Original Research Article

A multidimensional perspective on the impact of digital currency on the transformation of the international monetary system within the theoretical framework of financial development

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Abstract: From an angle of attack of financial development theory, digital currency exerts influence on the international monetary system in many aspects. In this paper, we establish an analytical framework to analyze how digital currency promotes the process of reshaping international monetary system in terms of financial intermediation, monetary sovereignty redefinition, and cross-border payment infrastructure adjustment, respectively. Our analysis shows that digital currency is not a fuel resulting from the process of technological development, but more importantly, a trigger that triggers the transformation of the international monetary system.

Keywords: Digital currency; Financial development theory; International monetary system; Institutional restructuring

1. Introduction

As the process of digitalization rapidly transforms the global financial system, the advent of digital currencies is giving rise to significant structural and functional changes in the international monetary order. Hyped as much as they are controversial, digital currencies are simultaneously transforming the rules of payment governance, monetary sovereignty, and cross-border finance in ways that present both opportunities and risks. Understanding the complex impact of digital currencies on the international monetary system is critical for revealing the institutional logic that shapes it, as well as for offering both analytical clarity and policy relevance for the reconfiguration of global financial governance.

2. Theoretical foundations

The theory of financial development first formulated by Joseph Schumpeter in 1911 highlights the key role played by financial systems in fostering economic growth. Financial instruments, institutions, and markets improve resource allocation efficiency, promote innovation and technological change–and thus act as the driving engines of modern economic development[1].Standing on the shoulders of this seminal theoretical framework, the aim of the current study is to analyse how digital currencies are influencing the international monetary system using a three-part analytical framework–the process of financial intermediation, monetary sovereignty reconfiguration, and cross-border payment system realignment. This analytical framework provides a coherent means of exploring both the internal logic and external transmission mechanisms through which digital currencies are reconfiguring the financial system with some combination of theoretical and empirical explanatory power.

3. The evolution of financial intermediation

3.1. The disintermediation effect of central bank digital currencies (CBDCs) on traditional banking functions

As sovereign fiat currency issued directly by the central bank to the public, CBDCs share the same legal tender status as physical cash. Unlike other monetary instruments, CBDCs would skip the intermediary commercial bank in the payment process[2]. If CBDCs were to be widely used, it is likely that people and firms will prefer to hold funds in CBDC accounts rather than commercial bank deposits.Such a tendency of "disintermediation" reduces the need for holding commercial bank deposits. This could weaken the deposit base of commercial banks and diminish their ability to create credits.Attenuation of banks' intermediary role is a systemic challenge to the relevance and position of banks in the monetary transmission mechanism. The functional irrelevance of banks and the structural weakness of the status quo are prompted by CBDCs, which transcend a mere technical issue.

3.2. The substitutive potential of digital currency platforms for conventional payment and settlement systems

Digital currency networks, which utilize DLT for enabling peer-to-peer value transfers and settlement of transactions in real-time, highly efficient and transparent, are completely different from conventional cross-border payment infrastructure, which is characterized by multilayered intermediaries[3]. Decentralized platforms based on this new payment paradigm, which automate transaction settlements and reduce fees through algorithms and smart contract running, can reduce latency with a compression in transaction fees.This new payment value network creates a powerful competitive alternative to Society for Worldwide Interbank Financial Telecommunication (SWIFT), especially in the area of international trade and transnational flows of capital. Real-time, multi-currency settlement enabled by digital currency platforms may lead to a disruptive replacement of conventional global payment infrastructure, and result in the need to overhaul current interoperability and compliance standards.

4. The restructuring of monetary sovereignty

4.1. Sovereign digital currency issuance as a safeguard of monetary autonomy

Caught in an increasingly competitive global landscape for digital currency, governments are rapidly rollout central bank digital currencies (CBDCs) to counter competition from privately issued stablecoins and foreign CBDCs.As privately issued stablecoins become more prevalent and foreign CBDCs enter the cross-border mix, monetary sovereignty is at risk of both de facto "currency substitution". In response, state-backed digital currencies are being promoted as policy tools to maintain control over domestic money and protect it from exogenous financial-technical incorporation.By building sovereign, digitally-native payment infrastructures states aim to exercise juridical control over the money creation and circulation. In addition to their policy instrument design, sovereignty preserving architecture autonomously serves to counteract monetary foreign inclusion, but also to reconfigure the institutions under which national money is governed in a financial technosphere.

4.2. Digital currency as a strategic instrument in the geopolitics of money

The programmability and cross-border interoperability of CBDCs endow issuing states with the ability to encode transactional rules, specify payment routes, and impose foreign-use constraints. These technical privileges turn digital currencies into instruments of monetary diplomacy and financial statecraft, enabling governments to extend soft power across borders via embedded regulation.By linking their CBDCs together via bilateral or multilateral interconnections, currency-strong governments can encourage the settlement use of their digital currencies in international trade and capital flows, thus shaping new forms of monetary dependence and alignment. In other words, the use of digital currencies is not a matter of technology for its own sake—it is, in practice, a conscious step toward greater monetary internationalization and status quoreshuffling.

5. The reshaping of cross-border payment architectures

5.1. The rise of multilateral digital currency platforms

The appearance of multilateral digital currency initiatives represents a sea-change in the design of global cross-border payment systems, moving from a relatively centralized dollar-centric architecture to a more multipolar and technology-intensive one. My example features central banks from multiple countries working together across blockchain infrastructure to co-create shared settlement layers that enable direct currency-exchange and near instantaneous clearing among sovereign states—a system that reduces reliance on the dollar as a intermediary currency.By better performing the transactional function of local currencies across borders, such platforms improve the efficiency and resilience of payment systems. They also offer the bedrock at a technical and institutional level for a de-dollarized and decentralized international monetary order.

5.2. The Evolution of transactional transparency and regulatory coordination

The transparency and data validity built into the currency transaction data of digital money greatly enhance the transparency of cross-border payments, presenting new opportunities for international regulatory cooperation.By jointly accessing blockchain transactional data, supervisory authorities in different jurisdictions can observe capital flows in real time, identify suspicious patterns, and enhance enforcement of AML and CTF regimes.This increased transparency environment is driving a shift from unilateral regulatory enforcement to a multilateral coordination framework, resulting in a rising momentum toward the coding of harmonized technical standards and compliance practices to create a globally interoperable and accountable financial system.

6. Conclusion

As an indelible feature of financial technological change, digital currency is profoundly transformative of the structure and functioning of the international monetary system, of the technology of financial intermediation, of the constitution of monetary sovereignty, and of the institutions governing cross-border payments. These are respectively important areas for understanding the redesign of the international monetary system by digital currency.Based in a financial development analysis of these factors, I argue that the path of international monetary system will depend on the combination of forces involving the rate of adoption of financial technological change, the ability of international institutions to provide the regulatory and infrastructural space for new technological combinations, and the emergence of cooperative multilateral governance arrangements. These forces will determine whether digital currency is an auxiliary tool or the architecture of a new, more diffuse and pluralist global monetary regime.

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