Managing the 2008 Financial Crisis: How Legal Constraints Caused the Fragmentation of the Monetary Power in Brazil*

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Abstract

The Lender of Last Resort (LoLR) is a financial agent that has the economic capacity and is willing to provide liquidity when no other agent would. Resolution authorities are legally empowered to apply technical tools to deal with solvency crises. Unlike developed countries, where central banks created a wide range of emergency liquidity facilities and occasionally played the role of resolution authorities, the Brazilian Central Bank (BCB) was legally prevented from increasing the extent of its political actions due to legal constraints. This article argues that the management of the 2008 crisis caused the institutional fragmentation of the monetary power in Brazil. We define monetary power as the economic capacity, combined or not with a legal mandate, to influence directly the expansion or the contraction of credit money in the economy. In this study, we scrutinize the legal instruments used by the BCB and the Deposit Insurance Fund (FGC) to cope with the financial crisis. The BCB and the FGC's mandates were profoundly rearranged. An analytical model is proposed to identify both the extension of the Brazilian institutional reform and its inherent limits. It is possible to identify significant problems related to the economic efficiency as well as accountability gaps in the current fragmented legal framework.

Keywords: Brazilian Central Bank (BCB), Brazilian Deposit Insurance Fund (FGC – *Fundo Garantidor de Crédito*), Emergency Liquidity Assistance (ELA), Lender of Last Resort (LoLR), resolution regime, deposit insurance.

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1. Introduction

Originally, the intellectual framework for the lenders of last resort (LoLR) was conceptualized by Walter Bagehot.[1] The LoLR are financial agents that have the *economic capacity* and are *willing* to provide liquidity when no other agent would. According to the Bagot dictum, central banks should lend freely in times of crisis based on good collateral and at high rates. Once a liquidity shortage occurs, the « monetary stabilizer »[2] assumes the responsibility of assisting financial institutions, preventing liquidity constraints from becoming insolvency concerns. If a solvency crisis follows, resolution authorities come into play and deploy a series of instruments and tools aimed at preventing the spread of systemic risk, either through the liquidation of a failed institution, its corporate reorganization (mergers and acquisitions), or the transfer of assets and/or liabilities to another institution.

The lender of last resort (LoLR) function has long been regarded as a core responsibility of central banks. In contrast, resolution tools are perceived as a responsibility of either the institution charged with managing the deposit insurance fund, a central bank or an independent agency entrusted with financial supervision powers. The literature on financial supervision has pointed to considerable differences in the allocation of roles and responsibilities for the exercise of supervisory and monetary functions amongst institutions in different countries.[3] Yet these studies did not develop a framework that could identify monetary and legal constraints underpinning countries' variations in the LoLR and resolution practices, notably in emerging and developing economies.[4]

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[1] The conceptualization was based on his observation of the Bank of England's practices in rediscounting bills of exchange during the 19th century. Yet Thornton had already formulated a rather sophisticated description of the banking system in London in 1802. See W. Bagehot. *Lombard Street: A description of the money market*. Kegan, Paul & Trench, 1999 [1873]; and H. THORNTON, *An Enquiry into the Nature and Effects of the Paper Credit of Great Britain*, J. Hatchard, 1802. For the historical perspective of the LoLR functions, see V. BIGNON, M. FLANDREAU, S. UGOLINI, «Bagehot for Beginners: The Making of Lender-of-last-resort Operations in the Mid-nineteenth Century», in *The Economic History Review*, n. 65(2), 2012; Maple (1990); see also C. GOODHART, «Why do Banks Need a Central bank?», in *Oxford Economic Papers*, n. 39, 1987. See also S. FISCHER, «On the need for an International Lender of last Resort», in *Princeton Univ. International Economics*, n. 220, 1999, p. 226. See also C. KINDLEBERGER, Z.R. ALIBER, *Manias, Panics, and Crashes: A History of Financial Crises*, 6th ed., Palgrave Macmillan, New York, 2011.

[2] C. KINDLEBERGER, Z.R. ALIBER,, *supra* note 1, pp. 213-228.

[3] For a comprehensive discussion of the architecture of financial supervision, see MASCIANDARO, D.; QUINTYN, M., «The Governance of Financial Supervision: Recent Developments», in Journal of Economic Surveys, 30 (5), pp. 982-1006.

[4] It should be noted that the resolution mandate has become increasingly seen as an 'autonomous' policy function after the 2008, with the development of a set of recommendations for effective resolution policies by the standard-setting bodies of the international financial system. See FINANCIAL STABILITY BOARD, «Key Attributes of Effective Resolution Regimes for Financial Institutions», 2014, available at: http://www.fsb.org/wp-content/uploads/r_141015.pdf.

Contrasting with developed countries, the LoLR function and the resolution tools employed in Brazil after the 2008 financial crisis were the result of a particular combination of policy actions, which provided (and continue to provide) *limited* liquidity assistance and *uncertain* resolution mechanisms in times of economic distress.

Our study shows that, unlike authorities in high-income countries in the post-2008 period – notably United States, United Kingdom, and Eurozone countries - , the Brazilian Central Bank (BCB) could not expand its emergency liquidity facilities, due to legal and political constraints. Central banks in advanced economies invested in a wide range of political actions supported by significant changes in their legal and policy frameworks, creating new tools of financial assistance and increasing the number of agents with access to central bank operations, as well as innovations in the design of resolution mechanisms.[5]

In this article, we argue that the management of the 2008 crisis caused the institutional fragmentation of monetary power in Brazil due to legal and political constraints imposed on the national central bank. Since then, the Brazilian deposit insurance fund (*Fundo Garantidor de Créditos* – FGC) is performing functions analogous to those of the Brazilian monetary authority. We define monetary power as the economic capacity, combined or not with the legal mandate, to directly influence the creation of credit money in the economy. Historically, this legal and economic power is attributed to central banks. In the Brazilian case, a significant portion of this power has been shared with the FGC.

To demonstrate the process of institutional fragmentation and the limits to the current Brazilian legal framework, we propose an analytical model to assess political actions related to the LoLR function and resolution measures in 2008. By conducting an analysis of political and legal measures taken by these institutions to tackle the financial crisis, we show how the FGC, a private entity, assumed the role of sustaining the credit money flow in the economy. More than that, the FGC not only provided emergency liquidity assistance (ELA), it was also integrated into the resolution regime, resolving cases of insolvency as well. Yet the legal framework supporting this function lacks certainty to

[5] K. JUDGE, «The First year: The role of a Modern Lender of last Resort», in *Columbia Law Review*, n. 116, 2016; see also BANK OF INTERNATIONAL SETTLEMENTS (BIS), *op. cit.*; see also M. RICKS, «Regulating Money Creation After the Crisis», in *Harv. Bus. L. Rev.*, n. 1, 2011; see also J. BLACK, «Managing the Financial Crisis – The Constitutional Dimension», in *LSE Legal Studies working paper*, n. 12, 2010; see also G. GORTON, A. METRICK, «Regulating the Shadow Banking System», in *Brookings Papers on Economic Activity,* 2010, pp. 261-312; see also R. KROSZNER, W. MELICK, «The Response of the Federal Reserve to the Recent Banking and Financial Crisis», Speech at the conference "An Ocean Apart? Comparing Transatlantic Responses to the Financial Crisis" organized by Banca d'Italia, Bruegel Institute e Peterson Institute of International Economics, held in Rome 10 September 2009.

deal with future liquidity crisis, suffers from moral hazard and does not provide accountability mechanisms to keep the FGC new powers in check.

This article is premised on two ideas, which we believe are fundamental to analyze the legal framework for financial resolution and LoLR practices in Brazil. The first premise is that the LoLR function has a monetary nature, *i.e.* the lender is exercising a monetary power aiming at supporting the activity of maturity transformation in the financial system. Thus, the LoLR seeks to influence directly the creation of credit money (represented by short-term debt claims) in the economy, through liquidity assistance to financial institutions. Banks create new units of monetary power (new debt claims) by lending to private agents – thus easing liquidity shortages in the economy. This premise stresses the importance of one of the Bagehot's *rules* in times of crisis: to lend freely.

Central banks can lend freely, since they are financial entities that can potentially expand their balance sheet without institutional constraints – *i.e.* they have the legal power to issue their *own* money, the national currency. In contrast, alternative institutional designs for the exercise of LoLR functions should consider their ability and credibility in providing liquidity in times of crisis without enjoying the same legal power of central banks. For instance, the FGC suffers from problems of economic efficiency as a LoLR, since its action is based on *limited rediscounting*. In addition, the FGC cannot issue money, but as a fund allocates its resources to banks experiencing liquidity troubles.

The second premise is that the traditional conception of a bank run was expanded in the post-2008 crisis. Monetary authorities worldwide are concerned with funding runs, in addition to bank runs.[6] Bank runs are products of a particular configuration of contractual arrangements: « they occur when large numbers of funding providers with short-term maturities decline to renew their contracts upon expiration ».[7] Therefore, they are inherent to the functioning of the monetary systems and can affect not only the relationship between banks and depositors, who are usually protected by traditional deposit insurance. In fact, they can occur in interbank connections, thus impacting the creation of money in the economy.

Therefore, together with *ex ante* deposit insurance schemes, authorities aimed to avoid maturity mismatches and ensure that financial institutions have adequate levels of liquidity to perform their economic function, *i.e.* the activity of maturity transformation. Regulators targeted the quality and the maturity of financial institutions' liabilities,

[6] R. KROSZNER, W. MELICK, *op. cit.*; see also M. RICKS, *op. cit.*
[7] M. RICKS, *op. cit.*, p. 84.

assuring the stability of banks' funding. This concern tends to expand legal mechanisms designed to respond to financial instability.

The delegation of monetary power to the FGC produced institutional fragmentation with both negative and positive effects. On the positive side, the Brazilian authorities could quickly respond to financial challenges using the FGC as a vehicle. They could circumvent legal limitations imposed on the BCB to fully act as a lender in the financial system. In addition, they reduced the recourse to taxpayer money, since the FGC is a private entity.

Nevertheless, the current fragmented framework is relatively uncertain, which tends to diminish the credibility of the Brazilian authorities to tackle deeper liquidity and solvency crises in the future. The exercise of a monetary power by the FGC is mainly discretionary and there are no detailed provisions to regulate it, only general authorizations. In addition, the FGC measures are based on limited rediscounting, since it is legally designed as a fund, and it has no access to the BCB as a final resort. In addition, problems of moral hazard and conflict of interest are particularly relevant in the exercise of monetary power by this entity, since the fund is a private association formed by financial institutions and, until 2012, it was also managed by directors of these banks.

Furthermore, as things currently stand the fund is a single entity responsible for managing *both deposit insurance* and *emergency liquidity facilities*. There is no legal separation between these responsibilities, or the resources destined to the implementation of each of these policies. In times of acute distress, financial bailout of troubled banks can deteriorate the funds pooled to support small investors and consumers.

Finally, the rearrangement of monetary powers between the BCB and the FGC was a product of *ad hoc* regulations and the executive branch's temporary measures, with limited participation of the Legislative branch. No accountability rules are currently in place. No legislative procedures or broader public debates are required to change the regulations created after the 2008 crisis, which tends to reduce the legitimacy of this framework and weaken the accountability of the central bank and the FGC. In sum, the legal framework, designed after the 2008 crisis, is still suffering from legitimacy gaps as well as problems of economic efficiency due to institutional fragmentation and legal constraints.

This article has three sections in addition to this introduction. In the next section (Section 2), we present an assessment of the Brazilian institutions' performance in the stabilization of the financial system after the 2008 crisis. We build an analytical model to

assess the economic and legal efficiency of the Brazilian LoLR tools and resolution regime to deal with future economic distresses. This model is derived from the empirical analysis developed in the following section (Section 3). We also present our main premises and concepts on institutional fragmentation and monetary power. The legal tools and actual practices of the BCB and the FGC are explored in detail in section 3. In addition, we review the legal and economic literature on the issue, highlighting the specificities of the Brazilian case. A brief conclusion follows.

2. The Institutional Fragmentation of Monetary Power in Brazil: Legal Constraints on Central Bank Prerogatives and Limitations of the Alternative Financial Framework

2.1. The anatomy of a monetary crisis

The monetary system can be characterized by the balance between two dimensions: elasticity and scarcity.[8] To ensure financial stability, public authorities manage the money supply by deploying mechanisms that promote monetary expansion in times of *liquidity shortage* (elasticity) and discipline during *credit booms* (scarcity). In ordinary times, the creation of money is indirectly managed by central banks through the definition of a price (*i.e.* the interest rate) for bank reserves.[9] Open market operations are tools to implement such policy on a day-to-day basis.

The monetary system encompasses high-powered money (central bank liabilities and currency held by the public) as well as credit money, represented by short-term debt claims mainly issued by banks.[10] Credit money is represented by financial instruments such as demand deposits, which are not money, but legal promises to pay money. Nonetheless, these instruments are used as final means of payment to settle a variety of obligations.[11] They are perceived by economic agents as substitutes of State-issued money and are transacted at par.

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[8] P. MEHRLING, *op. cit.*

[9] In a broad sense, reserves comprise financial institutions' deposits at the central bank, as well as government bonds that can be converted into currency as demanded without significant loss of value. For an analysis of the legal framework of the modern monetary policy, see C.V. DURAN, *A Moldura Jurídica da Política Monetária: Estudo do Bacen, do BCE e do Fed*, 1st ed., Saraiva/Direito GV, São Paulo, 2013.

[10] P. MEHRLING, *op. cit.*

[11] For a detailed explanation of the legal concept of money, see C. PROCTOR, *Mann on the legal aspect of money*, Oxford University Press, Oxford, 2012.

In times of crisis, short-term debt claims can become illiquid (*i.e.* long-term debt claims), notably in cases of insolvency. One of the central concerns during liquidity crises is precisely to prevent liquid assets from losing their economic capacity to function as credit money[12] and, as such, as a final means to settle obligations in the economy. Central banks intervene as LoLR to ensure the continuous creation of credit money by financial institutions, reinserting elasticity in the system. Actually, they exercise their monetary power to sustain the activity of maturity transformation, which has been primarily performed by banks.

For the management of the 2008 crisis, two Bagehot rules seem to have been eased: rediscounting on the basis of *good collateral* and at *high rates*. Considering the historical moment when Bagehot elaborated his prescriptions for the exercise of the LoLR function, the main idea was to avoid a banking crisis from being followed by a monetary crisis in the context of the gold standard regime. Therefore, high rates would prevent the conflict between the expansion of liquidity in times of economic distress and the goal of the exchange rate policy.[13]

In contemporary finance, the LoLR faces new challenges that could not have anticipated by Bagehot. Considering the landscape of credit providers in economies with a complex financial sector, emergency liquidity assistance in developed countries increased the number of institutions with access to central bank operations, as well as the type of collateral accepted for rediscount.[14] Central banks needed to lend freely directly to financial institutions which, besides banks, were also recognized as central to the process of maturity transformation: the shadow banking. These entities interfere in the money supply of the economy, since they issue short-term debt claims perceived as substitutes of money by different economic agents.[15]

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[12] M. RICKS, *op. cit.*

[13] For more details, see V. BIGNON, M. FLANDREAU, S. UGOLINI, *op. cit.*, pp. 25-27.

[14] K. JUDGE, *op. cit.*; see also IMF – INTERNATIONAL MONETARY FUND, *op. cit.*; see also BANK OF INTERNATIONAL SETTLEMENTS (BIS), *op. cit.*; see also M. RICKS, *op. cit.*; see also G. GORTON, A. METRICK, *op. cit.*; see also P. MEHRLING, *op. cit.*

[15] M. RICKS, *op. cit.*; seee also G. GORTON, A. METRICK, *op. cit*. This policy was combined with Quantitative Easing (QE) as a tool of monetary policy, which sought to influence the price of financial assets on the market, increasing the amount of money held by these agents and encouraging them to re-balance their portfolios. This policy, consequently, would decrease the cost of financing for companies, generating the *hot potato* effect, see M. MCLEAY, R. AMAR, T. RYLAND, «Money Creation in the Modern Economy», in *Bank of England Quarterly Bulletin Q1*, 2014, pp. 11-12. This unconventional monetary policy was also known as *balance sheet* policies, since it expanded the balance sheet of central banks in important developed economies. For details of this argument and criticism of unconventional monetary policies implemented during the management of the 2008 crisis, see P. BAGUS, D. HOWDEN, «Qualitative Easing in Support of a Trumbling Financial System: A look at the Euro System's Recent Balance Sheet Policies», in *Economic Affairs,* n. 29(3), 2009, pp. 60-65.

The 2008 crisis also forced regulators to expand the concept of *bank run* to encompass the notion of *funding run*.[16] The mitigation of liquidity shortages is crucial for regulators, because they impact the amount of credit money that can be expanded in times of crisis. The greater the complexity of the financial system, the greater the financial interconnectivity between financial entities. Therefore, bank runs encompass any funding run that could affect the activity of maturity transformation – *i.e.*, the lending activities by banks and, as a consequence, the creation of new deposits.

2.2. Are the central banks the single LoLR in times of crisis?

Fischer argues that, historically, central banks have played the role of LoLR and managers of liquidity crises, but none of these functions needs necessarily to be performed by them.[17] One of his arguments refers to the International Monetary Fund (IMF) and its role as LoLR at the global level: the fund is not entitled to *issue* the international currencies demanded by countries with balance of payments problems, but the IMF is the global manager of liquidity crises.

In the absence of a central bank, Bordo, Calomiris and Dunbar[18] refer to historical deposit insurance schemes and clearing-houses with the power to issue loan certificates, which were responsible for containing financial panics in the United States. These schemes played the role of alternative monetary stabilizers. The creation of an agency to deal with potential problems in the banking sector could be established by allocating sufficient funds to cover the anticipated costs of a liquidity crisis.[19]

Therefore, even though the LoLR is a main function of central banks, it is not, however, exclusive to them. There is some room for "alternative" arrangements, in which other institutions also serve as a backstop and an ELA provider while not retaining the same regulatory powers as the monetary authority.

Yet, they may suffer inherent institutional limitations. Only central banks can unlimitedly expand their balance sheets to create liquidity, since they are the public authorities entitled to issue national currency. This legal power is usually granted by

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[16] R.K. RANDALL, W.M. WILLIAM, *op. cit.*

[17] On the contrary, Goodhart (1987) argues the function of providing liquidity to the system could not be dissociated from the central bank, unlike monetary policy.

[18] M.D. BORDO, «The Lender of last Resort: Alternative Views and Historical Experience», in *FRB Richmond Economic Review*, n. 76(1), 1990, pp. 25-26; see also C.W. CALOMIRIS, «Is Deposit Insurance Necessary? A Historical Perspective», in *The Journal of Economic History*, n. 50(2), 1990; see also C. F. DUNBAR*, op. cit.*, pp. 43-46.

[19] S. FISCHER, «On the need for an International Lender of last Resort», in *Princeton Univ. International Economics*, n. 220, 1999, pp. 89-90.

statutes (or, as in the Brazilian case, by the Constitution itself). In a deeper crisis, alternative arrangements could have problems of credibility, because they do not enjoy the same legal and economic privilege of central banks.

Contemporary studies have addressed the shared roles of traditional actors of financial safety nets.[20] Kahn and Santos, for example, argued that in some circumstances it could be useful to have both the central bank and deposit insurance managing LoLR functions.[21] The rationale for the accumulation of LoLR mandates by the central bank and the deposit insurance scheme is: increased competition between both would lower lending charges and reduce the temptation of both authorities to regulatory forbearance,[22] as the deposit insurance would act when the central bank does not find it advantageous to do so. The authors concluded the allocation of responsibilities should be a function of the informational advantages of each institution.

Folkerts-Landau and Lindgren also take a time-sensitive, dynamic approach to the distribution of roles and responsibilities between the LoLR and the deposit insurance scheme.[23] In normal times, the deposit insurance should adopt prompt remedial actions to prevent a bank from becoming insolvent and maintain close ties with the LoLR. In systemic crises, the deposit insurance should be empowered to extend additional coverage and extend liquidity assistance with government backing. The authors advocate for a rule-based system for early intervention, with elements of discretion in extreme circumstances.

Drawing on case studies from eurozone countries, Labrosse and Singh explored the mandates, roles and responsibilities of agencies composing the financial safety net and how they tend to change during the course of a crisis.[24] The study found that, in response to the 2008 crisis, the mandates of safety net players were extended, either by legislative

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[20] The literature on the policies of the financial safety net is diverse and rich. However, the focus is usually on the politics of bank bailout rather than the political economy of the provision of emergency liquidity and other types of financial support among the actors.

[21] Kahn and Santos examined the allocation of the LoLR functions, deposit insurance schemes and supervision power (including monitoring and resolution authority), and the interplay between the assignment of these powers with the deposit insurance design (managed by private or public institutions) and the type of lending contract used by the LoLR (whether interest rates are pre-specified or left to the central bank's discretion). See C.M. KAHN, J.A.C. SANTOS, «Allocating bank Regulatory Powers: Lender of last Resort, Deposit Insurance and Supervision», *BIS Working Papers*, n. 102, August 2001, available at www.bis.org/publ/work102.pdf.

[22] Regulatory forbearance can be understood as an unwillingness of a regulator to take appropriate actions in case of failures, even when fully aware of underlying circumstances. For instance, an intervention delay can result in the deterioration of a bank's assets, raising the risk of systemic failure and increasing creditors' losses.

[23] D. FOLKERTS-LANDAU, C. LINDGREN, *Toward a Framework for Financial Stability*, 1st ed., International Monetary Fund, Washington, 1998, p. 30.

[24] J.R. LABROSSE, D. SINGH, « Developing a Framework for Effective Financial Crisis Management», in *OECD Journal: Financial Markets and Trends*, n. 2012(2), 2012.

means or through delegation granted by the Ministry of Finance or the Treasury. The case studies revealed that European safety net players used a wide range of extraordinary measures, such as blanket guarantees, recapitalization and asset purchases, as well as asset insurance schemes, to ease the panic and contain the crisis. They went beyond individual emergency liquidity assistance to special liquidity schemes on a market-wide basis, to both bank and non-bank sectors.[25] [26]

Gavin used a political economy approach to financial crisis management to put forward a model for the assessment of the effects of institutional underpinnings on the provision of liquidity by the LoLR.[27] He concluded that credible independent central banks boost last resort lending, while democratic pressures[28] act as a constraint. Where the central bank enjoys high levels of independence, the presence of a deposit insurance scheme reduces the likelihood of abnormal liquidity provision (namely, overlending or delay in intervention).

However, these contemporary studies on developed economies do not capture particular constraints and challenges of the financial safety net in emerging economies. For instance, Brazilian financial system combines a central bank with legal limitations to expand its balance sheet (*i.e.* legal limits to operate rediscounting activities in national currency) and a private deposit insurance fund enjoying no public backstop in times of crisis.

In the Brazilian legal framework, the BCB is the lender of last resort and the main resolution authority. Yet the central bank faces significant legal constraints to fully discharge its functions. Article 28 of the Fiscal Responsibility Law provides that « unless stated in specific legislation, public funds, including those arising from credit operations, must not be used to bail out institutions of the National Financial System, including through recovery loans or financing aimed at enabling the transfer of the shareholders control ». The second paragraph of the same article states that this provision « does not exclude the Brazilian Central Bank from granting discount window operations and loans with maturities less than 360 days to financial institutions ».

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[25] *Id.*, p. 14.

[26] The authors proposed the assignment of crisis management and bank resolution powers to an independent institution (the Financial Stability Committee) as a means to streamline the decision-making process, enhance coordination, reduce political influence and tackle regulatory forbearance. *Id.*, pp. 21-22.

[27] M. GAVIN, «The Politics of last Resort Lending», Conference at the University of Toronto, 23 May 2016, available at https://cpsa-acsp.ca/documents/conference/2016/Gavin.pdf.

[28] Understood as greater involvement of Legislative bodies.

The Fiscal Responsibility Law was enacted in a specific historical context: the Brazilian monetary authority was facing harsh criticism for bailing out banks during the 1990s. That decade was marked by the process of monetary stabilization, implemented by the *Real Plan*,[29] and constant banking crises arising from the significant reduction of banking revenues, which were previously secured by hyperinflation. Just as the State benefits from the seigniorage when issuing its own currency, the same process plays out for banks when issuing credit money in the economy.

However, the legal consequences of the Fiscal Responsibility Law endured over time. A qualified majority of Congress is required to change this type of legislation.[30] Thus, the probability of political veto is significantly high and, in times of crisis, can create insurmountable obstacles for a quick and adequate policy response. The Central Bank's margin of maneuver was drastically reduced by this legislation. The BCB suffers from a legal problem of institutional constraint.

In 2008, one of the practical consequences of Article 28 of the Fiscal Responsibility Law was to shift a significant portion of the LoLR and resolution mandates from the BCB to the FGC. As a result of the liquidity crisis, the National Monetary Council (*Conselho Monetário Nacional* – CMN), an Executive-branch council, resorted to restructuring the FGC's powers to circumvent legal limitations faced by the monetary authority. The main legal innovations and practices of the post-2008 crisis were implemented in the FGC structure.

The FGC was established in 1995 by a resolution of the CMN.[31] Investors and depositors in commercial, development and investment banks, mortgage companies, savings and loans associations, among other institutions, are insured by the FGC. The Fund's membership is mandatory for these entities. The FGC resources are primarily composed by *ex ante* compulsory contributions from market participants. [32] Originally, the Fund was set up with the sole objective of providing insurance to small depositors. From 2008, the CMN made significant changes to the FGC structure through successive regulations, which significantly expanded its powers and mandates.

[29] The Real Plan was a set of political measures aimed at tackling hyperinflation in Brazil in 1994. In 1993, the annual inflation rate in Brazil peaked at 2,447%. The architecture of the plan was the Brazilian minister of Finance, Fernando Henrique Cardoso, who became the Brazilian President in 1995 and governed the country for eight years.

[30] Article 69, Brazilian Constitution of 1988.

[31] Since 1994, the CMN is formed by the Minister of Finance, the Minister of Economic Planning and the central bank chairman, according to Article 8 of Law n. 9069/1995.

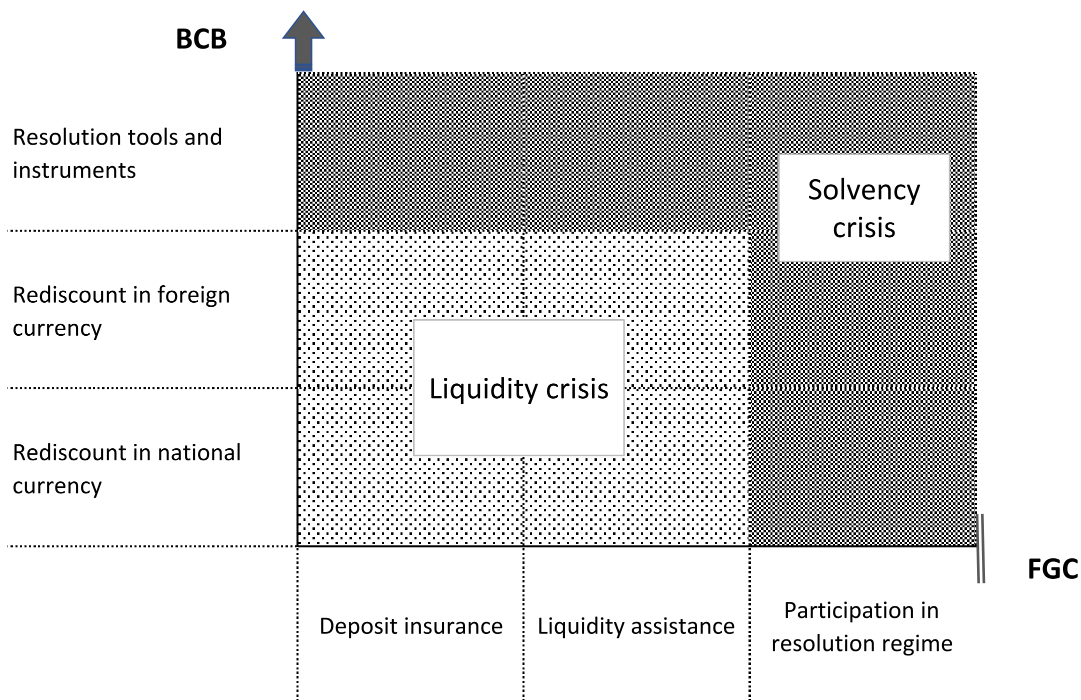
[32] Since 2017, the monthly rate of contribution was 0.0125% of the total amount of the insured bonds. The full list of the insured bonds can be found in the Annex II of Resolution n. 4222/2013.

In fact, the broader scopes of deposit insurance schemes are not exclusive to Brazil. In the aftermath of the global financial crisis, many deposit insurance providers had their mandates reconfigured. The Financial Stability Board (FSB) created a typology to classify such institutions, which are broadly grouped into four categories: a) *Paybox*: those only responsible for the reimbursement of insured deposits (Australia, Germany, Switzerland); b) *Paybox plus*: the deposit insurer has additional responsibilities, such as some specific resolution functions (Argentina, Brazil and UK); c) *Loss minimizer*: the insurer actively engages in least-cost resolution strategies (Canada, France, Mexico, Spain, and Turkey); and d) *Risk minimizer*: the insurer has comprehensive risk minimization functions that include a full suite of resolution powers as well as prudential oversight responsibilities (South Korea and United States). According to the FSB classification, the FGC falls under the *paybox plus* category, in the sense that it has acquired additional responsibilities beyond the insurance of deposits, such as resolution functions. Initially *de facto*, and later by means of regulations, it also acquired the power to assist financial institutions as a lender of last resort.

2.3. The Lenders of Last Resort in Brazil: an analytical model

Below, we propose an analytical model to represent the monetary powers of the BCB and the FGC, based on the practices and rules created by the CMN and by the executive branch in the post-2008 crisis (the political actions are detailed in the next section). This graph identifies the current political and legal mandates of these institutions, *i.e.* their role to overcome liquidity as well as solvency crises.

Graph 2.1 – Lenders of last Resort and Tools Available Within the Resolution Regime: the Fragmentation of the Brazilian Monetary Power in the Post-2008 Crisis



Source: prepared by Camila V. Duran.

The smaller square (in light gray) represents the political and legal measures to cope with liquidity shortages – LoLR functions in *strictu sensu*. The extension of this square may vary depending on the depth of the crisis and the tools used by the Brazilian entities. The graph also identifies the tools available in the Brazilian resolution regime related to capitalization of banks and other forms of credit operations for corporate restructurings (dark gray square).

The vertical arrow in the graph represents the *potential elasticity* of each institution (BCB and FGC), *i.e.* their ability to expand the volume of credit money in the economy, thus avoiding liquidity runs and solvency problems. This elasticity is unevenly distributed between the two entities. To increase the economic efficiency of the two Brazilian institutions, it would be necessary to manipulate the elasticity of each entity and their policy tools.

Hierarchically, the BCB is the most important LoLR and resolution authority in the Brazilian financial system. The Central Bank exercises the constitutional power to issue the national currency and is legally authorized to operate the resolution regimes.[33] The

[33] Its mandate includes the power to intervene in bank institutions and conduct extrajudicial liquidation, recapitalization and reorganization measures (Articles: 21, VII; 164 of the 1988 Brazilian Constitution; Law n. 6.024, of 13 March 1974).

BCB is the only authority not constrained by solvency principles, contrasting with the FGC, designed as a fund.

The monetary authority can, in practice, accumulate losses or operate with negative equity.[34] The manipulation *per se* of its balance sheet does not affect the *creation* of money, or even require capitalization. In Brazil, in case of losses, the recapitalization of the BCB by the National Treasury is, however, a legal obligation established by the Fiscal Responsibility Law.[35] The economic idea supporting this type of rule is that a central bank should have its balance sheet evaluated as if it were an ordinary financial institution. However, this theoretical conception does not take into account that a central bank is the issuer of its *own* money (in the case of Brazil, it is a constitutional power) and is not subject, therefore, to solvency constraints.

In the case of the FGC, it relies on the *quality* of its balance sheet, which supports the credit money it *allocates*. Since it is designed as a pre-funded entity, the FGC is based on limited rediscounting, which reduces its credibility in responding to a deeper financial crisis involving banks with larger deposit liabilities.

Therefore, the FGC is less "elastic" compared to the BCB: it is a fund and does not have access to the BCB as a last resort, as it lacks the legal standing of a financial institution (a formal requirement of Law n. 4595/1964). The FGC *is not able to lend freely*. Consequently, if the FGC goes bankrupt, the BCB cannot formally provide a backstop to the fund's commitments. The FGC can only rely on the *implicit* support of the Brazilian State. The Fund's statute provides that it can access additional funding sources in exceptional circumstances, including imposing extraordinary contributions on members, or issuing bonds and securing loans from national or multilateral institutions – other than the central bank.[36] However, in times of acute economic distress, the access to additional funds could be problematic.

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[34] The accumulation of losses in the central bank balance sheet does not affect the creation of money. This does not mean, however, that the demand for the national currency would not be compromised – this is a matter of confidence in the fiat currency. This idea is still quite controversial in the central bank literature. However, in a footnote of a public document, the European Central Bank (ECB) clearly recognized such institutional capacity for central banks. See D. BUNEA, P. KARAKITSOS, N. MERRIMAN, W. STUDENER, «Profit Distribution and loss Coverage Rules for Central bank», in *ECB Occasional papers*, n. 169, April 2016, p. 14, note 7.

[35] Article 7, Complementary Law n. 101, of 4 May 2000.

[36] Article 10, paragraph 2 of Resolution n. 4469/2016, of 25 February 2016.

A draft bill, not yet voted by the Brazilian Congress, aims to give the FGC the *status* of a financial institution for the purposes of having access to the BCB LoLR facilities.[37] As things currently stand, however, the FGC is subject to significant legal constraints to expand the creation of new debt claims in the economy, easing liquidity shortages. These limitations derive exclusively from its legal structure. Nonetheless, despite all these institutional limitations, the Fund seems to be – in practice - the main LoLR in the Brazilian financial system.

3. Legal Framework and Practices of the Brazilian Lenders of Last Resort and Resolution Authorities: Institutional Fragmentation to cope with the 2008 Crisis

3.1. Redefinition of the BCB Rediscount Activities: The legal problem of institutional constraint in practice

Within the narrow legal boundaries defined by the Fiscal Responsibility Law, the BCB acted in accordance with the regulations identified below (Table 3.1), which sought to define parameters for liquidity support in both national currency and US dollars. The BCB also resorted to the manipulation of reserve requirements as an additional policy tool to deal with the 2008 crisis.

Table 3.1 – The BCB's Legal Basis for LoLR Functions and Manipulation of Reserve Requirements (2008-today)

Regulation	Public authority	Main measures
Provisional Measure n. 442/2008	Brazilian President, executive branch	The National Monetary Council has the power to impose adequate levels of liquidity for financial institutions. In the event that financial institutions default with the central bank, the BCB is authorized to sell the pledged assets.
Resolution n. 3622/2008	National Monetary Council (CMN)	The resolution defines the types of the BCB rediscount operations and credit transactions (in foreign and national currencies).
Circular n. 3407/2008 Circular n. 3411/2008 Circular n. 3427/2008	BCB	These circulars conditioned the reduction in reserve requirements for individual financial institutions to: a) the acquisition of credit portfolios; b) the increase of interbank deposits and/or c) the purchase of shares in funds managed by the FGC.
Circular n. 3408/2008	BCB	

[37] See BCB, *Notice of Public Hearing,* n. 34/2009. See also F. MARQUES, V. PINHEIRO, «FGC gets Ready to gain more Power», *Valor.com*, 16 May 2016, available at http://www.valor.com.br/financas/4564267/fgc-se-prepara-para-ganhar-mais-poder.

Circular n. 3409/2008		The circulars reduced sequentially reserve requirements.
Circular n. 3410/2008		
Circular n. 3413/2008		
Circular n. 3417/2008		
Circular n. 3426/2008		
Circular n. 3427/2008		

Source: BCB website, prepared by the authors.

In 2009, the decrease on reserve requirements amounted to BRL 116 bn (US$ 37.15 bn).[38] However, despite the significant volume of these resources, this policy could be at that time recognized as a failure, since it did not incentivize financial institutions to expand their lending activities. Rather, in the Brazilian case, these resources were channeled to the acquisition of government bonds.[39]

The process of money creation – and, thus, the expansion of liquidity in times of crisis – depends on the increase of loan contracts to finance economic agents that as a result of such credit operations, have their demand deposits (*i.e.* debt claims) expanded. Put differently, financial institutions create new deposits and, therefore, inject liquidity into the economy by extending loans.[40] Therefore, money creation is not a result of financial intermediation, *i.e.* the process performed by banks of supposedly taking resources from a depositor and then lending them out to a borrower. It happens, in fact, through the activity of maturity transformation. This intellectual idea helps to explain why the manipulation of reserve requirements failed to deal with the 2008 crisis: it is not premised on how banks actually issue new units of monetary power.

The relationship between credit operations and liquidity expansion is already noted in the historical works of Young and Dunbar.[41] This approach is also stressed by Keynes in

[38] At the exchange rate of 1 US$ = BRL 3.12. See M. MESQUITA, M. TORÓS, «Considerações Sobre a Atuação do Banco Central na Crise de 2008», Working Paper Serie 202, *Banco Central do Brasil*, 2010, p. 13.

[39] The failure of this policy is not, however, limited to Brazil. In the case of the United States, the Federal Reserve balance sheet had an unprecedented amount of bank reserves in the post-2008 crisis. The Swiss central bank is also holding high levels of bank reserves even after the imposition of punitive interest rates. See A. BITTENCOURT, «Sem Rastro de Crise, Compulsórios têm nova Função», *Valor.com,* 18 January 2013, available at http://www.valor.com.br/valor-investe/casa-das-caldeiras/2975610/sem-rastro-de-crise-compulsorios-tem-nova-funcao.

[40] This conception is different from the view of Portuguese and Brazilian works and textbooks such as G.M. ALVES PINTO, *Regulação Sistêmica e Prudencial no Setor Bancário*, Almedina Brasil, 2015; see also J.S. FONSECA, *Economia Monetária e Financeira*, Imprensa da Universidade de Coimbra, Coimbra, 2010; see also M.C. OLIVEIRA, *Moeda, Juros e Instituições Financeiras: Regime Jurídico*, Forense, 2009; see also T. CORTEZ, «Moeda, Estado e Direito: O Papel do Estado na OrdemMonetária e seu Controle» PhD Thesis, Universidade de São Paulo Law School, São Paulo, 2004.

[41] A. YOUNG, *The Mystery of Money: Selected Papers of Allyn Abbott Young,* Edited by Roger J. Sandilands & Perry G. Mehrling, Routledge, New York, 1999, pp. 273-274; see also C.F. DUNBAR, *Chapters on the Theory and History of Banking*, GP Putnam's Sons, 1891, p. 48.

his *Treatise on Money*.[42] Nevertheless, it is interesting to note how this conception gained new impetus in the post-2008 crisis[43] and obtained support from central bank economists in advanced economies.[44]

In fact, during episodes of liquidity shortages, central banks need to assume a more interventionist role to sustain confidence in the monetary system and incentivize the creation of new short-term debts claims by banks. Manipulation of reserve requirements has not been well-suited to these objectives. As Mehrling pointed out, the monetary authority needs to emphasize its role as a *bankers' bank*. For instance, in developed countries, central banks even operated as a dealer of first resort, *i.e.* setting spreads « directly making markets rather than supporting private dealers in their efforts ».[45]

In the Brazilian case, the BCB's powers to act as a bankers' bank was reinforced by regulations and an executive provisional measure during the 2008 crisis (see Table 3.1, above). These measures were related to the BCB's performance in rediscounting operations up to 360 days, in both national currency and US dollars.

The table below (Table 3.2) identifies the BCB liquidity facilities that were actually deployed after 2008 based on an *ad hoc* legal basis.

Table 3.2 – BCB Liquidity Facilities to cope with the 2008 Crisis

Type of liquidity assistance	Date	Total amount
Auctions (spot market)	October 2008 – February 2009	US$ 14.5 bn
Repo in US dollars	October 2008 – February 2009	US$ 11.8 bn
Auctions (to lend Brazilian foreign-exchange reserves)	From October, 2008	US$ 12.6 bn
Non-deliverable currency swaps	From October, 2008	US$ 12 bn (the BCB announced up to US$ 50 bn, if necessary)

Source: Mesquita and Torós, 2010.

[42] «There can be no doubt that, in the most convenient of language all deposits are "created" by the bank holding them. It is certainly not the case that the banks are limited to that kind of deposit, for the creation of which it is necessary that depositors should come on their own initiative bringing cash or cheques»; see also J.M. KEYNES, *A Treatise on Money*, Mansfield Centre: Martino Publishing, 2011, p. 30.

[43] R.C. HOCKETT, S.T. OMAROVA, «The Finance Franchise», in *Cornell Legal Studies Research Paper Series*, n. 16-29, 2016; see also Z. JAKAB, M. KUMHOF, «Banks are not Intermediaries of Loanable Funds – And why this Matters», in *Bank of England working paper*, 2015; see also MCLEAY, R. AMAR, T. RYLAND, «Money Creation in the Modern Economy», *op. cit.*

[44] It is worth highlighting that this idea does not assume that banks are free from institutional constraints in the money creation process. Financial institutions are constrained by balance-sheet limitations (prudent management of liquidity and solvency risks), the obligation to comply with equity and liquidity ratios defined by regulation, the behavior of private agents (they can use the new funds to repay previous loans, destroying newly-created credit money), and, finally, the central bank's monetary policy (see M. MCLEAY, R. AMAR, T. RYLAND, *op. cit.,* pp. 4-5).

[45] P. MEHRLING, *op. cit.*

The BCB acted largely to support liquidity in US dollars to Brazilian financial institutions, *i.e.* assuring limited rediscounting in foreign currency. Despite the regulations aimed at improving LoLR facilities in national currency, there are no reports showing the use of this power by the BCB. Mesquita and Torós in 2010, central bank economists, detailed all the operations conducted by the BCB to cope with the 2008 crisis. However, there is no mention of emergency liquidity assistance in national currency, only in US dollars.[46] Limits concerning the maturity of the BCB's credit operations[47] and the requirement for a specific law for any operation longer than one year[48] created severe constraints on the Central Bank's ability to respond to a crisis.

Additionally, in the recent past, the Brazilian monetary authority faced harsh political criticism for bailing out banks using public funds. The BCB was the object of two parliamentary inquiries aimed at investigating financial assistance programs. The first inquiry commission dealt with the bailout operations between 1995 and 1997, in the aftermath of the monetary stabilization plan (the Real Plan). The second commission investigated alleged misconduct by public officials in hedging operations of a small number of institutions in the wake of the currency devaluation in 1999, when the foreign exchange regime shifted from pegged float to floating. In both cases, BCB operations were evaluated with great skepticism by Congress' members. The criticism had to do with the recourse to the "systemic crisis" arguments, which supported broader interventions by the central bank. At that time, Congressional members were particularly concerned with reports of private meetings between BCB officials and private bank managers in the run-up to liquidity provisions. They also complained about the lack of timely reporting of BCB actions to the Legislative branch.[49]

Therefore, it seems that a "legal culture" of avoiding legislative criticisms and the use of public funds was already established when the 2008 crisis hit. The complementary role of the FGC (a private fund) can be understood as a consequence of these constraints imposed by law as well as past political concerns.

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[46] When referring to these measures, the economists only reported the FGC liquidity support authorized by the CMN (explored by this article, below).

[47] Article 28, second paragraph, Fiscal Responsibility Law

[48] Article 28, Fiscal Responsibility Law

[49] See Brazilian Federal Senate, *Comissão Parlamentar de Inquérito* (CPI – National Financial System), created by Resolution n. 127, Final Report, 1999; see also Brazilian Chamber of Deputies, *Comissão Parlamentar de Inquérito* (CPI – PROER), created by Resolution n. 21, Final Report, 2002.

3.2. The Expansion of the FGC Powers: *Ex ante* and *ex post* insurance to the financial system

Deposit insurance is an *ex ante* guarantee to the Brazilian financial system and a binding commitment for the FGC. Pursuant to the FGC statute,[50] the fund should provide insurance to «investors of the associated financial institutions in situations of intervention or extrajudicial liquidation by the BCB, or in the case of insolvency recognized by the monetary authority».[51]

The liquidity shortage in 2008 was experienced in Brazil especially by the segment of small and medium-sized banks. They did not have a large base of depositors and their funding and credit operations relied heavily on institutional investors and interbank operations.[52] For this reason, the deposit insurance coverage was expanded beyond traditional deposits.

Mesquita and Torós, Central Bank economists, pointed out that the 2008 crisis caused a *flight to quality*,[53] *i.e.* a migration of deposits to large banks, perceived by Brazilian investors as safer. However, the expansion of the largest banks' liabilities was not automatically translated into more lending operations, notably in the interbank market, that could lessen the liquidity crunch faced by smaller banks.[54] To cope with the funding run on small and medium-sized banks (especially, on the former), the CMN issued Resolution n. 3692/2009, creating a new type of insured deposit: the Term Deposit with Special Guarantee (*Depósito a Prazo com Garantia Especial* – DPGE), with coverage of up to BRL 20 mi (US$ 6.4 mi) and maturity of at least six and a maximum of sixty months.

From 2008, the Brazilian Deposit Insurance Fund also had its mandate considerably expanded. In addition to the traditional deposit insurance, it has implemented the policies of emergency liquidity assistance. This power is discretionary in nature and is exercised in an *ex post* form, *i.e.* after a liquidity event.

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[50] Article 2 of CMN Resolution n. 4469/2016

[51] For a legal analysis on bank insolvency, see J. SADDI, *Insolvência Bancária: Navegando Mares Revoltos,* Textonovo, São Paulo, 2001. On banking crisis management in Brazil, see also C.S. BORGES, «Banco Central e a Administração de Crises Bancárias», *FGV Direito SP - Fundação Getúlio Vargas*, 2014.

[52] M.C. FREITAS, «Os Efeitos da Crise Global no Brasil: Aversão ao Risco e Preferência pela Liquidez no Mercado de Crédito», in *Estudos Avançados*, n. 23(66), 2009, pp. 125-145.

[53] M. MESQUITA, M. TORÓS, *op. cit.*, p. 8.

[54] Small-sized banks suffered the most, since the medium-sized banks managed to compensate for the loss of traditional deposits with the increase of interbank deposits. See D.M. PFIFFER, «Crise de Confiança e Liquidez Bancária: Evidências Empíricas no Mercado Bancário Brasileiro», *FGV Direito SP - Fundação Getúlio Vargas*, 2013. See also R.M. SANTANA, «Os Depósitos a Prazo com Garantia Especial e o Risco Moral nos Bancos de Menor Porte no Brasil», PhD thesis, *Universidade de Brasília: UnB*, 2013, p. 30

The shifting of this monetary power towards the FGC was formalized, firstly, by the legal possibility of the fund to purchase credit portfolios from financial institutions suffering from liquidity shortages.[55] From 2012, the FGC officially received the powers of a lender of last resort. Resolution n. 4087/2012 authorized the fund to carry out «credit operations destined to provide financial support and assistance in special situations, as recognized by the BCB ».[56] Later, this resolution was amended to exclude the requirement of prior authorization of the BCB.[57] The same regulation also authorized the FGC to provide support to mergers and acquisitions, by extending credit operations to the involved financial institutions.

Despite the significance of this power, it is very difficult to empirically assess how it was exercised by the FGC. Both the FGC and the BCB classify this information as confidential, which considerably reduces the transparency of the LoLR activity. As a comparison, the Federal Reserve of the United States (Fed) is under an obligation to disclose the borrowers' information after a certain period of time (generally, one year after the authorization to conduct the exceptional liquidity assistance).[58] No similar accountability rule is established by the Brazilian legal framework.

According to the FGC annual financial statements,[59] in 2008 and 2009 the fund's liquidity support to financial institutions amounted to: BRL 3.9 bn (US$ 1.24 bn) disbursed until December 2008; BRL 3 bn (US$ 960 mi) from January 2009 with an estimated BRL 2.3 bn (US$ 737 mi) for the end of the year; and BRL 1.3 bn (US$ 416 mi) for 2010. The legal basis was the CMN Resolution n. 3656/2008, which allowed the FGC to acquire credit portfolios from associated financial institutions.

Table 3.3 below seeks to identify the liquidity assistance operations and resolution measures undertaken by the FGC from 2008.[60]

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[55] CMN Resolution n. 3656/2008.
[56] Resolution n. 4087/2012, Article 4, paragraph 3, I.
[57] CMN Resolution n. 4222/2013.
[58] The Federal Reserve is under the obligation to publicly disclose information about discount window borrowers and open market operations' counterparties two years after the financial transaction. Information about borrowers under Section 13(3) facilities should be disclosed one year after the authorization for the facility is terminated. The US Federal Reserve offers detailed information on the LoLR operations. For the operations of the Fed, see FEDERAL RESERVE, «Credit and Liquid Programs and the Balance Sheet», *Federalreserve.gov*, available at https://www.federalreserve.gov/monetarypolicy/bst.htm.
[59] The financial statements of the FGC can be accessed at the fund's website – http://www.fgc.org.br.
[60] The information was collected from newspapers and specialized media reports, as well as from the FGC financial statements, when the information was available.

Table 3.3 – Emergency Liquidity Assistance by the FGC, Resolution Arrangements and Other Types of Credit Operations

Financial institution	Date	Type of liquidity assistance	Amount available
1. Various institutions	Between 2008 and 2010	Acquisition of credit portfolios from small and medium-sized banks	BRL 3.9 bn (US$ 1.24 bn) disbursed until December 2008; BRL 3 bn (US$ 960 mi) from January 2009; an estimated BRL 2.3 bn (US$ 737 mi) for December 2009; and BRL 1.3 bn (US$ 416 mi) for 2010.
2. PanAmericano	January 2011	Financing of equity acquisition by BTG Pactual	BRL 3.8 bn (US$ 1.21 bn)
3. Prosper	There is no report on liquidity assistance by the FGC		
4. Cruzeiro do Sul	April 2012	Purchase of senior shares from funds that acquired credit portfolios from Cruzeiro do Sul	BRL 3.58 bn (US$ 1.14 bn)
5. BVA	In September 2012, BVA applied for FGC liquidity assistance, but the operation was not formalized due to lack of good collateral. BVA was subsequently liquidated.		
6. Schahin	July 2011	Credit operations to BMG for the acquisition of Schahin	BRL 800 mi (US$ 256 mi)
7. Matone	July 2011	Credit operations to support the acquisition of Matone by the JBS Group[61]	BRL 1.85 bn (US$ 593 mi)
8. Morada	There is no report on liquidity assistance (*least cost resolution* principle: the FGC decided instead to reimburse depositors).		
9. BTG Pactual	April 2015	Emergency liquidity assistance	BRL 6 bn (US$ 1.92 bn)

Source: prepared by the authors from newspapers, specialized media reports and the FGC's annual financial statements.

From all the identified operations listed above, only the first one referring to various institutions, and the last one regarding the BTG Pactual properly refer to liquidity assistance, an exercise of LoLR functions. The other operations (namely, 2, 4, 5, 6 and 7) were designed as loan agreements destined to support mergers and acquisitions (usually, involving small and medium-sized banks). This empirical data reveals the importance acquired by the Fund since the 2008 financial crisis.

[61] According to the newspaper Valor Econômico, the loan was collateralized by shares of the JBS Group and the repayment period was of 15 years at the rate of the Interbank Deposit Certificate (CDI). See V. PINHEIRO, «Venda do Original pode Esbarrar em Dívida com FGC», *Valor Econômico,* 14 June 2017, available at http://www.valor.com.br//financas/5003476/venda-do-original-pode-esbarrar-em-divida-com-fgc?utm_medium=Social&utm_campaign=Compartilhar&utm_source=E-mail.

To obtain more details on these operations, we requested from the BCB information on the provision of consent or authorization allowing the FGC to carry out emergency operations and liquidity assistance prior to Resolution n. 4222/2013. This request followed the procedures set forth in the Brazilian Freedom of Information Law (Law n. 12527/2011).

In response to the request and the subsequent appeals, the BCB informed that there were no documents demonstrating the "identification of a special situation" pursuant to Resolution n. 4087/2012, and that even if such documents existed they would be protected by confidentiality rules. In the BCB view, the disclosure of such information could endanger the country's «financial, economic and monetary stability». In response to this request, and also in other official statements, the BCB has emphasized the discretionary nature of the choice on the «most appropriate legal tool» among the various preventive measures provided by the Brazilian legal framework to deal with liquidity shortages.

In dealing with the 2008 crisis, Antonio Carlos Bueno, former FGC executive director, declared that:

> [T]he interaction between the FGC and the Central Bank is impressive. It's informal but instantaneous. When they [central bank officials] need us, they call us, inform us, give us the update. What we, members of the FGC board of directors, have is a formal letter with a commitment of confidentiality. Over those 15 years, the central bank has become accustomed to the confidentiality of the FGC. At the time of the [2008] crisis, we exchanged ideas about everything, every day, at the weekend, at night, at dawn.[62]

This excerpt reveals the opaque relationship between the FGC and the BCB during the management of the 2008 crisis. A relationship based on confidentiality and informal interactions tends to weaken the political accountability of both the BCB and the FGC in the exercise of monetary power.

Until 2012, the managers of the FGC's main governance bodies – the Board of Directors and the Executive Board –[63] were appointed by the National Confederation of Financial Institutions (CNF - *Confederação Nacional de Instituições Financeiras*), a private organization representing the financial industrial sector. It was only in 2004 that a BCB approval for these appointments was required (Resolution n. 3251/2004).

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[62] Excerpts from an interview given by Antonio Carlos Bueno, FGC director, to Valor Econômico newspaper, entitled *FGC Takes on a new role and Starts to Prevent Crises*, 24 November 2011.

[63] The FGC Executive Board was created in 2002 (Resolution no. 3024/2002). Before that, the FGC was managed only by the Board of Directors.

In 2012, an overhaul in the FGC's governance changed the composition and the process for appointing new FGC's managers. The CMN Resolution n. 4087/2012 prevented the possibility of the FGC directors to serve in a professional capacity in the fund and, at the same time, in a financial institution (Article 25 of Resolution n. 4469/2016). These legal vehicles also created a *cooling off* period of four months in which former managers were prohibited from exercising any paid activity in financial institutions or in associations representing the interests of the financial industry (Article 31 of Resolution n. 4469/2016).

Notwithstanding these reforms, many of them spurred by the IMF,[64] it is important to highlight that professionals who developed their career as economists or lawyers in the financial markets have historically occupied key positions within the FGC governance bodies. For instance, the Chief Executive Officer (CEO) for the period of 2016-2019, Mr. André Arantes Loes, was the former chief-economist of the Brazilian branch of HSBC. His predecessor, Mr. Antônio Carlos Bueno, who served as CEO between 1996-2013, is also a renowned lawyer and former director of the ABN Amro Real, purchased by Santander in 2007.[65] The chairman of the Board of Directors between 2013-2017, Mr. José Luiz Majolo, served as the Banco Sudameris Brasil CEO, purchased by the ABN Amro Real in 2003. He left the FGC to become the Votorantim Finanças CEO, the holding company that controls the Votorantim Bank, a joint venture of the Votorantim conglomerate and the Banco do Brasil, a public bank.

Arguably, the governance reforms made in the FGC statute might not have completely ruled out the perception that there is a *revolving door* between the fund and its member-institutions. Currently, one of the main criticisms is that the FGC's competence to formalize credit operations with financial institutions is creating problems of moral hazard.[66]

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[64] In paragraph 38 of the 2012 Brazil Financial System Stability Assessment, the IMF noted that «a key staff recommendation in this regard was implemented shortly after the FSAP mission with the reform of the FGC's governance that removed active bankers from its Board».

[65] ABN Amro Real S.A. was formed after the Dutch bank ABN Amro purchased the Brazilian Banco Real S.A. in 1998.

[66] G.M.A. PINTO, *Regulação Sistêmica e Prudencial no Setor Bancário*, Almedina, 2015.
The presence of associated institutions in the management of the deposit insurance scheme and informal arrangements of cooperation between the fund and the banks, or between the fund and the central bank, are not always seen from a negative perspectiver by the literature. For Beck, the private nature of the German deposit insurance schemes (whose managers are appointed by the German Bank Association) avoids agency problems often found in funds owned by the government. The private nature would help in mitigating potential agency problems between public administrators of the scheme and the taxpayers, as owners, and in raising the cost of regulatory and political capture. In the author's view, personal contacts facilitate moral suasion and pressure. Yet, the author recognizes that the *success* of the German scheme may not be easy to

Despite its legal status as a private law entity, the FGC saw its public competences strengthened, assuming functions analogous to a monetary authority. Currently, the Fund has public responsibilities towards the maintenance of financial stability and the prevention of systemic banking crisis.[67] Changes in the FGC statute since the onset of the 2008 crisis had a more or less explicit intention to avert a perception that the Fund's operations were vulnerable to manipulation by market participants and, consequently, to moral hazard. This stems from the very legal design of the Fund.

Currently, the BCB has been advocating for a change of its legal framework,[68] so as to discipline the emergency liquidity support and the resolution regime. Among possible innovations, it has been suggested the possibility of creating a separate fund for liquidity assistance. Its management would be isolated from the deposit insurance fund. Available information indicates that both funds would be placed under the FGC purview.[69]

In an IMF report prepared under the Financial Sector Assessment Program (FSAP), the international organization considered the expanded mandate of the FGC as a positive development.[70] However, the IMF signalized potential conflicts of interest. It recommended, among other measures, that FGC actions should be subjected to the principle of *least cost resolution* and the open bank assistance should be restricted to situations of serious systemic risk, capped to 50% of the FGC's assets.[71] The IMF also recommended the inclusion of the FGC in the Brazilian Committee of Regulation and Supervision of Financial Markets, Capital Markets, Insurance and Pension Funds (COREMEC).[72]

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export to other countries and the replication of the model «has to be judged against the background of an institutional environment that fosters contract enforcement and the rule of law and that exhibits a low level of corruption». At the time Beck wrote the paper (2002), Germany had more than one deposit insurance fund, divided by groups of banks (public, cooperative and private). See T. BECK, Deposit insurance as private club: is Germany a model? *The Quarterly Review of Economics and Finance*, n. 42, 2002, pp. 701-719.

[67] Article 2 of Resolution 4, n. 469/2016

[68] A public consultation on a draft bill was staged by the BCB in 2009 (Notice of Public Hearing no. 34/2009), but until the conclusion of this paper the National Congress had still not voted on it.

[69] According to Valor Econômico newspaper of 16 May 2016, «FGC is getting ready to gain more power». See A. SILVA JÚNIOR, D. FRIEDLANDER, «FGC já deu R$ 7,5 bi a Bancos Pequenos», *Estadão*, 14 September 2011, available at http://www.valor.com.br/financas/4564267/fgc-se-prepara-para-ganhar-mais-poder.

[70] INTERNATIONAL MONETARY FUND, «Brazil: Financial System Stability Assessment», in *IMF Country Report*, n. 12/206, 31 July 2012. The Financial Sector Assessment Program (FSAP) periodically evaluates the soundness of member countries' financial systems and regulatory compliance with international standards.

[71] *Id.*, p. 32.

[72] *Id.*, p. 29.

On May 2013, the CMN finally incorporated the IMF's recommendations and explicitly included the principle of least cost resolution in the FGC statute (Article 4, paragraph 2(I) of Resolution n. 4222/2013). The rationale underlying this principle, however, was already embedded in the FGC practices.[73]

In relation to the IMF recommendation to cap liquidity assistance to 50% of the FGC's assets, this condition was incorporated through Resolution n. 4087/2012 (Article 4, paragraph 2.II). In 2013, however, Resolution n. 4222/2013 provided that, in adverse economic circumstances recognized by the BCB, this limit could be exceptionally repealed pursuant to a decision of the FGC Board of directors.[74] However, both these decisions – *i.e.* the BCB's authorization and the FGC Board of directors' statement – are not classified as public information, not even *ex post facto*.[75] The exercise of LoLR's and resolution powers by the FGC reveals persistent problems related to transparency and public accountability.

4. Conclusion

The 2008 financial crisis challenged much of the normative concepts about how a country should design its architecture for financial regulation and supervision, as well as the institutional framework underlying the interaction between monetary policies and financial stability. In many jurisdictions, a new wave of structural institutional reforms has ensued, either through the creation of new structures, the redistribution of functions among existing agencies, or the separation of agencies with more specialized tasks.

Drawing on an empirical account of the management of the 2008 crisis in Brazil, this article advanced the argument that the legal framework in which banks operate determines the ability and the credibility of a central bank, or a resolution authority, to act as a LoLR and/or as a resolution manager in an efficient manner and avoiding moral

[73] It was applied in the case of the Morada bank, before Resolution n. 4222: «According to sources participating in credit operations, where the cost of rescuing a bank is equal or not much bigger than the cost of reimbursing investors for their deposits, the FGC chooses to provide emergency assistance. In the case of the Morada, in Rio de Janeiro, the choice was between covering a hole of BRL 700 millions or reimbursing depositors in the amount of BRL 150 millions. In this case, the FGC decided to not bail out the bank». A. SILVA JÚNIOR, D. FRIEDLANDER, *op. cit.*

[74] Article 4, paragraph 3, Resolution n. 4222/2013

[75] In the *Core Principles for Effective Deposit Insurance Systems*, the International Association of Deposit Insurance (IADI), the main standard-setting body for deposit insurance schemes, recommends that the implementation of public policy goals must be verified by internal and external reviews, and both must take into consideration the views of interested parties. This recommendation, however, hardly find resonance in the current Brazilian regulatory framework. See IADI - INTERNATIONAL ASSOCIATION OF DEPOSIT INSURERS, «Core Principles for Effective Deposit Insurance Systems», *IADI.org*, available at http://www.iadi.org/en/assets/File/Core%20Principles/cprevised2014nov.pdf .

hazard. In times of crisis, if a central bank is confronted with institutional constraints to fully act as a lender, this function tends to be delegated to other entities through techniques of legal redesign. This delegation and consequently the institutional fragmentation resulting thereof, can provide (or not) a credible alternative framework to effectively deal with a moment of financial distress.

In Brazil, new regulatory and conceptual contours of the LoLR function and the resolution regime occurred through a progressive fragmentation of the monetary power. Unlike its peers in more developed countries, the Brazilian central bank did not expand emergency liquidity assistance since it suffered from institutional constraints. Nevertheless, Brazilian public authorities artfully circumvented legal limitations by delegating part of the central bank's monetary power to the Brazilian deposit insurance fund - the FGC - to sustain the credit money flow in the economy and rapidly respond to the 2008 crisis. The institutional fragmentation resulting thereof was supported by the Executive branch and regulations of the National Monetary Council without broader public debates or active participation of the Brazilian Congress.

The recent changes in the Brazilian legal framework are still an unfinished work. As discussed in this article, the Brazilian post-crisis safety net arrangements raise serious concerns related to its economic efficiency and its governance, including issues of transparency and accountability. The Central Bank, responsible for issuing the national currency, is limited in its ability to expand liquidity due to legal constraints. The FGC, a private-managed fund with no backstop from the BCB, is currently the main LoLR and resolution authority in the Brazilian financial system. The Central Bank mainly operates limited rediscounting facilities in foreign currency.

The fragmentation of the Brazilian monetary authority poses practical problems, with effects on the implementation of policies aimed at financial stability in times of crisis. A critical issue is still the relationship between the two entities: BCB and FGC. There is no transparency regarding the exercise of monetary powers by them (information is claissified as confidential, even *ex post facto*) and there is a lack of accountability mechanisms. The economic rationality for triggering each of these tools is not officially communicated by the BCB or the CMN. Additionally, when it comes to the FGC, in times of acute economic distress the LoLR mandate could conflict with the fund's obligation in relation to traditional deposit insurance. Ideally, segregated assets should be constituted within the FGC to protect the rights of smaller depositors from other fund's commitments related to credit operations with banks.

A roadmap of legal and institutional reforms is needed, and the most immediate development is likely to be pushed by the BCB itself, but that would require congressional approval since the most critical changes must be made at the level of legislation. An updated version of the draft bill that was staged by the BCB in 2009 is expected to be resubmitted, addressing part of the issues discussed before. In any case, robust accountability mechanisms and transparency requirements should not be left aside. Only a bold reform that addresses such gaps can generate greater economic efficiency and ensure the legitimacy of the legal framework.