Reimagining monetary policy: Lessons from Brazil's Implementation of a CBDC

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Abstract: This paper undertakes a critical reassessment of the historical evolution and contemporary status of central banks, with a particular focus on the Brazilian central bank (Banco Central do Brasil, BCB) and its impending adoption of a Central Bank Digital Currency (CBDC). By tracing the development of central banks from their origins to modern-day practices and analyzing the current implementation of Brazilian CBDC (Drex), we expose the political underpinnings of the choices for certain monetary designs and policies and its deep entanglement with social power and trust relationships. The advent of CBDCs offers a unique opportunity to bring to light this process as well as to, from a political perspective, reshape these dynamics, potentially democratizing the monetary and payment system through enhanced public engagement and alignment with broader societal objectives. Our analysis challenges the conventional depoliticized and technocratic portrayal of central banks, advocating for a paradigm shift towards a new monetary system and policies that not only aim at financial stability and inflation control but also address pressing societal challenges such as inequality and environmental sustainability, effectively integrating monetary and fiscal measures. We propose a reimagined role for central banks that aligns with democratic governance and public purpose, suggesting that central banks should not only be accountable but also proactively contribute to a just economic transition. This paper aims to contribute to the literature by filling a gap in studies concerning the political dimensions of money and monetary policy and by bringing to light the case of a peripheral country, particularly in light of the emerging technologies that enable the creation of CBDCs. We argue for a multidisciplinary approach to understanding the implications of digital currencies and their capacity to transform central banking.

Key-Words: Monetary policy, Monetary History, Central banks, Monetary Theory.
JEL codes: E58; E42; P16

Introduction

Examining the origins and evolution of the institutions that would later be recognized as central banks, along with the policies they implement, offers a valuable perspective for understanding the development of modern money and banking, as well as the emergence of bureaucratic rationality within modern states (Monnet, 2023). However, this inquiry is inherently complex, as it presupposes a conceptualization of what constitutes a central bank in terms of its functions and policy framework. Moreover, such an analysis underscores that the institutions now identified as central banks did not emerge through a linear process; rather, their formation was shaped by a dynamic interplay between broad international trends—exerting pressure and influencing models within specific political contexts—and the distinct regional, national, and political dynamics that contributed to their unique trajectories.

The literature presents diverse perspectives on the origins of central banking. Some scholars argue that the Royal Bank of Sweden (Riksbank) and the Bank of England, both established in the late 17th century, were the first central banks. These institutions, while having important predecessors—namely, the early public banks—gradually evolved in their functions over time (Roberts and Velde, 2014; Moschella, 2024). Others contend that modern central banks only emerged at the end of the 19th century, when banks of issue began to recognize their role in ensuring financial stability as lenders of last resort and managing exchange rates under the gold standard framework. A further perspective emphasizes the significance of banks that issued the highest-quality financial assets, thereby enabling them to function as key institutions for systemic transaction clearing (Monnet, 2023).

In Latin America, the 1920s witnessed the establishment of central banks in several countries, often under pressure from the international community, and operating within the framework of the gold standard regime (Jácome, 2016; Caldentey and Vernengo, 2018; Lourenço Filho, 2023). In contrast, Brazil formally established its central bank, the Banco Central do Brasil (BCB), only in 1964, making it a relatively latecomer compared to its regional counterparts (Carvalho et al., 2012; Corazza, 2005). However, prior to its creation, various institutions in Brazil functioned as precursors to a central bank, serving as embryonic forms of the institution. In this sense, the country's path toward establishing a central bank can be understood as a gradual and complex process, marked by significant challenges and institutional developments over time.

In 1999, following the implementation of the stabilization plan in 1994 and the subsequent abandonment of a fixed exchange rate regime, the BCB adopted the Inflation Targeting Regime. This shift aligned with international trends and was influenced by the principles of the New Macroeconomic Consensus, as well as the broader framework of neoliberalism (Dardot and Laval, 2016). In 2021, the BCB was granted formal autonomy, ensuring its independence from ministerial oversight and establishing a four-year term for board members, deliberately decoupled from the presidential term to reinforce institutional stability. The legislation further enshrined price stability as the bank's primary objective. Concurrently, since 2020, the BCB has been actively developing a digital version of the Brazilian currency (real), named DREX. Beyond representing a mere technological advancement aimed at enhancing payment system efficiency, the introduction of central bank digital currencies (CBDCs) holds the potential to fundamentally reshape—or even reimagine—the monetary system itself.

This paper aims to discuss the origins and evolution of central banking and monetary policy in Brazil, situating these developments within the broader context of international transformations in the making of money (Desan, 2014). More specifically, it seeks to contribute to the existing literature through a critical analysis of the recent and ongoing process of establishing Brazil's digital currency, DREX. This analysis interrogates the underlying assumption that the prevailing structure of money creation must be maintained, along with the existing objectives and scope of monetary policy.

To achieve its objective, this paper is structured as follows. The first section critically examines the origins and evolution of central banks, as well as the evolution of monetary policy, establishing how the public-private arrangement in monetary governance emerged historically. The second section shifts focus to Brazil, highlighting the historical trajectory of central banking and monetary policy while situating them within broader international and regional economic and political trends. Particular attention is given to the transformations that have taken place since the 1990s, a period marked by the narrowing of the institution's mandate and its gradual path toward independence, following an international political trend. The third section examines CBDCs from a political economy perspective, analyzing how different architectural designs embody distinct configurations of monetary power and governance. Through this lens, we evaluate Brazil's DREX implementation, revealing how its technical specifications reflect deeper political commitments to preserving existing financial hierarchies while constraining possibilities for democratic monetary innovation. Finally, the concluding remarks revisits the key arguments developed throughout the paper and presents the main findings derived from this analysis.

1. Origins and evolution of central banks

Few would contest the assertion that central banks have evolved into powerful and indispensable institutions, forming a fundamental pillar of modern states. Since the advent of the modern era, the development of central banking has been inextricably linked to the history of money—despite the fact that money itself predates these institutions by millennia. However, until the early 20th century, central banking remained largely a European phenomenon, and prior to the 1920s, central banks played a relatively passive role, operating within the constraints of the gold standard. This system functioned not only as an international exchange rate mechanism, but also as a significant limitation on the monetary interventions of governments. Yet, what exactly do central banks do to warrant their status as such pivotal institutions?

In addition to conducting monetary policy—primarily through the setting of short-term interest rates, arguably their most visible function today—central banks currently fulfill a range of other critical responsibilities. These include ensuring financial stability, maintaining the stability of payment systems, and managing exchange rates. Central banks have also historically assumed a variety of additional roles, some of which remain relevant today. These include the management of public debt, the operation of Treasury accounts, the production of economic statistics, and the dissemination of financial research and information, among other functions (Monnet, 2023). Given their broad and evolving responsibilities, a fundamental question arises: when and under what circumstances were these pivotal institutions first established?

Monnet (2023) identifies two distinct perspectives on the origins of central banks. The first approach asserts that central banks, in their modern form, emerged only in the late 19th century. This period was marked by repeated banking crises and runs, which ultimately led issuing banks to adopt the role of lender of last resort while also assuming responsibility for exchange rate management under the gold standard. Within this framework, institutions such as the Bank of England and the Bank of Sweden—both established in the second half of the 17th century— which are often regarded by some scholars as the earliest central banks would be more accurately considered precursors rather than fully developed central banks

The second perspective highlights the role of central banks as institutions responsible for issuing the ultimate form of financial money, which enables them to do the settlement of transactions within the financial system. According to this view, central banking precedes the developments seen in Sweden and England. As Monnet (2023, p.7) argues, "all banks that centralized other banks' deposits... thus played a role similar to modern central banks, not least because this allowed them to act as lenders of last resort, well before the 19th century."

Desan (2014, 2019) offers a distinct and particularly insightful perspective on this matter. For her, the central issue is not the creation of central banks per se, but rather the formation of modern money—a process that involves not only central banks but also other pivotal innovations, such as public debt, capital markets, and commercial banking. This interconnected cluster of developments, she argues, gave rise to modern money. This transformation was orchestrated during the 17th century in England, a period that not only saw the establishment of the modern monetary system, with the Bank of England playing a key role, but also witnessed the embedding of entrepreneurial self-interest as the central organizing principle of the economy (Desan, 2019, p. 7). Crucially, Desan contends that the defining feature of modern money was a significant ideological shift, whereby the management of money—a process previously regarded as a public and political matter—was entrusted to bankers.

> “The new approach to money creation, innovated by public authority and informed by the liberal invocation of individual interests as privileged motivations, would realign the way people understood money, the political and private work that maintained it, and “the market” that resulted". (Desan, 2014, p.16)

Resende (2020) further underscores this argument, asserting that until the late 17th century in England, money was viewed primarily as an instrument of public governance, a prerogative of the state. However, the transformations that took place toward the end of the century arose from a fundamental contradiction: the need to limit state power while simultaneously expanding liquidity. This tension, according to Resende, was central to the reconfiguration of money and its management during this period.

Moschella (2024) is primarily concerned with understanding the evolution of central banks rather than their origins. She argues that the principle of central bank independence—the idea that central bankers should operate free from political pressures in order to maintain low and stable inflation—became increasingly accepted beginning in the 1980s, eventually becoming orthodoxy in the 1990s under the framework of the New Macroeconomic Consensus. A key complement to this principle is the notion that central banks' primary tool for controlling inflation is the manipulation of short-term interest rates, the principal instrument of monetary policy, which is firmly under their control. However, Moschella draws attention to the unconventional monetary policies adopted by central banks following the 2008 financial crisis and in response to the challenges of the COVID-19 pandemic. She correctly observes that these policies, which diverged from traditional approaches, have called into question the conventional understanding of central bank conservatism. As Moschella (2024, p. 1-2) notes, "monetary authorities have often taken controversial decisions regarding which firms to support and which assets to buy. By including government debt in their asset purchases, central banks have further tested their cherished independence by reducing the traditional arm's-length distance from fiscal policy."

How, then, was it possible for central banks to alter their course and adopt a different approach? For Moschella (2024), this shift can be understood within the context of the political environment at the time, as she emphasizes that monetary policy is ultimately a political matter. When circumstances change, central banks must take those changes into account and, when necessary, adjust their policies accordingly. Crucially, the legal independence of central banks is granted by legislative bodies within a specific political context, one that is shaped by public support for the institution—a support that can shift over time. Therefore, the author argues, independence—whether de facto or de jure—does not remove central banking and monetary policy from the realm of politics.

> "Central banks respond to the expectations and demands of various audiences (including political and public audiences) based on the challenges these audiences pose to the reputation of central banks. … this finding … nonetheless indicates the existence of a political space that citizens and their political representatives can use to engage in a dialogue on the future direction of central banking".(Moschella, 2024, p.5)

In reality, the aim of central bank independence is not to depoliticize money or the institutions themselves, as they have always been inherently political. Rather, the ultimate objective is to undermine democratic oversight. Eich (2022) refers to this as the politics of monetary depoliticization.

2. Origins, challenges and politics in the constitution of the Brazilian Central Bank

The establishment of the first central banks in Latin America occurred in the 1920s, modeled after European institutions. Compared to their contemporary role, these early central banks operated in a more passive manner, refraining from direct intervention in the business cycle. Scholarly literature highlights the crucial influence of "money doctors"—foreign experts coming mainly from England, France and the United States—who not only pushed for the creation of these institutions but also played a key role in implementing orthodox monetary policies during this period. Prior to the 1920s, multiple attempts to establish central banks in the region had been unsuccessful, primarily due to the economic and political interests disrupted by granting a single institution the monopoly over currency issuance (Jácome, 2016).

In the 1930s, following the collapse of the gold standard[1]—which freed countries from the obligation to maintain the convertibility of their currencies to gold and, more broadly, from adherence to strict quantitative monetary rules—and the economic turmoil of the Great Depression, a second wave of central banks was established across Latin America. During this period, central banking legislation was adapted to align with the evolving monetary landscape. Governance structures typically included representatives from both the government and private banks, and in some cases, also incorporated delegates from labor organizations and business associations. This twist of central banking indicates that when faced with damage to their reputation, central banks change their policies in an attempt to manage criticisms and win back political support. In this sense, the transformations in central banking can hardly be understood as a technocratic process, being in fact connected to a search for political support.

In Latin America, this shift was accompanied by a departure from orthodox monetary policies in favor of a more interventionist approach. Central banks increasingly embraced monetary activism, prioritizing economic development and full employment over strict inflation control. According to Moschella (2024), this transformation marked the rise of modern central banking, reflecting a broader political consensus that tolerated higher inflation in pursuit of economic growth. The author argues that such shifts in central banking strategy are driven not merely by technocratic decision-making but by a need to restore institutional credibility and secure political support in response to reputational damage. In this view, the evolution of central banking cannot be understood in purely technical terms but must be seen as inherently tied to political considerations.

The collapse of the Bretton Woods system in the 1970s, coupled with the high inflation that characterized the decade, once again reshaped central banking, reflecting broader shifts in the political

[1] In Brazil there was a partial adoption of the gold standard, with convertibility being applicable to certain types of issues.

landscape. According to Vernengo (2021), the breakdown of the system ultimately stemmed from changing policy priorities in the United States, which transitioned toward a neoliberal economic order. From a monetary policy perspective, the 1980s marked a decisive turning point. Central banks, which had previously balanced multiple economic objectives, began to focus almost exclusively on controlling inflation, progressively abandoning the goal of full employment. With currencies no longer backed by commodities, yet prevailing economic thought still attributing inflation to excessive liquidity expansion, the adoption of new monetary policy rules aimed at constraining liquidity became the dominant paradigm.

Beginning in Chile in 1989, and continuing throughout the 1990s, nearly all Latin American countries—except Brazil—enacted new central bank laws that emphasized institutional independence. These reforms brought significant changes to central bank governance, notably eliminating the participation of government officials, private sector representatives, and labor organizations in decision-making processes. Additionally, in most cases, legal provisions were introduced to restrict the removal of board members, further reinforcing the autonomy of these institutions.

> "Although the scope of the new central bank legislation varied across countries, it had four common elements. First … were assigned as a single or primary objective to preserve price stability. Second, they were granted political independence to formulate monetary policy with the aim of delinking monetary policymaking from electoral calendars; Third … they were granted operational independence to implement monetary policy … Fourth, central banks were held accountable with respect to their policy objective."(Jácome, 2016, p. 19-20)

During the 19th century, Brazil underwent various monetary experiments involving multiple issuing banks, most of which operated under the name Banco do Brasil. The first Banco do Brasil was established as a private institution in 1806 but went bankrupt a few years later. Subsequently, another iteration of the bank was founded, though it too proved short-lived. The modern Banco do Brasil (BB) was created in 1905 and remains in operation today. In terms of ownership structure, it was founded with both public and private capital, though it remained under state control. Over time, the institution expanded across multiple dimensions, functioning not only as a commercial and development bank but also progressively assuming roles traditionally associated with central banking.[2]

[2] In 1920 the bank started rediscounting.

The Banco Central do Brasil was established in 1964, more than four decades after the first central banks in Latin America and following several unsuccessful attempts. The road to its creation was long and complex: it took twenty years from the establishment of the Superintendence of Currency and Credit (SUMOC) in 1945—an institution tasked with regulating the monetary market—until the formal founding of the BCB under the military dictatorship in 1964. However, the absence of a central bank in Brazil until the mid-1960s did not mean the absence of central banking functions. These responsibilities were distributed among Banco do Brasil, SUMOC, and the Treasury, with some scholars characterizing Banco do Brasil as a "near central bank" (Lourenço Filho, 2023; Carvalho and Paula, 2024). The political context of the dictatorship in 1964 facilitated the removal of opposition to the creation of a central bank. At the time, the Finance Minister had long advocated for an independent central bank with a primary focus on inflation stabilization, a vision that ultimately shaped the institution's foundation.

Brazil was among the last countries in the world to establish a central bank. According to Corazza (2005), this delay reflects strong political resistance to restructuring monetary management, as doing so required breaking with long-standing institutions—particularly Banco do Brasil—and the entrenched political and economic interests associated with them. Lourenço Filho (2023) further argues that several additional factors contributed to the prolonged absence of a central bank in Brazil. Some of the earliest attempts to establish such an institution occurred during periods of external financial crisis, when international loans were offered to Brazil on the condition that it adopt orthodox economic policies, including the creation of a central bank. However, these initiatives ultimately failed, as shifting political and economic conditions either within Brazil or abroad prevented the implementation of the agreements. Additionally, and perhaps most crucially, while there was an ongoing debate about the necessity of a central bank, there was no clear consensus on the role and institutional design it should assume

The debate over the necessity and design of a central bank was particularly intense during the 1930s and 1940s. According to Lourenço Filho (2023), in this period, this discussion was shaped by two competing perspectives. The first, that we can call an heterodox view, saw the central bank as a tool for promoting production and economic development. The second, an orthodox perspective, argued that the institution should primarily focus on ensuring price stability. These divergent positions were rooted in broader disagreements over the roles of money, credit, and economic development. However, these perspectives did not carry equal weight in the debate. Lourenço Filho (2023) emphasizes that the proponents of the heterodox view did not have the central bank as a key issue in their thoughts, not prioritizing the topic in their production. Orthodox economists, on the other hand, placed significant emphasis on the topic and produced a lot on the subject. Moreover, despite the contributions of the 1930s and 1940s, the heterodox perspective on central banking largely faded in the following decades. This uneven level of engagement might have influenced the course of monetary policy and central banking in the country.

In Brazil, as previously suggested, the debate over central bank independence dates back to the very inception of the institution itself. Advocates for an independent central bank were concerned not only with potential undue influence from the government but also with pressures exerted by economic sectors—particularly agriculture and industry—through the Banco do Brasil, which had traditionally financed these sectors. In this context, establishing an independent central bank was seen by some proponents as a means of delineating functions that should not be conflated within a single institution. The primary objective was to shield monetary policy from excessive expansionary pressures driven by both governmental and private sector interests.

The enactment of Law No. 4.595/1964, which established the Banco Central do Brasil, initially defined the institution as independent, granting fixed terms for board members. Nevertheless, government influence quickly led to changes in the board's composition. In response, the law was amended in 1974, allowing the President of the Republic to dismiss board members at will (Corazza, 2005). In fact, between 1964 and 1965, Brazil established a new institutional framework for monetary management. The creation of a central bank constituted one pillar of a broader financial reform, alongside the differentiation between commercial and non-commercial banking institutions and the establishment of a formal market for public securities. With its inception, the Banco Central do Brasil was granted exclusive authority over currency issuance and the administration of monetary and credit policies.

The same legislation that established the BCB also created the National Monetary Council (NMC) as the highest governing body of the Brazilian financial system, responsible for formulating monetary and credit policies. In its original structure, the NMC comprised the Minister of Finance, the Presidents of Banco do Brasil and Banco Nacional de Desenvolvimento Econômico e Social (BNDES)[3], along with seven other representatives from public institutions and the private sector. Since their creation, both the BCB and the NMC have undergone significant institutional transformations.

In a compelling study, Carvalho and Paula (2023) explore the tension between politics and technical expertise in shaping the bureaucracy of the Brazilian Central Bank. Their objective is to assess whether evidence suggests a predominance of instrumental rationality—defined as "the lack of ethical-political reflection in favor of a rationality focused strictly on the cold calculation of technique" - in this

[3] It is the main financing agent for development in Brazil. It was established in 1952, with the aim of developing and carrying out national economic development policies. https://www.bndes.gov.br/SiteBNDES/bndes/bndes_en/Institucional/The_BNDES/

bureaucracy. Their findings reveal a prevailing discourse that rejects politics in general, with a particular aversion to left-wing policies. This perspective reinforces the image of the BCB as an insulated institution, where the primacy of technical expertise—specifically, the principles of neoclassical economics—is upheld as sacrosanct.

In 1994, following the implementation of the Real Plan, the composition of the National Monetary Council was reduced, and since then, it has consisted solely of the Minister of Finance, the Minister of Planning and Budget, and the Governor of the Central Bank (Law No. 9.069/1995). According to Carvalho et al. (2010), this restructuring aimed to consolidate power within a small group—comprising two ministries and the governor of the BCB—thereby marginalizing other government banks, ministries, and civil society representatives. As a result, monetary policy increasingly became more insulated from democratic influence.

In 1999, after the abandonment of a fixed exchange rate regime, the BCB adopted the Inflation Targeting Regime and gained a de facto autonomy. In 2021, after decades of debate, and under the far-right government of Jair Bolsonaro, Complementary Law No. 179 established the autonomy de jure of the Banco Central do Brasil as an agency of special nature, characterized by its independence from any Ministry or hierarchical subordination. This law also defined a four-year term for the members of the Board of Directors, including the President, with terms that do not coincide with the four-year term of office of the President of the Republic. According to this law, the primary objective of the BCB is to ensure price stability (https://www.bcb.gov.br/content/about/legislation_norms_docs/complementary_law_179_24february2021.pdf).

In parallel, since 2020, the BCB has been actively working on the development of a digital version of the Brazilian real—DREX. This initiative goes beyond a mere technological shift aimed at enhancing the efficiency of the payment system. The implementation of Central Bank Digital Currencies (CBDCs) offers the potential to reimagine and reshape the structure of the monetary system itself.

3. A political economy of CBDCs

The historical analysis developed in previous sections reveals how central banking emerged through a specific configuration of public and private power that delegated monetary creation to market actors while preserving state authority over the unit of account. This arrangement, as we have seen in Brazil's case, has been repeatedly contested and renegotiated through political struggle. The current development of CBDCs represents another such moment of potential transformation, where technological innovation creates possibilities for reimagining this fundamental monetary relationship.

However, as the analysis of different CBDC architectures will demonstrate, technical design choices are inherently political, capable of either reinforcing or disrupting established patterns of monetary power.

The adoption of CBDCs by national governments marks a transformation in the architecture of contemporary monetary systems, requiring an analysis that goes beyond the technological dimension. As Desan (2014) demonstrates, modern money emerged through a constitutional design that integrated what she terms “fiscal value”—where participants advance resources to a central agent in exchange for future rights—with a “monetary premium”—the unique capacity of money to serve as a measure of value and a universal means of payment within a society. This integration establishes specific power relations by determining who can create money, under what conditions it can be issued, and how its benefits are distributed—precisely the arrangement that CBDCs have the potential to reshape.

As demonstrated in previous sections, central banks emerged and evolved through a historical process of intertwining state power with the development of modern money which began in the 17th century in England. This process transformed the way societies mobilized resources by reconfiguring the basic monetary pact, granting the banking system the authority to expand liquidity in exchange for profit. It thus entailed the delegation to bankers of what was previously an inherently public function, establishing a public-private monetary system that diverged from the state’s monopoly over money issuance (Desan, 2014). However, considering that modern money itself “is neither public nor private in a categorical sense; it gains effect through the action of each on the other” (Desan, 2014, p.30), it can be argued that CBDCs introduce new sources of tension within this public-private relationship.

Eich (2022) enriches this understanding by revealing how attempts to “depoliticize” money through technical innovation or the institutional independence of central banks are, themselves, political moves that incorporate specific visions of what democratic governance should entail. His analysis demonstrates how enduring layers of thought have shaped debates on whether monetary power should be rule-bound and/or subject to democratic deliberation. He argues that the issue is not whether money should be politicized or depoliticized, but rather what type of politics determines monetary institutions and whose interests they serve.

In this regard, Moschella (2024) helps us understand how the epistemic community of central banks constructs legitimacy over history. Her analysis reveals how monetary orthodoxy — consolidated through central bank independence under the New Macroeconomic Consensus in the 1980s and 1990s — has adapted to shifting political contexts, as could be seen in the adoption of unconventional policies after 2008. This illustrates the interaction between technical expertise and responsiveness to emerging societal demands, offering insights into how CBDC designs may emerge and gain acceptance.

Together, these analyses illuminate how CBDCs present an opportunity to reassess both the political nature of money and the possibilities for democratizing monetary institutions. In the next subsection (3.1), we will examine the basic monetary pact, analyzing how different CBDC architectures — whether direct, indirect, or hybrid — incorporate distinct configurations of power and trust. Design choices — from access conditions to governance structures — determine how fiscal value and monetary premium can be integrated into the payment system. These architectures model not only technical operations but also how society mobilizes and distributes resources through money, potentially transforming the established public-private arrangement.

The second subsection (3.2) will focus on the Brazilian case, which illustrates how the political dimensions of monetary design manifest in concrete institutional changes. The development of DREX by the Banco Central do Brasil coincides with its formal independence under Law 179/2021, reflecting Eich's perspective on how private interests can constrain the democratic potential of central banks. The design choices for DREX will forge not only technical operations improvements related to the payment system and the creation of new financial services, but also the broader capacity for democratic monetary governance in Brazil.

3.1 Making sense of CBDCs

The development of CBDCs projects by central banks arises from the confluence of at least three political forces: Big Tech's entrance; China; and the accelerated growth of online transactions due to Covid-19. Big Tech companies have advanced in online payment systems, alongside with the unexpected expansion of stablecoins, which reached a market capitalization of $220 billion in February 2025 (CoinGecko, 2025). The BIS (2022) underscores how these corporations leverage their extensive user networks and data analytics capabilities to operate beyond traditional banking boundaries, threatening both monetary sovereignty and the power of traditional banks. Moreover, China's pioneering e-CNY project has catalyzed geopolitical competition in digital and cross-border payment systems, signaling an attempt to redefine international monetary hierarchies through technological innovation (Duffie & Economy, 2022). Lastly, Covid-19 pandemic compelled the rapid digitalization of processes and transactions, reinforcing demands for more inclusive and comprehensive financial structures.

This transformation represents what Eich (2022) identifies as a constitutional moment in monetary design. According to the Atlantic Council (2025), 134 countries and monetary unions are currently exploring the development of a sovereign digital currency, analyzing technical possibilities and making fundamental political choices. CBDCs' core features - programmability, traceability, and accessibility - enable new forms of control over monetary circulation and distribution. However, the design of their technological infrastructure and operational framework, from privacy parameters to access conditions, reflects deeper political tensions between reinforcing existing power structures and enabling more democratic forms of monetary governance, particularly those aligned with pressing social and ecological imperatives.

A. Direct Model (Single-tier)

CBDC architecture models represent distinct forms of structuring monetary governance (or Desan's basic monetary pact), with direct implications for economic power relations. In the direct or single-tier model, the central bank maintains direct relationships with end users, assuming responsibility for issuing CBDC and, consequently, for liquidity, alongside retail payment services. As detailed by Auer and Böhme (2020), this architecture requires the central bank to manage the entire technological structure, from the central ledger to user-facing payment interfaces. The model processes retail payments through either centralized or distributed ledger systems, with the central bank maintaining individual accounts and verifying transactions. This represents what Bindseil (2020) describes as the most comprehensive form of public digital money - the well-known "reserves for all" type of CBDC.

This construction represents the most radical departure from the current public-private monetary arrangement established in 17th century England, as analyzed by Desan (2014). By eliminating (or circumventing) financial intermediaries from the currently designed payment structure, it fundamentally alters how fiscal value and monetary premium are integrated. The direct model enables new forms of public control over monetary creation and circulation, allowing customized implementation of both monetary and fiscal policies, as well as systematic evaluation of their reach and performance. It represents the full possibility of issuing and utilizing what Carstens (2021) calls "programmable money" - digital assets whose use can be automated and conditioned according to predefined rules - in a democratic manner, where beyond the capacity to define the unit of account and maintain tax collection prerogative, the State reclaims the power to expand liquidity according to socially (politically) agreed objectives.

However, as expected in a society dominated by neoliberal rationality (Dardot and Laval, 2016), where competition and market mechanisms are naturalized as the only legitimate form of social organization, resistance to such transformation conceals political and ideological commitments deeply embedded in the modern monetary system. This rationality not only shapes institutions but also the very subjectivities of involved actors, naturalizing a configuration that delegates the state prerogative of money creation to institutions driven by private interests and profit logic. As Moschella (2024) demonstrates, central banks have historically built their institutional legitimacy through an epistemic structure that privileges market-based arrangements, thus maintaining a strategic distance from retail operations. This legitimacy building creates cognitive barriers to the adoption of direct CBDCs in order to preserve the status quo of the financial system, as the model challenges the established division between public and private actors in monetary governance.

Therefore, this public-private division is not simply operational but constitutive of modern money's design itself, where liquidity creation and allocation is performed by the market through profit-oriented lending decisions. Though central banks often frame their reluctance in technical terms about operational capacity, this masks deeper tensions regarding power relations in the monetary system - specifically, how the banking system both constrains state authority and establishes financing patterns that directly shape the distribution of economic resources and opportunities throughout society. This arrangement, which has been fundamental to modern capitalism's development, creates a permanent conflict between state monetary sovereignty and private financial institutions' power over credit creation and distribution.

The challenges to democratizing monetary policy and restoring state control over the “monetary premium” resonate with Gabor's (2021) and Braun and Gabor’s (2023) analyses of the “Wall Street Consensus” and its resistance to a “Big Green State”. The objection to direct CBDCs reflects the institutional logic that the author demonstrates of systematic subordination of climate and development public policies to financial interests. This dynamic becomes particularly acute in countries with significant external debt burdens that issue peripheral currencies, which are forced to navigate the consequences of their subordinate position in the international hierarchy. In these cases, monetary governance remains under intense pressure from the financial establishment, as global financial centers dictate the terms of financial innovation. The analyses of both Dafermos (2022) and Gabor (2021) expose central banks' persistent adherence to market-based paradigms even when addressing social and environmental challenges.

The direct model enables the reassertion of public authority over monetary creation in its most comprehensive form, potentially democratizing access to the monetary system. The BIS (2022) itself acknowledges that such a model could allow a more direct implementation of monetary policy and improve financial inclusion. However, the institution raises concerns regarding the state's institutional capacity to undertake such an endeavor, as well as questions about financial privacy and the delicate balance between state authority and individual autonomy in monetary governance.

Thus, technical aspects are deeply intertwined with political economy considerations. As Auer and Böhme (2020) detail, the central bank would need to build and maintain a massive technological infrastructure to process millions of transactions per second, ensure cybersecurity, manage digital identities, and provide customer services. Beyond representing a technical challenge, as the authors elucidate, these operational requirements constitute a fundamental transformation of central banks' institutional role and capacity. Resistance to such transformation reflects both legitimate operational concerns and deeper institutional commitments to market and profit-based governance models that have been rooted in our society since the seventeenth century. Nonetheless, we cannot forget that, as evidenced in the 2008 crisis, as highlighted by Moschella (2024), the political environment can alter central banks' trajectory, particularly in a context where expectations and demands from part of their responsive audience are undergoing important modifications due to climate emergency and escalating social inequality.

B. Intermediated Model (Two-tier)

The intermediated or two-tier model represents the most conservative approach to CBDC implementation, maintaining the current public-private arrangement in monetary governance while introducing technological innovations. The model is characterized by a hierarchical structure in which the central bank maintains wholesale CBDC accounts only for regulated financial institutions, which then create synthetic instruments (or tokenized deposits) backed by CBDC for end users[4]. This institutional choice merely reproduces the current logic of modern money highlighted by Desan (2014), preserving the privileged role of financial institutions in managing social liquidity even when technical advances would enable greater direct public provision of monetary services.

This fundamental political-institutional arrangement materializes through specific technical choices that incorporate and reproduce its monetary governance premises. As detailed by Auer and Böhme (2020), this architecture requires a complex technological structure that combines centralized or distributed ledger systems with robust identity management mechanisms and Application Programming Interface (API) layers. Although presented as purely technical choices, these infrastructure decisions embody specific political choices about access to the financial system, network information surveillance, and social control of operations.

The API layers, for instance, are crucial in shaping the system's operation, as they form the connection point between banks, financial institutions, and the CBDC system. Through these layers, decisions are made about which transactions will be conducted, which security and authentication

[4] The intermediated model discussed by Auer and Böhme (2020, 2021) - also termed 'indirect CBDC' - requires intermediaries to fully back their retail liabilities with central bank reserves, making it effectively a 100% reserve version of the two-tier model. This distinguishes it from traditional fractional reserve banking while maintaining the basic intermediated structure.

mechanisms will be adopted, and who can access what types of information. Therefore, from the choice of data governance protocols that define privacy parameters to API structures, which determine market access conditions, the adopted technological framework has the potential to not only preserve existing institutional structures but also reinforce particular power relations.

As Eich (2022) argues, attempts to present monetary arrangements as results of technical imperatives often mask fundamental decisions about democratic governance and the public purpose of money. In the case of the intermediated model, the layered architecture itself materializes a particular vision about the appropriate limits of state monetary authority and the private sector's role in liquidity expansion. Moreover, decisions about privacy protocols, data access rights, and analytical capabilities not only affect the system's technical operation but fundamentally determine who can extract value and exercise control through the payments infrastructure.

While maintaining the fundamental public-private relationship described by Desan (2014), the intermediated model introduces additional monetary complexity through Big Tech's entry into payment systems, establishing new forms of power based on control over data generated through digital transactions. As Morozov (2019) observes, information about payment patterns and financial transactions that could serve public interest in formulating monetary and social policies is instead converted into rent-generating private assets, fueling business models predicated on the extraction and commodification of personal data by large technology companies. This process manifests a new dimension of the neoliberal rationality analyzed by Dardot and Laval (2016), wherein economic participation itself generates data that feeds business models based on the capture of social interactions. This systematic monetization of collectively generated data expresses a new dimension of the real subsumption of labor to capital analyzed by Marx, where not only the direct production process but everyday sociability itself becomes incorporated into valorization circuits. Data extracted from social relations are transformed into inputs for new processes of capital valorization, which thus appropriates not only direct labor time but also the information generated by the entire web of social relations to fuel accumulation.

This transformation complicates the legitimation dynamics of central banks identified by Moschella (2024), as technological financial intermediaries introduce forms of power that both complement and compete with traditional financial institutions. Moreover, as the BIS (2022) emphasizes, monetary governance and financial supervision must confront growing challenges related to privacy protection, data exploitation for targeted financial services, and personal security—challenges that tend to intensify as these institutions accumulate greater market power and redefine the very conditions of access to liquidity. The accumulation of payment data enables increasingly sophisticated forms of financial exclusion and market segmentation through price discrimination and restrictions on liquidity access, wherein these technological intermediaries not only reproduce but potentially deepen the contradictions inherent in the hybrid public-private nature of modern money identified by Desan (2014).

On the other hand, from Bindseil's (2020) analytical perspective, the requirement for full CBDC backing of tokenized deposits would not only restrict the operational autonomy of traditional banks operating under fractional reserve systems but would also fundamentally alter monetary policy dynamics. This institutional transformation reflects his concerns about the potential imbalance in the banking system caused by the public's preference for holding CBDCs over traditional deposits. In the case of an intermediated model, this risk is closely linked to the loss of flexibility and liquidity in banks' balance sheets due to the 1:1 reserve requirement for CBDCs - a technical specification that, while appearing neutral, potentially reshapes the power dynamics between public and private actors by limiting banks' traditional capacity to expand credit, given the reduced leverage space in their asset and liability management.

The post-Keynesian perspective, as developed by Minsky (1975) and Carvalho (1999), can help us understand how banks and financial institutions respond not just to technical liquidity conditions but to market conventions and confidence levels that shape their profit-seeking behavior - a dynamic that fundamentally challenges market-based theories of efficient monetary governance and exposes how power relations persist despite technological innovation. This theoretical framework explains why, during turbulent periods when liquidity preference intensifies, even sophisticated technical control mechanisms may prove insufficient to prevent dramatic portfolio reallocations (Minsky, 1986). These insights demonstrate how decisions about liquidity expansion continue to materialize through the self-interest of capitalist entrepreneurs, reinforcing rather than reversing the public-private arrangement that Desan (2014) identifies as fundamental to modern money's constitution.

Therefore, any attempt to modify these institutions' capacity for money creation and liquidity management - and thus to generate profit - does not occur without pressure and threats to the legitimacy of central banks, as framed by Moschella (2024). The technical architecture of CBDCs introduces new variables affecting banks' profit-generating capabilities, from remuneration structures to the specific design of payment systems and their interaction with traditional deposit arrangements. Bindseil (2020), for instance, argues that the conditions for liquidity access and creation depends on the calibration of various technical parameters - including conversion limits between reserves and CBDCs, the remuneration rate structures, and access mechanisms - which together determine the operational scope of traditional banks and other financial institutions and their capacity for endogenous money creation. Given these tensions, the intermediated model represents an attempt with the greatest potential to modernize payment infrastructure while preserving institutional arrangements that, as both Desan (2014) and Eich (2022) emphasize, incorporate market-based rather than democratic views of monetary governance.

Nonetheless, growing social pressures for financial inclusion, green transition, and democratic oversight increasingly challenge traditional modes of central bank legitimation. The identified contradictions - from the preservation of the historical public-private arrangement to new forms of data-based power - reveal deeper constitutive tensions within contemporary financial capitalism. As Desan (2014) argues, choices about monetary design are fundamentally choices about how to organize social relations of power and production, determining not only who can create and allocate liquidity but also which social objectives will be prioritized. The intermediated model, by attempting to preserve existing financial intermediation structures while introducing technological innovation, exemplifies what Eich (2022) identifies as the politics of monetary depoliticization - the use of technical solutions to avoid fundamental debates about democratic monetary governance, particularly relevant in the context of the critical climate distress. As Moschella (2024) demonstrates, growing social pressure for monetary reform that meets broader public objectives increasingly challenges this depoliticization strategy, showing that central banks' legitimacy will increasingly depend on their capacity to respond to urgent social demands such as the climate crisis. The future of digital monetary innovation will thus depend both on technological advances and on the capacity to imagine and implement institutional arrangements that effectively democratize monetary power, reconnecting its governance with pressing social and ecological objectives.

C. Hybrid Model

In the hybrid CBDC model, the central bank maintains a direct relationship with retail users through their CBDC holdings while delegating day-to-day payment operations to intermediaries. Building upon Desan's (2014) analysis, the hybrid CBDC model represents both an opportunity to reconfigure the monetary pact and to preserve essential elements of the existing public-private arrangement in modern money. Unlike previously analyzed models, the hybrid architecture, as detailed by Auer and Böhme (2020), differs from both the intermediated model, which maintains traditional banking hierarchies beneath tokenized instruments, and the direct model, which dissolves these structures entirely, by constructing distinct patterns of institutional interaction where the public's CBDC accounts remain on the central bank's balance sheet. This unique characteristic enables the rearrangement of power over liquidity creation and management, demonstrating, in Eich's (2022) terms, how seemingly technical choices in monetary design embody fundamentally political decisions.

The operationalization of this model enables monetary authorities to maintain supervision or even control over monetary issuance and payment functions while sustaining profitable private sector participation in operational domains. To understand the challenges of this arrangement, Bindseil (2020) detailed technical analysis reveals that, to enable this new form of public-private arrangement without risking bank disintermediation, it is necessary precise calibration of multiple parameters, such as conversion thresholds and reserve requirements to tiered remuneration structures. In this context, the intricate technical calibration serves a deeper political-economic purpose: preventing direct public access to CBDC wallets at the central bank from catalyzing a systemic shift of demand deposits toward these more liquid sovereign instruments. Such a shift could fundamentally alter the existing monetary hierarchy by constraining traditional banks' balance sheet management and thereby diminish their privileged position in the endogenous creation of money through credit extension.

These design choices not only determine the velocity and distribution of monetary creation power in the system but also reveal the inherent contradictions in attempting to democratize the monetary system while preserving private accumulation mechanisms. The delicate balance between public oversight and preservation of private profitability thus emerges as a central aspect of the technical design proposed by monetary authorities, in an attempt to prevent abrupt ruptures that could destabilize the financial system.

The hybrid model's change of conventional public-private boundaries generates unprecedented institutional tensions that challenge central banks' historically constructed legitimacy within their epistemic community (Moschella, 2024). While preserving certain spaces for private accumulation, the simultaneous operation of fractional reserve systems and CBDCs creates technical possibilities for more democratic monetary innovation (Eich, 2022). However, this potential can only materialize if operational parameters explicitly prioritize public oversight over the inherently speculative dynamics of financial institutions pursuing profitable opportunities (Minsky, 1986).

As discussed in the intermediated model, the preservation of private intermediaries' role in transactional data management enables them to extract value not only from individual operations but from the emerging patterns of social monetary relations as a whole (Morozov, 2019). The hybrid model thus risks intensifying what Keynes (1936) identified as the 'casino' aspect of financial markets, where speculation on metadata could overshadow the social utility of payment systems. As we have seen, this dynamic exemplifies neoliberalism's capacity to transform social interaction itself into a source of private accumulation (Dardot and Laval, 2016) - a tendency that hybrid CBDC architecture could either entrench or disrupt, highlighting persistent challenges for institutional design and policy effectiveness.

The hybrid model's success transcends purely technical design, requiring direct confrontation with structural contradictions that shape social conventions and profit expectations in financial decision-making. This analysis returns us to Desan's (2014) thesis: monetary design represents a constitutional choice about resource mobilization and distribution, which now confronts unprecedented technological possibilities for either democratizing or further privatizing the monetary system.

In a context of mounting pressure for central bank legitimacy, the critical test of the hybrid model's viability lies in its capacity to reconfigure the relationship between public and private interests while maintaining operational stability. This dilemma becomes particularly acute at the complex intersection of monetary and data management, where tensions between democratic control and market-driven financial innovation emerge with particular intensity. These challenges highlight the fundamentally political nature of monetary design choices and their profound implications for social power relations in contemporary capitalism.

3.2 DREX; the Brazilian CBDC

The development of DREX by the BCB represents an emblematic case of the tensions discussed in previous sections regarding CBDC implementation. According to official BCB documents (2021a), the project is presented as a natural evolution in financial system modernization, part of the BC# Agenda and complementary to PIX's success in instant payments. DREX materializes as a multi-asset platform based on distributed ledger technology (DLT), having evolved from the initial LIFT Challenge to broader phases of the RD Pilot. The project encompasses sixteen consortia and addresses thirteen selected themes, ranging from operations with public and private securities to transactions with agribusiness assets and decarbonization credits.

The BCB characterizes the project as a "hybrid" arrangement that would enable tokenized access to Digital Real through participants in the National Financial System and Brazilian Payment System. The proposed infrastructure seeks to implement financial services via smart contracts, emphasizing new instruments for collateralization and asset tokenization that, according to the BCB's official narrative, would reduce transaction costs and expand access to financial services. Specific regulatory criteria for converting deposits into DREX remain under development, being formulated in the controlled pilot environment in collaboration with other regulators such as the Securities and Exchange Commission (CVM).

Such a modernization narrative obscures a crucial historical insight developed by Desan (2014): that democratic monetary arrangements were possible even before the establishment of the modern market-based system in England. Indeed, far from technological necessity, the current public-private structure of money creation reflects specific political choices made in that period. Particularly salient here is how this historical perspective is especially relevant now, as technological disruption explicitly creates possibilities for reimagining monetary governance (policy).

As analyzed in section 2, BCB's trajectory - even before its foundation - was marked by recurring disputes over its governance and scope of action, with debates about autonomy extending for decades. Beyond mere coincidence, the temporal alignment between BCB's formal autonomy, established by Complementary Law 179/2021, and DREX's development is worth noting and suggestive of the "triumph of the technique". DREX's current design is based on a two-tier model that preserves traditional financial intermediaries' central role, demonstrating how even moments of radical technological innovation are shaped by previous institutional trajectories embedded in certain political environments. Notably, this choice suggests, as emphasized by Moschella (2024), central banks' capacity, as an institution, to adapt practices and discourses even in the face of potentially disruptive transformations in monetary relations in order to preserve its legitimacy.

As discussed in section 3.1., while technological capabilities now exist for implementing direct public access to state money with unprecedented precision and programmability, the chosen arrangement of DREX maintains the Brazilian financial system's hierarchy intact (Araújo, 2022). The resistance to direct models reflects what Dardot and Laval (2016) identify as neoliberal rationality's naturalization of market-based solutions, where concerns about bank disintermediation are treated as technical constraints rather than political choices about monetary governance. The decision not to remunerate DREX balances and establish conversion limits, as detailed in the project's technical documents (BCB, 2021b), shows how financial stability concerns are mobilized to justify preserving the current power balance between public and private actors. The very framing of disintermediation as a "problem" to be solved, rather than an opportunity for expanding public access to state money, exemplifies how neoliberal assumptions limit the imagination of alternative monetary arrangements.

A detailed analysis of DREX's architecture reveals how its apparent technical caution masks fundamental political choices about monetary governance. While the BCB (2023) presents its two-tiered structure - wholesale and retail - as a hybrid innovation, rigorous examination indicates its substantive proximity to the intermediated model described by Auer & Böhme (2020, 2021). This "hybrid" classification functions less as technical description and more as rhetorical device that, by suggesting greater public control, legitimizes the preservation of existing monetary hierarchies - a pattern that Desan (2014) identifies as recurrent in history, where seemingly technical arrangements consolidate specific structures of monetary power.

The fragmentation of reserves proposed by DREX into three distinct accounts - reserve/settlement for real-time operations, instant payments for PIX, and specific CBDC account (Araujo, 2022) - partially reconfigures liquidity management in the system. This arrangement enables commercial banks to issue tokens while maintaining the traditional fractional reserve system, whereas Payment System Providers (PSPs) must maintain 100% reserves, replicating current requirements for instant payment accounts. This regulatory asymmetry, far from merely technical, materializes the financial system's hierarchy.

Moreover, looking past surface-level technological neutrality, a friction emerges in the financial power dynamics with the penetration of Big Techs into payment infrastructure that materializes new forms of subsumption of the monetary system to the logic of capital. Their competitive advantage derives from their unique capacity to transform transactional data into sources of revenue through capture of collective behavioral patterns embedded in payment transactions (Morozov, 2019). Paradoxically, the same technological capabilities that enable this private colonization of financial flows could serve to democratize monetary governance. As Eich (2022) demonstrates in his analysis of the politics of monetary depoliticization, this tension exposes the inherently political character of institutional choices about payment architectures - choices that will determine whether analytical power over financial data will reinforce private control mechanisms or enable new forms of democratic oversight.

In a striking manifestation of neoliberal rationality, the BCB's official discourse emphasizes DREX's transformative potential for financial inclusion through reduced transaction costs and tailored financial products for excluded populations (BCB, 2021c). However, as Desan (2014) helps us understand, this narrative masks how the institutional architecture preserves, and indeed technologically upgrades, existing hierarchies of monetary power. The official proposed model of democratization essentially facilitates access to tokenized financial products, while reinforcing private control over monetary governance. This contradiction illuminates how technological innovation, absent democratic reimagining of monetary institutions, serves primarily to modernize and reinforce, rather than transform, existing power relations.

DREX's technological architecture embodies a fundamental contradiction at the heart of modern monetary design: while its granular control over monetary flows reinforces existing power structures, this same capacity creates unprecedented possibilities for democratic governance. The precision of digital programmability opens new horizons for directing credit creation toward collective needs - enabling targeted support for regional development and ecological transition in ways previously unimaginable. What makes this contradiction particularly acute is that the very mechanisms serving surveillance capitalism and private accumulation - the technological capacity for real-time tracking and programmable allocation of money flows - could, through political reorganization, transform the basic monetary pact that Desan (2014) identifies as constitutive of modern capitalism.

Conclusion

This paper intends to ultimately contribute to an effort of reshaping central banking and monetary policy in Brazil, making it appropriate for democratic purposes. At its core, it demonstrates that monetary design decisions, even when framed in technical terms, fundamentally reflect and shape social power relations.The implementation of the DREX, the digital currency of the Banco Central do Brasil, which can be a unique opportunity for reshaping the foundations of money making in the country, opens up the space for this discussion.

The trajectory of creation of central banks and, even more, of the foundation of the modern monetary system, based on the English model, represented a break with the system in which the state held exclusive the prerogative of issuing money. However, the system that was politically articulated is a problematic and even contradictory public-private system of creating money. In this system, central banks, on behalf of the State, keep some crucial roles: it defines and enforces the money of account, issues the “reserve money”, defines the basic interest rate and is the lender of last resort.

As Desan (2014) demonstrates, this public-private arrangement fundamentally reconfigured the monetary pact, integrating fiscal value with what she terms the "monetary premium" - money's unique capacity as a universal means of payment. While the state maintained control over fiscal value through taxation, the power to create and allocate liquidity was largely delegated to private banking institutions. Today, CBDCs present an unprecedented opportunity to reimagine this centuries-old arrangement.

In Brazil, the historical trajectory of central banking reflects this complex interplay between public authority, private interests, as well as the interests of its own bureaucracy, in connection with the international trends. The delayed establishment of the BCB until 1964, and the subsequent decades-long debate over its autonomy and even independence, illustrate how monetary governance remains fundamentally a politically sensitive terrain. Now, as the institution implements DREX amid its newly acquired formal autonomy, an innovation that is announced as a triumph of technique, we observe a critical paradox: while technological innovation creates unprecedented possibilities for democratizing monetary relations through a reconfiguration of the monetary premium, the chosen design largely reinforces existing hierarchies of financial power.

With its two-tier structure and the fragmentation of financial institutions' reserves into different accounts, DREX's institutional design demonstrates how seemingly neutral technical aspects consolidate historically constituted financial hierarchies and bureaucratic preferences. The regulatory differentiation between banks and payment providers, combined with conversion limits and operational restrictions, reveals a specific political project: preserving private control, specially of traditional banks, over liquidity creation. This arrangement exemplifies what Dardot and Laval (2016) identify as neoliberal rationality's capacity to adapt and preserve market-based governance even amid technological disruption. It also expresses how central banks, as Moschella (2024) demonstrates, can maintain their technocratic legitimacy by selectively incorporating innovation while keeping intact the boundaries for more democratic forms of monetary governance.

Yet paradoxically, these very technological capabilities - the precise tracking and programming of monetary flows - could, through political reorganization aligned with Dardot and Laval's (2016) vision of the common, enable democratic oversight of credit creation and allocation in service of urgent social and ecological needs. In the Brazilian case, this potential directly confronts financial hierarchies that concentrate power amid deepening social and environmental crises, exposing the growing limits of central bank technocratic legitimation. In conclusion, DREX's development reveals not just technical choices, but fundamental political decisions about the distribution of the monetary premium that has shaped capitalist development since the 17th century - choices that will determine whether digital currency innovation serves to democratize or further entrench existing patterns of financial power.

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