TOP TECHNOLOGY TREND

Islamic Cryptocurrencies: X8X & OneGram as Safe-Haven Assets

By: ICMA Research and Publications Department

Introduction

Technological advances are reshaping global finance, particularly through blockchain and digital currencies. Cryptocurrencies have become a disruptive innovation, transforming financial systems, investment strategies, and asset management. Over the past decade, the global cryptocurrency market has expanded dramatically, with market capitalization exceeding USD 1 trillion in 2023, highlighting the growing role of digital assets in global finance.

However, the volatility and speculative nature of many conventional cryptocurrencies raise concerns among investors and regulators. In Islamic finance, these concerns are stronger because financial instruments must comply with Shariah principles, which prohibit interest (riba), excessive uncertainty (gharar), and speculative behavior (maysir).

To address these concerns, a new category of Shariah-compliant digital assets known as Islamic cryptocurrencies has emerged. These cryptocurrencies combine blockchain technology with asset-backed, ethical financial models aligned with Islamic finance principles. The global Islamic finance industry itself has grown to over USD 3 trillion, reflecting strong demand for Shariah-compliant instruments. Notable examples include X8X Token and OneGram, designed to provide stability, transparency, and compliance with Islamic ethics.

Islamic cryptocurrencies can also serve as safe-haven assets, especially during periods of economic instability. By integrating blockchain with real asset backing, they provide a pathway toward resilient, ethical, and technology-driven financial ecosystems.

Blockchain and Shariah-Compliant Innovation

Islamic cryptocurrencies rely on blockchain technology, a decentralized digital ledger that records transactions transparently and immutably. Blockchain enhances financial transparency, reduces reliance on intermediaries, and enables secure peer-to-peer transactions, aligning with Islamic principles emphasizing fairness, accountability, and risk sharing.

By 2023, over 420 million people worldwide owned cryptocurrency, showing blockchain's transformative potential. Unlike many conventional cryptocurrencies, which may lack intrinsic value, Islamic cryptocurrencies often incorporate asset-backed structures, tying value to tangible assets such as gold or diversified financial reserves. This reduces speculative behavior and maintains a link to the real economy.

Many Islamic cryptocurrency projects involve Shariah advisory boards that certify compliance. Through blockchain-enabled smart contracts, profits and transactions can be automated according to pre-set rules, ensuring transparency in asset management. These features strengthen investor trust and address uncertainty concerns.

Furthermore, distributed ledger technology can be applied to improve land registries, welfare transfers, and supply chain management, demonstrating practical social and economic benefits beyond finance. One of the example for regulatory framework is UAE, providing guidance for developing compliant and innovative Islamic digital asset ecosystem.

X8X Token: Stability Through Asset-Backed Design

X8X Token introduces stability through a basket-backed reserve system consisting of fiat currencies and gold. Unlike many volatile cryptocurrencies, X8X maintains value by tying its token to real assets.

An algorithm monitors reserves and adjusts token supply, creating a self-regulating ecosystem designed to maintain price stability and investor confidence. For Islamic finance, this structure addresses concerns about speculation and lack of intrinsic value.

X8X functions as a safe-haven asset, particularly during financial turbulence. Historically, assets like gold and government bonds provided this role. In global uncertainty, investors increasingly seek alternative stores of value, contributing to the growth of stable, asset-backed digital assets. For example, the stablecoin market exceeded USD 120 billion globally.

Comparison: X8X vs OneGram

Feature	X8X Token	OneGram
Backing	Diversified basket of fiat and gold	Physical gold reserves
Stability	Algorithm adjusts supply to stabilize value	Gold-backed, intrinsic value provides stability
Shariah Compliance	Certified by Shariah advisory boards	Fully Shariah-compliant, gold-backed
Safe-Haven Role	Protects against volatility, inflation, currency depreciation	Preserves wealth, safe-haven during crises
Blockchain Features	Transparent, smart contracts, self-regulating	Transparent, verifiable reserves, automated transactions
Asset Allocation Benefit	Diversifies portfolio with stable digital asset	Adds gold-backed digital alternative for Islamic portfolios

X8X combines blockchain transparency with diversified backing to hedge against inflation, currency depreciation, and market volatility.

OneGram: Gold-Backed Islamic Cryptocurrency

OneGram is one of the earliest Shariah-compliant cryptocurrencies fully backed by physical gold. Each token corresponds to a specific amount of gold held in secure vaults, ensuring intrinsic value.

Gold has historically served as a safe-haven asset, protecting wealth during economic crises and inflationary periods. According to the World Gold Council, global gold demand reached 4,700 tonnes in 2023, showing its continued relevance. By linking digital tokens to gold reserves, OneGram merges traditional safe-haven strategies with blockchain technology.

OneGram also incorporates transaction fees that are used to purchase additional gold reserves, gradually increasing the intrinsic value backing each token. Blockchain transparency allows investors to verify reserves, building confidence and reducing risk. OneGram thus offers a reliable option for Shariah-compliant portfolios.

Islamic Cryptocurrencies and Asset Allocation

Islamic cryptocurrencies introduce a new asset class in Shariah-compliant portfolios, complementing traditional assets like equities, sukuk, commodities, and real estate.

Key contributions:

- Asset-backed structures reduce speculative risk and align with Islamic principles.
- Global accessibility enables investors to participate regardless of location.
- Blockchain transparency ensures monitoring of assets and verification of underlying reserves.

As safe-haven assets, these cryptocurrencies provide protection during market instability, offering a digital alternative to traditional safe-haven investments like gold or government bonds.

Implications for Ethical Digital Finance

Islamic cryptocurrencies reflect a broader trend in ethical fintech and decentralized finance (DeFi). The DeFi sector has grown rapidly, with total value locked surpassing USD 50 billion globally.

By combining Shariah principles with blockchain, these assets foster transparency, accountability, and social responsibility. Islamic cryptocurrencies can support tokenized financial ecosystems, representing real-world assets such as property, commodities, infrastructure, and welfare programs. This can improve liquidity, accessibility, and efficiency in Islamic markets.

Their adoption may also encourage governments and financial institutions in Muslim-majority countries to explore blockchain-based payments, transparent zakat distribution, and public finance management. Examples from UAE and Japan show how global best practices can guide regulatory and operational frameworks.

Conclusion

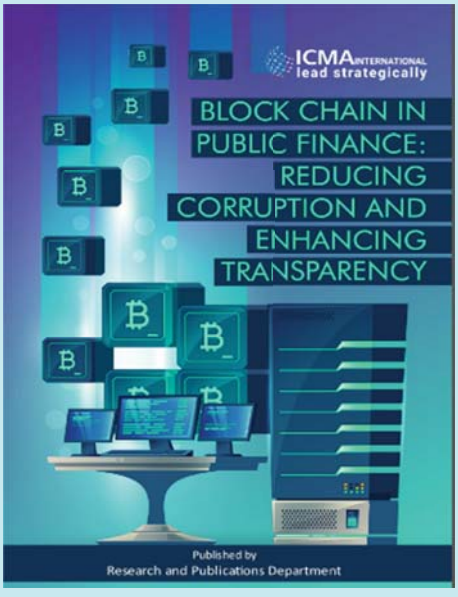
Islamic cryptocurrencies represent a technological and ethical innovation at the intersection of blockchain and Shariah finance. Projects like X8X and OneGram demonstrate that digital assets can comply with Islamic principles while addressing volatility and speculative concerns.

Through asset-backed structures, transparent blockchain systems, and ethical governance, they offer safe-haven investment options, enhance portfolio diversification, and strengthen financial inclusion.

As blockchain technology evolves, Islamic cryptocurrencies are poised to merge traditional safe-haven assets with decentralized financial systems, shaping the future of global finance.

(This article is prepared by Dr. Maiyra Ahmed, Assistant Director, R&P, under the guidance of Shahid Anwar, Senior Director R&P)

A SYNOPSIS OF BOOK ON 'BLOCKCHAIN IN PUBLIC FINANCE'



Authored by Mr. Muhammad Afzaal, FCMA, this upcoming book explains how blockchain technology can transform public financial management. It highlights key challenges such as fund leakages, inefficient procurement, and limited budget transparency, and shows how blockchain's transparency, traceability, and reliability can make public finance more accountable, efficient, and trustworthy. Using global examples and clear, engaging language, the book offers practical insights for policymakers, practitioners, and academics who want better governance and stronger public trust. The book will be launched soon. Stay tuned and be among the first to read it on the day of release.

Introduction

Public finance is the backbone of governance, guiding how governments collect revenues, allocate resources, and manage expenditures to support economic and social development. Traditional public financial management systems often face challenges such as corruption, inefficiency, limited transparency, tax evasion, and weak accountability. These issues undermine public trust and reduce the effectiveness of policy implementation. In recent years, technological innovations have emerged to address these weaknesses, and blockchain technology has emerged as one of the most promising tools for transforming public finance. Originally developed for cryptocurrencies, blockchain has evolved into a digital infrastructure that can reshape governance systems. It is a decentralized ledger that records transactions securely, transparently, and permanently. Each transaction is validated and linked chronologically, ensuring that once data is recorded, it cannot be altered without detection, creating a tamper-proof record for financial management.

Why Technological Innovation is Needed

Public finance systems around the world rely heavily on centralized databases, manual reporting, and fragmented management processes. These limitations allow manipulation, delayed reporting, and weak oversight. Audits are often conducted months or even years after transactions occur, reducing the ability of authorities to prevent misuse of funds. Revenue collection is frequently affected by tax evasion, weak compliance, and administrative inefficiencies. Governments lose substantial revenue due to underreporting, bribery, and manipulation of records. Citizens often have limited access to information about how public funds are collected and spent, creating a transparency gap that erodes trust in institutions. Blockchain offers a solution by providing a secure, automated, and transparent system for recording and verifying financial transactions, thereby strengthening oversight and efficiency.

Key Features of Blockchain

Blockchain provides several features that make it particularly suitable for public finance. Its decentralized structure allows multiple participants to maintain identical copies of the ledger, reducing reliance on a single authority and minimizing the risk of manipulation. Transparency allows authorized stakeholders, including government agencies, auditors, and in some cases citizens, to view transactions in real time, improving oversight and reducing information asymmetry. The immutability of blockchain ensures that once a transaction is recorded, it cannot be deleted or altered. Each block contains a cryptographic link to the previous block, making any attempt to modify historical data immediately detectable and creating a reliable audit trail. Smart contracts further enhance blockchain's utility by automating processes. These self-executing programs trigger transactions when predefined conditions are met, enabling faster tax collection, procurement payments, and welfare disbursements while reducing bureaucratic delays and opportunities for fraud.

Applications in Public Finance

Blockchain can improve multiple areas of public financial management, including spending transparency, process efficiency, fair procurement, and revenue collection. By recording transactions on a blockchain ledger, governments can create permanent and verifiable records of fund allocation and use. Citizens, auditors, and oversight bodies can independently verify these records, strengthening accountability and discouraging fraudulent practices. Traditional financial processes often involve multiple approvals, paperwork, and manual reconciliation, causing delays and increasing administrative costs. Blockchain automates these processes, allowing transactions such as welfare payments or intergovernmental transfers to occur automatically once conditions are met. In procurement, recording every stage of a tender on an immutable ledger prevents manipulation and ensures fairness. Blockchain also strengthens revenue collection by providing tax authorities with real-time visibility and enabling automatic calculation and deduction of taxes, improving compliance and reducing administrative burdens.

Global Examples

Several countries and international organizations have already demonstrated the practical potential of blockchain in public finance. Estonia has integrated blockchain into e-government systems to secure records such as health data, judicial information, and land registries, improving efficiency and public trust. Georgia uses blockchain to digitize land titles, reducing fraudulent claims and enhancing transparency. International organizations have also adopted blockchain solutions. The World Food Programme's Building Blocks initiative uses blockchain to deliver aid directly to beneficiaries, lowering administrative costs and preventing diversion of funds. The World Bank's Bond-i project has shown how blockchain can streamline bond issuance and settlement, demonstrating its potential in sovereign financing.

Challenges

Despite its promise, blockchain adoption faces several challenges. Regulatory uncertainty remains a major barrier, as many governments lack clear frameworks for blockchain in public administration. Technical issues such as scalability, interoperability, and integration with existing systems require significant investment and expertise. Privacy concerns must also be addressed when recording financial transactions on a transparent ledger, often necessitating permissioned systems to protect sensitive information. Energy consumption associated with certain blockchain mechanisms has raised environmental concerns, although newer models such as proof of stake are reducing this impact. These challenges highlight that blockchain should be implemented as part of broader governance reforms, not as a standalone solution.

Conclusion

Blockchain technology is a transformative tool with the potential to reshape public financial management. By providing transparent, secure, and permanent records of financial transactions, it can enhance accountability, efficiency, and trust in government institutions. Its applications in revenue management, procurement, expenditure tracking, and public service delivery demonstrate its ability to address longstanding challenges in public finance. Successful implementation requires careful planning, supportive regulatory frameworks, and integration with existing governance systems. When adopted responsibly, blockchain can play a central role in strengthening financial integrity and restoring public confidence in the management of public resources, shaping the future of public finance in the digital age.