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Regulating development banks: a case study of the Brazilian Development Bank (BNDES) (1952-2019)

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Abstract

This paper analyzes the experience of the Brazilian Development Bank [*Banco Nacional de Desenvolvimento Econômico e Social*] (BNDES) from 1952 to 2019 to understand how financial regulatory standards influence development banks and their performance as a tool for the socialization of investment and promotion of full employment. We focus on the period after the adoption of Basel standards by Brazilian authorities (1994), presenting and assessing the current regulatory framework that rules BNDES governance, operations, and risk management practices. Our methodology combines a comprehensive review of regulations, relevant data provided by BNDES and the Central Bank of Brazil and semi-structured interviews with BNDES' staff.

Keywords: Financial Regulation. Development Banks. Basel Accords. Brazilian Development Bank.

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Regulando bancos de desenvolvimento: um estudo de caso do BNDES (1952-2019)

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Resumo

O presente trabalho analisa a experiência do Banco Nacional de Desenvolvimento Econômico e Social (BNDES) no período entre 1952 e 2019 como forma de compreender como a regulação financeira influencia os bancos de desenvolvimento e seu desempenho como um instrumento para a promoção da socialização dos investimentos e do pleno emprego. Concentramos nosso foco no período após a adoção dos Acordos de Basileia pelas autoridades brasileiras – o que ocorreu em 1994 – e apresentamos e avaliamos o arcabouço regulatório atual que rege a governança, as operações e as práticas de gerenciamento de risco do BNDES. A metodologia combina uma extensa revisão das leis e regulações brasileiras, o uso de dados fornecidos pelo BNDES e pelo Banco Central do Brasil e a realização de entrevistas semiestruturadas com os funcionários do banco.

Palavras-chave: Regulação Financeira. Bancos de Desenvolvimento. Acordos de Basileia. Banco Nacional de Desenvolvimento Econômico e Social (BNDES).

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Introduction

From a Minskyian perspective, in modern capitalist societies, investment financing tends to be “ill done” because of uncertainty and speculation. The “invisible hand” of the market is unable to assure that investments will be enough so that the economy would achieve full employment. Moreover, the adoption of financially fragile positions in the process of investment might induce financial instability and crisis that may hamper economic development for purely financial reasons.

Therefore, the government needs to intervene to promote the so-called “socialization of investment” and to contain financial fragility. For Minsky, socialization of investment would include different tools that complement private investment in the origination of new fixed assets, such as dedicated taxes for infrastructure construction, capital budgeting, and development banks. These banks should play two essential roles. The first is to ensure that finance is always available to investment projects along the financial cycle, based on an “entrepreneurial” rationale. The second is to work to supplement private financial institutions to ensure that the market would never be short of finance to invest, playing a counter-cyclical role to promote a level of effective demand that gravitates around full employment (TORRES FILHO; MARTINS, 2022).

However, development banks, as any economic unit, are also subject to a “survival constraint”, redesigned into “financial regulatory constraints”. The government should assure that every bank always meets these constraints, what demands monitoring and supervision, and a set of rules that guarantees every bank does not compromise financial stability. At the same time, regulation should not conflict with the mission of development banks in promoting the socialization of investment (CASTRO, 2018).

This paper aims at analyzing a real-world case to understand how current financial regulatory standards are influencing development banks and their performance as a tool for the socialization of investment and promotion of full employment. We analyze the case of the Brazilian Development Bank

(BNDES)¹ from 1952 to 2019, focusing in the period after the adoption of Basel standards by Brazilian authorities (1994). More specifically, we describe and assess the current regulatory framework that rules BNDES governance, operations, and risk management practices in terms of its impacts on the bank's ability in accomplishing its mission as a development bank.

Our methodology combines a comprehensive review of Brazilian banking legislation and regulation from 1952 to 2019, the presentation of relevant balance sheet and regulatory data from recent years, obtained from BNDES and the Central Bank of Brazil's database *If.Data*, and semi-structured interviews with high-level staff members of BNDES from the Integrity, Control and Risk Management Department (as named at the time). To facilitate further research, we opted to present the relevant regulation – a total of 85 references – in footnotes along the paper as long the regulatory topics were discussed instead of listing them in the references at the end.

The remainder of this paper has four more sections. Section 1 provides a brief history of BNDES regulation over time. Section 2 presents the current regulatory framework, focusing on Basel regulations, operational limits and governance rules. Section 3 discusses the impacts of the Brazilian regulatory framework on BNDES. The final remarks summarize our discussion.

1. A historical account of the Brazilian regulatory framework for banks and BNDES regulation

The Brazilian government created BNDES in 1952 to act as an agent to finance the re-equipment and development of the national economy (Law n.º 1628, June 20th, 1952). Its original mission was to provide long-term funds for heavy industries and infrastructure investment projects. In its early years, BNDES funded investments related to Brazil's structural transition to an urban and industrial society from a rural and an export-oriented commodity economy.

1 BNDES is the acronym of the official name in Portuguese of the Brazilian Development Bank adopted after 1982: Banco Nacional do Desenvolvimento Econômico e Social.

BNDES creation was suggested by the Joint Brazil-United States Economic Development Commission (CMBEU), inspired by the U.S. experience with development financial institutions in the 1930s – the same institutions Minsky had in mind when discussing development banks (TORRES FILHO; MARTINS, 2022). The Brazilian federal government has always been the sole owner of BNDES and the bank has a special relationship with the National Treasury. Most of its resources come from special government funds. In the 1950s and 1960s, an income surtax provided most of the bank's funding. Since 1974, it became the manager of the Social Integration Program (PIS/PASEP), one of the most important government funds in Brazil.² In 1988, the new Constitution created the Worker's Support Fund (FAT), which absorbed PIS contributions with the purpose of funding unemployment benefits and supporting BNDES, which up to nowadays has the right to keep a share of FAT resources.³

Along 70 years, BNDES faced very different regulatory frameworks. In its early years, there was no formal central bank established in Brazil. Banco do Brasil (BB) – a commercial state-owned bank – and the Currency and Credit Superintendence (Sumoc) of the Ministry of Finance (MoF) carried out some of the activities of financial regulation, such as supervision and best practices. But neither BB nor Sumoc regulated BNDES.

The law that created BNDES imposed few restrictions to its operations, such as the prohibition to receive demand deposits,⁴ but, in general, the bank could carry out all banking activities. In the 1950s and 1960, MoF was very active in influencing loans origination and had to approve any change in the bank's by-laws, but not in setting risk management and operational standards. According to the bank statute, its financial department was responsible for operational limits and compliance with the general banking

2 PIS resources come from a tax levied on corporations' sales.

3 Originally, the Constitution directed 40% of FAT to BNDES, but a recent legal change reduced this number to 28% in 2019.

4 Though BNDES cannot take cash deposits from the public, the bank can use cash deposits to transfer resources to its clients. These resources are not a funding source for BNDES.

legislation,⁵ *i.e.*, BNDES relied mostly on self-regulation (BNDES, 1952; 1964).

This scenario changed after 1964. A financial reform imposed the segmentation of the Brazilian financial system following the U.S. model. The reform created two new regulatory institutions, the Central Bank of Brazil (BCB) and the National Monetary Council (CMN) (Law n.º 4595, Dec. 31st, 1964). The law introduced the concept of “national financial system”, which comprises CMN, BCB, BB, BNDES, and all other private and public financial institutions. CMN has jurisdiction over the national financial system and is responsible for regulating the creation and operation of financial institutions and their liquidity and solvency conditions. The Council conceded regulatory and supervisory powers to BCB to accomplish these tasks.

CMN and BCB had the duty to regulate BNDES, and the general regulations on financial institutions became applicable to it. However, in a segmented financial system, regulators tailored rules according to a bank’s set of activities. Norms were very restrictive on what private investment banks, commercial banks, and other financial institutions could and could not do.⁶ BNDES held a special status and did not fit into the segmented categories established in the financial reform. Therefore, those limits and constraints were not restrictive to BNDES: the bank was required to comply with some general standards, such as the rules on external loans (CMN Resolution n.º 96/1967), but there was still a large room for self-regulation.

In the end-1980s, Brazil repealed financial segmentation, allowing financial institutions to become universal banks (CMN Resolution n.º 1524/1988). This decision was the first step in the direction of standardization of banking regulations. In the following years, this process culminated in the adoption of the Basel Capital Accord in 1994 (CMN Resolution n.º 2099/1994). It was implemented for two main reasons. First, the government decided to

5 This means that BNDES can operate in the banking business as any other bank in Brazil given the restrictions imposed by its internal statute and by its charter-law.

6 *E.g.* CMN Resolution n.º 18/1966, which regulates private investment and development banks.

modernize the relationship between the Brazilian and the global financial system. Second, the restructuring of Brazilian external debt, under the Brady Plan, demanded some institutional “improvements”, which comprised the alignment of local banking regulations to international standards.

The structure of the financial system changed fiercely after 1994, induced by financial opening, privatization of public banks owned by subnational governments, bankruptcy and liquidation of important private banks, and the end of high inflation. BNDES needed to adapt to a new environment: the standardization of banking regulations under the aegis of Basel I required it to comply with rules designed to regulate private (internationally active) banks. Later on, the redefinition of rules governing operational limits also aligned the regulation of BNDES and private banks.⁷

Prado and Monteiro Filha (2005) argued that to apply Basel rules to BNDES is inadequate because of the very nature of development banks. They proposed the development of an alternative regulatory framework tailored to the specificities of BNDES, but Brazilian regulators never took this path. Alternatively, they introduced some waivers to deal with BNDES’ singularities when needed.

Castro (2009, p. 165-166) identified six main waivers or modifications after BNDES claims in CMN and BCB regulations:

- (i) The treatment of FAT as capital (CMN Resolution n.º 2837/2001);⁸
- (ii) The provision of a transition period to comply with immobilization limits during the 2000’s (CMN Resolution n.º 3105/2003);⁹

7 One relevant exception is that BNDES, as a government-owned bank, has not been subject to judicial and extrajudicial reorganization, bankruptcy proceedings, and BCB intervention. BNDES’ creditors cannot use against BNDES the usual enforcement actions provided by Brazilian Law, though the Brazilian federal government is liable for BNDES’s obligations in the events of default or insolvency.

8 BNDES claimed that Constitutional FAT have features of hybrid instruments and therefore should be classified as a Tier 1 capital instrument. CMN’s interpretation differed and treated FAT as subordinated debt, becoming eligible as a Tier 2 capital instrument.

9 This transition period has been further extended several times.

- (iii) Special treatment regarding client exposure limits (CMN Resolution n.º 3615/2008; n.º 3963/2011);¹⁰
- (iv) Classification of loans with guarantees from the Brazilian Federal government in the risk-weight factor of 0% after BNDES claim;
- (v) Reduction in the risk-weight factor of the Electricity Emergency Program operations from 100% to 50% (BCB Circular n.º 3216/2003);
- (vi) Change in the calculation of foreign exchange and public sector exposures for the measurement of allowances for doubtful accounts (loans).

Those exemptions were kept under the framework of Basel II, which was much more complex than Basel I as it broadened the scope of risk management to account for credit, market and operational risks, included transparency requirements for the sake of market discipline and allowed for the development of internal models for risk assessment. CMN adopted the Brazilian version of Basel II in 2004 (CMN Resolution n.º 3444/2007; BCB Circular n.º 3360/2007; among others). Those new standards demanded substantial changes in the organization and operational rules of BNDES, especially regarding risk management functions (CASTRO, 2009).

The 2008 international financial crisis inaugurated a new round of regulatory changes that led to Basel III. The third accord did not dismantle Basel II, but made it more rigid regarding risk assessment, transparency, and capital requirements. More specifically, it made it more difficult to classify an instrument as capital and adds countercyclical, conservation, and systemic capital buffers. Basel III also demands a more detailed treatment of derivatives and securitization exposures and introduces unprecedented minimum liquidity and leverage requirements. Those measures were all responses to particular problems identified during the crisis.

10 There was an inclusion of another waiver in 2009 that increased the ceiling of credit limit related to the development bank net assets, for two large state-owned companies: Petrobras – integrated oil company – and Eletrobras – integrated power company, and a privatizes mining company – Vale.

Brazilian authorities adopted Basel III in 2013 (CMN Resolutions n.º 4192/2013; n.º 4193/2013; BCB Circular n.º 3644/2013; among others). Since then, CMN and BCB became more restrictive for waivers and started, progressively, to repeal some of them. For instance, the local version of Basel III is wiping out the resources of FAT from BNDES' capital. It seems that the purpose of Brazilian authorities is to make banking regulation standardized, despite the public or private control of banks, their characteristics, or their missions. In this scenario, a conflict between the purpose of a development bank and regulation may emerge.

2. Regulation of BNDES: a summary of the current rules

The present section summarizes the significant pieces of regulation that set prudential requirements, operational limits, and governance standards to BNDES. It considers the rules that are currently in force but occasionally refers to previous ones as a comparative exercise. It includes a description of regulations, followed by an assessment of indicators or considerations regarding BNDES position with respect to the requirements. This section focuses on core regulations edited only by CMN and BCB plus the new rules on corporate governance of state-owned companies, although different authorities regulate some accessory activities of BNDES.

2.1 Basel standards

2.1.1 Financial system segmentation by systemic importance

Since 2017, the CMN established the segmentation of financial institutions and conglomerates for proportional application of prudential requirements (CMN Resolution n.º 4553/2017), according to their systemic

importance. The classification methodology takes into account the type and size of a financial institution and, in the case of banks, takes also in consideration if they are internationally active. There are five levels, from which we focus on the first two: (i) Level 1 (S1) includes banks¹¹ that have total exposures larger than 10% of the Brazilian gross domestic product (GDP) or relevant international activities (total assets abroad greater than US\$ 10 billion); and (ii) Level 2 (S2) include banks that have total exposures between 1% and 10% of GDP, or other financial institutions that have total exposures larger than 1% of the Brazilian GDP.

Shifts in classifications respect a minimum time lag, which will vary as institutions are ascending or descending in the scale. The CMN also delegates to BCB the discretion to change the classification of an institution according to the occurrence of merger and acquisitions, the ability to attend proportional prudential regulations of origin and destination levels before due dates and the results of supervision. Therefore, Brazilian authorities have the authority to change the classification over time.

According to the classification, institutions will have to attend to different prudential requirements, as we will detail below. The level S1 is representative of systemically important financial institutions (SIFIs) and, therefore, applies more stringent requirements. The degree of regulatory stringency decreases as the level increases.

Since the regulation is in force, BNDES total exposure exceeded the threshold of 10% of Brazilian GDP, but the regulator classified it in S2. This decision might suggest that BNDES received special treatment, but in practice this treatment is not that special: the same classification applies to other private banks, such as Safra, Votorantim and Citibank Brazil, and state-owned, such as Northeast of Brazil and Banrisul. All of them are universal banks that accept cash and demand deposits from the public.

11 Universal banks, commercial banks, investment banks, foreign exchange banks and the federal savings bank. Does not encompass other financial institutions.

2.1.2 Capital requirements

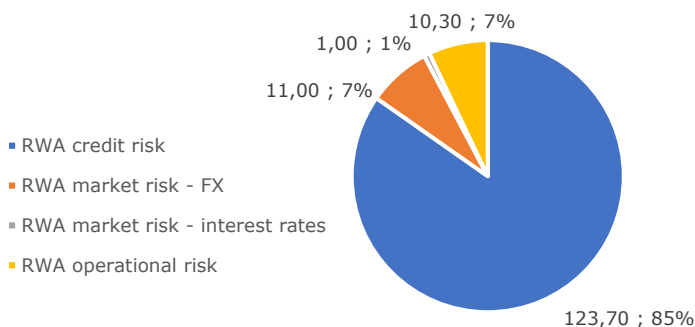
BNDES is currently subject to Basel III capital requirements without any waivers. Historically, CMN and BCB regulations conceded some waivers, such as the treatment of the Workers' Support Fund (FAT) as subordinated debt in the capital basis and the risk-weight factor applicable to loans with guarantees from Brazilian government (CASTRO, 2009, p. 165-166). Basel III provided a full alignment among BNDES, other public banks, and private universal banks in terms of rules, with the repeal of such special treatments conceded to BNDES.

The bank needs to consolidate its financial statements in a prudential conglomerate (CMN Resolution n.º 4195/2013), encompassing BNDES and its two subsidiaries, BNDESPar and Finame. Brazilian regulation allows financial institutions to use internal models to calculate risk-weighted assets but BNDES uses BCB standardized approach to calculate total risk-weighted assets (RWA), taking into account credit, market, and operational risks.¹²

Financial regulation does not differentiate among BNDES and private universal banks, but some lasting features of the bank's balance sheet make some risk-weights ineffective to the former, such as the 20% credit risk-weight factor to short-term securities. In practice, credit is the leading risk component of BNDES risk-weighted assets as shown in **Figure 1**. Market risks and operational risks are residual, representing individually less than 10% of total risk-weighted assets.

12 Respectively, BCB Circular n.º 3644/2013 (credit risk); n.º 3634/2013; n.º 3635/2013; n.º 3636/2013; n.º 3637/2013; n.º 3638/2013; n.º 3639/2013; n.º 3641/2013; n.º 3645/2013 (market risk); n.º 3640/2013 (operational risk). BNDES considered to develop internal models and ran preliminary models and projections. Castro (2009, p. 222) shows that the results of preliminary models for credit risk indicated a capital requirement that is around 4 times smaller than the one calculated by the BCB standardized approach. However, BNDES' internal model was never submitted for the validation of BCB. The general norm in Brazil is the use of the standardized approach, even for large private banks. With Basel III, the incentives for the adoption of internal models changed substantially: capital-saving benefits are tiny in the new framework.

Figure 1 – BNDES risk-weighted assets by category (USD billion; % in total), March 2019



Source: IF.Data, 2019; BCB, 2019.

Regarding capital requirements, since January 2019, the BCB standardized approach fully aligns Brazilian requirements with international Basel III standards, as specified below:

- Common Equity Tier 1 (CET1) capital: 4.5% of RWA plus 2.5% of RWA (conservation buffer) plus 0.0-2.5% of RWA (countercyclical buffer) plus 2.0% of RWA (buffer for national systemically important financial institutions - SIFI);
- Tier 1 capital: 6.0% of RWA;
- Total capital: 8.0% of RWA.

BNDES is not subject to the SIFI buffer as an S2 financial institution. As of July 2019, the countercyclical buffer is set at zero in Brazil. Therefore, capital requirements applicable to BNDES are 7.0% of RWA in CET1, 6.0% of RWA in Tier 1 capital and 8.0% of RWA in total capital. **Figure 2** and **Figure 3** show BNDES capital levels, which largely exceeds the minimum requirements.

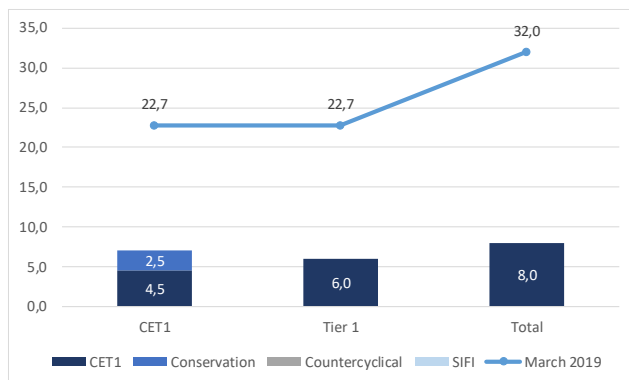
Figure 2 – BNDES capital vs. minimum total capital requirement, 2000-2019



Source: IF.Data, 2019; BCB, 2019.

Subtitle: * March, 2019.

Figure 3 – BNDES capital (line) vs. minimum capital requirements (bars), March 2019



Source: IF.Data, 2019; BCB, 2019.

The composition of BNDES capital is a sensitive topic after the adoption of Basel III. The new accord aimed at improving banks' capital quality and is much more rigid in the classification of obligations as capital, imposing stringent requirements on the features of banks' securities and obligations to qualify. Since 2001, the obligations to the constitutional FAT and other regional funds¹³ were partly recognized as Tier 2 capital (CMN Resolution n.º 2837/2001). Only BNDES and other federal public banks use these specific funding instruments. In 2018, CMN decided to eliminate the special treatment to these resources and established a gradual phase-out of these funds from BNDES capital basis, from 2019 to 2029 (CMN Resolution n.º 4679/2018).

As of December 2018, Tier 2 FAT amounted BRL 52.7 million in BNDES capital, or a 31.6% share. Though currently BNDES capital largely exceeds the regulatory minimum, this adjustment will shrink the bank's capital basis in the future. If we disregard the transitional period and calculate a final impact on BNDES capital, the bank's Basel index would fall from 32.0% to 21.9% in December 2018, i.e., almost ten percentage points. Nevertheless, one should recognize that BNDES has the Brazilian Treasury as the sole owner and guarantor of its liabilities. Therefore, the Treasury could alleviate any extra capital needs to be determined by regulators through direct capitalization as it did in the past.¹⁴ Only political pressures can operate to limit this type of transaction.

2.1.3 Liquidity coverage and net stable funding ratios

Basel III introduce minimum liquidity requirements as a regulatory novelty, acknowledging that solvency is not the only issue related to systemic risk. The new accord introduced two liquidity measures and minimum thresholds: the liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR). The former is a measure of a bank's short-term liquidity cushion,

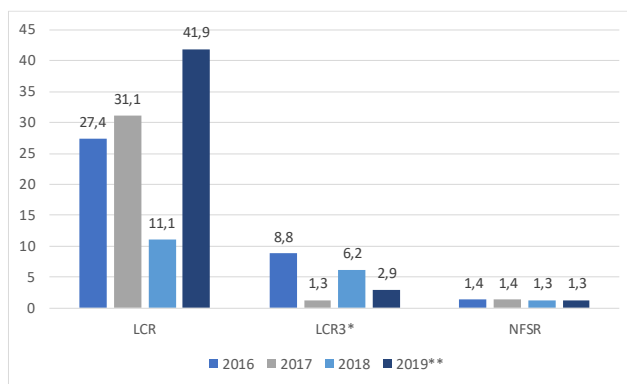
13 Northeast, North and Center-West Constitutional Financing Funds, created by Law n.º 7827/1989, which regulate the article 159 of the Constitution of the Federative Republic of Brazil.

14 One need to keep in mind the relationship of BNDES with the Treasury also has another implication, such as the occasional creation of liquidity pressures when the government distributes BNDES profits to improve the fiscal budget.

referring to the proportion of high-quality liquid assets to an estimated net cash outflow under a situation of liquidity stress in the period of the next 30 calendar days. The latter is a measure of a bank's "long-term" liquidity cushion, referring to the ratio relating the total available stable funding and the required stable funding. The concept of stable funding is the portion of a bank's capital and liabilities that will remain in its balance sheet for more than one year. The NSFR, thus, is a measure of balance sheet mismatches.

CMN introduced LCR in 2015, and two years later, in 2017, it edited the rule for NSFR (CMN Resolution n.º 4401/2015; n.º 4616/2017, respectively).¹⁵ Only SIFIs (S1 institutions) are required to comply with liquidity requirements. BNDES, as an S2 institution, does not need to comply with them but it calculates both indicators, as shown in **Figure 4**. The design of Basel liquidity requirements didn't focus banks that have a balance sheet like BNDES, with a large concentration of assets and liabilities in the long term, and the bank would not have problems to comply with those minimum ratios if required.

Figure 4 – BNDES LCR, LCR3 and NSFR, 2016-2019



Source: IF.Data, 2019; BCB, 2019.

Subtitle: * LCR3 extends the LCR Horizon for three months instead of one.

** March 2019.

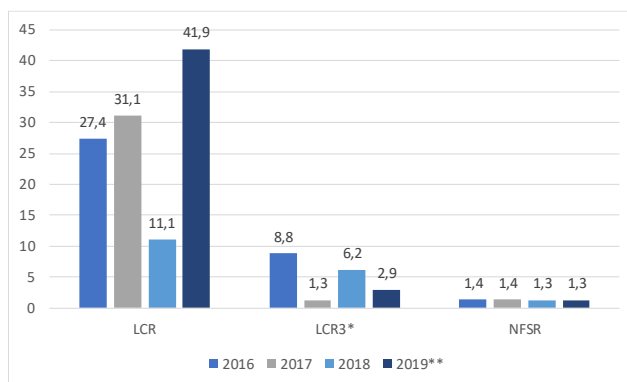
15 BCB complementary regulations were BCB Circular n.º 3749/2015; n.º 3761/2015 (LCR); n.º 3869/2017 (NSFR).

2.1.4 Leverage ratio

One of the main marks of the 2008 crisis was the crumbling of highly leveraged financial institutions. To deal with this problem, Basel III introduced a minimum raw leverage ratio of 3.0%. This leverage ratio is the inverse of the common leverage indicator used in accounting, which plots liabilities over net worth. A minimum 3.0% leverage ratio means a maximum leverage of 33.3 times the capital.

CMN adopted the leverage ratio (LR) in January 2018 (CMN Resolution n.º 4615/2017).¹⁶ Compliance is mandatory for institutions classified in S1 and S2, which is the case of BNDES. Currently, BNDES is very comfortable with LR: as of March 2019, the bank's LR was 13.3% (**Figure 5**). But, shortly, the shrink of the bank capital basis will contribute to reduce this indicator. If the bank starts going to fund in capital markets, it would be another source of pressure over LR, although one needs to keep in mind that the regulatory standard is very lax.

Figure 5 – BNDES Leverage Ratio, 2016-2019



Source: IF.Data, 2019; BCB, 2019.

Subtitle: * March 2019.

16 BCB Circular n.º 3748/2015 defines the methodology.

2.1.5 Structure of risk and capital management

Basel II required the implementation of new structures for the management of operational, market, credit and liquidity risks and capital by Brazilian financial institutions (CMN Resolution n.º 3380/2006; n.º 3464/2007; n.º 3721/2009; n.º 4090/2012; n.º 3988/2011, respectively). These rules engendered many organizational changes, even though the conception of risk management that prevailed at that time was very fragmented. With the adoption of Basel III, there was a call for the integration of those activities. CMN required financial institutions classified in S1, S2, S3, and S4 to implement structures to on-going capital management and on-going and integrated risk management (CMN Resolution n.º 4557/2017). These structures need to be suitable to the business model, the nature of transactions and the complexity of products, services, processes, and activities of each institution, being proportional to size, risk exposure, and systemic importance. The board has several attributions regarding those on-going management tasks.

The on-going activity of integrated risk management should assure the adoption of several standards and the performance of the following tasks, such as risk management policies and strategies, stress test programs¹⁷ and business continuation plans. A document titled "Risk Appetite Declaration" is required, and banks need to appoint a director in charge of risk management (CRO). Regarding on-going capital management, CMN also requires that institutions dispose of or perform several tasks, such as capital management policies and strategies, capital plan and contingency plan, and assessment of capital adequacy.

BNDES created a Risk Management Department in 2007 (BNDES Resolution n.º 1488/2007) as a response to regulatory challenges posed by Basel II and the adoption of International Financial Reporting Standards CASTRO, 2009, p. 201). Castro (2009) provides a detailed account of the

17 S2 institutions do not need to use the reverse stress methodology.

BNDES experience in the creation of the Risk Management Department, stressing the challenges posed by the need to separate risk management functions in a decentralized structure, their integration into one single department and in the redefinition of governance and responsibilities along BNDES areas – in addition to information technology difficulties.

BNDES anticipated the integration of risk management activities in one department, but some organizational changes centralized other functions – especially, compliance and internal controls – under the same department. Therefore, when CMN enacted its regulation BNDES' risk and capital management structure was already in place, requiring minor changes in the day-to-day of those tasks.

2.1.6 Transparency and market discipline

There are three pillars in Basel II: minimum capital requirements, supervision, and market discipline. Basel Committee understood the promotion of market discipline as a critical factor for the stability of the financial system. It relied on the dissemination of information to investors, analysts, customers, etc., making easier the assessment of a bank's financial soundness and risk management practices. Should a particular bank not performing underperform, the "market" would be able to see and react, pushing for changes in business practices or risk management. Pillar 3 provisions included transparency or disclosure requirements regarding financial statements, risk management, managerial reports, and so on.

Basel III reinforced the original transparency requirements, adding several elements and broadening the scope of information disclosed by banks. Pillar 3 disclosures now contains information on credit, liquidity, market and operational risks, and the leverage ratio; risk-weighted assets as calculated by internal models and the standardized approach; and an overview of risk management and critical prudential metrics.

In Brazil, BCB established very detailed disclosure requirements in two different moments, 2013 and 2019 (BCB Circular n.º 3678/2013; n.º

3930/2019). From 2020 on, BNDES and all other financial institutions will issue quarterly the so-called Pillar 3 reports, detailing: (i) prudential and risk management indicators; (ii) comparison of accounting and prudential information; (iii) capital composition; (iv) macroprudential indicators; (v) leverage ratio; (vi) liquidity ratios; (vii) credit risk; (viii) counterparty credit risk (derivatives); (ix) securitizations; (x) market risk; (xi) banking book; (xii) compensation schemes.

Though there is no apparent conflict between transparency requirements and the mission of development banks, one needs to keep in mind that information on BNDES will reflect the peculiarities of the bank's transactions and are not entirely comparable to other public or private institutions that have different business focus or are profit-oriented.

2.2 Operational limits

2.2.1 Client exposure limits

Brazilian financial institutions have to comply with a client exposure limit of 25% of total capital (CMN Resolution n.º 2844/2001). This provision applies not only to loans advanced to a client but also to investments in securities issued by her. Also, the regulation limits the sum of the so-called "concentrated exposures" to 600% of total capital. These are exposures that account for 10% or more of total capital per client. Non-compliance with client exposure limits entails the prohibition to extend new loans to a client (or a set of clients) or increase investments in securities issued by her (them). BCB demands immediate information and the formulation of a plan for reducing that exposure.

BNDES received a special treatment regarding Petrobras' total credit risk in 2009. The exemption allowed the bank to calculate an independent ceiling of the credit risk for each of the subsidiaries of the oil company. It also could discount equity holdings of these companies from securities and concentrated exposures (CMN Resolution n.º 3615/2008). In 2011, BCB

extended those waivers to energy companies controlled by the federal government (Eletrobras) (CMN Resolution n.º 3963/2011).

In 2012, CMN extended the benefit to mining companies (Vale do Rio Doce) but repealed the special treatment for equity holdings of BNDES (CMN Resolution n.º 4089/2012).¹⁸ Therefore, from then on, the bank would have to add loans and equity holdings for calculating client exposures. This last decision made more likely the violation of the 25% limit. Moreover, for the first time, regulations established a timetable for adjustment and alignment of client exposure limits to the general rule, providing a phase-out arrangement that would end in June 2024.

In 2018, CMN went further in the repeal of regulatory waivers. The new rules didn't mention energy companies anymore and repealed the individualization of legal persons controlled by the government, with effects from January 2019 (CMN Resolution n.º 4678/2018). Moreover, BNDES would have to calculate those limits taking as reference Tier 1 capital instead of total capital. Yet, CMN extended the deadline for full compliance to the end of 2027. From 2028 on BNDES will need to comply with the same rules as private banks.

In the 2018 financial statements, BNDES highlighted that only one client was non-compliant with the general rule, but it had reduced this exposure in line with the timetable established by CMN. In the future, this standardized treatment might limit some operations but the possibility to introduce new waivers should not be discarded.

2.2.2 Fixed assets (immobilization) limits

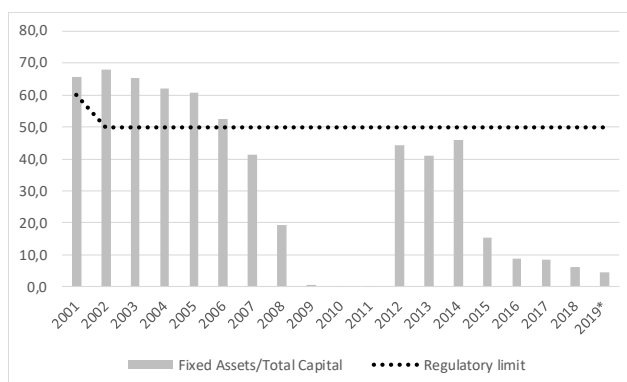
BNDES received most of its shares of state-owned companies as paid-in capital in its early years. Lately, the bank bought Petrobrás equity with Treasury funds after the 2008 financial crisis, following government investment policies. The value of some of these shares skyrocketed after

¹⁸ Further amended by Resolution n.º 4430/2015.

Brazil's integration into the global financial markets in 1994. The equity holdings of private firms result from BNDES mission of acquiring participations in Initial Public Offers (IPO) or the execution of collaterals from defaulted loans (**Figure 6**).

Since 2002, CMN imposes a limit on banks of 50% of the total on the amount they can apply in fixed assets (immobilization limits) (CMN Resolution n.º 2283/1996).¹⁹ At that time, it was clear that BNDES would not be able to comply with the 50% threshold and CMN authorized an exception conceding an additional time to BNDES adjust its portfolio (CMN Resolution n.º 3105/2003). This status was very relevant because non-compliance would generate an obligation to remove from total capital the resources exceeding the regulatory limit, compromising the observance of capital requirements. BNDES had four years to eliminate 10% of the exceeding values and then needed to progressively adjust the remainder until June 2013.

Figure 6 – BNDES fixed assets/total capital ratio, 2001-2019



Source: IF.Data, 2019; BCB, 2019.

Subtitle: * March 2019.

¹⁹ Modified by CMN Resolution n.º 2669/1999.

The regulator renewed this waiver on several occasions. For instance, in 2009, CMN provided a new deadline extension to June 2021 and added the possibility of lowering stocks acquired due to “investments consistent with BNDES corporate purpose”. In 2012, CMN restricted this set of shares to oil, electricity and mining companies, but conceded an extension of the deadline to June 2024 (CMN Resolution n.º 4089/2012). In 2015, a new regulation redefined the intermediary adjustment timetable (CMN Resolution n.º 4430/2015) and recently CMN shifted its approach regarding this special treatment: in 2018 this waiver was removed, aligning BNDES’ and private banks’ immobilization limits (CMN Resolution n.º 4678/2018).

2.2.3 Public sector exposure limits

Brazilian regulation imposes a limit for bank loans to public sector entities, such as federal, state and municipal governments and state-owned companies (CMN Resolution n.º 4589/2017). Total exposures should not exceed 45% of total capital. There are exemptions to loans guaranteed by the Brazilian National Treasury as well as to loans to Petrobrás and Eletrobrás. There is no differentiation among BNDES and other banks (CMN Resolutions n.º 2653/1999; n.º 2827/2001). Considering the treatment of secured loans and the exemption of Petrobras and Eletrobras, BNDES had no problems in complying with this limit.

2.2.4. Foreign exchange exposure limits

Exposure limits also apply to transactions that are subject to foreign exchange risk. Exposures to gold, foreign currencies, and other assets that may vary due to fluctuations in foreign exchange rates should not exceed the threshold of 30% of total capital (CMN Resolution n.º 2606/1999).²⁰ There is no differentiation among BNDES and other banks.

²⁰ Further replaced by CMN Resolution n.º 3488/2007.

2.3 Governance

As a state-owned bank, BNDES has to comply with governance principles established to all government-owned firms. In 2016, the government enacted a new Law concerning corruption and mismanagement in the public sector (Law n.º 13303/2016.). The legislation is very extensive, covering topics such as corporate organization, contract law, and bidding processes. The main impacts of this legislation are on the appointments for boards, risk management standards, and internal/external controls.

2.4 Other regulations

A detailed analysis of every regulatory piece that affects BNDES transcends the purpose of this paper. In the following lines, we list some other regulatory topics and provides the proper references in footnotes:

- Compliance (CGPAR Resolution n.º 18/2016; CMN Resolution n.º 4595/2017) and internal controls (CMN Resolution n.º 2554/1998);
- Internal audit (CMN Resolution n.º 4588/2017);
- Anti-money laundering regulations (BCB Circular n.º 3461/2009; n.º 3780/2016; BCB Circular Letter n.º 3405/2009; n.º 3409/2009; n.º 3430/2010; n.º 3542/2012);
- Recovery and resolution (CMN Resolution n.º 4502/2016);
- Socio-environmental responsibilities (CMN Resolution n.º 4327/2014).

3. Does BNDES face relevant regulatory constraints?

A historical account of BNDES performance in the last decades shows that the bank had a notorious ability to adapt to new regulations. The adoption of Basel I in 1994 outshined the experience of the bank with self-regulation, which lasted from its inception in the 1950s to the mid-1990s.

This framework was tutelary and mandatory, applied without reserves to the Brazilian national financial system, despite its peculiarities.

Basel I inaugurated a new era in Brazilian regulation. From the viewpoint of BNDES, we can characterize the framework of Basel I and II as a framework of “standardized prudential requirements with waivers”. When Basel III entered in force, the BNDES regulatory framework became a framework of “standardized prudential requirements without waivers” – reflecting a one-size-fits-all approach from Brazilian regulators.

Sobreira and Martins (2011) argued that many economists expected the adoption of Basel would hamper BNDES activities. They tested some empirical hypotheses regarding the potential impacts of Basel I on BNDES and analyzed data in the period 1998-2010, finding mixed results. At one hand, they found that, despite one can expect from Basel requirements: there was a consistent growth in disbursements, with an increase in the share of loans over assets; risk-weighted assets and total capital did not cointegrate, and the participation of lower quality capital did not increase. At the other hand, they show a higher concentration of loans in investment-grade clients and an increase in the share of highly liquid assets.

The authors argued that Basel I rules did not jeopardize BNDES role as a development bank: the bank was able to implement an operational strategy that was relatively autonomous to the potential regulatory constraints, but the increase of investment-grade clients signals an attempt to keep risks under tuff control. Yet, the application of Basel I to BNDES without constraints opened the room to the automatic application of Basel II and III regulations without a proper discussion on the issue.

Castro (2009) analyzes the implementation of Basel II and its impacts on BNDES focusing on the changes in risk management structure and processes. The author posits Basel II was able to increase risk-sensitiveness, mitigate procyclicality, and reduce the bias against small and medium enterprises. Moreover, she highlights the larger flexibility due to internal models and praises the accord as an international quality label for risk management practices.

BNDES staff was interviewed revealing they see current financial regulation as beneficial for BNDES for different reasons: (i) it creates a barrier for politicians to use BNDES loans as a political tool; (ii) it inhibits the appointment of inappropriate persons to the board; (iii) disclosure of information and BCB supervision are seen as positive; (iv) compliance with Basel standards was relevant to modernize internal procedures and to facilitate the access of BNDES to capital markets.²¹

In practice, BNDES registered its most massive expansion in history under the framework of Basel II and was able to deal with the crisis without significant limitation or disruption. As long the regulators are flexible enough to provide room for an adaptation to the purpose of BNDES, Basel regulations are not seen as inappropriate. BNDES staff stressed that an on-going dialogue with the regulator is of paramount relevance. However, this does not mean that the Basel framework is the most suitable for BNDES and other development banks: it still treats a development bank like a private bank.

Right before the 2008 crisis, there was an in-depth discussion on BNDES funding and capital needs because of two main drivers: the need to expand BNDES balance sheet to finance the federal government's Growth Acceleration Program and the need to comply with Basel capital requirements. The drop of 10.0 percentage points in the BNDES Basel index between 2007 and 2008 illustrates the challenge posed by regulation. The practical solution was the capitalization of the development bank by the National Treasury, which injected around BRL 11.5 billion in capital between 2008 and 2009. The problem of non-compliance with client exposure and fixed assets operational limits was settled through regulatory waivers.

CMN reorientation in recent years towards the adoption of a framework of prudential requirements without waivers is a novelty in the Brazilian regulatory history. It removes degrees of freedom from BNDES, squeezes its capital basis and can make several transactions unfeasible due to operational limits in the next decade. Though one can argue that BNDES classification in

21 interview conducted by the authors in May 28th, 2019.

S2 is a kind of waiver, it poorly benefits the bank as liquidity ratios are not a problem and neither is an additional capital cushion of 1.0%.

This movement occurs at the same time that the current federal administration reassesses the role played by BNDES (TORRES FILHO, 2018). It is expected that as BNDES reduces its size domestic private banks and capital markets would fill the void. However, nothing assures this process will take place. The one-size-fits-all approach from Brazilian regulators seems to align with a conception of an atrophied BNDES.

A proper analysis of the post-Basel III period is difficult because part of the regulations is still in a transitional phase. The downsize policy mitigates the potential conflicts between regulation and development. Nevertheless, our primary perception is that the downsizing of BNDES might create constraints in the supply of long-term funds in the domestic currency if investment accelerates. This restriction will happen if the regulators decide not to reintroduce waivers to the standardized regulatory framework.

Finally, the experience of BNDES shows that there are positive and negative effects due to the application of Basle rules to a development bank. Among the positive ones are the political insulation from political risks as the bank has to comply with financial indicators and with supervision from BCB. Other positive effects are due to the modernization effect of regulation on the institution and the potential to access capital markets. Among the negative ones are the credit limits concerning credit exposure to clients and the creation of unnecessary situations of capital shortage.

Summing up, the experience of BNDES suggests that development banks and regulation can be a win-win game. However, this positive result depends on a critical issue that neither the literature nor the interviews have mentioned: the role played by the capital provider of the development banks, *i.e.* the government. Regardless of some specific factors, it is possible to solve most of the Basel financial limitations by injections of more capital or by making adjustments on the standardized rules. Along with exceptions from an "indulgent regulator", the behavior of the government as an "indulgent capitalist" was relevant for BNDES to avoid the restrictions imposed by

financial regulations on the bank's activity as a development bank.

Final Remarks

This paper provided a systematic analysis of BNDES regulation in a historical perspective. We noticed two long-term patterns. First, self-regulation lost importance in defining BNDES management practices and was replaced by mandatory provisions set by CMN and BCB. Second, the standardization of Basel requirements became a general rule that included BNDES, as the regulators repealed all waivers in recent years. Therefore, despite the special status of the development bank in the Brazilian financial system, there is now a full alignment between BNDES' and private banks' regulations.

This standardization pattern raises concerns on the adequacy of the current regulatory framework to the accomplishment of BNDES functions. In the second half of the 2000s, the development bank was able to combine regulatory compliance and a massive expansion of its transactions. However, in recent years, it has faced a more restrictive regulatory environment. For instance, BNDES will need to exclude its more stable funding source from its capital along the next decade.

The current political context in Brazil is materializing a view that calls for the dismantling of BNDES and its downsizing. Since 2015, fiscal adjustment and austerity have replaced growth as the primary goal of economic policies. In this new context, BNDES was used as a tool to reduce the expansion of public debt. The bank has prepaid the loans extended by the Treasury, and BNDES' disbursements achieved its lower level since 2004.

At the same time, financial regulators eliminated most of BNDES' waivers and are promoting a one-size-fits-all approach to regulate BNDES. The current context eventually mitigates the potential conflicts between regulation and development because restrictions operate mainly in periods of expansion, not retraction. We showed that, until now, whenever such conflicts

appeared, the Brazilian government acted pragmatically to avoid a conflict between BNDES role as a development bank and regulation. To date, regulatory waivers and a rise in paid-in capital of BNDES were sufficient to deal with limitations posed by regulation. The Brazilian government was able to act as an “indulgent regulator” and “indulgent capitalist”.

The agenda of the current administration suggests that the “indulgent state” changed its approach towards BNDES. Yet, it is too early to state that this change is a permanent divide in the relation between BNDES and the Brazilian government. Should the political orientation change in the future and BNDES has to face another round of expansion, Brazilian authorities could face more difficulties to reactivate the development bank due to the regulatory standardization. From a Minskyian perspective, in a situation like this, the government might need to redefine regulation so BNDES will not face significant restrictions in accomplishing its mission.

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