

The BNDES countercyclical role in the international economics crisis

Abstract: *the paper analyses the role of Brazilian Bank for Economic and Social Development (BNDES) during international crisis from 2008 on. It discusses, from the Keynesian approach, the Bank's countercyclical role, which boosts the resources to investment financing and their effects on the employment expansion, income and tax revenues. In contrast to the criticism, especially regarding to the alleged National Treasury's subsidies to BNDES, it is concluded that BNDES performance was positive during of the crisis and was essential to minimize adverse effects on the Brazilian economy. The financing operations costs to the National Treasury is smaller than the benefits, taking into account the investment's multiplier effects, as well as the aggregate demand, employment and taxes revenues increasing.*

Resumo: o artigo analisa o papel do Banco Nacional de Desenvolvimento Econômico e Social (BNDES) durante a crise deflagrada em 2008. É discutido, a partir de uma abordagem Keynesiana, o papel anticíclico da instituição financeira, com a disponibilização de recursos para financiamento de investimentos e seus efeitos sobre a expansão do emprego, renda e impostos. Em contraste as críticas, especialmente quanto aos subsídios advindos do Tesouro Nacional, pode-se concluir que foram positivos os efeitos da atuação do BNDES durante a crise e foi essencial para minimizar os impactos na economia brasileira. Os custos das operações financeiras com o Tesouro Nacional foram menores do que os benefícios produzidos, considerando-se o efeito multiplicador dos investimentos, bem como a demanda agregada, emprego e geração de impostos.

Keywords: BNDES; Treasury Policy; Brazilian economy

Jel Classification: E63 – Treasury Policy, G01 – Financial Crises, H12 – Crises Management.

1 INTRODUCTION

The article discusses the countercyclical role of the National Bank of Economic and Social Development (BNDES) in the economic crisis of 2008-2009. It discusses, from the Keynesian approach, the countercyclical role of the Bank, which expanded the resources to finance productive investments and their effects on the expansion of employment, income and tax revenues.

The article provides a counterpoint to criticism, especially with regard to the alleged subsidies Treasury to BNDES - pointing to the role of public banks cause macroeconomic imbalances, with rising inflation, imbalances of public accounts, caused by government subsidies and a disincentive to private funding. Unlike this approach, we found that the BNDES helped increase productive investment in recent years. Moreover, the fiscal cost of the BNDES performance should be analyzed in perspective and with respect to their benefits generated, i.e., the government has expanded its revenue by increasing tax revenues from increased taxes on aggregate demand, but also the Treasury receives plus dividends from the Bank, being the majority shareholder of the Bank.

Unlike the approach mentioned above, the counterpoint proposed in this article is that public banks boost productive investment that the Keynesian multiplier effect expands employment, income and government revenue. The fiscal cost of BNDES performance is much less than the benefits generated, considering that the government has expanded its revenue increased by raising taxes on higher aggregate demand.

It should be added that the Treasury receives further dividends, since is the majority shareholder of the Bank. Thus, the country has the macroeconomic benefit by widening Gross Domestic Product (GDP), employment, income, and a positive result in the public accounts. We conclude that the pro-activity of this institution during the crisis of the late 2000s was crucial to mitigate the adverse effects on the economy.

The cost of financing operations for the exchequer should be analyzed from the perspective of the benefits generated, considering the indirect impacts as the multiplier effect of the investments, as well as the increase of the aggregate demand, employment, income and tax revenues.

Thus, the article has the following structure: In Section 1 we conducted a brief history of the importance of BNDES for financing public; The section 2 presents its countercyclical role in the economic crisis of 2009; In the section 3 we present an analysis on the structure of capitation of the resources together to the National Treasury and the costs created in such operations and their consequences for the economy; Section 4 presents a review of the importance of capital markets as external financing as alternatives to finance the National Treasury.

2. Brief history of the National Bank of Development, Economic and Social (BNDES)

In this section is presented the importance of the National Bank of Development, Economic and Social (BNDES). The Bank, founded in 1952, has played an important role for investment in the infrastructure at Brazil, one of the main financial instruments to operationalization of economic development plans of the country¹. In the short term, the Bank exercises one countercyclical role, in order to the expansion of resources that finance productive investments; their effects on the expansion of employment, income and tax revenues. In the long run, the BNDES has the role of increasing the aggregate supply above the demand of the economy, creating conditions for sustained economic growth.

From the Plano de Metas (1957-1961), even as the Brazilian Development Bank (BNDE), Lessa highlighted the key role of the institution "This investment bank, passage point practically mandatory of the government programs, that forecast also as better compatibility of programs and decisions made sectorally, in order to manipulate the mass of powers according to economic criteria higher than those achievable in isolated units. Well filled, BNDE so declared, the function analysis center of government programs, constituting for more this reason, the basic part of the philosophy of Plano de Metas." (LESSA, 1982, p. 105).

The BNDES exercised, and plays an important role in total loans to productive sectors linked to agriculture, industry, trade and infrastructure in Brazil with the development of efficient techniques in the elaboration and in the studies of the projects to expand the availability of financial resources for productive sectors.

¹ Rego and Marques highlight the importance of BNDES for Brazil's infrastructure: "the creation of BNDE in 1952, financed through of one additional on income tax, was instrumental in the financing of infrastructure projects in transport, energy and then implementation of industrial projects."(REGO, MARQUES, 2001, p. 82).

With the economic liberalization of the 1990s, instead of fostering productive investments, he began to play a leading role in other functions. In that decade, the BNDES was the managing agency of the privatization process at the federal level, beyond play the role of supervisor of the process, especially in the National Privatization Program (PND) 1990, it was designated as the manager of the National Privatization Fund (FND), with the main duties associated with licitation, contracting, coordination and supervision of the sale of public enterprises to private capital. Already in the 2000s, the international² economy began to show accelerated growth of the production, trade and capital flows. In this context, began to finance public projects and private investment from the Real Plan³.

From the consolidation of macroeconomic fundamentals, and with the resumption of the state as the main inducer and regulator of economic growth and a new cycle of investments in infrastructure, BNDES again had a prominent role with the expansion of its supply of credit to projects in infrastructure and productive investments⁴.

3. The role of BNDES financing in Brazilian economic policy in the international economic crisis in 2009

This section shows the countercyclical role of BNDES in the economic crisis of 2008-2009. For this reason, in subsection 2.1. We conducted a brief history of the process and theoretical aspects of the international economic crisis of 2009. Following is shown the importance of funding public banks in the crisis in the section 2.2 .Finally, we present the role of BNDES in an international comparison.

² The framework for expansion of the world economy, with a growth of 5.0% pa between 2002 and 2007, contributed to a significant reduction in external vulnerability of the Brazilian economy in the period, supported by macroeconomic policy framework or the tripod: a floating exchange rate, fiscal responsibility and inflation targeting. This set of measures became the economy more modern in possible periods of adverse shocks that have become amenable to correction by means of the economic policy instruments.

³ From 1994 we started to use a cambial anchor as an instrument of the stabilizing policy prices, since the volatility / appreciation arising from this strategy resulted in reduced exports and increased imports. (Rego and Marques, 2001, p. 215). With macroeconomic stability achieved since the adoption of the Real Plan in 1993/94 - based on the exchange rate peg, and continued stabilization, through the adoption of inflation targeting system, from 1999, despite lower growth to cause the country - with average growth of 2.5% between 1994 and 2009. Despite the theoretical possibility of the long-term financing to represent an increase in external demand in Brazil, this topic is not covered in this article.

⁴ According to an article on the problems and challenges of the Financing for Latin American countries, the Economic Commission for Latin America and the Caribbean (ECLAC): "The opening of markets for infrastructure services and the sale of state enterprises allowed the entry of foreign carriers in many cases of new production techniques, technologies and forms of business organization, which proved decisive for the modernization of the infrastructure and services produced locally. Incidentally, this modernization is crucial for higher profits systemic competitiveness and attracts new investment flows to other productive sectors." (ROZAS, 2010, p. 60).

3.1. A brief historical and theoretical aspects of the international economic crisis of 2008-2009

The international economic crisis, which originated in the credit markets high-risk, called as subprime at U.S. That erupted from mid-2007; it acquired such proportions that went from a credit crunch for a classic crisis of confidence in financial markets. With the growing interconnection between international finance and between these and the productive sectors the crisis has spread extensively, affecting the performance of the leading indicators of activity in the countries.

Uncertainties related to the balance sheets of large U.S. banks, especially on the state of its assets, led to a freezing of interbank markets. With the presence of uncertainty, international investors preferred to retain its cash resources, or assets considered safe and liquid, the role played by North American treasuries. The mutual distrust between banks and for those with businesses and physical people has led to a situation of liquidity preference. In this sense, Keynes defines the liquidity preference of economic agents as “(...) is given by schedule of the amounts of his resources, valued in terms of money or of wage-units”, which he will wish to retain in the form of money in different sets of circumstances (...)”. (Keynes, 1936, p. 149).

With the worsening of the crisis, financial institutions have raised their lending criteria and spreads⁵ abruptly, with greater restriction of the supply of foreign exchange, with a consequent pooling of credit in international markets, as well as higher costs of funding worldwide.

To reverse this process and reactivate the international financial system, the monetary authorities of the major developed countries have used massive injections of liquidity into the markets, mainly through loans, including nationalization, especially in Europe, the credit portfolios and financial operations of financial institutions that held the claims to be settled without prospects. There was also a reduction and even extinction of guarantees imposed on financial institutions by the monetary authorities, and they assumed the responsibility of lender of last resort.

In this context, the post-Keynesian approach Hyman Minsky⁶ addressed the issue of financial fragility of capitalism, through the systematization of a theoretical framework that encompassed mainly the recognition of the importance of training agents' expectations in the credit system and investment decisions.

Under this approach, expectations of the agents are associated with uncertainties that guide the present and future profile of the profitability and risk of the project, recognizing the impact on firms' balance sheets of investment decisions.

⁵ The broad concept of Spread is the difference between the rate of application for financing operations and the rate of lending by financial institutions.

⁶ American economist, exponent of the post-Keynesian tradition that addressed, among other issues, the financial instability hypothesis of capitalism.

This process has led to a fall in asset prices. The collapse of asset prices and consequently the decline of the investment resulted in a deflationary process with serious consequences for the real sectors of the international economy.

According to Minsky, the financial fragility is the behavior of agents due to behavior unstable and volatile of the financial market personified by interest rates and resource flows. The financial weakness of capital structures as the ratio of debt service and net income required to service of the same debt. In case there is no sufficient revenue to meet the obligations, we resort to refinancing, and in case of difficulties to roll the debt, the economic agent can resort to debt settlement assets as a source of internal resources.

In this sense, the concept of financial fragility has interdependency with the capital structure of companies, and especially with the investment strategy and management of this structure. This, in addition to condition new investments, which can generate future obligations, due to the uncertainties and volatility in financial markets, can overcome the ability to generate cash. Thus, the degree of financial fragility is not only important for the composition of the investment portfolio of economic units, but mainly by the ability to generate cash from companies.

Thus, in periods of prosperity in the economic cycle, demand for additional funding is increasing and the final decision is taken by financing agents, i.e., private financial institutions. This decision is based on expectations of return on investment. Therefore, this cyclical trend and almost natural of the capitalist economies is characterized by recurrent periods of financial fragility that reinforce the unstable character of the economy.

The economic crisis of 2008-2009 resulted in serious effects, as the credit crunch on an international scale, the fall in gross domestic product (GDP) of developed economies, and the sharp drop in international trade, which fell from USD 27, 1 trillion in 2007 to USD 24 trillion in 2008, according to data from the World Trade Organization (WTO).

The international financial crisis and the volatility in global markets highlight the importance and role of countercyclical public banks, as opposed to the volatility and uncertainties present in the private market. They have a vital role to increase the supply of credit, against a backdrop of restriction and increased cost of borrowing, exercising a function to mitigate the recessionary effects.

The bailouts to private financial systems, implemented by the financial authorities of the countries have minimized the effects of the liquidity crisis, which prevented a more gravity about their economic activity indicators, but did not prevent the crisis of confidence in the interbank market to establish itself and the availability of credit on an international scale.

Thus, the next section presents the role of public banks, in particular, the importance of BNDES for financing the Brazilian economy, in a context of international financial crisis.

3.2. The role of the funding of public banks in the crisis: the importance of BNDES for the Brazilian economy

According to official data from the Central Bank in Brazil, public banks exceed 30% of total loans, which denotes a relevant participation in international terms. However, especially in times of crisis, public banks increased their loans and started to reduce bank spreads, with the goal of reducing the cost of financing for businesses and consumers.

The federal government conducts systematic contributions of the Treasury to BNDES to avoid the shortage of financial resources, which may cause the postponement or even cancellation of investment projects and adversely affect the level of production of the country. With the availability of additional financial assistance, the development Bank increases its disbursements of funds to the productive sector and infrastructure.

The total BNDES disbursements to the productive sectors have expanded significantly, from an average of USD 36.6 billion between 2001-2005 to USD 138.9 billion in 2011 (Table 1). For this year, with regard to the sectoral distribution of these total disbursements, 61% were for trade and services, 29% for the manufacturing sector, 7% for agriculture and 3% to mining and quarrying. According to the IBGE, the Gross Fixed Capital Formation (GFCF), which includes investments in machinery and equipment and construction, recorded an average annual growth of 13% pa in 2000-2009, with an average of USD 351.7 billion in the period. Despite the effects of the international economic crisis, and with the contribution of BNDES, the GFCF surpassed USD 500 billion from 2009.

**Table 1. Brazil: total disbursements by sector of the BNDES
(BRL million, current prices)**

Sector	2001-2005 (Average)	2006	2007	2008	2009	2010	2011
Agricultural	4.570,6	3.422,6	4.997,8	5.594,5	6.855,7	10.126,3	9.759,0
Extractive Industry	276,8	1.457,9	1.050,5	3.310,7	3.219,3	1.513,6	3.579,0
Transformation Industry	16.874,0	25.663,0	25.395,4	35.710,3	60.302,2	77.255,2	40.270,4
Commerce/ Services	14.862,0	20.774,5	33.448,0	46.262,5	65.979,1	79.527,8	85.265,0
Total	36.583,4	51.318,0	64.891,7	90.878,0	136.356,3	168.422,9	138.873,4

Source: Own elaboration with data from BNDES.

3.3. The BNDES in an international comparison

With regard to international comparison, BNDES is a major development banks in the world. In this context, the institution has an important role in the financing of Brazilian growth and long-term financing of projects in partnership with private institutions⁷. By the criteria of total assets, the BNDES, with a total of USD 222 billion is exceeded only by IBRD, with USD 275 billion and the development bank of China (China DB), with USD 546 billion. The Brazilian bank stands out with the highest net income, to USD 3.8 billion. With regard to disbursements⁸ directed to the banks in order to finance production and infrastructure, BNDES with USD 79 billion is exceeded only by China Development Bank - DB China with USD 167.2 billion (Table 2).

⁷ As an example, the BNDES has signed an agreement with Bradesco S/A in May 2012, with a credit line of BRL 200 million for financing exports from Brazil to countries in Africa and Latin America.

⁸ No was calculated the relation disbursements / GDP for the other development banks due to these other banks to grant credit lines to different countries, that become impossible to make the calculation of proportion with the products of each country.

Table 2. International comparison: main indicators of the largest development banks in the world (USD billion)

	BNDES	BID	IBRD	CAF	China DB
Total Assets	222,050	84,006	275,420	15,887	545,886
Net Worth	15,867	20,674	40,037	5,287	49,786
Net Profit	3,868	794	3,114	235	2,971
Loan Portfolio	162,917	58,049	105,698	11,687	414,086
Capitalization	7,1%	24,6%	14,5%	31,9%	9,1%
Returns s/ assets	2,3%	1,0%	2,4%	2,4%	0,6%
Return s/ PL	29,0%	4,0%	8,0%	4,7%	6,0%
Volume of Disbursements	78,910	11,424	18,564	4,584	167,244
Disbursements (% GDP, 2009)	5,0%	-	-	-	3,0%
Founded in:	1952	1959	1945	1968	1994

Source: extracted from presentation to Support Infrastructure BNDES (2010, p. 7), the Secretariat of Strategic Affairs of the Presidency of the Federative Republic of Brazil.

Nevertheless, compared with disbursements relative to countries' GDP, BNDES becomes the first place, with about 5.0% of the GDP in 2009, surpassed the Chinese development bank, with 3.0% of GDP Chinese 2009. This indicator denotes that Brazil directs more resources to production and infrastructure than China. With this, the BNDES is configured with one of the largest development banks in the world and domestic importance, and its stake in Brazilian GFCF grew by 8.4% in 2006 to 18.6% in 2009.

The role of the Brazilian development bank came to represent one (a) increase of the investment rate of the economy, with major investments in capacity expansion, (b) expansion of infrastructure, and the BNDES has great importance in the financing of the project called Program Acceleration of Growth (PAC), (c) countercyclical action in order to sustain the expansion of credit and (d) contribution to export growth, employment growth, productivity and income.

Despite the financial resources of the BNDES represent on average 20% of Brazilian FBKF between 2000-2010, these resources have contributed to the expansion of investment in GFCF, and as a

proportion of GDP in Brazil, according to IBGE data reached a annual average of 17.0% between 2000-2010, and in the remaining of the BRIC⁹ countries, are rate was, on average, twice.

The BNDES has played its countercyclical and, in sense Keynesian, spurred the animal spirits of entrepreneurs in Brazil in the 2000s. It was found that disbursements of funds from the Bank to the productive sectors and infrastructure, which increased on average by 18% pa between 2000-2010, drove the increase in the rate of investment to GDP ratio in the country, 16.5% in 2000 to 19.0% in 2010.

Thus, the importance of BNDES to finance productive investments in Brazil is much larger than the volume of funds in the budget of the Bank, including be a source of credit in local currencies, with lower interest rates.

The Bank is an important state instrument, as regards the activity of coordination and financing of works and projects in infrastructure, and contributes to the new economic growth cycle started in 2000¹⁰.

4. An analysis of the costs and benefits of BNDES for the Brazilian economy in 2000

In the late 2000s it was observed, due to the need to increase funding contributions from public banks, a significant increase in transfers of funds or National Treasury to BNDES totaling £ 180 billion by 2010. In support of this process, a study was conducted by BNDES¹¹, which concluded that the loan granted by the Treasury to the Bank generates positive impacts on public accounts, primarily through dividend payments made by the bank to the Treasury and a subsequent increase in tax collection tax, due to increased demand created by the Bank's disbursements.

The main objective of the study was dimensionate size of the benefit from Treasury's loan. But we must also remember that the operation has other significant social and economic effects. The funds allowed the BNDES strengthen their ability to extend credit at a time of acute international crisis, which resulted in continuity in the provision of resources that enabled countercyclical investments, which helped to maintain a level of jobs, income and consumption in the country.

⁹ According to the IMF, the GFCF grew in China, India and Russia on average 10.5% pa 7.7% pa and 6.6% pa, respectively.

¹⁰ In December 2010, the Ministry of Finance of Brazil announced a package to stimulate long-term credit, which included the (1) tax reduction on capital markets, (2) financing of infrastructure, is the exemption of Income Tax incident on debentures issued by Special Purpose Entities (SPE) for projects in the sector, (3) issuance of debentures to non-residents with lower taxes, (4) direction of three percentage points of compulsory deposits, the Central Bank of Brazil on time deposits to create a fund to increase liquidity in the secondary market for corporate bonds, (5) regulation by the Securities Commission (CVM), the public offering of calls financial bills, which are instruments in banks' funding deadlines longer, (6) changes in the tax treatment of credit private negotiations launched as losses by financial institutions - are delayed PIT and CSLL (40%), (7) changes in the IOF levied on foreign exchange transactions of funds equity investments (FIP's) and mutual funds investing in emerging companies (FMIEE) and (8) to permit accounting for securitized receivables in the framework of savings deposits, which is 65%.

¹¹ The presentation "Benefits of Loans Treasury to BNDES" presented in 19/08/2010 demonstrates the main conclusions of the BNDES on the subject.

The cited work indicates that, given the scenario of convergence Selic, defined by the Central Bank of Brazil at 10.75% pa and the Interest Rate (TJLP)¹² at 6% pa, both on December 2010, the Bank had a profit at the end of the Treasury loan of BRL 37.1 billion at the end of the loan. Since the Treasury is the majority shareholder of BNDES, the profits return to the company, in order to pay dividends to the Union. Another return appointed by study indicates that tax collections Union should grow by more than BRL 40 billion, depending on increase in financing arranged by BNDES.

Moreover, as Gerardo (2010), analysis of the fiscal impact of BRL 180 billion, loaned by the Union to the BNDES, shall be calculated based on the difference of rates between, on the one hand, of the average cost of federal debt, on the other, the remuneration of the loan agreed, added to the gross earnings of the bank with the proceeds of the transaction, plus the tax impact arising from outstanding loans by BNDES under the Investment Support Program (ISP). Schematically, the fiscal impact for the period (t) would be:

$$IF_{BNDES(t)} = SD_{BNDES(t)} * (i_{TN(t)} - i_{BNDES(t)} - i_{spread(t)}) + SE_{BNDES-PSI(t)} * (i_{TJLP(t)} - i_{PSI(t)})$$

$IF_{BNDES(t)}$: fiscal impact in t year of the loan granted by the Treasury to BNDES;

$SD_{BNDES(t)}$: value of the outstanding balance of the loan in year t;

$i_{TN(t)}$: average cost of federal debt in year t;

$i_{BNDES(t)}$: average interest rate paid by the Treasury to BNDES in year t;

$i_{SPREAD(t)}$: average spread charged by BNDES disbursements made in year t;

$SE_{BNDES-PSI(t)}$: average balance of loans granted under the PSI;

$i_{PSI(t)}$: average interest rate charged by BNDES disbursements under the PSI in year t;

$i_{TJLP(t)}$: rate of long-term interest in year t.

Also according to this author, the loans granted by the Treasury to cause a negative effect on public accounts, which creates the need for increases in government primary surpluses. There is need to increase the primary surplus level because the rates which the loans were granted to the BNDES, in general, are lower than the average cost of debt¹³. With these parameters and the value of the loan as a

¹² The TJLP was established by MP No 684 of 31 October 1994, being defined as the basic cost of financing granted by BNDES. Subsequent changes occurred through of the MP in the 1790, of December 29, 1998, and MP in the 1921, to September 30, 1999, converted into Law 10183 of February 12, 2001. The TJLP has duration of a calendar quarter, and is calculated from the following parameters: i) inflation target calculated pro rata for the 12 months following the first month of application rate, even based on the annual targets set by the Board National Monetary Council (CMN), and ii) risk premium. In June 2009, the CMN approved the reduction of 6% pa for TJLP.

¹³ According to the Monthly Reports of the Public Debt National Treasury.

proportion of GDP, the primary surplus required additional calculated, would be approximately 0.25% of GDP in 2010, without considering other variables and their fiscal impacts.

According to the same source, two other effects on the primary outcome generated by the loans are broken down as follows. First, the increase in revenue derived from primary dividends obtained by the financial institution because the spread charged by BNDES is reflected in higher profits and that will, to some extent, be transferred to the National Treasury. Second, raise primary expenditure as loans under the PSI, with interest rates between 4.5% and 5.5% will be equalized by the National Treasury, up to the limit of BRL 134 billion, as set forth in Provisional no. 501/2010.

These transactions explain the limitations of long-term financing in the country. The main Brazilian development bank has no way to raise funds for its operations, other than through the issuance of Treasury securities. Reinforces the importance and limits of compulsory saving mechanisms - funding of public banks, especially BNDES, in the face of a growing demand for resources in a cycle of sustained investment. Fourth, since 2008, BNDES has been looking to broaden their sources of funding through external funding. The operation resulted in an interest of 5.634% per annum, which represents premium on U.S. Treasury 1.875% pa, the lowest rate obtained by the bank issuing international bonds.

The critical role of the BNDES is also made by Bacha (2007, p. 266-268), which states that it is only a matter of time before the Brazilian public institutions become irrelevant, occurred in Mexico and Korea¹⁴, compared to increased importance of BNDES. In this sense, public banks have a strong presence only in countries that are in the early stages of development. Bacha proposes the incorporation of regional development banks, which are traditional victims of political use, to the Brazilian Development Bank (BNDES) and the opening of the share capital of Caixa Economica Federal (CEF) to improve its corporate governance or alternatively its incorporation into the BB; the improvement of corporate governance of the Bank of Brazil (BB) and the complete separation of functions of a commercial bank and Treasury agent; already BNDES lose access to the funds of compulsory savings and broaden its partnership with private banks in implementing the resources.

Another criticism can be seen in Almeida (2011). According to the authors, there is a decision to renew and expand the Investment Support Program (PSI)¹⁵, that has the support of the entire business

¹⁴ Contrary to claims of Bacha, public banks in Korea are far from irrelevant. Nevertheless, the profound transformation of the Korean financial system after the crisis of 1997, which included the privatization of public commercial banks, specialized banks were kept and assumed new roles. As shown Cintra (2007), this was the case of Korea Development Bank (KDB), originally created to fund strategic industrial sectors, but which currently operates as a commercial bank, of investment and international. Also, in addition to restructuring activities "defensive" debt of non-financial corporate sector, KDB informally acts as lender of last resort to the banking system, given that the Bank of Korea, where he adopted the inflation targeting regime, no longer perform that function. Also according to Cintra, specialized public banks increased their share in the Korean banking system loans from 36.75% in 2002 to 39.64% in 2006.

¹⁵ Program established by BNDES in July 2009 as part of government measures to mitigate the effects of the international financial crisis on the Brazilian economy has helped to stimulate the production, acquisition and export of capital goods and technological innovation through the BNDES PSI subprograms: Real Capital, Innovation and Exports.

class and it was a government decision (BNDES is only the agent of the program). As you know, the Treasury incurs two costs to become the PSI as viable. First, there is the financial cost represented by the cost that the Treasury pays to borrow (Selic) and pass the application to the BNDES and / or its financial agents (TJLP). He explains that when the National Treasury transfers to the BNDES, in the lending operations as already known, the BNDES stays with the title that earns SELIC and owe a debt to the Treasury corrected by TJLP. So while not lend these funds, BNDES stays with one rate differential and thus increases your profit artificially.

In contrast to the criticisms outlined above, the facts point to the positive aspects of the operation of Treasury loans to BNDES. The economic context must be analyzed from the point of view dynamic and not static, but also in an economic analysis than merely accounting.

BNDES is an important institution for Brazil and for the financing of productive activity. Thus, it is expected that most of the bank's profit arises from the activity in order to it is granting long-term credit to enterprises in productive activity rather than investments in bonds and securities, particularly investments in government securities as it seems be the case in the past two years.

According to the Ministry of Finance of Brazil, the balance of loans from the Treasury for public sector banks increased from BRL 9.6 billion in 2006 to BRL 310 billion in early 2011. This total, BNDES has a level of own funds between BRL 60 billion and BRL 65 billion per year. BNDES also need to capture the market by mainly instruments like debentures, can capture the international market and also have to stand on their own legs. But let's not neglect the infrastructure. So, BNDES has a focus on infrastructure and the private sector can devote to long-term industrial financing, exports, construction and production and consumption of manufactured goods.

The first point to note is that these are long-term loans, more than thirty years, as infrastructure projects. It is very unlikely that the current difference between Selic and TJLP prevail in this long period. Longer term, the outlook is that the two interest rates are close, driven by falling real interest rates in the country - the Central Bank of Brazil reduced the actual rate of 11% in 2002 to a rate below 2% in 2012.

Secondly, we need to analyze the role of public banks in broad context. These exist as promotion activity, financing investments in infrastructure, industry and agriculture, something that private banks are not always willing to do so. Another important aspect is that in an increasingly globalized world, our companies compete with others who have financing conditions incomparably more favorable.

Credit is one of the basic functions for economic growth, although it is worth noting that, similarly, trust is also a determining factor. On the first point, credit, public banks can help. The confidence of economic agents is more subjective, it depends on the expectations, of convincing everyone, consumers and entrepreneurs so the economy's future performance. The South Korean companies and Chinese, for example, rely on public funding to virtually zero cost and have their activities supported with

subsidies and incentives because they are seen as strategy for development and international integration of these countries.

The point is that the high interest rates in the domestic Brazilian inhibit productive investments, but this scenario is in the process of change, considering the fall in real interest rates in the country. The private banks themselves tend not to be interested in credit operations, because it is much more economically viable the financing public debt.

But the public accounts are also favored with the results of the operations of public banks. First because there is a multiplier effect of the total additional investments of USD 180 billion available to the BNDES, there is a potential of at least USD 350 billion made available for economic activity, given the multiplier effect of investments, which causes increased employment, income and tax revenues.

The second aspect is related to the return, in the form of dividends, from to BNDES to the National Treasury. Despite criticism, especially with regard to the alleged subsidies Treasury to BNDES, which cause effects such as (i) imbalance of public accounts and (ii) occupation of public bank instead of private banks in Brazil, it is worth noting that the Treasury as the largest shareholder of the BNDES, receives dividends in the form of a positive counterpart from the Bank to the public accounts. The total payments of the BNDES to the Treasury, in the form of dividends totaled BRL 38.8 billion, accumulated in the period 2001 to 2010, in current basis.

A third point, difficult to measure, is the cost represented by not realization of investments, if no resources are made available for funding projects. The BNDES has nearly doubled its participation in the financing of investments in infrastructure and industry in the last four years, from 21% in 2005 to almost 40% of the total in 2009.

Without the support of public banks many projects would not be realized, especially in infrastructure, representing a growth restriction of activity, employment, income and tax revenue. There is no allowance in Treasury operations with BNDES, because the interest charged, although lower than the average of the Brazilian financial of the markets are still far above other countries. Thus, there isn't an addition that encumbers the public accounts, whereas the revenue generated for the government outweighs the cost implicit in the transaction between the Treasury and BNDES.

The BNDES operates with public funds of funds, for example, the Worker Support Fund - FAT, which are important sources of funding for economic development¹⁶ programs. Moreover, the fact that the cumulative value of companies traded on the Stock Exchange has grown from 30 to 90% in the period 2000-2010 indicates that the Bank's actions did not inhibit, quite the contrary, stimulated the development of the Brazilian capital market.

The international crisis appreciated the crucial role played by public banks in Brazil, which represented an important instrument of countercyclical macroeconomic policy. It was a crucial counterpoint to the lack of credit financing and therefore one of the main factors that differentiated the Brazilian economy of other developing countries that could not rely on equivalent instruments.

The Bank performance does not distort market conditions, but on the contrary, stimulates their development in that also plays a role formatter projects financing by private banks, and often supply them with resources to be transferred to the plaintiffs of financing.

The acting countercyclical of the National States requires investment in infrastructure, and in Brazil, there is the important role of BNDES, enabling economic growth, with repercussions on the industrial activity and infrastructure as a means of transport, sanitation, electricity networks and telecommunications.

¹⁶ Until August 2012, the balance of FAT funds in the BNDES was USD 155.66 billion, broken down into USD 134.89 billion in ordinary appeals under Article 239 of the Federal Constitution and USD 20.88 billion of deposits special.

5. Alternative funding for productive investments and infrastructure

The 2000s were marked by the expansion of financial flows and international capital, which grew an average of two and a half times faster than the overall product¹⁷. According to the World Economic Forum (2010), the development of domestic infrastructure is a priority of national states, and these began to fund this development, with the transfer of public resources and with the important contribution of the private sector in order to meet demand for global fixed investments, which always exceeds the capacity of governments.

According to the World Economic Forum (WEF), the financial and capital markets play an important role in providing resources for productive investments through ownership or acquisition of securities of long-term debt or shares of private equity funds. According to estimates of the Forum itself, the total assets of pension funds is more than USD 25 trillion.

For works and infrastructure projects and technologies involving high risks, grow the need for safeguards and guarantees from the public sector to the private sector, as regards in the responsibility to financing, the prevision of the rentability and legal certainty for the viability of investments. In this sense, an important source of financing for fixed investment are SWFs, according to estimates of the WEF, there may be around USD 3.5 trillion, and the supply of these resources contributes to financing mainly country markets developing, and particularly the BRIC¹⁸ countries.

Private funding is also a viable form of productive investment in order to promoting economic growth of the countries. However, for countries to attract these funds are necessary legal and institutional frameworks compatible with those found in developed countries, to protect contracts and agreements. Thus, the conclusions and perspectives are highlighted by the WEF:

- a) Costs of the private securities debt: the costs significantly impact in funding for investments. But the capital market is an important source of financing of productive investments, with characteristic long-term;
- b) Institutional funds and specialized: focus operations with the best return and risk. Investors attach a high importance to managers of portfolio and asset management experience in investment projects;

¹⁷ In Brazil, there was a similar process of falling interest rates from 20.0% in 2000 to 8.8% at the end of 2009. This is a result of the expansion of the Brazilian economy, accompanied by falling international interest, besides the expansion of global trade flows. Falling interest rates meant a stimulus for productive investment. With this stimulus, there is increased demand, which creates more jobs, income and consumption.

¹⁸ According to UNCTAD, in contrast, there will be more investment opportunities in emerging economies that have political regimes, legal and economic increasingly stable. This effect send / receive can be mitigated by the desire to offset budget deficits by selling infrastructure assets, which would keep the interest in established markets.

- c) Source of financing for retail investors: the WEF assigns the greatest potential for expansion of these funds, contributing to the massification of finance for productive investment.
- d) Government sources: investment in fixed infrastructure and are considered important countercyclical instruments and are implemented through public-private partnerships or PPPs, as well as the promotion of public banks;
- e) Budgetary resources: developed countries redirect budgetary resources for infrastructure projects in developing countries as a way of implementing policy and foreign aid, to promote good international relations.

In the 2000s, there was an increase in private participation in these investments. However, for example, the estimates presented by WEF, indicate that global private investment in infrastructure amounted to about USD 1 trillion, with a volume less than that required to meet the annual demand overall, approaching USD 3 trillion. Considering the sources of available resources and rising demand for projects, it is possible to increase investments in infrastructure, with public and private participation.

In this case, that private financing of infrastructure is a viable option, it is necessary, private investors systematically assess the soundness and sustainability of different funding opportunities throughout the cycle of investment in fixed capital.

Also according to the WEF, for the viability of new productive investments, with the contribution public and private, are some necessary conditions:

- a) Creation of supportive political, legal and economic conducive to investment;
- b) Establish ongoing programs of investment;
- c) Establishment of contractual framework and minute regulatory to resolve any problems efficiently and fairly;
- d) Creating forums for stakeholders to share experiences;
- e) Public regulation in all phases of the investment.

In order to eliminate the serious and persistent perception gap between the public and private sector with regard to the financing of infrastructure, the starting point of the report is to propose a common definition that is relevant from the point of view of private financing. From this perspective, the key elements for the characterization of infrastructure opportunities are: capital intensity, existence of tangible assets to operate and maintain, and the expectation of generating revenue in the long term. Are also important from the point of view of financing, the distinctions concerning the type of project or company, the contractual aspect, the cycle of investment in physical assets and the prospect of expanding the consumer market.

Such characterizations meet more precisely the main concerns of private financiers in relation to obtaining the expected returns and the likelihood of repayment of the loan. With regard to the types of projects, from social infrastructure involve the construction and operation of infrastructure assets to support the delivery of public services.

6. Concluding Remarks

The paper covered the countercyclical role of BNDES in the economic crisis of 2008-2009. It has been argued, from a Keynesian approach, the countercyclical role in the expansion of the Bank's financial resources for productive investment, which reduced the effect of the international economic crisis and boosted job growth, income and government revenues in Brazil. In addition, BNDES has the role of increasing the aggregate supply over demand, which contributes to the long-term economic growth.

The article made a counterpoint to criticism, especially with regard to the alleged subsidies Treasury to BNDES - pointing to the role of public banks cause macroeconomic imbalances, with rising inflation, imbalances of public accounts, caused by government subsidies and a disincentive to private funding. Unlike this approach, we found that the BNDES helped increase productive investment in recent years. Moreover, the fiscal cost of the BNDES performance should be analyzed in perspective with respect to their benefits generated, i.e., the government has expanded its revenue by increasing tax revenues from increased taxes on aggregate demand, but also the Treasury receives plus dividends from the Bank, being the majority shareholder of the Bank.

Thus, in section 1 was rescued a brief history of the bank's performance in the Brazilian industrialization, highlighting its role in the financing of import substitution and creation of mechanisms to promote production and export. In section 2 was mainly highlighted its countercyclical role in the economic crisis of 2009, which was crucial for the effect of the crisis that was alleviated in the country and, moreover, was made possible more robust growth, in 2010. In the section 3 was presented an analysis on the structure of funding the bank with the National Treasury, the costs created in such transactions and developments in the Brazilian economy. The Section 4 highlighted the importance of capital markets and external financing as alternatives to public funding.

It was found that there was increase in disbursements of funds from the bank to the productive sectors and infrastructure, which spurred the animal spirits of entrepreneurs in Brazil in the 2000s. In the period 2000-2010, the BNDES disbursed for productive investments that increased on average 18% per year, which helped to drive the increase in the rate of investment to GDP ratio in the country 16.5% in 2000 to 19% in 2010. The result was that there was an increase in the average growth rate of GDP of 3.5% per year between 2000-2010, exceeding the rate of 1.5% pa the previous decade and an increase in tax revenues, which grew on average double the GDP in the period.

The above indicators denote the Keynesian multiplier effect with positive impacts in key macroeconomic indicators such as GDP, inflation and employment in Brazil, especially in the second half of the 2000s. Despite criticism that subsidies Treasury to BNDES cause imbalances in public accounts and inhibit the action of the private market, the fact is that the performance of BNDES was instrumental in crisis as a source of domestic government funding at a time of international liquidity constraint.

Moreover, the cost of operation of the bank generated for the Treasury due to the difference in interest rate funding and bank loans is much smaller than the benefits created, as the highest aggregate demand, increased government revenues and increase in dividends paid to the Treasury by BNDES.

In the long term it is necessary to coordinate and integrate the Brazilian public policies in order to combine the potential of public funding with other funding sources, such as encouraging the development of domestic capital markets and attracting foreign capital.

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