – exerted strong pressure on the exchange rate, which depreciated 42.6% from September 1 to December 31, 2008[3].

Besides the contagion-effect on the balance of payment, another important transmission channel of international financial crisis was the domestic credit market. The most immediate effect was the reduction of the international credit operations, which had impact on the modalities of corporative credit that are supplied backed with foreign funding, as export finance. Another mechanism of contagion was the reduction in the cross-border credit operations due to the re-allocation portfolio of international banks. This mechanism affected in particular the direct credit operations of firms in the international financial market. On the other hand, the overall deterioration of expectations related to the future due to the spread of the financial crisis combined with the uncertainty environment regarding the amount of losses and the firms involved in

[3] Data from IPEADATA (2012).

the foreign exchange derivatives increased the liquidity preference of the banks (mainly private ones) that contributed to the slowdown in the interbank market and the reduction of domestic credit.

Figure 2. Contribution to GDP growth* (%) – T3/2003-T4/2012



Source: IPEADATA
(*) Contribution to GDP growth in the quarter compared to the same quarter of the former year.

Brazilian authorities responded the financial crisis by adopting a number of countercyclical measures (Barbosa, 2010; Paula, 2011, ch.3):

a) In order to avoid the spread of the credit crunch, Central Bank of Brazil ("*Banco Central do Brazil*" in Portuguese, thereby BCB) adopted a lot of liquidity-enhancing measures[4].

b) BCB did interventions in the foreign exchange markets – selling US 23 billion of its foreign reserves in the last quarter of 2008 in the sport market and offering foreign exchange swaps in order to hedge against currency depreciation –and offered temporary credit facilities to Brazilian exporters, aiming mainly to maintain a minimum level of liquidity in foreign exchange for Brazilian firms – rather than defending a particular level of exchange rate.

[4] See more on this matter in the next section.

d) State-owned banks were encouraged to expand their credit operations, compensating the deceleration in the credit supply by private banks and acting as a 'penultimate' lender of last resort during the critical phase of the credit crunch.

e) Ministry of Finance have taken a lot of fiscal measures in order to stimulate aggregate demand and to avoid an excessive accumulation of inventories, especially of consumer durable goods, that included reduction in the industrialized products tax (IPI) burden on motor vehicles, a lot of consumer durables and construction items, and an increase in the duration of unemployment insurance and in government support for housing.

Consequently, Brazilian government used a variety of instruments to face the effects of the global financial crisis that contributed to the quick recovery of the economy, although the contagion of the crisis had been sharp and deep. According to Barbosa (2010, p.6), the delay in monetary policy to stimulate economic growth immediately after the 2008 crash had to be compensated by fiscal policy. Indeed, Brazilian government revised its fiscal targets for 2009, comprising a reduction of the primary surplus target from 3.3% to 2.5% of GDP.

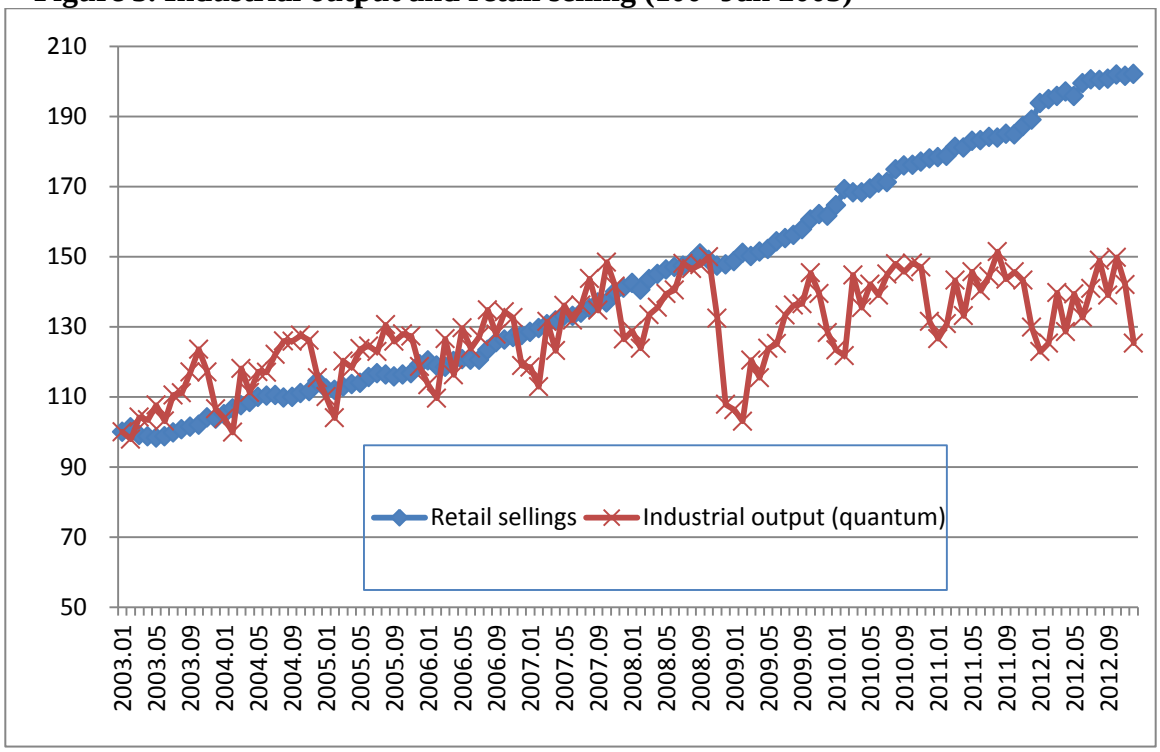
CEPAL (2009) points out that, among the Latin American countries, Brazil was one of the countries that made use of greater variety of tools to face the effect-contagion of the financial crisis. Brazil was favored by some actions of the federal government that were taken before the crisis that resulted in some mechanisms that reduced the contagion of the crisis. One should note the combination between previous government's reduction in its external debt and the increase in the foreign exchange reserves that resulted in a government's net credit position in foreign currency, so that exchange rate devaluation favored public finance. As a result, for the first time since the 1980s an external crisis did not result in a fiscal deterioration in Brazil!

After the recession in the first semester of 2009, the economy recovered quickly in the second semester, and in 2010 GDP growth and industrial output was 7.5% and 10.4%, respectively[5]. This is a clear evidence of the success of the countercyclical policies adopted as response to the Lehman Brothers crisis. Gross formation of fixed capital and consumption contributed to this prompt economic recovery, and industrial output and capacity utilization rate increased rapidly along the year of 2009. Responding the quick economic recovery, the restoration of the agents' confidence, and

[5] Such spectacular increase was in part of a statistical effect of the low GDP basis of 2009.

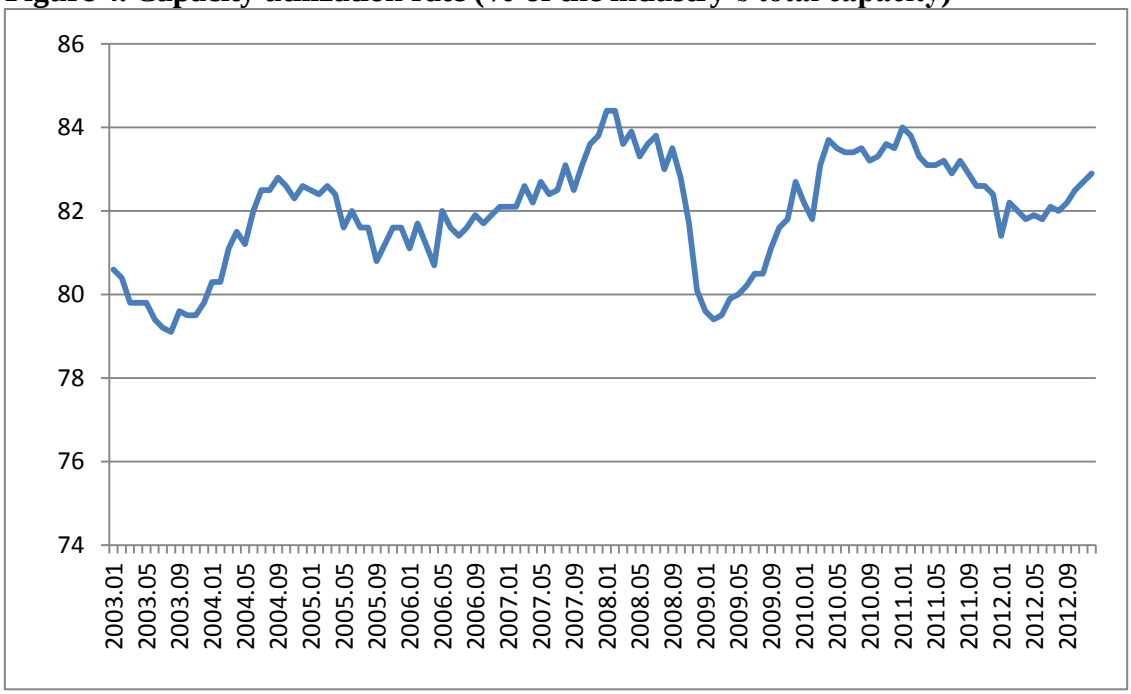
the consequent increase in the industrial capacity utilization, the investment rate increased from 17.0 of GDP in the first quarter of 2009 to 20.5% in the third quarter of 2010.

Figure 3. Industrial output and retail selling (100=Jan 2003)



Source: IPEADATA

Figure 4. Capacity utilization rate (% of the industry's total capacity)



Source: IBGE

One should notice that the industrial production (quantum) stagnated since 2010 while retail selling followed increasing (Figure 3 and 4), what is explained by the increase in the coefficient of imports of the industry[6] (manufacturing imports over industrial domestic output), with negative impact on the industrial sector. As we will see in the next section, a new surge of capital inflows to emerging economies started in the middle of 2009, and in case of Brazil a further reason for such surge was the high differential between the internal and external interest rates. For this reason, Brazil was one of the emerging countries that had a stronger trend of currency appreciation until 2011: from April 2009 to April 2011 Brazilian currency appreciated 28%, and exchange rate returned to the same level of June 2008 (R$ 1.60).

In the end of 2010 until the first trimester of 2011, with the fear of increasing system risk of financial system, due to both (and somehow related) a surge of capital inflows and a quick increase of credit supply (and a consequent rise in households' indebtedness, mainly in vehicles' and personal loans), Brazilian government decided to implement macro-prudential measures in order to reduce the assumption of the risks by the banking sector.

Such macro-prudential measures included: an increase from 8% to 12% in reserves requirements' on sight and fixed term deposits; an increase of minimum capital required for personal credit with maturity up to 24 months; a rise in the tax on financial transactions (IOF) from 1.5% to 3.0% in all credit operations; the implementation of non-interest bearing reserve requirement of 60% over banks' selling positions in future foreign exchange market that exceed US$ 3 billion or their capital base, whichever is smaller; increased to 6% the IOF on new foreign loans (banking loans and securities issued abroad) with maturities of up a year, and extended 6% of IOF for the renewal of foreign loans with maturities of up a year. Macro-prudential measures can be seen also as an adjunct tool for the traditional policies– one of the objectives of the latter measures were become less attractive carry trade operations that contributed to overvaluation of the domestic currency as BCB began a gradual cycle of increasing the short-term interest rates in January 2010 due to the inflationary pressures.

Dilma Roussef's government was marked in its first two years (2011-12), on the one hand, by the gradual worsening in the international scenario due to the Euro crisis and later by the decline in growth in emerging economies (including China) – indeed,

[6] See more on this in the next section.

the average GDP growth in the world reduced from 5.1% in 2010 to 3.8% in 2011 and 3.3% according to estimates to 2012 (IMF, 2012a, p. 190). On the other hand, there was some important changes in the structure and 'modus operandi' of economic policy, including the adoption of more gradualist strategy of BCB to deal with inflation under a context of inflation targeting regime, the use of broader instruments of economic policy (such as macro-prudential measures) as a complement of the traditional tools, and the adoption of economic growth as an explicit goal of the economic policy.

After an initial period (first semester of 2011) when Roussef's government adopted more tightening economic policy in order to reduce aggregate demand to curb inflation acceleration, some countercyclical policies were implemented, due to the deterioration of the Euro crisis and the slowdown of the Brazilian economy. Among others, such measures included the change in the mix of economic policy (gradual and strong reduction in the interest rate and devaluation of the currency), that was expected to boost growth; credit stimulus and tax relieving to some sectors; the enlargement of the capital controls due to the fear of a new and intensive stream of capital inflows in consequence of the liquidity expansion of the European Central Bank. Finally, it was adopted an additional fiscal restraint in the public expenditures so as to enhance its commitment with fiscal austerity (primary fiscal surplus increased from 2.8% of GDP in December 2010 to 3.7% in August 2011), understood as necessary to open space for the reduction in the interest rate.

The deterioration of the Euro crisis since September 2011 and the deceleration of the inflation due the reduction in the commodities prices and in the domestic demand made possible an initially unexpected and steady policy of reduction of the Selic interest rate, that fell from 12.5% p.a. in July 2011 to 7.5% in August 2012. Furthermore, in order seek to curb the deterioration in the competitiveness of the industry, in both external and domestic markets, BCB induced a currency devaluation from R$ 1.71 in January 2012 to R$ 2.02 in May 2012, a devaluation of 18.1% in just four months. Exchange rate oscillated around R$ 2.00 since then. For this purpose, instead of make use exclusively of the intervention in the spot foreign exchange market, Brazilian government made also use of other regulatory tools, including foreign exchange (FX) derivatives regulation.

Due to the good fiscal performance in the first semester of 2011, Ministry of Finance could adopt a countercyclical fiscal policy without jeopardizing fiscal targets (until mid-2012). The main fiscal tool was a tax exemption (most measures were part of

the so-called "*Plano Brasil Maior*", launched in August 2011), that included the reduction of tax on industrial products (IPI) on investment goods, exemption of the payroll in labor-intensive sectors, such as construction and textile industry (allowing the change of charge of social security contributions from 20% of payroll' workers by rates of 1% or 2% on the firms' earnings), that was gradually enlarged for other sectors, and the reduction of tax on industrial products (IPI) on some consumer durable goods (such as vehicles and some electrical appliances) in April 2012[7].

Those fiscal measures aimed at reactivating the economy and increasing the competitiveness of the domestic industry, compensating by both currency appreciation and the greater competition in the external market. In the second half of 2012, besides to seek to stimulate private expenditures, Brazilian government sought a more direct action on the demand with the adoption of packages of governmental purchases and the increasing of public investments, however with limited effect due to the limited dimension of such actions, although with potential for the future.

In general 2011-2012 economic growth disappointed: average growth was only 1.8%, while industrial output declined even more (0.4% on average). In 2012, in particular, GDP growth dropped to only 0.9%.When we have a look on the contribution of expenditures to growth, all the variables somehow decreased. So far fixed capital contributed more for such decline (Figure 1). Such poor economic performance is consequence of both external and domestic factors. Although the economic situation of the euro now seems to be not disruptive, it affected the Brazilian economy mainly by the commercial side, due to the slow recovery of the commodities prices in 2012 and the reduction in the external demand of the exports of semi-manufacturing, manufacturing and basic goods.

On the domestic side, we have to consider a lot of factors. Investment rate increased in 2010-2011 as the firms were expecting that economic growth would continue to be high – what did not happen. At the same time the industrial output stagnated due mainly to the increase in the coefficient of imports. As a result the capacity utilization rate of the industry decreased, generating idle capacity that contributed for the slowdown of the investments in 2012, also affected by the deterioration in the entrepreneur expectations due to the worsening in the international environment.

[7] For a more information about Roussef's economic policy in 2011-2012, see FUNDAP (2012).

Exporters lost external markets due to the lack of competitiveness and low external demand, while imports increased shifting part of industrial production– indeed a lot of years of high interest rate and currency appreciation seems to be eroded the competition capacity of the domestic firms. For this reason, net exports did not contributed for higher growth. Household consumption was still high, but reducing gradually in consequence of the slowdown in the demand and supply for credit due to the high level of the household indebtedness and the high level of delinquent payment, what reduced a great deal the efficacy of the measures adopted to boost consumption (including tax exemption and stimulus to credit).

Finally, public expenditures – including public investments – were not enough to compensate the overall reduction in the other components of the aggregate demand. As we will see in the next section, countercyclical fiscal policy in 2001-2012 was very limited compared to the fiscal policy adopted after the Lehman Brother crisis contagion. Furthermore, such policy was focused on tax exemption with limited effect on the aggregate demand due to the deterioration of the agents' expectations, among other factors. Fiscal policy should be focused in public investments, with higher income multiplier, mainly in the case of social and economic infrastructure. It seems that Brazilian government bet that the change in the mix of the economic policy (lower interest rate and more devaluated currency) together with some tax exemption to stimulate for demand and supply of goods would be enough to reach a robust economic growth. When it was clear that this was not the case, government sought to implement ad hoc measures to boost growth. Such action, however, was not well coordinated and lacked consistence. We deepen this subject in the next section.

3. Economic policies and economic performance during the contagion of the two crises

3.1 Monetary and financial policy

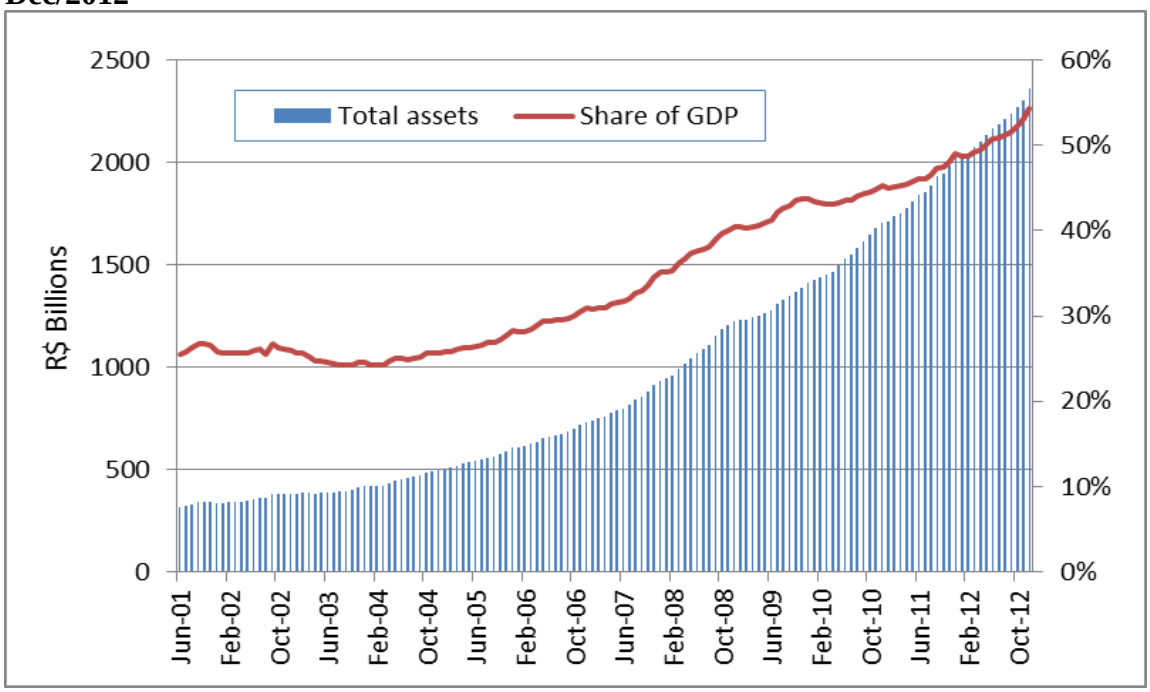
As we have seen in section 2, credit and financial policy were well succeeded in avoiding a domestic credit crunch in the aftermath of Lehman Brother contagion crisis (2008-09). Following the Lehman Brother contagion, banking sector has dramatically increased their liquidity preference due to a strong expectations' deterioration. The result was a deep pooling of liquidity and a sudden stop of money market operations. In

addition to that, Brazil has also faced a sudden stop of external credit inflow both to banks and firms.

In the face of this drastic credit conditions deterioration, BCB has provided liquidity – both in domestic and foreign currency – to economic system as a whole. Mainly between October 2008 and January 2009, BCB was engaged in some relevant liquidity-enhancing measures for the banking system. Among them, one should note: i) a reduction in reserve requirements that resulted in an expansion of liquidity of around 3.3% of GDP in money market (Barbosa, 2010)[8]; ii) the creation of incentives for larger financial institutions to purchase the loan portfolios of small and medium banks, which were particularly affected by the worsening of credit conditions; and iii) an additional insurance deposit for small and medium banks.

In a few words, BCB has promptly and successfully acted as a lender of last resort, with the use of conventional and non-conventional tools. As a result, financial system was able to go through the worse moments of the international crisis without witnessing any bankruptcy. Although a credit crunch was avoided, there was a sharp decline in credit supply, led mainly by private banks (Figures 5 and 6).

Figure 5. Total domestic credit (left: R$ billions; right: share of GDP) – June/2001-Dec/2012



Source: Authors' elaboration based on BCB data.

[8] The reserves requirements are historically high in Brazil and they apply to sight deposit, time deposit and to saving accounts. Reserve requirements were reduced: from 53.0% to 47.0%, on sight deposit (October 2008); and from 19.0% to 17.5%, on time deposit (September 2009).

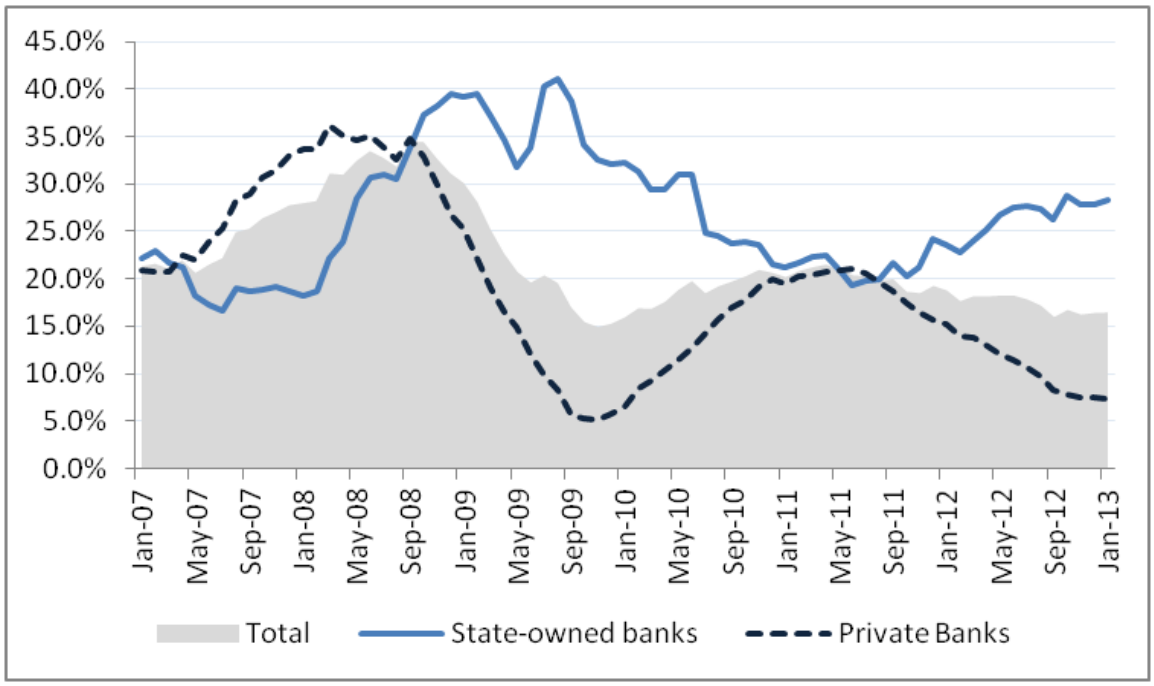
Total domestic credit[9] growth rate reached a peak of 34.5% p.a. in September 2008 and felt sharply during the next 14 months, reaching a low of 14.9% p.a. in November 2009. Annual data shows that the credit boom – observed during the last decade – has slowed down substantially, although credit continues to show high growth rates. Indeed, credit-over-GDP ratio rose from around 26% to more than 50% in the period 2002-2012. From 2005 to 2008 this ratio presented an average growth rate of 25.5%, while in 2009-2012 period reduced to 18.3% p.a. on average.

Credit policy response to the crisis was not limited to providing liquidity. State-owned banks have also played a major role in avoiding a credit crunch and thus smoothing the sharp decline in private banks credit supply (Figure 6). It should be noted that the expansionary strategy of the state-owned banks, mainly in case of the three 'giants' – BNDES, *Banco do Brasil* (BB) and *Caixa Economica Federal* (CEF) – was a political decision of the Brazilian government to face the contagion of the crisis. BNDES, a state-owned federal development bank, was favored in the beginning of 2009, by a special credit facility of 3.3% of GDP opened by National Treasury, in order to offer special facilities for circulating capital, small and medium enterprises and exports (Barbosa, 2010, p.5). BB and CEF, respectively the first and the fifth biggest bank in the ranking of total assets, were stimulated by government to expand their lending during the crisis.

As a result of this divergent behavior between private and state-owned banks, the later has increased its market share to around 40% in July 2009. Consequently state-owned banks played a major countercyclical role – thus contributing to avoid a sharper decline of credit supply and consequently of economic activity, as we have seen in section 2.

[9] Total loans in Brazil can be divided into so-called 'earmarked' and 'non-earmarked' credit. Earmarked credit refers to credit operations with compulsory allocation and/or government resources at below-market rates (mainly in housing, agricultural and firms' long term credit operations), while non-earmarked credit, by contrast, is not subject to directed-lending requirements.

Figure 6. Total credit growth rate (%) by bank ownership (12 months) – Jan/2007-Jan/2013



Source: Authors' elaboration based on BCB data.

One should note that the "households' indebtedness-over-accumulated income of the past 12 months ratio" was still in a moderated level (32%, in October 2008). So, the countercyclical credit policy – combined with the tax exemption on durables goods – was able to stimulate the consumption demand. Indeed, consumption was the first expenditure variable to recover after the crisis (Figure 2).

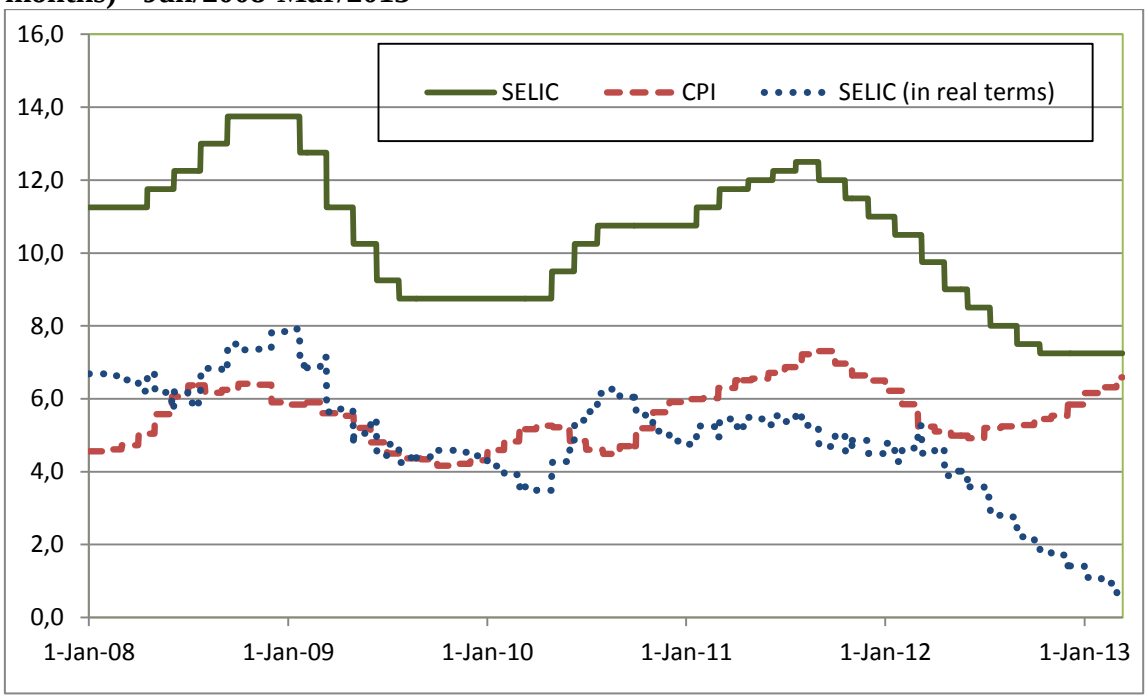
In one hand, adopting a countercyclical credit policy was a policy goal clearly stated by authorities to the public. But in the other hand, one may say that there was some lack of policy coordination since monetary policy, in its turn, was quite restrictive (Figure 7). In September 2008, BCB raised the Selic rate to 13.75% p.a. After that, BCB – even facing clear signs of a drastic downturn in economic activity – kept Selic rate stable and very high (above 7% in real terms) until January, 2009, thus being highly conservative (Modenesi et al., 2013).

According to BCB, its conservative behavior was justified in the face of the risk of the inflationary pressures resulting from the sharp depreciation of domestic currency.[10] In fact, there is a lot of evidence showing that the exchange rate has been the most relevant channel of monetary policy in Brazil since the Real Plan (mid-1994). However BCB did fail to recognize the deflationary pressures arising from two other

[10] From July 2008 to December 2008, Brazilian currency (real) depreciated 50%.

sources: a sharp and huge fall in commodities prices (of 31%); and a drastic fall in economic activity (monthly industrial production felt 15%). As pointed out by Araújo and Modenesi (2010), the combined deflationary effect of those two later variables explains why inflation did not rise abruptly despite of the exchange rate depreciation. Indeed, CPI inflation reached 4.5%, in 2007, and it rose to just 5.9% in 2008 and felt to 4.31% in 2009.

Figure 7. Selic rate (Left: % p.a.) and CPI monthly inflation (right: % last 12 months) - Jan/2008-Mar/2013



Source: Authors' elaboration based on BCB data.

The reaction to the Euro crisis (2011-12) during the first two years of Dilma Rouseff's administration was different in some relevant aspect to the one observed during Lula's administration (analyzed above). The major difference regards monetary policy, which was clearly conducted in a less conservative way. Credit policy, in its turn, did remain expansionist. Thus, one may say that the credit and monetary policy was somehow better coordinated during Dilma Rouseff's than during Lula da Silva's administration.

The new behavior of BCB was shown in August 2011, when its Open Market Committee (Copom) reduced the Selic rate (from 12.5% to 12.0% p.a.) unexpectedly and despite of the fact that both current inflation and inflation expectations were raising.

Following this decision, Selic rate was gradually reduced to its lower historical level: 7.5% p.a. in November 2012 (Figure 6).

Following the deterioration of firms' and banks' expectations resulting from the Euro crisis, private and state-owned banks has kept the same divergent path shown during the Lehman Brother crisis. As a result, state-owned banks market share kept its rising trend and reached almost 50% of total assets in January 2013 (Figure 2). Indeed, overall credit of private banks grew only from 26.1% of GDP in January 2011 to 28.0% in December 2012. In the other hand, total credit of state-owned banks increased from 18.9% to 35.5% of GDP, in the same period.

Besides expanding state-owned banks operations, credit policy also encompassed an explicit goal of bank spread reduction. Indeed Roussef's government has launched a sort of 'crusade against the high spreads' and used Banco do Brasil (BB) and CEF to push for a reduction in banks spreads. Banco do Brasil and CEF reduced the spread of their main credit lines by more than 4 percentage points (p.p.) during the 2nd and 3rd quarter of 2012. Following, *Itaú Unibanco* and *Bradesco* cut their spread on loans to individuals by 8 and 2.5 p.p., respectively (Table 1). Consequently, the countercyclical role of state-owned banks was even deepened.

Table 1. Average spreads on loans to individuals and working capital (percentage points)

	30/Mar-05/Apr.		11-17/Sep.		Δ*	
	Individuals	**Working capital**	**Individuals**	**Working capital**	**Individuals**	**Working capital**
BB	26.7	12.5	22.3	9.5	-4.4	-3.0
CEF	21.3	11.3	17.1	6.4	-4.2	-5.0
Itaú Unibanco	51.4	15.7	43.4	14.6	-8.0	-1.1
Bradesco	58.0	21.1	55.5	22.5	-2.5	1.3
Santander	39.4	11.9	41.1	32.1	1.7	20.2
HSBC	54.0	24.2	57.2	25.2	3.2	1.0

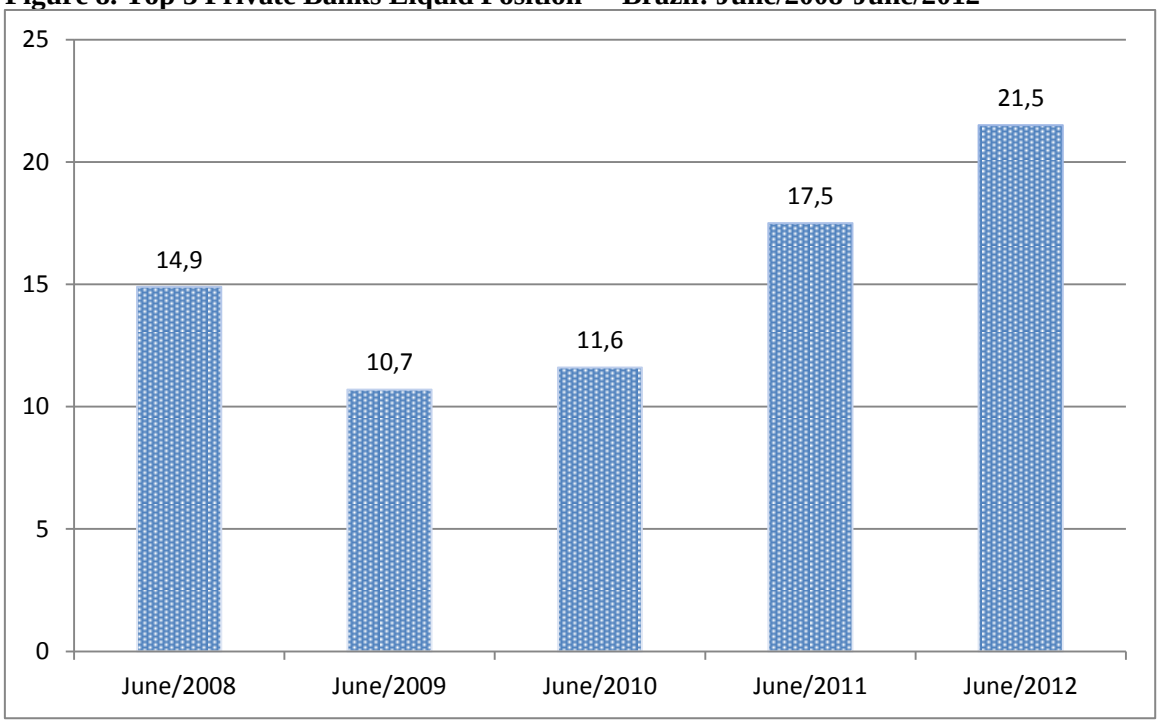
Source: Authors' elaboration from BCB data. Spreads were calculated by the difference between loans rates and the Selic rate. *As a matter of comparison, the Selic rate was cut by 2.25 p.p. during the same period.

One should note a sort of puzzle here: despite of being loosened considerably, monetary policy was not able to induce a substantial economic recovery. This fact is even more puzzling if you take into account that, broadly speaking, the policy mix was kept expansionist and average bank spread was reduced from 32,2 p.p. to 29,1 p.p.,

between 2011 and 2012. In other words, this suggests that monetary policy transmission mechanism did not work properly. This seems to be true especially regarding the credit and the expectations channels, as detailed above.

Banking system's liquidity preference has sharply increased as a result of an increasing in risk aversion due to the risk of the end of the Euro monetary system – a cataclysm of unpredictable consequences for the global economy. For instance, the top three private banks (which respond to almost 50% of total banking assets) had an uneven behavior during the two periods analyzed here. Following the Lehman Brothers crisis, the big private banks has reduced its liquid position from 14.9% to 10.7%. During the Euro crisis, they went in the opposite direction: this ratio has doubled to 21.5% (Figure 8). Another further reason for this behavior is the fact that the households' indebtedness rose monotonically from 32.5% (Jan/2009) to a peak of 43.8% of income accumulated during the last 12 months (Aug/2012) and remained above 43.0% until Dec/2012. Banks probably became more reluctant to offer new loans fearing delinquent payments. In fact, average delinquency rate rose from a low of 4.5% (Dec/2010) to a peak of 5.9% in mid-2012.[11]

Figure 8. Top 3 Private Banks Liquid Position[+] – Brazil: June/2008-June/2012



Source: Authors' elaboration based on BCB data.
[+] (Cash + Securities)/Total Assets*100. Data includes Itau, Bradesco and Santander.

[11] Authors' elaboration based on BCB data.

Also as a result of observed increasing in indebtedness, households have probably become more reluctant in taking new loans. Additionally, firms did the same in the face of the slowdown of the economy, and specially, of the rising in industry's idle capacity from 79% (Jan/2009) to 84% (Dec/2010).[12] Accordingly is reasonable to believe that demand for credit was reduced. Summing up, the combined behavior of the non-financial agents (households and firms) and banks might explain why the credit channel did not work during the Euro crisis despite the easing of monetary conditions.

The monetary impulse probably was not transmitted through the expectations channel specially in the face of a widespread increasing in risk perception. As we saw, world economic activity – and thus international trade – reduced considerably following the Euro crisis. The sequence of bail outs (Greece, Portugal, Ireland and Spain) plus the slow and timid reaction of the European authorities, gave rise to a perception that the Euro could dramatically collapse at any time – and it almost did happened. Facing such a huge risk, combined with the exhaustion of the credit boom, one should not expect that loosing monetary policy would be enough to boost economic activity.

3.2 Exchange rate and trade balance

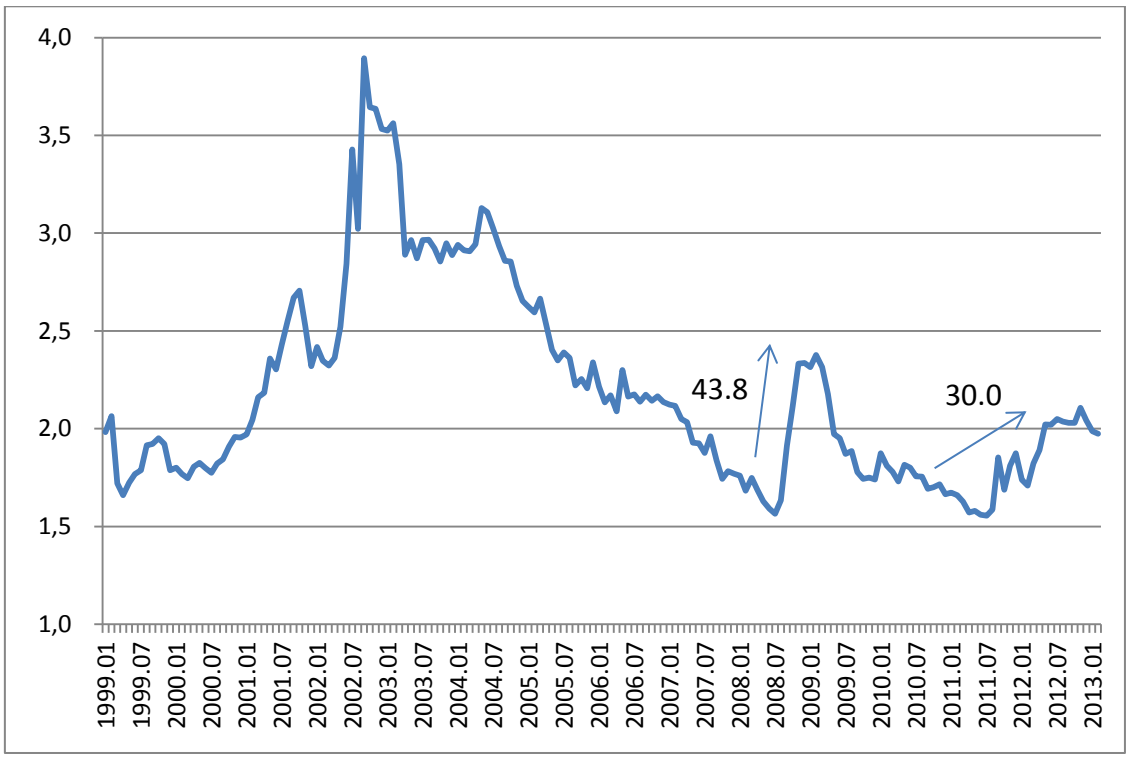
After a period of currency devaluation (1999-2002), marked by the collapse of the semi-pegged exchange rate in January 1999, world economic turbulence (effects of September 11, 2001' attack, Argentina's 2002 crisis, etc.), and 2002 confidence crisis (due to the imminence of the election of Lula da Silva as President), there is a clear general trend of currency appreciation in 2003-2011, with a short interregnum in the last quarter of 2008 (Lehman Brothers' contagion).

Exchange rate (R$/US$) declined gradually from R$ 3.1 in June 2004 to R$ 1.6 in May 2008, a nominal appreciation of 51.6% (Figure 9). This trend was somehow tolerated by Central Bank of Brazil (BCB) as essential to the attainment of the inflation target in Brazil (Arestis et al, 2011). As we have pointed out in the section 2, since September 2011 and mainly since January 2012 BCB induced currency devaluation, so that exchange rate depreciated 30% from July 2011 until May 2012. Since then exchange rate was maintained stable around R$ 2.00 due the worries of the government about the inflation behavior. For the effectiveness of government's intervention in the

[12] Industry's idle capacity (NUCI) is seasonal adjusted and calculated by Getulio Vargas Foundation (FGV). It remained above 80% until December 2012 (83%).

foreign exchange market contributed some reduction of the net capital flows due to the deterioration in the international financial environment (worsening of the Euro crisis) and mainly the greater effectiveness of the adoption of capital account regulation.

Figure 9. Exchange rate (real/dollar) – Jan/1999-Jan/2013



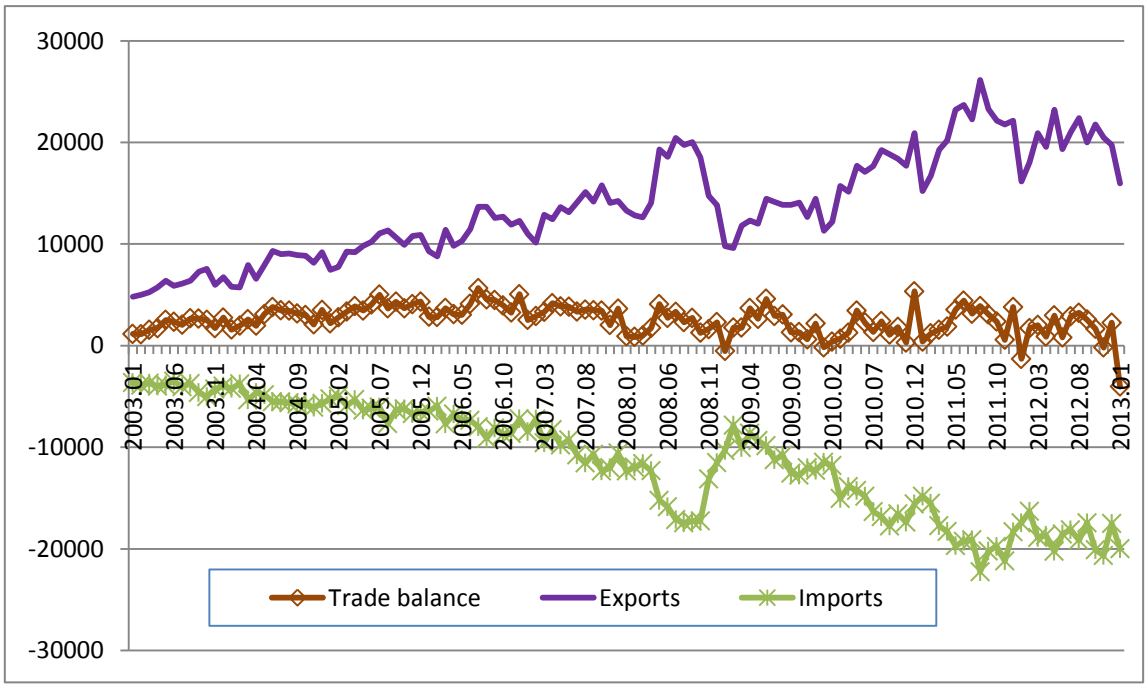
Source: Central Bank of Brazil

After implementing some slight capital account regulation since the end of 2009, including the use of financial transaction tax ("*Imposto sobre Operações Financeiras*" – IOF) on portfolio investments' capital inflows and an IOF of 6% on margin requirements of foreign exchange (thereby FX) derivatives transactions, a more comprehensive strategy was adopted. Ministry of Finance and BCB extended the IOF on external loans, in order to close the loopholes, and enlarged the scope of tools, including prudential financial regulation (reserve requirement equivalent to 60 percent of bank´s short dollar positions in the FX spot market). However, it was only with the regulation on net position on FX derivatives– with the implementation of a IOF of 1% on the sold net positions in derivative operations up to US$ 10 million (penalizing the bet of foreign investors in the Brazilian currency appreciation) –, that the strategy revealed to be effective. Therefore, FX derivatives operation had a central role in the government strategy to devaluate Brazilian currency given that FX futures market has much higher liquidity and depth in comparison to the FX spot market (Paula and Prates,

2012).

As we have pointed out in section 2, the performance of trade balance was one of the main driver of the economic recovery in 2004. Indeed trade balance rose from US$ 24.8 billion in 2003 to US$ 44.7 billion in 2005 due to the increase of exports in consequence of the previous currency devaluation and the commodities boom (Brazil is an important exporter of commodities, such as soya, metal, etc.), pushed up by the growth of the world economy and Chinese economy (5.1% and 12.7% in 2005-07 on average, respectively). Price index of exports increased 91.4% from October 2003 to July 2008. Due to the high income-elasticity of imports in a period of domestic economic growth (GDP growth of 5.0% p.a. in 2005-07 on average) and currency appreciation trend since mid-2004, total imports also increased sharply in particular in 2007-08. The effect of the contagion of Lehman Brothers crisis on trade performance was immediate, so that total exports declined abruptly while total imports reduced dramatically in the last quarter of 2008 (Figure 10). Indeed, terms of trade deteriorated quickly due to the effects of the world recession (causing a drop in commodities prices) on Brazilian trade balance.

Figure 10. Trade balance (US$ million) – Jan/2001-Jan/2013

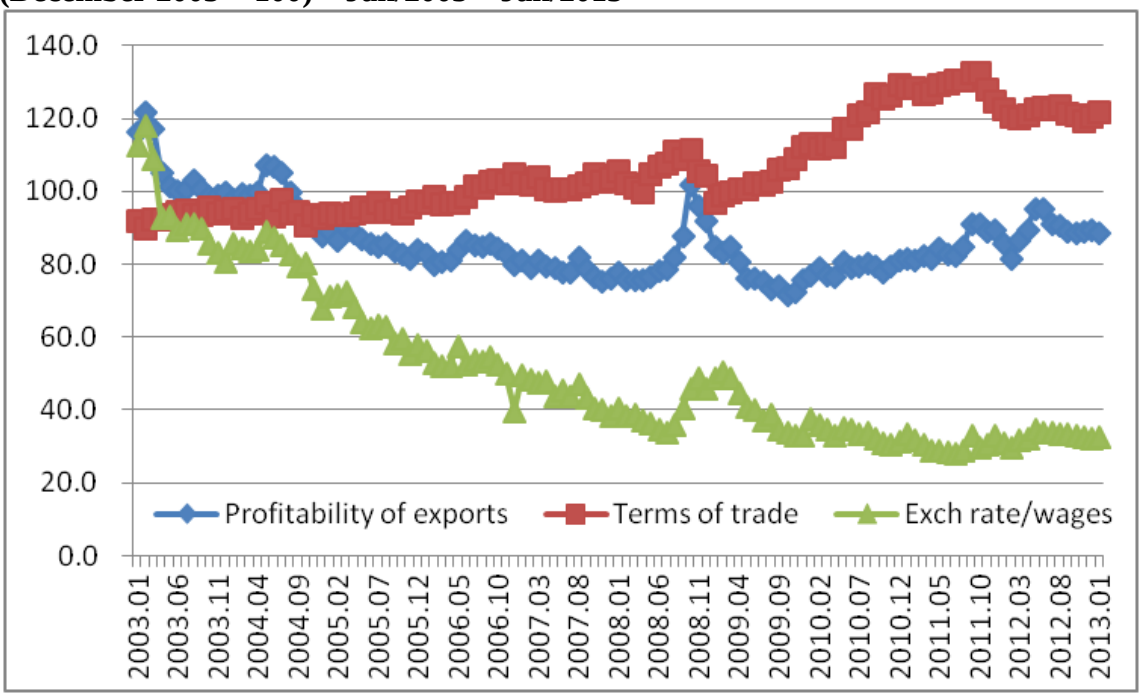


Source: Central Bank of Brazil - BCB

In 2009, both exports and imports began to increase gradually. Exports performance was favored by the strong improvement in the terms of trade (Figure 10)

due mainly to the performance of Chinese economy that grow 9.2% in 2009 (contrasting with advance countries' growth of -0.8%), and the world recovery in 2010 (IMF, 2013, p.149). The ratio "exchange rate over wages" declined dramatically from 2003 to 2008 in consequence of both nominal exchange rate appreciation trend and the increase in the real wages in the industry sector. One can see in Figure 11 that profitability of exports rose gradually in 2009-2011 in spite of the currency appreciation trend due to the increase of the price in dollars of exported goods that resulted from the improvement in terms of trade.

Figure 11. Profitability of exports and real effective exchange rate (December 2003 = 100) – Jan/2003 – Jan/2013

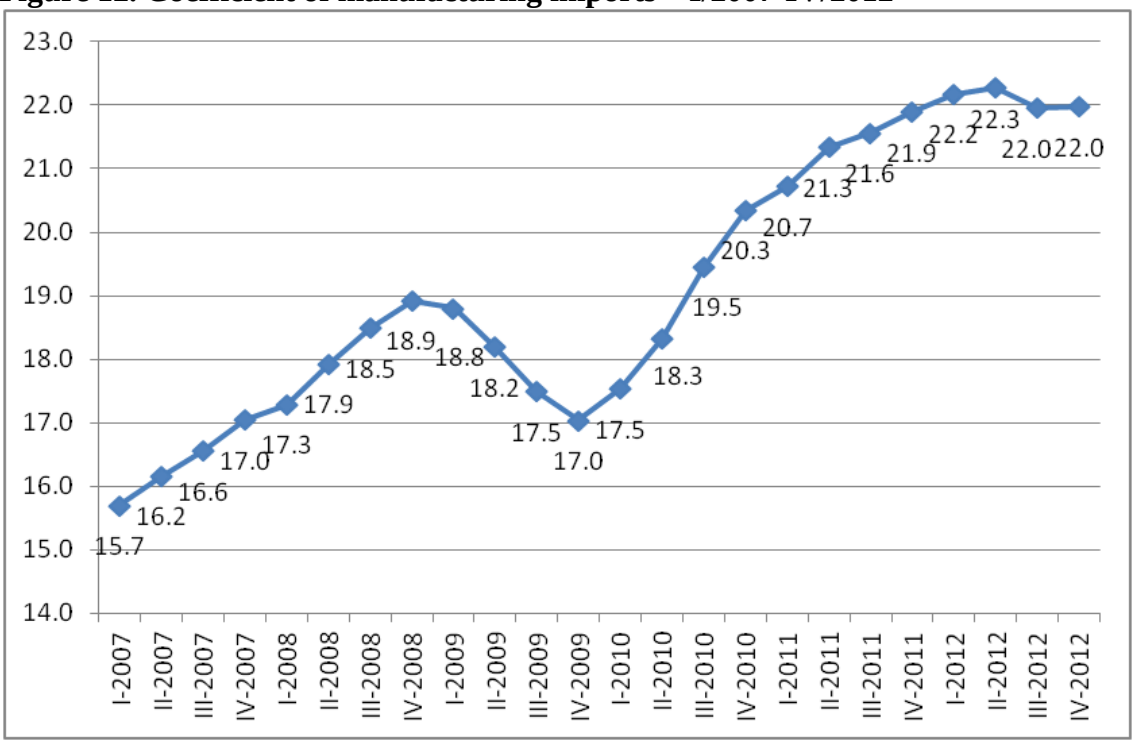


Source: Central Bank of Brazil and FUNCEX.
Note: a) Profitability of exports is calculated according to the following formula: *PE = (E.Px)/C,* where *E* is the nominal exchange rate (real/dollar), *Px* the price in dollars of exported goods and *C* is the costs of domestic production in reais. b) Terms of trade is calculated by dividing the index of exports price by the index of imports prices of the economy.

Industry's coefficient of imports increased quickly from the fourth quarter of 2009 (17.0%) to the first quarter of 2012 (22.2%), according to Figure 12. Such behavior shows that the loss in the competitiveness of domestic manufacturing goods - a overall trend that included different sectors, such as informatics, machines and electric equipment, pharmaceutical goods, vehicles, and textile and clothing products - due

mainly to the effects of the currency appreciation[13]. So, in spite of the exports' growth, trade balance reduced from US$ 40 billion in 2007 to US$ 20 billion in 2010, in 2011 eventually increased to US$ 30 billion due to the better conditions in terms of trade but declined again to US$ 19.4 billion in 2012.

Figure 12. Coefficient of manufacturing imports – I/2007-IV/2012



Source: FUNCEX

Note: Coefficient of imports is ratio "total value of imports of industrial sector" over "total value of domestic output of industrial sector"

One could expect that a currency depreciation of 30.0% — would boost net exports, and, combined with the sharp cut in the Selic rate, would push up economic growth. Nevertheless it did not happen, as imports stagnated while exports reduced slightly. Comparing 2012 to 2011, exports shrank 5.3% while imports decreased 1.4% (Figure 10). Consequently trade balance declined 34.8% due mainly to the decrease in the exports of basic goods (-7.4%) and semi-manufacturing goods (-8.3%), while in the imports side the acquisitions of raw material and industrial supplies and materials, as well as capital goods, did not reduce (MDIC, 2012). In special, the fall in the exports is due to the drop of 4.9% in the price index, caused by a decrease in commodities prices,

[13] Using OECD classification, the imports of medium-high tech manufacturing (chemical products, except pharmaceuticals ones, vehicles, machines and equipment, equipment of transport except airplanes, and electrical materials and machines) rose from US$ 58.6 billion in 2009 to US$ 102.5 billion in 2011, according to data from FUNCEX.

especially iron ore, that resulted from the slowdown of the advanced economies and China. Indeed the profitability of exports increased in the first semester of 2012, due to the effects of the currency depreciation on exports' revenues in *reais*. In the other hand both the terms of trade and the world demand for exported goods declined due to the world economy slowdown: Brazilian main trade partners, Europe, China and, particularly important for the Brazilian manufacturing exports, Argentina, had GDP growth reduced in 2012.

Table 2 shows some estimation of exports' functions to Brazilian economy with the use of different methodologies and periods of analysis. Broadly speaking, empirical evidence suggests that the price effect (resulting from an exchange rate movement) is overcome so far by income effect. For this reason, although currency depreciation had some positive effect on exports it was surpassed by the world economic deceleration. On the other hand, when we focus on the performance of imports one should consider a hysteresis phenomenon: years of currency appreciation have determined a sort of domestic firms' behavior (replacing domestic capital goods and raw materials by imported ones) that is not changed immediately, mainly if one consider that a devaluation of 25-30% was not enough to compensate the enormous currency appreciation of the previous years (Figure 9). So, the increase in the prices in *reais* of imported capital and intermediary goods did not reduce the quantum of imports. Therefore, in the short run, demand for the more expensive imports can remain price inelastic, due to time lags in the consumer's search for acceptable, cheaper alternatives. Over the longer term an exchange rate depreciation could have the desired effect of improving the trade balance; however, low world economic growth weakens and retards this effect.

Table 2. Estimation of exports' functions to Brazil

Authors	Period	Model	Exchange rate elasticity	Income elasticity
Castro and Cavalcanti (1997)	1955-1995	VECM	Non-significant	0.65
Cavalcanti and Frischtak (2001)	1980-2001	ARIMA	0.61	1.01
Muinhos and Alves (2003)	1988-2001	ADL	0.14	0.45
Minella and Souza-Sobrinho (2009)	1999-2008	OSL	0.12	1.02
Schettini, Squeff and Gouvêa (2011)	1995-2009	VECM, MS and EE	-0.04-0.11	0,92-1,2

Source: Authors' own elaboration.

3.3 Fiscal Policy

The way Brazilian economic authorities perceived the nature of the economic slowdown can be seen by comparing the fiscal policy response to contagion from the Lehman Brothers crisis with the response to contagion from the Euro crisis. What is interesting is firstly the timing and intensity of the fiscal policy responses in the two contexts; and secondly the makeup of the policy was also different, and appears partly to explain the stagnation.

A third aspect to be considered in analysing Brazilian fiscal policy since the Lehman Brothers crisis is the growth in quasi-fiscal operations. One solution for funding investments was to increase BNDES credit operations by borrowing from the National Treasury. A number of economists have questioned this kind of funding because it heightens Brazil's indebtedness, raising doubts as to the dynamics of the gross debt. It is thus useful to consider the discussion in terms of two separate dimensions: (a) fiscal impulse; and (b) fiscal consistency.

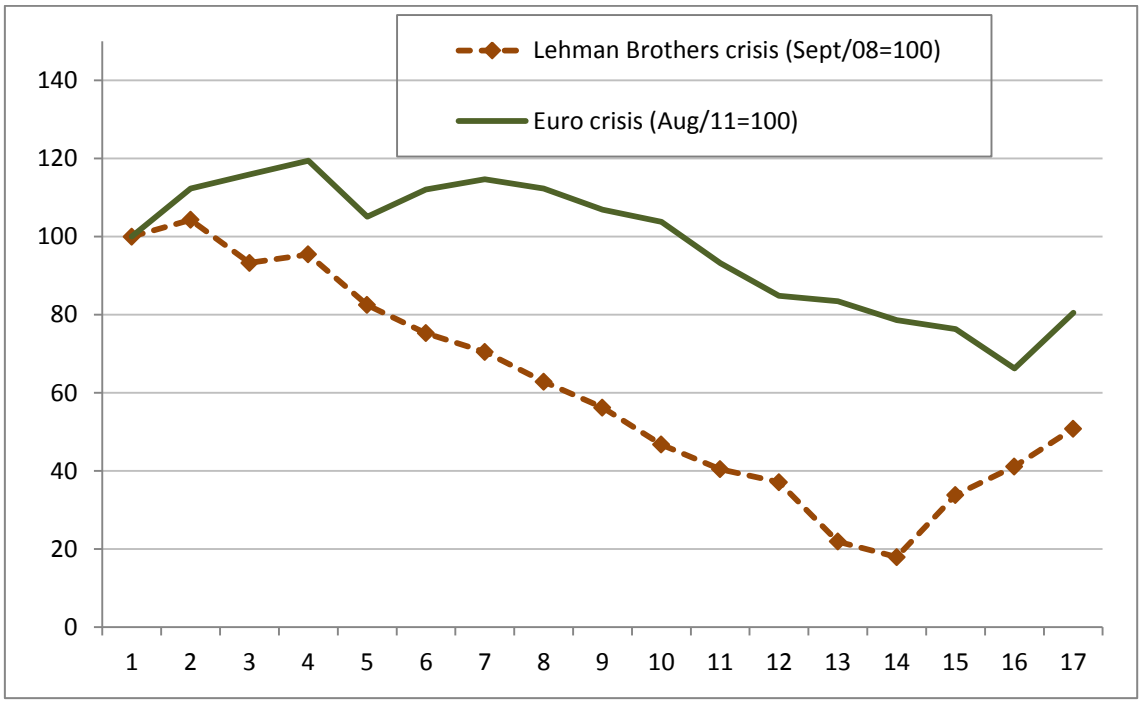
3.3.1. Fiscal Impulse

As mentioned, fiscal policy was the first economic policy instrument to react during the Lehman Brothers crisis, at first by way of automatic stabilisers, which reduced revenue, and then later by expanding spending, which resulted in a fall in the primary surplus. During the economic slowdown stemming from the Euro crisis, as seen in section 2, fiscal policy was regarded as an instrument of macroeconomic consistency that sought to provide support for a more substantial and lasting reduction in interest rates and also for depreciation of the exchange rate.

Figure 13 shows how the primary balance evolved as a percentage of GDP from the moment each crisis broke. It is striking that the primary surplus fell immediately after the start of the Lehman Brothers crisis, while during the Euro crisis the opposite occurred: the primary surplus increased and it was not until ten months after the onset of the crisis that the primary surplus actually began to show a decrease from the values at the start of the crisis. Thus, despite the difference between the two crises in the severity

of contagion, the figures appear to suggest that the government authorities may have underestimated the challenges posed by the economic scenario at the time.

Figure 13. Primary fiscal balance as share of GDP (in months)



Source: Authors' elaboration with data from Secretaria do Tesouro Nacional.

A second important aspect is that the composition of fiscal expansion also seems to have affected the final outcome. During the Lehman Brothers crisis the government gave greater weight to actions involving expenditure, such as minimum wage and social cash-transfer increases, expansion of public investments and investments by Petrobrás, a wide-ranging housing programme for the lower social classes, in addition to R$ 100 billion in funding for the BNDES to finance investments at subsidised rates[14]. As regards tax relief, some temporary, restricted measures were taken, such as a reduction of taxes on vehicles, electrical appliances and building materials, and on credit operations. Barbosa (2010) estimates that the fiscal measures taken from 2008-2009 represent a total impulse of the order of 6.3% of GDP.

While the response to the Lehman Brothers crisis involved a speedy series of substantial measures to relieve taxes and expand spending, the response during the Euro

[14] The policy of injections into the BNDES was maintained in 2010 with further input of R$ 80 billion. In subsequent years, these injections continued in decreasing amounts.

crisis did not occur until the second half of 2012, and was slanted towards tax relief, with many measures showing no clear effect on economic activity[15].

Many tax reductions were designed to reduce corporate costs: payroll taxes were cut to reduce company labour costs, although in many cases this gain was eventually absorbed into profit margins[16]. Even those tax reductions that had produced effects in the previous crisis yielded more limited effects in 2012, because in terms of household consumption not only was the level of indebtedness much higher than in 2009, as already seen, but also a good many families inclined to renew their durables (motor vehicle, refrigerator etc.) had already done so in 2009, and this helped produce a more modest effect from consumer tax incentives.

In 2012, total tax reductions estimated at 0.5 p.p. of GDP were introduced for various sectors of the economy, chiefly manufacturing industries (Ministério da Fazenda, 2013). On the expenditure side, the main impulse came from a substantial (14%) minimum wage increase, which generated a fiscal impulse equivalent to 0.5% of GDP. There was no significant growth in public investments, which represented 1.1% of GDP, the same value as in 2011 and lower than in 2010. Lastly, a further loan equivalent to 1% of GDP was made to the BNDES, totalling an impulse of the order of 2% of GDP.

By and large, the government's fiscal policy response suggests that the economic slowdown was possibly underestimated; that is suggested, at least, by its policy regarding the BNDES. As in 2008-2009 the BNDES was important for keeping the investment credit channel open, and the results were clearly positive; however, it was not until the second half of 2012 that the government decided to increase funding to the bank and bring down the TJLP[17] interest rate on long-term loans. In this way, in addition to the loan mentioned above, the interest rate was temporarily lowered significantly, to 2.5% p.a., which resulted in a negative real interest rate for investment. By the end of 2012 that measure had shown an effect, enabling the BNDES to expand its operations substantially – and the result became apparent, even if belatedly: gross

[15] In 2011, as the Euro crisis deteriorated, the government's decision was to increase the primary surplus by R$ 10 billion (0.25% of GDP) in the expectation that this larger surplus would sustain lower interest rates permanently.

[16] One representative example of tax relief with little effect on economic activity was the CIDE oil tax, a regulatory tax on oil consumption which was eliminated in 2012, seeking to attenuate the effect on inflation and at the same time produce an inverse effect on economic activity, given that Brazil is a net oil importer.

[17] TJLP - Long-Term Interest Rate is the reference rate of BNDES' loans. It is defined by the National Monetary Council.

fixed capital formation grew by 0.5% in the fourth quarter of 2012, after falling for four consecutive quarters.

Considering overall fiscal impulse, it can be concluded that it was far smaller, overdue and of such a composition that the resulting impact on economic activity in 2012 was lesser than in 2009-2010. Indeed, the literature has presented empirical evidence that the fiscal revenue multipliers have smaller effects on aggregate income than spending multipliers. IMF (2012b), for example, revised the empirical literature on fiscal multipliers and concluded that spending multipliers average about 0.9, while expenditure multipliers are around 0.3. Pires (2012) estimated that the spending multiplier value for Brazil is greater than 1, but found no statistically significant revenue multipliers.

3.2.2. Fiscal policy consistency

Since 2008 the federal government has centred a considerable portion of its economic policy – through its development bank, the BNDES – on a strategy of providing more attractive financial conditions for private investment by offering loans at subsidised rates of interest and with longer timeframes than the rest of the banking system.

This strategy has been made possible by the National Treasury's lending substantial amounts to the BNDES and charging rates of interest well below what it receives on the financial market. In accounting terms this funding strategy has very little effect on net public sector indebtedness: while increasing liabilities, it also boosts public sector assets, because it generates a government credit against the BNDES. It is not neutral in terms of gross debt, however. The negative net fiscal effect is given by the interest rate differential over the various years of the contract.

This kind of operation has made gross debt statistics relevant to analysing the sustainability of Brazil's public debt. Although Brazil's net debt has decreased, the fact that this process has not been accompanied by the gross debt has raised doubts as to the sustainability of fiscal policy[18]. It thus follows that the dynamics of Brazil's gross debt is an area deserving more attention.

[18] Net public sector debt fell from 38.5% GDP in 2008 to 35.2% GDP in 2012. Gross debt, in turn, rose from 57.4% GDP in 2008 to 58.7% GDP in 2012.

Analysis of the gross debt shows that two components are very important to its dynamics: (i) domestic federal public securities debt on the market; and (ii) repurchase agreements (repo operations) performed by the BCB. While the bond market debt reflects fiscal policy measures, the repo operations reflect monetary policy measures backed by extremely liquid assets, such as accumulated international reserves and temporary operations to mop up excess bank liquidity, which become important at times of credit squeezes, such as those applied by private banks since mid-2011.

Accordingly, excluding repo operations from gross debt statistics gives a real notion of gross public sector indebtedness. Table 4 shows a breakdown of the gross debt and ends by excluding repo operations from the total. The results show that, in recent years, Brazil's gross debt has stabilised at a high but steady plateau – around 46% of GDP, well short of any risk to fiscal sustainability[19].

Another important aspect of the dynamics of Brazil's gross debt is quasi-fiscal operations. In that longer-term debt, even if at high levels, is more comfortable for fiscal policy than lesser debt that has to be constantly refinanced, the following question arises: to what extent have such operations prevented improved public debt management? That question is particularly telling in view of Brazil's history of short maturities and high proportions of indexed debt.

Table 3 also shows the indicators for the percentage of bond debt maturing in the following 24 months, the percentage of debt indexed to the Selic rate (the main indexer for Brazil's bond debt) and the mean cost of federal bond debt. Debt management has shown improvement on all these criteria and accordingly it can be seen that economic policy has not prevented public debt management from improving. Table 4 shows that the portion of federal public debt bond indexed to the Selic rate fell from 28.7% in 2010 to 17.9% in 2012[20], the percentage of debt with maturity at less than two years declined from 47.9% to 44.4% and the mean cost decreased from 15.9% to 11.6%: these values are all high, but also clearly in the process of improving. It can

[19] This conclusion is also corroborated by studies using different methodologies (Credit Suisse, 2012).

[20] Public debt partly indexed to the Selic rate has a number of adverse effects: it diminishes the forcefulness of the channel by which monetary policy is transmitted by (partly) neutralising the wealth effect that results from raising the interest rate (as a portion of financial wealth is appreciated by such a rise); it discourages the formation of a normal long-term yield curve by stimulating the short-term allocation of financial wealth; and, connected with that, it discourages placement of longer-maturity fixed-rate corporate debt, in view of the spreading "overnight" logic particularly on the securities market. This is because public debt indexed to the Selic rate offers zero duration (or duration of one day), high liquidity and until recently good returns. The BCB's Selic rate reductions since August 2011 have helped improve the public debt profile.

therefore be concluded that Brazil's public debt situation does not constrain fiscal policy action to any major extent.

Table 3. Selected indicators of public indebtedness

	2008	2009	2010	2011	2012
Gross debt of Federal Government (A)	57.4	60.9	53.4	54.2	58.7
Domestic federal public securities debt on the market	40.8	42.3	41.6	42.2	42.5
Repurchase agreements of BCB	10.7	14.0	7.7	8.3	11.9
Banking debt of federal government and debt assumed by Union	1.1	1.2	1.2	1.1	1.4
External debt	4.8	3.4	2.9	2.6	2.9
Gross debt of Federal Government ex repurchase agreements	46.7	46.9	45.7	45.9	46.8
Net debt of consolidated public sector	38.5	42.1	39.1	36.4	35.2
Percentage of debt due in 24 months of federal public securities debt	47.9	45.7	43.9	45.5	44.4
Percentage of federal public securities debt indexed to SELIC rate	28.5	28.3	28.7	27.0	17.9
Average cost of federal public securities debt (% p.a.)	15.9	9.4	11.6	12.8	11.6

Source: Secretaria do Tesouro Nacional and Central Bank of Brazil (BCB).

4. Conclusion

This chapter analyzed Brazilian economy and the policy responses during the contagion of the Lehman Brothers crisis and Euro crisis. The comparison of the economic policies and economic environment in the two periods examined in the chapter shows that:

a) The domestic and international conditions during the two periods were somehow very different: the economic reaction in 2009-2010 was favored by the new boom of commodities and still low level of households' indebtedness, what it was not the case in 2011-2012. Although the contagion of the international crisis was severe in 2008, economic recovery in the world economy was rapid after mid-2009, mainly in case of emerging economies, while in 2011-2012 there was not a 'big event' but the world economy slowed as a whole without any perspective of recovery in the medium term, what contributed to entrepreneurs' deterioration of expectations in the long term and to the slowdown in the international trade.

b) Consequently, the change in the mix of economic policies in 2011-2012, although necessary, was not enough to boom economic growth: reduction in the interest rate and devaluation of domestic currency had limited effects on economic growth.

c) Brazilian government was confident that the change in the economic policy in 2011-2012 was enough condition to allow a cycle of robust economic growth for the Brazilian economy, while fiscal policy was regarded as an instrument of macroeconomic consistency that sought to provide support for a more substantial and lasting reduction in interest rates and also for depreciation of the exchange rate; for the reasons that the chapter showed this did not happen. Indeed, it seems that government authorities may have underestimated the challenges posed by the economic scenario at the time.

d) When Brazilian government realized that economic growth would failure began to adopt a lot of ad hoc fiscal stimulus, more for the side of tax exemption that the side of public expenditures (with higher income multiplier), with limited effect on economic growth. Under an environment of high liquidity preference of the banks, deterioration of firms' expectation about the future and high level of households' indebtedness loosing monetary policy and expansionary fiscal policy using tax exemption have a limited effect in boosting economic activity. It would be the case that Brazilian government was explicit in showing clear signals to private sector that it was making use of countercyclical economic policies - however with the appropriate mix of policies for the circumstance - in order to stimulate them to act in the direction desired by the economic authorities.

e) Therefore, Brazilian government reaction to the contagion of the Euro crisis characterized, in our analysis, a situation of certain lack of coordination of economic policies. Specific policies – such as monetary policy and exchange rate policy – should never be formulated in isolation from other policies. In order to be effective, Keynesian activist policy endeavors to make use of both fiscal and monetary measures in consistent and coordinated pursuit of economic goals.

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