

FINANCIAL STABILITY IN CRYPTO-ASSETS

By decentralizing ownership and control of financial and material assets and streamlining payments, crypto-assets¹ are potentially one of the most transformative financial innovations in history. However, financial innovation without proper oversight and regulation increases consumer and institutional risks, potentially threatening financial stability by introducing systemic vulnerabilities into the financial ecosystem.

What Is Financial Stability, and How Might Crypto-Assets Pose a Threat?

The Financial Stability Oversight Council (FSOC) defines financial stability as a financial system being resilient to events or conditions that could impair its ability to support financial market and economic activity, such as by intermediating financial transactions, facilitating payments, allocating resources, and managing risks.² Financial markets tend to be cyclical with a repeated pattern of speculative excess, making them prone to financial vulnerabilities. The collapse of the housing market in 2008 thrust the identification of and pre-emptive action to address risks to financial stability to the fore of regulatory reform. Specifically, in 2010 the Dodd-Frank Act enhanced financial stability risk monitoring by creating new entities tasked with identifying emerging vulnerabilities to financial stability and set forth a substantial number of new regulations to help improve the resilience of the financial system.

Cryptocurrency and other crypto-assets emerged as an alternative financial paradigm in the wake of the 2008–2009 financial crisis, during which the centralized financial system and major financial institutions enabled opaque financial products to propagate systemic vulnerabilities. Crypto-assets have introduced a paradigm change by shifting both control and responsibility of financial transactions from institutions to individuals. However, in doing so, this increases the potential risks to consumers, who have traditionally relied on financial institutions and the accompanying protection and deposit insurance from financial regulators. Because the crypto-assets market minimizes the role of centralized intermediaries in financial oversight, traditional approaches to regulatory controls such as asset risk disclosures and liquidity minimums do not translate well. Furthermore, low barriers of entry for new products and services and the ability to move money faster than ever before mean that real-time monitoring of risks is critical.

Why Is Financial Stability With Crypto-Assets Important?

Crypto-asset innovations call for global and local coordination among regulatory bodies to maintain financial stability, oversight, and regulation, which is especially complicated given crypto-assets' novel structures. Recognizing that the continued growth of crypto-asset decentralized products and services could introduce new financial stability risks, the G-20's September 2023 Joint Communique endorsed the International Monetary Fund Financial Stability Board's (IMF-FSB's) recommendations and standards for the proper regulation and oversight of crypto-assets activities and markets.³ The foremost principle of the IMF-FSB's recommendations is "same activity, same risk, same regulation." The IMF-FSB collective recommendations, which include high-level macro-financial policies and financial stability regulation, are authorities in the United States that span across multiple regulatory bodies. We believe that focusing on developing activities-based regulatory controls, though not exclusively, specific for crypto-assets best embraces the IMF-FSB's principle and would suit a decentralized ecosystem of crypto-asset specialized single service providers. U.S. regulatory design approaches for crypto-assets need to be adaptable and real time as crypto-assets introduce new services that deepen integration with traditional finance systems.



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MITRE's mission-driven teams are dedicated to solving problems for a safer world. Through our public-private partnerships and federally funded R&D centers, we work across government and in partnership with industry to tackle challenges to the safety, stability, and well-being of our nation.

What Are the Opportunities?

Enact activities-based regulation. Activities-based regulation⁴ should foster financial innovation through ensuring an open competition among financial technology companies, thus reducing the cost of financial services while maintaining a timely, consistent risk management standard. An example of this type of activities-based regulation could be specific requirements on stablecoin issuers' reserves.

Anticipate how vulnerabilities might arise through scenario modeling. Stress testing financial stability models through scenario analysis can help develop early warning indicators that allow regulators to act quickly to prevent localized financial instability from threatening the broader ecosystem. Again, the development of these models can be adopted by those currently utilized to model traditional financial sector stability.

Update and enhance financial risk controls. There is robust literature on traditional financial market stability from the Federal Reserve, the FSOC, the Office of Financial Research, and other U.S. financial regulators, which can serve as a foundation for updating financial controls for the crypto-assets market. However, current policies and controls will need to be modernized to reflect the nature of crypto-assets, and new ones will need to be developed to account for unique vulnerabilities.

Preserve the USD's pre-eminence in global transactions. In embracing well-regulated dollar stablecoins, the United States has an opportunity to asymmetrically challenge other countries' Central Bank Digital Currency initiatives, furthering the global reach and primacy of the USD.

What Are the Challenges?

Limited understanding of the relationship between crypto-assets and the traditional system and few real-world examples. USDC's temporary depegging, a dislocation from the stable \$1.00 value, during the Silicon Valley Bank bankruptcy, highlighted how the failure of a traditional market custodial could degrade the stability of a stablecoin. Regulation on real-time disclosure of assets should inspire more confidence in consumers that their assets are stable, secure, and available.

Inconsistent and limited data access. Although decentralized financial transactions are recorded on a publicly accessible digital ledger, the trading of crypto-assets in centralized exchanges remains opaque, similar to how stock trading traditionally has operated. This opacity limits the ability to achieve a holistic view of potential vulnerabilities.

Little research within the field. Research into the interactions between traditional finance and decentralized finance is limited. A holistic, systems engineering understanding of how these markets interact is critical to instilling confidence.

Priority Policy Questions

- How can financial regulators better understand the risk of crypto-assets through clearly assessing their relationship to the traditional system? How can we identify the greatest risks so that we can invest in the research and development needed to mitigate those risks?
- What are the immediate and medium-term applied research priorities in crypto-assets?
- How do we make the trading of crypto-assets in both decentralized and centralized exchanges more transparent?

MITRE's Experience and Products

Over the past several years, MITRE has provided unbiased, trusted advice to multiple federal agencies and U.S. policymakers who seek to better understand rapidly changing technology developments across the full spectrum of digital assets, from cryptocurrencies, stablecoins, Central Bank Digital Currencies, and non-fungible tokens. Several of our recent publications include:

- Stablecoin Regulatory Design: A Logic Model-Based Approach to Drive Public-Private Collaboration, <https://www.mitre.org/news-insights/publication/stablecoin-regulatory-design-logic-model-based-approach>
- Securing Web3 and Winning the Battle for the Future of the Internet, <https://www.mitre.org/news-insights/publication/securing-web3-and-winning-battle-future-internet>
- MITRE's Response to the OSTP RFI Supporting a National Digital Assets R&D Agenda, <https://www.mitre.org/news-insights/publication/mitre-ostp-supporting-national-digital-assets-rd-agenda>

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¹ The Financial Stability Oversight Council defines crypto-assets as "private sector digital assets that depend primarily on cryptography and distributed ledger or similar technology." <https://home.treasury.gov/system/files/261/FSOC-Digital-Assets-Report-2022.pdf>

² <https://www.federalregister.gov/documents/2023/04/28/2023-08969/analytic-framework-for-financial-stability-risk-identification-assessment-and-response>

³ <https://www.fsb.org/2023/09/imf-fsb-synthesis-paper-policies-for-crypto-assets/>

⁴ Activity-based regulation aims to establish controls for specific financial activities such as lending, borrowing, investing, settlement, clearing, deposit taking, and insurance that are more granular than controls applied to an entity's overall financial capitalization and balance sheet. See also: 12 U.S.C. §§ 5322(a)(2)(K). capitalization and balance sheet. See also: 12 U.S.C. §§ 5322(a)(2)(K).