



DIGITAL CURRENCY MONETARY AUTHORITY

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MONETARY SYSTEM REFERENCE MODEL

MSRM-7

REQUEST FOR EVALUATION OF NEW STANDARDS WORK

MSRM-7 Reference Model and Supporting MSRM-7 Reference Model Technical Specifications

Prepared in direct response to the national standards need identified by
GENIUS Act § 12 and OCC Question 208

SUBMITTED FOR INITIAL ANSI / ASC X9 REVIEW

Working Draft • August 2026

Technology-neutral • Institutionally grounded • Functionally interoperable

August 2026

American National Standards Institute (ANSI)
ANSI ISO Team

Copy: Accredited Standards Committee X9, Inc. (ASC X9)
U.S. Technical Advisory Group to ISO/TC 68 - Financial Services
ISO/TC 68 Secretariat

RE: Request for Evaluation of New Standards Work - MSRM-7 Monetary System Reference Model and Supporting Technical Specifications

Dear ANSI and ASC X9 Standards Leadership:

The Digital Currency Monetary Authority (DCMA) respectfully requests evaluation of proposed new standards work for the Monetary System Reference Model (MSRM-7) and supporting MSRM-7 Reference Model Technical Specifications. The proposed work would establish a technology-neutral monetary-system reference architecture capable of consistently defining, comparing, implementing, and supporting interoperability among different institutional classes of money and the monetary systems through which they operate.

This inquiry is timely and directly responsive to a national standards need now recognized in United States law and federal rulemaking. Section 12 of the Guiding and Establishing National Innovation for U.S. Stablecoins Act (GENIUS Act), enacted July 18, 2025, directs the primary Federal payment stablecoin regulators, in consultation with the National Institute of Standards and Technology (NIST), other relevant standard-setting organizations, and State bank and credit union regulators, to assess and, if necessary, prescribe standards promoting compatibility and interoperability among permitted payment stablecoin issuers and the broader digital finance ecosystem.

The Office of the Comptroller of the Currency (OCC), Department of the Treasury, subsequently issued its March 2, 2026 proposed GENIUS Act regulations. Question 208 specifically requested input concerning what regulators should consider in determining whether standards are necessary and whether promulgation of standards would broaden stablecoin adoption. Although that comment period has closed, the underlying statutory standards mandate remains. DCMA submits this inquiry to the U.S. voluntary-consensus standards community as a concrete standards-development response to that need.

MSRM-7 is not proposed as a stablecoin product standard and is not limited to a particular blockchain, token, communications protocol, or digital-asset technology. It is proposed as a monetary-system reference model: a common institutional and functional architecture within which stablecoins and other forms of digital monetary value can be defined and implemented consistently while preserving the distinct authority, governance, denomination, issuance, credit, market, and settlement characteristics applicable to each form of money.

DCMA therefore requests that ANSI and ASC X9 evaluate MSRM-7 and its supporting technical specifications as proposed new standards work, identify the appropriate U.S. standards-development pathway, and advise DCMA regarding initiation of the applicable standards-development process, including the appropriate pathway for U.S.-originated international standardization through ISO/TC 68 where warranted.

The enclosed concept paper summarizes the standards need, the proposed reference architecture, the relationship to GENIUS Act § 12 and OCC Question 208, and the requested scope of work. DCMA welcomes the opportunity to present MSRM-7 to the appropriate ANSI/X9 technical leadership and to participate in the consensus standards-development process.

Respectfully submitted,



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1. EXECUTIVE PURPOSE

MSRM-7 addresses a standards problem that is becoming more consequential as monetary systems evolve beyond an environment principally organized around Sovereign Money and Commercial Bank Private Money. Stablecoins and other forms of Institutional Private Money increasingly participate in payments, markets, financing, treasury operations, and settlement. Similar technologies can represent fundamentally different forms of money, institutional authority, rights, obligations, reserve arrangements, credit capabilities, and settlement functions.

The proposed standardization work establishes a common monetary-system reference architecture through two complementary dimensions. The first identifies the institutional class of money and the authority under which it exists. The second identifies the monetary functions through which that money operates. Together, these dimensions allow monetary systems to be described consistently without treating technological representation as the source of monetary character.

The proposed work consists of the MSRM-7 Reference Model and supporting MSRM-7 Reference Model Technical Specifications. The Reference Model establishes the common architecture. The supporting technical specifications define standardized requirements, data elements, determinations, states, controls, evidence, interfaces, and other technical requirements necessary to implement the Reference Model consistently in applicable monetary and financial infrastructures.

2. NATIONAL STANDARDS CATALYST: GENIUS ACT § 12 AND OCC QUESTION 208

GENIUS Act § 12 creates an explicit federal standards mandate. It directs the primary Federal payment stablecoin regulators, in consultation with NIST, other relevant standard-setting organizations, and State bank and credit union regulators, to assess and, if necessary, prescribe standards for permitted payment stablecoin issuers to promote compatibility and interoperability with other permitted payment stablecoin issuers and with the broader digital finance ecosystem, including accepted communications protocols and permissioned or public blockchains.

OCC Question 208 operationalized that statutory issue in the March 2026 proposed rulemaking by asking what regulators should consider in determining whether standards are necessary and whether promulgation of standards would broaden stablecoin adoption. This inquiry demonstrates that the standards question is not confined to protocol connectivity. Effective interoperability also requires a common way to describe the monetary functions, authority, states, controls, and conditions represented by interoperating systems.

Two systems can exchange technically valid messages while assigning materially different meanings to issuance, reserve sufficiency, redemption, monetary denomination, credit, liquidity, or settlement finality. A common communications protocol therefore does not by itself establish monetary interoperability. MSRM-7 is intended to provide the higher-level monetary reference architecture within which technical interoperability standards can operate consistently.

3. PROPOSED MSRM-7 REFERENCE MODEL

3.1 Institutional Classes of Money

MSRM-7 classifies money according to the institutional authority under which it is issued, reflecting distinctions recognized within the U.S. legal and regulatory framework:

Institutional Class	Definition
Sovereign Money	Money issued under sovereign monetary authority.
Commercial Bank Private Money	Money issued by commercial banks under sovereign banking authority and regulation.
Institutional Private Money	Money issued under private institutional authority by an authorized monetary or financial issuer.

The classification is representation-invariant. Physical, electronic, tokenized, distributed-ledger, account-based, or future representations do not by themselves determine the institutional class of money.

3.2 Seven Functional Domains

MSRM-7 defines seven common monetary-system functions applicable across the institutional classes:

Function	Decisive Question
Authority	Under whose institutional authority does the money and monetary activity exist?
Governance	Under what rules, controls, permissions, and oversight may its monetary capabilities be exercised?
Denomination	What monetary value does it represent, how is that value expressed, and what is the money recognized to do?
Issuance	How is the money created, issued, circulated, redeemed, withdrawn, and extinguished?
Credit	What financing capabilities does the monetary system provide, and under what authority?
Market	How is the money acquired, exchanged, valued, traded, and provided with liquidity?
Settlement	How does the money transfer value, interact with other forms of money, and discharge monetary obligations?

The functions are distinct but interoperating domains. They are not required to operate as a single sequential pipeline. A monetary instrument or system can be characterized through the functions applicable to it, while a law, regulation, policy, or technical requirement can apply to one or multiple domains.

4. SUPPORTING MSRM-7 REFERENCE MODEL TECHNICAL SPECIFICATIONS

The Reference Model establishes a common monetary architecture. Supporting MSRM-7 Reference Model Technical Specifications would provide the technical means by which requirements within that architecture are expressed consistently and, where appropriate, made machine-readable, auditable, interoperable, and capable of conformity assessment.

Depending upon the subject matter standardized through the consensus process, the supporting technical specifications may define common data elements, monetary states, authoritative determinations, event classifications, qualification requirements, controls, evidence requirements, interfaces, state transitions, interoperability conditions, or other implementation requirements associated with one or more MSRM-7 functional domains.

The supporting specifications are not proposed as substitutes for law, regulation, monetary policy, or institutional authority. Rather, applicable legal, regulatory, policy, and institutional requirements can be expressed through a consistent reference architecture so that different compliant systems can implement and evidence those requirements without requiring a common vendor, ledger, blockchain, database, or software platform.

Applicable Law / Regulation / Monetary Policy / Institutional Requirement
MSRM-7 Reference Model Functional Classification
Applicable MSRM-7 Reference Model Technical Specification
Consistent Monetary-System Implementation, Evidence, and Interoperability

5. WHY A MONETARY REFERENCE MODEL IS RELEVANT TO INTEROPERABILITY

Interoperability among digital monetary systems is not solely a problem of message formats, network connectivity, APIs, or blockchain compatibility. Monetary interoperability requires systems to preserve and correctly interpret the institutional and functional meaning of the monetary value being created, transferred, exchanged, redeemed, or used in settlement.

For example, a permitted payment stablecoin may reference the U.S. dollar while remaining a separately issued monetary instrument with its own issuer authority, governance requirements, reserve and redemption conditions, market characteristics, and settlement eligibility. A common reference model allows those characteristics to remain explicit when the instrument interacts with banks, payment systems, digital-asset service providers, financial-market infrastructures, or other stablecoin issuers.

MSRM-7 therefore complements, rather than replaces, protocol and messaging standards. It provides the monetary-system context needed to determine what a technically interoperable transaction means and whether the relevant monetary functions are authorized, governed, and operationally compatible.

6. PROPOSED STANDARDIZATION SCOPE

DCMA proposes that the standards work establish the MSRM-7 Monetary System Reference Model and supporting MSRM-7 Reference Model Technical Specifications sufficient to support consistent implementation of the Reference Model. The precise structure, normative content, work allocation, and publication form should be determined through the applicable ANSI-accredited consensus process.

At a minimum, the Reference Model should provide a common framework for: (1) institutional classification of money; (2) the seven monetary-system functional domains; (3) characterization of monetary capabilities and limitations through the common functional architecture; (4) preservation of institutional and sovereign

distinctions while supporting interoperability; and (5) a common basis for supporting technical specifications applicable to monetary-system implementation.

The proposed work should remain technology-neutral and should not prescribe a particular blockchain, distributed ledger, database, messaging network, smart-contract platform, or commercial implementation.

7. REQUESTED ANSI / ASC X9 ACTION

DCMA respectfully requests that ANSI and ASC X9:

- evaluate MSRM-7 and the supporting MSRM-7 Reference Model Technical Specifications as proposed new standards work within the U.S. financial-services standards framework;
- identify the appropriate ANSI-accredited technical pathway for initiation and development of the proposed work;
- advise regarding the appropriate pathway for U.S.-originated international standardization through ISO/TC 68, where appropriate; and
- invite DCMA to present the proposal to the appropriate technical leadership and participate in the applicable consensus standards-development process.

8. EXPECTED PUBLIC AND INDUSTRY VALUE

A common monetary-system reference model can help regulators, financial institutions, payment stablecoin issuers, technology providers, market infrastructures, standards developers, and other stakeholders reason about digital money using consistent institutional and functional concepts. It can also provide a durable standards architecture as new forms of private and digital money develop capabilities that cross payments, credit, markets, treasury functions, and settlement.

For GENIUS Act implementation specifically, MSRM-7 can provide a common architecture for expressing interoperability-relevant requirements without converting a technology-specific implementation into the definition of monetary compliance. More broadly, the same reference model can support consistent monetary-system design and interoperability across sovereign, commercial-bank, and authorized institutional private money.

9. ABOUT DCMA

The Digital Currency Monetary Authority (DCMA), Washington, D.C., develops monetary-system research, reference architectures, and technical specifications concerning digital monetary systems and emerging forms of money. DCMA developed MSRM-7 as a technology-neutral framework for classifying monetary authority and monetary-system functions across Sovereign Money, Commercial Bank Private Money, and Institutional Private Money.

DCMA is prepared to provide the full MSRM-7 technical proposal, reference figures, supporting definitions, and draft technical specification materials to the appropriate ANSI/X9 technical body upon request.

10. ABOUT DARRELL HUBBARD

Darrell Hubbard brings substantial prior experience in the development of national and international technical standards. During his tenure at ATT Bell Laboratories in Holmdel, New Jersey, in the 1990s, Mr. Hubbard participated in standards activities involving the **National Institute of Standards and Technology (NIST)**, served as a **United States Expert through the American National Standards Institute (ANSI)**, and held a **Chairperson role within the International Organization for Standardization (ISO)**. His experience therefore

includes direct participation in the U.S. and international consensus standards-development processes through which emerging technologies are translated into formal technical standards.

Over the past twelve years, Mr. Hubbard's work has increasingly focused on digital currency, monetary-system architecture, and financial technology. During this period, he has engaged with central banks, monetary authorities, governmental institutions, and international organizations concerning digital currency research and development, including engagements involving the **European Commission, People's Bank of China, Monetary Authority of Singapore, and United States Department of the Treasury.**

His digital-currency and financial-technology work has received international recognition, including exposure through the **European Commission** and **World Economic Forum**, as well as innovation awards announced in connection with **Hong Kong Blockchain Week**. His work now combines this digital monetary-system experience with his earlier background in formal national and international standardization.

Mr. Hubbard is the principal architect of the **Monetary System Reference Model (MSRM-7)** and its supporting technical specifications. MSRM-7 reflects the convergence of these two areas of experience: monetary-system research and the development of consensus-based technical standards.

Should ANSI and ASC X9 determine that the proposed MSRM-7 standards work warrants advancement, Mr. Hubbard is prepared to participate actively in the applicable standards-development process and offers his availability to serve in a technical leadership capacity, including as Chair of a new committee or working group should ANSI/X9 determine that such a body is appropriate.

11. SOURCE AUTHORITIES

1. Guiding and Establishing National Innovation for U.S. Stablecoins Act (GENIUS Act), Pub. L. 119-27, § 12, Interoperability Standards.
2. Office of the Comptroller of the Currency, Proposed Rule, Implementing the Guiding and Establishing National Innovation for U.S. Stablecoins Act for the Issuance of Stablecoins by Entities Subject to the Jurisdiction of the Office of the Comptroller of the Currency, 91 Fed. Reg. 10202 (Mar. 2, 2026), Question 208.
3. Accredited Standards Committee X9, Program of Work, describing the X9 U.S. TAG to ISO/TC 68 - Financial Services and the TAG's role in representing the United States and advancing requests for new work items.