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## The CBDC that wasn't: Brazil's Drex and the quiet death of a digital real in Latin America

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### Abstract

This paper analyzes the evolution of Brazil's Drex, its official digital currency project. Initially conceived as a blockchain-based CBDC, the project was reportedly suspended in its original form by 2025. Media reports indicate it abandoned DLT to become a tokenization ecosystem, with an official stating it is "not a CBDC". This article argues the transition highlights the fundamental tension between technological innovation and monetary sovereignty. We argue this shift prioritized hierarchical state control and situate Drex as a "third way" between centralized surveillance and private innovation. Drex's unfinished legacy provides crucial insights into the institutional future of money.

**Keywords:** Central Bank Digital Currency (CBDC); Drex; Monetary Sovereignty; Tokenization

### 1. Introduction

The digitalization of finance and the global expansion of crypto assets have transformed monetary systems into arenas of technological and political experimentation. As the Bank for International Settlements (BIS, 2023) reports, more than ninety percent of central banks have been exploring the design of Central Bank Digital Currencies (CBDCs), reflecting the growing need to modernize payment infrastructures while safeguarding monetary sovereignty.

Within this global race, the Brazilian project known as Drex (Digital Real EconomyX) emerged as one of the most ambitious initiatives in Latin America. Drex was originally conceived as a blockchain-based CBDC and a pilot project on a Distributed Ledger Technology (DLT) platform, which was developed using the open-source platform Hyperledger Besu (Banco Central do Brasil, 2023a). This study will also address the central dilemma underlying all state-led digital currency projects: how to adopt the logic of decentralization and programmability without undermining the hierarchical and discretionary powers of the state. This issue is particularly relevant in the case of this coin, which was initially conceived to maintain parity with the Brazilian real, 1 real to 1 drex.

This paper aims to contribute to the understanding and contextualization of Drex, the Brazilian Central Bank's digital currency project. As of April 17, 2026, there is no official information or statement from the Central Bank of Brazil, the institution responsible for managing the Drex initiative, regarding the project's current status. From now on, the Central Bank of Brazil will be called by its original name "Banco Central do Brasil".

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This lack of official communication about the Drex project has generated uncertainty and speculation about the project's direction and objectives, especially because its official website has not been updated in terms of receiving a new official pdf report in the last 2 years. Therefore, this work seeks to provide a comprehensive overview of the available information, relying also on secondary sources and media reports. The paper will also outline the broader institutional and technological context that shapes Brazil's digital currency initiatives, setting the stage for a deeper analysis in which the evolution of Drex's identity and purpose will be examined in detail.

Following this introduction, the literature review develops a theoretical framework connecting monetary sovereignty and digital architecture, examines the historical evolution of digital currencies, and reviews prior studies on Drex by Brazilian authors. The methodology section describes the approach adopted to reconstruct the trajectory of the project. The results section presents the evolution of Drex from its inception to April 2026 as a case study of institutional negotiation. The discussion then examines how the project's design choices, especially its abandonment of blockchain, reflect deeper institutional priorities, and situates Drex in a comparative context, contrasting its trajectory with the Chinese, European, and US models. The conclusion argues that the Drex experience offers crucial insights into the institutional future of money.

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## 2. Literature Review

### 2.1. Theoretical Framework

Money is not merely a technical instrument of exchange; it is an institutional construct that embodies relationships of trust, authority, and legitimacy (Carstens, 2023). As Fama and Lucarelli (2025) argue, monetary innovation requires a process of institutionalization capable of integrating new technologies into the legal and regulatory architecture that sustains state sovereignty. In this sense, monetary issuance is inseparable from the state's capacity to guarantee legal coercion, macroeconomic stability, and public recognition.

The instability of private digital assets, such as stablecoins, has further emphasized the institutional dimension of money. The collapse of TerraUSD and the persistent doubts surrounding Tether's reserves exposed the structural fragility of these private arrangements. According to the International Monetary Fund (IMF, 2023), such events reinforce the need for public digital currencies supported by institutional authority, providing stability, trust, and regulatory oversight. Similarly, Gorton and Zhang (2021) describe money's defining feature as its "no-questions-asked" acceptability, a property that algorithmic or collateralized tokens struggle to achieve under market stress.

Central banks worldwide have therefore moved to develop CBDCs as institutional responses to the risks posed by decentralized finance (DeFi) and unregulated crypto assets (BIS, 2023; Auer et al., 2022; Banco Central do Brasil, 2023a). In the Latin American context specifically, central banks have been prioritizing the research and development of retail-oriented CBDC models, which raises recurring controversies regarding user privacy, political monitoring of economic behavior, and the institutional autonomy of central banks from political pressures (Universidad Empresarial Siglo 21, 2025). Drex was part of this broader movement. Conceived as a public digital currency backed by the Brazilian real and supervised by the Central Bank, its design aimed to combine the technological efficiency of tokenized systems with the institutional safeguards of the traditional financial hierarchy.

The rise of decentralized technologies such as blockchain initially appeared to challenge this institutional logic. Bitcoin, for example, emerged as a reaction to the perceived failures of traditional financial systems during the 2008 crisis (Nakamoto, 2008; Tapscott & Tapscott, 2016). Its architecture promised transparency, immutability, and autonomy from state control. However, as Fantacci (2019) notes, cryptocurrencies represent not only a technical innovation but also an institutional rupture by transferring the issuance of money from the public sphere to decentralized networks. This displacement of monetary authority calls into question the foundations of sovereign money and compels states to redefine their role in digital finance.

The Drex project could have been interpreted as Brazil's attempt to integrate the technological advances of the blockchain era without relinquishing institutional control. The Banco Central do Brasil (2023a) explicitly stated that Drex would not replace physical currency but would coexist as a new digital layer of the national monetary system. As Lopes (2023) emphasizes, a Central Bank Digital Currency must preserve the legal and institutional prerogatives of monetary policy, ensuring that innovation strengthens rather than weakens the state's role in the financial system.

From this perspective, Drex represented an institutional synthesis: a technological modernization of money embedded within the governance structures of public authority. By rejecting the radical transparency of blockchain and opting for a permissioned and centralized architecture, the Banco Central do Brasil reaffirmed that digital innovation must occur

under state supervision. The resulting tension between efficiency, privacy, and control defines the essence of contemporary monetary digitalization.

## 2.2. The Historical Evolution of Digital Currencies

The emergence of digital currencies is deeply intertwined with the broader process of financial digitalization and the development of cryptographic technologies. The origins of secure digital transactions can be traced to the 1970s, with the invention of the RSA algorithm by Rivest et al. (1978), which laid the foundations for public-key cryptography and online trust. In 1983, David Chaum introduced the concept of anonymous digital payments using "blind signatures," considered the starting point for the field of digital money (Chaum, 1983).

Throughout the 1990s, researchers such as Wei Dai and Timothy May expanded these ideas through projects like *b-money* and the *Crypto Anarchist Manifesto*, which envisioned monetary systems without central authorities (Dai, 1998; May, 1992). These early proposals directly inspired the creation of Bitcoin in 2009, marking the beginning of decentralized digital currencies. Bitcoin's launch established a paradigm shift by offering a form of money based on distributed consensus rather than sovereign issuance (Nakamoto, 2008).

However, as these decentralized systems gained prominence, states and central banks recognized the need to adapt. The growing popularity of cryptocurrencies and stablecoins revealed both the potential and the risks of private monetary innovation. According to the BIS (2023), the proliferation of unregulated digital assets threatened financial stability and monetary policy transmission mechanisms.

In response, central banks began to design digital currencies that could capture the benefits of technological innovation while maintaining institutional oversight. Within this global context, the Banco Central do Brasil announced the Drex project as part of a strategic effort to modernize the national financial system through tokenization and programmable contracts (Banco Central do Brasil, 2023a). The initiative aimed to integrate digital currency into the existing financial infrastructure, ensuring interoperability with systems such as Pix while preserving regulatory control.

The trajectory of Drex thus fits within a broader historical continuum. From early cryptographic experiments to blockchain-based ecosystems, the evolution of digital money reflects a constant negotiation between innovation and authority.

## 2.3. Prior Studies on Drex: Insights from Academic Works by Brazilian Authors, The "National Point" of View

The literature on Drex, Brazil's Central Bank Digital Currency (CBDC), reflects a diverse scholarly engagement by Brazilian authors that underscores its innovative potential for economic development, financial inclusion, and systemic modernization, while critically examining implementation challenges, regulatory needs, and societal implications.

Silka et al. (2025) position Drex as a pivotal state-led financial innovation orchestrated by the Central Bank, designed to enhance transaction security and efficiency across government, businesses, and consumers, thereby serving as a public policy mechanism with substantial promise for advancing the national economic and financial framework, even amid its pilot testing phase; they further contextualize this within Brazil's historical inability to emerge as a global innovation leader despite varied policies, emphasizing the state's dual role as promoter and active creator of socially inclusive innovations.

Spera et al. (2024) conduct a qualitative comparative analysis with CBDCs in China, Sweden, and the Bahamas, arguing that Drex's integration of blockchain and asset tokenization could revolutionize Brazil's financial system by fostering inclusion and diminishing banking sector concentration, though persistent issues like deficient infrastructure in remote regions and digital exclusion necessitate equilibrated regulation, infrastructure investment, and policies to curb inequalities and bolster competitiveness.

Camargo (2025) applies innovation diffusion theory to Drex adoption, asserting that attributes such as relative advantage, compatibility, complexity, trialability, and observability will critically influence user acceptance and reshape financial behaviors in Brazil's evolving digital economy. Duarte (2024) highlights Drex's offline functionality as a cornerstone for financial inclusion in developing contexts, particularly benefiting unbanked populations in rural and riverside areas lacking internet access; drawing on Central Bank reports and access-to-finance data, she contends that while Drex offers significant inclusion potential, its success hinges on prioritizing this objective in design and inter-regulator collaboration to avert widening the digital divide and instead cultivate genuine inclusion over exclusion.

Macedo (2024) employs a semiotic lens to dissect Drex's monetary functions, medium of exchange, unit of account, and store of value, within capitalist cognition, revealing that its rollout strategy deviates from prevalent academic foci on monetary policy amplification and access universalization for the disadvantaged, prioritizing instead the mitigation of monetary "debanking" via decentralized cryptography and the establishment of a platform for novel intermediary-offered services.

Carvalho Neto and Wendt (2025) adopt a logical-deductive approach to question Drex's necessity against cryptoassets, acknowledging its capacity to enable new business models but expressing skepticism about attracting anonymity-seeking crypto investors due to Central Bank-managed user registration and transaction oversight, which contrasts with decentralized alternatives.

Silva (2024) provides a comprehensive dissertation on global CBDC innovations and challenges, framing Drex as a pathway to financial resilience through programmability and blockchain, yet cautioning against risks like instability and advocating for robust governance informed by international precedents to ensure effective Brazilian implementation. Overall, these works converge on Drex's transformative prospects balanced against pre-launch uncertainties, with limited empirical outcomes due to its developmental status (Silka et al., 2025; Spera et al., 2024; Camargo, 2025; Duarte, 2024; Macedo, 2024; Carvalho Neto & Wendt, 2025; Silva, 2024).

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### 3. Methodology

This study adopts a qualitative documentary analysis to reconstruct and interpret the evolution of Brazil's Drex project, given the absence of recent official communication from the Banco Central do Brasil regarding the project's current status. As of April 17, 2026, there is no official information or statement from the Central Bank of Brazil, the institution responsible for managing the Drex initiative, regarding the project's current status. This lack of official communication, together with the fact that the project's official website has not received a new official pdf report in two years, motivates a methodology based on a comprehensive overview of the available information, relying on secondary sources and media reports.

The corpus analyzed includes official reports, technical notes, and press releases issued by the Banco Central do Brasil (Banco Central do Brasil, 2021a, 2021b, 2023a, 2023b, n.d.), a contribution by the project's coordinator published in the BIS Papers series (Araújo, 2022), academic works on Drex by Brazilian authors (Silka et al., 2025; Spera et al., 2024; Camargo, 2025; Duarte, 2024; Macedo, 2024; Carvalho Neto & Wendt, 2025; Silva, 2024), government communication on the project (Secretaria de Comunicação Social, 2025), and Brazilian media reports covering the most recent developments (Freitas, 2025; Lascado, 2025; Tolotti, 2025; Lobo, 2025).

The analysis is organized in two complementary steps. First, the paper reconstructs the chronological trajectory of Drex, from the creation of the Central Bank's initial CBDC working group in 2020 up to April 17, 2026, identifying the institutional and technological milestones of the project. Second, in the discussion section, the paper reinterprets Drex as a case study of institutional negotiation, situating it in a comparative context by contrasting its trajectory with the Chinese e-CNY, the European digital euro, and the United States approach to state-issued CBDCs (Fama & Lucarelli, 2025). The interpretation is framed within a theoretical discussion that connects monetary sovereignty and digital architecture.

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### 4. Results: The Trajectory of Drex

**2020:** Creation of a working group at the Central Bank of Brazil (BC) to study the potential development of a Central Bank Digital Currency (CBDC) (Banco Central do Brasil, 2023a). This information was extracted from a 2023 report, even that no official proof was found on the internet.

**2021:** The trajectory of Drex began strongly in 2021, when the Central Bank of Brazil (Banco Central do Brasil) introduced the concept of the *"Real Digital"*, and later decided to use the name Drex more officially. The project was described as a digital extension of the national currency, designed to foster innovation, efficiency, and financial inclusion. It was intended for retail use, integrated with existing payment systems for online operations, and conceptually similar to physical cash for offline transactions. The proposed model was intermediated, with the Central Bank issuing the digital real through financial institutions to maintain current customer relationships and expand access to the financial system. The Bank also stated that the digital real would not generate interest, mirroring the non-remunerated nature of physical currency (Banco Central do Brasil, 2021a, 2021b).

**2022:** In a paper published in 2022, and as part of the *BIS Papers No. 123* series, Fábio Araújo, project leader of the Digital Real Initiative at the Banco Central do Brasil, outlined the strategic vision behind Brazil's CBDC project. He explained that the main objective of introducing a Central Bank Digital Currency (CBDC) in Brazil is to create a safe and reliable environment for innovation through programmability technologies such as smart contracts and programmable money. Brazil already has an advanced payment ecosystem, including RTGS for real-time gross settlement, e-money platforms, and Pix, an instant payment system launched in 2020 that allows real-time money transfers between individuals and businesses at no cost and operates 24/7. Araújo emphasized that the Digital Real is not meant to replicate existing payment systems but to expand them by enabling new smart payment solutions. He also highlighted that integrating these innovations within the central bank's regulatory framework can enhance transparency, auditability, and financial inclusion while ensuring solid governance and system stability (Araújo, 2022).

**2023:** In 2023, the Central Bank of Brazil (BCB) released its *Relatório de Economia Bancária*, which included a dedicated section on the impact of Drex and “programmable finance” on the structure of the national financial system. The report emphasized that, through the use of Distributed Ledger Technology (DLT), Drex aims to provide a digital version of the Brazilian real under the supervision of the BCB, fostering a more efficient, secure, and inclusive financial environment. It also highlighted that this initiative seeks to ensure interoperability between traditional and digital infrastructures, enabling asset tokenization and the application of smart contracts to increase innovation and efficiency in credit, investment, and payment operations. Furthermore, the BCB noted that the combination of Drex with Open Finance could democratize access to credit and investment options, especially for small investors and companies, thus promoting diversification and financial inclusion within the Brazilian financial system (Banco Central do Brasil, 2023b).

In November 2023, the Banco Central do Brasil issued the technical note *A Moeda Digital Oficial Brasileira (Drex): Referências Básicas*, consolidating the practical, theoretical, and technical aspects of the national digital currency project. The document described the *Drex Pilot*, launched in March 2023, as an experimental phase designed to test tokenized transactions and wholesale settlement operations using the digital real. The note indicated that *Drex* is being developed on the open-source platform Hyperledger Besu, integrating decentralized finance and smart contract functionalities to enhance financial service efficiency. Moreover, the BCB emphasized *Drex's* potential to reduce credit provision costs, strengthen financial inclusion, and stimulate competition among institutions, allowing citizens to access digital financial products as easily as performing a transaction through the Pix instant payment system (Banco Central do Brasil, 2023a).

**2024 and 2025:** In 2024, the Central Bank of Brazil published two news releases, but they were merely intentions to work with banks; there were no substantial changes or any official announcement of real modifications to the essence of DREX (Banco Central do Brasil, n.d.). The DREX project of the Central Bank of Brazil (BCB) has effectively been suspended in its originally intended state. Although no official report explicitly declaring a full suspension has been issued, as of April 17, 2026, there is no formal communication from the Central Bank confirming that DREX has been completely abandoned.

Numerous sources, including a writer called Freitas, that authored an article in *Forbes Brasil* (2025), have reported that while DREX has not been entirely dismissed, the project will abandon its reliance on blockchain technology, marking yet another postponement in a series of delays that have occurred since its initial announcement several years ago.

Other sources include Binance and UOL, with Binance being the largest cryptocurrency exchange and UOL one of the most prominent media outlets in Brazil. Both reported in September 2025 that DREX “stopped being a CBDC (central bank digital currency) to become a tokenization ecosystem with smart contracts” (Lascado, 2025; Tolotti, 2025). Meanwhile, no official communication has been issued by the Central Bank of Brazil regarding this change, although several media outlets have continued to discuss the matter.

Additionally, Ana Paula Lobo, author of the news portal *Convergência Digital* (2025), another Brazilian media outlet, reported that Breno Lobo, one of the officials responsible for the DREX initiative at the Banco Central do Brasil, stated: “We took a step back. It is not a CBDC, not a digital currency of the Central Bank. It is an infrastructure designed to enable smart contracts and ensure delivery versus payment. But we need to take the first step; we see DREX fulfilling this function” (Lobo, 2025).

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## 5. Discussion

### 5.1. Innovation and Sovereignty: The Technological Dilemma

The tension between technological innovation and monetary sovereignty lies at the core of contemporary debates on CBDCs. Blockchain-based systems promise efficiency, automation, and transparency through the use of smart contracts

and distributed consensus (Tapscott & Tapscott, 2016). Yet these same features challenge the institutional prerogatives of central banks, particularly the capacity to maintain discretion, enforce privacy, and ensure stability in the financial system.

Drex illustrated this dilemma vividly. By abandoning the distributed model in favor of centralized tokenization, the *Banco Central do Brasil* sought to preserve institutional hierarchy and legal coherence. The design reflected a belief that modernization must occur without eroding public authority. As the official documents note, the Central Bank concluded that adopting a DLT infrastructure for Drex allows for a high degree of auditability, traceability, and transparency, while aiming to balance innovation with institutional stability (Banco Central do Brasil, 2023a).

This decision also reflected a broader recognition that technological architecture directly shapes the state's ability to conduct monetary policy. Fama and Lucarelli (2025) contend that CBDC design choices determine whether monetary authorities can retain effective control over liquidity and macroeconomic intervention. In this view, a permissioned and centralized CBDC allows for flexibility in policy implementation and safeguards the coherence of monetary transmission mechanisms.

At the same time, Drex's architecture sought to avoid the disintermediate risks associated with decentralized finance. By maintaining the role of commercial banks as intermediaries, the project aimed to preserve the complementarity between public money and private credit, a principle emphasized by Bibi and Canelli (2025). The result was a hybrid configuration that combined technological innovation with institutional continuity.

In essence, Drex did not reject innovation but redefined its boundaries. The project demonstrated that the digital transformation of money is not an inevitable path toward decentralization but a process of selective adaptation to institutional realities. The Brazilian case shows that sovereignty and innovation are not mutually exclusive; rather, sovereignty provides the legal and political framework that makes innovation viable.

Also, it is noted that it is false that DREX, the digital currency of the Banco Central do Brasil, was trying to be created with the purpose of replacing physical money. The issuance of paper currency continues to meet various needs and habits of the population (Secretaria de Comunicação Social, 2025). DREX, known as the digital real, will serve as an additional option for online transactions rather than a substitute for cash. Moreover, it is untrue that the Brazilian government created DREX to monitor people's financial activities. Developed by the Central Bank of Brazil since 2020, the project follows the country's data protection and banking secrecy laws, ensuring security and privacy for users (Secretaria de Comunicação Social, 2025). While this was stated in 2025, it could raise concerns about what the government of Brazil planned to do in previous years.

## **5.2. Drex as an Instrument of Monetary Policy and Institutional Sovereignty**

The Drex project can be understood not simply as a technological innovation but as an institutional response to the growing disintermediation caused by decentralized finance. By reaffirming the Central Bank's exclusive authority to issue and supervise digital money, the initiative sought to preserve Brazil's monetary sovereignty while integrating technological efficiency into its financial system (Banco Central do Brasil, 2023a).

Rather than disrupting existing financial hierarchies, Drex represented a reconfiguration of them. Its design was grounded in the idea that digital currency should serve as an extension of public authority rather than a substitute for it. According to the Banco Central do Brasil (2023a), the Drex Pilot was established as a testing phase to evaluate the benefits of programmability and the privacy guarantees that the platform can provide. This approach reflects the same logic identified by Bibi and Canelli (2025), who argue that state-backed digital currencies must preserve hierarchical supervision to prevent financial fragmentation and systemic risk.

Drex also exemplified the attempt to restore informational asymmetries in favor of the public sector. As Yacoubian et al. (2025a) observe, in data-driven financial systems, information has become a new source of competitive and institutional advantage. By positioning the Central Bank as the hub of tokenized transactions and digital settlement, Drex aimed to reassert public control over financial data flows and to strengthen state capacity in the governance of monetary information.

From a policy perspective, Drex was envisioned as a tool for enhancing the Central Bank's role in liquidity management and financial stability. The institution emphasized that in the absence of a decentralized infrastructure that has the Central Bank's currency as a settlement asset, users are exposed to various risks (Banco Central do Brasil, 2023a). Such

capabilities align with the broader objective of reinforcing policy effectiveness in a digital economy increasingly influenced by private tokens and algorithmic finance.

The broader question of whether digital currency initiatives can effectively reach unbanked populations in developing countries depends, however, on factors beyond technical design. Yacoubian (2025d), in a thematic review of trust in digital banking across developing countries, identifies institutional quality, technological security, and user experience as core drivers of trust, while digital illiteracy, fraud concerns, and weak regulatory enforcement operate as key barriers to adoption. These findings underscore that the effectiveness of a CBDC like Drex in promoting financial inclusion hinges not only on its architecture but also on the trust dynamics that shape user engagement in the broader developing-country context.

The project also aimed to promote financial inclusion, as stated by the Banco Central do Brasil, one of Drex's core objectives was to democratize access to financial services, particularly for unbanked populations, through authorized intermediaries integrated into digital networks. It is worth noting that Brazil integrates its unbanked population primarily through the *Microempreendedor Individual* (MEI) program, a micro-entrepreneurship unified tax regime system established to extend social security benefits and formalize previously unreported economic activities (Government of Brazil, 2025).

A study by Yacoubian (2025c) on the *Monotributo* regime in Argentina, a system similar to Brazil's MEI (*Microempreendedor Individual*), highlights that when formalization processes are not accompanied by adaptable and updated monetary policies, they can lead to unintended burdens for taxpayers. The analysis shows that rigid policy designs can create distortions that undermine the incentives for formal participation in the economy, revealing that the success of any modernization effort depends on its fiscal and monetary coherence. In a comparative study of the MEI and the *Monotributo*, Yacoubian et al. (2025b) show that administrative simplification alone does not guarantee sustained formalization. Since Drex's inclusion objectives depend on reaching the same population that the MEI is meant to formalize, the limits of that fiscal regime also bound what a CBDC can realistically achieve in terms of inclusion.

In the latest report of the Banco Central do Brasil (2023a), it is stated that the objectives of digital initiatives include “to accompany the dynamism of the technological evolution of the Brazilian economy; to increase the efficiency of the retail payment system; and to contribute to the emergence of new business models and other innovations based on technological advances” (Banco Central do Brasil, 2023a). However, the report does not specify how these objectives will be integrated with the MEI system currently used in Brazil.

Although the pilot was ultimately “suspended”, Drex's institutional design demonstrates the potential for CBDCs to serve as instruments of both monetary governance and social transformation. By situating digital money within a framework of legal supervision, privacy protection, and inclusivity, the project provided a model of “regulated innovation” that could inform future developments in other emerging economies.

### 5.3. International Comparisons: Drex as a “Third Way”

The international landscape of CBDC development reveals three distinct institutional models. The first, represented by China's *e-CNY*, emphasizes centralized control and data-driven surveillance; the second, exemplified by the European Union's *digital euro*, prioritizes privacy protection and institutional legitimacy; and the third, seen in the United States, reflects an explicit rejection of state-issued CBDCs in favor of private sector innovation (Fama & Lucarelli, 2025).

Against this backdrop, Drex emerged as a potential “third way” for emerging economies seeking to balance innovation with sovereignty. Its design integrated elements of technological modernization, such as tokenization and programmable contracts, within a structure of public governance. The Banco Central do Brasil (2023a) emphasized that Drex's architecture has centralized governance, is permissioned, and is aligned with its institutional responsibilities to ensure supervision and stability of the National Financial System.

This positioning placed Brazil in a unique intermediary role between the extremes of authoritarian control and market privatization. While the Chinese model demonstrates the state's capacity to harness digital technologies for monetary surveillance, and the American approach reflects confidence in private financial innovation, the Brazilian experiment sought to institutionalize innovation through legal and regulatory oversight. As Mattassoglio (2025) and Bibi and Canelli (2025) suggest, CBDCs can become instruments of geopolitical influence, redefining global payment infrastructures and monetary hierarchies.

The Drex project also carried geopolitical implications within the Global South. The Banco Central do Brasil documentation (2023a) highlights interoperability as one of the initiative's guiding principles, with the aim of enabling cross-border transactions and connecting Brazil to global payment networks. Such integration could have strengthened the role of the BRICS nations in promoting a multipolar monetary architecture, reducing dependence on the U.S. dollar while enhancing regional financial cooperation.

A parallel case emerges within the Mercosur region itself. In October 2023, during a televised presidential debate, Argentina's then Minister of Economy and presidential candidate Sergio Massa announced his intention to send a bill to Congress to create the Moneda Digital Argentina (MDA), a central bank digital currency to be issued by the Banco Central de la República Argentina (Infobae, 2023). According to official sources cited at the time, the MDA was conceived as a retail-oriented digital currency designed to simplify financial operations, extend access to non-digitalized and unbanked sectors, reduce taxes and transaction fees, and bring informal economic activity into the formal circuit, thereby broadening the tax base and improving fiscal efficiency (Infobae, 2023). The proposal envisioned a two-stage implementation, first reinforcing the existing retail digital payments ecosystem of fintechs, commercial banks, and clearinghouses under the supervision of the central bank, and subsequently deploying a new infrastructure enabling the central bank to issue the digital currency itself (Infobae, 2023).

Despite its announcement, the project was never implemented and the political cycle that followed effectively interrupted its development. The parallel with Drex is notable. Both initiatives emerged in neighboring Mercosur economies, both were framed as instruments of inclusion and formalization, both assigned a central role to the national monetary authority, and both were ultimately interrupted before reaching full deployment. This parallel is particularly significant given the deep economic integration between Brazil and Argentina within Mercosur, despite the fact that Brazil's Pix instant payment system was never adopted by Argentina. Taken together, the Brazilian and Argentine experiences illustrate that the pursuit of CBDCs in Latin America is neither an isolated phenomenon nor a purely Brazilian concern, but part of a broader regional and global wave in which virtually every jurisdiction, from advanced economies to emerging markets, is evaluating the institutional and technological implications of issuing a central bank digital currency.

As Fantacci and Gobbi (2021) note, central bank digital currencies are not merely technical instruments but geopolitical tools capable of reshaping monetary power. In this sense, Drex represented an attempt by Brazil to articulate a sovereign yet open model of digital currency governance. Although the project did not reach full implementation, its conceptual architecture remains a valuable reference for understanding how emerging economies can pursue innovation without sacrificing institutional integrity.

Ultimately, Drex's comparative significance lies in its articulation of a hybrid model: a system that sought to modernize financial infrastructure through tokenization and smart contracts while maintaining regulatory coherence and state oversight. This configuration exemplifies how digital sovereignty can coexist with technological advancement, offering an alternative path distinct from both authoritarian centralization and unregulated privatization.

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## 6. Conclusion: The Unfinished Legacy

The suspension of Drex, at least with the goal it was designed, marks a pivotal moment in the evolution of digital money and the institutional boundaries of monetary innovation. More than a technological experiment, Drex represented an institutional laboratory that exposed the limits and possibilities of reconciling digital efficiency with state authority.

The Drex experience reveals that the future of money will not be determined by code alone but by the institutions that govern it. Its suspension illustrates the enduring tension between algorithmic transparency and institutional discretion, between the promise of technological democratization and the imperatives of sovereignty and stability. These tensions are not unique to Brazil; they echo across jurisdictions as governments grapple with how to integrate innovation within established regulatory architectures.

As the Banco Central do Brasil (2023a) emphasized, Drex was conceived as a new layer of the national monetary system, not as a replacement for existing forms of money. Its design philosophy illustrates the broader institutional realization that innovation must serve governance rather than challenge it. By halting the project at the pilot stage, Brazilian policymakers acknowledged that sustainable digital transformation requires more than technological capacity: it demands institutional maturity.

In this sense, Drex's unfinished trajectory offers a theoretical and empirical contribution to the study of state-led financial innovation. It shows that the success of a CBDC does not depend solely on technological design but on the

capacity of institutions to internalize innovation within their regulatory, ethical, and political frameworks. The Brazilian experience thus reaffirms that the monetary revolution of the twenty-first century will be institutional, and that its sustainability will depend on how effectively states can balance the opposing forces of innovation and sovereignty.

Drex remains unfinished. Although it is unknown why the managers responsible for the project have not made any official announcements, the authors find it noteworthy that they refer to its changes or even its “abandonment” in a conference or a non-official paper rather than on the project's official website. Yet its legacy endures: it transformed a national experiment into a global lesson on the institutional anatomy of digital money.

This study is subject to several limitations that also open avenues for future research. First, although the analysis draws on a combination of primary institutional sources and a substantial body of secondary sources and media reports, the absence of recent official communication from the Banco Central do Brasil regarding the current status of the Drex project constrains the depth of institutional interpretation and leaves room for revision once updated primary documentation becomes available. Second, the qualitative documentary approach, while appropriate given the exploratory nature of the case, does not allow for empirical measurement of Drex's potential effects on financial inclusion, market structure, or monetary policy transmission. Third, the comparative discussion with the Chinese, European, and U.S. models is necessarily schematic and could be expanded into a more systematic cross-country analysis.

Future research could therefore pursue several directions: conducting interviews with officials and stakeholders involved in the Drex initiative once access is feasible; developing quantitative assessments of the project's impact on the Brazilian financial ecosystem, particularly its interaction with Pix and the MEI regime; extending the comparative framework to include other Latin American CBDC experiences, such as the interrupted Moneda Digital Argentina, to identify regional patterns of institutional negotiation; and examining how the shift from a blockchain-based CBDC toward a tokenization infrastructure reshapes the broader debate on monetary sovereignty and digital architecture in emerging economies.

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## Compliance with ethical standards

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