



## An Argument on Abolishing Physical Money Why Should Cash Be Kept for Longer?

Omar Hamid Ibrahim  
University of Zakho ,College of  
Administration & Economics  
[omar.ibrahim@uoz.edu.krd](mailto:omar.ibrahim@uoz.edu.krd)

Abdulwahid Taha Shukri  
University of Zakho ,College of  
Administration & Economics  
[abdulwahid.shukri@uoz.edu.krd](mailto:abdulwahid.shukri@uoz.edu.krd)

### Abstract

In today's increasingly digitalized world, physical objects are fading away; physical money is no exception. The role of cash—both bills and coins—is steadily diminishing, challenged by fintech innovations that threaten its very existence, marking a potential turning point in the history of money. The rise of centralized and decentralized digital payment systems is reshaping the financial landscape, reinforcing the shift toward digital alternatives. Notably, China and Sweden, the first countries to introduce banknotes, are piloting the cash alternative project. Other countries are withdrawing high-value banknotes. Amidst this transformation, a heated debate continued between advocates for maintaining cash circulation and skeptics who fear its imminent demise. This paper critically argues common issues such as tax evasion and the facilitation of the shadow economy, exposing the underlying unfairness in these claims, especially as the push for greater transparency has become a settled issue. It then presents counterarguments that support the authors perspectives. Furthermore, the study delves into key questions surrounding cash's future: is it truly on the brink of extinction, or should it coexist with digital payment methods? Most importantly, should cash be retained for a longer period, or has it outlived its usefulness? To maintain focus, this paper will focus on the internal considerations over international ones. CBDCs emerge as the primary alternative to physical cash. The paper does not address the sufficiency or implementing challenges of CBDC.

**Keywords:** *Physical cash, tax evasion, shadow economy, CBDC, cash abolition, centralized system*



## مناقشة حول إلغاء النقود (الكاش) لماذا يجب الاحتفاظ بالنقود لفترة أطول؟

عبدالواحد طه شكري

جامعة زاخو، كلية الإدارة والاقتصاد

[abdulwahid.shukri@uoz.edu.krd](mailto:abdulwahid.shukri@uoz.edu.krd)

عمر حامد إبراهيم

جامعة زاخو، كلية الإدارة والاقتصاد

[omar.ibrahim@uoz.edu.krd](mailto:omar.ibrahim@uoz.edu.krd)

### الملخص

في عالمنا الرقمي اليوم، تتلاشى الأشياء المادية؛ والنقود المادية ليست استثناءً. يتراجع دورها باستمرار، حيث تُقوّض التكنولوجيا المالية مكانتها وتُهدد وجود أشكالها المادية (الورقية والمعدنية)، والتي قد تُشكّل نقطة تحول في تاريخ النقود. من خلال استخدام أحدث أدوات الدفع المركزية واللامركزية، يُرسّخ المشهد المالي أرضية البدائل الرقمية. السويد، من أوائل الدول التي أدخلت الأوراق النقدية، تُسحبها من التداول. كما تُسحب دول أخرى الأوراق النقدية عالية القيمة. في غضون ذلك، لا يزال هناك جدل حاد بين مناصري الحفاظ على تداول النقد والمُشكّكين الذين يخشون اختفائه الوشيك. تهدف هذه الورقة إلى دحض الحجج النقدية الهامة، مثل التهرب الضريبي ودعم الاقتصاد الموازي، من خلال كشف الظلم الكامن وراء هذه الحجج، حيث يُمكن اعتبار زيادة الشفافية المالية جدلاً محسوماً. ثانياً، عرض بعض الاعتراضات التي تدعم وجهة نظر المؤلف. ثالثاً، استكشاف بعض الأسئلة الجوهرية المتعلقة بالنقد، مثل ما إذا كان على وشك الانقراض أم ينبغي أن يتعايش مع أدوات الدفع الرقمية. وأخيراً، والأهم من ذلك، هل ينبغي لنا الاحتفاظ بالنقد لفترة أطول أم أنه تجاوز فائدته؟ لتضييق نطاق الموضوع، ستركز الورقة على الاعتبارات الداخلية أكثر من الاعتبارات الدولية. ولذلك، يُعد النظام المركزي (CBDC) البديل الرئيسي لنظام النقد المادي، حيث يُنظر إلى النقد المشفر اللامركزي كخيار موثوق. لا تتناول هذه الورقة مدى كفاية CBDC.

**الكلمات المفتاحية:** النقد المادي، التهرب الضريبي، إقتصاد الضل، CBDC، إلغاء النقد، النظام المركزي، فشل الشبكات.



## Introduction

The accelerating pace of innovation signals an imminent scientific revolution in artificial intelligence—one that promises to reshape human life in ways not yet fully understood (Al-Kheiqani and Al-Rawaziqi, 2024). With each wave of information technology comes a dual-edged impact: the resolution of longstanding problems alongside the emergence of new challenges (Harari, 2024). Money, like other social constructs, has historically evolved in response to societal expansion, the emergence of new markets, and demands driven by international trade. At other times, monetary transformations have occurred without necessity, reflecting shifts in ideology or technological preference.

Since Aristotle, money has served three core economic functions: as a unit of account, a medium of exchange, and a store of value (Stanford Encyclopedia of Philosophy, 2023). Even primitive currencies such as wampum shells or Yap stones fulfilled some of these traditional roles (Davies, 2002). However, the function of money as a standard for deferred payment was largely absent in ancient economies (Nelson, 2000), a point also noted by Joseph Schumpeter (Meikle, 1994). This subtle historical omission highlights one of the rare but significant evolutions in the conceptual role of money.

Over time, money has taken on diverse physical forms—cowrie shells, stones, metals, paper, and now digital and virtual currencies—each reflecting broader economic and technological shifts (Brzezinski et al., 2024). Today, the world stands on the brink of another major transformation: the potential abolition of physical cash in favor of centralized digital currencies. This emerging financial system envisions transactions conducted through virtual



state-issued instruments such as Central Bank Digital Currencies (CBDCs) or, less likely, legally adopted decentralized cryptocurrencies.

CBDCs, unlike cryptocurrencies, are backed and regulated by official monetary authorities, giving them a competitive advantage in terms of legitimacy and stability. While early adopters of CBDC systems include smaller economies like the Bahamas and Saint Kitts and Nevis, over 130 countries—most notably China—are currently piloting or exploring their own digital currencies. Nonetheless, global consensus on the future of cash remains elusive.

A wide spectrum of scholarly opinion reflects this division. Critics of cash abolition—such as Hummel (2019), Schneider (2019), Deutsche Bank Research (2020), Scott (2022), and Arora (2023)—warn that eliminating cash would offer only marginal benefits in reducing tax evasion or crime. Hummel, for example, finds little empirical support for a significant crime-reduction effect, while Scott raises concerns about the surveillance potential of centralized digital systems. Conversely, proponents such as Nakamoto (2008), Wolman (2012), Sand (2016), Rogoff (2016), and economists like Willem Buiter and Peter Bofinger (Dowd, 2024) argue for retiring cash—citing its role in enabling crime, tax evasion, and even the transmission of disease. Rogoff, in particular, advocates a phased reduction of high-denomination notes to improve economic transparency. While some, such as Gabriel Zucman (2015), propose alternative strategies to combat tax evasion without eliminating cash, the broader narrative suggests that physical currency is losing its practical dominance to mobile and card-based payment systems.



Recognizing that financial systems are in constant flux, this study does not seek to halt technological progression. Instead, it aims to assess the broader implications of eliminating cash—particularly risks to privacy, civil liberties, and national resilience in times of crisis, including cyberattacks and war-related network outages. The paper offers a defense of cash as a democratic and resilient financial instrument, advocating for its continued coexistence with digital systems rather than a premature or absolute transition.

### Historical Changes in the Financial System

The international monetary system has long served as the framework through which national economies are interconnected and interdependent (Eichengreen, 2008). While humanity excels at creating financial systems and regulatory regimes, history also shows our capacity to manipulate or circumvent them. Importantly, there is a fundamental difference between systems that fail due to structural insufficiency and those that collapse under the weight of human dishonesty or moral decay.

Throughout history, financial systems have evolved in response to practical needs—ranging from domestic economic growth to the demands of international trade. From the earliest known counting tools, such as the Ishango Bone (McWilliams, 2024), to contemporary innovations like cryptocurrencies and Central Bank Digital Currencies (CBDCs), the evolution of money has been constant. For instance, livestock was eventually replaced by cowrie shells, which were more portable and divisible (Quiggin, 1949). In turn, cowrie shells gave way to Lydian coins, which offered improved supply control and state-backed legitimacy (Orrell & Chlupatý, 2016; Goetzmann, 2016).



Some shifts were strategic rather than organic. Sumer transitioned from barley to coins to facilitate international trade (McWilliams, 2024), while the introduction of paper money—famously observed by Marco Polo in 1295 upon returning from China—revolutionized global commerce (Steinhart, 2014). Yet paper money brought challenges of its own, most notably inflation and currency debasement, especially during wartime (Reinhart & Savastano, 2003). China, the originator of paper currency, reverted to barter during World War II before reintroducing a new paper currency—the renminbi—in 1949 (Einzig, 1966).

In 2008, the pseudonymous Satoshi Nakamoto proposed a decentralized payment system in the form of cryptocurrency (Nakamoto, 2008). While widely adopted over the following decade, these digital currencies lack core characteristics of formal money: central oversight, regulatory frameworks, and price stability. Moreover, they are frequently linked to tax evasion and illicit financial activity (Ibrahim, 2023). In response, governments initiated the development of CBDCs—state-regulated digital currencies intended to serve as a modern replacement for physical cash. For instance, China’s central bank reported in September 2024 that its e-CNY system had processed over 7 trillion yuan (\$1 trillion) in transactions (The Economist, 2024). Proponents argue that rapid advances in smartphone adoption, cryptography, and computing power make this shift feasible.

However, the accelerating pace of technological change raises concerns. Innovations arrive in such quick succession that societies may lack sufficient time to adapt before the next disruption. Today’s push to eliminate cash is often linked to concerns over tax evasion and crime. But is this rationale sufficient?



## I. Mechanism for Eliminating Cash

The transition from physical to digital currency is typically approached incrementally. Before the rollout of electronic money systems—such as CBDCs—governments must establish legal and technological infrastructure. Kenneth Rogoff (2016), in *The Curse of Cash*, advocates a phased strategy: first eliminating high-denomination notes, which are commonly associated with illicit activity, followed by the gradual removal of lower denominations. Several countries have already employed similar strategies. In 2016, India demonetized its 500 and 1,000 rupee notes—then comprising 86% of circulating cash (Lahiri, 2020). The same year, the European Central Bank ceased production of €500 notes (ECB, 2016). China, by contrast, introduced the digital yuan without eliminating paper currency, choosing a dual-currency model (Time.com).

Gradual withdrawal of large notes appears more effective than abrupt elimination or indefinite coexistence. Sudden abolition risks destabilizing the financial system if digital infrastructure fails, whereas retaining all physical currency could undermine the transition.

## II. Arguments for Abolishing Physical Cash

### 1. Cash Facilitates Tax Evasion

One of the most cited arguments for abolishing cash is its alleged role in enabling tax evasion. While digital currencies may improve traceability, is this justification robust?

The U.S. tax code spans over 17,000 pages, compared to the Constitution's brevity (Lundeen & Hodge, 2013), reflecting the nation's deep reliance on tax revenue. Yet countries like Iraq primarily fund their budgets through



resource exports (Ali, 2023), demonstrating that tax evasion is not universally cited as a motive for cash abolition.

Historically, tax revenues have funded military campaigns as much as social services. For example, 83% of the Song dynasty's annual budget in 1065 went to military expenditure (Harari, 2024). In modern times, U.S. defense spending surged from 2.4% to 17% of GDP during WWI, with taxes covering just 22% of costs (Rockoff, 2004). Since 9/11, the average American has contributed roughly \$7,500 to military conflicts (Weisgerber, 2017). Thus, public skepticism persists regarding whether taxes are truly allocated toward welfare.

More problematic is the behavior of the tax collectors themselves. Former French and Spanish officials have been jailed for hiding millions in foreign accounts, while major corporations such as Apple have engaged in aggressive tax avoidance strategies (Fortune.com). Economist Gabriel Zucman (2015) estimates that 8% of global wealth resides in offshore havens. These strategies often go unchallenged by governments, which instead focus enforcement on the public.

Schneider (2019) argues that tax morale and institutional trust—not cash—are the main determinants of tax compliance. Respectful treatment of taxpayers and transparency in public spending are more influential than removing paper money. Moreover, new systems may present new vulnerabilities: the centralization of CBDCs could itself become a tool for circumvention. Ultimately, it is not the form of money but the function of institutions like the IRS that determines the success of tax enforcement. While digital systems may modestly increase tax compliance, this alone does not justify abolishing cash. The broader issues lie in governance, distribution



of public resources, and institutional accountability—not the medium of exchange.

## 2. Cash Enables the Shadow Economy

Another major criticism of cash is its role in facilitating untraceable transactions. While this is partially true, the relationship is neither absolute nor deterministic. Kiyotaki and Wright (1989) note that traditional monetary theory assumes transactions may occur without formal records. Nonetheless, some studies estimate that over 50% of cash transactions in certain countries are used to obscure financial activity (Rogoff, 2014).

Governments are responding by promoting e-payments and reducing ATM access, but ironically, such restrictions have often increased public demand for cash. Between 2003 and 2016, the amount of euros in circulation tripled in the EU (Mai, 2016).

The link between cash and the underground economy varies. Austria and Germany rely heavily on cash yet maintain low levels of shadow activity. Sweden, largely cashless, still experiences considerable black-market activity. Conversely, countries like Italy and Greece show strong correlations between high cash usage and shadow economies. Thus, culture, enforcement, and public trust matter just as much as cash availability.

Meanwhile, decentralized systems—especially cryptocurrencies—are emerging as significant enablers of illicit finance. According to the U.S. Department of Justice (2020), cryptocurrencies are used in crimes ranging from fraud and human trafficking to terrorism financing. As CBDCs emerge, so too will more evasive decentralized technologies, threatening to expand the shadow economy rather than reduce it.



Eliminating cash will not eliminate criminal transactions. With decentralized alternatives available, illicit actors may simply shift platforms. Rather than targeting the medium, policy should focus on enforcement, transparency, and transnational cooperation.

### III. Objections to a Cashless Society

#### 1. Privacy and Surveillance

One of the most profound concerns with a fully digital monetary system is the erosion of personal privacy. Financial transactions, once private and anonymous, would leave permanent digital footprints accessible to governments and corporations. As cash disappears, so does the ability to transact without surveillance.

As Lewis (2012) provocatively suggests, modern technology companies may function as tools of state intelligence. In a CBDC world, governments could trace individuals' financial activities with precision—where they eat, shop, travel, and sleep. Unlike handing over a \$20 bill, which leaves no record, every digital transaction becomes data.

Facebook founder Mark Zuckerberg himself once balked at revealing a personal detail during a privacy trial—highlighting the double standard. In a cashless society, every citizen may live in a metaphorical glass house, their financial lives entirely transparent.

Moreover, this consolidation of financial control into centralized institutions—similar to the data monopolies of tech giants—could concentrate power and undermine civil liberties. Once connected directly to a central bank or payment processor, individuals may face restrictions, monitoring, or even exclusion based on their financial behavior.



The abolition of cash risks creating a surveillance economy where privacy is compromised, autonomy is curtailed, and financial control is centralized. These risks require rigorous debate and safeguards before any widespread transition.

## 2. Democracy Violation

Abolishing cash also raises serious concerns regarding civil liberties and democratic participation (Rogoff, 2015). As governments and central banks reshape the financial ecosystem, individual choice diminishes. Citizens are effectively compelled to accept state-sanctioned digital payment systems, even as they retain the right to elect their leaders. This contradiction raises a critical question: if democratic societies allow citizens to choose their representatives, why are they denied a choice in the type of money they use? Such a constraint risks violating fundamental civil rights.

Historically, shifts in the flow of information have reshaped social structures, but the reach and intensity of modern surveillance technologies are unprecedented. While technological advancement has deepened democratic engagement in some areas, it has simultaneously exposed individuals to pervasive privacy violations. The abolition of physical cash directly affects the citizen–state relationship (Mai, 2016), threatening to erode trust in public institutions. While some level of governmental intervention is necessary to maintain order, democratic principles require that such actions be transparent, justified, and proportionate. In the absence of compelling necessity, individuals should retain their autonomy.

A cornerstone of democracy is the protection of fundamental rights—such as privacy, freedom of movement, freedom of religion, and the right to work—regardless of popular opinion. Even in increasingly cashless societies



like Sweden and the Netherlands, public demand for physical currency persists (Marketplace.org). As anthropologist Bill Maurer argues, the continued use of cash by segments of the population affirms its importance; disregarding this preference infringes upon personal freedom and democratic choice. Cash is a symbol of autonomy—it belongs not to the state, but to the people.

### 3. Network Outages

Another critical risk associated with a fully digital currency system is its reliance on uninterrupted technological infrastructure. Network outages—caused by cyberattacks, natural disasters, or armed conflict—can paralyze entire economies. In 2024, a global IT failure resulted in billions of dollars in losses, highlighting the vulnerability of hyperconnected systems. Similarly, in 2022, the Eastern Caribbean Central Bank’s digital currency platform went offline for two months due to cybersecurity threats (Harsono, 2022). The Bahamas’ Sand Dollar and Jamaica’s JAM-DEX experienced similar disruptions (Klein, 2023).

While these economies are small on a global scale, they are early adopters of CBDCs and serve as indicators of potential challenges. The risks become even more pronounced when imagining scenarios in conflict zones. A city like Gaza or a country like Ukraine, if reliant solely on digital currency, could find its economy incapacitated. The consequences would be catastrophic—potentially impeding access to food, water, and healthcare.

Skeptics may argue that such scenarios are isolated or irrelevant to developed nations. However, no country is immune from disaster. California wildfires, the COVID-19 pandemic, and cyberattacks on U.S. infrastructure have all



demonstrated the fragility of digital systems. In many developing nations, the lack of reliable internet access already limits access to basic financial services. A hasty transition to cashless economies could result in financial exclusion and deepen global inequality.

#### 4. Replicating Decentralized Systems

By adopting fully digital legal tender, governments may inadvertently replicate features of decentralized systems—thereby inheriting many of their risks. Unlike traditional paper currency, digital money can be hacked, cloned, or corrupted by malicious actors. While physical counterfeiting is geographically and technically limited, cyberattacks transcend borders. A single hacker located in one country could disrupt another nation's financial infrastructure with a few lines of code.

E-money is inherently more exposed to cybersecurity threats (Bharath et al., 2024; Tian et al., 2023). Unlike physical balances, digital funds lack tangible proof of ownership, making recovery more difficult in the event of a breach. For instance, Nigeria's launch of a CBDC suffered setbacks due to infrastructure and cybersecurity failures (Olabimtan, 2025).

Moreover, the elimination of physical cash may inadvertently empower decentralized alternatives. Shadow economies and illicit actors—unable to use traceable CBDCs—may gravitate toward cryptocurrencies and other anonymous payment tools. This shift could strengthen decentralized systems, undermining central bank authority and complicating enforcement efforts.



#### IV. Alternatives to Abolishing Cash

While the complete elimination of cash is increasingly framed as inevitable, this transition need not be abrupt or absolute. Governments worldwide are actively piloting CBDCs, but caution is warranted. Rather than abandoning cash altogether, policymakers should consider hybrid models that preserve the advantages of both physical and digital currency.

The concept of a cashless society is not novel; the 20th century saw the rise of electronic payments and fund transfer systems (Sahi et al., 2021). What distinguishes the current phase is the ambition to completely eradicate physical money. A dual system—combining cash and digital payments—offers a balanced, resilient solution.

Such a model might include:

- Maintaining cash reserves at both central and commercial banks, supported by debit cards and mobile wallet systems (e.g., Zain Cash, FastPay);
- Encouraging electronic transactions for wholesale and high-value trade while allowing limited, regulated use of cash in retail or emergency scenarios;
- Reforming banking laws to reduce financial secrecy, require clearer account disclosures, and improve oversight of offshore assets.

This model ensures financial inclusion, particularly in regions with limited access to digital infrastructure. It also preserves individual freedom while enabling governments to enhance tax compliance and transparency.

Critics may argue that the shadow economy will persist regardless of monetary reforms. Indeed, as Medina and Schneider (2018) note, the informal economy often evolves in response to regulatory changes. The real



challenge lies not in the form of money but in the policy environment that enables such behavior. Reforming financial governance—not abolishing cash—is the more effective path forward.

### Conclusion

The global financial system is undergoing a profound transformation, driven by the rise of CBDCs and declining reliance on physical currency. While these developments offer promising efficiencies and new technological capabilities, they also present substantial risks. This paper has critically examined the key arguments for abolishing cash—tax evasion, the shadow economy, and transactional efficiency—and has challenged their sufficiency in justifying the elimination of a centuries-old monetary form.

Cash serves as more than just a medium of exchange—it is a tool of privacy, freedom, and democratic autonomy. In times of crisis, cash ensures access to resources when digital infrastructure fails. It also offers protection against excessive surveillance and centralized control. Furthermore, the problems of tax evasion and underground economies stem not from paper money itself, but from broader institutional failures and ethical lapses.

Rather than rushing toward a fully digitalized system, a more measured and inclusive approach is necessary. Maintaining a dual system—where digital and physical money coexist—provides flexibility, resilience, and safeguards essential civil liberties. Governments should prioritize reforms in financial transparency and regulatory oversight over the mere substitution of currency forms.

In conclusion, preserving physical cash is not an impediment to progress but a call for balance, caution, and human-centered policy. Cash should continue to circulate—not only because many people still rely on and prefer it (Davies



et al., 2016)—but because its presence ensures economic dignity, autonomy, and readiness in a world that remains unpredictable. The future of money must be inclusive, resilient, and, above all, democratic.

## Literature

### I. Books

1. Davies, G. (2002). A History of Money, From Ancient Days to the Present Day. Third edition, University of Wales Cardiff Press.
2. Einzig, P. (1966). Primitive Money, In Its Ethnological, Historical, and Economical Aspects. Pergamon Press Ltd., Headington Hill Hall, Oxford, 2nd edition, pp. 303.
3. Eichengreen, B. (2008). Globalization Capital: A History of the International Monetary System. Princeton University Press, 2nd Edition, pp. 1.
4. Goetzmann, W.N. (2016). Money Changes Everything: How Finance Made Civilization Possible. Princeton University Press, pp. 101.
5. Harari, Y.N. (2024). Nexus. A Brief History of Information Networks from the Stone Age to AI. Random House, New York, 2024.
6. Lewis, J.E. (2012). The Mammoth Book of Conspiracies. Is the Truth out There?
7. McWilliams, D. (2024). Money: A Story of Humanity. Simon and Schuster, London, 2024, pp. 20.
8. Nelson, A. (2000). Marx's Concept of Money. The God of Commodities. First Edition, Routledge Publication, London and New York.
9. Orrell, D. and Chlupaty, R. (2016). The Evolution of Money. Columbia University Press.



10. Quiggin, A.H. (1949). A Survey of Primitive Money. The beginning of Currency. Methuen and Co. Ltd., London, 1949, pp. 25, 36.
11. Rogoff, K.S. (2016). The Curse of Cash.
12. Scott, B. (2022). Cloud Money, Cash, Cards, Crypto, and the War for Our Wallets.
13. Steinhart, Ch. (2015). A Brief History of Money. Market Street Publishing, San Francisco, pp. 148.
14. Wolman, D. (2012). The End of Money. Counterfeiters, Preachers, Techies, Dreamers, and the Coming of Cashless Society. De Capo Press Publication, First Edition, 2012.
15. Zucman, G. (2015). The Hidden Wealth of Nations. The Scourge of Tax Havens. The University of Chicago Press, 1st Edition, 2015.

## II. Journals and Conferences

1. Al-Kheiqani, M.M., and Al-Rawaziqi, A.S. (2024). Artificial Intelligence Technologies and Their Importance in Developing the General Budget and Its Auditing Tools in Iraq: A Model. Journal of Economics and Administration, University of Mustansiriyah, Vol. 49, issue 146 (93-104).
2. Ali, N.K. (2023). Oil and Economic Performance in Iraq: A Blessing or a Curse! Regional Studies Journal, Vol. 17, Issue 56 (2023).
3. Dowd, K. (2024). Killing the Cash Cow. Why Andi Haldane is Wrong about Demonetization.
4. Kiyotaki, N., and Wright, R. (1989). On Money as a Medium of Exchange. Journal of Political Economy 87 (4): 927–54.
5. Lahiri, A. (2020). The Great Indian Demonetization. Journal of Economic Perspectives, vol. 34, no. (pp. 55–74).
6. Meikle, S. (1994). Aristotle on Money. Phronesis, Vol. 39, No. 1.



7. Nakamoto, S. (2008). Bitcoin. A peer-to-peer electronic cash system. White Paper.
8. Omar, H.I. (2024). Cryptocurrency, the new unleashed financial instrument, should it be regulated? Humanities Journal of the University of Zakho, Vol. 12, Issue 2.
9. Rockoff, H. (2004). The US economy in the World War. Available at [https://www.nber.org/system/files/working\\_papers/w10580/w10580.pdf](https://www.nber.org/system/files/working_papers/w10580/w10580.pdf).
10. Rogoff, K. (2014). Costs and Benefits of Phasing Out Paper Currency.
11. Reinhart, C.M., and Savastano, M.A. (2003). The Reality of Modern Hyperinflation.
12. Schneider, F. (2019). Restricting or Abolishing Cash: An Effective Instrument for Eliminating the Shadow Economy, Corruption, and Terrorism? The European Money and Finance Forum. SUERF Policy Note, Issue No. 90.
13. Stanford Encyclopedia of Philosophy, 2023. Philosophy of Money and Finance.
14. Sand, P. (2016). Making it Hard for Bad Guys: The Case for Eliminating High Denomination Notes. M\_RCBG Associate Working Paper Series No. 52.
15. Sahi, A.M., Khalid, H., Abbas, A.F., Khatib, S.F.A. (2021). The Evolving Research of Customer Adoption of Digital Payment: Learning from Content and Statistical Analysis of the Literature. Journal of Open Innovation: Technology, Market, and Complexity. Volume 7, Issue 4, December 2021, 230.
16. Taskinsoy, J. (2021). Say goodbye to physical cash and welcome to central bank digital currency. SSRN Electronic Journal, available on.



17. Tian, Sh., Zh., B., and Olivares, R.O. (2023). Cybersecurity risks and central banks' sentiment on central bank digital currency: Evidence from global cyberattacks. Elsevier, Finance Research Letters, Volume 53, 103609.
18. Wang, Y.R., Ma, Ch.Q., and Ren, Y.Sh. (2022). A model for CBDC audits based on blockchain technology: learning from the DCEP. Research in International Business and Finance. Volume 63, December 2022, 101781.

### III. Reports

1. Brzezinski, A., Palma, N.P.G., Velde, and F.R. Understanding Money Using Historical Evidence. Federal Reserve Bank of Chicago. Working Paper No. 2024\_10.
2. Bharath, A., Paduraru, A., and Gaidosch, T. (2024). Cyber Resilience of the Central Bank Digital Currency Ecosystem. FinTech Note.
3. Consultative Group on Risk Management. (2023). Central Bank Digital Currency (CBDC) Information Security and Operational Risks to Central Banks. An operational lifecycle risk management framework.
4. Deutsche Bank report (2020). The Future of Payments. Cash, the dinosaur will survive for now.
5. Davies, C., Doyle, M.A., Fisher, Ch., and Nightingale, S. (2016). The future of Cash. Australian Bulletin.
6. EUROPOL (2015). Why is Cash Still King? A Strategic Report on the Use of Cash by Criminal Groups as a Facilitator for Money Laundering.



7. International Monetary Fund (2019). IMF Paper Working WP/19/278. Explaining the Shadow Economy in Europe: Size, Causes, and Policy Options.
8. Mai, H. (2016). Cash, freedom, and crime: use and impact of cash in a world going digital. EU Monitor Global Financial Markets.
9. Medina, L., and Schneider, F. (2018). Shadow Economies Around the World: What Did We Learn Over the Last 20 Years? IMF Working Papers.
10. The European Central Bank. (2016). ECB ends production and issuance of €500 banknotes.
11. U.S. Department of Justice. (2020). Cryptocurrency Enforcement Framework. Report of the Attorney General's Cyber Digital Task Force.

#### IV. Internet References

1. Arora, R. (2023). Should Cash Be Abolished? Retrieved from <https://www.bradford.ac.uk/news/archive/2023/should-cash-be-abolished.php>. Accessed on 17.08.2028.
2. Hummel, J.R. (2019). Abolishing Cash. Be careful what you wish for. Available at: <https://www.milkenreview.org/articles/abolishing-cash>. Accessed on 09.08.2024.
3. How China's Digital Currency Could Challenge the Almighty Dollar. Available on <https://time.com/6084146/china-digital-rmb-currency/>. Accessed on 29.06.2025.
4. Harsono, H. (2022). Policy Implications Stemming from the ECCB's CBDC outage. Available on: [https://hackernoon.com/policy-implications-stemming-from-the-eccbs-cbdc-outage?utm\\_source=chatgpt.com](https://hackernoon.com/policy-implications-stemming-from-the-eccbs-cbdc-outage?utm_source=chatgpt.com). Accessed on 28.06.2025.



5. Klein, M. (2023). The Caribbean's central bank digital currency experiments are slow to take off. Available on: [https://www.caymancompass.com/2023/02/16/caribbeans-central-bank-digital-currency-experiments-slow-to-take-off/?utm\\_source=chatgpt.com](https://www.caymancompass.com/2023/02/16/caribbeans-central-bank-digital-currency-experiments-slow-to-take-off/?utm_source=chatgpt.com). Accessed on 29.06.2025.
6. Lietaer, B. (2009). Why this crisis? Retrieved from Bernard [Lietaer: Why this crisis? And what to do about it? » @ TEDx Berlin 11/30/09 \(socioeco.org\)](#). Accessed on 04.09.2024.
7. Lundeen, A., and Hodge, S. (2013). The Income Tax Code spans more than 70,000 pages. Available on <https://taxfoundation.org/data/all/federal/income-tax-code-spans-more-70000-pages/>. Accessed on 01.01.2025.
8. Olabimtan, B. (2025). Three years after launch, eNaira battles for relevance in Nigeria's financial system. available on: [https://www.thecable.ng/three-years-after-launch-enaira-battles-for-relevance-in-nigerias-financial-system/?utm\\_source=chatgpt.com](https://www.thecable.ng/three-years-after-launch-enaira-battles-for-relevance-in-nigerias-financial-system/?utm_source=chatgpt.com). Accessed on 28.06.2025.
9. The Economist Magazine (2024). What the History of Money Tells You About Crypto's Future Available on: <https://www.economist.com/finance-and-economics/2024/09/19/what-the-history-of-Mon.pdf>. Accessed on 06.01.2025.
10. French ex-budget minister jailed for tax fraud. Available on: <https://www.france24.com/en/20180515-france-former-budget-minister-cahuzac-sentenced-two-years-prison>. Accessed on 3.1.2025.



11. Spanish Prime Minister Rajoy is accused of hiding secret income.  
Available on: <https://www.theguardian.com/world/2013/jan/31/spanish-prime-minister-secret-payments>. Accessed on 08.01.2025.
12. Commentary: Apple Avoided \$40 Billion in Taxes. Now it wants a gold star? Available on: <https://fortune.com/2018/01/18/apple-bonuses-money-us-350-billion-taxes-trump/>. Accessed on 08.01.2025.
13. <https://www.marketplace.org/2023/04/21/what-would-happen-if-paper-money-became-obsolete/>. Accessed on 17.01.2025.
14. <https://www.npr.org/2016/10/22/498398032/as-military-moving-costs-rise-its-difficult-for-officials-to-keep-track>. Accessed on 03.02.2025.