ECONSTOR
*Make Your Publications Visible.*

A Service of

ZBW Leibniz-Informationszentrum Wirtschaft
Leibniz Information Centre for Economics

Meredith, Patricia

**Working Paper**

# Digital money and payments infrastructure

CIGI Papers, No. 341

**Provided in Cooperation with:**
Centre for International Governance Innovation (CIGI), Waterloo, Ontario

*Suggested Citation:* Meredith, Patricia (2025) : Digital money and payments infrastructure, CIGI Papers, No. 341, Centre for International Governance Innovation (CIGI), Waterloo (Ontario)

This Version is available at:
https://hdl.handle.net/10419/337187

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*

https://creativecommons.org/licenses/by/4.0/

WWW.ECONSTOR.EU

Mitglied der Leibniz-Gemeinschaft

Centre for International
Governance Innovation

CIGI Paper No. 341 — November 2025

# Digital Money and Payments Infrastructure

Patricia Meredith

Centre for International
Governance Innovation

CIGI Paper No. 341 — November 2025

# Digital Money and Payments Infrastructure

Patricia Meredith

## About CIGI

The Centre for International Governance Innovation (CIGI) is an independent, non-partisan think tank whose peer-reviewed research and trusted analysis influence policy makers to innovate. Our global network of multidisciplinary researchers and strategic partnerships provide policy solutions for the digital era with one goal: to improve people's lives everywhere. Headquartered in Waterloo, Canada, CIGI has received support from the Government of Canada, the Government of Ontario and founder Jim Balsillie.

## À propos du CIGI

Le Centre pour l'innovation dans la gouvernance internationale (CIGI) est un groupe de réflexion indépendant et non partisan dont les recherches évaluées par des pairs et les analyses fiables incitent les décideurs à innover. Grâce à son réseau mondial de chercheurs pluridisciplinaires et de partenariats stratégiques, le CIGI offre des solutions politiques adaptées à l'ère numérique dans le seul but d'améliorer la vie des gens du monde entier. Le CIGI, dont le siège se trouve à Waterloo, au Canada, bénéficie du soutien du gouvernement du Canada, du gouvernement de l'Ontario et de son fondateur, Jim Balsillie.

## Credits

President, CIGI Paul Samson
Research Director, Digital Economy S. Yash Kalash
Director, Program Management Dianna English
Senior Program Manager Jenny Thiel
Publications Editor Susan Bubak
Publications Editor Christine Robertson
Graphic Designer Sepideh Shomali

Copyright © 2025 by the Centre for International Governance Innovation

The opinions expressed in this publication are those of the author and do not necessarily reflect the views of the Centre for International Governance Innovation or its Board of Directors.

For publications enquiries, please contact publications@cigionline.org.

The text of this work is licensed under CC BY 4.0. To view a copy of this licence, visit http://creativecommons.org/licenses/by/4.0/.

For reuse or distribution, please include this copyright notice. This work may contain content (including but not limited to graphics, charts and photographs) used or reproduced under licence or with permission from third parties. Permission to reproduce this content must be obtained from third parties directly.

Centre for International Governance Innovation and CIGI are registered trademarks.

67 Erb Street West
Waterloo, ON, Canada N2L 6C2
www.cigionline.org

# Table of Contents


vi About the Author

vi Acronyms and Abbreviations

1 Executive Summary

1 Introduction

2 First Principles

3 Closed or Open Systems: Can They Co-Exist?

4 Geopolitical Question: Who Do We Trust?

5 US Dollar Reserve Currency Implications

6 Implications for Canada

8 Conclusion

8 Works Cited

## About the Author

Patricia (Pat) Meredith is a CIGI senior fellow and a global thought leader, award-winning author and consultant in the emerging field of inclusive governance.

Pat is the director of many public, private and not-for-profit organizations. She was executive vice president and chief strategy officer of a major financial institution and senior strategy adviser to financial services and technology companies for a global strategy consultancy.

Pat has written three books on strategy and governance: *Stumbling Giants: Transforming Canada's Banks for the Information Age* (co-authored with James L. Darroch, 2017), which won the Donner Prize for best public policy book of the year; *Catalytic Governance: Leading Change in the Information Age* (2016); and *Better Boardrooms: Repairing Corporate Governance for the 21st Century* (2020).

From 2010 to 2012, Pat chaired Canada's Task Force for the Payments System Review. The task force, which applied a catalytic governance process, delivered a community-supported action plan that enabled government and industry to quickly act on all four of the recommendations. With her *Catalytic Governance* co-authors, Steven A. Rosell and Ged R. Davis, she is working to create a community of leaders developing better approaches to governing in the information age.

Pat has a Ph.D. in business strategy, an M.B.A. in management information systems and a B.Math. She is a fellow of the Institute of Chartered Professional Accountants of Ontario and the David and Sharon Johnston Centre for Corporate Governance Innovation at the University of Toronto's Rotman School of Management. She teaches courses on strategy, uncertainty and governance to M.B.A. students and executives. Pat is chair of the Audit and Finance Committee of the Canadian Institute for Advanced Research.

## Acronyms and Abbreviations

| | |
|---|---|
| AI | artificial intelligence |
| AML | anti-money laundering |
| ASEAN | Association of Southeast Asian Nations |
| BoC | Bank of Canada |
| CBDC | central bank digital currency |
| IP | intellectual property |
| P2P | peer-to-peer |
| RTR | real-time rail |
| SMEs | small and medium-sized enterprises |
| SWIFT | Society for Worldwide Interbank Financial Telecommunication |

# Executive Summary

This paper examines the different ways that payment systems could evolve for digital assets. To anchor this question, it first explores Benjamin Franklin's four questions through a twenty-first-century lens: What is money? Who should create it? What should backstop money? How should money come into circulation? The commercial banks have been the primary owners, gatekeepers and custodians of the current (industrial age) payments system. But technology innovation and advances in communications are vastly increasing the speed and efficiency of financial transactions, further integrating digital platforms with real-time operations.

The United States wants to preserve the dollar's status as the world's reserve currency, using stablecoin adoption to do so. Given declining trust in US rule of law, property rights and democracy, this strategy has made China and the rest of the world jittery. China had already launched a central bank digital currency (CBDC) (the digital yuan); encouraged Hong Kong to develop an effective regulatory framework for cryptocurrency, including stablecoins; and built an open-source, cross-border, cross-currency (public and private) exchange. Emerging economies (Africa, Brazil, India and the Association of Southeast Asian Nations [ASEAN]) are leapfrogging into digital infrastructure. The liberal democratic developed countries have yet to respond, but if they want some control over monetary policy, they may be forced to launch CBDCs, stablecoins and so forth — based on the productive capacity of their economies — and build effective regulatory frameworks for digital money.

To compete in the digital age, countries including Canada must have real-time, information-rich, cross-border, cross-currency (public and private) exchanges. They must be peer-to-peer (P2P) networks (similar in design to the internet) that can seamlessly connect to other payment networks. Consequently, developed countries that have relied on commercial banks to own, operate and control their payment systems will need to become more active participants in payment systems. In addition, disintermediation of banks in payments will force banks to transform their business model to suit the digital age.

# Introduction

Until the control of the issue of currency and credit is restored to government and recognized as its most conspicuous and sacred responsibility, all talks of the sovereignty of Parliament and of democracy is idle and futile.

—William Lyon Mackenzie King[1]

As the above quote by Canada's longest-serving prime minister states, the key question is who controls currency and credit. This question goes back to the origin of the current monetary system and the debate between Alexander Hamilton, on one side, and Thomas Jefferson/Franklin on the other. George Washington sided with his former aide-de-camp, Hamilton, and although the system has evolved over time, governments struggle to manage the economy and their debt load. Today's answers to this question will determine the payment systems, accounting standards and other financial market infrastructure necessary for the digital age.

The current technological, economic, social and political revolutions (a confluence last seen 500 years ago during the European Renaissance) provide an opportunity for governments to regain control of currency and credit through direct issuance of CBDCs. Private sector digital currency, including bitcoin, Ether, stablecoins and so forth, are already well established. Although private entities are unlikely to replace nation-states as the primary issuers of currency, the developed world will be forced to update its infrastructure to accommodate them. In addition, the current geopolitical turmoil threatens to disrupt the global monetary system that has operated effectively for almost a century.

Every economic revolution — commercial, industrial and digital — has been accompanied by new forms of money. The feudal age had coins, the commercial age had notes (letters of credit), the industrial age had paper, and the digital age has bits and bytes stored on a computer. New money required new financial institutions, regulations, technology and governance. Over the past decade, developed countries (including Canada) have fallen behind, as the developing world has leaped over the

1 See www.azquotes.com/author/8057-William_Lyon_Mackenzie_King.

traditional centralized, hub-and-spoke payment, clearing and settlement systems. Modern payment systems are decentralized P2P networks, similar in their design to the internet. Developing countries such as Brazil (with its Pix payment system), China (WeChat, Alipay), India (Unified Payments Interface) and many other Asian and African countries are already there. For developed countries (including Canada) to participate fully in the digital economy, they must transform their financial infrastructure.

Before tackling specific questions about payment systems, this paper explores four basic questions about money. The answers to these questions should guide policy makers' thinking about money, banking and financial infrastructure in the digital age.

# First Principles

In 1729, at the age of 23, Franklin published a pamphlet titled "A Modest Enquiry into the Nature and Necessity of a Paper-Currency," which is relevant to this discussion (McGarvey 2016, 119–21). In it, Franklin addresses the four key monetary questions:

- What is money?
- Who should be entrusted to create new money?
- What, if anything, should backstop money to support its exchange value?
- How should money come into circulation?

## First Question

In the eighteenth century, the question of what is money was open to debate, as it is today. Franklin supported the revolutionary idea that money should be a paper currency and that it derives its legitimacy from government fiat, not from the value of gold or silver in the coin itself. In the digital age, bits and bytes stored on a computer have replaced paper. And although cryptocurrencies are already the rage, private enterprises have not yet replaced nations as trusted issuers of money.[2] This may change with assetification (securities backed by productive or valuable assets — see paper by Kean Birch [forthcoming 2025]), but for the foreseeable future, most commentators expect nation-states to be the primary creators of money.

## Second Question

On the question of who should be entrusted to create new money, Franklin was equally clear. The new paper currency should be issued directly by the colonial legislature, not through private banking institutions, thereby accruing no debt/interest burden on the state.[3] A growing economy needs an expanding money supply; otherwise, as Franklin observed, there would be no currency (or credit) available to purchase newly created goods and services. Governments have recently exercised this power. During the 2008 global financial crisis, central banks used quantitative easing (direct issuance of currency) to compensate for the contraction of credit resulting from a global financial collapse.

The question today is: Should the commercial banks be the primary generators of new money in the digital economy? The historical rationale for this — collecting savings from individuals and making commercial loans to support growth of the economy — no longer holds true. Loans to small and medium-sized enterprises (SMEs), the backbone of the economy, are becoming a smaller and smaller part of Canadian banks' activities. Although the government could require banks to return to this "core" business, without generally accepted accounting standards that recognize intangible assets, this is unlikely to change. Banks do not know how to collateralize assets, such as human creativity, social and network relationships, intellectual property (IP) and data — the productive assets of the digital economy.

## Third Question

As to what, if anything, should backstop money to support its exchange value, Franklin argued against convertibility into gold, suggesting that precious metals were not to be trusted as their values fluctuated with increases or decreases in supply. He suggested tying the colony's new paper money supply to Pennsylvania's most productive

2 Although commercial banks create most of the money supply today, they do so on behalf of national governments.

3 This question points to the reason for the author's initial exploration of this topic: why China can build high-speed rail lines criss-crossing the country, and Canada has trouble building one from Toronto to Montreal. The short answer is: China has a sovereign monetary system.

asset: land. Commercial bankers have known this for centuries; it is why they back their loans with collateral. In the digital age, the only realistic limitation for new money creation is growth in real productive capacity. It works in private sector banking: the latent value resident in productive assets provides a control on bank credit-making activities so they do not lead to excessive monetary growth and inflation. The same process could, in theory, provide the appropriate monetary discipline needed for public monetary agency.

Today's challenge is measuring real productive assets. Accountants have not made much progress in measuring intangible assets, such as human capital, social and network relationships, IP and data. Yet these assets represent more than 90 percent of the value of the S&P 500. Private equity financiers have used existing accounting standards and methodologies to measure goodwill impairment to identify undervalued companies, but the impact of this massive undervaluation on the economy (GDP) and productivity has not been examined. According to Jaron Lanier (2014, 11), the creator of virtual reality, "The blindness of our standards of accounting to all that value is gradually breaking capitalism."

## Fourth Question

Franklin's eighteenth-century solution to getting money into circulation was also new. Paper money should be loaned into circulation by the colonial government, secured against its value in land. The introduction of government-issued fiat currency, he argued, would allow landowners to effectively monetize their land, unlocking its latent value for other productive purposes. The privately owned commercial banking system is, at present, the primary means of bringing new money into public circulation in the developed world. Supporters of a CBDC suggest that retail CBDC would democratize money circulation. With a CBDC, the central banks would remain creators of wholesale money (reserve money — their present role) but would also assume responsibility for bringing money into public circulation. Retail CBDC would create direct central bank connections with individuals and businesses, all of which would be able to hold the equivalent of a current account at the central bank.

The direct issuance of CBDCs by central banks would require governments to rethink the role of chartered banks. While chartered banks played a very important role in the industrial age, they are no longer fit for purpose. Although the Bank for International Settlements has proposed a hybrid model that would allow private banks to keep their traditional role, without changes in accounting standards and collateralization of intangible assets, banks cannot supply the money necessary to grow the digital economy. Furthermore, if money is a representation of productive capacity, then a more holistic approach to valuing organizations (including countries and companies) than the current sum of the tangible parts is required.

Technological innovation and geopolitical uncertainty have thrust payment networks and other financial market infrastructure into the spotlight. These systems are the nuclear weapons of a global economic war, including the US trade and tariff war. Until very recently, the United States was the undisputed leader of the international monetary, banking and payment systems. But CBDC, stablecoins and blockchain-based payment networks can deliver faster, cheaper, more transparent and more accessible cross-border payments. Research suggests that the average cost of international payments is approximately five percent of the transaction — much more than the negligible cost of these digital payments (Awrey, Macey and Zhang 2024).

# Closed or Open Systems: Can They Co-Exist?

Technology innovations such as blockchain, artificial intelligence (AI), quantum computing and enhanced fifth-generation networks are revolutionizing financial transactions, data processing and risk management. Blockchain technology underpins the rise of decentralized finance, enabling P2P financial transactions without the need for traditional financial intermediaries. The development of quantum computing could compromise existing data encryption, necessitating a new approach to data security, including fraud and anti-money laundering (AML)/countering the financing of terrorism initiatives. Advances in communications technology (sixth generation) will increase the speed and efficiency of financial transactions, further integrating digital platforms with real-time financial operations.

Commercial banks have been, by far, the largest generators of new money in the developed world. In the United States, for example, demand, savings, time and other bank deposits currently represent more than 90 percent of total money supply. But as Dan Awrey, Joshua Macey and Jeffrey Y. Zhang (ibid., 13) pointed out in their paper on payment network governance, "Banks are also the primary owners, gatekeepers, and custodians of a vast electronic payments infrastructure that moves this money across the economy." This system is "the product of deeply entrenched and self-reinforcing legal, institutional, and technological path dependencies. It is also a policy choice — one that comes with enormous and often poorly understood costs" (ibid.).

Furthermore, the authors continue, "The high cost, long delays, financial exclusion, and other inefficiencies associated with the current system of cross-border payments is a function of its peculiar structure and, ultimately, governance" (ibid., 33). These problems, combined with US aggression, have spurred efforts to create an alternative international payment system, bypassing the use of the dollar and the Society for Worldwide Interbank Financial Telecommunications (SWIFT) system. According to Alex He (2025, 9), "The potential connection between the China-dominated mBridge [a new distributed ledger technology] and BRICS Pay[4] poses a significant challenge to the US-dominated global financial system, which relies on the SWIFT message network." In a trade/tariff war, this alternative payment system is critical.

But decentralized "web-based" networks, especially those created by the developing world (including Brazil, China, India and many African, ASEAN and Latin American countries), are leapfrogging traditional hub-and-spoke payment systems. With US government backing, stablecoins are quickly bridging the gap between these old payment systems (see Catalini 2025), addressing complex payment processes, improving transaction speed and reducing fees. But at what cost? According to Antonio Lanotte (quoted in Chandra 2025, 2–3), "With stablecoins, the United States doesn't need to force other nations to use the Society for Worldwide Interbank Financial Telecommunications [SWIFT] or traditional banking channels to maintain dollar hegemony."

4 BRICS member countries are Brazil, Russia, India, China and South Africa.

Awrey, Macey and Zhang (2024, 22–23) write: "The crypto ecosystem emerged from the rubble of the global financial crisis. For many, the crisis triggered a profound loss of confidence and trust in banks and other conventional financial institutions." The question now is who do we trust: public money (CBDCs) or private money (stablecoins, bitcoins and so forth)?

## Geopolitical Question: Who Do We Trust?

Our world is being transformed by technological, economic, social and political revolutions. As Jonathan Haskel and Stian Westlake (2017) observed in *Capitalism without Capital:* "Early in the twenty-first century, a quiet revolution occurred. For the first time, the major developed economies began to invest more in intangible assets, like design, branding, and software, than in tangible assets, like machinery, buildings, and computers. For all sorts of businesses, the ability to deploy assets that one can neither see nor touch is increasingly the main source of long-term success." The transition from the tangible industrial economy to the intangible digital economy is clearly under way and is creating winners and losers. Some countries will embrace the new economy; others, such as the United States, will try to return to an earlier time (for example, the 1890s or the 1960s).

S. Yash Kalash outlined three directions geopolitics could take: a "global power play" where a "multipolar world emerges" (Kalash 2025, 2); a "great unravelling" characterized by "fragmentation of the global economic order" (ibid., 3); or a "unified global order" defined by "global governance and cooperation" (ibid., 4). The United States has triggered the unravelling of the liberal democratic world order that has been in place for the past 80 years. Its tariff/trade attacks support the second scenario but ignore possible responses by an increasingly powerful China and the rest of the world. The third scenario is the most hopeful, but it is only plausible if China and the rest of the world respond with a collaborative governance model and shared infrastructure.

Under the first option, there are at least three possibilities. First, a unipolar US dollar global

currency: The US government is attempting to utilize stablecoins to strengthen the dollar's position as the world's primary currency. It has passed stablecoin legislation intended to strengthen the dollar's dominance (the Guiding and Establishing National Innovation for US Stablecoins Act [GENIUS Act], the Stablecoin Transparency of Reserves and Uniform Safe Transactions Act [Stablecoin TRUST Act]/Digital Asset Market Clarity Act [CLARITY Act], and an act forbidding the US government to issue CBDC) (Gold 2025). But the Trump administration's embrace of stablecoins is making European and Chinese leaders jittery. And declining trust in the rule of law, property, and human rights and democracy in the United States could undermine this strategy.

The second possibility: a bipolar China has launched a CBDC; encouraged Hong Kong to develop an effective regulatory framework for cryptocurrency, including stablecoins; and is building an open-source, cross-border, cross-currency (private and public) exchange. On March 4, 2025, the Chinese Embassy in the United States said in a post on social media site X that "if war is what the U.S. wants, be it a tariff war, a trade war or any other type of war, we're ready to fight till the end" (Chinese Embassy in US 2025). China's Ministry of Foreign Affairs spokesperson, Lin Jian, made similar remarks (Bao 2025). Over the past six months, China's foreign policy has been much less aggressive and developed countries' trust has been increasing (*The Economist* 2025). The third possibility: liberal democratic developed countries, including Australia, Canada, the European Union and the United Kingdom, for example, come together to create a regulatory regime for competing currencies, such as CBDCs, stablecoins and so forth (Tria, Samson and Arcelli 2025). If these currencies were backed by the productive capacity of the nation — determined through a rigorous accounting of tangible and intangible national assets, both private and public — they could represent superior value to the US dollar or Chinese yuan. If governments want to control monetary policy, and credit is preferred over either of the two previous options, then the rest of the world does not have a choice except to act.

But as Fareed Zakaria (2024, 283) points out in *Age of Revolutions*, "After centuries of lagging behind the west, being colonized by it, and then remaining marginal in global power politics, many once-poor countries rose to wealth and power....Scholars debate whether the world is unipolar, bipolar, or multipolar. But the reality is that regardless of whether these newcomers rate as great powers, many of them are acting forcefully in their own interest and resisting being corralled by larger powers." Although it is impossible to predict the outcome, all three of these scenarios represent a dramatic shift in monetary, banking and payments policy.

## US Dollar Reserve Currency Implications

The implications for the US dollar will be determined by the US government's response to Franklin's four questions. As Daron Acemoglu and James A. Robinson (2021) described in *Why Nations Fail*, during times of economic revolution, nations fail when their financial and political institutions do not transform themselves to fit the new reality. Prior to Donald Trump becoming US president, the United States was slow to respond. It has not introduced a CBDC. Its accounting standards were written for the industrial age (although President Joe Biden did create a task force to inventory all American natural assets) and do not formally recognize the intangible assets — human creativity, social and network relationships, data and IP — that underpin the digital economy.

The Trump administration, as emphasized by Treasury Secretary Scott Bessent, views stablecoins as critical for preserving the dollar's status as the world's reserve currency. Trump clearly endorses this policy, as he stated at a bitcoin conference in 2024: "If crypto is going to define the future, I want it to be mined, minted and made in the USA" (quoted in Sigalos 2024). The three bills previously mentioned clearly enforce the administration's preference for private digital money.

Even if the United States does not transform its monetary system, the US dollar is likely to remain a reserve currency for some time. It took more than a century after Holland's economic peak for the Dutch guilder (the first reserve currency) to decline in importance. As Barry Eichengreen (2025, 3) states, "The recent past suggests that there will be no dollar crisis or collapse, only a gradual erosion of the dollar's dominance as a

reserve currency, as central bank reserve managers confront a growing range of alternatives." But recent economic, financial, geopolitical and technological revolutions could alter this trend.

# Implications for Canada

The trade and tariff war with the United States is forcing Canada to make a difficult choice. Either Canada continues to align itself with the United States, or it embraces the digital economy and the rest of the world in attempting to create a unified world order. Expanding trade beyond the United States will require a safe and secure payment system that operates outside the US-dominated SWIFT/correspondent banking system. Fortunately, these systems are being built, but Canada — like other so-called developed countries — would have to transform its payment, banking and monetary systems to participate fully in this new decentralized digital payment system.

## Option 1: Maintaining the Status Quo

If Canada maintains its special trade relationship with the United States, it can continue down its current path. The only developed country in the world with a worse (less efficient) payment system than Canada is the United States (Fay 2025).

Since the 2012 report of the Task Force for the Payments System Review, Payments Canada has been attempting to create the real-time rail (RTR). Building a modern payments system on top of a 30-year-old mainframe platform is proving difficult and questionable. Consequently, the implementation has been delayed to an unspecified date, but likely late 2026 or early 2027. The slow progress on the RTR is a direct result of legacy systems that were not replaced due to a lack of competitive pressures and the large bottom-line contribution. Indeed, about 40 percent of bank profits come from payments and related activities (including interest income on the float) for individuals and SMEs. In the meantime, high fees will continue to be a drag on Canada's productivity and hit consumer pocketbooks hard at a time when they can least afford it — while continuing to enrich large incumbent financial institutions.

Given the prospect of greater competition from fintechs (financial technology companies), there is little incentive for Canada's large financial institutions to accelerate progress on RTR. It took more than a decade for Interac to open its doors to competition in debit cards, and real-time payment is likely to be the same story. And even when RTR is up and running, non-bank payment providers would have to use the Interac messaging system. Interac (a private company owned by the six banks and two credit union umbrellas) is essentially a gatekeeper in the system and, not surprisingly, is a designated system by the Bank of Canada (BoC). Participants have no choice but to use it even though decisions made by Interac may not be in their best interests. Witness the lack of transparency over its volume-based fee structure that greatly benefited large players. Interac has only recently (begrudgingly) announced that it will move to a flat-fee structure.

This centralized double hub (Payments Canada and Interac) and hub-and-spoke system assume that the US-dominated monetary and payments system continues to hold and traditional commercial banks use stablecoins to bridge the gaps in the global payments system. As Christian Catalini (2025, 7) writes, "Led by the Group of Seven (G7), legislators in the largest economies codify reserve, capital and disclosure requirements for fully backed payment stablecoins. Once that legal clarity arrives, inertia favours the incumbents: banks tokenize deposits or issue their own stablecoins, card networks wrap merchant balances, and major fintechs and neobanks mint branded digital dollars and euros. The network still mirrors the old correspondent-banking web — dense, dollar-centric and knit together by redundant bilateral links — yet settlement now clears in seconds instead of days."

## Option 2: Joining the Developing World

If Canada chooses the second option, the BoC will require a thoroughly modern decentralized (P2P) payments system to connect with the rest of the world, especially the so-called developing world, and to deliver all the transaction data required by an AI-driven information economy.

What other infrastructure is required for Canada to transition to digital currency? Before we can answer this question, Canada must determine its response to the four questions posed by Franklin.

Clearly, as with the necessary infrastructure investments in transportation, communication and power generation for a digital economy, Canada's current monetary system is inadequate to meet the challenges of the digital age. Does the government have the courage to reform currency and credit, take control from the chartered banks and return it to the democratically elected government? Digital sovereign currency (CBDC) issued by the BoC would help to address both the country's productivity problem and reduce its debt burden (if the new currency were used to pay down the debt). It would also enable Canada to make the investments necessary to compete in the global digital economy.

A CBDC would require, as an absolute necessity, a decentralized digital payments infrastructure. But, as the Bank of Brazil has demonstrated, this infrastructure can be purchased for less than US$10 million, from several suppliers, and implemented in less than two years. Recently, the Bank of England came to the same conclusion and announced that it was investing in a new (P2P) small payments system (Arnold, Fleming and Al-Khalaf 2025). More than a decade after the final recommendations of the Task Force for the Payments System Review, Canadian banks have clearly shown their inability to transform their industrial-age technology to meet the needs of the digital age. It is time for the government or the BoC to step up.

Instead of Payments Canada connecting to Interac, make Interac connect to Payments Canada (similar to the action taken by the Bank of Brazil). This would require banks to meet the International Organization for Standardization's ISO 20022 standard[5] and to collect all relevant data, which is essential for AI algorithms. Payments Canada could ensure that fraud detection, AML and other illegal activity surveillance is part of the system available to all payment services providers. This would break the monopolistic stranglehold that Interac's owners (the six banks and two credit unions) have on the Canadian payments system and support the entry of fintech competitors (that meet the BoC's requirements), driving down the cost of payments (a big drag on productivity) and providing the data required to fuel an AI-driven information economy.

As former deputy governor of the BoC, Tim Lane (2025, 5), stated, "Such a disruption of established ways of doing business could have major benefits for the public, including both households and companies. But, of course, the other side of simplifying transactions is eliminating many margins and fees that are a major source of revenues for established financial institutions.[6] Some financial institutions' business models could become obsolete. Clearly, financial institutions need to be nimble to spot the opportunities in a new environment — those that are left behind may face substantial risks that could also spill over to the wider system."

In addition, Canada's decentralized payments system would require network governance. Network governance is based upon government-endorsed objectives, principles and standards that all payment services providers (bank and non-bank) must adhere to. This approach was recommended in 2012 by the Task Force for the Payments System Review.

Proper accounting for assets also plays a key role. The missing link in maintaining the Canadian dollar's exchange value is the recording of our unrecognized assets, including our highly educated human creative potential, abundant natural resources and very productive economy. Reforms in public and private sector accounting to recognize the tangible and intangible assets, both privately and publicly owned that underpin the productive economy, would surface the inherent value of the Canadian dollar and provide that anchor for money supply calculations. Documenting the present inventory (and growth) in productive assets would provide the reliable accounting metrics supporting both the quantity of money in circulation and the non-inflationary monetary growth potential of the money supply.

Clear legislation regarding data ownership, privacy and security is essential. Who owns data about individuals? The author believes that Canadians have made it clear that they think they own their data (for example, through their resistance to Google's Sidewalk Labs), yet the Government of Canada has failed to pass legislation to make data ownership an inalienable right. Resolution of this critical question will require citizen engagement. No matter where we land on data rights, digital identification and authentication infrastructure

5 See www.iso20022.org/.

6 About 40 percent of their profits come from rents for payments (including interest of the float) – services that are virtually free in most developing countries (for example, Brazil, China and India).

is necessary to effectively implement the legislation and support the payments system.

Finally, high-quality, low-cost internet is required for all citizens. Canada could make a deal with Starlink or, better yet, invest in Ottawa-based Telesat, a global leader in low-Earth-orbiting satellite technology, to deliver broadband to all Canadians.

# Conclusion

CBDCs, tokenized deposits and stablecoins will co-exist and cater to specific use cases in the global economy. Countries, including Canada, that want to compete in the global digital economy must be able to connect efficiently and effectively and transmit unlimited data related to the transaction. This requires a networked (P2P) platform, governed by the network based upon agreed objectives, principles and standards.

## Acknowledgement

The author would like to recognize the contributions to this paper from Robert McGarvey with whom she co-authored the forthcoming book *Citizen's Time to Lead*; Robert Fay, senior fellow at CIGI; and Tracey Black, former CEO of Payments Canada.

# Works Cited

Acemoglu, Daron and James A. Robinson. 2021. *Why Nations Fail: The Origins of Power, Prosperity, and Poverty*. New York, NY: Crown.

Arnold, Martin, Sam Fleming and Laith Al-Khalaf. 2025. "Bank of England to find replacement for UK's outdated payment system." *Financial Times*, July 15. www.ft.com/content/7f791df4-ae33-4544-878b-2431f99c1e79.

Awrey, Dan, Joshua Macey and Jeffery Y. Zhang. 2024. "Payment Network Governance." Working Paper No. 801/2024. September. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4951523.

Bao, Anniek. 2025. "China says it will continue to take 'resolute and forceful' countermeasures as U.S. tariffs kick in." CNBC, April 9. www.cnbc.com/2025/04/09/china-vows-forceful-countermeasures-as-us-tariffs-kick-in-.html?.

Birch, Kean. Forthcoming 2025. "What Is Digital Tokenization of Assets, and Where Is It Going?" Waterloo, ON: CIGI.

Catalini, Christian. 2025. *How Will Stablecoins Integrate with the Financial System?* CIGI Paper No. 331. Waterloo, ON: CIGI. www.cigionline.org/publications/how-will-stablecoins-integrate-with-the-financial-system/.

Chandra, Sharat. 2025. *How Can Stablecoins Work in a Tariff World?* CIGI Paper No. 332. Waterloo, ON: CIGI. www.cigionline.org/publications/how-can-stablecoins-work-in-a-tariff-world/.

Chinese Embassy in US. 2025. "If war is what the U.S. wants, be it a tariff war, a trade war or any other type of war, we're ready to fight till the end" (X thread). X, March 4, 10:48 p.m. https://x.com/ChineseEmbinUS/status/1897132043362034153?lang=en.

Eichengreen, Barry. 2025. *When the Facts Change: The Future of the Global Monetary System*. CIGI Paper No. 321. Waterloo, ON: CIGI. www.cigionline.org/publications/when-the-facts-change-the-future-of-the-global-monetary-system/.

Fay, Robert. 2025. *Digital Transformation of the Canadian Financial Services Industry*. CIGI Conference Report, May 29. Waterloo, ON: CIGI. www.cigionline.org/publications/digital-transformation-of-the-canadian-financial-services-industry/.

Gold, Michael. 2025. "What to Know About the Three Crypto Regulation Bills in Congress." *The New York Times*, July 17. www.nytimes.com/2025/07/17/us/politics/crypto-regulation-bills-explainer.html.

Haskel, Jonathan and Stian Westlake. 2017. *Capitalism without Capital: The Rise of the Intangible Economy.* Princeton, NJ: Princeton University Press.

He, Alex. 2025. *Digital Assets Regulation: Lessons from Mainland China and Hong Kong*. CIGI Paper No. 329. Waterloo, ON: CIGI. www.cigionline.org/publications/digital-assets-regulation-lessons-from-mainland-china-and-hong-kong/.

Kalash, S. Yash. 2025. *Exploring Potential Impacts of Global Shifts on Financial Systems and Assets*. CIGI Paper No. 324. Waterloo, ON: CIGI. www.cigionline.org/publications/exploring-potential-impacts-of-global-shifts-on-financial-systems-and-assets/.

Lane, Timothy. 2025. *Digital Assets and the Potential for Global Systemic Risk*. CIGI Paper No. 328. Waterloo, ON: CIGI. www.cigionline.org/publications/digital-assets-and-the-potential-for-global-systemic-risk/.

Lanier, Jaron. 2014. *Who Owns the Future?* New York, NY: Simon & Schuster.

McGarvey, Robert D. 2016. *Futuromics: A Guide to Thriving in Capitalism's Third Wave*. Constanța, Romania: Ovidus Publishing.

Sigalos, MacKenzie. 2024. "Here's what Trump promised the crypto industry ahead of the election." CNBC, November 6. www.cnbc.com/2024/11/06/trump-claims-presidential-win-here-is-what-he-promised-the-crypto-industry-ahead-of-the-election.html.

*The Economist*. 2025. "A savage squable between China and Europe." July 15. www.economist.com/china/2025/07/15/a-savage-squabble-between-china-and-europe.

Tria, Giovanni, Paul Samson and Angelo Federico Arcelli. 2025. "A new 'poly' global reserve currency." World Commerce Review, June 2. https://worldcommercereview.com/a-new-poly-global-reserve-currency/.

Zakaria, Fareed. 2024. *Age of Revolutions: Progress and Backlash from 1600 to the Present.* New York, NY: W. W. Norton.

67 Erb Street West
Waterloo, ON, Canada N2L 6C2
www.cigionline.org