The money process still required a deep, unacknowledged act of faith, so mysterious that it could easily be confused with divine powers

Central banks are not traditionally thought of as being socially accountable. In fact, the main innovation of central banks in the 20th century was to make them largely independent from political influence. Thus, the prevailing (economic) analyses of central bank accountability have examined the formal relationships of accountability to political bodies such as the legislature and the executive. However, this article argues that trends in monetary policy-making beginning in the 1990s inadvertently led to the potential for greater social accountability of central banks. Driven by a shifting economic consensus, central banks moved from an approach of secretive currency management to transparent communication with the market. This transformation was prompted by new beliefs about the efficiency of monetary policy. This article argues that the current 'hard law' framework for central bank accountability does not reveal all of the social mechanisms in place. In fact, 'soft law' instruments are causing more and faster institutional changes in the legal framework for the central bank accountability. The role of law is changing accordingly: central banks have their actions controlled in an ex post model of supervision rather than an ex ante form. This study explores the institutional development of accountability mechanisms in two central banks in advanced economies (the US Federal Reserve and the European Central Bank) and in a monetary authority in an emerging economic power (the Brazilian Central Bank). All the three central banks had the same institutional development, despite the significant differences in terms of political, social and economic contexts in which they operate.

Keywords: Law and central banking, accountability, monetary policy, Fed, ECB, Brazilian Central Bank (BCB).

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Amongst the attributes of sovereignty, central banks (CBs) are as important as symbols, as flags and national anthems. CBs are important institutions in domestic politics and their actions have a direct impact on households and firms. Those CBs that manage currencies accepted as international means of payment and investment vehicles can also shape financial politics worldwide. In the management of the 2008 crisis, CBs gained even greater powers to act in financial markets in order to stabilize credit and money markets. The impact of their actions could be felt on a global scale. With these growing powers, it is doubly important that the appropriate accountability mechanisms are in place.

The central goal of this paper is a comparative analysis of three central banks and their institutional design for the exercise of monetary power. This study analyses 'hard law' mechanisms (established by treaties, constitutions or statutes) for social accountability in three CBs: the European Central Bank (ECB), the United States (US) Federal Reserve (Fed) and the Brazilian Central Bank (BCB). It then examines 'soft law' mechanisms, usually created by CBs themselves, since in some institutions these instruments can play an important role for legitimacy and accountability.

This paper takes a specific legal approach. It conceives of law as a framework to hold CBs accountable. Accountability can be defined as a social relationship between an actor and a forum in which the actor is obliged to explain and justify his conduct; the forum can pose questions,
pass judgment and the actor may face consequences for his actions. For the purpose of this study, monetary accountability is scrutiny of the monetary policy implemented by CBs and the potential imposition of sanctions should policy be deemed inappropriate.

The Fed (established in the 1910s) and the ECB (established in the 1990s) are the most important CBs in the world. They issue the two leading currencies, with the US dollar and the Euro being most frequently used internationally as means of payment, reserves and investment vehicles for both states and private actors. Their actions, therefore, have more stakeholders than other CBs: since their currencies are de facto used at the level of the international monetary system, these two CBs carry out global financial missions even without specific legal mandates covering their global actions. For these banks, therefore, accountability and transparency mechanisms are especially relevant. The BCB, a monetary authority in a rising economic power, established in the 1960s, is an example of an institution that has its policies highly influenced by foreign markets in US dollars and the Fed’s policies.

These three CBs were established in very different historical moments and political contexts. Yet, interestingly, they have developed the same legal framework for accountability and transparency – i.e. based on instruments of soft law – and are held accountable not to political agents, but mainly to national and international economic actors. This can be explained with reference to the economic consensus on monetary policy implementation that has been pervasive since the 1990s: price stability as the main monetary goal and market communication as an instrument to manage inflation expectations. The earlier mystery and the secrecy of the currency management have been replaced by the disclosure of methods and goals for the CBs’ decision-making process. This framework of transparency was designed with an underlying economic purpose, i.e. to provide information to markets; however, it established new instruments that potentially can improve CBs’ accountability towards political and social actors, both at the domestic and global level.

The main arguments of this paper are as follows: (i) the current 'hard law' framework does not reveal all of the social accountability mechanisms in place in the CBs under study; (ii) while 'hard law' mechanisms still represent an important component of the legal framework designed for social accountability, 'soft law' mechanisms are causing more and faster institutional changes in the accountability and, consequently, the legitimacy of CBs; and (iii) based on findings (i) and (ii), the role of law in this domain has changed: CBs have their actions controlled in ex post form (political powers and social actors evaluate if the CB attained its goals) rather than an ex ante model (by a prior definition of policy limits, e.g. a ceiling for reserve requirements or a limit for the issuance of paper money).

This article is divided into six sections. Following this introduction, I present an overview of the economic literature on accountability in CBs. I then identify the main gap in this literature and highlight what a legal perspective can add to the study of this subject. The third section proposes a legal concept for accountability and discusses how it can be applied to the study of CBs. The fourth section presents the case studies, analysing the social accountability mechanisms in the ECB, the Fed and the BCB that have a 'soft law' nature. This research focuses on the analysis of accountability instruments geared towards the general public and political powers (what is usually referred to in the economic literature as 'operational transparency'). The fifth section presents the main conclusions related to the case studies and highlights directions for future work. The final section concludes.

II. A LEGAL ANALYSIS OF ECONOMIC RESEARCH ON CENTRAL BANK ACCOUNTABILITY: SOFT LAW NEGLECTED

In the economic literature, there is no broad agreement on the exact relationship between the concepts of accountability and transparency. Empirical economic research on central banks is usually based on rankings of these banks on the basis of their accountability and transparency. However, there is often confusion between authors' description of ex ante or ex post accountability, as well as de facto or de jure transparency in the form of disclosure of monetary targets, procedures and information. By


contrast, this paper clearly argues that accountability is essentially an *ex post* mechanism, yet *ex ante* targets are needed for *ex post* evaluation of the CB’s actions.

Laurens et al.,\(^7\) for example, evaluate an extensive sample of 98 monetary authorities. The authors examine accountability mechanisms such as the legal definition of monetary targets (including their prioritization and quantification), the legal obligation to explain and justify actions taken (i.e. the publication of reports addressed to political authorities and to the public in general) and the existence of a decision-making process that provides detailed explanation of reasons underpinning collective deliberations. Transparency was defined as operational (disclosure of targets), economic (disclosure of monetary strategies and analysis) and in relation to procedures (publication of minutes or voting records).

They argue that there is a positive and significant correlation between accountability and transparency, i.e. accountable CBs tend also to achieve a high degree of transparency.\(^8\) Nonetheless, this correlation could also imply that they are measuring the same phenomenon. Transparency facilitates and integrates the political process of accountability. Scrutiny of CBs' actions is based on disclosure. Moreover, transparency could be conceived as a form of *social* accountability, which allows other stakeholders – not only national political powers – to evaluate CBs' decisions and make judgments.

This flaw, of seeing transparency as distinct from accountability when in fact the two are mutually reinforcing and, at root, the same phenomenon, becomes evident when considering a subset of the monetary authorities studied by Laurens et al: those in advanced economies (25 Central Banks). The authors find that in these institutions a high degree of transparency was not followed by a proportional growth in 'accountability' mechanisms. This variation can be explained, according to the authors, by the legislative process for establishing the instruments to hold CBs accountable. Since creating accountability mechanisms requires a change in legislation, it is dependent on political will and, thus, demands a higher political consensus.

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\(^7\) Laurens et al (n 5).

\(^8\) ibid, 137-163.
The barrier to establishing 'formal' accountability rules is, thus, deemed higher than for transparency mechanisms. Laurens et al also argue that CBs in advanced economies were able to use new technological tools to improve transparency, but they have not invested the same amount of efforts in their 'accountability frameworks'.

I argue that this economic perspective on CB accountability is premised on two inaccurate assumptions: (i) the tools of transparency are necessarily 'informal' (de facto) and (ii) the accountability mechanisms have primarily a political nature and are always 'formal' (de jure), i.e. they are established by hard law and aimed at accountability to political powers.

The economic perspective tends to reduce the social relations of accountability only to reports required by hard law. It ignores instruments with a low degree of normativity or 'legalness' (such as regulations and CBs' regulatory decisions), which also create relationships of accountability. The economic perspective fails to capture the complexity of these social mechanisms, since they can be established through soft law, i.e. by political decisions with a lower degree of formality.

In fact, at the same time as developed countries' CBs have innovated on instruments to achieve better communication with markets, they have established greater accountability instruments. However, these accountability mechanisms have emerged as soft law, outside of the battles in the political arena, and have, therefore, gone unnoticed in the economic literature, which refers to them only as 'mechanisms of operational transparency'.

However, it is important to mention that the mere existence of soft law accountability mechanisms does not necessarily mean CBs will be accountable. Soft law can encourage innovation and experimentation, but there is a risk: it can also be a way to avoid definite, binding commitments, allowing CBs to easily change the mechanisms in moments of pressure. Further, the growing complexity of monetary policy, especially during times of crisis, could undermine the effectiveness of accountability mechanisms, especially for a broad public audience that, unlike market participants, may struggle to understand the implications of complex monetary policy decisions.

Nonetheless, law (even, soft law) is not neutral or external to the political process of CB accountability. Law is a technical and symbolic discourse that can both aid monetary policy implementation and at the same time promote accountability. Once legal mechanisms to hold CBs accountable are established and an institutional space for dialogue (between social

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9 ibid, 172.
actors, political powers and the CB’s managers) is created, there is already an effect on the operations of the CB. This structure is an institutional reality and may allow social actors to contest the political choices underlying monetary policy implementation and its distributional effects.

After an important historical period of innovations in monetary actions, e.g. balance-sheet policies and quantitative easing (QE),\(^\text{11}\) the period after the 2008 crisis has re-focused on the question of accountability. As demonstrated in Section 4, all three CBs appear to have the legal instruments that would allow for ex post evaluation, yet until now only the Fed has been seriously called to account for its decisions.\(^\text{12}\)

Given this argument for the importance of soft law accountability mechanisms, several steps are necessary to ascertain their true impact on CBs’ accountability legal framework. First of all, it is necessary to identify whether an accountability instrument is in fact a legal rule. Once created, the legal rule generates a social expectation for the maintenance of the mechanism. In time, this rule can then create a forum to question and make judgements about monetary options. That seems to have happened with the Fed’s actions in the aftermath of 2008 crisis: political and social judgements on the efficiency and fairness of these actions were feasible.\(^\text{13}\)

Secondly, monetary policy is a complex and arguably scientific issue (at least, this is how the discourse around monetary policy describes it), but it has clear wealth distributional effects between classes (and even nations), i.e. it has a political nature. Therefore, the potential public impact of an accountability rule is significant. It permits the assessment of political choices that have social effects. It compels public authorities to explain their rationale. As long as more instruments of transparency are established by rules, it will be more difficult to remove them. I argue below that CB regulations and decisions do in fact have a legal nature and that CBs have established accountability mechanisms since the 1990s. These instruments can potentially reinforce the accountability of CBs over time. After a period of crisis, CBs’ decisions are today again being questioned and these instruments are, therefore, even more important.


\(^{13}\) ibid.
The three CBs chosen for this case study were established in different historical periods: the 1910s (the Fed), the 1990s (the ECB), and the 1960s (the BCB). They operate in very different political and economic contexts. Also, there is a huge variation between their institutional set-up: one CB is a supranational institution with monetary powers and limited financial regulation authority (the ECB); the other is a federal agency that works alongside with regional private banks (the Fed); and the third one is a national and centralized CB, not de jure independent from political powers in contrast with the other two (the BCB).

However, they were chosen because the two advanced economies' CBs and the emergent BCB have developed the same institutional pattern during the last decade: they have innovated their accountability framework through soft law instruments. As said above, this specific form of institutional innovation can be attributed to an economic consensus on the nature of monetary policy implementation. These CBs have specific concerns in relation to operational transparency. Both ECB and Fed manage international currencies. The BCB, in turn, is concerned with foreign investments in the Brazilian financial market and capital flows.

III. THE LEGAL STRUCTURE OF CENTRAL BANK ACCOUNTABILITY

The aim of this section is to identify the legal structure of mechanisms dedicated to the CB accountability. For this purpose, it is pertinent to develop a theoretical framework for the recognition of an accountability rule: How do we know an accountability rule when we see one?

As outlined in the introduction above, accountability is an established social relationship between an actor and a forum in which the actor is obliged to explain and justify its conduct; the forum can pose questions, pass judgments and the actor may face consequences. Monetary accountability is a form of scrutiny and implies the potential use of sanctions over the currency management implemented by the CBs. Monetary accountability is a social relationship institutionalized by law. The legal framework for monetary accountability implies rules with different degrees of 'legalness' – i.e. soft or hard in a continuum. I conceive normativity or 'legalness' as a matter of graduation. Legalness is the quality of a legal standard that creates an accountability mechanism.

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14 Bovens (n 2).
15 This study employs the concept of 'legalness' as 'juridicité' as developed by Gérard Timsit, Archipel de la Norme (PUF 1997).
17 Timsit (n 15).
Accountability rules involve legal procedures and parameters for monetary actions. This legal relationship encompasses interaction between different agents – CBs and the forums in which they can be scrutinized. The forums have the legal power to assess, judge and potentially impose sanctions on the CBs (table 1).

Table 1. Monetary accountability as a social relationship and as a legal framework

<table>
<thead>
<tr>
<th>The social relationship of accountability is:</th>
<th>Rules intended to improve the social accountability of a monetary authority are:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. A relationship between an actor and a forum, ...</td>
<td>Relational rules – between a CB and social forums – ...</td>
</tr>
<tr>
<td>2. ...in which the actor is obliged...</td>
<td>...institutionalized by law ...</td>
</tr>
<tr>
<td>3. ...to explain and justify...</td>
<td>...which define a legal form of scrutiny ...</td>
</tr>
<tr>
<td>4. ...his conduct.</td>
<td>...of an action or an omission (the object of accountability process).</td>
</tr>
<tr>
<td>5. The forum can pose questions, ...</td>
<td>The forum has the legal power to scrutinize the CB. There are procedures and parameters for monetary actions established by legal instruments (soft or hard law).</td>
</tr>
<tr>
<td>6. ...pass judgments ...</td>
<td>The forum can impose sanctions: legal, economic, reputational or social repressive measures.</td>
</tr>
<tr>
<td>7. ...and the actor may face consequences.</td>
<td>The legal nature of an accountability rule does not depend on the legal nature of its sanction.</td>
</tr>
</tbody>
</table>

In addition, one must distinguish two different perspectives for the analysis of accountability relationships. Accountability may be conceived as a virtue or as a mechanism. As a normative concept (accountability as a virtue), it is a set of standards for the evaluation of public agents’ behaviour, i.e. did CBs behave in a manner that was accountable to its stakeholders? In a narrower and descriptive sense, accountability is an

18 ibid.
institutional relationship or an arrangement in which an actor can be held to account by a forum, i.e. can the CB be held responsible for its actions by its stakeholders? This study conceives the monetary accountability relationship in the latter, descriptive sense and my legal approach sees law as an instrument for institutional design.

Social accountability involves the scrutinization of CBs by social forums. The social forums may comprise citizens, communities, independent media and interest groups, including academics, professional peers, market and civil committees. They are the 'CB watchers'.

This paper conceives of social accountability in terms of what Grant and Keohane\textsuperscript{19} classify as market and peer accountability relationships. Market accountability is a relationship whose forum comprises consumers and investors (equity- and bond-holders). It is characterized by their influence, which is exercised in whole or in part through market mechanisms. In monetary accountability, the market relationships include international or national investors who act directly on the real economy or through financial markets. These actors have their financial decisions influenced by monetary policy. In turn, consumers 'hold' fiat money (managed by a CB). Sanctions from these market actors may manifest as restrictions on access to capital, demands of higher interest rates or even refusal to accept fiat money.

Peer accountability arises as the result of scrutiny by professional institutions or organizations characterized by the same scientific values and ideas. Sanctions issued by this type of social forum are related to effects on network ties, scientific support, reputation and prestige. Grant and Keohane\textsuperscript{20} identify 'public reputation' as a type of accountability mechanism. Nevertheless, 'public reputation' can be affected by several different social forums (whether professional, related to market, etc), or even by political forums. In addition, reputational sanctions very often have the ability to activate the political mechanisms that have real 'teeth'.\textsuperscript{21}

For the purpose of this article, I refer to 'social forums' as a large group of CB watchers comprising market agents, academic peers, media and citizens in general. My main concern is by which legal means this diverse group can assess information and motivation of CB monetary actions.


\textsuperscript{20} ibid.

IV. **Accountability Mechanisms for Central Banks: The Legal Framework of the ECB, the Fed and the BCB**

This section applies the framework set out above, analysing the mechanisms for social accountability for the monetary actions of the ECB, the Fed and BCB. The key accountability mechanisms identified by this research are: (i) the legal basis of central bank mandates, (ii) the monetary objectives set for the central banks, and (iii) legal instruments related to operational transparency to hold them accountable to different stakeholders, at national and international levels. Although the first two instruments establish legal parameters to evaluate monetary actions (*ex ante* mechanisms), together all three constitute an accountability process.

1. **Legal Basis of Central Bank Mandate**

   With respect to political accountability, changes to the legal basis of CBs, or merely the threat of such changes may be a sanction for the monetary authority. That depends on the legal conditions and political consensus required for an amendment to the CBs legal foundation text. Furthermore, the legal basis provides parameters for governments and social actors to evaluate monetary actions (or inactions). This basis supports the exercise of monetary power by CBs and, depending on its degree of 'legalness', can strengthen the social perception of monetary authority legitimacy. To establish how exactly the legal basis of a CB plays a role as an accountability instrument, one must examine its degree of 'legalness'.

   Analysis of the institutional basis of CBs reveals three different ways of structuring the establishment of a monetary authority by law. The first model involves the constitutional recognition of a central bank combined with a legislative act structuring its monetary operations. This is the case for the BCB. The Brazilian Constitution of 1988 states that monetary issues are the exclusive matter of the Federal government and must be exercised through a specific institution, namely a 'central bank' (Article 164, Constitution of 1988). The Brazilian Constitution does not specifically invoke the BCB but references a central bank as the institution responsible for monetary policy implementation. Therefore, a hypothetical annihilation of the BCB would be dependent on a high degree of political consensus, since a constitutional amendment would be necessary, requiring approval by three fifths of the Congress. Also, the Constitution establishes that the financial functions must be defined in a 'complementary act' (Article 192, Constitution of 1988) whose approval shall require an absolute majority of the Congress (Article 69, Constitution of 1988).

   The second model for organizing a monetary authority is illustrated by the Fed. The 1787 Constitution of the United States assigns the power to issue money to the Congress and does not contain references to a CB. References to currency matters in the 1787 Constitution can only be found in the description of the power of Congress regarding the regulation of the value of currency and the prohibition for individual states to issue paper
money (Article 1, Sections 8 and 10, Constitution of 1787). In 1819, the Supreme Court of the United States recognized that Congress had the constitutional prerogative to make 'necessary' and 'proper' laws in order to exercise its powers (Article 1, Section 8, Constitution of 1787) and could establish a CB designed specifically for monetary control. The Fed is thus an agency of the legislative power.

The third model for creating a monetary authority is represented by the ECB as a supranational institution. The ECB is not conceived under a legal regime created by a single State. It was established by a constitutional treaty, born out of an agreement between the Member States of the European Union to share their monetary sovereignty. This legislative instrument was signed by the executive of Member States and then needed to be ratified by their parliaments according to their constitutional requirements. The ECB is a European institution under the terms of Article 13(1) of the Treaty on the Functioning of the European Union (TFEU). The TFEU states that the EU has exclusive competence in monetary policy for Member States whose currency is the euro.

The three models for structuring the monetary authority can be summarized as below (table 2).

| Table 2 – The legal basis of the ECB, the Fed and the BCB |
|-------------------------------|-----------------|-----------------|
| **Legal basis**               | **ECB**         | **Fed**         |
| Supranational and constitutional status, monetary powers under a treaty | Without constitutional status, monetary powers under a Congressional act | Constitutional status, monetary powers under a Congressional act |

The ECB is the only monetary authority expressly referred to in a legislative act that regulates the monetary system. The ECB is also recognized as a European institution on par with the entities of the EU executive and legislative powers. It has its monetary powers provided by the same instrument. In order to change the ECB basis, a (very) high political consensus would, therefore, be required.

The European political powers have, thus, lost the most drastic sanction for their monetary authority: the ability to change, or even threaten to change, its legal basis. The legal structure, which insulates the ECB from the threat of legal reform by political actors, may act as a block against the

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22 McCulloch v Maryland 17 US 316 (1819).
implementation of any *legal* sanctions. This design not only ensures a high degree of operational autonomy for the ECB, but also means that the accountability instruments (especially the political ones) tend to be fewer and less effective compared to those available for checking national monetary authorities.

There are, however, rules that provide for a simplified revision for the ECB and ESCB statutes. In such a process, the Council and the European Parliament are the entities involved. Nevertheless, the status of independence, the monetary objectives and the very existence of the ECB cannot be changed by this procedure. This procedure led by the Council and Parliament has authority over only very few operational powers. Furthermore, the decision-making process provides for the recommendation of or consultation with the ECB governing council. This demonstrates that the mechanism was not designed specifically as an accountability instrument for the EU political powers (as a way to eventually 'punish' the CB), but only as a way to make more flexible operational and technical changes that are necessary for the ECB itself.

In times of crisis, the legal basis of the monetary authority is particularly important, as witnessed after the 2008 crisis. The time for political negotiations and legislative process can cause the success or failure of measures to overcome macroeconomic shocks. The design of the supranational monetary authority in the euro area tends to multiply veto points to such measures. The ECB was pushed to innovate and assumed the risk to be challenged by courts. However, outside of crisis' events, this structure tends to ensure the highest degree of legal predictability.

In a broader perspective, one must recognize that, despite the institutional differences between these three monetary authorities, the high degree of 'legalness' of their institutional basis allows them to operate stably within the parameters agreed by political powers by means of a statute or a treaty. The social (and political) oversight of their actions (as well as the social perception of their responsibilities and powers) tend to be reinforced by the fact that their legal structure is subject to negotiations in the political arena and is articulated by instruments with a relevant degree of 'legalness'.

2. Monetary Objectives

Clear and specific monetary objectives to be pursued by the CB are crucial parameters for assessing their behaviour. Performance in accordance with

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24 Art 129(4), TFEU.
26 See the CJEU case C-62/14 *Peter Gauweiler and Others v Deutscher Bundestag* ECLI:EU:C:2015:400. The ECB's outright monetary transactions in secondary sovereign bond markets (OMT) was contested by Germany in relation to the interpretation of arts 119 TFEU, 123 TFEU and 127 TFEU and of arts 17 to 24 of Protocol (No 4) on the Statute of the European System of Central Banks and of the European Central Bank.
these parameters can be evaluated by both political and social forums. The degree of 'legalness' of the act that specifies CB's policy objectives reveals the extent to which the monetary target can be used as a predictable and stable reference for accountability evaluation. If there are multiple policy objectives for the CB, with no hierarchical ordering among them a margin of choice is delegated by the political powers to the CB. The monetary authority can choose at its discretion to pursue a specific objective over another. This ambiguity may make it more difficult for political and social forums to monitor and evaluate the CB's behaviour.

Regarding monetary objectives, the CBs of this study can be divided into two types. The first type is a CB with priorities designated by political powers. The ECB falls into this type. However, the ECB itself quantitatively defines its target without the involvement of political powers. The second type (containing the BCB and the Fed) comprises monetary authorities with multiple objectives. In the BCB's case, the inflation targeting system was adopted explicitly by the executive power, i.e. this objective was part of the legislative basis of the CB; while in the case of the Fed, this system was adopted only by the CB initiative.

The ECB's priorities are explicitly designated by political powers. Article 282(2) of the TFEU states that price stability is the primary objective of the central banks system managed by the ECB. Without prejudice to this objective, the ESCB may support other EU economic policies. In 1998, the ECB governing council quantified the price stability objective by a collegial decision: an average inflation of 2% per year.27

The second type includes both the Fed and the BCB. The Fed aims at full employment and price stability objectives, a dual mandate without hierarchy,28 alongside a financial stability aim. Neither the Federal Reserve Act, the CB's regulations nor its multiyear strategic plans set priorities or quantify objectives. However, it could be argued that the Fed's institutional practice since Alan Greenspan's administration was consistent with implicit adoption of an inflation targeting system.29 During the 2008 crisis, public statements made by former Chairman Ben Bernanke referenced an implicit inflation target of 2%. However, it was not until January 2012 that the Fed decided to adopt an explicit inflation target by a Federal Open Market Committee (FOMC)’s decision.30 This specific decision, unlike previous public statements, may reveal some degree of 'legalness'.

27 In 2003, it reformulated the quantitative objective to clarify that its achievement is expected in the medium term and in order to avoid deflation risks the target must be considered achieved if inflation is below, but close, to 2% (ECB governing council's decisions on 13th October, 1998 and 8th May, 2003).
28 Federal Reserve Act (1913), s 2a.
29 Goodfriend (n 4); Peter Boffinger, Monetary Policy: Goals, Institutions, Strategies and Instruments (OUP 2001).
30 FOMC decision on 25th January 2012 (‘FOMC statement of longer-run goals and policy strategy’).
Similarly, in the case of the ECB, as in the case of the Fed, I argue that their collective deliberation constitutes an act capable of generating legal effects. The public statement of their inflation target uses a specific legal formula, a particular code. It is possible to identify the will to create a legal standard by the issuer of this decision (the ECB governing council and the FOMC). The action is intended to create an obligation for the bank itself. Furthermore, this decision is directed outside as it can allow social and political forums to assess compliance.

From this perspective, the decision of the ECB governing council as well as of the FOMC would correspond to a unilateral act of will. For the Fed, it took some time to use this code. After 2012, the references to an inflation target appear to have the explicit intention of establishing a rule. The reference to a 2% target is not vague anymore. It was communicated to Congress and is now publicly assumed as a Fed decision. Nevertheless, in its statements, the Fed explicitly denied that the consequence of the inflation target adoption could be a legal hierarchy or prioritization of its monetary objectives.

The BCB must carry out the National Monetary Council (Conselho Monetário Nacional – CMN) provisions. The CMN has a political nature and it is an institution with multiple functions in accordance with Article 3 of Law no. 4595 of 1964. Notwithstanding, in 1999, the Brazilian Executive – by the adoption of the Decree 3088 – inaugurated an inflation targeting system as 'a guideline for the monetary policy regime.' This act introduced price stability as a primary objective for the Brazilian monetary system. The CMN defines a quantitative inflation target – and a margin of tolerance – for each calendar year, which must be achieved by the BCB. The Decree is an act that can be changed by the Brazilian President without going through a legislative process.32

Amongst the three CBs, the Fed is the only monetary authority that has the legal power to choose the policy objective to be prioritized at any point. Therefore, it requires close oversight by social and political forums, since its multiple goals do not explicitly delineate institutional behaviour. This tends to preserve the Fed's political autonomy. However, the Fed is a

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31 See the 'Semi-annual monetary policy report to Congress before the Committee on Financial Services, U.S. House of Representatives', Washington D.C., 29th February 2012.
32 The adoption of the Decreto 3088 was followed by the abandonment of a fixed exchange rate system and was sought to ensure international credibility for Brazilian monetary policy. It was originally inspired by the Bank of England's system. See Joel Bogdanski, Alexandre Tombini and Sérgio R Werlang, 'Implementing Inflation Targeting in Brazil' (2000) BCB Working Paper Series
https://www.bcb.gov.br/pec/wps/ingl/wps01.pdf (accessed 5 February 2011). Through the Circular 2698 of 1996, the BCB created a special committee serving as the main forum for the decision-making process related to monetary policy: the Monetary Policy Committee (Comitê de Política Monetária – COPOM) inspired by the FOMC.
legislative agency and the US Congress historically intervenes in the aftermath of a crisis, creating new mechanisms of surveillance by law. That was the case in the 1970s as well as with the 2008 crisis.

The ECB’s behaviour can be more easily assessed by social forums. The monetary objective established by treaty and the inflation target set by the institution are clear and precise. Nevertheless, the act that created a quantitative target was issued by the CB itself. As a result, it can be changed at any time. Another issue may arise concerning the ECB authority to define this rule. Should an EU political body not review this type of rule periodically as is the case for the BCB? After all, the quantitative inflation target determines the application of a legal standard specified by treaty, which was negotiated by political powers. Is the price stability defined by the ECB what the EU powers wanted (or want) for the eurozone? Would a degree of flexibility be desirable, according to European political powers? The Eurozone crisis after 2010 raises this set of questions.33

Similarly, the Brazilian monetary regime provides a quantitative criterion for evaluation of the BCB’s behaviour. However, a ministerial institution, the CMN, defines the quantitative target annually: the decision is in the hands of a political power. Only the execution is assigned to the BCB. Also, the degree of 'legalness' of this act that introduced the inflation targeting system raises questions about its stability and predictability. After all, it was established by an executive act, so it may be revoked at any time without significant institutional constraints. Since 2011, the actual institutional practice is to aim at the ceiling of the target range (e.g. to aim at inflation of 6.5% when the target is 4.5%, +/- 2%), amplifying the BCB’s leeway with respect to inflation.34

The following table summarizes the legal instruments for social accountability related to the monetary objectives of the BCB, the ECB and the Fed.

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33 See Lastra (n. 4).
34 Comitê de Política Monetária (COPOM), 'Ata da 161ª reunião' (31 August 2011) https://www.bcb.gov.br/?COPOM161 (accessed 13 June 2015). At that time the BCB decided to reduce the basic interest rate (SELIC) even while confirming that the accumulated inflation over 2012 was already above the central inflation target of 4.5%. Note that in the previous month, the expected inflation was the driver reason for an increase in the SELIC interest rate.
Table 3 – Monetary objectives of the ECB, the Fed and the BCB

<table>
<thead>
<tr>
<th>Monetary Objectives</th>
<th>ECB</th>
<th>Fed</th>
<th>BCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition of monetary objectives</td>
<td>By treaty</td>
<td>By statute</td>
<td>By statute and by executive decree</td>
</tr>
<tr>
<td>Hierarchy of monetary objectives</td>
<td>By treaty</td>
<td>Without hierarchy (at central bank’s discretion)</td>
<td>By executive decree</td>
</tr>
<tr>
<td>Measurement of monetary objectives</td>
<td>Quantitative target: defined by the ECB governing council</td>
<td>Quantitative target: defined by the FOMC</td>
<td>Quantitative target: defined periodically by a ministerial institution (legal structure provided by an executive decree)</td>
</tr>
</tbody>
</table>

3. The Legal Framework for the Relationship Between Central Banks and Social Forums

In this section, the analysis focuses on examining specific social accountability mechanisms related to operational transparency. These instruments allow for the oversight of monetary policy implemented by CBs and are generally directed towards social and market forums – but they can also be used by political powers. Specifically, they are related to the legal obligation of disclosing the economic rationale of monetary actions.

The three CBs analysed in this study have legal mechanisms for social accountability. Interestingly, some mechanisms were established by a regulation created by the CB itself or were extended at the initiative of the monetary authority from stipulations issued by political powers. That is to say, in some cases the monetary authorities themselves introduced measures that made them more accountable.

The BCB, through the issuance of a Circular (regulatory decision), created new legal mechanisms for social accountability in 2005, since it requires

35 Circular 3297 2005 (BR).
the agency to disclose its decisions and motivations for policies. According to Article 5 of this Circular, the decision on interest rate policy taken by the BCB’s monetary policy committee shall be publicly released. These minutes provide the committee reasoning, the relevant data on which the deliberation was based, as well as the final decision, indicating the number of votes and, since May 2012, revealing the identity of dissenting members. The Brazilian Executive has also created a mechanism for social accountability. The BCB is required to release reports containing an analysis of the inflation targeting performance, the impact of past monetary decisions and a prospective inflation evaluation.

The acts of the Brazilian executive power and its CB suggest a change in their institutional behaviour. Created in 1964, the administration inherited from the authoritarian regime conceived legal obligations for social accountability by its own initiative and by the executive power, to which it is explicitly linked. The inertia of the legislature in creating legal instruments for social accountability was overcome by the monetary authority itself in the last decade. Even if, at first, the institutional innovation of the CB aimed to achieve efficiency in monetary policy implementation, it ultimately created – especially, after the adoption of inflation targeting system in 1999 – a form of social accountability, not only by its institutional behaviour, but also by issuing acts having a certain degree of 'legalness' (Circulares). These acts have not only created an obligation for the BCB, but also assigned an authority to social forums assessing its compliance.

The ECB has a particular structure. In Europe, the general rule is that 'any citizen of the Union [...], shall have a right of access to documents of the Union's institutions, bodies, offices and agencies, whatever their medium' and 'each institution, body, office or agency shall ensure that its proceedings are transparent.' However, the same article withdraws the ECB from this general principle as regards its monetary decisions. The confidentiality of the ECB deliberations is guaranteed by the treaty and regulated by the CB, which specifies a period of thirty years for their disclosure. Article 132(2) of the TFEU delegates the disclosure of

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36 Art 4, § 4 states that the minutes of its meetings must be disclosed within six days after their conclusion. The calendar of meetings should be made public in October each year. See Circular 3297 2005 (BR), art 6.
37 BCB executive board’s vote no. 97 on 16th May 2012 in accordance with Lei de Acesso à Informação 2011(BR).
38 See Decree 3088 of 1999 (BR). The BCB is also obliged to publish an analysis of its past actions and the Brazilian inflation targeting system development (reports on inflation – 'relatórios de inflação').
39 Art 15(3), TFEU.
40 Public access to ECB documents is governed by its decision on 4th March 2004 (ECB/2004/3; 2004/258/C), pursuant to art 10(2) of the Rules of Procedure of the ECB Governing Council and art 23(2) of the Rules of Procedure of the ECB. This decision governs the ad hoc procedure to access ECB documents. Free access is
decisions to the ECB's discretion. Protocol 4 states that the governing council meetings are confidential and that it is up to the ECB to announce them.41

The ECB institutional practice has been to release its decision in a public statement after its main monetary policy meeting. Then, the institution organizes a press conference (with its president and vice-president) and a press conference open to journalists' questions, in which the motivations for its decision are revealed. In February 2015, the ECB decided to publish its minutes. The Financial Times attributed this decision to the 'public pressure for more accountability after the global financial crisis [that] has forced traditionally secretive rate setters to open up.'42 Politically, however, the power to decide the degree of transparency and the level of social accountability concerning monetary decisions is granted to the ECB.

Yet the ECB does not disclose whether there were any dissenting votes in the final decision. The institution presents its deliberation as the result of a 'consensus'. This position is justified by the bank's desire to preserve its operational independence, avoiding political pressure on central bankers who form its council.43 This allows members of the national CBs to act in a European perspective 'decoupled' from their national positions.

Regarding disclosure of monetary information, the main difference between the ECB and the BCB is that the latter decided to issue acts in order to create obligations related to social accountability. Although the ECB has behaved in this way since its creation, releasing pertinent monetary information, there were no obligations explicitly stated in legal acts issued by the institution prior to 2015. For the BCB, it is clear that there is a formal requirement regarding the disclosure of information, even if its degree of 'legalness' is low: it is a mere regulation (Circular). For the ECB, the disclosure of decisions and their motivation through press releases and conferences have been a practice since June 1998. Sessions opened to journalists' questions began in October 1998. This practice was conducted by all presidents that the institution has had. There seems to be a political intention to continue this behaviour. In this sense, I also argue that there is a degree of 'legalness' in this ECB act.

When it comes to analysing the case of the Fed, there is a wide range of legislative provisions concerning accountability, also expanded or specified in the Fed's regulations. Regarding the application of the Freedom of Information Act (FOIA), the Board of Directors issued the Regulations

possible only thirty years after the monetary decision, unless otherwise determined by the body responsible for issuing it (pursuant to art 10(3), Rules of Procedure of the ECB governing council and art 23(3), Rules of Procedure of the ECB).

41 Art 10(4), Protocol No 4.
42 See 'European Central Bank opens up with release of minutes' (19 February 2015) Financial Times.
Regarding Availability of Information.\textsuperscript{44} Section 261.10 of this instrument provides that the board of directors must publish various reports on Fed’s actions.

The Government in the Sunshine Act of 1976 states (with certain exceptions) that 'every portion of every meeting of agency shall be open to public observation.'\textsuperscript{45} Notwithstanding, the statute provides exceptions for meetings that can lead to 'financial speculation' or put a financial institution at risk. The Rules Regarding Public Observation of Meetings, issued by the board of directors, states that the meetings related to 'monetary policy matters' (section 261b.7, a) should be conducted without public observation because they could cause 'financial speculation'. In the Statements of Policy (12 CFR 281) issued by the FOMC, the Fed argued that the FOMC does not correspond to the definition of federal 'agency' contained in the Government in the Sunshine Act of 1976. The FOMC is a committee, unlike the Fed's Board of Directors. Thus, the FOMC would not need to immediately disclose transcripts of the meetings that are not available. However, the committee, 'recognizing the purpose of the legislative power' in enacting this statute, decided to publicize a 'record of policy actions' one month after its meetings. According to the Fed, this complies with the legal requirements.

Since 1994, the FOMC releases files with a record of its actions and detailed transcripts of its meetings five years after they occurred. Moreover, in the same year, it became an institutional practice to announce changes in interest rate policy immediately after the meetings. According to Alan Greenspan, at that time there was a strong legislative pressure for the adoption of this practice.\textsuperscript{46} Since 1999, the committee has announced its policy decision even if there has been no change. Since 2004, the minutes of meetings are available three weeks after the respective meeting, however transcripts continue to only be disclosed five years later. The interest rate decision is notified immediately by a press release. There are also press conferences conducted by the chairman. Unlike the ECB, the Fed reveals the positions and names of committee members who dissented from the final decision.

In 2010, in the aftermath of the economic crisis and given the increased powers acquired by the Fed to intervene in financial markets, the US Congress decided to amend the Federal Reserve Act to include new mechanisms for its social accountability. The two main mechanisms are: (i) the creation of a page on the Fed's website entitled 'Audit', which became a repository of information on the Fed's performance and provides all reports to the Congress and those prepared by independent auditors and

\textsuperscript{44} The Rules Regarding Public Observation of Meetings (12 CFR), s 261b.
\textsuperscript{45} Sunshine Act (1976), s 552b.
by the Office of Inspector General (OIG) and other relevant information that the board of directors 'reasonably believes is necessary or helpful to the public in understanding the accounting, financial reporting, and internal controls of the Board and the Federal reserve Banks' (my emphasis)47 as well as (ii) the disclosure of information on emergency loans granted and on the open market operations conducted by the Fed during the crisis management.48

The Fed, compared to the BCB and the ECB, is the monetary authority most subject to rules of a legislative nature for social accountability. Also, the Fed wanted more than just a political and sporadic decision to disclose information: it designed special measures in order to create a legal obligation to release such information.

As the Fed has been closely monitored by the US Congress in post-crisis periods, during the 1970s and post-2008,49 the Fed's own initiatives to publish regular data and regulate its disclosure tend to potentially avoid confrontations with the legislative power. The Fed has taken steps to determine the format, frequency and quantity of data to be disclosed that could prevent future unilateral decisions taken by the Congress. In particular, this seems to be the case for rules relating to the application of the Government in the Sunshine Act.

Legal instruments for monetary policy accountability related to social forums can be summarized as follows in Table 4.

47 Federal Reserve Act (1913), s 2b.
48 Federal Reserve Act (1913), s 11s.
49 The Federal Reserve Reform Act of 1977 and the Dodd-Frank Act are the main legislative initiates that changed the accountability of the Fed.
Table 4 – The legal framework for the relationship between central banks and social forums

<table>
<thead>
<tr>
<th>The legal framework for the relationship between central banks and social forums</th>
<th>ECB</th>
<th>Fed</th>
<th>BCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rules related to disclosure of decisions (interest rate policy)</td>
<td>Institutional behavior via press release</td>
<td>Statute and regulations via press release</td>
<td>Regulations (Circulars) via press release</td>
</tr>
<tr>
<td>Rules related to disclosure of motivation (interest rate policy)</td>
<td>Institutional behavior and, after 2015, ECB decision via press conference and minutes</td>
<td>Statute and regulations via minutes and others means</td>
<td>Regulations (Circulars) via minutes</td>
</tr>
<tr>
<td>Rules related to disclosure of data (decision basis) and motivation</td>
<td>Institutional behavior and treaty press conferences, monthly bulletins and minutes</td>
<td>Statutes and regulations several methods of publication (reports, bulletins, minutes, etc.)</td>
<td>Executive decree reports on inflation</td>
</tr>
<tr>
<td>Rules related to disclosure of financial information</td>
<td>Treaty (frequency extended by institutional behavior)</td>
<td>Statute and regulations</td>
<td>Statute</td>
</tr>
</tbody>
</table>

V. **What do these institutional changes reveal?**

Given the growing complexity of monetary issues, it seems that the role of law (as a system for structuring the exercise of power by CBs) has changed. This transformation comes from the change of paradigm concerning CB interventions in currency management: from an action manipulated and *ex ante* controllable by administrative rules (rule-based instruments) to an action in which these institutions operate primarily as agents in open...
market operations (market-based instruments).\textsuperscript{50} Actually, CBs no longer manage currency by preponderantly issuing binding norms, as was usual in the 1960-70s, especially with respect to reserve requirements.\textsuperscript{51} Instead, as a main model of policy implementation, CBs act as market agents, formalizing repurchase agreements (open market operations) and swap contracts. Moreover, they intervene in financial markets by shaping incentives, i.e. by setting short-term interest rates and inflation targets.\textsuperscript{52}

As a result, the role of public law in creating a framework for monetary policy implementation has moved: (i) from outlining instrumental rules for policy actions (\textit{ex ante} regulation, e.g. the legal limits on reserve requirements or the gold standard as political control of paper money’s expansion) (ii) to establishing legal mechanisms to render discretionary actions accountable (a model of \textit{ex post} regulation, e.g. the duty to report monetary actions to the Congress or the disclosure of their motivation to a wider audience). The historical pendulum movement between 'rules' and 'discretion' in monetary policy seems to point to more 'discretion' for contemporary central banking.\textsuperscript{53} However, the presence of accountability mechanisms in central bank framework means presence of rules, regardless their degree of 'legalness'.

The legal design of an accountability mechanism consists in an \textit{ex post} structure, since the institutional process presupposes the assessment of an act (or of an omission) that has already been implemented by a CB (e.g., a short-term interest rate). Even if it takes prior legal parameters for behaviour, such as monetary goals or inflation targets, into account, the \textit{ex ante} element has a 'cognitive' nature, i.e. the anticipation of a future assessment.\textsuperscript{54} Given this shifting pattern of monetary policy, the accountability relationship implies scrutiny of CBs’ discretionary actions that were taken based on parameters previously set out by a legal standard.

\textsuperscript{50} Bernard J Laurens, Monetary Policy Implementation at Different Stages in Market Development (IMF Occasional Paper 2005).
\textsuperscript{51} Reserve requirements are the amount of funds that a depository institution must hold in reserve against deposit liabilities.
\textsuperscript{52} Iain Begg, 'Monetary Policy Strategies' in Marcussen Dyson, \textit{Central Banks in the Age of the Euro: Europeanization, Convergence and Power} (OUP 2009); Ben S Bernanke; Thomas Laubach; Frederic S Mishinski and Adam S Posen, \textit{Inflation Targeting: Lessons from International Experience} (PUP 1999); Ulrich Bindseil, \textit{Monetary Policy Implementation: Theory, Past, Present} (OUP 2004); Boffinger (n 29); Goodfriend (n 4).
\textsuperscript{54} Marie-Anne Frison-Roche, 'Le Couple ex ante-ex post, Justification d’un Droit Propre et Spécifique de la Régulation' in Marie-Anne Frison-Roche, \textit{Les Engagements dans les Systèmes de Régulation} (Daloz 2006).
The operational transparency envisaged by CBs was initially aimed at monetary policy efficiency, an economic goal. It was the product of a change of economic consensus on monetary policy. Nevertheless, the creation of these mechanisms had a secondary and relevant (legal) effect: institutionalizing structures allowing for social accountability. These same instruments are also available for political powers’ scrutiny of monetary authorities.

I believe that, instead of CBs resorting to a battle in the political arena – to include accountability mechanisms in statutes or treaties through political negotiations – they may have found a faster, though no less effective, means of institutional innovation and experimentation. In other words, CBs have improved their legal framework for accountability through soft law instruments – i.e. the enactment of regulations and unilateral acts that can generate legal effects. I argue that these mechanisms of operational transparency (e.g. regulations and unilateral acts that create obligations in communicating monetary decisions) can indeed serve as legal instruments for social accountability. Actually, they consist of rules that create legal parameters for scrutinizing and checking CB actions through soft legal instruments. In this sense, the mechanisms referred to by economists as 'de facto accountability' and 'operational transparency' in fact consist of legal instruments for social accountability. These instruments frame a specific relationship between central banks and social forums, and they can have different degrees of 'legalness'.

Therefore, there is an emergence of a new legal approach: (i) from a traditional 'exogenous' normativity approach imposed by the State (ii) to an 'endogenous' normativity approach that is non-hierarchical, created by economic agents themselves, including by regulatory authorities that act as a market agent in order to develop their functions. This model reveals a polycentric and decentralized regulatory regime, which is characterized by its fragmentation and complexity as well as interdependence between different social actors where the State bureaucracy is no longer the sole locus of authority.

This administrative trend changed the structure and role of the State in the monetary policy. Moreover, it is possible to argue that it had an impact on the accountability design of public structures. Especially for CBs, as shown in the previous section, I believe that a trend can be identified: (i) from rules of accountability designed by constitutions, statutes and treaties (rules created by States) and aimed primarily at accountability to the

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55 See n 4.
56 See, for instance, Laurens et al. (n 3) and Bank for International Settlements (BIS), Issues in the Governance of Central Banks: a Report from the Central Bank Governance Group (BIS 2009).
political authorities (ii) to rules produced by the CBs themselves self-regulating their actions and aimed at legitimising their decisions, mainly geared towards social forums.

In the economic debate, this movement towards more transparency and open communication by CBs is aimed at ensuring monetary policy implementation. The mystery of the bureaucratic performance has been replaced by transparency of methods and goals. Moreover, in addition to the efficiency gains of transparency, it is possible that these bureaucracies hope that more communication to the public in general can eventually ensure greater legitimacy for CB’s actions. In other words, transparency can help to assure, together with other institutional mechanisms, the social acceptance of the CB’s mandate.

Given an economic approach, transparency and predictability are prerequisites for monetary policy effectiveness in globalized and complex financial markets. From the point of a political and legal view, transparency is a precondition (i) to legitimate monetary policy implemented by de facto or de jure independent CBs and (ii) for the accountability of these institutions – it enables social forums and political institutions to monitor and evaluate their operation.\(^5\) In the 2008 aftermath, these instruments proved to be valuable to politicians, academics and the media. The monetary actions of the most important CBs were widely divulged. For instance, the Group of 30 (G30), an intellectual community in central banking, published a detailed report on CB responses to crisis.\(^6\) All these materials were made available by the CBs.

The 'unelected bodies' or 'non-majoritarian institutions',\(^6\) e.g. independent CBs and regulatory agencies, have a direct source of legitimacy, and not only the legitimacy derived from their establishment by political powers. Their legitimacy can be compared to the legitimacy of the judiciary. They are responsible for the empirical component of public policies and for the professional judgments on a deeply technical subject, developing analysis of evidence and data. They are public structures responsible for problem solving, in contrast to political powers responsible for value judgments.\(^6\)

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\(^6\) Vibert, (n 60); Pierre Rosanvallon, La Contre Démocratie: la Politique à L’âge de la Défiance (Éditions du Seuil 2006).
CBs have a specific knowledge related to the currency management on which they base their technical authority. They are what Robert Castel\textsuperscript{62} defines as the 'expert instituant', i.e. authorities that not only assess a given situation from their technical point of view, but also recreate the empirical conditions with their own knowledge. In other words, monetary authorities are functional experts who deal with data and shape evidence at the same time. The function of a CB goes beyond the expression of an opinion, a compilation of information or the design of a mere report to resolve a conflict or clarify a political choice. CBs define their own technical criteria and the actual circumstances to which they devote themselves. As a result, this institutional structure is more complex than a body merely designed to analyse empirical evidence and data.

Furthermore, these agencies are embedded in epistemic communities both at the domestic and international level. Epistemic communities are networks of professionals with recognized expertise and competence in a particular area.\textsuperscript{63} They claim authority over a relevant field of knowledge. They also share a specific set of values, norms and beliefs, which is derived from their analysis of practical problems in an expertise domain. Epistemic communities also share notions of validity while defining the criteria for selection of problems and their solutions.\textsuperscript{64} For CBs, the Bank for International Settlements (BIS) has institutionalized international cooperation among monetary authorities. In such arrangements, CBs are national representatives, imbued with the powers to decide standards or policies at the international level that will be implemented within their territories. The Basel Accords on financial market regulation is just one example.

As a matter of fact, monetary authorities have heavily invested in their research departments to establish and build the bases for their decisions and economic evaluations. The symbolic effect is an ideological consensus in relation to the technical knowledge of monetary policy. For example, in December 2002, 74\% of the publications on monetary policy, in edited journals in the United States and published by US economists, came from the Fed-published journals or were co-authored by a Fed staff economist.\textsuperscript{65} The fifty largest PhD-granting economic institutions in the US employ around 390 economists in macroeconomics, monetary policy and banking. The US Fed system alone used to have 27\% more.\textsuperscript{66} In terms of full-time

\textsuperscript{63} Peter M Haas, 'Introduction: Epistemic Communities and International Policy Coordination' [1992] 46 IO 1.
\textsuperscript{66} ibid.
researchers, the ECB has more PhDs in economics than the London School of Economics and Political Science – LSE. In 1999, the BCB created its Department of Research and Economics Studies (‘Depep’) with offices in three major cities (Brasilia, Rio de Janeiro and São Paulo). The person responsible for the creation of the Depep, Alexandre Tombini, is currently the BCB governor.

Marcussen identifies a further step in the development of CBs in the 2000s. He points out that there is an important feature in the current situation that makes it more difficult to assess CBs' performance: the rise of a scientific discourse in monetary decisions. The movement of 'scientization' in central banking poses new challenges for accountability and the relationship between social forums and technocrats. The main concern is how social forums can engage with a high-specialized institution, as well as how to exercise controls on its power (which seems to be based on knowledge and 'science'). While the 1990s were characterized by the discourse of political autonomy for CBs, the 2000s seems to be characterized by the ideological process of 'scientization' in currency management, reinforced by the growing reliance on research departments.

Nowadays, CBs tend to ensure their legitimacy and their authority in currency management using ideas of the scientific domain, mainly from economics. Science has becomes the source of their cognitive authority. For instance, the 'Taylor rule', created by the Stanford economist John B Taylor to describe (and then to prescribe) the Fed's policy, became a recipe for central bank practice. This policy 'rule' was incorporated in the political economic analysis or the decision-making process of CBs in advanced and emerging economies.

With the 2008 crisis, these technocrats gained more power and technical credibility in order to intervene in markets. Their scientific discourse seems to be valued again and it was extended to the political domain. For instance, in Europe, as an immediate response to crisis, a former central

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68 ibid.
69 ibid.
banker, Lucas Papademos, and a former European bureaucrat, Mario Monti, were appointed as prime ministers of their home countries.\footnote{However, as pointed by Borio, after the 2008 economic crisis CBs have been facing three major challenges: economic, intellectual and institutional. See Claudio Borio, 'Central Banking Post-Crisis' (2011) BIS Working Paper 353 1/2011 http://www.bis.org/publ/work353.pdf (accessed 10 March 2013). See also Michael Aglietta, 'Complément A: La Rénovation des Politiques Monétaires' (2011) Rapport CAE 1/2011, 195 http://www.cae-eco.fr/Rapport-Banques-centrales-et-stabilite-financiere.html (accessed 8 September 2012); Goodhart (n 4).}

Accountability mechanisms as a model of ex post regulation tend to gain more significance with the growing discretionary powers of CBs. However, can these mechanisms actually be effective? Who can understand the minutes of the CB's meetings? How to assess the political options available and the trade-offs underlying them? Monetary decisions have distributional effects, but economic language tends to create difficulties in understanding them at their core. Therefore, two crucial questions remain: is the contemporary movement towards CB transparency, in fact, more of secrecy? If positive, how could accountability mechanisms created by soft law overturn this tendency? The legal structure for monetary accountability is an institutional reality, regardless its degree of 'legalness'. It has the potential to allow social actors to contest the political choices of CBs. To overcome the complexity of these economic decisions, the social forums that are capable to scrutinize them are mainly academia and specialized media. Nevertheless, in different degrees, sanctions with 'teeth' are only at the disposal of political powers.

VI. Conclusion

In the CBs studied, there were standards and procedures developed by law that provided them with mandates and objectives. The sources of law that lay out the CBs' mandates and also prescribe procedures and standards for their actions, are quite different from each other. Nevertheless, it is possible to identify two types of legal mechanisms specifically for their accountability: (i) 'hard' rules of accountability designed by constitutions, statutes and treaties and aimed mainly at accountability to political agents, and (ii) more recent 'soft' rules created by the CBs themselves and geared towards social accountability. The analysis of the legal structure of these instruments revealed that most institutional changes in monetary policy accountability in recent decades took place through mechanisms with a low degree of 'legalness' (more of soft law). This trend is common to the three CBs studied.

In the case of the ECB, the absence of hard mechanisms of social accountability pushed the bank to create its own rules on an inflation target and mechanisms to publish its own decisions, even though the European treaty gave the opportunity to the ECB operating without such disclosure. Did the ECB create these 'soft' rules just as a concern about
monetary policy efficiency? I believe that this decision was also taken to legitimate its actions in a complex political environment.

In the case of the BCB, formal mechanisms of social accountability were established by the executive power and through regulations. These rules, created in the late 1990s, were aimed at monetary policy efficiency and to raise international market confidence. However, I believe that these mechanisms have also proved themselves useful for (i) the legitimacy of the Brazilian central bank decision-making process during 2000s, as well as (ii) safeguarding its de facto independence from political powers.

In the case of the Fed, the creation of an inflation target after the 2008 crisis was an unexpected political event, since the institution has been avoiding the definition of a quantitative criterion since the 1990s. However, the Fed has a traditional practice of creating accountability mechanisms related to operational transparency since the administration of Governor Alan Greenspan.

The exact mechanisms for social accountability, and the process of their creation, appear to be shaped by shared economic beliefs. The historical and institutional framework (in which monetary authorities operate) tends to be relevant to the design of their relationship with political powers and social forums. However, global theoretical-economic convergence in monetary policy, i.e. operational transparency for the interest rate policy, may be the most important driver of the common trend among these three CBs: the creation of social accountability mechanisms often led by the monetary authority itself.

These 'transparency' mechanisms were originally intended as a means to achieve efficiency in currency management. However, the instruments of monetary transparency have established a legal structure for social accountability. Their creation has led to the introduction of instruments not only of technical and political nature, but also of a legal nature destined to social accountability.

Actually, it is difficult to come back and change this structure by the CBs themselves. Once this legal set-up becomes an institutional reality, even if a 'soft'one, it creates a legal expectation, potentially allowing social actors to contest the political choices underlying policy decisions. This structure tends to be relevant especially in the post-crisis context.