Re-Architecting Treasury Payments to Reduce Fraud and Strengthening Public Finance Through Blockchain

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The <u>Problem</u>: Fraud, Improper Payments, and an Aging Treasury Payments Stack -

Distributed ledger technology - commonly referred to as blockchain - is rapidly reshaping how payments, recordkeeping, and financial controls operate across the private sector and increasingly at the state-government level. Yet federal payment systems remain largely anchored to legacy infrastructure, even as the financial sector is undergoing extraordinary transformation.

Against this backdrop, fraud and improper payments remain a persistent and costly challenge for the U.S. Department of the Treasury (Treasury). Each year, hundreds of billions of dollars - and cumulatively trillions over time - are lost due to payment errors, fraud, and weak controls across federal programs. These losses undermine public trust, strain federal finances, and divert resources from their intended beneficiaries.

While oversight and enforcement efforts continue, the underlying architecture of federal government payments has not kept pace with the scale, complexity, and conditionality of modern public programs. Treasury continues to be stuck with systems designed for batch processing, limited transparency, and post-hoc reconciliation. These systems are resilient and trusted, but they are increasingly expensive to maintain and difficult to adapt to today's modern and evolving financial landscape.

Reducing fraud and improper payments at scale will ultimately require not only better oversight, but a rethinking of how federal funds move, are conditioned, and are tracked across levels of government.

A <u>Strategic Opportunity</u>: Supplementing Existing Rails with Blockchain -

A measured but meaningful step forward is the **<u>piloting</u> of blockchain-based payment rails and digital representations of money for federal government payments**, as a supplement to existing Treasury infrastructure such as ACH and Fedwire.

The purpose of this effort is directly tied to the government's longstanding challenges with fraud and improper payments. By testing payment flows using blockchain technology, Treasury can assess how blockchain-based mechanisms can strengthen controls, improve visibility, better align with conditional fund release and compliance requirements, and reduce payments made to ineligible or incorrect recipients – all while improving government accountability across federal programs.

The objective is not replacement, nor disruption of systems that work. Rather, it is to introduce, on a limited basis, payment flows using a technology that is fundamentally transforming how payments move. The Bureau of the Fiscal Service, as the federal government's payment agent of the Treasury, is uniquely positioned to lead this blockchain pilot.

Why Now: Momentum, Funding, and Institutional Alignment -

Several factors make this an opportune moment for Treasury to act:

- Permanent and Indefinite (P&I) appropriations already support Treasury payment systems, enabling experimentation without new authorizing legislation.
- State governments are actively experimenting with blockchain and digital payment technologies, creating momentum - and potential fragmentation - that Treasury will need to interface with.
- There is senior leadership interest within Treasury and the Trump Administration in modernizing public finance and strengthening financial infrastructure.
- The private sector is rapidly transforming payments, settlement, and custody, increasing the risk that federal systems lag behind evolving market standards.

Rather than waiting for technology adoption to force reactive policy responses, Treasury has an opportunity to engage proactively, shape standards, and build institutional understanding through hands-on experience.

Scope and Design Principles: Initial Use Cases -

The proposed approach is intentionally narrow and conservative. The idea is to begin with **select, well-defined federal payment use-cases** - such as disaster relief payments, Social Security payments, or other federal benefit and grant disbursements - that can be delivered to digital wallets under existing program authorities and controls.

This approach assumes a private, permissioned blockchain network, where Treasury defines governance, access, and controls, and where participation is limited to vetted public and regulated private entities. This network would operate inside the regulated banking system and be subject to guardrails.

Modernization Pressure: TWAI and the Cost of Inaction -

Treasury's Treasury Web Application Infrastructure (TWAI), operated by the Federal Reserve as Fiscal Agent, remains foundational to federal payments. At the same time, it is widely recognized as outdated, associated with large operating costs, limited functionality and increasingly difficult to modernize. Critically, TWAI has a near impossible path toward transition to the most transformative financial innovation of the past decades: distributed ledger technology.

Maintaining TWAI indefinitely without parallel experimentation risks:

- Continued large operating costs
- Continued opacity in payment workflows
- Missed opportunities to improve controls along with transparency
- Reduced institutional readiness for identity solutions that will ensure a payment goes to its intended recipient

A limited, parallel distributed ledger-based rail offers Treasury a way to learn by doing, without destabilizing mission-critical systems.

Federal-State Fund Flows and the Relevance of CMIA -

Each year, the federal government transfers trillions of dollars to state governments, which serve as the frontline administrators of public programs including social security, unemployment insurance and federally funded grant programs.

These transfers are governed by statutory and programmatic requirements, Treasury certification, and, for grant transfer to states, the Cash Management Improvement Act (CMIA) which seeks to align the timing of federal fund transfers with actual cash needs.

While CMIA significantly improved intergovernmental cash management, practical challenges remain, particularly around transparency into compliance preconditions, fund availability, and recipient eligibility. These challenges contribute to payments being delayed, misdirected, or made to the wrong recipients.

A pilot conducted under the rubric of the CMIA and its implementing regulation would allow Treasury to test ledger-based fund flows while engaging states, agencies, and the public on how existing regulations governing federal–state transfers could evolve to incorporate blockchain and digital asset–enabled payment mechanisms to tackle these problems.

## Public–Private Partnership Model -

Treasury need not, and should not, build this infrastructure alone. At the federal level, the Bureau of the Fiscal Service can encourage new partnership models, allowing:

- Regulated banks to serve as token issuers and digital payment intermediaries
- Collaboration with non-deposit-taking payment processors and fintechs
- Treasury to retain governance, oversight, and control

At the state level, governments can competitively contract for:

- User-facing payment applications
- Identity verification and eligibility tools
- Integration with existing state systems

Government Blockchain-Based Payment Flow

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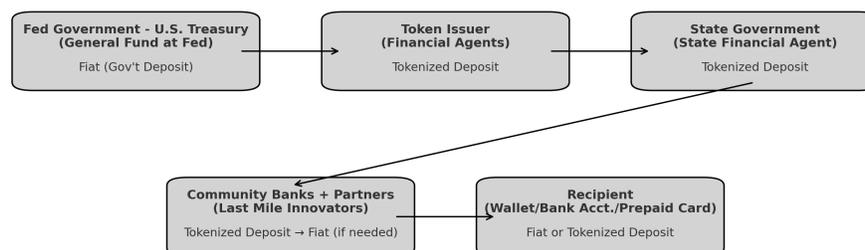
Under this distributed model, applications would run atop federal government-controlled blockchain infrastructure, preserving federal standards while enabling localized innovation.

Role of States: Frontline Administrators and User Experience Owners -

States are closest to citizens and best positioned to design privacy-preserving digital identification solutions and fraud-reduction tools at the point of interaction with recipients.

Under federal standards, states can focus on front-end delivery, while Treasury maintains control over the underlying payment rail and national privacy-preserving digital ID standards. This division of responsibility aligns authority with capability and encourages innovation without fragmenting core infrastructure.

Digital Identity -

Effective payment reform depends on knowing who is being paid. Any integration of digital identity should be:

- Privacy-preserving
- Anchored in existing state authority
- Designed to support eligibility and anti-fraud controls
- Avoid centralized data concentration

The Case for a Pilot: Learning, Calibration, and Institutional Readiness -

The core objective of this pilot proposal is learning. A limited, well-governed pilot would allow Treasury, regulators, and partner agencies to:

- Observe distributed ledger-based payment workflows in practice
- Identify real-life operational and compliance risks
- Calibrate supervisory expectations based on evidence
- Educate policymakers and officials on a technology that is rapidly reshaping finance

Blockchain and digital asset technologies are no longer theoretical. They are being adopted across the private sector and increasingly by state governments. Treasury cannot ignore this evolution.

A carefully designed pilot offers a way to build institutional understanding, inform future rulemaking, and maintain Treasury's leadership role in public finance, while managing risk and preserving the integrity of existing systems.