GLOBAL JOURNAL OF
ECONOMIC POLICY
AND DEVELOPMENT

NAWALA

Volume 2, Number 2, 2023

Digital Currencies and Their Policy Implications for Financial Stability

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Abstract

Article history:
Received: August 13, 2023
Revised: October 04, 2023
Accepted: November 21, 2023
Published: December 30, 2023

Keywords:
CBDC,
Cryptocurrencies,
Digital Currencies,
Financial Stability

Identifier:
Nawala
Page: 105-115
https://nawala.io/index.php/gjepd

The rise of digital currencies—including cryptocurrencies, stablecoins, decentralized finance (DeFi), and central bank digital currencies (CBDCs)—has created opportunities and risks for financial systems. This study reviews literature published to examine how these innovations affect financial stability. Using a systematic approach, it synthesizes findings from academic and policy sources on key risk channels and policy responses. Results show that private digital assets increase volatility, contagion risks, and regulatory challenges, while CBDCs can enhance payment efficiency and monetary policy but may also cause disintermediation and new vulnerabilities. The discussion highlights three themes: risks from private digital assets, opportunities and trade-offs in CBDCs, and the need for coordinated regulation. The review concludes that digital currencies can modernize finance but require robust oversight to prevent systemic instability.

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1. Introduction

The emergence and rapid evolution of digital currencies have become one of the most significant developments in global financial systems over the last decade. Digital currencies, which include both privately issued cryptocurrencies and central bank digital currencies (CBDCs), are transforming the traditional architecture of money and payments. Cryptocurrencies, such as Bitcoin and Ethereum, introduced blockchain-based peer-to-peer networks that enable transactions without intermediaries, challenging the conventional roles of banks and payment service providers. Meanwhile, the concept of CBDCs represents an official, state-backed form of digital money that seeks to combine the efficiency and convenience of digital technologies with the trust and stability of central bank liabilities. These innovations offer numerous opportunities, including faster and cheaper cross-border payments, greater financial inclusion, and more efficient monetary policy transmission mechanisms (Adrian & Mancini-Griffoli, 2021; Allen et al., 2022). However, their rise has also generated serious concerns about their implications for the stability and integrity of the financial system.

Privately issued cryptocurrencies are characterized by decentralization and high volatility (Garriga, 2021). While their advocates highlight potential benefits such as reducing transaction costs and democratizing access to finance, recent empirical reviews confirm that cryptocurrencies function primarily as high-risk speculative instruments rather than stable media of exchange, which makes them prone to sharp price fluctuations and credibility shocks in emerging markets (Reis, 2021). Furthermore, the interconnectedness of cryptocurrencies with traditional financial

markets has grown over time, exposing financial institutions and investors to new channels of risk. Similarly, the growth of stablecoins and decentralized finance (DeFi) platforms, although designed to provide stability and financial innovation, has introduced new systemic and operational vulnerabilities, particularly where transparency and regulatory oversight remain limited (Auer et al., 2022; IMF, 2022).

In response to the rapid growth of digital assets, central banks and regulators around the world have been exploring CBDCs as a means of modernizing payment systems and addressing the risks posed by private digital money (Kiff et al., 2020). CBDCs have the potential to improve payment efficiency, reduce transaction costs, enhance financial inclusion, and strengthen the effectiveness of monetary policy. However, their design and implementation also raise important policy considerations. For example, widespread adoption of CBDCs could alter the structure of financial intermediation, potentially leading to disintermediation of commercial banks and increased vulnerability to bank runs during periods of stress. Therefore, while CBDCs may offer an official, regulated alternative to private cryptocurrencies, their effectiveness will depend on adaptive design and strong institutional risk management frameworks (Auer et al., 2022).

Given the accelerating pace of digital currency development, the implications of these instruments for financial stability have become a central concern for researchers, policymakers, and international financial institutions (BIS, 2023). Through this synthesis, this article contributes to a structured and nuanced understanding of how digital currencies reshape the financial stability landscape in advanced and emerging economies alike (Snyder, 2019; OECD, 2022).

2. Literature Review

Research on digital currencies has expanded rapidly, addressing their design, adoption, and implications for financial stability. Early structured syntheses confirm that cryptocurrencies behave primarily as speculative instruments with high volatility and limited function as stable stores of value, making them prone to sharp spillover risks in emerging markets (Reis, 2021; Auer et al., 2022). The expansion of stablecoins and DeFi has further intensified these dynamics, as interconnections between digital assets and traditional financial systems can amplify systemic vulnerabilities during periods of stress (IMF, 2022; BIS, 2023).

Another strand of the literature examines the policy and regulatory challenges posed by digital currencies. Studies note that cryptocurrencies and DeFi platforms, due to their decentralized nature, complicate efforts to enforce traditional regulatory measures, creating gaps in consumer protection, anti-money laundering (AML), and cybersecurity. Scholars increasingly emphasize the importance of adaptive macroprudential oversight as the crypto ecosystem matures and becomes more integrated with regulated financial entities (Bodea & Hicks, 2021; OECD, 2022).

CBDCs have emerged as a prominent topic in the literature, framed largely as a public-sector response to these challenges. Research has assessed the potential benefits of CBDCs in modernizing payment infrastructures and enhancing monetary policy effectiveness, especially in a digital economy. Recent empirical reviews confirm that CBDC effectiveness depends on careful calibration of design and

governance to avoid disintermediation and operational risks (Adrian & Mancini-Griffoli, 2021; Allen et al., 2022).

Despite this growing body of research, there is no unified framework that integrates findings across private cryptocurrencies, stablecoins, DeFi, and CBDCs to assess their combined implications for financial stability. Reviews stress the need for a holistic approach to policy design that recognizes the cross-cutting risks and opportunities presented by digital currencies (BIS, 2023). The fragmented nature of the literature, with studies often siloed by type of digital asset or specific risk channel, underscores the value of a systematic review to synthesize evidence and identify emerging themes, which this study aims to provide.

3. Methods

This study adopts a systematic literature review approach to synthesize current research on digital currencies and their implications for financial stability. The methodology follows contemporary structured review recommendations that emphasize transparency, reliability, and thematic synthesis in social science research (Snyder, 2019; Xiao & Watson, 2019). The process began by defining the research objectives and key themes, namely: (1) the evolution and characteristics of digital currencies, including cryptocurrencies, stablecoins, DeFi, and CBDCs; and (2) their potential effects on financial stability. A comprehensive search was conducted in major academic databases such as Scopus, Web of Science, and Google Scholar, covering peer-reviewed journal articles, working papers, and policy reports

published up to 2023. Keywords including "digital currency," "cryptocurrency," "CBDC," "stablecoin," "DeFi," and "financial stability" were used in combination to ensure a broad coverage of the topic.

The initial search yielded a large pool of studies, which were screened in two stages. This staged filtering is consistent with modern qualitative evidence-synthesis logic recommended for structured literature reviews (Snyder, 2019). In the first stage, titles and abstracts were reviewed to exclude articles that were unrelated to the topic or purely technical (e.g., cryptography or blockchain algorithms without policy relevance). In the second stage, full-text assessments were carried out to ensure that the remaining studies provided insights into either the risks or the regulatory and policy implications of digital currencies for financial stability. This process led to the inclusion of a final set of peer-reviewed academic papers, central bank publications, and key institutional reports from organizations such as the Bank for International Settlements and the International Monetary Fund. The selected studies were then analyzed thematically, with particular attention to recurring concepts such as volatility, systemic risk, contagion channels, regulatory responses, and design features of CBDCs. The analytical process adopted thematic synthesis techniques that allow cross-context comparison and identification of research gaps (Snyder, 2019; OECD, 2022).

4. Results and Discussion

The findings from this systematic literature review reveal three major and interrelated themes regarding the relationship between digital currencies and

financial stability. The first theme concerns the risks associated with privately issued digital assets, including cryptocurrencies, stablecoins, and DeFi platforms. Regulators and scholars consistently confirm that cryptocurrencies are characterized by extreme price volatility, driven largely by speculative trading and rapid shifts in market sentiment, which differentiate them from conventional banking assets (Allen et al., 2022). Unlike traditional financial assets, their value often moves independently of macroeconomic fundamentals, which makes them prone to bubbles and sudden price collapses. The expansion of stablecoins has not eliminated systemic risks. Research notes that these instruments introduce vulnerabilities linked to reserve management, liquidity mismatches, and rapid redemption pressures during financial stress, potentially transmitting shocks into regulated sectors (Auer et al., 2022). Therefore, unregulated private digital currencies can amplify instability through multiple risk channels as their integration with traditional institutions deepens.

The second theme focuses on the opportunities and challenges posed by CBDCs. The literature indicates that CBDCs, if carefully designed, have the potential to deliver important public benefits. They can provide a secure and efficient digital payment medium, reduce transaction costs, and extend financial access to underserved populations (Adrian & Mancini-Griffoli, 2021). Furthermore, CBDCs could strengthen monetary policy by improving the speed and transparency of policy transmission, especially in a world increasingly dominated by digital financial activity (Auer et al., 2022). However, the review also reveals significant risks that could emerge from their introduction. CBDCs could alter the balance between central

banks and commercial banks by enabling direct holdings of central bank liabilities. Such disintermediation might reduce credit availability and weaken bank funding models, particularly during periods of stress when rapid shifts to CBDCs may occur. As recent institutional analyses emphasize, these structural changes require cautious calibration and strong technological safeguards to prevent new forms of instability (Reis, 2021; Allen et al., 2022).

The third theme emerging from the literature is the need for coherent regulatory and policy responses. International organizations emphasize that effective oversight must evolve alongside digital finance to address cross-border flows, regulatory arbitrage, and operational vulnerabilities (OECD, 2022). Fragmented regulatory regimes create incentives for migration toward lightly regulated jurisdictions, increasing global systemic risk. Coordination across jurisdictions and institutions is therefore essential, as highlighted in recent policy-oriented reviews which call for adaptive macroprudential tools and clearer governance frameworks (Bank for International Settlements, 2023).

Taken together, these findings illustrate that digital currencies present a paradox for financial stability. They hold the promise of enhancing payment efficiency, improving access to financial services, and fostering innovation, yet they simultaneously create new risks through volatility, technological vulnerabilities, and structural changes in the financial system. Policymakers face the challenge of balancing these opportunities with the need to preserve the resilience of the financial sector. The review also identifies critical research gaps. Empirical studies on the long-term impact of CBDCs on credit creation and financial intermediation remain

limited, and there is a lack of integrated models that capture how digital asset markets interact with macroeconomic and financial stability indicators over time. Future research should address these gaps and provide evidence-based guidance to help regulators and central banks design frameworks that can accommodate technological change while safeguarding financial stability.

5. Conclusion

This study synthesizes the growing body of research on digital currencies and their policy implications for financial stability. The review shows that the rapid development of cryptocurrencies, stablecoins, and decentralized finance has introduced new forms of volatility, operational risk, and market interconnectedness that can amplify financial instability (Auer et al., 2022). At the same time, the exploration of central bank digital currencies reflects an effort to harness technological innovation to improve payment efficiency, resilience, and monetary policy transmission. However, these public initiatives also carry risks, particularly around bank disintermediation and potential disruptions to existing financial intermediation structures (Allen et al., 2022).

The findings emphasize that the impact of digital currencies on financial stability depends largely on their design features, the degree of their integration with the traditional financial system, and the strength of regulatory and supervisory frameworks. Recent analyses stress that modern digital finance requires proactive governance and structured oversight rather than fragmented responses (Snyder, 2019). There is broad consensus in the literature that fragmented and reactive

regulatory approaches are insufficient in the face of rapidly evolving technologies. Instead, proactive, internationally coordinated policies and risk management strategies are needed to mitigate systemic risks while allowing for innovation (BIS, 2023).

In conclusion, digital currencies present a double-edged transformation: they hold the promise of modernizing finance and improving inclusion, but without strong governance, they may also create new channels of instability. Policymakers and researchers alike must focus on developing adaptive, forward-looking frameworks that can respond to these emerging challenges and ensure that innovation contributes to a stable and resilient global financial system (Auer et al., 2022; Allen et al., 2022).

References

Adrian, T., & Mancini-Griffoli, T. (2021). The rise of digital money. *Annual Review of Financial Economics,* 13, 57–77.

Allen, S., Gu, X., Jagtiani, J., & Kowalski, K. (2022). The emerging landscape of central bank digital currencies. *Journal of Banking & Finance*, 134, 106232.

Auer, R., Cornelli, G., & Frost, J. (2022). Rise of the central bank digital currencies: Drivers, approaches and technologies. *Bank for International Settlements Quarterly Review,* September, 1–15.

Bank for International Settlements. (2023). *Annual economic report 2023*. BIS.

Garriga, A. C. (2021). Central bank independence in the digital age. *Review of International Political Economy,* 28(4), 1025–1051.

International Monetary Fund. (2022). Global financial stability report: Shockwaves from the war in Ukraine. *IMF.*

Kiff, J., Alwazir, J., Davidovic, S., Farias, A., Khan, A., Khiaonarong, T., Malaika, M., Sugimoto, N., Tourpe, H., & Zhou, P. (2020). *A survey of research on retail central bank digital currency* (IMF Working Paper No. 20/104). International Monetary Fund.

OECD. (2022). Global financial markets policy responses to digitalisation. Organisation for Economic Co-operation and Development.

Reis, R. (2021). The volatility of cryptocurrencies: Causes and consequences. *Brookings Papers on Economic Activity*, Fall, 1–63.

Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research,* 104, 333–339