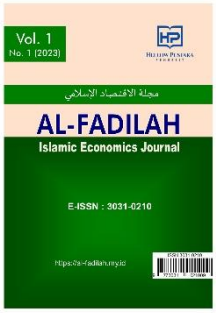

مجلة الاقتصاد الإسلامي

Al-Fadilah: Islamic Economics Journal

E-ISSN: 3031-0210 Vol. 3 No. 2 (2025)
https://doi.org/10.61166/fadilah.v3i1.81 pp. 235-249

Research Article

Reimagining Global Financial Settlements: A Gold-Backed Cryptocurrency Framework Anchored in Blockchain and Islamic Finance Principles

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Received : September 19, 2025
Revised : October 21, 2025
Accepted : November 13, 2025
Available online : Desember 02, 2025

How to Cite: Irma Naddiya Binti Mushaddik. (2025). Reimagining Global Financial Settlements: A Gold-Backed Cryptocurrency Framework Anchored in Blockchain and Islamic Finance Principles. *Al-Fadilah: Islamic Economics Journal*, 3(2), 235–249. https://doi.org/10.61166/fadilah.v3i2.81

Abstract. In a world where economic turbulence and financial inequities are increasingly driven by the shortcomings of fiat currency systems, this paper advances a bold and timely proposition: the integration of gold-backed cryptocurrencies into global net settlement systems through blockchain technology. Bridging the philosophical depth of Islamic economic principles with the technical power of decentralized digital infrastructure, this study outlines a visionary framework that addresses the core weaknesses of inflation, centralization, and systemic risk. Grounded in qualitative research, including expert interviews and content analysis, the paper proposes a decentralized, ethically anchored, and technologically secure model that restores intrinsic value to money. Malaysia is

identified as a strategic pioneer in this transformation, leveraging its leadership in Islamic finance and fintech to initiate a paradigm shift in global monetary governance. This work not only challenges existing financial orthodoxy but also provides a blueprint for a more stable, just, and transparent future of international finance.

Keywords: Gold-Backed Cryptocurrency, Blockchain, Islamic Finance, Net Settlement, Fiat System, Financial Stability, Malaysia, Central Banks

INTRODUCTION

The vulnerabilities and limitations of the contemporary global financial system have been laid bare through a series of severe and recurring economic shocks. The 1997 Asian Financial Crisis revealed the fragility of emerging markets under speculative currency attacks. The 2008 global financial crisis, triggered by the collapse of major financial institutions and over-leveraged banking practices, exposed the systemic risks inherent in the fiat-based, debt-driven financial order. More recently, the economic ramifications of the COVID-19 pandemic have deepened concerns about monetary instability, central bank overreach, inflationary pressures, and widening wealth disparities.

Adding to this economic uncertainty the onset of a global trade war initiated by Trump administration. The imposition of sweeping tariffs on imports—particularly targeting Chinese goods—sparked retaliatory measures and disrupted international trade flows. These protectionist policies undermined the multilateral trading system, stoked inflationary pressures, and increased volatility in currency markets. For many countries, the trade war exposed the vulnerabilities of a dollar-dominated financial order, as supply chain dependencies and transactional asymmetries further tilted the balance of global economic power.

These crises and conflicts are not isolated anomalies; they are symptomatic of deeper structural deficiencies in the modern financial architecture—most notably, the reliance on fiat currencies that lack intrinsic value and are managed by centralized authorities with vast discretionary powers. The overissuance of money, politicization of monetary policy, speculative financial instruments, and uneven access to liquidity have collectively undermined public trust in the global economic system. As a result, calls for alternative models that promote monetary stability, transparency, and ethical governance have gained traction worldwide.

In response, this paper proposes a transformative framework for international financial settlements: the adoption of a gold-backed cryptocurrency (GBC) system supported by blockchain technology and guided by Islamic finance principles. By anchoring digital currency to physical gold, this model restores intrinsic value to money, mitigates inflationary risk, and reintroduces discipline into monetary policy. Blockchain technology further enhances this framework by providing a secure, decentralized, and transparent infrastructure that allows real-time settlement without reliance on intermediaries.

The integration of Islamic financial ethics adds a crucial dimension of moral accountability to the system. Rooted in the prohibition of interest (riba), avoidance of excessive uncertainty (gharar), and commitment to justice and fairness, Islamic

finance offers a coherent ethical framework for sustainable financial practices. In particular, the emphasis on asset-backing and risk-sharing aligns naturally with the principles underlying gold-backed digital currencies.

This paper aims to present not merely a theoretical critique of fiat monetary regimes, but a practical and ethically grounded alternative capable of reshaping global finance. It positions Malaysia—renowned for its leadership in Islamic finance and financial technology—as a strategic launchpad for this innovative model. Through interdisciplinary analysis and expert insights, the study builds a compelling case for gold-backed cryptocurrencies as a viable and necessary evolution in global monetary governance.

LITERATURE REVIEW

The shift from the gold standard to fiat currency continues to be a focal point in monetary economics, reflecting deep concerns about currency stability, inflation, and the ethical basis of monetary systems. The classical gold standard (1881–1913), under which national currencies were directly convertible into gold, provided monetary discipline and long-term price stability. Bordo (1998) and Kydland and Wynne (2002) found that inflation was significantly lower and less volatile under the gold standard compared to the discretionary monetary policy regimes that followed the collapse of Bretton Woods in the 1970s.

The termination of the Bretton Woods system in 1971 by President Nixon marked a global transition to fiat money, untethered from any physical asset. While this move offered monetary authorities flexibility in responding to economic shocks, it also introduced the potential for reckless fiscal and monetary expansion. Bernstein (2000) contends that fiat currencies derive their value from political will rather than tangible backing, leaving them vulnerable to inflation, devaluation, and fiscal mismanagement.

More recently, financial theorists have examined the consequences of fiat money in fostering inequality and unsustainable debt (Hudson, 2012). Critics argue that central banks' quantitative easing policies have disproportionately benefited asset holders, exacerbating the wealth gap (Stiglitz, 2016). Furthermore, financial crises have revealed the fragility of systems predicated on confidence and continuous credit expansion (Reinhart & Rogoff, 2009).

In contrast, renewed interest in commodity-based currencies has emerged as a counterbalance to fiat's vulnerabilities. Gold, in particular, has regained attention as a store of value and hedge against inflation (Baur & McDermott, 2010). This revival is not purely nostalgic but reflects a desire for more disciplined, transparent, and equitable monetary systems. Lewis (2007) advocates for a return to asset-backed currencies, arguing that historical evidence supports their capacity to ensure sustainable economic stability.

Islamic economic thought offers an ethical and jurisprudential lens that naturally aligns with these concerns. Historically, gold (dinar) and silver (dirham) served as primary mediums of exchange in the Muslim world. Islamic scholars such as Imam al-Ghazali (d. 1111) emphasized that money should be a measure and store of value rather than an object of speculation or exploitation. Ibn Taymiyyah also

emphasized the moral imperative of stable and just monetary policy, condemning the debasement of currency as a form of injustice (Haneef & Barakat, 2002).

Contemporary Islamic finance scholars have increasingly argued for the reconsideration of gold and silver-based currencies in modern contexts (Sholeh, Faiz, & Anwar, 2022). The prohibition of riba (interest), gharar (excessive uncertainty), and maysir (speculation) in Islamic law underlines the need for monetary systems that are asset-backed, stable, and ethically governed. However, the practical limitations of reintroducing physical gold into a digitized global economy have hindered this vision's implementation.

This gap is where gold-backed cryptocurrencies (GBCs) emerge as an innovative fusion of tradition and technology. As Corbet, Lucey, and Yarovaya (2018) explain, GBCs combine the decentralized architecture of blockchain with the monetary stability of gold, offering a superior alternative to unbacked cryptocurrencies such as Bitcoin. GBCs mitigate the volatility associated with purely speculative digital assets while preserving the benefits of fast, borderless, and decentralized transactions.

Yet, academic literature on GBCs remains relatively nascent. Existing research often focuses on either the technological aspects of blockchain (Narayanan et al., 2016) or the economic role of gold as a hedge (Baur & Lucey, 2010), without deeply integrating these domains in the context of ethical monetary reform. Furthermore, few studies systematically explore the compatibility of GBCs with Islamic finance or their application in cross-border net settlement systems.

This review highlights three major gaps in the existing literature: (1) a lack of interdisciplinary models that integrate blockchain technology with asset-backed ethical monetary systems, (2) limited empirical analysis on GBCs' viability as instruments for international trade and financial settlements, and (3) insufficient exploration of Islamic finance principles in shaping digital currency frameworks. By addressing these gaps, this paper contributes to the emerging discourse on monetary innovation, particularly at the intersection of financial ethics, digital infrastructure, and global economic governance.

THEORETICAL FRAMEWORK

This study's theoretical foundation is based on an integrative approach that blends critical theory with Islamic economic and monetary traditions. This convergence enables a deeper interrogation of the philosophical, ethical, and structural dimensions underpinning modern financial systems, particularly the dominance of fiat currency. Through this interdisciplinary lens, the study proposes a gold-backed cryptocurrency (GBC) model as a systemic corrective grounded in intrinsic value, decentralization, and Islamic ethical principles.

Critical theory, as articulated by Alvesson and Deetz (2000), serves as the overarching epistemological lens. It challenges prevailing ideological constructs that reinforce neoliberal monetary governance and critiques the power structures that sustain the fiat system. In this view, money is not neutral; it is embedded in systems of control that reproduce inequality, obscure moral responsibility, and centralize economic power within elite institutions such as central banks and multinational financial entities (Held & McGrew, 2007; Harvey, 2005). Critical theorists argue that

fiat money creation—particularly through debt-based mechanisms—legitimizes artificial value creation and speculative financialization, often at the expense of real economic productivity and equitable development.

These critiques resonate with contemporary crises. The 2008 global financial collapse and the post-COVID liquidity injections exemplify how fiat systems, untethered from real value, foster systemic risk. Central banks expanded balance sheets dramatically without parallel economic output, fueling asset bubbles, intergenerational inequities, and loss of trust in monetary institutions (Stiglitz, 2016).

In contrast, Islamic monetary theory offers an alternative framework rooted in divine law, ethical justice, and real economic value. The classical Islamic view treats money as a facilitator of trade, not a commodity to be traded. Imam Abu Hamid al-Ghazali (d. 1111) emphasized that dinar and dirham—representing gold and silver—were to be used solely as standards of value and means of exchange, not hoarded or manipulated for speculative gain (Ghazali, 2004). For Ibn Taymiyyah (d. 1328), the legitimacy of currency rested on its capacity to serve justice in market transactions. He condemned practices that led to currency debasement, which he considered a form of zulm (oppression) that distorted prices and harmed the public (Ibn Taymiyyah, 1967).

This ethical heritage continues in modern Islamic economics, where scholars like Chapra (2000) and Siddiqi (2004) argue that money must be linked to tangible value to ensure stability and justice. The maqasid al-Shariah, or objectives of Islamic law, provide the ethical scaffolding: preservation of wealth (hifz al-mal), elimination of injustice, and promotion of the public good (maslahah). In this paradigm, monetary policy is not only a technical function but a moral one, accountable to both society and divine law.

The GBC model proposed here integrates these critical and Islamic principles through three interlocking conceptual pillars:

Intrinsic Value of Currency

The first pillar challenges the epistemological foundation of fiat currency, which derives value from legal decree and institutional trust rather than material backing. Fiat money's vulnerability to inflation, devaluation, and policy manipulation stands in contrast to the historical use of gold and silver in Islamic finance, which were valued for their rarity, durability, and universal acceptability (Sholeh, Faiz, & Anwar, 2022). By anchoring digital currency to physical gold, GBCs create a system where monetary expansion is inherently limited by real-world constraints. This ensures price stability and shields societies—especially in the Global South—from the externalities of dollar hegemony and currency volatility.

Islamic jurisprudence supports this asset-backed approach. Imam al-Sarakhsi (d. 1090) and al-Maqrizi (d. 1442) both emphasized the importance of sound money in avoiding inflation and protecting market integrity. The issuance of currency not backed by real assets is seen in Islamic law as a form of gharar (excessive uncertainty), which distorts market behavior and undermines social justice.

Decentralized Trust Infrastructure

The second pillar leverages blockchain as a distributed ledger technology that eliminates the need for centralized intermediaries in financial verification. Blockchain's cryptographic verification, immutability, and transparency address key criticisms of centralized financial systems, particularly the opacity and systemic fragility of fractional reserve banking (Narayanan et al., 2016).

In Islamic ethics, decentralization enhances the trust (amanah) and accountability (muhasabah) that are central to financial justice. The Qur'an explicitly endorses transparency in contracts and transactions, as seen in verse 2:282, which commands that financial obligations be recorded in writing. Blockchain technology operationalizes this divine instruction by embedding transparency and accountability into the transaction protocol itself.

This model also democratizes access to financial infrastructure. Individuals and institutions can engage in secure, peer-to-peer transactions without reliance on politically compromised or economically exclusionary banking networks. In doing so, GBCs expand financial inclusion and challenge the structural biases of existing financial hierarchies.

Ethical Governance Through Islamic Finance

The third pillar establishes a regulatory and moral framework grounded in Islamic financial ethics. It integrates smart contracts with Shariah compliance mechanisms to prevent riba (interest), maysir (speculation), and gharar (uncertainty). These prohibitions are not merely theological; they are tools for economic stability. Riba, for instance, fosters debt traps and income inequality, while speculation undermines real-sector investment.

Smart contracts allow Shariah compliance to be encoded directly into financial instruments, ensuring that transactions uphold Islamic values. This innovation also addresses the interpretational diversity within the Islamic world. A multilateral Shariah supervisory board—representing different madhahib (jurisprudential schools)—can guide the development of algorithmic filters and compliance protocols (Laldin, 2018).

Moreover, the GBC system supports broader maqasid objectives: it enhances wealth circulation (taswiyah), facilitates zakat tracking and distribution, and reduces systemic financial instability. These goals echo the prophetic mission to build a just, transparent, and welfare-oriented economy.

Together, these three pillars form a comprehensive challenge to the prevailing fiat paradigm. The GBC model not only addresses technical limitations but also reimagines money as a moral instrument—one that serves public interest, promotes economic resilience, and adheres to divine guidance. In this way, the model responds to both the emancipatory aspirations of critical theory and the ethical mandates of Islamic economics.

METHODOLOGY

This study employs a qualitative research design, grounded in a conceptual and exploratory approach. The choice of methodology is rooted in the complex,

interdisciplinary nature of the topic, which spans Islamic finance, monetary theory, blockchain technology, and regulatory frameworks. Given the scarcity of empirical precedent in this domain and the need for rich, contextual insights, qualitative methods are deemed most suitable for developing a nuanced understanding of the prospects and challenges of implementing a gold-backed cryptocurrency (GBC) for international net settlement via blockchain.Two primary data collection methods were utilized: content analysis of secondary sources and semistructured indepth interviews with domain experts. The secondary sources included peerreviewed academic journals, classical Islamic jurisprudential texts, historical monetary studies, and contemporary financial and technological reports. These sources were systematically analyzed to identify recurring themes, conceptual contradictions, and historical precedents relevant to the study.In parallel, nine expert interviews were conducted with professionals from diverse but complementary fields Islamic finance scholars, economists, fintech innovators, blockchain developers, and regulatory advisors. Participants were selected through snowball sampling, an effective technique for identifying hard-to-reach, high expertise individuals in specialized and evolving fields. This technique helped ensure that the sample included voices with both academic and applied insights.The data from these interviews were processed through thematic analysis, a robust qualitative method that identifies, analyzes, and reports patterns(themes) within the data. This allowed the researchers to capture commonalities, divergences, and emerging concerns across expert perspectives. Key themes explored included:

- Perceptions and limitations of fiat currency in current monetary systems, especial ly in the context of international settlement.
- The viability and operational challenges of implementing gold-backed cryptocurrencies as a credible monetary standard.
- Shariah compliance and jurisprudential debates, particularly concerning the natu re of money, intrinsic value, and the permissibility of digital and gold-linked currencies.
- Blockchain integration, including its role in enhancing transparency, trust, and d ecentralization in financial systems.
- Policy and regulatory implications, especially the readiness of institutions and go vernments to accommodate or resist such monetary innovations.

Moreover, the methodology reflects a conceptual framework approachthat connects the evolution of monetary systems with emerging technological tools such as blockchain and the growing interest in commoditybacked alternatives in the face of fiat currency volatility. The qualitative design thus allows the study not only to trace theoretical linkages but also to engage with realworld insights that inform the proposed framework.In sum, this methodological strategy ensures that the proposed goldbacked cryptocurrency model is grounded in both historical relevance and contemporary practicality, addressing theoretical, technological, and regulatory dimensions comprehensively.

ANALYSIS AND DISCUSSION

Weaknesses of Fiat-Based Net Settlement

Fiat currencies, which are not backed by any physical commodity, are inherently susceptible to overissuance and inflationary pressures. Central banks can expand the money supply without a corresponding increase in real economic output, leading to currency devaluation, asset bubbles, and persistent economic inequality (Smets, 2014). These issues are further exacerbated in global settlements due to the overreliance on the U.S. dollar as a reserve currency. This exposes emerging and developing economies to external monetary shocks, especially those stemming from U.S. Federal Reserve policy decisions (Arner et al., 2022).

The U.S. dollar's dominance in global trade—approximately 88% of all forex transactions involve the dollar (BIS, 2022)—creates asymmetric dependencies where monetary tightening in the United States can transmit deflationary shocks globally (Rey, 2013). This dynamic often forces central banks in developing economies to synchronize their monetary policies with the U.S. Federal Reserve to maintain currency stability, despite domestic economic misalignments.

Moreover, the fractional reserve banking system amplifies these vulnerabilities. In this model, banks are permitted to lend multiple times the amount of their actual reserves, thereby artificially inflating the money supply and increasing systemic risk. During periods of economic downturn, such practices can exacerbate the misallocation of capital and amplify financial contagion. Arner et al. (2022) argue that such systems contribute significantly to financial instability, moral hazard, and wealth inequality.

Gold-Backed Cryptocurrency: Bridging Stability and Innovation

Gold-backed cryptocurrencies (GBCs) present a compelling alternative by combining the monetary discipline of precious metals with the technological innovation of blockchain-based digital assets. Gold has historically served as a hedge against inflation and a universal store of value (Baur & McDermott, 2010). Its integration into the cryptocurrency ecosystem offers intrinsic value and stability often absent from fiat and speculative digital currencies.

The asset-backed nature of GBCs ensures that each unit of currency issued is directly tied to a verifiable quantity of physical gold, thereby curbing inflationary risk. Furthermore, these currencies may function as both a medium of exchange and a unit of account in cross-border transactions. Compared to Bitcoin—which remains volatile and speculative—GBCs offer greater regulatory acceptance and financial inclusion potential, especially for unbanked populations in the Global South (Corbet et al., 2018).

Despite these advantages, operationalizing GBCs globally faces significant logistical, governance, and geopolitical challenges. Secure physical storage of gold reserves requires an internationally trusted custodial framework, possibly involving a multilateral institution such as the Islamic Development Bank or a future GBC Council. Transparent auditing standards must be established using blockchain-based mechanisms to ensure trust. Without these governance and technical standards, global acceptance of GBCs will remain limited.

Blockchain as the Foundation for Trust and Efficiency

Blockchain technology represents a revolutionary infrastructure for global finance by enabling trustless, decentralized systems of value exchange. It eliminates the need for central clearinghouses and intermediaries, allowing real-time, immutable transaction validation (Narayanan et al., 2016).

In international settlement, blockchain can serve as a distributed ledger that records all transactions with complete transparency, enhancing compliance and auditability. As Skinner (2016) emphasizes, blockchain's "Internet of Value" potential lies in its ability to radically reduce reconciliation delays, operational inefficiencies, and intermediary costs. Financial institutions increasingly recognize these benefits, as demonstrated by projects like SWIFT gpi and JPMorgan's Onyx platform.

However, scaling such systems to a global level raises questions about computational efficiency and energy consumption. Public blockchains like Bitcoin and Ethereum face significant scalability issues, including limited transactions per second and high environmental costs. A permissioned blockchain architecture—where only vetted nodes participate in consensus—could offer better scalability and compliance, but raises questions about governance, inclusiveness, and control. Clear designation of permissioning authorities and dispute resolution mechanisms will be vital for GBC legitimacy (Zetzsche et al., 2020).

Islamic Finance Perspective and Maqasid al-Shariah

The proposed GBC framework aligns well with the ethical underpinnings of Islamic finance, particularly the prohibition of riba (interest), gharar (excessive uncertainty), and maysir (speculation). Islamic monetary theory emphasizes the use of real, asset-backed instruments, with money serving as a medium of exchange, not a commodity (Chapra, 2000). GBCs, by being linked to physical gold, fulfill these criteria and ensure a more equitable and stable currency regime.

However, the implementation of Islamic financial principles in a blockchain environment introduces novel jurisprudential challenges. One key issue is the uniformity of Shariah interpretation across jurisdictions. Variability in rulings from different Shariah boards can lead to inconsistencies in defining what constitutes a compliant smart contract or financial product (Elasrag, 2021).

Moreover, Shariah governance in smart contracts must consider dynamic compliance. Embedding rules into code—what some call "halal by design"—requires consensus among scholars and robust auditing mechanisms. The emergence of digital Shariah advisory platforms like Finterra and Amanie has begun addressing these issues, but a unified framework remains essential for cross-border adoption.

Malaysia as a Launchpad

Malaysia has consistently positioned itself as a global leader in Islamic finance, fintech innovation, and regulatory experimentation. Institutions such as Bank Negara Malaysia, the International Shariah Research Academy (ISRA), and the International Islamic University Malaysia (IIUM) offer a strong foundation for piloting ethically aligned digital finance initiatives.

The country's adoption of regulatory sandboxes and digital banking licenses demonstrates readiness to test emerging financial technologies in a controlled environment. However, the article should also consider Malaysia's potential role as a regional influencer. ASEAN's ongoing efforts to promote cross-border QR code payment interoperability and digital banking regulations could provide a platform for piloting GBC systems.

Additionally, non-Islamic countries may join such an initiative not for religious reasons, but due to pragmatic interests: diversifying reserve holdings, reducing dollar dependency, or aligning with emerging BRICS+ financial structures. The proposal would be strengthened by analyzing these alternative motivations, as seen in recent interest by Russia, China, and India in gold and crypto-based payment mechanisms (Subacchi, 2020).

Proposed Framework for Gold-Backed Cryptocurrency Net Settlement

The proposed framework is designed to operationalize a gold-backed cryptocurrency (GBC) model for international net settlement. It integrates monetary stability with digital innovation while aligning with Islamic financial ethics and modern regulatory requirements. The framework is built around five interdependent components:

1. **Reserve Mechanism**
   Tangible gold reserves are held in audited and geopolitically diversified international vaults. These reserves form the foundation of the GBC, with each token digitally representing a fixed and verifiable weight of gold. Unlike past gold standards which lacked transparency and dynamic reporting mechanisms, this model employs blockchain-based proof-of-reserves to ensure that gold holdings can be publicly verified in near real time (Zetzsche et al., 2020). A multi-jurisdictional custodial approach can mitigate risks of political capture or centralized control.
2. **Blockchain Layer**
   The GBC operates on a permissioned blockchain infrastructure governed by a consortium of vetted institutions, including central banks, Islamic finance bodies, and technology providers. This architecture ensures high throughput and transaction scalability while maintaining accountability. Permissioned ledgers offer benefits such as faster consensus algorithms and compliance with data localization laws, making them suitable for financial applications (Tsai, 2018). To preserve decentralization principles, node governance could rotate among stakeholders, with weighted voting mechanisms aligned to gold reserve contributions.
3. **Compliance Protocol**
   Embedded smart contracts enforce regulatory and Shariah compliance. These programmable rules ensure that transactions remain within the bounds of Islamic financial principles (e.g., no riba, gharar, or maysir) and relevant national regulations. Compliance modules may include automated Know-Your-Customer (KYC), Anti-Money Laundering (AML), and transaction screening tools. Shariah compliance must be supervised by a global advisory board

consisting of scholars from multiple madhahib (schools of jurisprudence) to navigate cross-border variation (Elasrag, 2021).

4. **Settlement System**
   The system enables instantaneous net settlement across jurisdictions without reliance on legacy infrastructures like SWIFT. It is built to support cross-border trade, capital transfers, and sovereign-to-sovereign exchanges. Integrating the ISO 20022 messaging standard into smart contract architecture ensures compatibility with central banks and large financial institutions (Bank for International Settlements, 2021). Additionally, a dual-layer tokenization system can differentiate between retail and wholesale users, enhancing flexibility and scalability.
5. **Regulatory Sandbox**
   A controlled, phased implementation strategy begins with deployment in Malaysia under Bank Negara Malaysia's fintech sandbox initiative. This stage facilitates empirical testing of the framework's performance, interoperability, risk management, and legal viability. Malaysia's experience in regulating Islamic digital finance makes it an ideal pilot country. Lessons from Iran's and the UAE's sandbox environments may further guide policy harmonization and technical standards (Arner et al., 2022).

The GBC framework is built for modular adaptability, allowing other jurisdictions to onboard over time through bilateral agreements or multilateral consortia. It offers a blueprint for combining ethical governance, financial inclusion, and technological efficiency in global monetary reform.

Policy Implications and Strategic Recommendations

To facilitate the adoption of gold-backed cryptocurrencies and transform global net settlement practices, a coordinated and multi-level policy approach is required. Key strategic recommendations include:

- **Central Bank Engagement**
  Central banks in Muslim-majority and emerging economies should initiate feasibility assessments for issuing gold-backed central bank digital currencies (CBDCs). Such instruments can preserve monetary sovereignty while offering compliance with Islamic legal and economic principles (BIS, 2022). Pilot projects can begin with bilateral settlement corridors, especially in the GCC or ASEAN regions.
- **Regional Monetary Alliances**
  Regional blocs such as ASEAN, the Organization of Islamic Cooperation (OIC), and the Islamic Development Bank (IsDB) should form monetary interoperability task forces. These bodies can develop common technical standards, dispute resolution mechanisms, and regulatory principles tailored to digital gold-backed currencies. A model similar to the Pan-African Payment and Settlement System (PAPSS) could serve as a reference.
- **Legal and Regulatory Infrastructure**
  National legislatures must enact comprehensive legal frameworks governing the issuance, transfer, taxation, and redemption of asset-backed tokens. Legal clarity

is essential to attract institutional investors and protect retail users. Regulatory regimes must ensure robust enforcement of AML/CFT norms, investor protection, and cyber risk management, especially concerning tokenized commodities stored in distributed vaults (Zetzsche et al., 2020).

- **Public-Private Partnerships**
  Governments should promote co-development with fintech firms, blockchain developers, Shariah scholars, and academic institutions. Innovation clusters or Islamic fintech hubs can act as incubators for prototypes. Strategic funding from public institutions or development banks (e.g., IsDB, World Bank) can accelerate R&D efforts and de-risk early adoption. Community engagement and literacy campaigns should also accompany rollout to ensure social acceptance.
- **International Coordination**
  Beyond Islamic economies, engagement with the BRICS New Development Bank and regional clearing unions may foster alternative reserve pooling mechanisms. Given the rising discourse on de-dollarization, positioning GBCs as neutral, asset-based instruments could attract broader geopolitical interest, especially in multipolar economic blocs (Subacchi, 2020).

These policy directions, taken together, build the foundation for a gradual, consensus-driven shift toward a stable, ethical, and interoperable global monetary system.

CONCLUSION

This study has proposed a transformative framework for the integration of gold-backed cryptocurrencies (GBCs) into blockchain-enabled net settlement systems, driven by a confluence of critical imperatives: the systemic fragilities of fiat-based monetary regimes, the technological potential of blockchain, and the ethical-moral vision of Islamic finance. More than a speculative reform, this framework addresses the structural, philosophical, and ethical deficits of the existing international financial architecture.

The analysis has shown that fiat currency systems, by their very nature, lack intrinsic value and are susceptible to inflationary overreach, moral hazard, and political instrumentalization—especially under the shadow of U.S. dollar hegemony. These dynamics undermine economic sovereignty and financial justice, particularly in the Global South. The paper has demonstrated how the global economy remains exposed to externally induced monetary instability, such as capital flight and devaluation shocks, with little recourse for local governments and communities. In short, the current paradigm is not only economically inefficient but also ethically untenable.

In contrast, GBCs introduce a principled alternative. By anchoring currency issuance to real, finite assets—gold—these systems offer inherent checks against monetary expansion, thereby preserving purchasing power and restoring credibility to money. Furthermore, their deployment through blockchain infrastructure enables real-time, secure, and decentralized financial settlements that bypass traditional gatekeepers such as SWIFT and Western central banks. This creates space for a new form of monetary multilateralism.

Where this study particularly distinguishes itself is in its Islamic approach, which is not merely a religious add-on but a comprehensive ethical, legal, and economic framework. The GBC model operationalizes the maqasid al-Shariah—not only in abstract but through concrete monetary mechanisms. It institutionalizes justice ('adl) by promoting value-based money; prevents exploitation (zulm) by prohibiting riba (interest), gharar (uncertainty), and maysir (speculation); and advances the public good (maslahah) through equitable access and financial inclusion. These principles are embedded not through external moral exhortation, but through the architecture of the monetary system itself: asset-backing, smart contracts, and transparent distributed ledgers.

What differentiates the Islamic approach here is its emphasis on money as amanah (trust), a moral and social responsibility that must facilitate real economic activity rather than serve as an instrument for hoarding, rent-seeking, or state manipulation. Classical scholars such as Al-Ghazali and Ibn Taymiyyah were not only critical of monetary debasement but also insisted on aligning money creation with the real economy. This study advances that tradition by applying their insights to 21st-century technologies.

Malaysia is positioned as a natural launchpad for this initiative. It combines Islamic financial leadership, regulatory agility, and fintech infrastructure. The nation's institutions—such as ISRA, IIUM, and Bank Negara Malaysia—possess the jurisprudential depth and policy sophistication needed to pilot a Shariah-compliant, blockchain-integrated gold currency. Importantly, a Malaysian-led regional initiative—perhaps beginning with ASEAN or OIC members—would not be an isolated experiment but a model for ethical monetary pluralism in a multipolar world.

The five-layered framework presented—encompassing reserve governance, blockchain architecture, Shariah-compliant smart contracts, real-time settlement systems, and regulatory sandboxing—demonstrates that the proposal is not utopian. It is both scalable and actionable, adaptable to different jurisdictions, and capable of being incrementally implemented. It offers an operational roadmap for reconfiguring monetary sovereignty in an age of digital finance.

This research argues that the integration of gold-backed cryptocurrencies governed by Islamic financial principles constitutes not just a technological evolution, but an ethical and epistemic shift in how money is conceptualized and practiced. It realigns currency with real value, decentralizes trust through verifiable protocols, and embeds moral accountability in the infrastructure of exchange. For Muslim-majority and values-oriented nations seeking to reclaim financial sovereignty and justice, this model presents a timely and necessary path forward. With visionary leadership and principled collaboration, the Islamic gold-backed digital currency could become not only an alternative, but a new standard for just and stable global finance.

REFERENCES

Alvesson, M., & Deetz, S. (2000). *Doing critical management research*. SAGE Publications.

Arner, D. W., Buckley, R. P., Zetzsche, D. A., & Sergeev, A. (2022). Financial technology and the future of banking. *Journal of International Economic Law, 25*(2), 245–276.

Arner, D. W., Buckley, R. P., Zetzsche, D. A., & Sergeev, A. (2022). The role of money in the modern economy. *Journal of Financial Regulation, 8*(1), 1–33.

Bank for International Settlements (BIS). (2021). *ISO 20022 and interoperability: Implications for central bank payment and settlement systems*. https://www.bis.org

Bank for International Settlements (BIS). (2022). *Triennial central bank survey of foreign exchange and OTC derivatives markets*. https://www.bis.org/statistics/rpfx22.htm

Baur, D. G., & Lucey, B. M. (2010). Is gold a hedge or a safe haven? An analysis of stocks, bonds and gold. *Financial Review, 45*(2), 217–229.

Baur, D. G., & McDermott, T. K. (2010). Is gold a safe haven? International evidence. *Journal of Banking & Finance, 34*(8), 1886–1898.

Bernstein, P. L. (2000). *The power of gold: The history of an obsession*. John Wiley & Sons.

Bordo, M. D. (1998). The gold standard and price stability. In M. D. Bordo & A. J. Schwartz (Eds.), *Retrospective on the classical gold standard, 1821–1931* (pp. 63–100). University of Chicago Press.

Chapra, M. U. (2000). *The future of economics: An Islamic perspective*. Islamic Foundation.

Corbet, S., Lucey, B. M., & Yarovaya, L. (2018). Cryptocurrencies as a financial asset: A review. *Finance Research Letters, 26*, 81–88.

Elasrag, H. (2021). Blockchain and Islamic finance: Opportunities and challenges. *International Journal of Islamic Business and Management, 5*(2), 15–27.

Ghazali, A. H. (2004). *Ihya' Ulum al-Din* [Revival of the Religious Sciences] (Vol. 4). Dar al-Ma'rifah.

Haneef, M. A., & Barakat, A. F. (2002). Contemporary Islamic economics: The missing dimension. *Journal of King Abdulaziz University: Islamic Economics, 14*(2), 25–45.

Harvey, D. (2005). *A brief history of neoliberalism*. Oxford University Press.

Held, D., & McGrew, A. G. (2007). *Globalization theory: Approaches and controversies*. Polity Press.

Hudson, M. (2012). *The bubble and beyond: Fictitious capital, debt deflation and the global crisis*. ISLET.

Ibn Taymiyyah, A. (1967). *Al-Hisbah fi al-Islam* [Market Regulation in Islam]. Cairo: Dar al-Kutub al-Hadithah.

Kydland, F. E., & Wynne, M. A. (2002). Alternative monetary standards and price stability. *Federal Reserve Bank of Dallas Economic Review, Q4*, 21–30.

Kydland, F. E., & Wynne, M. A. (2002). Monetary policy and the role of price stability. *Review of Economic Dynamics, 5*(4), 825–860.

Laldin, M. A. (2018). The objectives of Shariah (Maqasid al-Shariah) in Islamic finance. *ISRA International Journal of Islamic Finance, 10*(1), 1–9.

Lewis, N. (2007). *Gold: The once and future money*. Wiley.

Narayanan, A., Bonneau, J., Felten, E., Miller, A., & Goldfeder, S. (2016). *Bitcoin and cryptocurrency technologies: A comprehensive introduction*. Princeton University Press.

Reinhart, C. M., & Rogoff, K. S. (2009). *This time is different: Eight centuries of financial folly*. Princeton University Press.

Rey, H. (2013). Dilemma not trilemma: The global financial cycle and monetary policy independence. *Proceedings - Economic Policy Symposium - Jackson Hole*, Federal Reserve Bank of Kansas City, 285–333.

Sholeh, M. A. N., Faiz, M. F., & Anwar, M. M. (2022). Gold and silver in Islamic monetary thought. *Journal of Islamic Economics, Banking and Finance, 18*(2), 99–115.

Sholeh, M. A. N., Faiz, M. F., & Anwar, M. M. (2022). The permissibility of cryptocurrencies under Islamic jurisprudence: A contemporary fiqh perspective. *Journal of Islamic Monetary Economics and Finance, 8*(1), 59–76.

Siddiqi, M. N. (2004). *Riba, bank interest and the rationale of its prohibition*. Islamic Research and Training Institute.

Skinner, C. (2016). *ValueWeb: How fintech firms are using mobile and blockchain technologies to create the Internet of value*. Marshall Cavendish International.

Smets, F. (2014). Financial stability and monetary policy: How closely interlinked? *International Journal of Central Banking, 10*(1), 263–300.

Stiglitz, J. E. (2016). *The euro: How a common currency threatens the future of Europe*. W. W. Norton & Company.

Subacchi, P. (2020). *The cost of free money: How unfettered capital threatens our economic future*. Yale University Press.

Tsai, W. T. (2018). Blockchain for financial applications. *IEEE IT Professional, 20*(1), 8–12.

Zetzsche, D. A., Buckley, R. P., Arner, D. W., & Barberis, J. N. (2020). Decentralized finance. *Journal of Financial Regulation, 6*(2), 172–203.