Chapter 46. Blockchain Technology and the Investment Management Industry

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Chapter 46

Blockchain Technology and the Investment Management Industry

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§ 46:1 Introduction
§ 46:1.1 Overview
§ 46:1.2 General Description of Blockchain Technology, Blockchains, and Digital Assets
[A] What Is Blockchain Technology?
[A][1] Hashing
[A][2] Asymmetric Keys
[A][3] Peer-to-Peer Networks
[A][4] Merkle Trees

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[B] What Is a Blockchain Network?
[C] What Are Digital Assets, Virtual Currencies, and Tokens?
[C][1] "Tokens"
[C][2] Technology Companies: Supporting the Financial Services Industry
[C][3] "Digital Asset Security"
[C][4] "Virtual Currency" and Cryptocurrency
[C][4][a] Commodity Futures Trading Commission
[C][4][b] Internal Revenue Service
[C][4][c] U.S. Securities and Exchange Commission and the Financial Action Task Force
[C][5] "Central Bank Digital Currency"
§ 46:1.3 Smart Contracts
§ 46:2 Use of Blockchain Technology in the Asset Management Business
§ 46:2.1 Transfer Agency
[A] Background
[B] What Entities Must Register As Transfer Agents?
[C] What Are the SEC Registration Requirements for a Transfer Agent?
[D] Do States Regulate Transfer Agents?
[E] What Additional Functions Do Registered Transfer Agents Perform for Registered Funds?
[F] DLT and the Transfer Agent Role
[F][1] Generally
[F][2] Use of Transfer Agents by Tokenized Fund Products—Key Takeaways
[F][2][a] Opening Accounts and Wallets and Transacting Using DLT
[F][2][b] Identifying the "Official" Transfer Record
[F][2][c] Blockchain "Instructions"
[F][2][d] Who Pays for "Gas"?
[G] Why Are Transfer Agents Not Using DLT More Fully?
[G][1] Existing Federal Regulation
[G][2] State Regulation
[G][3] Inability to Automate Certain Roles
[G][4] Technology and Education Gap
§ 46:2.2 Custody
[A] Custody Under the Investment Advisers Act
[A][1] Qualified Custodian
[A][2] Adviser (or Its Affiliate) As a Qualified Custodian
[A][3] Exceptions to the Custody Rule
[B] Custody Under the Investment Company Act
[B][1] Bank Custody
[B][2] Securities Depository Custodian
[B][3] Self-Custody Under Certain Conditions

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[B][4] Custody with a Member of a National Securities Exchange
[B][5] Custody Outside the United States or a Foreign Securities Depository
[C] Custody Under the Exchange Act
[C][1] Physical Possession or Control of Securities
[C][2] Control of Securities
[C][3] Other Requirements
[C][4] Exemptions and Extensions
[C][5] Delivery
[D] Special Purpose Broker-Dealers (Historical Statement)
[E] Digital Securities and Related Custody Issues
[E][1] Definitional Issues
[E][2] Operational Issues
§ 46:2.3 Clearance and Settlement on a Blockchain
[A] Clearance and Settlement of Securities on a Blockchain
[A][1] Clearance and Settlement of Publicly Traded Securities on a Blockchain
[A][2] Clearance and Settlement of Private Securities on a Blockchain
[B] Netting and Settlement of FX Forward Contracts on a Blockchain
§ 46:2.4 Other Investment Management Functions and Operations
[A] Proxy Voting
[B] Indexing
[C] AML/KYC
§ 46:3 Digital Assets As an Asset Class
§ 46:3.1 Digital Assets Under the Commodity Exchange Act
[A] Commodities and Commodity Interests
[B] Virtual Currencies and Other Digital Assets As Commodities
[C] Commodity Interests Involving Virtual Currencies
[C][1] Virtual Currency Futures Contracts
[C][2] Swaps and Options
[C][3] Retail Commodity Transactions for Digital Assets Such As Virtual Currencies
[C][4] Transactions Involving Crypto Assets That May Be Characterized As Commodity Interests
[D] Implications of Investing in Digital Assets That Qualify As Commodity Interests
[D][1] Commodity Pools, Commodity Pool Operators, and Commodity Trading Advisors
[D][2] Registered Investment Companies
[D][3] Private Investment Funds
[D][4] Investment Advisers

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§ 46:3.2 Digital Assets As Securities
[A] The DAO Report
[B] Post-DAO Report and the SEC/CFTC Framework for Digital Assets
[B][1] SEC Enforcement Actions
[B][2] SEC/CFTC Framework for Digital Assets
[C] SEC Staff No-Action Relief for Digital Assets
[C][1] TurnKey Jet, Inc. No-Action Letter
[C][2] Pocketful of Quarters, Inc. No-Action Letter
[C][3] IMVU Inc. No-Action Letter
[C][4] DoubleZero No-Action Letter
[C][5] Fuse Crypto Limited No-Action Letter
[C][6] MegPrime Holding LLC No-Action Letter
[D] Regulation A+ Offerings of Digital Assets
[E] Federal Digital Asset Legislation, Market-Structure Bills, and Executive Orders
[E][1] Earlier Proposed but Unenacted Federal Legislation
[E][1][a] Eliminate Barriers to Innovation Act of 2021
[E][1][b] Crypto-Currency Act of 2020
[E][1][c] Token Taxonomy Act of 2019
[E][1][d] Financial Innovation and Technology for the 21st Century Act
[E][1][e] Lummis-Gillibrand Responsible Financial Innovation Act
[E][2] Enacted Federal Legislation
[E][2][a] The GENIUS Act
[E][3] Pending Federal Legislation
[E][3][a] Digital Asset Market Clarity Act of 2025
[E][4] Executive Orders and Executive Branch Policy
§ 46:3.3 Stablecoins
[A] Legal and Regulatory Treatment of Stablecoins in the United States
[A][1] Federal Payment Stablecoin Framework
[A][2] Stablecoins As Securities
[A][3] Stablecoins As Commodities
[A][4] Stablecoins As Currency Substitutes
[B] Utilization of Stablecoins
[C] Stablecoins Versus Money Market Funds
§ 46:3.4 Registered Pooled Investment Entity Products
[A] SEC-Registered Closed-End Fund with Digital Shares
[B] Crypto Asset Exchange-Traded Products and Grantor Trusts
[C] Tokenized Registered Funds and Cash Management Products
[D] Rejected Applications for SEC-Registered ETPs and the Shift to Spot Crypto ETP Approvals
[E] Central Bank Digital Currencies

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[F] Traditional Registered Funds' Exposure to Digital Assets
[G] Digital Assets As Corporate Treasury Assets
§ 46:3.5 Issues Related to Holding Digital Assets
[A] Custody
[B] Valuation
[C] Market Manipulation
[D] SEC Division of Examinations Risk Alert on Digital Asset Securities
§ 46:4 Conclusion

§ 46:1 Introduction

§ 46:1.1 Overview

The concept of the blockchain burst into the public consciousness in the latter part of the last decade, as prices of bitcoin soared in a speculative market in which everyone became suddenly familiar with terms like "wallets" and "keys." Today, the technology continues to present intriguing opportunities both as a technology to facilitate many of the core functions of the investment management industry—transfer agency, custody, and settlement—and as an asset class itself. Many of these opportunities remain only partially achieved, because the technology has developed unevenly and because existing regulations were largely adopted well before the digital age. At the same time, recent developments suggest that distributed ledger technology (DLT) is moving from experimentation toward more targeted implementation in a promising and advanced manner.

Several developments since the prior edition help explain why interest in these uses has intensified. The underlying technology continues to mature, with more developed networks, custody options, and market infrastructure; recent legislation, executive orders, and agency and staff guidance have supplied a measure of regulatory clarity that earlier market participants lacked; institutional participants have grown more comfortable with the operational and control environment; and a broader investor base has shown demand for on-chain products and services, including lending, staking, tokenization, and other centralized and decentralized-finance offerings. Further, with the advent of artificial intelligence (AI), including agentic AI, it is becoming increasingly apparent that DLT could offer rails that could be leveraged to harness the power of AI. None of these drivers removes the legal and operational constraints discussed throughout this chapter, but together they have moved blockchain from speculative experimentation toward a targeted, regulated implementation. Accordingly, broader adoption will continue to depend on whether

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particular uses can be made to fit within existing, modified, or new regulatory obligations, and whether the operational benefits justify the costs and risks of adoption.

This chapter addresses the current state of play of blockchain in the asset management industry, beginning with a discussion of the technology itself and an introduction of the basic lexicon. Next, the chapter addresses the potential and current uses of blockchain technology in back-office functions of the investment management industry. For example, while the blockchain could be a powerful tool for instantaneously recording ownership of shares, the rules governing transfer agents largely continue to contemplate a registered transfer agent responsible for the official record of ownership. Thus, issuers utilizing blockchain technology to record or reflect share ownership must do so largely under the aegis of transfer agents registered under the current regulatory framework. At the same time, an algorithm by itself is not capable of providing the ancillary services provided by transfer agents, such as delivery of documents and responding to inquiries. It seems most likely, therefore, that a hybrid model will continue for the foreseeable future. Custody continues to present formidable challenges, in particular with respect to establishing control over assets tracked using DLT, although progress is being made on that front from regulatory and technological perspectives. Settlement has seen more concrete testing and infrastructure development, including Depository Trust & Clearing Corporation (DTCC) parallel-production and tokenization initiatives. Some DLT settlement proposals also emphasize faster, instantaneous (atomic swaps) or continuous, around-the-clock settlement. Those designs provide significant benefits and flexibility, and also raise liquidity-management, netting, operational, and settlement-finality questions addressed later in this chapter.

The chapter then reviews certain utilities for which blockchain can be used, including proxy voting, indexing and fund-data dissemination, securitization, and processes for complying with anti-money laundering and "know your customer" requirements.

The chapter distinguishes digital assets that are treated as assets in their own right, such as virtual currencies and certain tokens, from the tokenization of traditional instruments, such as fund interests, Treasury or money-market instruments, and bank deposits. Tokenization generally changes the method of issuance, recordkeeping, or transfer, but it does not, without more, alter the instrument's legal character or create a separate regulatory regime. Since the prior edition, tokenization and stablecoins have become central to the next phase of blockchain adoption in investment management. Tokenization may provide a recordkeeping, transfer, collateral, and settlement layer for conventional instruments, while stablecoins may

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supply a programmable payment leg for settlement, collateral, and cash-management workflows. The Wharton paper on tokenizing real-world assets captures the practical policy point: tokenization may improve issuance, trading, settlement, and transferability, but it continues to depend on legal foundations, custody, auditability, redemption design, valuation quality, and oracle governance.[1] As noted above, agentic AI is a related, still-emerging theme. Agentic wallets and payment protocols such as x402 and AP2 may permit software agents to hold, spend, earn, or trade stablecoins and to pay for data, compute, content, or services. Agentic AI-powered tools could evolve to a point where they could serve one or more functions typically carried out by traditional service providers like, for example, investment advisory services. Those arrangements sharpen familiar questions on who is the registered party, who authorized a transaction, who controls the private key, and how error, supervision, transactions screening, and other regulatory requirements are handled.[2] From there, the chapter turns to digital assets as an asset class, including virtual currencies, tokens, stablecoins, tokenized fund interests, and registered or exchange-traded exposure products. It also analyzes when digital assets may be securities, commodities, or other interests; discusses SEC and CFTC developments; and addresses investment vehicles that use blockchain in their operations or provide digital asset exposure. The chapter concludes with issues related to holding digital assets, including custody, valuation, market manipulation, examination priorities, AML and sanctions control, tax reporting, and the practical barriers that remain. Since 2021, federal digital asset policy has moved from largely case-by-case guidance toward a mix

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1. *See* Lin William Cong, Simon Mayer & Daniel Rabetti, *Tokenizing Real-World Assets*, WHARTON INITIATIVE ON FIN. POL'Y & REGUL. (May 2026), https://wifpr.wharton.upenn.edu/wp-content/uploads/2026/05/WIFPR-Tokenizing-Real-World-Assets-Cong-Mayer-and-Rabetti.pdf.
2. *See* Coinbase Advisors LLC, Form ADV (Apr. 24, 2026), https://files.adviserinfo.sec.gov/IAPD/Content/Common/crd_iapd_Brochure.aspx?BRCHR_VRSN_ID=1042718; *Introducing Agentic Wallets: Give Your Agents the Power of Autonomy*, COINBASE DEV. PLATFORM (Feb. 10, 2026), https://www.coinbase.com/developer-platform/discover/launches/agentic-wallets; *Introducing x402: A New Standard for Internet-Native Payments*, COINBASE DEV. PLATFORM (May 6, 2025), https://www.coinbase.com/developer-platform/discover/launches/x402; *Linux Foundation Is Launching the x402 Foundation and Welcoming the Contribution of the x402 Protocol*, LINUX FOUND. (Apr. 2, 2026), https://www.linuxfoundation.org/press/linux-foundation-is-launching-the-x402-foundation-and-welcoming-the-contribution-of-the-x402-protocol; *Powering AI Commerce with the New Agent Payments Protocol (AP2)*, GOOGLE CLOUD (Sept. 16, 2025), https://cloud.google.com/blog/products/ai-machine-learning/announcing-agents-to-payments-ap2-protocol.

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of enforcement, staff guidance and withdrawals, targeted staff statements, market-infrastructure orders, and statutory developments, including a presidential policy shift toward private digital financial technology, payment stablecoins, and a Strategic Bitcoin Reserve and U.S. Digital Asset Stockpile.

§ 46:1.2 General Description of Blockchain Technology, Blockchains, and Digital Assets

[A] What Is Blockchain Technology?

Blockchain technology, a type of distributed ledger technology (DLT), is a decentralized cryptographic technology that provides a means of securely exchanging and tracking data. Blockchain technology is itself an amalgamation of four types of technology.

[A][1] Hashing

The backbone of blockchain technology is hashing, which involves transforming a string of characters into a usually shorter fixed-length value or digest (also called a "hash value") that represents the original string. The hashing technique is commonly used in data science to index and retrieve items in a database because finding an item is faster using the shorter digest than using the original value. In the case of blockchain, a secure hash algorithm takes an input and runs through a process that is effectively "irreversible" (by the standard of today's mathematical and computational abilities), producing an output. The input will produce the same hash output every time, but, as a practical matter, someone who has only that output cannot work backward to recover the original input.[3]

[A][2] Asymmetric Keys

Blockchain technology utilizes asymmetric key cryptography under which each participant creates both a public and a private key (a public key is mathematically derived from a private key; a public address is commonly derived from the public key).[4] A public key serves as the participant's public address, similar to a bank routing

3. *See* NIST, FIPS PUB. 180-4, SECURE HASH STANDARD (Aug. 2015), https://nvlpubs.nist.gov/nistpubs/fips/nist.fips.180-4.pdf.
4. *See* NIST SP 800-57 PT. 1 REV. 5, RECOMMENDATION FOR KEY MANAGEMENT (May 2020), https://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-57pt1r5.pdf [hereinafter NIST SP 800-57]; SATOSHI NAKAMOTO, BITCOIN: A PEER-TO-PEER ELECTRONIC CASH SYSTEM (2008), https://bitcoin.org/bitcoin.pdf [hereinafter SATOSHI]; Chris Jaikaran, Cong. Rsch. Serv., R45116, Blockchain: Background and Policy Issues (2018), https://www.congress.gov/crs-product/R45116 [hereinafter Jaikaran], at 1.

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number, and a private key serves as a participant's private password, similar to a PIN.[5] Using these credentials, participants can authorize transactions with other participants and allow the network to verify them.[6]

[A][3] Peer-to-Peer Networks

Blockchain technology typically relies on a network of participating computers, or "nodes," to apply the network's rules to proposed transactions and collect valid transactions into "blocks."[7] Blockchain networks use consensus mechanisms to determine which transactions become part of the ledger. Proof-of-work networks such as Bitcoin rely on miners and provide probabilistic finality rather than an absolute mathematical guarantee. Proof-of-stake networks rely on validators that stake assets and may be subject to penalties, such as "slashing," for improper validation. The choice of consensus mechanisms can affect settlement finality, operational risk, and custody analysis addressed later in this chapter.[8]

[A][4] Merkle Trees

A Merkle Tree is a technique for organizing and hashing data in order to manage a data file more efficiently. In a blockchain, this technique is used to summarize the transactions within a block. The transactions in the block are summarized by a Merkle root included in the "block header," which is then put through a hash function to produce an unpredictable output. The blockchain network maintains a certain "target," that is, the block's header must have a hash output below the target value, often expressed as a required number of leading zero bits. If a node produces a block with a hash below the target, it may be accepted as a valid new block for the blockchain, and nodes

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5. *See* NIST SP 800-57, *supra* note 4; SATOSHI, *supra* note 4; Stephen A. Keen & Thomas M. Ahmadifar, *Can Mutual Fund Transfer Agents Be Automated Using Distributed Ledger Technology?*, INV. LAW. (Apr. 2020) [hereinafter Keen & Ahmadifar], at 29.
6. *See* NIST SP 800-57, *supra* note 4; SATOSHI, *supra* note 4; Jaikaran, *supra* note 4, at 2; Keen & Ahmadifar, *supra* note 5, at 28.
7. Jaikaran, *supra* note 4, at 2; *see also* Sec. & Exch. Comm'n v. Telegram Grp. Inc., No. 19-cv-9439, 2020 WL 1430035, at *3 n.2 (S.D.N.Y. Mar. 24, 2020) ("Individual blockchain transactions are grouped together and then recorded in 'blocks' that are linked to prior blocks creating a 'chain.'").
8. *See* SATOSHI, *supra* note 4; *The Merge*, ETHEREUM FOUND., https://ethereum.org/en/roadmap/merge/ (last updated May 15, 2026) [hereinafter *The Merge*, ETHEREUM FOUND.]; *see also* Molly Moynihan & Dana Syracuse, *Blockchain, Tokens, and Mutual Funds—We're Not There Yet*, INV. LAW. (July 2018) [hereinafter Moynihan & Syracuse], at 11.

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generally continue working on the longest valid proof-of-work chain.[9] This can be seen as a random dart-throwing exercise in which the teams are partitioned by groups of nodes that follow the same "validation rules."[10]

Each proposed block must include the block header from the previous block. It is important to note that information about the previous blocks accepted by a "team" are input to headers of new block attempts and thus a chronological linking is secured by the validity of the block header hashes. This "chaining" of hashes (hence the term "blockchain") prevents unauthorized changes to the ledger. If a node changed data in an existing block on its copy, the block's hash would change and no longer correspond to the hashes of subsequent blocks, indicating that the data on that node's copy had been corrupted.

[B] What Is a Blockchain Network?

A blockchain network is a peer-to-peer network managing a shared, immutable ledger of data that operates using blockchain technology.[11] There are variations of blockchain networks. A blockchain network can be permissionless, in which case anyone may participate in and validate transactions (for example, the Bitcoin network).[12] Alternatively, a blockchain network can be permissioned so that only certain authorized users may validate the transactions. Blockchain networks can also range from private blockchains to systems that autonomously function based on the instructions embedded in the blockchain.[13] In addition, blockchain networks can use different protocols for adding blocks of data (referred to as "mining" on proof-of-work networks).[14] For instance, a blockchain network may use a "proof of work" process or a "proof of stake" process for verifying and adding new blocks.[15]

For example, Ethereum moved from proof-of-work to proof-of-stake in September 2022, replacing mining with validator staking.[16] Many blockchain applications also now operate through "Layer-2" networks, which process transactions separately while settling on

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9. *See* SATOSHI, *supra* note 4; *Telegram Grp.*, 2020 WL 1430035, at *3 n.2; *see also* Dirk A. Zetzsche, Ross P. Buckley & Douglas W. Arner, *The Distributed Liability of Distributed Ledgers: Legal Risks of Blockchain*, 2018 U. ILL. L. REV. 1361, 1371 (2018).
10. *See* SATOSHI, *supra* note 4.
11. *Id.*; Moynihan & Syracuse, *supra* note 8, at 11.
12. *Id.*
13. *Id.*
14. Jaikaran, *supra* note 4, at 4.
15. For a more detailed discussion of how blockchains using proof-of-work or proof-of-stake processes operate, see Jaikaran, *supra* note 4, at 4–5.
16. *The Merge*, ETHEREUM FOUND., *supra* note 8.

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a base blockchain. Layer-2 networks may reduce transaction costs and increase throughput, but they also add dependencies on additional operators, bridges, and settlement mechanics that should be considered in custody, transfer-agency, and settlement analysis.[17] Institutional blockchains often use permissioned networks, in which known participants validate transactions and access to transaction data is restricted. That design may better align with transfer agent, custody, confidentiality, and settlement obligations than a fully permissionless public network, but that also reduces some of the decentralization features and widespread adoption and distribution associated with public blockchains.[18]

Transactions recorded on a blockchain can provide pseudo-anonymity through the use of asymmetric keys.[19] The transactions themselves are publicly recorded using the counterparties' public addresses; however, other users may not know the identity of the person with the private key to that address.[20] Courts have found that a party does not have a reasonable expectation of privacy with regard to the information transacted from his or her public address on a public blockchain because such information is more like a bank record, which does not receive Fourth Amendment protection.[21]

Public blockchain addresses do not identify their owners by name, but intermediaries, exchange records, and blockchain analytics may connect addresses to real persons or entities. The practical anonymity of blockchain activity is therefore limited, particularly where a regulated intermediary is involved.[22] Privacy-enhancing techniques, including zero-knowledge proofs and selective-disclosure designs, may now allow limited compliance information to be verified without

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17. *See Layer 2*, ETHEREUM FOUND., https://ethereum.org/en/layer-2/ (last visited June 14, 2026); *Blockchain Bridges*, ETHEREUM FOUND., https://ethereum.org/bridges/ (last visited June 14, 2026).
18. DYLAN YAGA ET AL., NIST, NISTIR 8202, BLOCKCHAIN TECHNOLOGY OVERVIEW 5–6 (Oct. 2018), https://doi.org/10.6028/NIST.IR.8202.
19. COMM. ON PAYMENTS & MKT. INFRASTRUCTURES, MKTS. COMM., BANK FOR INT'L SETTLEMENTS, CENTRAL BANK DIGITAL CURRENCIES 6 n.9 (Mar. 2018).
20. *Id*.
21. *See, e.g.*, United States v. Gratkowski, 964 F.3d 307, 312 (5th Cir. 2020).
22. *Id*. at 307–12 (discussing public blockchain address data, blockchain analysis, and exchange records); Harper v. Werfel, 118 F.4th 100, 107–16 (1st Cir. 2024), *cert. denied sub nom.* Harper v. Faulkender, No. 24-922, 2025 WL 1787823 (U.S. June 30, 2025) (addressing IRS access to exchange customer records).

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making all transaction details public, but those techniques do not eliminate otherwise applicable regulatory requirements.[23]

[C] What Are Digital Assets, Virtual Currencies, and Tokens?

Digital assets, crypto assets, virtual currencies, and tokens (among the most commonly used terms) are generally digital representations of value that are recorded on or otherwise associated with blockchain or other DLT.[24] Although specific definitions may be provided in the sections to follow, depending on the nature of the discussion, the following is a list of definitions to standardize the terms used throughout this chapter. Any of the assets described by the terms below may or may not meet the definition of a "security" under the federal securities laws, depending on its facts and circumstances unless explicitly presumed or intended. Terminology is context specific. This chapter generally uses "digital assets" as the umbrella term, while preserving source-specific terms such as "crypto asset," "virtual currency," "virtual asset," "digital asset security," "crypto asset security," "digital commodity," or "payment stablecoin" when discussing particular statutes, rules, releases, staff statements, or guidance. The SEC/CFTC 2026 interpretation uses a functional taxonomy that distinguishes digital commodities, digital collectibles, digital tools, stablecoins, and digital securities or tokenized securities; that taxonomy is useful for organization, but the legal analysis remains tied to the governing statute, rule, or instrument being discussed.[25]

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23. *See* FinCEN, Innovation Program: Emerging Themes and Future Role in AML Act Implementation 4–5 (Mar. 2021), https://www.fincen.gov/system/files?file=2021-03%2FFinCEN+IH+Prgm+Public+Report+508C.pdf; U.S. DEP'T OF THE TREASURY, ILLICIT FINANCE RISK ASSESSMENT OF DECENTRALIZED FINANCE 34–35 (Apr. 2023), https://home.treasury.gov/system/files/136/DeFi-Risk-Full-Review.pdf.

24. With respect to the technological component, irrespective of use or regulatory treatment, such items will hereinafter be referred to as "tokens." As applicable throughout this chapter, tokens may be further defined depending on their use and regulatory treatment in the context being discussed.

25. *See, e.g.*, SEC Div. of Corp. Fin., Div. of Inv. Mgmt. & Div. of Trading & Mkts., Statement on Tokenized Securities (Jan. 28, 2026), https://www.sec.gov/newsroom/speeches-statements/corp-fin-statement-tokenized-securities-012826-statement-tokenized-securities [hereinafter SEC Tokenized Statement]; Application of the Federal Securities Laws to Certain Types of Crypto Assets and Certain Transactions Involving Crypto Assets, Securities Act Release No. 33-11412, Exchange Act Release No. 34-105020, 91 Fed. Reg. 13714 (Mar. 23, 2026), https://www.govinfo.gov/content/pkg/FR-2026-03-23/pdf/2026-05635.pdf [hereinafter SEC/CFTC Crypto Asset Interpretation]; *Frequently Asked Questions*

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[C][1] "Tokens"

Tokens may be implemented in different ways, including as native tokens of a blockchain network, smart-contract tokens, or tokens associated with applications built on a blockchain network.[26] Tokens can be native tokens or tokens that enable various functions through the use of smart contracts (described below). A native token is the digital asset native to a blockchain network, such as bitcoin on the Bitcoin blockchain, ether on the Ethereum blockchain, or ada on Cardano blockchain.[27] Functional tokens may enable transactions as well as provide access to services, provide voting or governance rights, or power applications on the blockchain.[28]

[C][2] Technology Companies: Supporting the Financial Services Industry

The SEC staff and the Office of General Counsel of the Financial Industry Regulatory Authority (FINRA) have defined "digital asset" as "an asset that is issued and transferred using distributed ledger or blockchain technology, including, but not limited to, so-called 'virtual currencies,' 'coins,' and 'tokens.' A digital asset may or may not meet the definition of a 'security' under the federal securities laws."[29] The 2019 SEC/FINRA joint statement from which this definition was drawn has since been withdrawn and should not be relied on as current custody guidance; the terminology, however, remains a useful starting point and continues to appear in later SEC staff materials,

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Relating to Crypto Asset Activities and Distributed Ledger Technology, SEC DIV. OF TRADING & MKTS. (May 15, 2025; updated Dec. 17, 2025 and Feb. 19, 2026), https://www.sec.gov/rules-regulations/staff-guidance/trading-markets-frequently-asked-questions/frequently-asked-questions-relating-crypto-asset-activities-distributed-ledger-technology [hereinafter SEC Crypto/DLT FAQs]; Guiding and Establishing National Innovation for U.S. Stablecoins Act (GENIUS Act), Pub. L. No. 119-27, 139 Stat. 419 (2025).

26. Moynihan & Syracuse, *supra* note 8, at 11.

27. Bitcoin and Ether are both native tokens of their respective blockchain networks. *See* Sec. & Exch. Comm'n v. Telegram Grp. Inc., No. 19-cv-9439, 2020 WL 1430035, at *3 n.3 (S.D.N.Y. Mar. 24, 2020).

28. *Id*.

29. Div. of Trading & Mkts., U.S. Sec. & Exch. Comm'n & Office of Gen. Counsel, Fin. Indus. Reg. Auth., Joint Staff Statement on Broker-Dealer Custody of Digital Asset Securities (July 8, 2019), https://www.sec.gov/news/public-statement/joint-staff-statement-broker-dealer-custody-digital-asset-securities [hereinafter Joint Statement on Broker-Dealer Custody of Digital Asset Securities].

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which should be read in the context of the particular rule, release, or staff statement in which the term is used.[30]

[C][3] "Digital Asset Security"

A "digital asset security" is a digital asset that satisfies the criteria of a "security" under applicable federal or state securities laws.

[C][4] "Virtual Currency" and Cryptocurrency

[C][4][a] Commodity Futures Trading Commission

The Commodity Futures Trading Commission (CFTC) has interpreted "virtual currency" or "digital currency" as encompassing the following:

> [A]ny digital representation of value that functions as a medium of exchange, and any other digital unit of account that is used as a form of a currency (i.e., transferred from one party to another as a medium of exchange); may be manifested through units, tokens, or coins, among other things; and may be distributed by way of digital "smart contracts," among other structures.[31]

In its 2020 interpretive guidance relating to the meaning of "actual delivery" of digital assets, the CFTC stated that "the term 'virtual currency' for purposes of this interpretive guidance is meant to be viewed as synonymous with 'digital currency' and 'cryptocurrency' as well as any other digital asset or digital commodity that satisfies the scope of 'virtual currency.'"[32] The CFTC withdrew the 2020 retail commodity (actual delivery) guidance in December 2025, so it should be treated as historical background to the CFTC's terminology in that guidance.[33]

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30. *See SEC and FINRA Staff Withdraw Joint Staff Statement on Broker-Dealer Custody of Digital Asset Securities*, U.S. SEC. & EXCH. COMM'N (May 15, 2025), https://www.sec.gov/newsroom/speeches-statements/withdrawal-joint-staff-statement-broker-dealer-custody-digital-asset-securities; SEC Crypto/DLT FAQs, *supra* note 25.
31. Retail Commodity Transactions Involving Certain Digital Assets, 85 Fed. Reg. 37734, 37736 n.53 (June 24, 2020), https://www.govinfo.gov/content/pkg/FR-2020-06-24/pdf/2020-11827.pdf.
32. 85 Fed. Reg. 37741 n.148 (2020).
33. CFTC, Withdrawal of Interpretive Guidance: Retail Commodity Transactions Involving Certain Digital Assets, 90 Fed. Reg. 58149 (Dec. 16, 2025), https://www.govinfo.gov/content/pkg/FR-2025-12-16/pdf/2025-22872.pdf; Press Release, CFTC, Acting Chairman Pham Announces Withdrawal of Outdated Digital Assets Guidance (Dec. 11, 2025), https://www.cftc.gov/PressRoom/PressReleases/9152-25.

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[C][4][b] Internal Revenue Service

The Internal Revenue Service (IRS) has provided the following definition:

> Virtual currency is a digital representation of value that functions as a medium of exchange, a unit of account, and/or a store of value. In some environments, it operates like "real" currency (i.e., the coin and paper money of the United States or of any other country that is designated as legal tender, circulates, and is customarily used and accepted as a medium of exchange in the country of issuance), but it does not have legal tender status in any jurisdiction. Cryptocurrency is a type of virtual currency that utilizes cryptography to validate and secure transactions that are digitally recorded on a distributed ledger, such as a blockchain.
>
> Virtual currency that has an equivalent value in real currency, or that acts as a substitute for real currency, is referred to as "convertible" virtual currency. Bitcoin is one example of a convertible virtual currency. Bitcoin can be digitally traded between users and can be purchased for, or exchanged into, U.S. dollars, Euros, and other real or virtual currencies.[34]

The 2014 guidance predates later developments. These include the 2021 statutory definition of "digital assets" as a digital representation of value recorded on a cryptographically secured distributed ledger or similar technology; the IRS's later use of "digital assets" as the umbrella term to cover convertible virtual currencies and cryptocurrencies; and Treasury and IRS digital asset broker reporting regulations that phase in Form 1099-DA reporting for digital asset sales.[35]

[C][4][c] U.S. Securities and Exchange Commission and the Financial Action Task Force

In materials cited by the SEC in the prior edition, the Financial Action Task Force (FATF) defined "virtual currency" as:

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34. I.R.S. Notice 2014-21, 2014-16 I.R.B. 938, https://www.irs.gov/pub/irs-drop/n-14-21.pdf.

35. 26 U.S.C. § 6045(g)(3)(D) (added by Infrastructure Investment and Jobs Act, Pub. L. No. 117-58, § 80603, 135 Stat. 429, 1339 (2021)); I.R.S., Digital Assets, https://www.irs.gov/filing/digital-assets; I.R.S. Notice 2014-21, 2014-16 I.R.B. 938; Treas. Reg. § 1.6045-1; T.D. 10000, Gross Proceeds and Basis Reporting by Brokers and Determination of Amount Realized and Basis for Digital Asset Transactions, 89 Fed. Reg. 56480 (July 9, 2024); I.R.S., About Form 1099-DA, Digital Asset Proceeds from Broker Transactions, https://www.irs.gov/forms-pubs/about-form-1099-da.

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> [A] digital representation of value that can be digitally traded and functions as: (1) a medium of exchange; and/or (2) a unit of account; and/or (3) a store of value, but does not have legal tender status (i.e., when tendered to a creditor, is a valid and legal offer of payment) in any jurisdiction. It is not issued or guaranteed by any jurisdiction, and fulfills the above functions only by agreement within the community of users of the virtual currency. Virtual currency is distinguished from fiat currency (a.k.a. "real currency," "real money," or "national currency"), which is the coin and paper money of a country that is designated as its legal tender; circulates; and is customarily used and accepted as a medium of exchange in the issuing country. It is distinct from e-money, which is a digital representation of fiat currency used to electronically transfer value denominated in fiat currency.[36]

FATF has since updated its terminology and guidance to focus on "virtual assets" and "virtual asset service providers," a broader AML/CFT framework that is discussed again in the operational compliance sections below.[37]

[C][5] "Central Bank Digital Currency"

A central bank digital currency (CBDC) is a digital form of central-bank money issued by a central bank; whether it has legal-tender status depends on the issuing jurisdiction's law and design.

Since the prior edition, the Federal Reserve has issued a discussion paper on a potential U.S. CBDC, while later executive-branch policy has prohibited federal agencies from taking action to establish, issue, or promote a U.S. CBDC except as required by law.[38] The same policy framework favors private dollar-backed stablecoins over a U.S.

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36. Report of Investigation Pursuant to Section 21(a) of the Securities Exchange Act of 1934: The DAO, Exchange Act Release No. 81,207 (July 25, 2017), https://www.sec.gov/litigation/investreport/34-81207.pdf [hereinafter The DAO Report] (citing FATF Report, Virtual Currencies, Key Definitions and Potential AML/CFT Risks, Financial Action Task Force (June 2014), https://www.fatf-gafi.org/content/dam/fatf-gafi/reports/Virtual-currency-key-definitions-and-potential-aml-cft-risks.pdf).
37. FATF, UPDATED GUIDANCE FOR A RISK-BASED APPROACH TO VIRTUAL ASSETS AND VIRTUAL ASSET SERVICE PROVIDERS (Oct. 2021), https://www.fatf-gafi.org/content/dam/fatf-gafi/guidance/Updated-Guidance-VA-VASP.pdf.
38. BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, MONEY AND PAYMENTS: THE U.S. DOLLAR IN THE AGE OF DIGITAL TRANSFORMATION (Jan. 2022), https://www.federalreserve.gov/publications/files/money-and-payments-20220120.pdf; Exec. Order No. 14,178, Strengthening American Leadership in Digital Financial Technology, 90 Fed. Reg. 8647 (Jan. 31, 2025), https://www.govinfo.gov/content/pkg/FR-2025-01-31/pdf/2025-02123.pdf.

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CBDC, and the President's Working Group on Digital Asset Markets recommended that Congress codify the executive-order CBDC restrictions. The House passed the Anti-CBDC Surveillance State Act in July 2025, and the CLARITY includes similar Federal Reserve restrictions, although neither has become law as of this update.[39] The CBDC point therefore should be treated as a policy and market-structure issue rather than a near-term assumption for U.S. asset-management operations.

§ 46:1.3 Smart Contracts

A smart contract is an algorithm that can automatically complete several actions per its own instructions: self-execute, self-enforce, self-verify, and self-constrain the performance of itself.[40] In doing so, a smart contract may incorporate the elements of a binding contract or may simply execute certain terms of a contract.[41] Although, to be clear, not every smart contract constitutes a valid, binding legal agreement, particularly if the "smart contract" is specific code programmed to perform a specific task or action. By utilizing self-executing programming, a smart contract can trigger actions at specified times or based on the presence or occurrence of a specified action or event.[42] Blockchain technology provides developers the opportunity to build applications that rely on complex smart contracts to complete various types of agreements and actions.[43]

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39. H.R. 1919, 119th Cong. (2025) (as passed by House July 17, 2025), https://www.govinfo.gov/content/pkg/BILLS-119hr1919eh/pdf/BILLS-119hr1919eh.pdf; Digital Asset Market Clarity Act of 2025, H.R. 3633, 119th Cong. tit. VI §§ 601-605 (as passed by House, July 17, 2025); *see also* Exec. Off. of the Pres., Statement of Administration Policy: H.R. 1919—Anti-CBDC Surveillance State Act (July 15, 2025), https://www.whitehouse.gov/wp-content/uploads/2025/07/SAP-HR1919.pdf.

40. J. Dax Hansen & Carla L. Reyes, Legal Aspects of Smart Contract Applications 2 (2017), https://www.virtualcurrencyreport.com/wp-content/uploads/sites/35/2017/05/Perkins-Coie-LLP-Legal-Aspects-of-Smart-Contracts-Applications.pdf (citing Tim Swanson, Great Chain of Numbers: A Guide to Smart Contracts, Smart Property and Trustless Asset Management 312 (2014)).

41. Commodity Futures Trading Comm'n, A Primer on Smart Contracts (Nov. 27, 2018), https://www.cftc.gov/sites/default/files/2018-11/LabCFTC_PrimerSmartContracts112718.pdf [hereinafter CFTC Smart Contracts Primer].

42. *Id*. These occurrences could be something such as the delivery of an asset, weather conditions, or change in a reference rate.

43. Smart contracts' satisfaction of the tenets of contract law (for example, meeting of the minds, consideration, capacity, legality, and ultimately enforceability) is beyond the scope of this chapter; however, such issues are worth noting as under discussion in the legal community; *see, e.g.*,

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In the investment management context, smart contracts are best understood as programmed execution tools rather than substitutes for the legal obligations underpinning the underlying product or service. Where a smart contract depends on information outside the blockchain, an oracle or other data source may be needed to supply the relevant off-chain data, which introduces governance, reliability, and liability questions separate from the code itself.[44]

Smart contracts could have a variety of potential benefits and use cases. For instance, the CFTC has identified that smart contracts could benefit standardization, security, economy and speed, and certainty in certain transactions.[45] In addition, smart contracts have been the subject of study in a number of different contexts, including, but not limited to, derivatives or swaps smart contracts,[46] securities programmed as smart contracts with certain instructions related to transfer,[47] and the clearance and settlement of securities transactions.[48] Post-2021 tokenization and market-infrastructure developments confirm that the practical question is usually not whether a smart contract can execute an instruction, but whether the surrounding legal and operational framework identifies the responsible intermediary, protects investor records and assets, and lets the parties

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Kevin Werbach & Nicolas Cornell, *Contracts Ex Machina*, 67 DUKE L.J. 313 (2017).

44. CFTC SMART CONTRACTS PRIMER, *supra* note 41; SEC Tokenized Statement, *supra* note 25.

45. CFTC SMART CONTRACTS PRIMER, *supra* note 41.

46. *See* ISDA, SMART DERIVATIVES CONTRACTS: FROM CONCEPT TO CONSTRUCTION 5 (2018), https://www.isda.org/a/cHvEE/Smart-Derivatives-Contracts-From-Concept-to-Construction-Oct-2018.pdf. The International Swaps and Derivatives Association (ISDA) has noted that smart contracts could create efficiencies in derivatives markets by allowing for terms within the smart contract that can be automatically performed. *Id*.

47. For example, a closed-end fund operating as an interval fund declared effective in July 2020 is issuing shares that can be transferred in peer-to-peer transactions reviewable on the Ethereum blockchain. Per its registration statement, the fund's shares can have internal restrictions programmed through smart contracts that can "impose conditions on the transfer of [shares], such as to whom they may be transferred, and the number of [shares] that may be transferred . . . ." Arca U.S. Treasury Fund, Prospectus (Form 424B3) (May 1, 2025), https://www.sec.gov/Archives/edgar/data/1758583/000158064225002893/arca-ustreasury_424b3.htm.

48. *See* DTCC, Guiding Principles for the Post-Trade Processing of Tokenized Securities 3-17 (Mar. 2019), https://www.crowdfundinsider.com/wp-content/uploads/2019/03/DTCC-Crypto-Asset-Whitepaper-2019.pdf.

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correct, reverse, suspend, or remediate a transaction when the code or the transaction record does not match the legal entitlement.[49]

§ 46:2 Use of Blockchain Technology in the Asset Management Business

This section discusses blockchain as a technology and how it is being or could be utilized for various operational functions that are part of the infrastructure of the asset management business: transfer agency, custody, trading, and clearance and settlement. Because these functions at base involve either recordkeeping or transfer of value, there are multiple possibilities for employing blockchain technology to simplify processes or increase security. Adoption of blockchain technology, however, faces two primary hurdles: regulatory issues and the willingness of market participants to invest in the technology where existing systems are widely accepted globally and generally function well.

§ 46:2.1 Transfer Agency

[A] Background

Shares of issuers are either "certificated" or "uncertificated" securities. "Certificated" means the "security interest is represented by a certificate," while "uncertificated" means the security interest is reflected in book-entry form on the records of the issuer (or its transfer agent).[50] A shareholder can be a registered owner of, or have an "entitlement right" to, certificated or uncertificated securities. A registered owner is listed (registered) as the owner of the security on the books and records of the issuer.[51] Most shareholders today hold an entitlement right in the securities, which are ultimately held by a depository clearinghouse, most often the Depository Trust Company (DTC). DTC's nominee, Cede & Co., is the registered owner of the securities and creates security entitlements to the securities for its members (financial intermediaries, for example, brokers or banks), who in turn create security entitlements for their clients. Securities registered through DTC and held through financial intermediaries are said to be held in "street name."[52] Regardless of the manner of ownership, once a shareholder acquires the shares, a whole set of rights and obligations flows between the issuer and its shareholders.

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49. CFTC SMART CONTRACTS PRIMER, *supra* note 41; SEC Tokenized Statement, *supra* note 25.
50. U.C.C. § 8-102(a)(4), (18).
51. *See* U.C.C. § 8-102(a)(13).
52. *See* U.C.C. § 8-102(a)(7).

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Typically, the issuer requires a service provider to assist in complying with certain obligations pertaining to the issuance, ownership, transfer, and redemption of its securities. Transfer agents fill this need. The 2022 Uniform Commercial Code (UCC) amendments added a parallel regime, Article 12, for certain controllable electronic records; that regime may be relevant to tokenized assets that are not held through Article 8's securities-intermediary framework.[53]

Transfer agents serve as an intermediary between issuers of securities and their shareholders.[54] Issuers ordinarily engage transfer agents to:

> (i) track, record, and maintain on behalf of issuers the official record of ownership of each issuer's securities; (ii) cancel old certificates, issue new ones, and perform other processing and recordkeeping functions that facilitate the issuance, cancellation, and transfer of those securities; (iii) facilitate communications between issuers and registered securityholders; and (iv) make dividend, principal, interest, and other distributions to securityholders.[55]

[B] What Entities Must Register As Transfer Agents?

Under the Securities Exchange Act of 1934 (the "Exchange Act"), any person providing certain enumerated services with respect to securities that are registered under section 12 of the Exchange Act and certain securities exempt from registration under section 12 (such as shares of a mutual fund) must register with the SEC (or, if it

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53. U.C.C. § 8; U.C.C. § 12.

54. With respect to shareholders who have an entitlement to a security, an intermediary, rather than the transfer agent, maintains and updates the security holder's records, facilitates or executes transfers, and provides other services for the security holder. These transfer and recordkeeping services provided to beneficial owners by intermediaries are referred to as "sub-transfer agent" services. These transfer agent related functions are routinely performed by broker-dealers and banks without registration as transfer agents. 80 Fed. Reg. 81957. In addition, a clearing broker-dealer is able to act as a transfer agent under the Exchange Act upon registering with the SEC on Form TA-1. *See* SEC, Form TA-1, https://www.sec.gov/files/formta-1.pdf. Therefore, a clearing broker-dealer could provide transfer agent services in a partial or full capacity depending on the broker-dealer's respective degree of registration.

55. *See Transfer Agent Regulation, Advance notice of proposed rulemaking; Concept release; Request for comment*, SEC Release No. 34-76743 (Dec. 31, 2015), https://www.sec.gov/files/rules/concept/2015/34-76743.pdf.

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is a bank, with a bank regulator) as a transfer agent.[56] The Exchange Act defines a transfer agent as:

> any person who engages on behalf of an issuer of securities or on behalf of itself as an issuer of securities in (A) countersigning such securities upon issuance; (B) monitoring the issuance of such securities with a view to preventing unauthorized issuance, a function commonly performed by a person called a registrar; (C) registering the transfer of such securities; (D) exchanging or converting such securities; or (E) transferring record ownership of securities by bookkeeping entry without physical issuance of securities certificates.[57]

[C] What Are the SEC Registration Requirements for a Transfer Agent?

A transfer agent registers with the SEC by filing Form TA-1.[58] The rules require a registered transfer agent to provide annual reports to the SEC[59] and comply with certain notice, safeguarding, and record-keeping requirements.[60] A transfer agent is subject to certain basic "performance standards,"[61] which trigger requirements to (i) file with the SEC;[62] (ii) submit reports to issuers upon a failure to comply with the standards within a prescribed period of time; and (iii) respond to shareholder, broker-dealer, and other persons' inquiries within a set amount of days.[63] A transfer agent is also required to report "missing, lost, counterfeit, or stolen securities" to the SEC.[64] This was later extended to cover canceled certificates.[65] Small transfer agents and issuers of less transferred securities (such as mutual funds and limited partnerships) may be exempt from many of these requirements.[66] A transfer agent also must conduct prescribed searches for lost security holders and unresponsive payees under Rule 17Ad-17.[67]

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56. 15 U.S.C. § 78q-1(c)(1).
57. 15 U.S.C. § 78c(a)(25).
58. 17 C.F.R. § 240.17Ac2-1; SEC Form TA-1, 17 C.F.R. § 249b.100.
59. 17 C.F.R. § 240.17Ac2-2(a); SEC Form TA-2, 17 C.F.R. § 249b.102.
60. 17 C.F.R. §§ 240.17Ad-2 to -20.
61. 17 C.F.R. § 240.17Ad-2.
62. *Id.*; 17 C.F.R. § 240.17Ad-3(b).
63. 17 C.F.R. §§ 240.17Ad-5 to -7.
64. 15 U.S.C. § 78q(f)(1); 17 C.F.R. § 240.17f-1.
65. Pub. L. No. 111-203, 124 Stat. 1376, § 929D (2010).
66. 17 C.F.R. § 240.17Ad-4(b).
67. 17 C.F.R. § 240.17Ad-17.

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[D] Do States Regulate Transfer Agents?

Each state has regulations in place governing the corporate matters of entities formed and/or operating in its state, and certain transfer agent activities fall within these regulations. For example, UCC Article 8, which is adopted in various forms by all fifty states, imposes additional requirements.

[E] What Additional Functions Do Registered Transfer Agents Perform for Registered Funds?

A transfer agent may provide additional services to an SEC-registered fund due to the fund's structural and operational differences from traditional companies. Exchange-traded funds and closed-end funds also use registered transfer agents, although their transfer-agency mechanics differ: ETF creation and redemption run through authorized participants and DTC, and listed closed-end fund shares are held largely in street name, so the discussion below focuses on mutual funds, where the transfer agent's shareholder-servicing role is most extensive. For example, a mutual fund continuously offers and redeems its shares directly to and from its shareholders,[68] does not have a set number of outstanding shares, is priced at a net asset value price calculated after receipt of the purchase or redemption order,[69] and charges certain shareholder fees. As such, a mutual fund transfer agent may provide a litany of services, including:

- Processing applications for new accounts;
- Providing written confirmations of trades;
- Calculating any transaction-based charges (such as sales loads) and fees (such as redemption fees), deducting the calculated amount and allocating it among the fund, its principal underwriter, dealers, or other appropriate parties;
- Processing and administering letters of intent, systematic withdrawal plans, and plans for reducing certain transaction-based sales charges and redemption fees;
- Acting as the fund's dividend-paying agent by calculating the dividends payable to each shareholder and the aggregate dividends payable, distributing the dividends, or, if the shareholder elects to reinvest the dividend, calculating shares issued upon reinvestment and issuing such shares;

68. 15 U.S.C. §§ 80a-2(a)(32) and 22(e).
69. 17 C.F.R. § 270.22c-1.

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- Distributing shareholder communications or providing mailing lists for such distributions;
- Responding to shareholder inquiries regarding their accounts;
- Obtaining taxpayer identification numbers from shareholders, and preparing and distributing tax reports (such as Form 1099s) to the IRS and to shareholders;
- Withholding and remitting taxes on applicable foreign accounts;
- Providing information necessary to implement the fund's market timing and excessive trading policies;
- Complying with state laws regarding unclaimed shares and dividends; and
- Maintaining all records necessary to perform and document these services.[70]

[F] DLT and the Transfer Agent Role

[F][1] Generally

The invention and development of DLT raises the issue of whether a transfer agent's role can be automated using such technology. As with many technology questions, the answer is complicated.

DLT could be leveraged to automate or support certain roles of a transfer agent. For example, each time a shareholder (or a shareholder's agent) initiates a transaction pertaining to its shares on a distributed ledger, certain information such as the order type (buy/sell), the number and price of the shares subject to the transaction, and the relevant account currently holding the shares could all be sent to the distributed ledger instantaneously to be verified by nodes. Upon verification, the shares and funds are exchanged instantaneously from one wallet to another, and all the pertinent information is simultaneously and permanently recorded in a new block on the distributed ledger along with a time stamp. Each node on the network contains an identical copy of the distributed ledger that is updated simultaneously with the addition of each new block. In other words, the distributed ledger protocol (including the smart contracts and the nodes on the network) would be able to register the transfer of the shares, prevent unauthorized issuance, and maintain a record of ownership of the shares, which are the main functions historically carried out by a transfer agent. The legal and operational conclusion, however,

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70. Keen & Ahmadifar, *supra* note 5, at 30.

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depends on the product architecture as different distributed ledgers may have different node access, data visibility, finality, correction, or governance characteristics. One important distinction is whether an existing registered transfer agent uses DLT as part of its own system for maintaining the record of share ownership or whether a sponsor seeks to rely on the distributed ledger itself to satisfy the regulatory and practical requirements of serving as a transfer agent. As early as 2019, transfer agents organized around DLT, including Securitize, LLC and Harbor Digital Transfer Agent, LLC, registered with the SEC on Form TA-1, confirming that a DLT-based transfer agency could operate within the existing transfer agent registration framework years before the staff's 2025–2026 guidance addressed use of a distributed ledger as the official master securityholder file.[71]

[F][2] Use of Transfer Agents by Tokenized Fund Products—Key Takeaways

The Arca U.S. Treasury Fund ("Arca Fund"), an SEC-registered closed-end fund; the Franklin Blockchain Enabled U.S. Government Money Fund, now the Franklin OnChain U.S. Government Money Fund, an SEC-registered government money market fund ("Franklin MMF"); and later WisdomTree digital funds, including the WisdomTree Treasury Money Market Digital Fund, are registered fund examples of blockchain-assisted share recordkeeping.[72] These products issue uncertificated securities and rely on a registered transfer agent and shareholder-recordkeeping framework. The current examples do not replace the registered transfer agent with an autonomous blockchain protocol; rather, the blockchain component is used to facilitate, represent, integrate with, or mirror aspects of the recordkeeping and transfer process, with the registered transfer agent remaining responsible for the applicable transfer agent functions and official ownership records.[73]

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71. *See* Securitize LLC, Form TA-1 (filed July 22, 2019); Securitize LLC, Notice of Effectiveness (July 31, 2019); Harbor Digital Transfer Agent LLC, Form TA-1 (filed Oct. 4, 2019); Harbor Digital Transfer Agent LLC, Notice of Effectiveness (Oct. 30, 2019).
72. *See* further discussion of these funds, *infra* § 46:2.1[F][2].
73. *See* Arca U.S. Treasury Fund, Registration Statement (Form N-2) (filed Apr. 30, 2026), SEC Accession No. 0001580642-26-002799, https://www.sec.gov/Archives/edgar/data/1758583/000158064226002799/arca-ust_486b.htm [hereinafter Arca Registration Statement]; Franklin OnChain U.S. Government Money Fund, Statutory Prospectus (Form N-1A), https://www.franklintempleton.com/tools-and-resources/lit-preview/29386/SINGLCLASS/franklin-on-chain-u-s-government-money-fund#prospectus [hereinafter Franklin Registration Statement]; WisdomTree Treasury Money Market Digital Fund, Statutory Prospectus (Form N-1A) (filed

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Private and institutional tokenized products, such as BlackRock's BUIDL fund and other Securitize-supported offerings, illustrate a related operational model outside the registered-fund context. A transfer agent, administrator, or other responsible recordkeeper maintains the operative investor records while broker-dealer, ATS, onboarding, wallet, and smart-contract services support distribution or approved secondary transfers. Those products should not be conflated with the registered-fund products, but they reinforce the same transfer-agency point for asset managers: tokenization generally adds a technology and distribution layer to an existing legal recordkeeping architecture rather than eliminating that architecture, at least as of this date.[74]

The key takeaways from the process utilized by these funds' transfer agents are discussed below.

[F][2][a] Opening Accounts and Wallets and Transacting Using DLT

To utilize DLT for the transfer agency function, an issuer must first develop or utilize an existing distributed ledger or other DLT environment, which may be public, permissioned, or otherwise restricted depending on the product structure. Decentralized applications, also known as dApps, are computer applications that run on distributed computing systems and may be used by potential investors (or intermediaries) to open an account with the issuer or transfer agent. To comply with various anti-money laundering (AML) and "know your customer" (KYC) regulations and related sanctions and transfer-restriction requirements at this stage, the issuer or transfer agent would need to obtain sufficient information to "whitelist" potential investors that have complied with those requirements. Next, the issuer or transfer agent would need to make a wallet available for each shareholder that would allow the shareholder to hold the issuer's

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Mar. 10, 2026), https://prospectusconnect.com/pdf-viewer/stationary_prospectus/114/bXVsdGlwbGVfdXBsb2FkZWQvMTc3MzE2NTIxNl9hVkMxdlU4ejlmLnBkZg==/1 [hereinafter WisdomTree Registration Statement]; SEC Tokenized Statement, *supra* note 25. These and other registered pooled product developments are discussed *infra* section 46:3.4.

74. *See* BlackRock USD Institutional Digital Liquidity Fund Ltd., Form D, SEC Accession No. 0002014390-24-000001 (Mar. 2024), https://www.sec.gov/Archives/edgar/data/2013810/000201439024000001/xslFormDX01/primary_doc.xml; Securitize, BlackRock Launches Its First Tokenized Fund, BUIDL, on the Ethereum Network (Mar. 20, 2024), https://securitize.io/learn/press/blackrock-launches-first-tokenized-fund-buidl-on-the-ethereum-network; SEC Div. of Corp. Fin., Div. of Inv. Mgmt. & Div. of Trading & Mkts., Statement on Tokenized Securities (Jan. 28, 2026), https://www.sec.gov/newsroom/speeches-statements/corp-fin-statement-tokenized-securities-012826-statement-tokenized-securities.

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shares and assign each wallet a private and public key. The issuer or transfer agent would then need to deploy smart contracts to execute the various conditions it wishes to impose on the shares (for example, restricting transfer to whitelisted shareholders, preventing or allowing peer-to-peer transactions, or restricting the number of shares that can be transferred at once). To meet these functions, various standards and product-specific controls have been developed by the industry to program functionality into the relevant tokens.[75] Current tokenized-fund structures generally permit transfers among approved investors, subject to transfer agent controls, investor onboarding, transfer restrictions, sanctions screening, and reconciliation to the master securityholder file.

From the shareholder's perspective, the workflow will depend on the product's account and wallet design. An investor may use an issuer or transfer agent application, a broker or intermediary interface, a hosted wallet, a self-custodied wallet approved for the product, or another approved electronic interface to open an account and transact. Upon opening the account, the shareholder would connect the account or wallet to a bank account, stablecoin arrangement, or other issuer-approved funding source, as permitted by the product. The shareholder or its intermediary could then initiate a transaction through the approved interface or wallet, subject to the controls discussed above.

[F][2][b] Identifying the "Official" Transfer Record

The product examples should be distinguished by their current recordkeeping design. The Arca Fund continues to describe the Ethereum blockchain as a viewable "courtesy copy" while the registered transfer agent's records constitute the official shareholder record. Franklin's current disclosures state that its transfer agent maintains the official record through a proprietary blockchain-integrated system that uses features of traditional book-entry form and one or more public blockchain networks. WisdomTree's disclosures likewise describe an integrated recordkeeping system, with the transfer agent maintaining book-entry records and blockchain records used in the recordkeeping process. These structures are not all identical, but none should be read as replacing the registered transfer agent with an unaffiliated blockchain protocol acting as transfer agent. Later product disclosures and SEC staff guidance make clear that the official record

75. These newer programs seek to provide greater functionality than what was historically provided under the standard ERC-20-based tokens operating on the Ethereum blockchain. Some examples of such standards include ST-20 by Polymath, ERC-1404 by Tokensoft, and S3 by OpenFinance.

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need not categorically sit outside DLT if the transfer agent's DLT-based or blockchain-integrated system itself satisfies the Exchange Act transfer agent rules.[76] The practical point is therefore to identify which record is legally operative, who is responsible for it, how the on-chain and off-chain components reconcile, and how errors, unauthorized transactions, investor servicing, and regulatory records are handled.

The references to Ethereum and Stellar blockchains should be read as product-specific examples, not as an exhaustive list of networks used by tokenized funds. Later registered and private institutional products have used or contemplated other public blockchains and Layer-2 networks, and some institutional arrangements may use private or permissioned ledgers. That distinction matters operationally because a public permissionless network, a public network with permissioned token-transfer controls, a Layer-2 network, and a private or permissioned ledger may allocate validation, access, reversibility, wallet controls, privacy, and governance differently. For transfer-agency purposes, however, the threshold legal question is not the name of the blockchain, but whether the issuer and its service providers have identified the legally operative ownership record, the party responsible for maintaining the record, the method for reconciling any on-chain and off-chain records, and the controls for correction, freeze, stop-transfer, investor servicing, and regulatory books and records.[77]

[F][2][c] Blockchain "Instructions"

Subject to specific conditions, Article 8 requires an issuer to register the transfer of an uncertificated security upon presentation of an instruction by an appropriate person; a transfer agent acting for the issuer in registering transfers has the same obligation for that function.[78] "Instruction" is defined as "a notification communicated to the [issuer] of an uncertificated security which directs that the transfer of the security be registered or that the security be redeemed." Article 8 does not specify the form of the notification or means of communication. A transfer agent might therefore treat a transaction message recorded on the blockchain as an instruction from the shareholder assigned to a public address. Early product disclosures did

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76. *See* SEC Crypto/DLT FAQs, *supra* note 25; SEC Tokenized Statement, *supra* note 25; Franklin Registration Statement, *supra* note 73; WisdomTree Registration Statement, *supra* note 73.
77. *See generally* SEC Tokenized Statement, *supra* note 25; Press Release, Securitize, BlackRock Launches New BUIDL Share Classes Across Multiple Blockchains (Nov. 13, 2024), https://securitize.io/learn/press/blackRock-launches-new-buidl-share-classes-across-multiple-blockchains.
78. U.C.C. §§ 8-401, 8-102, 8-407.

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not necessarily treat the blockchain message itself as the Article 8 instruction, but that product-specific point should not be read as a regulatory bar to DLT-based transfer agent systems. The SEC Trading and Markets staff has since stated that a registered transfer agent may use DLT as its official master securityholder file, or as a component of that file, if the transfer agent satisfies the Exchange Act transfer agent rules. The operative question is therefore whether the transfer agent's system captures valid instructions and maintains secure, accurate, current, retrievable, and complete records, not whether the relevant records are maintained exclusively off-chain.[79] The 2022 UCC amendments create a parallel path for assets structured as controllable electronic records rather than Article 8 securities or security entitlements.[80] Article 12 generally addresses a person's rights in certain electronic records that can be subject to "control," and it provides rules for control, transfer, and priority that are conceptually closer to possession or control of a negotiable asset than to Article 8's instruction regime for uncertificated securities. "Control" under Article 12 is a legal status, not merely possession of a private key. Thus, the focus is on whether the person has the power to avail itself of substantially all the benefit from the electronic record, prevent others from doing so, and transfer control to another person under the statute. The distinction is important for tokenized products because a fund share or other investment interest may still be an Article 8 security or security entitlement even if a blockchain record is used, while a different digital asset may be analyzed as a controllable electronic record. Thus, it is important to assess whether the operative transfer concept is an Article 8 instruction, an Article 12 control analysis, or both. Article 12 also does not eliminate applicable federal regulations. It instead supplies a state commercial-law framework that must be layered with federal securities, commodities, banking, custody, transfer agent, and other applicable requirements.

[F][2][d] Who Pays for "Gas"?

A transaction on a distributed ledger often requires transaction fees payable in the network's native asset (such as bitcoin (BTC) on the Bitcoin blockchain, ether (ETH) on the Ethereum blockchain, lumens (XLM) on the Stellar blockchain, SOL on the Solana blockchain, ada

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79. *See* SEC Crypto/DLT FAQs, *supra* note 25, Questions 10-11 (discussing transfer agent registration and use of DLT as the official Master Securityholder File under Exchange Act Rule 17Ad-9(b) or as a component thereof, and stating that a transfer agent need not maintain a duplicate off-chain record if applicable requirements are met); U.C.C. §§ 8-401, 8-102, 8-407.

80. *See* U.C.C. art. 12.

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(ADA) on the Cardano blockchain, or AVAX on the Avalanche blockchain). The issuer would need to decide who (shareholder? fund? third party?) will be responsible for the fees required to transact on the distributed ledger. For example, for the Arca Fund, the fund ultimately pays the ether gas required to transact on the Ethereum blockchain when the fund makes distributions on a shareholder's interest or pays a dividend, while the investor pays the gas required to redeem its shares back to the fund or for peer-to-peer transactions with a whitelisted shareholder.[81] Later product disclosures show several approaches. In the Franklin fund, network transaction fees for transactions through the fund's app or institutional web portals are borne by the investment manager or its affiliates, while transactions signed with investor-managed wallets may require the investor to maintain the applicable native digital asset or gas-fee token.[82] WisdomTree discloses another product-specific allocation where WisdomTree or an affiliate covers gas fees for primary purchases or redemption through the firm's App or Portal via a WisdomTree digital hosted wallet, while investors pay gas fees for peer-to-peer transfers, including between their own wallets.[83]

[G] Why Are Transfer Agents Not Using DLT More Fully?

[G][1] Existing Federal Regulation

The various federal regulations applicable to transfer agents pose numerous challenges to providing such services through adoption of DLT, although they do not prohibit DLT use as such. Post-2021 staff guidance confirms a path within the existing transfer agent framework where a registered transfer agent may use DLT as the official master securityholder file, or as a component of that file, if the transfer agent satisfies the applicable Exchange Act requirements.[84] Most notably, the federal regulatory scheme governing transfer agents was largely developed well before the advent of today's technology and may require modernization, interpretation, or careful application to DLT-based systems. The most recent substantive update to the applicable SEC regulation occurred decades ago. The latest modernization effort was limited to an SEC concept release in 2015, which still has not resulted in a comprehensive DLT-specific transfer agent rulemaking, although the Commission's most recent regulatory

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81. *See* Arca Registration Statement, *supra* note 73.
82. *See* Franklin Registration Statement, *supra* note 73.
83. *See* WisdomTree Registration Statement, *supra* note 73.
84. *See* SEC Crypto/DLT FAQs, *supra* note 25; SEC Tokenized Statement, *supra* note 25.

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agenda lists a transfer agent modernization rulemaking that would expressly address crypto assets and transfer agents' use of DLT; no proposed rule had been issued as of this writing.[85] When the SEC significantly updated the applicable regulations in the 1970s, it did so based on many studies, including the SEC-commissioned Rockwell Information Systems Company study, which found that "the securities industry's operations were unnecessarily complicated and had not kept pace with technology and recommended that the actual physical movement of securities be reduced." Decades later, the rules remain technology-neutral in important respects and do not supply a bespoke DLT transfer agent regime. Since the prior edition, tokenized-security and tokenized-fund activity has therefore continued under the existing transfer agent rule set, supplemented by ordinary recordkeeping, safeguarding, lost-securityholder obligations, privacy, cybersecurity, and staff-statement analysis.[86]

For example, under the current regulatory scheme, it is not clear what entity should be registered as the transfer agent—the distributed ledger protocol that validates each block? The smart contract that acts as the registrar? Every operator of each node on the system that maintains an identical copy of the distributed ledger? The developer of the software that may no longer control the network upon release? The issuer of the shares who does not control the operation of the ledger?[87] These questions remain most acute for structures that would rely on an autonomous protocol, smart contract, node set, or specific developer without an identifiable registered transfer agent responsible for the statutory transfer agent functions. Where a registered transfer agent uses DLT as part of its own books-and-records architecture, the more practical question is whether the transfer agent can satisfy the Exchange Act transfer agent rules, including maintaining an accurate master securityholder file, safeguarding records, correcting errors, and performing required shareholder and regulatory functions.

Similarly, certain current regulatory requirements may require careful operational design in the context of distributed ledgers, such as various requirements under the SEC rules to:

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85. Transfer Agent Regulations, Exchange Act Release No. 76,743, at 21 (Dec. 22, 2015), https://www.sec.gov/rules/concept/2015/34-76743.pdf. *See also* Off. of Info. & Reg. Affairs, Transfer Agents, RIN 3235-AL55, Spring 2025 Unified Agenda, https://www.reginfo.gov/public/do/eAgendaViewRule?RIN=3235-AL55&pubId=202504.

86. *See, e.g.*, SEC Crypto/DLT FAQs, *supra* note 25; SEC Tokenized Statement, *supra* note 25; 17 C.F.R. 240.17Ad-17; Regulation S-P: Privacy of Consumer Financial Information and Safeguarding Customer Information, Exchange Act Release No. 34-100155, 89 Fed. Reg. 47688 (June 3, 2024).

87. Keen & Ahmadifar, *supra* note 5, at 31–34.

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- have certain industry personnel be fingerprinted;[88]
- safeguard assets in the transfer agent's custody;[89]
- reconcile aged record differences;[90]
- record changes to the master securityholder file within a specified number of days;[91] or
- ensure the authenticity and quality of the electronic facsimile, detect attempts to alter or remove the records, and provide means to recover altered, damaged, or lost records resulting from any cause.[92]

Rule 17Ad-17's address-of-record search obligations also raise compliance design questions for tokenized share registers, where a wallet address alone will not provide the contact information needed to conduct prescribed searches. An issuer or transfer agent operating on DLT generally will need off-chain contact information through onboarding, whitelisting, or shareholder-servicing processes.[93]

The 2024 amendments to Regulation S-P are particularly relevant for transfer agents using DLT. The amendments require covered transfer agents to maintain an incident-response program for unauthorized access to or use of customer information, provide customer notice within prescribed time periods after determination that sensitive customer information was or is reasonably likely to have been accessed without authorization, oversee service providers, and maintain related records. The amendments' staggered compliance dates of December 3, 2025, for larger entities and June 3, 2026, for smaller entities have both passed, so these requirements now apply to all covered agents. A transfer agent operating a distributed-ledger share record must design those controls around customer information systems and securityholder information it maintains.[94]

These and other outdated concepts highlight the need to continue to modernize the existing federal regulations applicable to transfer agents to fully harness the innovation DLT offers in this space.

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88. 17 C.F.R. § 240.17f-2.
89. 17 C.F.R. § 240.17Ad-12.
90. 17 C.F.R. § 240.17Ad-11.
91. 17 C.F.R. § 240.17Ad-10.
92. 17 C.F.R. § 240.17Ad-7.
93. 17 C.F.R. § 240.17Ad-17.
94. Regulation S-P: Privacy of Consumer Financial Information and Safeguarding Customer Information, Exchange Act Release No. 34-100155, 89 Fed. Reg. 47688 (June 3, 2024), https://www.govinfo.gov/content/pkg/FR-2024-06-03/pdf/2024-11116.pdf.

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[G][2] State Regulation

State regulations may also raise obstacles for adopting a distributed ledger as a transfer agent. State laws impose significant corporate regulations governing issuers' conduct. For example, until amendments in 2017, Delaware used language that, for purposes of votes, required the preparation of a list of stockholders by an "officer who has charge of the stock ledger of a corporation." Section 224 also required a corporation to maintain its records in a manner that was unclear regarding whether it permitted the use of a DLT, and section 232 permitted corporations to provide shareholder notices through electronic means.

In 2017, to capture the use of DLT, the state amended:

- Section 219 replaced "officer who has charge" with corporation-level responsibility for the stockholder list, permitted outsourcing of such roles, and defined "stock ledger" as "1 or more records administered by or on behalf of the corporation in which the names of all of the corporation's stockholders of record, the address and number of shares registered in the name of each such stockholder, and all issuances and transfers of stock of the corporation are recorded in accordance with § 224 of this title";[95]
- Section 224 to expressly state that a corporation may maintain its record in "one or more electronic networks or databases (including one or more distributed electronic networks or databases)";[96] and
- Section 232 to expand the definition of "electronic transmission" to include "1 or more electronic networks or databases (including 1 or more distributed electronic networks or databases), that creates a record that may be retained, retrieved and reviewed by a recipient thereof, and that may be directly

95. DEL. CODE ANN. tit. 8, § 219 (2020); *see also* J. Travis Laster & Marcel T. Rosner, *Distributed Stock Ledgers and Delaware Law*, 73 BUS. LAW. 319 (Spring 2018) [hereinafter Laster & Rosner] (noting "the changes to section 219 make clear that a corporation has the power to delegate the administration of its stock ledger to a third-party service provider, such as a transfer agent, or to a network of participants, such as its stockholders. The amendments to section 219 do not go so far as to authorize the use of blockchain technology to track share ownership without some involvement by the corporation. The [amendment] . . . implies that the corporation must remain involved in some capacity.").

96. DEL. CODE ANN. tit. 8, § 224; *see also* Laster & Rosner, *supra* note 95.

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reproduced in paper form by such a recipient through an automated process."[97]

In addition, UCC provisions, which many states have adopted in various degrees, may pose additional obstacles. For example, the usage of distributed ledgers to transfer certificated securities may raise issues under Article 8 of the UCC.[98] While corporations may convert to uncertificated shares to comply with Article 8, some states require that the certificated securities first be surrendered to the issuer.[99] Similarly, section 8-403(a) of the UCC grants an uncertificated security shareholder stop-transfer rights under certain circumstances, a request with which a distributed ledger would be unable to comply absent additional measures by the issuer.[100]

As noted above, many states have adopted the 2022 UCC amendments, including new Article 12, but enactment, effective dates, and non-uniform variations remain state-specific. Article 12 does not replace the Article 8 analysis for uncertificated securities or security entitlements. It, instead, creates a separate commercial-law framework for certain controllable electronic records and related rights. For tokenized securities, issuers and transfer agents therefore still must determine whether the relevant interest is governed by Article 8, Article 12, corporate law, or some combination of those regimes, and whether the system provides any required stop-transfer, control, correction, and recordkeeping functionality.[101]

Thus, issuers must conduct a careful analysis of the requirements under the UCC.

[G][3] Inability to Automate Certain Roles

As noted above, a distributed ledger probably could perform many of the core transfer agent functions. Many of the incidental services normally provided by a transfer agent, however, would be difficult to implement on a distributed ledger alone. A public distributed ledger standing alone generally would not, as a practical and legal matter, be used to maintain personally identifiable information such as names, addresses, and taxpayer identification numbers, because recording such data on an immutable, publicly visible ledger would raise significant privacy and data security concerns and would be difficult

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97. DEL. CODE ANN. tit. 8, § 232(c).
98. *See* Laster & Rosner, *supra* note 95; Richards, Layton & Finger, 2017 Proposed Amendments to the General Corporation Law of the State of Delaware (2017) [hereinafter Richards, Layton & Finger].
99. *See, e.g.*, DEL. CODE ANN. tit. 8, § 158 (2017); Richards, Layton & Finger, *supra* note 98.
100. U.C.C. § 8-403(a); Keen & Ahmadifar, *supra* note 5, at 33–34.
101. *See* U.C.C. § 12; U.C.C. § 8-103(h); U.C.C. §§ 12-102, 12-104, 12-105.

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to reconcile with the safeguarding, disposal, confidentiality, and incident-response obligations applicable to transfer agents and other covered institutions. Nor is a public ledger, standing alone, well suited to communicating with shareholders and responding to their inquiries; transmitting shareholder reports, proxy statements, prospectuses, account statements, and other shareholder documents; or filing tax reports with, and remitting withholding to, the IRS.[102] Many of these services therefore would need to be provided through a complementary system or platform—for example, an issuer, transfer agent, broker, intermediary, wallet, or other shareholder-servicing platform, including a traditional provider of transfer agency services. Emerging privacy-preserving techniques, such as zero-knowledge proofs and selective-disclosure identity systems, may permit verification of identity, eligibility, or transfer status without exposing the underlying personal information on-chain, but they reinforce rather than eliminate the need for off-chain records and responsible service providers.[103] Post-2021, digital asset tax reporting developments point in the same direction. Treasury and the IRS have adopted digital asset broker reporting regulations, including Form 1099-DA reporting, and a fund transfer agent or related service provider should consider whether its operational role requires collection, retention, and reporting of certain information that cannot, and should not, be maintained solely on a public blockchain.[104]

[G][4] Technology and Education Gap

DLT continues to evolve at a rapid pace, and its use in connection with registered products can no longer be described as confined to the earliest stages of experimentation. Since the prior edition, market participants have moved from studying the technology to deploying it in more concrete settings, and regulators have moved from anticipating the issue to addressing it. Even so, this progress has narrowed the technology and education gap rather than closed it. Boards, advisers, transfer agents, intermediaries, custodians, regulators, and service providers must understand not only the vocabulary of public ledgers,

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102. Keen & Ahmadifar, *supra* note 5, at 34.

103. *See* NIST, NISTIR 8202, BLOCKCHAIN TECHNOLOGY OVERVIEW (Oct. 2018) (explaining that typical blockchain implementations are not standalone identity-management systems and that permissioned systems may selectively reveal transaction information), https://doi.org/10.6028/NIST.IR.8202.

104. *See* Treas. Reg. § 1.6045-1; Gross Proceeds and Basis Reporting by Brokers and Determination of Amount Realized and Basis for Digital Asset Transactions, T.D. 10000, 89 Fed. Reg. 56480 (July 9, 2024); IRS, About Form 1099-DA, Digital Asset Proceeds from Broker Transactions (last updated Jan. 20, 2026).

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permissioned systems, wallets, private keys, smart contracts, and multichain support, but also how those tools operate alongside conventional books and records and affect the legally operative share register, transfer restrictions, errors, corrections, cybersecurity, privacy, reconciliation, shareholder servicing, and accountability.[105]

Most directly for transfer agents, SEC staff has acknowledged that a registered transfer agent may maintain required securityholder records on a distributed ledger, or use DLT as a component of its master securityholder file, if the transfer agent otherwise satisfies the applicable Exchange Act requirements. The incremental nature of this guidance, rather than comprehensive DLT-specific transfer agent rulemaking, itself reflects a market still developing shared expectations and operational experience. These developments do not mean, however, that traditional transfer agency is disappearing or that securities are moving wholesale to public blockchains. The more likely near-term model remains incremental and hybrid, where a distributed ledger may serve as a recordkeeping, transfer, or transparency layer, while a registered transfer agent or other regulated service provider remains responsible for the legally operative records, controls, corrections, shareholder communications, and compliance functions. As market participants continue to test the waters, broader adoption will turn less on whether securities can be tokenized as a technical matter than on whether DLT-based systems can be integrated into existing transfer agent and related frameworks.

§ 46:2.2 Custody

Custody of securities and other financial assets plays a critical role in safeguarding and transferring investor assets. While individual investors may simply hold their digital assets in cold storage, warm storage, or a hot wallet of their choosing,[106] various federal regulations impose stringent requirements on market participants that

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105. *See* SEC Crypto/DLT FAQs, *supra* note 25; SEC Tokenized Statement, *supra* note 25; *see also infra* section 46:3.4.

106. Custody practice commonly distinguishes "hot" wallets (private keys held on systems connected to the internet, enabling immediate transfers), "cold" storage (keys generated and held offline), and intermediate "warm" arrangements (keys held on online-capable systems subject to additional access controls and delayed or restricted authority). These designations are generally industry usage rather than regulatory categories. *See* Custody of Digital Asset Securities by Special Purpose Broker-Dealers, Exchange Act Release No. 34-90788, 86 Fed. Reg. 11627, 11630–31 (Feb. 26, 2021), https://www.govinfo.gov/content/pkg/FR-2021-02-26/pdf/2020-28847.pdf (recognizing, in the broker-dealer digital asset custody context, private key protection processes including cold storage, key sharding, multiple factor authentication, and biometric authentication).

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custody certain assets held by regulated entities, such as SEC-registered investment advisers and funds. Such custodians may need to comply with requirements under the Investment Advisers Act of 1940, as amended (the "Investment Advisers Act"), the Investment Company Act of 1940, as amended (the "Investment Company Act"), the Exchange Act, and the Commodity Exchange Act, as amended (CEA). Because safeguarding of assets is an important function of the securities laws, these rules in general are detailed and complex. Although technological advancements, wider public and industry adoption, and regulatory developments have started to surface workable practices with respect to custody of digital assets, navigating these complex regulatory frameworks has continued to prove challenging both with respect to the use of distributed ledgers for custody and for perfecting custody over digital assets. In particular, as discussed below, the nature of digital assets continues to pose unique challenges to compliance with these regulatory requirements. Since the initial publication of this chapter, significant regulatory and industry developments have affected how asset managers custody digital assets, as described below.

[A] Custody Under the Investment Advisers Act

Asset managers ordinarily hold their clients' assets using either internal systems or external service providers, depending on the nature of the particular asset and applicable regulatory requirements. The Investment Advisers Act regulates such investment advisers' custodial practices to "protect . . . those client assets from being lost, misused, misappropriated or subject to the advisers' financial reverses."[107] More specifically, Rule 206(4)-2 of the Investment Advisers Act ("Custody Rule") generally requires an investment adviser that is deemed to have custody of its clients' "funds" and "securities" to hold such assets with a "qualified custodian."[108] Under the rules, an investment adviser is deemed to have "custody" of its clients' assets if it holds "directly or indirectly, client funds or securities or has any authority to obtain possession of them."[109] Thus, an investment adviser may be deemed to have custody of a client's assets if it (1) holds its clients' securities or cash; (2) has any authority to withdraw or dispose of such assets for any reason other than

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107. Custody of Funds or Securities of Clients by Investment Advisers, Investment Advisers Act Release No. IA-2968 (Dec. 30, 2009), 75 Fed. Reg. 1456 (Jan. 11, 2010) https://www.federalregister.gov/documents/2010/01/11/2010-18/custody-of-funds-or-securities-of-clients-by-investment-advisers.
108. 17 C.F.R. § 275.206(4)-2(a)(1).
109. 17 C.F.R. § 275.206(4)-2(d)(2).

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authorized trading (for example, to deduct advisory fees and other expenses directly from the account); or (3) acts in a capacity that gives it legal ownership over, or access to, its clients' assets (for example, serving as a general partner or managing member of a pooled investment vehicle).[110] In 2023, the SEC proposed a sweeping Safeguarding Rule that would have redesignated Rule 206(4)-2 as Rule 223-1 and expanded the "funds" and "securities" concept to a broader "assets" category.[111] The Commission, however, subsequently withdrew the proposed rule effective June 17, 2025.[112] Thus, the proposed rule never went into effect. Similarly, the SEC adopted separate Private Fund Adviser Rules that would have impacted certain requirements under the current Custody Rule, which were later vacated by the Fifth Circuit Court of Appeals.[113]

[A][1] Qualified Custodian

An investment adviser that is deemed to have custody of its clients' funds or securities is required to have those funds or securities maintained with a "qualified custodian."[114] A qualified custodian mainly means a bank or FDIC-insured savings association, an SEC-registered broker-dealer, a CFTC-registered futures commission merchant, or a qualifying foreign financial institution.[115] In 2025, the SEC staff issued no-action relief under which the staff would not recommend enforcement action against registered investment advisers and registered funds for treating qualifying state-chartered trust companies as a "bank"[116] for purposes of qualified-custodian requirements with

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110. 17 C.F.R. § 275.206(4)-2(d)(2)(iii).
111. Safeguarding Rule, Investment Advisers Act Release No. IA-6240, 88 Fed. Reg. 14672 (Mar. 9, 2023), https://www.federalregister.gov/documents/2023/03/09/2023-03681/safeguarding-advisory-client-assets ("defining 'assets' as 'funds, securities, or other positions held in a client's account.' As opposed to the custody rule's use of 'funds and securities'").
112. *See* Withdrawal of Proposed Regulatory Actions, Securities Act Release No. 33-11377, 90 Fed. Reg. 25531 (June 17, 2025), https://www.federalregister.gov/documents/2025/06/17/2025-11110/withdrawal-of-proposed-regulatory-actions.
113. *See* Private Fund Adviser Rules, Investment Advisers Act Release No. IA-6383, 88 Fed. Reg. 63206 (Sept. 14, 2023), *vacated by* Nat'l Ass'n of Priv. Fund Managers v. SEC, 103 F.4th 1097 (5th Cir. 2024).
114. 17 C.F.R. § 275.206(4)-2(a)(1).
115. 17 C.F.R. § 275.206(4)-2(d)(6)(i)–(iv).
116. SEC Div. of Inv. Mgmt., Simpson Thacher & Bartlett LLP, No-Action Letter (Sept. 30, 2025), https://www.sec.gov/rules-regulations/no-action-interpretive-exemptive-letters/division-investment-management-staff-no-action-interpretive-letters/simpsonthacherbartlett093025 [hereinafter Simpson Thacher & Bartlett, SEC No-Action Letter]; Hester M. Peirce, Comm'r, SEC, Out of the Gray Zone: Statement on the Division of

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respect to crypto assets and related cash or cash equivalents, subject to the conditions that include due inquiry into safeguarding controls, contractual segregation and limits on rehypothecation, disclosure of material risks, and best interest determinations, as discussed below. In addition, federal banking agencies have provided guidance with respect to bank or trust company digital asset custody and safekeeping, including with respect to banking organizations' authority and risk-management expectations.

Such entities must maintain a separate account for each client of the investment adviser under the client's name, or in accounts that contain only the investment adviser's clients' funds and securities, with the investment adviser as an agent (or trustee) of the clients.[117] Upon opening an account with the custodian on the client's behalf, the investment adviser must send certain notifications to the client, including notice of the custodian's name and address and the manner in which the assets are held.[118] The investment adviser must "have a reasonable basis, after due inquiry," for believing the qualified custodian is sending at least quarterly account statements to each of the investment adviser's clients.[119] Moreover, the custodied assets must be subject to a surprise examination by an independent public accountant to verify the assets at least once each year, and advisers must report custody arrangements on Form ADV while the accountant files the surprise-examination certificate on Form ADV-E.[120]

[A][2] Adviser (or Its Affiliate) As a Qualified Custodian

If an investment adviser, or its affiliate, serves as the qualified custodian of its clients' assets, the registered investment adviser must

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Investment Management's No-Action Letter Relating to the Custody of Crypto Assets with State Trust Companies (Sept. 30, 2025), https://www.sec.gov/newsroom/speeches-statements/peirce-statement-custody-crypto-assets-093025; Caroline A. Crenshaw, Comm'r, SEC, Poking Holes: Statement in Response to No-Action Relief for State Trust Companies Acting as Crypto Asset Custodians (Sept. 30, 2025), https://www.sec.gov/newsroom/speeches-statements/crenshaw-093025-poking-holes-statement-response-no-action-relief-state-trust-companies-acting-crypto.

117. 17 C.F.R. § 275.206(4)-2(a)(1).

118. 17 C.F.R. § 275.206(4)-2(a)(2).

119. 17 C.F.R. § 275.206(4)-2(a)(3).

120. 17 C.F.R. § 275.206(4)-2(a)(4); Form ADV, Part IA, Item 9. The SEC has brought an enforcement action against an investment adviser to a private fund investing in digital assets for alleged violations of these custody-rule provisions. *See In re* Galois Cap. Mgmt. LLC, Investment Advisers Act Release No. 6670, Admin. Proc. File No. 3-22043 (Sept. 3, 2024), https://www.sec.gov/files/litigation/admin/2024/ia-6670.pdf.

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obtain, or receive from a related person, an annual internal control report related to custody of client assets by an independent public accountant registered with and inspected by the Public Company Accounting Oversight Board.[121] The report must describe control objectives, controls, the accountant's test of the controls, and verification that client assets are reconciled to an unaffiliated custodian, and test results.[122]

[A][3] Exceptions to the Custody Rule

With respect to its client holdings in mutual fund shares, an investment adviser may use the fund's transfer agent in lieu of a qualified custodian.[123] In addition, non–publicly offered shares are excluded from the qualified-custodian requirements if they are uncertificated and ownership of such securities is recorded on the issuer's (or its transfer agent's) books in the name of the client, and are transferable only upon prior consent of the issuer or holders of the issuer's outstanding securities.[124] Pooled investment vehicles subject to an annual audit by an independent public accountant registered with and subject to regular inspection by the PCAOB are also not required to comply with the notice and account statement requirements, and are deemed to be in compliance with the independent verification requirements as long as such entities distribute audited financial statements prepared in accordance with generally accepted accounting principles to the beneficial owners of the pooled investment vehicles within one hundred twenty days of the entity's fiscal year-end (one hundred eighty days for fund of funds) and promptly upon liquidation.

[B] Custody Under the Investment Company Act

The Investment Company Act regulates the custody of a registered management fund's assets. To ensure the safety of the assets, the rules require such funds to maintain their assets with certain enumerated custodians, such as a bank, a member of a national securities exchange, a securities depository custodian, or other similar foreign entity.[125]

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121. 17 C.F.R. § 275.206(4)-2(a)(6).
122. *Id*.
123. 17 C.F.R. § 275.206(4)-2(b)(1).
124. 17 C.F.R. § 275.206(4)-2(b)(2)(i).
125. 15 U.S.C. § 80a-17(f); *see also* 17 C.F.R. § 270.17f-4 to 270.17f-7.

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[B][1] Bank Custody

Section 17(f) requires registered funds that maintain custody of their "securities and similar investments" with a bank to do so with a bank that has the same qualifications as those of trustees of a unit investment trust.[126] This generally means that the bank must at all times have an aggregate capital (including surplus and undivided profits) of a specific minimum amount not less than $500,000.[127] To maintain custody with such a bank, the fund must also keep the cash proceeds from a sale of such assets and other cash account in the custody of the bank or in accordance with such other rules as the SEC may prescribe from time to time.[128] A fund is allowed to maintain a checking account with the bank for the trustees of a unit investment trust in an amount no higher than the fidelity bond covering the fund's officers and employees. As noted above, the SEC staff has issued no-action relief that would allow registered investment advisers and funds to treat state-chartered trust companies as a "bank" for purposes of qualified-custodian requirements, subject to the conditions set forth in the no-action letter.

Since the initial publication of this chapter, there have been significant regulatory developments with respect to bank digital asset custody that should be taken into account. For example, in 2025, the OCC issued Interpretive Letter 1183 rescinding the prior OCC supervisory non-objection process and reaffirming national-bank authority to provide crypto asset custody services; the OCC also issued Interpretive Letter 1184 addressing crypto asset custody services, execution, and outsourcing. In addition, the FDIC and Federal Reserve withdrew certain prior approval or advance-notification expectations for permissible crypto-related activities, while leaving those activities subject to safety-and-soundness supervision, and the federal banking agencies issued a joint statement identifying risk-management considerations for banks that provide crypto asset safekeeping, including private key control, segregation, sub-custody, due diligence, audit, compliance, and contingency planning.[129]

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126. *Id*.
127. 15 U.S.C. § 80a-26(a)(1).
128. 15 U.S.C. § 80a-17(f).
129. OCC, Interpretive Letter No. 1183, OCC Letter Addressing Certain Crypto-Asset Activities (Mar. 7, 2025), https://www.occ.gov/topics/charters-and-licensing/interpretations-and-decisions/2025/int1183.pdf; OCC, Interpretive Letter No. 1184, Clarification of Bank Authority Regarding Crypto-Asset Custody Services (May 7, 2025), https://www.occ.gov/topics/charters-and-licensing/interpretations-and-decisions/2025/int1184.pdf; FDIC, FIL-7-2025, FDIC Clarifies Process for Banks to Engage in Crypto-Related Activities

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[B][2] Securities Depository Custodian

Under certain conditions, a registered fund may custody its "financial assets"[130] for which it holds securities entitlement with a securities depository.[131] The fund's contract with such custodian (or the custodian's written rules for its participants) must require the securities depository to, at minimum, exercise due care in accordance with reasonable commercial standards in providing such services, and to, upon request, promptly provide the fund with reports on its internal accounting controls and financial condition.[132] The fund must also implement internal controls reasonably designed to prevent and detect unauthorized officers' instructions.[133]

The custodian may also engage a subcustodian as long as the subcustodian is subject to the same conditions noted above.[134]

(Mar. 28, 2025), https://www.fdic.gov/news/financial-institution-letters/2025/fdic-clarifies-process-banks-engage-crypto-related; Press Release, Bd. of Governors of the Fed. Reserve Sys., Federal Reserve Board Announces the Withdrawal of Guidance for Banks Related to Their Crypto-Asset and Dollar Token Activities (Apr. 24, 2025), https://www.federalreserve.gov/newsevents/pressreleases/bcreg20250424a.htm; Press Release, Bd. of Governors of the Fed. Reserve Sys., FDIC, & OCC, Crypto-Asset Safekeeping by Banking Organizations (July 14, 2025), https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20250714a1.pdf.

130. "Financial asset" means "any property that is held by a securities intermediary for another person in a securities account if the securities intermediary has expressly agreed with the other person that the property is to be treated as a financial asset under" the Uniform Commercial Code. U.C.C. § 8-102(a)(9). A "securities intermediary" includes a clearing corporation or "a person, including a bank or broker, that in the ordinary course of its business maintains securities accounts for others and is acting in that capacity." U.C.C. § 8-102(a)(14). A person acquires a security entitlement if a securities intermediary "indicates by book entry that a financial asset has been credited to the person's securities account." U.C.C. § 8-501(b)(1).

131. 17 C.F.R. § 270.17f-4(b). A "security depository" means any clearing corporation registered as such with the SEC or a Federal Reserve bank or other person authorized to operate a federal book entry system as prescribed in the Department of Treasury's (or other federal agencies) regulations. 17 C.F.R. § 270.17f-4(c)(6). In light of this definition, a permissioned blockchain would not qualify as such merely because it records transfers of digital assets or tokenized interests.

132. 17 C.F.R. § 270.17f-4(b)(1).

133. 17 C.F.R. § 270.17f-4(b)(2).

134. 17 C.F.R. § 270.17f-4(a).

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[B][3] Self-Custody Under Certain Conditions

A registered fund may maintain custody of its assets if it can comply with specific asset control and safekeeping requirements. Specifically, under certain exceptions, a fund may deposit its "securities and similar investments . . . in the safekeeping of, or in a vault or other depository maintained by, a bank or other company whose functions and physical facilities are supervised by Federal or State authority." The fund must physically segregate its securities and similar investments from those of any other person.[135]

Other than certain officers and employees of the custodian and the fund's independent auditor, only persons authorized pursuant to a fund's board of directors' approval may be permitted to have access to custodied assets, and the custodian at all times must be subject to an SEC inspection.[136] When depositing or withdrawing such assets with the custodian, such persons must provide a signed notation, on a serially numbered form, showing:

(1) date/time of deposit/withdrawal/order;

(2) title/amount of the investment deposited and other identifications (for example, certificate numbers);

(3) manner of acquisition of the investments deposited or the purpose of the withdrawal; and

(4) if withdrawn and delivered to another person, the name of such person.[137]

Lastly, an independent public accountant of the fund must verify the custodied securities and similar investments through actual examinations at least three times during each fiscal year, two of which must be surprise examinations.[138] Upon completion of each examination, Form N-17f-2 must be promptly filed with the SEC noting that such examination has been conducted and detailing the nature and extent of the examination.[139]

[B][4] Custody with a Member of a National Securities Exchange

A registered fund is prohibited from maintaining custody of its securities and similar investments with a member of national securities exchange, except pursuant to a written contract approved by a

135. 17 C.F.R. § 270.17f-2(b).
136. 17 C.F.R. § 270.17f-2(d).
137. 17 C.F.R. § 270.17f-2(e).
138. 17 C.F.R. § 270.17f-2(f).
139. *Id*.

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majority of its board and submitted promptly to the SEC.[140] Such a written contract, which must be ratified by the board annually, must include provisions requiring the segregation of the fund's assets from the assets of the custodian's other clients (through separate containers, tags, labels, or other means) and verification of such assets through examinations by the fund's independent public accountant at least once during the fund's fiscal year. Additionally, the contract must prohibit the custodian from attaching a lien or charge of any kind in its favor and from assigning, hypothecating, pledging, or otherwise disposing of the investments (except at the direction of the fund).[141] Upon completion of each examination, Form N-17f-1 must be promptly filed with the SEC noting that such examination has been conducted and detailing the nature and extent of the examination.

The segregation requirement and the prohibitions pertaining to the lien, assignments, and hypothecation related requirements do not apply to investments the custodian bought for, or sold to, the fund until such investments are in the physical possession of the custodian and the fund renders the payment.[142]

[B][5] Custody Outside the United States or a Foreign Securities Depository

Subject to certain conditions, a registered fund may maintain custody of its assets with an "eligible securities depository"[143] or a foreign bank.[144]

[C] Custody Under the Exchange Act

First adopted in 1972, Rule 15c3-3 under the Exchange Act, also known as the Customer Protection Rule, governs custody requirements applicable to broker-dealers.[145] As the SEC and FINRA staff aptly summarized in a joint statement issued in 2019:

> The purpose of the Customer Protection Rule is to safeguard customer securities and funds held by a broker-dealer, to prevent investor loss or harm in the event of a broker-dealer's failure, and to enhance the Commission's ability to monitor and prevent unsound business practices. Put simply, the Customer Protection Rule requires broker-dealers to safeguard customer assets and to keep customer assets separate from the firm's assets, thus

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140. 17 C.F.R. § 270.17f-1.
141. 17 C.F.R. § 270.17f-1(b)(1)–(5).
142. 17 C.F.R. § 270.17f-1(b)(6).
143. 17 C.F.R. § 270.17f-7.
144. 17 C.F.R. § 270.17f-5.
145. 17 C.F.R. § 240.15c3-3.

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> increasing the likelihood that customers' securities and cash can be returned to them in the event of the broker-dealer's failure.[146]

The SEC and FINRA staff withdrew the 2019 joint statement in 2025, leaving it as historical background, and the SEC Trading and Markets staff later provided a subsequent statement on the applicability of Rule 15c3-3(b)(1) to broker-dealer activity with respect to crypto asset securities and FAQs addressing, among other things, the scope of Rule 15c3-3, control locations for crypto asset securities, and related records and SIPA issues. Those FAQs also state that non-security crypto assets are not SIPA-protected, although Article 8 treatments as "financial assets" carried in a "securities account" may help address customer-property treatment if a broker-dealer becomes insolvent.[147]

[C][1] Physical Possession or Control of Securities

Under the Customer Protection Rule, a broker-dealer is required to promptly "obtain" and "maintain" physical "possession or control" of its client's fully paid securities and excess margin securities.[148] Temporary delays due to normal business operations are permitted so long as the broker-dealer acts in good faith to promptly take control or possession of such assets.[149] Borrowed assets and repurchase agreements may be excluded from such requirements pursuant to written agreements.[150] The current SEC staff views with respect to broker-dealer custody of crypto asset securities focus on whether the broker-dealer has access to the asset, the capacity to transfer it on the relevant distributed ledger or network, documented technology and network assessments, and controls reasonably designed

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146. Div. of Trading & Mkts., U.S. Sec. & Exch. Comm'n & Off. of Gen. Counsel, Fin. Indus. Reg. Auth., *Joint Staff Statement on Broker-Dealer Custody of Digital Asset Securities*, U.S. SEC. & EXCH. COMM'N (July 8, 2019), https://www.sec.gov/news/public-statement/joint-staff-statement-broker-dealer-custody-digital-asset-securities (historical statement withdrawn May 15, 2025).

147. *SEC and FINRA Staff Withdraw Joint Staff Statement on Broker-Dealer Custody of Digital Asset Securities*, U.S. SEC. & EXCH. COMM'N (May 15, 2025), https://www.sec.gov/newsroom/speeches-statements/withdrawal-joint-staff-statement-broker-dealer-custody-digital-asset-securities; Div. of Trading & Mkts., Statement on the Custody of Crypto Asset Securities by Broker-Dealers, U.S. SEC. & EXCH. COMM'N (Dec. 17, 2025), https://www.sec.gov/newsroom/speeches-statements/trading-markets-121725-statement-custody-crypto-asset-securities-broker-dealers; SEC Crypto/DLT FAQs, *supra* note 25.

148. 17 C.F.R. § 240.15c3-3(b)(1).

149. 17 C.F.R. § 240.15c3-3(b)(2).

150. 17 C.F.R. § 240.15c3-3(b)(3)–(4).

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to protect private keys from theft, loss, and unauthorized use. The December 2025 Trading and Markets statement states a staff no-objection position under Rule 15c3-3(b)(1) and does not itself amend the Customer Protection Rule. Separately, the Division of Trading and Markets issued a 2026 Rule 15c3-3 no-action position concerning specified securities-lending reserve-formula treatment; that relief is relevant as Customer Protection Rule modernization context, but it should not be read as digital asset custody relief.[151]

[C][2] Control of Securities

Generally, a broker-dealer is deemed to have "possession" of the security if the security is located at the broker-dealer's location and "control" of the security if the security is, in addition to other requirements,

- represented by a certificate in custody or control of a clearing corporation or other subsidiary of a national securities exchange or association, or a bank custodian, free of any lien;
- carried by the broker-dealer in an omnibus credit account in compliance with the Federal Reserve System regulations;
- subject to a bona fide transfer of up to forty days;
- custodied with certain foreign entities approved by the SEC;
- under bank custody;
- in transit between offices of the broker-dealer for no more than five business days or held by its majority-owned subsidiary; or
- held at other locations permitted by the SEC.[152]

The SEC Trading and Markets staff clarified in FAQs that a broker-dealer may establish control through an otherwise qualifying Rule 15c3-3(c) control location even though the crypto asset security is not in certificated form.

Each day, the broker-dealer is required to assess which fully paid and excess margin securities are in its possession or control and which are not in its possession and control; if it finds itself to be noncompliant with the Customer Protection Rule, it must take remedial measures within a specified time frame.[153]

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151. SEC Div. of Trading & Mkts., ISLA Americas & Securities Industry and Financial Markets Association, No-Action Letter re: Rule 15c3-3 Reserve Formula (Mar. 30, 2026), https://www.sec.gov/files/isla-sifma-20260330-15c3-3.pdf.
152. 17 C.F.R. § 240.15c3-3(c).
153. 17 C.F.R. § 240.15c3-3(d).

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[C][3] Other Requirements

A broker-dealer must maintain special reserve bank accounts for the exclusive benefits of customers and proprietary (PAB) accounts[154] and comply with specific notification, deposit, and withdrawal requirements for such accounts;[155] buy-in all short security differences that are not resolved within a forty-five-day period;[156] and regulate its treatment of any free credit balances.[157] These rules are designed to ensure the broker-dealer is using its customers' cash for the intended purposes and not as working capital for its business.

[C][4] Exemptions and Extensions

The rules provide targeted exemptions, under certain conditions, for a broker-dealer:

- whose principal and agency activities are limited to specified transactions involving registered fund redeemable securities or insurance company separate-account interests;[158]
- that does not carry margin accounts, promptly transfers all funds and securities to its clients, does not otherwise hold, or owe, money or securities to its customers, and effectuates all such transactions with its customers through a bank account designated for the exclusive benefit of its customers;[159]
- that acts as an introducing broker-dealer, clears customer transactions with a clearing broker on a fully disclosed basis, and maintains applicable books and records;[160] and
- that is exempted by the SEC in response to the broker-dealer's written application.[161]

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154. 17 C.F.R. § 240.15c3-3(e).
155. 17 C.F.R. §§ 240.15c3-3(f)–(g), (j).
156. 17 C.F.R. §§ 240.15c3-3(f)–(g).
157. 17 C.F.R. § 240.15c3-3(h).
158. 17 C.F.R. § 240.15c3-3(k)(1).
159. 17 C.F.R. § 240.15c3-3(k)(2)(i). However, a broker-dealer retaining custody of securities pursuant to a repurchase agreement with a counterparty must comply with additional requirements, including that it must enter into such agreement pursuant to a written agreement and confirm in writing that the specific securities involved and advises the counterparty that SIPA does not protect the repurchase agreement; the broker-dealer is required to maintain custody for the securities subject to the agreement. 17 C.F.R. § 240.15c3-3(b)(4).
160. 17 C.F.R. § 240.15c3-3(k)(2)(ii).
161. 17 C.F.R. § 240.15c3-3(k)(3).

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A registered national securities exchange or association may also grant extensions of certain Customer Protection Rule timing requirements.[162]

[C][5] Delivery

These rules do not impact a customer's right to demand delivery of a certificate for a security to which it is entitled or of fully paid margin securities.[163]

[D] Special Purpose Broker-Dealers (Historical Statement)

This section discusses a 2020 SEC staff statement on special purpose broker-dealers that has since expired. The 2020 statement remains useful as historical background, but current analysis should also consider later Trading and Markets staff guidance and FAQs, including the 2025 broker-dealer custody statement, discussed below in section 46:3.5[A].

In December 2020, the SEC issued a statement and request for comment designed to "encourage innovation" in applying the Customer Protection Rule, *see* section 46:2.2[C] above, to digital asset securities.[164] Specifically, the SEC sought comments with respect to "special purpose broker-dealers" that limit their business "to digital asset securities to isolate risk and having policies and procedures to, among other things, assess a given digital asset security's distributed technology and protect the private keys necessary to transfer the digital asset security."[165]

Recognizing that rapid innovation in digital securities had created uncertainty for broker-dealers seeking to custody digital asset securities for customers, the SEC stated that, during the five-year period beginning April 27, 2021, a special purpose broker-dealer that limited its business to digital asset securities and met the release's conditions would not face enforcement action solely because the firm deemed itself to have physical possession or control of customer fully paid and excess margin digital asset securities for purposes of the Customer

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162. 17 C.F.R. § 240.15c3-3(n).
163. 17 C.F.R. § 240.15c3-3(*l*).
164. Custody of Digital Asset Securities by Special Purpose Broker-Dealers, Exchange Act Release No. 34-90788, 86 Fed. Reg. 11627 (Feb. 26, 2021), https://www.govinfo.gov/content/pkg/FR-2021-02-26/pdf/2020-28847.pdf ("Special Purpose Broker-Dealer Statement") (historical five-year SPBD statement; effective Apr. 27, 2021 and now superseded in material respects by the Dec. 17, 2025 Trading and Markets staff statement).
165. *Id*. at 11628.

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Protection Rule.[166] That period has expired, so the statement is now principally historical, although its conditions remain useful background. To rely on the statement during its effective period, the broker-dealer had to:

(1) have access to the digital asset securities and the capability to transfer them on the associated DLT;

(2) limit its business to dealing in, effecting transactions in, maintaining custody of, and/or operating an alternative trading system for digital asset securities;[167]

(3) not undertake to maintain custody of a digital asset security if it is aware of any material security or operational problems or weaknesses with the DLT and associated network used to access and transfer the digital asset security, or is aware of other material risks posed to the broker-dealer's business by the digital asset security;

(4) establish, maintain, and enforce reasonably designed written policies and procedures to conduct and document:

(a) an analysis of whether a particular digital asset is a security offered and sold pursuant to an effective registration statement or an available exemption from registration, and whether the broker-dealer meets its requirements to comply with the federal securities laws with respect to effecting transactions in the digital asset security, before undertaking to effect transactions in and maintain custody of the digital asset security; and

(b) an assessment of the characteristics of a digital asset security's DLT and associated network prior to undertaking to maintain custody of the digital asset security and at reasonable intervals thereafter;

(5) establish, maintain, and enforce reasonably designed written policies, procedures, and controls that are consistent with industry best practices to demonstrate the broker-dealer has exclusive control over the digital asset securities it holds in custody and to protect against the theft, loss, and unauthorized and accidental use of the private keys necessary to access

166. *Id*.

167. *Id*. However, the broker-dealer may hold proprietary positions in traditional securities solely for the purposes of meeting the firm's minimum net capital requirements under Rule 15c3-1 of the Exchange Act or hedging the risks of its proprietary positions in traditional securities and digital asset securities.

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and transfer the digital asset securities the broker-dealer holds in custody;

(6) establish, maintain, and enforce reasonably designed written policies, procedures, and arrangements to:

(a) specifically identify, in advance, the steps it will take in the wake of certain events that could affect the firm's custody of the digital asset securities, including, without limitation, blockchain malfunctions, 51% attacks, hard forks, or airdrops;

(b) allow for the broker-dealer to comply with a court-ordered freeze or seizure; and

(c) allow for the transfer of the digital asset securities held by the broker-dealer to another special purpose broker-dealer, a trustee, receiver, liquidator, or person performing a similar function, or to another appropriate person, in the event the broker-dealer can no longer continue as a going concern and self-liquidates or is subject to a formal bankruptcy, receivership, liquidation, or similar proceeding;

(7) provide written disclosures to prospective customers:

(a) that the firm is deeming itself to be in possession or control of digital asset securities held for the customer for the purposes of paragraph (b)(1) of Rule 15c3-3 based on its compliance with this SEC position; and

(b) about the risks of investing in or holding digital asset securities;[168] and

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168. 86 Fed. Reg. at 11632. At minimum, it must: (a) prominently disclose that digital asset securities may not be "securities" as defined in SIPA—and in particular, digital asset securities that are "investment contracts" under the *Howey* test, but are not registered with the SEC are excluded from SIPA's definition of "securities"—and thus the protections afforded to securities customers under SIPA may not apply; (b) describe the risks of fraud, manipulation, theft, and loss associated with digital asset securities; (c) describe the risks relating to valuation, price volatility, and liquidity associated with digital asset securities; and (d) describe, at a high level that would not compromise any security protocols, the processes, software and hardware systems, and any other formats or systems utilized by the broker-dealer to create, store, or use the broker-dealer's private keys and protect them from loss, theft, or unauthorized or accidental use. *Id*.

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(8) enter into a written agreement with each customer that sets forth the terms and conditions with respect to receiving, purchasing, holding, safekeeping, selling, transferring, exchanging, custodying, liquidating, and otherwise transacting in digital asset securities on behalf of the customer.[169]

During the statement's effective period, a special purpose broker-dealer was subject to FINRA and SEC examinations.

[E] Digital Securities and Related Custody Issues

At the core of the various custody regulations discussed above is the principle that a custodian must have possession or control over an asset to keep the asset safe from theft and misappropriation. To the extent that a regulated entity holds traditional securities, or digital securities issued or transacted on a distributed ledger, it must comply with the custody-related regulations described above. The fact that digital securities operate on a distributed ledger does not change the custodian's duties to safeguard those assets in compliance with applicable regulations. Thus, any registered entity—including investment advisers, funds, broker-dealers, banks, or other custodians—maintaining custody of a digital security would need to comply with the relevant regulations in the same manner as for traditional securities. That may not always present a clear path. The 2020 special-purpose broker-dealer statement should be treated as historical background and read together with later Trading and Markets guidance and FAQs, discussed below in section 46:3.5[A].

[E][1] Definitional Issues

As noted above, the Custody Rule generally requires an investment adviser that is deemed to have custody of its clients' "funds" and "securities" to hold such assets with a qualified custodian. However, as commenters have noted:

> While the term "security" is not defined in the Advisers Act and has been interpreted by federal courts in numerous decisions, the term "funds" is not defined in the Advisers Act or the Custody Rule. To date, neither the SEC nor federal courts have addressed whether, or to what extent, virtual currencies may be "funds" under the Custody Rule. The SEC has historically regarded cash and bank deposits as funds, but left the door open for classification of other assets as such. Some digital assets, in particular dollar-backed "stablecoins," are akin to cash or bank deposits

169. *Id.* at 11631–32.

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> because they similarly function as a liquid medium of exchange, store of value and unit of account.[170]

Although the SEC in its Safeguarding Rule proposal attempted to expand the definition of "funds and securities" to "assets," which the rule defined broadly as "funds, securities, or other positions held in a client's account" and went on to state "most crypto assets are likely to be funds or crypto asset securities" for purposes of the current Custody Rule, the rule proposal was subsequently withdrawn. Similarly, the GENIUS Act created a federal payment–stablecoin framework, but it did not impact whether payment stablecoins were "funds" for purposes of the Custody Rule. The 2025 SEC staff no-action letter likewise does not resolve the question; it uses the framing "Crypto Assets and cash and cash equivalents reasonably necessary to effect Crypto Assets transactions." Accordingly, the issue remains not free from doubt, and until Congress or the SEC provides clarity, a best practice would be to treat virtual currencies as "funds" for purposes of the Custody Rule.

[E][2] Operational Issues

In March 2019, the SEC's Division of Investment Management circulated a request for public input on, among other things, "whether and how characteristics particular to digital assets affect compliance with the Custody Rule."[171] While a small number of digital asset custodians are qualified custodians under the Custody Rule,[172] the unique characteristics of digital assets continue to pose obstacles to compliance with the Custody Rule and custody requirements for mutual funds. For example, the concept of control is difficult to apply in the context of digital securities since such assets are often maintained in wallets and controlled through a private key. If persons other than, or in addition to, the custodian have access to these private keys, it could be hard to assert the custodian has sole "control" or "possession" over

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170. Michael S. Didiuk, Joshua L. Boehm & Michael S. Selig, *How the Characteristics of Digital Assets Affect Compliance with the Custody Rule*, IAA TODAY (July 27, 2020) [hereinafter Didiuk, Boehm & Selig].

171. *Engaging on Non-DVP Custodial Practices and Digital Assets*, U.S. SEC. & EXCH. COMM'N (Mar. 12, 2019), https://www.sec.gov/investment/non-dvp-and-custody-digital-assets-031219-206.

172. In particular, certain trust companies chartered in New York and South Dakota, where regulators have established frameworks for chartering and supervising digital asset trust companies, may be "qualified custodians." These digital asset custodians offer security features such as cold storage and multi-signature digital wallets that are not currently offered by more traditional financial institutions. *See* Didiuk, Boehm & Selig, *supra* note 170.

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the digital securities in the wallet. Even in instances where it maintains sole possession of the asset, the custodian has little to no power to reverse unauthorized or incorrect transactions.[173] The custodian may also lose the private key entirely with no means to retrieve it, through a cyber attack, defalcation, or control failures, thus losing custody of the assets represented by the private key. In addition, if a custodian is utilizing the cold storage method, such as storing private keys or wallets in vaults, that could raise additional issues such as the need to physically safeguard the asset and the need to test and insure the vault's operation to curtail legal liability.[174] An adviser may direct an authorized trade through a qualified custodian without possessing the private key. If the adviser itself has access to a private key that permits it to transfer or withdraw client assets, however, that authority may constitute custody under the Custody Rule. Required independent accountant verification and tracing requirements may also pose a challenge when dealing with such assets.

All these operational and structural differences between traditional securities and digital securities raise significant challenges that must be studied closely. For additional discussions on custody issues pertaining to digital assets, including non-security digital assets, see section 46:3.5 below.

§ 46:2.3 Clearance and Settlement on a Blockchain

Clearance and settlement are key points in the post-trade life cycle for securities and other financial transactions, such as foreign exchange forward contracts and derivative contracts. Clearance has been defined as the process by which an intermediary calculates the counterparties' obligations to make deliveries or payments on the specified settlement date.[175] In the settlement process, the counterparties discharge their delivery and payment obligations. Blockchain technology could be used for each of these processes if certain regulatory obligations can be satisfied. The following subsections evaluate the clearance and settlement process, as well as the current or potential implementation of blockchain, for securities (publicly and privately issued) and commodity interests.

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173. Joint Statement on Broker-Dealer Custody of Digital Asset Securities, *supra* note 29.

174. Jesse Kanach, Dana Syracuse, Joshua Boehm & Thomas Ahmadifar, *Crypto Fundamentals*, TR. Q. REV., vol. 16 issue 3 (2018), at 12–19.

175. DAVID MILLS ET AL., FED. RSRV. BD., DISTRIBUTED LEDGER TECHNOLOGY IN PAYMENTS, CLEARING, AND SETTLEMENT 6 (2016), https://www.federalreserve.gov/econresdata/feds/2016/files/2016095pap.pdf [hereinafter DAVID MILLS].

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[A] Clearance and Settlement of Securities on a Blockchain

[A][1] Clearance and Settlement of Publicly Traded Securities on a Blockchain

After the "Paperwork Crisis" of the 1960s and 1970s, the securities industry moved toward a central depository and book-entry system that resulted in "share immobilization" with the Depository Trust & Clearing Corporation (DTCC), the parent of DTC, the National Securities Clearing Corporation, and the Fixed Income Clearing Corporation, among others, serving as key post-trade market infrastructure.[176] As such, DTCC is a primary provider of clearance and settlement services for exchange-listed equities and fixed income securities in the United States.[177] The trade settlement process for exchange-listed securities differs slightly for retail trades and institutional trades; however, in both cases, DTC typically provides the ultimate settlement services and transfers the securities between the buying and selling broker-dealer accounts at DTC.[178] Given the reliability of the current system, it remains unclear as to what extent, and at what speed, market participants will be willing to move to utilization of blockchain technology. Nonetheless, a key issue regarding clearance and settlement is the length of time required to process a transaction. Enhancing the speed of clearance and settlement of securities transactions could further reduce the amount of margin that counterparties are required to hold, while also reducing the risk of an unpredictable event that impacts the ultimate completion of the transaction.[179] If it continues to develop appropriately, DLT may

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176. For a further discussion of the Paperwork Crisis and the outgrowth of "share immobilization" and the role of DTCC, see Thomas M. Ahmadifar, Valerie Dahiya, Matthew S. Williams & Gwendolyn A. Williamson, *Proxy Voting and the Possibilities of Blockchain*, INV. LAW. at 10–11 (Oct. 2019).

177. DTCC, DTCC's BUSINESSES, SUBSIDIARIES & JOINT VENTURES, https://www.dtcc.com/about/businesses-and-subsidiaries (listing DTCC's subsidiaries including its foreign subsidiaries). For a discussion of blockchain technology in payment, clearing, and settlement in the international context, see COMM. ON PAYMENTS & MKT. INFRASTRUCTURES & BANK FOR INT'L SETTLEMENTS, DISTRIBUTED LEDGER TECHNOLOGY IN PAYMENT, CLEARING AND SETTLEMENT (2017), https://www.bis.org/cpmi/publ/d157.pdf.

178. Amendment to Securities Transaction Settlement Cycle, 81 Fed. Reg. 69240, 69247–50 (Oct. 5, 2016) (proposed rule), https://www.federalregister.gov/documents/2016/10/05/2016-23890/amendment-to-securities-transaction-settlement-cycle.

179. DTCC, PROJECT ION CASE STUDY 4 (2020), https://www.dtcc.com/~/media/Files/Downloads/settlement-asset-services/user-documentation/Project-ION-Paper-2020.pdf [hereinafter PROJECT ION WHITEPAPER].

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be a viable option for retooling the securities infrastructure in a way that enhances the efficiency of the clearance and settlement process for securities.[180] As discussed below, DTCC, and the financial services industry more broadly, continue to introduce blockchain and DLT-based solutions through parallel, pilot, or discrete infrastructure services, rather than through wholesale replacement of existing clearance and settlement systems. Since the prior edition, the SEC shortened the standard U.S. settlement cycle from T+2 to T+1, effective May 28, 2024, and adopted same-day affirmation requirements. The SEC has also adopted Treasury-market clearing reforms for covered clearing agencies, with compliance dates for eligible secondary-market cash transactions and eligible repo transactions extended to December 31, 2026, and June 30, 2027, respectively.[181] These reforms change the baseline. Shortened settlement cycles are now the norm, so a blockchain-enabled T+0, intraday settlement, or tokenized-collateral proposals must outperform an already-faster conventional system. The conventional infrastructure is compressing settlement and tightening clearing, so the critical emphasis should be on the incremental benefit DLT provides within that newer framework, such as shared records, collateral mobility, programmable settlement conditions, or improved reconciliation.

In 2019, the SEC staff issued a no-action letter to a blockchain-based securities settlement system to operate a pilot program.[182] Paxos Trust Co., LLC ("Paxos") is a New York limited purpose trust company regulated by the New York State Department of Financial Services (NYSDFS) and a participant of DTC. Per the terms of the no-action letter, Paxos's settlement service would allow two parties to bilaterally settle securities trades directly with each other. The service was designed to offer simultaneous exchange of cash and securities to settle trades. In the portion of the system directly relevant to its blockchain, Paxos creates digitized security entitlements of the assets used by the buyer and seller (that is, securities and/or cash), and the security entitlement is credited to the respective party in its account on the Paxos blockchain, which operates on a private and

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180. *See, e.g.*, DAVID MILLS, *supra* note 175.

181. Shortening the Securities Transaction Settlement Cycle, Exchange Act Release No. 34-96930, 88 Fed. Reg. 13872 (Mar. 6, 2023) (amending Exchange Act Rule 15c6-1 to shorten the standard settlement cycle for most broker-dealer transactions from T+2 to T+1, with a May 28, 2024, compliance date); Extension of Compliance Dates for Standards for Covered Clearing Agencies for U.S. Treasury Securities, 90 Fed. Reg. 11134 (Mar. 4, 2025).

182. Paxos Trust Co., LLC, SEC No-Action Letter, Fed. Sec. L. Rep. (CCH) ¶ 79,004 (Oct. 28, 2019), https://www.sec.gov/divisions/marketreg/mr-noaction/2019/paxos-trust-company-102819-17a.pdf.

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permissioned network. The SEC staff's no-action letter imposed various limitations on the pilot program, including a two-year period for operation, eligible-security and volume limits, and operations within the facts presented to the staff, and relieved Paxos from registering as a clearing agency under section 17A(b)(1) of the Exchange Act.[183] The two-year pilot period expired by its terms in October 2021, and the no-action relief should now be treated as historical. In May 2026, the SEC granted Paxos Securities Settlement Company, LLC temporary registration as a clearing agency for a period not to exceed eighteen months, reflecting movement from staff pilot relief toward regulated clearing-agency status, subject to the limits, exemptions, and conditions in the SEC order.[184]

In May 2020, DTCC announced Project Ion as a proof of concept for accelerated settlement utilizing DLT with the stated goal of pursuing a T+0 settlement cycle.[185] Project Ion sought to incorporate four key design concepts: trade capture, asset digitalization, netting, and settlement. DTCC later moved Project Ion into a parallel production environment in August 2022, using a private permissioned DLT platform built on R3 Corda. DTCC reported that Ion was parallel-processing more than 100,000 bilateral equity transactions per day, while DTC's existing systems remained the authoritative record.[186] These developments showed that DLT has been tested successfully as an infrastructure supplement for settlement processing, but not as a wholesale replacement for existing clearing-agency records, at least so far.

These initiatives also carry meaningful execution risk that must be carefully studied and designed for elimination or mitigation. The most prominent attempt to replace a national clearance and settlement system with DLT—the Australian Securities Exchange's blockchain replacement for its CHESS system—was halted in November 2022

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183. Paxos Trust Co., LLC, SEC No-Action Letter, *supra* note 182; *see also* Templum, Petition for Rulemaking Regarding Clearance and Settlement, at I.D. (Dec. 12, 2018), https://www.sec.gov/rules/petitions/2018/petn4-736.pdf; 15 U.S.C. § 78q-1(b)(1).

184. Paxos Securities Settlement Co., LLC, Exchange Act Release No. 34-105562, Order Granting an Application for Temporary Registration As a Clearing Agency Under Section 17A of the Securities Exchange Act of 1934 (May 27, 2026), https://www.sec.gov/files/rules/other/2026/34-105562.pdf.

185. PROJECT ION WHITEPAPER, *supra* note 179.

186. *DTCC Project Ion Platform Moves to Parallel Production Environment*, DTCC (Aug. 22, 2022), https://www.dtcc.com/news/2022/august/22/project-ion; *Innovation Insight: DTCC's Project Ion*, DTCC CONNECTION (Oct. 13, 2022), https://www.dtcc.com/dtcc-connection/articles/2022/october/13/innovation-insight-dtccs-project-ion.

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after an independent review, resulting in a significant write-down, which helps explain why U.S. incumbents have so far favored parallel or discrete DLT deployments over wholesale replacement of existing infrastructure.

Since then, another prominent effort in this space is DTC's pilot tokenization service for DTC-custodied assets. In December 2025, SEC Trading and Markets staff issued a no-action letter addressing that service for eligible DTC-held securities.[187] The service is limited to registered DTC Participants and approved wallets; DTC's records remain central to ownership and control, and tokenized entitlements are not assigned collateral or settlement value for DTC risk-management purposes. DTCC announced in May 2026 that DTC planned initial limited production trades in July 2026 and a service launch in October 2026, and later announced plans to connect the service to the Stellar public blockchain in the first half of 2027.

DTCC also has tested fund-data distribution as part of the infrastructure around tokenized products. In 2024, DTCC and Chainlink reported a Smart NAV pilot[188] involving major financial institutions that tested delivery of structured U.S. mutual fund NAV data on-chain.

Tokenized registered-fund structures also are beginning to affect settlement mechanics. In 2026, the SEC granted WisdomTree Digital Trust exemptive relief permitting affiliated and covered broker-dealers, subject to the conditions in the order, to purchase and sell shares of the WisdomTree Treasury Money Market Digital Fund at $1.00 per share on a principal basis rather than only at the fund's next-calculated NAV. WisdomTree announced that the relief would support 24/7 trading against USDC and instant settlement for tokenized money market fund shares within "U.S. regulatory perimeter via a dealer-principal liquidity model," which WisdomTree touted as a first for the industry.[189]

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187. Depository Trust Co., SEC Div. of Trading & Mkts. No-Action Letter (Dec. 11, 2025), https://www.sec.gov/files/tm/no-action/dtc-nal-121125.pdf; *Paving the Way to Tokenized DTC-Custodied Assets*, DTCC (Dec. 11, 2025), https://www.dtcc.com/news/2025/december/11/paving-the-way-to-tokenized-dtc-custodied-assets; *DTCC Advances Development of New Tokenization Service, Convenes 50+ Firms to Drive Digital Assets Adoption*, DTCC (May 4, 2026), https://www.dtcc.com/news/2026/may/04/dtcc-advances-development-of-new-tokenization-service.

188. DTCC & CHAINLINK, SMART NAV PILOT REPORT: BRINGING TRUSTED DATA TO THE BLOCKCHAIN ECOSYSTEM (May 2024), https://www.dtcc.com/-/media/Files/Downloads/DTCC-Connection/Smart_NAV-Report.pdf.

189. WisdomTree Digital Trust, Investment Company Act Release No. IC-35968, Order Under Sections 6(c) and 17(d) of the Investment Company Act of 1940 and Rule 17d-1 Thereunder (Feb. 23, 2026),

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In the securities-financing markets, SEC Trading and Markets staff also issued no-action relief in 2026 permitting limited U.S. participation in HQLAx's private, permissioned DLT platform for securities lending and repurchase-transaction collateral mobility without clearing-agency registration under section 17A(b)(1), subject to the facts, volume limits, participant conditions, reporting requirements, and time limits described in the request and staff response.[190]

[A][2] Clearance and Settlement of Private Securities on a Blockchain

By virtue of their nature and their regulatory treatment, as unregistered offerings, privately issued securities are offered and transact differently than publicly issued securities. A common method to privately issue securities is pursuant to Regulation D under the Securities Act of 1933 (the "Securities Act"), which provides an exemption from the registration requirements of the Securities Act.[191] Regulation D imposes various restrictions on qualifying private offerings of securities. For instance, many private offerings are limited in practice to purchasers who are deemed to be "accredited investors."[192] In addition, there are limitations on when and how the securities may be resold.[193]

Blockchain technology and smart contract technology could provide various possibilities for privately issued securities. Through smart

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https://www.sec.gov/files/rules/ic/2026/ic-35968.pdf; WisdomTree, WisdomTree to Launch 24/7 Trading and Instant Settlement for Tokenized Money Market Fund Shares (Feb. 24, 2026), https://ir.wisdomtree.com/news-events/press-releases/detail/777/wisdomtree-to-launch-247-trading-and-instant-settlement.

190. HQLAx S.à r.l. & Clearstream International S.A., SEC No-Action Letter, Request Related to the Use of HQLAx's Platform by U.S. Participants to Transfer Securities on a Private, Permissioned Distributed Ledger (May 4, 2026), https://www.sec.gov/files/tm/no-action/hqlax-nal-request-050426.pdf.

191. 17 C.F.R. §§ 230.500–230.508. Other examples of regulatory possibilities for the issuance of unregistered securities include Regulation A and Regulation Crowdfunding; see 17 C.F.R. §§ 230.251–230.263 (Regulation A); 17 C.F.R. pt. 227 (Regulation Crowdfunding).

192. 17 C.F.R. § 230.501(a) (defining "accredited investor"); 17 C.F.R. § 230.506(b)(2)(i) (limiting non-accredited purchasers to 35); *see also* 17 C.F.R. § 230.506(c)(2)(i) (requiring all purchasers in a generally solicited Rule 506(c) offering to be accredited investors).

193. 17 C.F.R. § 230.502(d) (imposing limitations on resale of Regulation D securities); 17 C.F.R. § 230.144 (providing a "safe harbor" for the resale of restricted securities if certain conditions are met); *see also* 17 C.F.R. § 230.144A (providing relief for private resales of securities to institutions).

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contracts, it may be possible to embed the regulatory limitations of Regulation D into the security tokens themselves. For instance, if the securities are digitized and issued on a blockchain, the securities could be programmed in such a way that they are only available to verified accredited investors who have completed AML/KYC and bad actor checks.[194] In addition, blockchain networks could potentially give accredited members of the network the option to trade and clear private securities transactions in peer-to-peer transactions over the blockchain network, with any restrictions on resale embedded in the code of the digitized security.

In May 2020, DTCC announced a new prototype platform (labeled "Project Whitney") to evaluate whether a digital infrastructure for supporting private market securities is worthwhile.[195] DTCC's stated goal with Project Whitney was to incorporate new technology to build greater efficiencies into the growing private securities markets in the United States. For a primary private security offering, DTCC explained that the Project Whitney platform could build out an interface that would allow for issuers to issue digitalized securities with programmed restrictions and for investors to present accreditation information. Once issued, the platform would distribute tokenized shares of the issuer to the investor's wallet on the Ethereum blockchain. DTCC explained that its platform could allow for secondary market transactions on a peer-to-peer basis or through a trading venue such as an Alternative Trading System (ATS). Per DTCC, the transfer agency record for the tokenized securities will be maintained off-blockchain and the tokens would be issued and could be transferred on the Ethereum blockchain.[196]

Project Whitney did not become a DTCC product. DTCC later described its Digital Securities Management initiative as building on the Project Whitney research, and after acquiring Securrency in 2023, DTCC folded that work into DTCC Digital Assets. Other market participants have developed separate private-market tokenization, transfer agent, ATS, custody, and settlement workflows.

[B] Netting and Settlement of FX Forward Contracts on a Blockchain

For foreign-exchange forward contracts (FX contracts), settlement involves the making of payments or exchange of payments between

194. *See* 17 C.F.R. § 230.506(d).
195. DTCC, PROJECT WHITNEY CASE STUDY (2020), https://www.dtcc.com/~/media/Files/Downloads/settlement-asset-services/user-documentation/Project-Whitney-Paper.pdf, at 3.
196. *Id*. at 6–7 (2020).

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counterparties on the contract's settlement date.[197] There are several associated risks with the settlement of FX contracts, including principal risk, replacement cost risk, liquidity risk, and operational and legal risks.[198] A number of different settlement arrangements are available to address these risks, such as close-out netting, bilateral obligation netting, collateral arrangements, settlement via traditional correspondent banking, on-us settlement, payment-versus-payment settlement, central clearing, and indirect participation in settlement or central counterparty (CCP) arrangements.[199]

In June 2020, Vanguard publicly announced that it had completed, along with Bank of New York Mellon, State Street, and Franklin Templeton, a simulated pilot for the trading of thirty-day FX contracts.[200] Using a blockchain technology from Symbiont,[201] according to Vanguard's press release, the test program demonstrated that blockchain technology gave the parties in the network "the ability to value, move, and settle collateral instantaneously . . . ."[202] Instantaneous settlement of FX transactions using blockchain technology could alleviate a number of the FX risks in Forex transactions, including counterparty payment and default risk and adverse external events between the trade date and settlement that could affect the transaction's value.

Since that 2020 pilot, similar work has continued in more targeted forms. Public-sector and market-infrastructure projects have tested blockchain-based settlement involving payments, tokenized deposits, and tokenized collateral; bank-operated platforms have also used

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197. FOREIGN EXCH. COMM., FOREIGN EXCHANGE TRANSACTIONS: EXECUTION TO SETTLEMENT RECOMMENDATIONS FOR NON-DEALER PARTICIPANTS 12 (2016), https://www.newyorkfed.org/medialibrary/microsites/fxc/files/2016/fxc011916.pdf.

198. BASEL COMM. ON BANKING SUPERVISION, BANK FOR INTERNATIONAL SETTLEMENTS, SUPERVISORY GUIDANCE FOR MANAGING RISKS ASSOCIATED WITH THE SETTLEMENT OF FOREIGN EXCHANGE TRANSACTIONS 27–29 (2013), https://www.bis.org/publ/bcbs241.pdf.

199. *Id*. at 29–31.

200. Press Release, Vanguard, Vanguard, Symbiont and Partners Collaborate to Accelerate Digitization of Currency Forward Market Using Blockchain Technology (June 23, 2020), https://corporate.vanguard.com/content/corporatesite/us/en/corp/who-we-are/pressroom/Press-Release-VG-Symbiont-Partners-Collaborate-Digitization-of-Currency-Forward-Market-Blockchain-062320.html [hereinafter Vanguard].

201. Adam Krellenstein & Ben Spiegelman, *Assembly™: The Blockchain for Enterprise Finance*, MEDIUM (Jan. 21, 2020), https://medium.com/symbiont-io/assembly-the-blockchain-for-enterprise-finance-cd6d1a803766.

202. Vanguard, *supra* note 200.

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tokenized deposits and token services to support around-the-clock, cross-border U.S. dollar payment and liquidity workflows.[203] CFTC staff and advisory-committee materials have separately addressed the use of tokenized non-cash collateral, including tokenized U.S. Treasuries, money market fund shares, and certain digital assets as margin collateral, and CFTC Letter No. 25-39 provides staff views on tokenized assets as collateral in futures and swaps markets. DTCC has also announced related work with Chainlink on collateral management. These developments are useful current examples, but they remain pilots, recommendations, staff guidance, or no-action positions rather than a general change to the CFTC's collateral rules.[204]

Market-infrastructure work has increasingly focused less on generic settlement speed and more on the legal and operational quality of the cash leg, collateral leg, participation access, finality, and risk controls. Public-sector and market-infrastructure pilots involving central bank money, tokenized deposits, and tokenized collateral illustrate the point that blockchain settlement design is useful only if the legal settlement asset, collateral treatment, operational controls, and participation obligations are clear.

§ 46:2.4 Other Investment Management Functions and Operations

The asset management industry continues to explore and increasingly adopt blockchain technology. Market participants have focused

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203. *See, e.g.*, Press Release, Citi, Citi Achieves Industry First: Integrating Citi® Token Services with 24/7 USD Clearing for Real-Time Cross-Border Payments and Liquidity Management (Sept. 29, 2025), https://www.citigroup.com/global/news/press-release/2025/citi-integrates-citi-token-services-with-24-7-usd-clearing-real-time-cross-border-payments-liquidity-management; *Kinexys Pilots First USD-Denominated Deposit Tokens*, J.P. MORGAN (June 24, 2025), https://www.jpmorgan.com/payments/newsroom/kinexys-usd-digital-deposit-tokens.

204. *See* Lin William Cong, Simon Mayer & Daniel Rabetti, *Tokenizing Real-World Assets*, WHARTON INITIATIVE ON FIN. POL'Y & REGUL. (May 2026), https://wifpr.wharton.upenn.edu/wp-content/uploads/2026/05/WIFPR-Tokenizing-Real-World-Assets-Cong-Mayer-and-Rabetti.pdf; Press Release, CFTC, CFTC Global Markets Advisory Committee, Digital Asset Markets Subcommittee, Recommendation on Tokenized Non-Cash Collateral (Nov. 21, 2024), https://www.cftc.gov/PressRoom/PressReleases/9009-24; CFTC Market Participants Div., Div. of Mkt. Oversight & Div. of Clearing & Risk, CFTC Staff Letter No. 25-39, Use of Tokenized Assets As Collateral in the Trading of Futures and Swaps (Dec. 8, 2025), https://www.cftc.gov/csl/25-39/download; Press Release, DTCC, DTCC Announces New Platform for Tokenized Real-time Collateral Management (Apr. 2, 2025), https://www.dtcc.com/news/2025/april/02/dtcc-announces-new-platform-for-tokenized-real-time-collateral-management.

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on targeted uses for the technology where a shared record, standardized data, digital identity controls, or blockchain analytics can support an existing process.

[A] Proxy Voting

In proxy voting, mutual funds face unique challenges. While a variety of matters require shareholder approval (in particular, change of control of the adviser), the large retail shareholder base and a lack of shareholder engagement make it difficult to obtain the required votes. In addition, given that most mutual fund shares are held through financial intermediaries, mutual funds struggle to ensure vote integrity. Finally, the costs of obtaining a vote can be prohibitive, creating perverse incentives in governance.

To combat these issues, blockchain voting prototypes have been developed, although they have not yet become a broadly adopted replacement for mutual-fund intermediary voting infrastructure. Essentially, the use of blockchain technology would streamline the proxy-voting process by using DLT to generate an immutable and shared record of all voting activity. The fund would import meeting information onto a distributed ledger, including agenda items and event details. The fund would also define specific rules related to the meeting using a smart contract. Entitled shareholders could then vote using a single immutable recordkeeping system built on the distributed ledger. Each time a vote was imported onto the ledger, it would create an individual block. Proxy voting remains an appealing blockchain use case, but the more immediate post-2021 development for registered funds has been regulatory and data-standard modernization, including amendments to Form N-PX that require more structured and comparable proxy-vote reporting by registered funds. Blockchain-based vote recording would still need to fit within the fund's proxy voting policies, intermediary voting infrastructure, and recordkeeping obligations.

[B] Indexing

In 2017, Vanguard announced an effort to simplify the index data sharing process through the use of blockchain technology by developing a system to enable index data to move instantly between index providers and market participants over one decentralized database. The platform was intended to allow investment managers to instantly distribute, receive, and process index data, resulting in better benchmark tracking. In 2019, Vanguard completed its implementations of blockchain technology and began using blockchain to ingest data

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for $1.3 trillion worth of funds.[205] Publicly available materials do not appear to show that the Vanguard/Symbiont index-data platform became a durable production platform. In addition, Symbiont later filed for bankruptcy protection and its assets were subsequently sold.

A more recent fund-data example is DTCC's 2024 Smart NAV pilot with Chainlink, which tested delivery of structured U.S. mutual-fund NAV data on-chain for use in tokenized asset workflows.

[C] AML/KYC

Financial intermediaries have completed a number of "proof of concept" trials using private, permission-based distributed ledgers to handle KYC and AML compliance. While not widely adopted, the technology would allow clients to create a digital profile validating the client's identity and containing required AML/KYC documentation. This profile then becomes accessible to financial intermediaries in an encrypted fashion that allows the financial intermediary to validate and share the client's identity, without the requirement of actually sharing the data. The blockchain-based register could reduce duplication, enable encrypted updates to information, and provide a historical record to demonstrate compliance.

Since the prior edition, this use case has remained less about replacing AML/KYC review than about improving the information available to firms performing that review. In digital asset and tokenized-fund workflows, firms may need to connect traditional customer-identification information with wallet addresses, transfer restrictions, sanctions screening, and transactions-monitoring tools. Those tools can help various stakeholders in the asset management industry review activity involving digital assets. The same point applies to Travel Rule information, which generally requires covered financial institutions to collect, retain, and transmit specified originator and beneficiary information for certain fund transfers. A blockchain address may show where value moved but it ordinarily will not by itself provide that required information, at least on a permissionless decentralized blockchain.

§ 46:3 Digital Assets As an Asset Class

In addition to the potential of blockchain as a technology for many of the functions that support the infrastructure of the investment management industry, asset managers may choose to invest in digital assets—either traditional assets in a digitized form, such as debt,

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205. Jeff Kauflin, *Vanguard Is Now Using Blockchain Technology to Help Manage $1.3 Trillion in Index Funds*, FORBES (May 30, 2019), https://www.forbes.com/sites/jeffkauflin/2019/05/30/vanguard-is-now-using-blockchain-technology-to-help-manage-13-trillion-in-index-funds/#22063338dfe6.

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equity, commodities and derivatives on any of the foregoing, or as a new form of asset class, such as digital currencies, payment stablecoins, or tokenized interests. This section addresses both the nature of such assets and some of the challenges faced by asset managers seeking to invest in them. It is clear that the SEC historically took the position that many early forays into offerings of digital assets, in particular tokens in so-called Initial Coin Offerings (ICOs), may have violated section 5 of the Securities Act and proceeded under a regulation by enforcement approach, as discussed below, by aggressively pursuing a rash of civil and criminal actions against issuers. Since then, the SEC and CFTC have modified or withdrawn certain prior restrictive guidance and interpretations and have taken steps to encourage innovation in this space. That shift reflects both current changing federal policy and the continued development and maturity of digital assets and related infrastructure as an asset class.

§ 46:3.1 *Digital Assets Under the Commodity Exchange Act*

[A] Commodities and Commodity Interests

Commodities and commodity interests, both regulated in some form under the CEA by the CFTC, differ in many respects. As defined under the CEA, a commodity includes many different forms of physical commodities (for example, wheat, cotton, or corn) as well as "all services, rights, and interests (except motion picture box office receipts, or any index, measure, value or data related to such receipts) in which contracts for future delivery are presently or in the future dealt in."[206] The CFTC has substantial anti-fraud and anti-manipulation jurisdiction over transactions in interstate commerce that involve a commodity.[207]

Alternatively, "commodity interest" is a term used in the CEA, but not explicitly defined under the CEA.[208] For instance, the definitions of "commodity pool" and "commodity pool operator" (CPO)

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206. 7 U.S.C. § 1a(9).

207. *See, e.g.*, 7 U.S.C. §§ 6(c), 9(a)(1)–(2); 17 C.F.R. §§ 180.1–180.2.

208. *See* Andrew P. Cross, *Cryptocurrency Derivatives, Funds and Advisers: Key Considerations Under U.S. Commodity Laws (Part 3: Why Commodity Interests Are of Interest)*, DERIVATIVES & REPO REP. (Oct. 10, 2018) [hereinafter Cross]. Section 6m of the CEA defines "commodity interest" for purposes of instituting a registration requirement for commodity pool operators and commodity trading advisors. 7 U.S.C. § 6m(3)(C) (defining "commodity interests" for purposes of paragraph (3) of section 6m of the CEA to include "contracts of sale of a commodity for future delivery, options on such contracts, security futures, swaps, leverage contracts, foreign exchange, spot and forward contracts on physical commodities, and any monies held in an account used for trading commodity interests").

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each provide a list of interests that are types of commodity interests, including futures contracts, swaps, commodity options, retail commodity transactions, and leveraged transactions, among others.[209] Some investments may constitute "orthodox commodity interests," a prime example of such an interest being an exchange-traded futures contract.[210] Other types of commodity interests can be "inadvertent commodity interests" where they may qualify even if it is not their intention. For example, a product may be a commodity interest if it provides financial returns determined by reference to an identified asset without conveying an ownership interest in that asset.[211] Because the CFTC substantively regulates aspects of certain types of transactions in commodity interests and the counterparties to those transactions under the CEA,[212] whether a product is a commodity interest is the lynchpin of the regulatory regime of the CEA and the CFTC.

[B] Virtual Currencies and Other Digital Assets As Commodities

The CFTC considers virtual currencies[213] to be a "commodity" as defined under section 1a(9) of the CEA.[214] In addition, at least two federal district courts have held that virtual currencies meet the definition of "commodity" under the CEA.[215] Enforcement rulings since 2021 have reinforced that treatment. As a commodity, a virtual currency is subject to any applicable provisions of the CEA and the CFTC's regulations and enforcement jurisdiction.[216] In

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209. *See* 7 U.S.C. § 1a(10)(A); 7 U.S.C. § 1a(11)(A).
210. Cross, *supra* note 208.
211. *Id*.
212. *Id*.
213. For the CFTC's definition of "virtual currency," see *supra* section 46:1.2[C][4][a].
214. Retail Commodity Transactions Involving Certain Digital Assets, 85 Fed. Reg. at 37741 (citing *In re* Coinflip, Inc., d/b/a Derivabit, and Francisco Riordan, CFTC Docket No. 15-29, 2015 WL 5535736, [Current Transfer Binder] Comm. Fut. L. Rep. (CCH) ¶ 33,538 (Sept. 17, 2015) (consent order)); *see also* 7 U.S.C. § 1a(9) (defining "commodity" in pertinent part as "[A]ll services, rights, and interests (except motion picture box office receipts, or any index, measure, value or data related to such receipts) in which contracts for future delivery are presently or in the future dealt in.").
215. *See, e.g.*, Commodity Futures Trading Comm'n v. McDonnell, 287 F. Supp. 3d 213, 217 (E.D.N.Y. 2018); Commodity Futures Trading Comm'n v. My Big Coin Pay, Inc., 334 F. Supp. 3d 492, 495–98 (D. Mass. 2018).
216. COMMODITY FUTURES TRADING COMM'N, CFTC BACKGROUNDER ON OVERSIGHT OF AND APPROACH TO VIRTUAL CURRENCY FUTURES MARKETS, https://www.cftc.gov/sites/default/files/idc/groups/public/@newsroom/

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addition, because a virtual currency is a commodity, the CFTC also has the authority to police fraud and manipulation in underlying spot markets (that is, markets of ordinary course delivery and payment, as compared to delivery and payment on a forward basis) for virtual currencies.[217] The treatment of at least certain virtual currencies (for example, bitcoin and ether) as commodities as opposed to securities is consistent with the statements of various SEC officials and SEC staff.[218]

Current regulatory, statutory, and judicial developments, including SEC and CFTC interpretive guidance, reinforce that conclusion for bitcoin, ether, and other crypto assets as digital commodities. Nonetheless, classification remains facts-and-circumstances based and should be assessed for overlap with securities-law analysis to the extent a transaction is deemed to involve an investment contract. Similarly, the GENIUS Act, when implemented, excludes a payment stablecoin issued by a permitted payment stablecoin issuer from the definition of "commodity" but otherwise leaves the CEA analysis for other digital assets undisturbed.

The allocation of jurisdiction between the SEC and CFTC over digital assets remains subject to pending federal legislation. As of June 2026, that legislation had not been enacted; see section 46:3.2[E] below for additional discussion.

There are potential opportunities and ramifications of a particular virtual currency being classified as a commodity as opposed to a security. As commodities, virtual currencies may offer a new type of asset for interested investors to incorporate into their investment strategies. However, an institutional investor or fund interested in investing in such a product must ensure that the investment is within existing disclosures, such as stated investment objectives and restrictions. In addition, a registered investment company seeking "diversification"

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documents/file/backgrounder_virtualcurrency01.pdf; *see also Introduction: Virtual Currency Before the S. Comm. on Banking, Housing, and Urban Affairs*, 115th Cong. (Feb. 6, 2018) (written testimony of J. Christopher Giancarlo, Chairman, Commodity Futures Trading Comm'n), https://www.cftc.gov/PressRoom/SpeechesTestimony/opagiancarlo37.

217. *Id*.

218. *See* Kate Rooney, *SEC Chief Says Agency Won't Change Securities Laws to Cater to Cryptocurrencies*, CNBC.COM (June 6, 2018 10:45 AM, updated June 11, 2018 9:35 AM), https://www.cnbc.com/2018/06/06/sec-chairman-clayton-says-agency-wont-change-definition-of-a-security.html (quoting Chairman Jay Clayton of the SEC that replacing a sovereign currency with bitcoin would not be a security); William Hinman, Dir., Div. of Corp. Fin., Sec. & Exch. Comm'n, Speech, Digital Asset Transactions: When *Howey* Met Gary (Plastic) (June 14, 2018), https://www.sec.gov/news/speech/speech-hinman-061418.

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status under section 5 of the Investment Company Act and "regulated investment company" (RIC) status under subchapter M of the Internal Revenue Code should monitor any investment in a virtual currency so that it does not cause the registered investment company to fail in holding sufficient amounts of qualifying assets in order to meet the relevant statute's thresholds.[219]

Virtual currency futures contracts can provide the opportunity for investors to gain exposure to the price of the underlying virtual currencies without the need to acquire and custody the virtual currency itself.

[C] Commodity Interests Involving Virtual Currencies

[C][1] Virtual Currency Futures Contracts

A futures contract is "[a]n agreement to purchase or sell a commodity for delivery in the future: (1) at a price that is determined at initiation of the contract; (2) that obligates each party to the contract to fulfill the contract at the specified price; (3) that is used to assume or shift price risk; and (4) that may be satisfied by delivery or offset."[220] Per the terms of the futures contract, delivery could occur as physical delivery of the referenced commodity or by means of cash settlement.[221] Futures contracts can be entered into by eligible contract participants (ECPs) and non-ECPs alike,[222] provided that the purchaser or seller of the futures contract accesses the market through a regulated market intermediary known as a futures commission merchant (FCM) (or qualifies as some other type of regulated market participant).[223]

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219. *See* 15 U.S.C. § 80a-5(b)(1) (defining a "diversified company" in relevant part as one with "[a]t least 75 per centum of the value of its total assets is represented by cash and cash items (including receivables), Government securities, securities of other investment companies, and other securities"); 26 U.S.C. § 851(b)(3)(A) (providing various thresholds on the types and amounts of assets that an investment company may have in order to qualify for RIC status).

220. *Glossary*, COMMODITY FUTURES TRADING COMM'N, https://www.cftc.gov/LearnAndProtect/EducationCenter/CFTCGlossary/glossary_f.html.

221. *See id*.

222. An ECP must be a type of regulated entity (such as a financial institution) or satisfy certain financial qualification tests. An ECP can be either an entity or a natural person. 7 U.S.C. § 1a(18); 17 C.F.R. § 1.3.

223. Andrew P. Cross, *Cryptocurrency Derivatives, Funds and Advisers: Key Considerations Under U.S. Commodity Laws (Part 4: About the Interests of Interest)*, DERIVATIVES & REPO REP. (Oct. 25, 2018), https://www.

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Any fund or adviser seeking to trade a crypto futures contract will need to open an account and enter into a futures customer agreement with an FCM.[224] Futures contracts are traded over an exchange, known as a designated contract market (DCM) (that is, a futures exchange). Late in 2017, several futures exchanges announced that they self-certified the listing of bitcoin futures contracts.[225] In at least one instance, the bitcoin futures contract was cash settled and based on a specified reference rate for the price of bitcoin, which is, in turn, calculated daily by aggregating the trade flow of major bitcoin spot exchanges.[226] Since then, regulated bitcoin and ether futures, options and similar crypto asset derivatives have become routes for fund exposures, and those instruments remain commodity interests that can trigger CEA, CFTC, CPO, CTA, and related analysis.

[C][2] Swaps and Options

The definition of a "swap" under the CEA provides that any "agreement, contract or transaction" could be a swap if it:

- Requires a payment or delivery to be made by one party to the arrangement based upon the change in the value of an asset without conveying a direct or indirect ownership interest in that asset;
- Is an option of any kind on any asset other than a security; or
- Requires that a payment or delivery be made based upon the occurrence, non-occurrence, or the extent of the occurrence of an event with a potential, financial, economic, or commercial consequence.[227]

Prediction-market contracts using blockchain technology are recent developments in the industry and may warrant CEA derivatives analysis,

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derivativesandreporeport.com/2018/10/cryptocurrency-derivatives-funds-and-advisers-key-considerations-under-u-s-commodity-laws-part-4-about-the-interests-of-interest/.

224. *Id*.

225. *See* Press Release No. 7654-17, Commodity Futures Trading Comm'n, CFTC Statement on Self-Certification of Bitcoin Products by CME, CFE and Cantor Exchange (Dec. 1, 2017), https://www.cftc.gov/PressRoom/PressReleases/7654-17; *see also* CME Grp., CME Group Self-Certifies Bitcoin Futures to Launch (Dec. 1, 2017), https://www.cmegroup.com/media-room/press-releases/2017/12/01/cme_group_self-certifiesbitcoin futurestolaunchdec18.html [hereinafter CME]; Alexander Osipovich, *Cboe Abandons Bitcoin Futures*, WALL ST. J. (Mar. 18, 2019 9:00 AM), https://www.wsj.com/articles/cboe-abandons-bitcoin-futures-11552914001.

226. *See* CME, *supra* note 225.

227. 7 U.S.C. § 1a(47).

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including under the event-based prong. In June 2026, the CFTC issued a notice of proposed rulemaking that would amend its rules for event contracts and "prediction markets," including by further specifying event contracts that may be subject to a contrary-to-public-interest determination and by proposing definitions and procedures for that review. Related *Kalshi* litigation has focused on the boundary between CFTC-regulated event-contract markets and state gaming or wagering laws. As of this update, the CFTC had filed amicus briefs in, among other matters, *Commonwealth of Massachusetts v. KalshiEx LLC* in the Massachusetts Supreme Judicial Court and *KalshiEx LLC v. Schuler* in the Sixth Circuit, asserting exclusive federal jurisdiction over CFTC-regulated prediction markets.[228]

Perpetual-style crypto derivatives and around-the-clock trading developments fit the same CEA derivatives analysis. In 2026, the CFTC began to bring perpetual derivatives and continuous trading within the regulated U.S. framework. The Commission approved KalshiEX's BTCPERP contract, a cash-settled bitcoin perpetual futures contract listed on a designated contract market with a funding-rate mechanism and continuous trading, and issued a contemporaneous policy statement explaining that other perpetual contracts would be reviewed case by case under Commission Regulation 40.3. CFTC staff separately addressed the treatment of certain offshore perpetual contracts as "foreign futures" and issued an advisory on operational and clearing expectations for around-the-clock (24/7) trading and clearing, and the Division of Market Oversight later issued a no-action position for designated contract markets converting existing perpetual-style digital commodity futures into true perpetual futures. These are CFTC orders, a policy statement, and staff

228. Prediction Markets; Public Interest Determinations, 91 Fed. Reg. 35806 (June 12, 2026) (to be codified at 17 C.F.R. pt. 40); Press Release No. 9249-26, CFTC, CFTC Seeks Public Comment on Notice of Proposed Rulemaking Concerning Event Contracts Involving Enumerated Activities (June 10, 2026), https://www.cftc.gov/PressRoom/PressReleases/9249-26; Press Release No. 9219-26, CFTC, CFTC Reaffirms Exclusive Jurisdiction Over Prediction Markets in Massachusetts Supreme Judicial Court Filing (Apr. 24, 2026), https://www.cftc.gov/PressRoom/PressReleases/9219-26; Press Release No. 9230-26, CFTC, CFTC Reaffirms Exclusive Jurisdiction Over Prediction Markets in Sixth Circuit Amicus Brief (May 12, 2026), https://www.cftc.gov/PressRoom/PressReleases/9230-26; KalshiEx, LLC v. Flaherty, No. 25-1922 (3d Cir. Apr. 6, 2026) (affirming a preliminary injunction holding that the CFTC's jurisdiction over sports-related event contracts is likely exclusive and the CEA likely preempts contrary state law).

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guidance rather than a comprehensive perpetual-contract rulemaking.[229] These actions are the subject of a pending legal challenge.[230]

Different types of derivatives on or involving cryptocurrencies and other digital assets, including swaps, options, perpetual-style derivatives, and event contracts, may be available for trading by investment funds and their advisers.[231] Such products may constitute commodity interests for purposes of the CEA.

[C][3] Retail Commodity Transactions for Digital Assets Such As Virtual Currencies

Under section 2(c)(2)(D) of the CEA, "retail commodity transactions" are agreements, contracts, or transactions offered or entered into by a party on a leveraged or margined basis, or financed by the offeror, the counterparty, or a person acting in concert with the offeror or counterparty on a similar basis to or with persons who do not qualify as either an ECP or an eligible commercial entity (ECE).[232] The CFTC has exclusive jurisdiction over the marketplace for retail commodity transactions in light of the regulatory principle behind the CFTC's oversight of retail commodity transactions.[233] Specifically, such arrangements are speculative in nature and have indicia of futures contracts by virtue

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229. Policy Statement Concerning the Listing of Perpetual Contracts, 91 Fed. Reg. 33160 (June 3, 2026); *see* Press Release No. 9240-26, CFTC, CFTC Approves BTCPERP Contract Submitted by KalshiEx, LLC (May 29, 2026), https://www.cftc.gov/PressRoom/PressReleases/9240-26; Press Release No. 9242-26, CFTC, CFTC Issues Policy Statement Concerning the Listing of Perpetual Contracts (May 29, 2026), https://www.cftc.gov/PressRoom/PressReleases/9242-26; CFTC Staff Letter No. 26-17 (May 29, 2026); CFTC Staff Letter No. 26-11 (May 29, 2026); Press Release No. 9252-26, CFTC, CFTC Issues No-Action Letter for DCMs Concerning Existing Perpetual-Style Digital Commodity Futures into True Digital Commodity Perpetual Futures (June 12, 2026), https://www.cftc.gov/PressRoom/PressReleases/9252-26.

230. *See* Chi. Mercantile Exch. Inc. v. CFTC, No. 1:26-cv-02157 (D.D.C. filed June 18, 2026) (contending that bitcoin perpetual contracts are "swaps" under 7 U.S.C. § 1a(47), not futures, and that the Commission's self-certification approval of KalshiEx's BTCPERP was unlawful).

231. *See, e.g.*, *Cryptocurrency Futures and Options*, CME GRP., https://www.cmegroup.com/markets/cryptocurrencies.html; Prediction Markets; Public Interest Determinations, 91 Fed. Reg. 35806 (June 12, 2026) (to be codified at 17 C.F.R. pt. 40).

232. 7 U.S.C. § 2(c)(2)(D). An ECE is a sub-set of ECPs that use a commodity for the commercial purposes specified in the CEA. *See* 7 U.S.C. § 1a(17).

233. Andrew Cross et al., *Part 2: CFTC Finalizes Guidance on Digital Assets in the Context of Retail Commodity Transactions*, PERKINS COIE LLP (May 4, 2020).

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of the use of leverage, margining, or financing.[234] If an arrangement constitutes a retail commodity transaction, then it is subject to the same regulatory standards and requirements as a futures contract. In effect, a retail commodity transaction must be entered into over a CFTC-regulated futures exchange (that is, a "designated contract market"). Certain types of retail commodity transactions are excepted under the CEA from CFTC regulation. One exception is a retail commodity transaction for a contract of sale that results in actual delivery within twenty-eight days.[235]

In 2013, the CFTC issued final guidance regarding the interpretation of the term "actual delivery" for purposes of section 2(c)(2)(D) of the CEA in the context of certain physical commodity transactions ("2013 Guidance").[236] Then, in 2014, the U.S. Court of Appeals for the Eleventh Circuit stated that actual delivery, in the context of a retail commodity transaction, "denotes '[t]he act of giving real and immediate possession to the buyer or the buyer's agent'"; and constructive delivery does not suffice.[237] Additionally, in 2019, the U.S. Court of Appeals for the Ninth Circuit indicated that the actual delivery exception to retail commodity transaction regulation requires "some meaningful degree of possession or control by the customer."[238]

In 2020, the CFTC finalized its guidance on the meaning of "actual delivery" in the context of virtual currencies ("2020 Guidance"), which it withdrew subsequently in 2025.[239] The interpretation applied to the actual delivery of a "virtual currency," which it defined for these purposes as a "digital asset that encompasses any digital representation of value or unit of account that is or can be used as a form of

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234. *See id*. (citing Heath P. Tarbert, Chairman, Commodity Futures Trading Comm'n, Statement of Chairman Heath P. Tarbert in Support of Interpretive Guidance on Actual Delivery for Digital Assets (Mar. 24, 2020), https://www.cftc.gov/PressRoom/SpeechesTestimony/tarbertstatement032420a).

235. 7 U.S.C. § 2(c)(2)(D)(ii)(III)(aa).

236. Retail Commodity Transactions Under Commodity Exchange Act, 78 Fed. Reg. 52426 (Aug. 23, 2013).

237. 85 Fed. Reg. at 37735 n.26 (citing CFTC v. Hunter Wise Commodities, LLC, 749 F.3d 967 (11th Cir. 2014)).

238. 85 Fed. Reg. at 37735 n.31 (citing CFTC v. Monex Credit Co., 931 F.3d 966, 972–75 (9th Cir. 2019)).

239. Retail Commodity Transactions Involving Certain Digital Assets, 85 Fed. Reg. 37734. In its guidance, the CFTC noted that the term "virtual currency" for purposes of the interpretation was synonymous with "digital currency" and cryptocurrency, and more generally any digital asset that satisfies these conditions. 85 Fed. Reg. at 37741 n.148. *See generally* Andrew Cross et al., *Part 3: CFTC Finalizes Guidance on Digital Assets in the Context of Retail Commodity Transactions*, PERKINS COIE LLP (May 8, 2020).

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currency (that is, transferred from one party to another as a medium of exchange); may be manifested through units, tokens, or coins, among other things; and may be distributed by way of digital 'smart contracts,' among other structures."[240]

The 2020 Guidance also clarified the scope of the application of the interpretation by stating, "In regards to other digital assets that are commodities, but do not serve as a medium of exchange or otherwise fall within the scope of this [2020 Guidance] at the time of the transaction, the Commission would continue to refer to the 2013 Guidance to determine whether actual delivery has occurred."[241] While the CFTC at that time did not further clarify or provide concrete examples of digital assets that would fall within this category, it did determine that it will continue to follow the 2013 Guidance on the meaning of "actual delivery."[242] In addition, the CFTC provided specific instances of when "actual delivery" has occurred within the context of a virtual currency:

(1) A customer secures: (a) possession and control of the entire quantity of the commodity, whether it was purchased on margin, or using leverage, or any other financing arrangement, and (b) the ability to use the entire quantity of the commodity freely in commerce (away from any particular execution venue) no later than twenty-eight days from the date of the transaction and at all times thereafter; and

(2) The offeror and counterparty seller (including any of their respective affiliates or other persons acting in concert with the offeror or counterparty seller on a similar basis) do not retain any interest in, legal right, or control over any of the commodity purchased on margin, leverage, or other financing arrangement at the expiration of twenty-eight days from the date of the transaction.[243]

As noted above, the CFTC withdrew that guidance effective December 10, 2025, and thus it should be read as historical background.

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240. 85 Fed. Reg. at 37741.
241. 85 Fed. Reg. at 37737.
242. 85 Fed. Reg. at 37742; *see* Retail Commodity Transactions Under Commodity Exchange Act, 78 Fed. Reg. 52426; *see also* Andrew Cross et al., *CFTC Finalizes Guidance on Digital Assets in the Context of Retail Commodity Transactions*, PERKINS COIE LLP (Apr. 30, 2020).
243. 85 Fed. Reg. at 37742–43 (internal citations omitted).

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[C][4] Transactions Involving Crypto Assets That May Be Characterized As Commodity Interests

Funds and advisers must analyze each cryptocurrency investment to determine whether it is or may be a commodity interest.[244] As discussed above, some crypto asset investments may constitute straightforward commodity interests such as an exchange-traded futures contract. However, the analysis of other crypto asset investments may be nuanced and involve inadvertent commodity interests where a particular token or transaction that involves a token may have characteristics that could result in that token or transaction being treated as a commodity interest, even if the token seller does not intend for that token to be a commodity interest. Depending on the outcome of such an analysis, if the crypto asset investment is a commodity interest, then an investment fund would be a commodity pool, and that in turn could implicate commodity pool operator registration (or require the reliance upon an available exemption). In addition, an adviser providing advice with respect to the purchase or sale of a crypto asset investment that is a commodity interest may implicate commodity trading advisor registration obligations. Commodity pools, commodity pool operators, and commodity trading advisors are discussed in greater detail below.

[D] Implications of Investing in Digital Assets That Qualify As Commodity Interests

As noted, if a product is a commodity interest, it raises additional regulatory questions and issues under the CEA. Investors, including funds, and their advisers must monitor their regulatory obligations should they choose to use crypto asset derivatives (including futures contracts, options, swaps, and other derivatives) to "obtain exposure to particular investments or markets more efficiently than may be possible through direct investments."[245] If they do, then they may invoke various registration requirements under the CEA and CFTC regulations, and either register or otherwise seek an applicable exemption or exclusion from registration. Because of the possible availability of digital asset related commodity interests, the following sections review the implications of investing in and advising on commodity interests for investment funds and their advisers.

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244. Cross, *supra* note 208.

245. Use of Derivatives by Registered Investment Companies and Business Development Companies, 85 Fed. Reg. 4446, 4447–48 (Jan. 24, 2020) (proposed rule).

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[D][1] Commodity Pools, Commodity Pool Operators, and Commodity Trading Advisors

The definitions of the terms "commodity pool," "commodity pool operator" (CPO), and "commodity trading advisor" (CTA) in sections 1a(10),[246] 1a(11),[247] and 1a(12)[248] of the CEA, respectively, invoke commodity interests, thus raising their importance should any given digital asset related instrument or transaction qualify as a commodity interest. If a fund invests or even has the ability to invest in commodity interests, then the fund will be a commodity pool and its operator will be a CPO and will be required to register with the CFTC as such or qualify for an exemption from registration. Similarly, an adviser that provides advice or holds itself out as providing advice for compensation or profit about commodity interests will be a CTA that needs to consider registration or exemption from registration as such.[249] For purposes of the CPO and CTA regulatory analysis and any applicable disclosures, being able to invest in a commodity interest is as important as actually investing in a commodity interest.[250]

[D][2] Registered Investment Companies

A registered investment company (RIC) that invests, or has the ability to invest, in certain derivatives will constitute a commodity pool and the entity that operates the fund must register with the CFTC as a CPO or qualify for the exemption from registration available under CFTC Regulation 4.5.[251] Regulation 4.5 requires the entity claiming the exclusion to file (1) an initial notice of eligibility with the National Futures Association; (2) an amendment of the notice if its information or representations become inaccurate or incomplete;

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246. 7 U.S.C. § 1a(10) (defining a "commodity pool" as "any investment trust, syndicate, or similar form of enterprise operated for the purpose of trading in commodity interests").
247. 7 U.S.C. § 1a(11) (defining a CPO as any person engaged in a business that is of the nature of a commodity pool, investment trust, syndicate, or similar form of enterprise, and who, with respect to that commodity pool, solicits, accepts, or receives from others, funds, securities, or property, either directly or through capital contributions, the sale of stock or other forms of securities, or otherwise, for the purpose of trading in commodity interests).
248. 7 U.S.C. § 1a(12) (defining a CTA as any person who, for compensation or profit, engages in the business of advising others, either directly or through publications, writings, or electronic media, as to the value of or the advisability of trading in commodity interests).
249. *See* 7 U.S.C. § 6m(1) (requiring generally that each person who satisfies the CPO and CTA definitions to register as such with the CFTC).
250. Cross, *supra* note 208.
251. 17 C.F.R. § 4.5(b)(1).

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and (3) an annual affirmation of continued reliance on the exemption within sixty days of each calendar year end, while complying with certain books and records maintaining requirements.[252] In 2019, the CFTC approved amendments to CFTC Regulation 4.5 that clarified that the investment adviser to a RIC is its CPO and would be the entity that must file the notice of eligibility to claim the exclusion.[253]

With respect to a RIC seeking to obtain digital asset exposure through crypto asset futures contracts, options, swaps, or other derivatives, the RIC must ensure compliance with section 18 of the Investment Company Act,[254] as well as any other relevant federal securities law provisions, the Internal Revenue Code (for example, subchapter M),[255] Regulation T of the Federal Reserve Board,[256] and the rules and regulations of the CFTC.[257] In addition, any such investment must not be prohibited by the fund's investment restrictions, as stated in its registration statement.

A registered fund's use of crypto asset futures, options, swaps, or other derivatives must also be analyzed under section 18 of the Investment Company Act and Rule 18f-4 thereunder, which imposes value-at-risk framework, derivatives risk-management program, board reporting and oversight, and other related requirements applicable to the fund's derivatives transactions, subject to certain limited exceptions.

[D][3] Private Investment Funds

CFTC Rule 4.13 provides certain exemptions from the registration requirements as a CPO.[258] Among the exemptions is CFTC Rule 4.13(a)(3), a *de minimis* exemption commonly relied upon by private investment funds (that is, "pools") seeking to hold limited amounts of commodity interests.[259] The exemption provides relief from CPO registration if (a) "[t]he aggregate initial margin, premiums, and required minimum security deposit for retail forex transactions (as defined in § 5.1(m) of this chapter) required to establish such positions, determined at the time the most recent position was established, will not exceed five percent of the liquidation value of the pool's portfolio, after

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252. 17 C.F.R. § 4.5(c).
253. Registration and Compliance Requirements for Commodity Pool Operators and Commodity Trading Advisors: Registered Investment Companies, Business Development Companies, and Definition of Reporting Person, 84 Fed. Reg. 67343 (Dec. 10, 2019).
254. 15 U.S.C. § 80a-18.
255. 26 U.S.C. §§ 851–55.
256. 12 C.F.R. pt. 220.
257. 85 Fed. Reg. at 4448; *id.* at 4448 n.6.
258. 17 C.F.R. § 4.13.
259. 17 C.F.R. § 4.13(a)(3).

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taking into account unrealized profits and unrealized losses on any such positions it has entered into"; or (b) "[t]he aggregate net notional value of such positions, determined at the time the most recent position was established, does not exceed one hundred percent of the liquidation value of the pool's portfolio, after taking into account unrealized profits and unrealized losses on any such positions it has entered into . . . ."[260]

If a pool meets either of the *de minimis* standards under CFTC Rule 4.13(a)(3), it must meet additional conditions in order to rely on the exemption, including (1) the interests in the pool are exempt from registration under the Securities Act and the interests are marketed and advertised to the public in the United States solely, if at all, in compliance with certain provisions of the Securities Act; (2) each investor in the pool meets one of several minimum standards; and (3) participations in the pool are not marketed as or in a vehicle for trading in commodity futures or commodity options markets.[261]

A CPO claiming Rule 4.13(a)(3) relief must file (1) an initial notice of eligibility with the National Futures Association; (2) an amendment of the notice if its information or representations become inaccurate or incomplete; and (3) an annual affirmation of continued reliance on the exemption within sixty days of each calendar year-end, while complying with certain books and records maintaining requirements.

[D][4] Investment Advisers

In addition to the CPO considerations for investment advisers that advise RICs under CFTC Rule 4.5, discussed above in section 46:3.1[D][2], investment advisers may also consider whether the adviser is exempt from the CTA registration requirements under the conditions of CFTC Rule 4.14(a)(8).[262] The exemption is available for investment advisers registered with the SEC under the Investment Advisers Act or with a state, to investment advisers exempt from registration, or investment advisers excluded from the definition of "investment adviser" under sections 202(a)(2) and 202(a)(11) of the Investment Advisers Act.[263] To qualify for the exemption, the investment adviser must meet certain conditions: (1) the adviser's advice is "directed solely to, and for the sole use of" one or more of certain types of recipients (for example, "qualifying entities" as defined in CFTC Rule 4.5(b), which include RICs and CPOs that have claimed the CFTC Rule 4.13(a)(3) exemption); (2) the adviser provides commodity interest trading advice solely incidental to providing securities

260. 17 C.F.R. § 4.13(a)(3)(ii).
261. 17 C.F.R. § 4.13(a)(3)(i), (iii)–(iv).
262. 17 C.F.R. § 4.14(a)(8).
263. *Id.*

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or other investment advice to the types of recipients listed in CFTC Rule 4.14(a)(8)(i), and the adviser is not holding itself out as a CTA; (3) the adviser files an initial and annual notice of exemption with the NFA; and (4) the adviser must keep all relevant books and records.[264]

Section 6m(3) of the CEA also excepts investment advisers registered with the SEC under the Investment Advisers Act from the CTA registration obligation if the investment adviser meets certain conditions.[265] In addition to being registered with the SEC, the investment adviser's business cannot consist primarily of acting as a CTA, and the investment adviser cannot act as a CTA to any commodity pool that is engaged primarily in trading commodity interests.[266] For purposes of this exception, the CEA defines "engaged primarily" in the business of being a CTA or a commodity pool as being or holding oneself out to the public as being engaged "primarily, or proposes to engage primarily, in the business of advising on commodity interests or investing, reinvesting, owning, holding, or trading in commodity interests, respectively."[267]

§ 46:3.2 *Digital Assets As Securities*

[A] The DAO Report

The SEC provided its initial formative guidance on whether digital tokens are "securities" under the federal securities laws in its July 2017 DAO Report.[268] The DAO operated as a for-profit entity that would raise funds by selling DAO tokens (DAO Tokens are a digital means of transferring value and rights) to investors, and then use those assets to fund certain projects. In the DAO Report, the SEC affirmatively concluded that tokens on blockchain can be securities by virtue of being investment contracts within the definition of "security" under the Securities Act and the Exchange Act per an evaluation under the *Howey* test.[269] Unless the DAO Tokens were issued in compliance with an exemption under the Securities Act, the SEC concluded that the DAO should have registered its offerings of DAO Tokens. The SEC also concluded that the DAO was the "issuer" of the

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264. 17 C.F.R. § 4.14(a)(8)(i)–(iv).
265. 7 U.S.C. § 6m(3).
266. 7 U.S.C. § 6m(3)(A).
267. 7 U.S.C. § 6m(3)(B).
268. The DAO Report, *supra* note 36.
269. *Id*. at 11–15; *see also* Sec. & Exch. Comm'n v. W.J. Howey Co., 328 U.S. 293, 298–99 (1946) (providing that an "investment contract" is (1) an investment of money (2) in a common enterprise (3) with a reasonable expectation of profits (4) to be derived from the entrepreneurial or managerial efforts of others).

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securities, even though it was an autonomous organization embodied in computer code and executed on a blockchain. To the extent that the DAO Tokens were being traded in secondary markets, the SEC found that platforms over which DAO Tokens were traded were "exchanges" for purposes of the Exchange Act, and should have either registered with the SEC or complied with the exemption for ATSs. Finally, the SEC noted that the implementation of the DAO's plan to fund projects would have raised questions over its status as an "investment company" under the Investment Company Act and the status of its associates as "investment advisers" under the Investment Advisers Act.

[B] Post-DAO Report and the SEC/CFTC Framework for Digital Assets

[B][1] SEC Enforcement Actions

After the DAO Report, the SEC began initiating enforcement actions in both the civil and administrative contexts.[270] In many instances, the cases focused on the issuance of an unregistered security that did not seek or comply with the requirements of an applicable exemption from registration under the Securities Act.

For example, in the administrative context, one of the SEC's first actions after the DAO Report was the settlement of an enforcement action in December 2017 with Munchee Inc. for issuing unregistered securities.[271] Munchee had launched an iPhone application that allowed users to post photographs and review restaurant meals, announcing that it would hold a public sale of its own token in an ICO. In the settlement order, the SEC noted that Munchee's white paper contained statements about how Munchee's tokens would increase in value and how token holders would be able to trade tokens on secondary markets. Munchee also directed a series of marketing statements to specific audiences—cryptocurrency investors rather than the restaurant industry and its likely customer base—relating to the future profit of buying and holding tokens. In its marketing materials and in statements made by Munchee representatives in Facebook posts, in YouTube videos, and on podcasts, Munchee stated that its tokens would achieve high rates of return. Finally, in its white paper, Munchee provided statements that the SEC believed would allow token purchasers to reasonably expect profits from the efforts

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270. For a complete timeline of the SEC's actions with regard to digital assets in the wake of the DAO Report, see PERKINS COIE LLP, DIGITAL ASSET SEC TIMELINE.

271. Munchee Inc., Securities Act Release No. 10,445 (Dec. 11, 2017), https://www.sec.gov/litigation/admin/2017/33-10445.pdf.

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of others. Specifically, the white paper described how the value of tokens would depend in part on the company's ability to develop the Munchee application and build an ecosystem for the tokens, that is, the expectation of profits for a MUN token purchaser was dependent on the skills and experience of Munchee's founders and employees.

A series of early high-profile cases, in which the SEC has prevailed so far in the courts, initially made it clear that the SEC was vigorously enforcing its position that existing securities laws are clearly applicable to the offer and sale of many tokens and other digital assets, and that parties seeking to use the public markets to capitalize their businesses must comply with the registration requirements of the federal securities laws. Beginning in 2025, under the Trump administration and Chair Atkins, the SEC substantially recalibrated its approach, including by resolving or dismissing several pending matters initiated during the prior administration.

The early cases remained instructive in that they show the SEC's and courts' application of the *Howey* analysis to digital assets. For example, in October 2019, the SEC filed an emergency action and obtained a temporary restraining order against Telegram Group Inc. for conducting an alleged unregistered, ongoing digital token offering in the United States and overseas. The offering had raised more than $1.7 billion of investor funds.[272] The SEC alleged that the company had sold approximately 2.9 billion digital tokens called "Grams" at discounted prices to initial purchasers worldwide, including thirty-nine U.S. purchasers. According to the SEC, Telegram promised to deliver the Grams to the initial purchasers upon the launch of its blockchain by no later than October 31, 2019, at which time the purchasers and Telegram would be able to sell billions of Grams into U.S. markets. The SEC alleged that Telegram failed to register the offer and sale of Grams, in violation of the registration provisions of the Securities Act. Significantly, Telegram sought to bifurcate the initial offer and sale of Grams, pre-functionality, from the later distribution, but the SEC argued that the entire process constituted a single unlawful distribution. In March 2020, a federal court granted a preliminary injunction, finding that the SEC had shown a substantial likelihood of proving that Telegram's sales were part of a larger scheme to unlawfully distribute the Grams to the secondary public market.[273]

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272. Press Release, Sec. & Exch. Comm'n, SEC Halts Alleged $1.7 Billion Unregistered Digital Token Offering (Oct. 11, 2019), https://www.sec.gov/news/press-release/2019-212; *see also* Complaint, Sec. & Exch. Comm'n v. Telegram Grp. Inc., No. 19-cv-9439 (PKC) (S.D.N.Y. Oct. 11, 2019), https://www.sec.gov/litigation/complaints/2019/comp-pr2019-212.pdf.

273. Sec. & Exch. Comm'n v. Telegram Grp. Inc., No. 19-cv-9439 (PKC), 2020 WL 1430035 (S.D.N.Y. Mar. 24, 2020).

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In June 2020, the SEC entered into a settlement with Telegram under which Telegram, while neither admitting nor denying liability, agreed to return more than $1.2 billion to investors and pay an $18.5 million civil penalty.[274]

Similarly, in June 2019, the SEC brought a complaint in the Southern District of New York alleging that Kik Interactive Inc. ("Kik") conducted an illegal securities offering of digital tokens by selling its tokens to issuers without registering their offer and sale as required by the federal securities laws.[275] Among the purported facts to support its allegations, the SEC argued that Kik marketed its tokens as an investment opportunity and that Kik told investors that rising demand would drive up the value of the tokens, with Kik working to generate that demand. At the time Kik offered and sold the tokens, the SEC alleged that there were not any services and systems in existence and there was nothing at the time to purchase using the token. Finally, the SEC alleged Kik claimed that it would keep a large number of tokens for itself, that tokens would immediately trade on secondary markets, and that Kik would profit alongside investors from the increased demand that the token would foster. In September 2020, Judge Alvin K. Hellerstein of the Southern District of New York issued a decision on the case granting the SEC's motion for summary judgment. Judge Hellerstein referenced Telegram Group as "instructive" but distinguishable on its facts. In granting the SEC's summary judgment motion, Judge Hellerstein found that Kik offered and sold securities without a registration statement or exemption from registration, in violation of section 5 of the Securities Act. Importantly, emphasizing the "economic realities" of the transactions at issue, Judge Hellerstein followed *Howey* and concluded that Kik's public sale of its token was a security offering, and integrated its pre-public sale with the public sale. On October 20, 2020, Judge Hellerstein issued a final judgment in the case, permanently enjoining Kik from violating section 5 of the Securities Act and requiring that, for the next three years, Kik give the SEC notice before participating, directly or indirectly, in an issuance, offer, sale, or transfer of any digital asset. Kik was also required to pay a penalty of $5 million. The case cast doubt

274. Press Release, Sec. & Exch. Comm'n, Telegram to Return $1.2 Billion to Investors and Pay $18.5 Million Penalty to Settle SEC Charges (June 26, 2020), https://www.sec.gov/news/press-release/2020-146.

275. Complaint, Sec. & Exch. Comm'n v. Kik Interactive Inc., No. 19-cv-5244 (S.D.N.Y. June 4, 2019), https://www.sec.gov/litigation/complaints/2019/comp-pr2019-87.pdf.

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on structures that involve an initial private sale to be followed by a public distribution of tokens or other digital assets.[276]

In December 2020, the SEC filed an action in the U.S. District Court for the Southern District of New York against Ripple Labs Inc. ("Ripple") and two of its executives for an alleged unregistered, ongoing digital asset securities offering in the amount of over $1.3 billion.[277] The complaint alleged, among other things, that beginning in 2013, Ripple's co-founder and executives raised capital to finance Ripple's business through the sale of digital assets, known as XRP, to U.S. and non-U.S. persons.[278] The SEC also argued that Ripple allegedly distributed billions of XRP in exchange for non-cash consideration, such as labor and market-making services.[279] The complaint alleged that Ripple failed to register the offer and sale of XRP or satisfy any exemption from registration, in violation of the registration provisions of the federal securities laws. The case was noteworthy for a number of reasons, in particular the period of time that the SEC alleged Ripple had issued XRP in an unregistered security offering (commencing in 2013) prior to filing suit in 2020. On July 13, 2023, the court granted partial summary judgment holding that Ripple's institutional XRP sales were unregistered offers and sales of investment contracts, but that its programmatic exchange sales and certain of the distributions did not satisfy the *Howey* prongs. The court later entered a final judgment against Ripple. The SEC and Ripple subsequently dismissed their cross-appeals in August 2025.

The SEC's era of regulation by enforcement continued as it brought cases in which courts entered summary judgment for the SEC or advanced SEC theories in matters such as LBRY and Terraform, and in matters involving several centralized exchanges and other industry participants. Starting in 2025, however, the SEC voluntarily dismissed or resolved a number of crypto enforcement actions through enforcement discretion rather than merits rulings, including actions involving Coinbase, Binance, Kraken/Payward, and other market participants. That recalibration should not be read to mean that crypto-related enforcement has ended; the SEC continued to bring actions

276. Sec. & Exch. Comm'n v. Kik Interactive Inc., No. 19-cv-05244-AKH, 2020 WL 5819770 (S.D.N.Y. Sept. 30, 2020).

277. Complaint, Sec. & Exch. Comm'n v. Ripple Labs, Inc. et al., No. 1:20-cv-10832 (S.D.N.Y. Dec. 22, 2020), https://www.sec.gov/litigation/complaints/2020/comp-pr2020-338.pdf.

278. *Id*.

279. *Id*.

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where it alleged fraud, false statements, or investor harm, including the 2025 Unicoin offering-fraud action.[280]

[B][2] SEC/CFTC Framework for Digital Assets

On April 3, 2019, the SEC's Strategic Hub for Innovation and Financial Technology ("FinHub") published a framework for analyzing whether a digital asset is offered and sold as a security under the federal securities laws.[281] The framework, which has since been withdrawn and superseded by the Commission-level SEC and CFTC interpretation discussed below, included "common sense guidance" that was intended to provide greater detail and clarity regarding the application of the federal securities laws to digital assets. The FinHub framework consisted of three primary aspects:

- **Consolidation of SEC Guidance, Positions, and Statements**. The framework consolidated into one document previous SEC staff guidance, positions, and statements regarding the application of the *Howey* test to digital assets.
- **New Considerations**. In addition to consolidating previous SEC staff guidance, the framework introduced new emphases and considerations for analyzing digital assets, with the net effect of setting a low bar for concluding that a digital asset is an investment contract and therefore a security. Notable new emphases and considerations included: (1) introducing a new term, "active participant," which broadly defines the participants in a digital asset network whose efforts may form the basis of a purchaser's expectation of profits; (2) focusing

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280. *See, e.g.*, Press Release No. 2025-47, SEC, SEC Announces Dismissal of Civil Enforcement Action Against Coinbase (Feb. 27, 2025), https://www.sec.gov/newsroom/press-releases/2025-47; SEC Announces Dismissal of Civil Enforcement Action Against Binance Entities and Founder Changpeng Zhao, Litigation Release No. 26316 (May 29, 2025), https://www.sec.gov/enforcement-litigation/litigation-releases/lr-26316; SEC v. Payward, Inc., No. 23-cv-06003, Order Granting Joint Stipulation of Dismissal with Prejudice (N.D. Cal. Mar. 27, 2025); Ripple Labs, Inc., Bradley Garlinghouse, and Christian A. Larsen, Litigation Release No. 26369 (Aug. 7, 2025), https://www.sec.gov/enforcement-litigation/litigation-releases/lr-26369; Press Release No. 2025-75, SEC, Unicoin, Top Executives Charged in Offering Fraud That Raised More Than $100 Million from Thousands of Investors (May 20, 2025), https://www.sec.gov/newsroom/press-releases/2025-75; Press Release No. 2024-73, SEC, Terraform and Kwon to Pay $4.5 Billion Following Fraud Verdict (June 12, 2024), https://www.sec.gov/newsroom/press-releases/2024-73.

281. *Framework for "Investment Contract" Analysis of Digital Assets*, SEC. & EXCH. COMM'N (Apr. 3, 2019), https://www.sec.gov/corpfin/framework-investment-contract-analysis-digital-assets.

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on an active participant's compensation practices, intellectual property rights, and self-interest (through retained inventory of digital assets) in a digital asset network; (3) suggesting that when an active participant facilitates creation of a secondary market, transfers may only be made by and among users of a network; and (4) suggesting that digital assets that are virtual currencies must be immediately useable to make payments in a wide variety of contexts.

- **Once a Security, Not Always a Security**. The framework included considerations for the analysis of digital assets that were once sold as securities, but which may no longer be securities.

In March 2026, the SEC and CFTC issued an interpretation providing guidance on the application of the federal securities laws to certain crypto assets and related transactions involving crypto assets. The interpretation is significant because it gives market participants a Commission-level functional taxonomy after a period in which much of the analysis was driven by SEC statements, enforcement actions and litigation. It confirms that a crypto asset that is not itself a security may nevertheless be offered or sold as part of an investment contract depending on the surrounding facts, marketing, and purchaser expectations under *Howey*. It also supersedes or qualifies earlier staff guidance to the extent inconsistent with the Commission-level interpretation.[282]

The taxonomy separates the asset from the transaction in which the asset is used and clearly lists and defines each category. Under the interpretation, a "digital commodity" derives its value from the programmatic operation of a functional crypto system and is used to participate in or access that system, with bitcoin and ether identified as examples. A "digital collectible," such as an NFT, evidences a unique item, while a "digital tool" provides access to a good, service, or function on a network. A "stablecoin" is designed to hold a stable value, typically by reference to a fiat currency, and a "digital" or "tokenized" security is described differently because it is, or represents, a security under the federal securities laws. The guidance clarifies that digital commodities, digital collectibles, and digital tools are not themselves securities, that stablecoins may or may not be securities depending on their characteristics, and that digital or tokenized securities remain securities. It emphasizes that labels do not control and the analysis turns on the rights conveyed, how the product is marketed, what

282. SEC/CFTC Crypto Asset Interpretation, *supra* note 25.

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purchasers are led to expect, and the role of any issuer, sponsor, promoter or intermediary.[283]

Separate from the Commission's interpretation guidance, the Division of Corporation Finance staff issued a series of statements applying securities law analysis to recurring crypto asset activities. Those statements show how the staff is distinguishing network or payment functionality from capital-raising and investment products. Although not binding on the Commission or altering the *Howey* precedent, these statements identify circumstances in which the staff would not view the transactions described as securities transactions.[284]

The meme-coin statement focused on crypto assets bought mainly for entertainment, social interaction, or speculation and not carrying yield, rights to issuer assets, governance rights, or claims on an enterprise, which the staff viewed as activities that did not involve offers or sales of securities.[285] The proof-of-work mining statement treated mining rewards as the result of a miner's own network-validation activity and the protocol's operation, not as returns expected from a promoter's managerial efforts.[286] The protocol-staking statement reached a similar result for covered staking activity, treating validation as administrative or ministerial participation in network operation rather than entrepreneurial management of a common enterprise.[287] The liquid-staking statement applied comparable reasoning to a covered liquid staking receipt, treating the receipt as evidence

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283. *Id*.

284. *See* SEC Div. of Corp. Fin., Staff Statement on Meme Coins (Feb. 27, 2025), https://www.sec.gov/newsroom/speeches-statements/staff-statement-meme-coins; SEC Div. of Corp. Fin., Statement on Certain Proof-of-Work Mining Activities (Mar. 20, 2025), https://www.sec.gov/newsroom/speeches-statements/statement-certain-proof-work-mining-activities-032025; SEC Div. of Corp. Fin., Statement on Stablecoins (Apr. 4, 2025), https://www.sec.gov/newsroom/speeches-statements/statement-stablecoins-040425; SEC Div. of Corp. Fin., Statement on Certain Protocol Staking Activities (May 29, 2025), https://www.sec.gov/newsroom/speeches-statements/statement-certain-protocol-staking-activities-052925; SEC Div. of Corp. Fin., Statement on Certain Liquid Staking Activities (Aug. 5, 2025), https://www.sec.gov/newsroom/speeches-statements/corpfin-certain-liquid-staking-activities-080525.

285. *See* SEC Div. of Corp. Fin., Staff Statement on Meme Coins (Feb. 27, 2025), https://www.sec.gov/newsroom/speeches-statements/staff-statement-meme-coins.

286. Statement on Certain Proof-of-Work Mining Activities (Mar. 20, 2025), https://www.sec.gov/newsroom/speeches-statements/statement-certain-proof-work-mining-activities-032025.

287. Statement on Certain Protocol Staking Activities (May 29, 2025), https://www.sec.gov/newsroom/speeches-statements/statement-certain-protocol-staking-activities-052925.

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of the staked position rather than a separate investment contract on the stated facts.[288] The stablecoin statement focused on fully backed, redeemable, dollar-referenced instruments used for payments or as a store of value and not marketed as investments or as providing interest, profit, or governance rights.[289] These are high-level summaries of staff statements, and deeper analysis may be warranted where a particular transaction or product involves yield, profit sharing, rights to issuer assets, or reliance on a sponsor's managerial efforts.

The Division of Trading and Markets staff also addressed broker-dealer registration for certain covered user interfaces used with self-custodial wallets in crypto asset securities transactions. The statement is narrow.[290] It does not decide whether any token is a security, and it does not give general relief to a platform that recommends trades, routes orders, handles customer assets, or otherwise intermediates transactions. Rather, the staff stated that a covered interface provider whose interface only helps a user assemble and sign the user's own on-chain transactions, from the user's self-custodial wallet and subject to the statement conditions, is not required to register as a broker under the Exchange Act section 15(a) on that basis alone.[291]

The Division of Corporation Finance also issued disclosure-oriented staff views for offerings and registrations of securities in the crypto asset markets.[292] The statement does not decide whether a crypto asset is a security. Instead, it sets forth the staff's expectations when the securities disclosure regime applies. Relevant disclosures may include the issuer's business and development stage, how the network or application operates, governance token-holder rights, transfer and custody-mechanics, supply terms, risk factors, financial statements, and where code defines or affects investor rights, exhibits

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288. SEC Div. of Corp. Fin., Statement on Certain Liquid Staking Activities (Aug. 5, 2025), https://www.sec.gov/newsroom/speeches-statements/corpfin-certain-liquid-staking-activities-080525.

289. SEC Div. of Corp. Fin., Statement on Stablecoins (Apr. 4, 2025), https://www.sec.gov/newsroom/speeches-statements/statement-stablecoins-040425.

290. SEC Div. of Trading & Mkts., Staff Statement Regarding Broker-Dealer Registration of Certain User Interfaces Utilized to Prepare Transactions in Crypto Asset Securities (Apr. 13, 2026), https://www.sec.gov/newsroom/speeches-statements/staff-statement-regarding-broker-dealer-registration-certain-user-interfaces-utilized-prepare-staff-statement-regarding-broker-dealer-registration-certain-user-interfaces-utilized.

291. *Id*.

292. SEC Div. of Corp. Fin., Offerings and Registrations of Securities in the Crypto Asset Markets (Apr. 10, 2025), https://www.sec.gov/newsroom/speeches-statements/cf-crypto-securities-041025-offerings-registrations-securities-crypto-asset-markets.

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addressing smart contracts or other operative code.[293] This highlights that the staff focuses not only on legal characterization, but also on whether investors are informed of, among other things, how the product works, what rights (if any) they have, who performs key functions, and what operational risk they bear.[294]

[C] SEC Staff No-Action Relief for Digital Assets

The following no-action letters remain useful examples of circumstances where the SEC staff provided relief.

[C][1] TurnKey Jet, Inc. No-Action Letter

On the same day the FinHub released its framework, the SEC staff issued a no-action letter to TurnKey Jet, Inc.[295] The letter provided relief to a U.S. dollar–pegged digital asset that is part of a membership program for an air charter services company. The digital asset failed the "expectation of profits" prong of the *Howey* test because of characteristics related to the manner of the proposed offering, price restrictions, and contractual and technical transferability restrictions TurnKey planned to impose on the digital asset. However, the SEC staff noted the following conditions and restrictions imposed by TurnKey in issuing its no-action relief:

- No funds will be used to develop the TurnKey Platform, and the TurnKey Platform will be fully operational at the time any tokens are sold;
- The tokens are planned to be immediately useable for their intended functionality at the time they are sold;
- TurnKey will restrict transfers of tokens to TurnKey wallets only, and no wallets external to the TurnKey Platform will be allowed to transact in tokens;
- The token price will be pegged 1:1 to a U.S. dollar value;
- Any repurchase of tokens by TurnKey will be at a discount to face value; and
- The tokens will be marketed in a manner that emphasizes their functionality.

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293. *Id.*
294. *Id.*; *see also* SEC Div. of Corp. Fin., Crypto Asset Exchange-Traded Products (July 1, 2025).
295. TurnKey Jet, Inc., SEC No-Action Letter (Apr. 3, 2019), https://www.sec.gov/divisions/corpfin/cf-noaction/2019/turnkey-jet-040219-2a1.htm.

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Subject to compliance with these conditions, the no-action letter confirmed that the Division of Corporation Finance would not recommend enforcement action if TurnKey offered and sold its tokens without registering the offering under section 5 of the Securities Act or registering the digital assets under section 12(g) of the Exchange Act.[296]

[C][2] Pocketful of Quarters, Inc. No-Action Letter

On July 25, 2019, the SEC staff issued a second no-action letter to a company planning to issue blockchain-based tokens. The letter was issued to Pocketful of Quarters (PoQ), a gaming start-up that sought to issue an Ethereum-based gaming utility token called Quarters for use within its gaming platform.[297] In the no-action letter, the SEC staff stated that it reached its position because of several facts related to PoQ's tokens, including the following:

- No proceeds from the sale of tokens would be used to develop the token's technology;
- The token's technology was fully developed, functional, and ready for use upon launch;
- Technological and contractual provisions governing the tokens restricted the transfer of tokens;
- Users would only be able to transfer tokens for gameplay to addresses of game developers with approved accounts or to PoQ in connection with participation in e-sports tournaments;
- Tokens would be made continuously available to gamers in unlimited quantities at a fixed price;
- There would be a correlation between the purchase price of tokens and the market price of accessing and interacting with games on the token's platform; and
- PoQ would market and sell tokens to gamers solely for consumptive use as a means of accessing and interacting with participating games.[298]

The PoQ letter was the first instance of an Ethereum-based ERC-20 token to be transacted on a public blockchain.

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296. *Id*.
297. Pocketful of Quarters, Inc., SEC No-Action Letter (July 25, 2019), https://www.sec.gov/corpfin/pocketful-quarters-inc-072519-2a1.
298. *Id*.

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[C][3] IMVU Inc. No-Action Letter

In November 2020, the SEC staff issued a no-action letter stating that it would not recommend enforcement action if IMVU Inc. offered and sold VCOIN, a blockchain-based digital asset, as a transferable non-security to its users worldwide under the conditions described in the request.[299] IMVU is an avatar-based social platform with a global network of over 7 million monthly active users. These users create three-dimensional avatars to meet new friends, interact, and play games in virtual environments. VCOIN can be earned on the site and either exchanged for additional services or functionality on the site or for fiat currency. The IMVU no-action letter was the first issued by the SEC staff for a blockchain token that can be transferred outside of a closed platform and exchanged for fiat currency. Importantly, in the case of IMVU, no capital raise was involved, and the tokens were fully usable at launch. In the no-action letter, the SEC staff stated that it reached its position because of several facts related to tokens, including the following:

- No proceeds from the sale of tokens would be used to finance the token's technology;
- The token's technology was fully developed, functional, and ready for use upon launch and before any token is sold;
- The token will be immediately usable for its intended purpose at the time it is sold;
- IMVU will impose specified limits on token purchases, conversions, and transfers;
- The token holders will be subject to KYC/AML checks;
- Tokens would be made continuously available in unlimited quantities at a fixed price, and IMVU will always generate enough supply of the tokens to maintain the token's fixed price;
- IMVU will not promote or support listing or trading of the tokens on any third-party trading platform;
- IMVU will market and sell tokens to users solely for consumptive use as a means of exchange value on, and in connection, with the platform; and

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299. IMVU Inc., SEC No-Action Letter (Nov. 19, 2020), https://www.sec.gov/corpfin/imvu-111920-2a1.

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- IMVU will require users who purchase the tokens from IMVU to affirm that, among other things, they are acquiring the token for consumptive use and not for speculative purposes.[300]

This is the first no-action letter involving a digital asset that can be transferred on and off of the issuer's platform and exchanged for fiat currency by purchasers.

[C][4] DoubleZero No-Action Letter

In September 2025, the SEC staff issued a no-action letter to DoubleZero Foundation concerning programmatic transfers of 2Z tokens used in a decentralized physical infrastructure network for high performance internet connectivity.[301] The platform was described as a purpose-built internet network optimized for distributed systems, in which users would use 2Z to pay for network services and network and resource providers would receive 2Z for contributing connectivity and related network functions. In the no-action letter, the SEC staff stated that it reached its position because of several facts related to the 2Z tokens and the programmatic transfers, including the following:

- The request was limited to programmatic transfers and did not extend to prior 2Z transactions;
- The protocol was live and functional, and the network had launched;
- The network was operated by a diffuse ecosystem of participants rather than by a central promoter or sponsor;
- Network providers and resource providers would receive 2Z as compensation for active network services;
- Payments would be determined by smart contracts and the participants' own service activity;
- 2Z was designed for consumptive use as payment for network services and did not include dividends, a deflationary token supply, programmatic buybacks, or similar passive value-accrual functionality; and
- The foundation would not promote 2Z as an investment or as a means to earn passive investment returns.[302]

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300. *Id*.
301. DoubleZero, SEC No-Action Letter (Sept. 29, 2025), https://www.sec.gov/rules-regulations/no-action-interpretive-exemptive-letters/division-corporation-finance-no-action/doublezero-092925.
302. *Id*.

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The DoubleZero letter is a notable example of SEC staff relief for a token used in a live network in which participants earned tokens by providing network services, rather than by passively holding the token.

[C][5] Fuse Crypto Limited No-Action Letter

In November 2025, the SEC staff issued a no-action letter to Fuse Crypto Limited concerning tokens distributed in connection with the Fuse Network, an energy-services platform.[303] Fuse described the platform as a token-enabled system for coordinating consumer distributed energy resources into virtual power plants, with tokens awarded for consumer energy activity and redeemable for limited discounts or rebates on Fuse goods and services. In the no-action letter, the SEC staff stated that it reached its position because of several facts related to the Fuse tokens, including the following:

- Fuse would not sell tokens to consumers for cash;
- Tokens would be awarded for substantive consumer activity in the Fuse Network;
- Tokens would be immediately usable for their intended purpose when awarded;
- Tokens would be redeemable only with Fuse for limited discounts on Fuse goods and services;
- A Token's value would be tied to its utility in the Fuse Network and not to the overall success of Fuse or the Fuse Network; and
- Fuse would market the tokens solely for consumptive use as a means of interacting with the Fuse Network.[304]

The Fuse letter is a notable example of SEC staff relief for a customer reward token tied to consumer participation in the platform and used for limited redemption rights.

[C][6] MegPrime Holding LLC No-Action Letter

In January 2026, the SEC staff issued a no-action letter to MegPrime Holding LLC concerning MegPrime Tokens.[305] MegPrime

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303. Fuse Crypto Limited, SEC No-Action Letter (Nov. 24, 2025), https://www.sec.gov/rules-regulations/no-action-interpretive-exemptive-letters/division-corporation-finance-no-action/fuse-crypto-limited-112425.
304. *Id*.
305. MegPrime Holding LLC, SEC No-Action Letter (Jan. 15, 2026), https://www.sec.gov/rules-regulations/no-action-interpretive-exemptive-letters/division-corporation-finance-no-action/megprime-holding-llc-011526.

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described the tokens as part of a rewards program in which users could spend MegPrime tokens in day-to-day purchases and receive token or points-based rewards, including rewards connected to home affordability programs. In the no-action letter, the SEC stated that it reached its position because of several facts related to the tokens, including the following:

- MegPrime tokens would be immediately usable for purchases and for earning rewards under the Rewards program;
- Token holders would not receive interest, profit, other returns, ownership interests, or governance rights;
- The only right or interest associated with the tokens would be to receive consumption rewards tied to spending or, for certain rewards, limited holding requirements;
- Users would be able to acquire MegPrime tokens before a purchase and convert remaining balances to USD after a purchase;
- Any repurchase by MegPrime would be limited to rewards program, vendor, or operational needs and would not be conducted to manipulate or affect the token's market price; and
- MegPrime would market the token as a household budgeting and affordability tool and not an investment.[306]

The MegPrime letter is a notable example of SEC staff relief for a token used in a consumer payment and rewards program, even though the token was expected to have secondary-market liquidity.

[D] Regulation A+ Offerings of Digital Assets

Regulation A, colloquially referred to as "Regulation A+" after the 2015 amendments,[307] is an exemption from Securities Act registration requirements for public offerings.[308] Regulation A has two offering tiers: Tier 1, for offerings of up to $20 million in a twelve-month period, and Tier 2, for offerings of up to $75 million in a twelve-month period.[309] Certain basic requirements apply to both Tier 1 and Tier 2

306. *Id*.
307. Amendments for Small and Additional Issues Exemptions Under the Securities Act (Regulation A), 80 Fed. Reg. 21806 (Apr. 20, 2015).
308. 17 C.F.R. §§ 230.251–230.263.
309. Sec. & Exch. Comm'n, Regulation A (last updated May 19, 2020), https://www.sec.gov/smallbusiness/exemptofferings/rega; Facilitating Capital Formation and Expanding Investment Opportunities by Improving Access to Capital in Private Markets, 86 Fed. Reg. 3496 (Jan. 14, 2021) (raising the Tier 2 maximum offering amount to $75 million, effective

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offerings, including company eligibility requirements, bad actor disqualification provisions, disclosure, and other matters.[310] Tier 2 has additional requirements, including limitations on the amount of money a non-accredited investor may invest, requirements for audited financial statements, and the filing of ongoing reports.[311] Issuers in Tier 2 offerings are not required to register or qualify their offerings with state securities regulators.[312]

In July 2019, Blockstack PBC conducted a Tier 2 token offering under the Regulation A+ exemption.[313] The sale enabled Blockstack to raise capital through the U.S. securities markets for the development of its Blockstack network while offering a "utility token" that can be used to burn as fuel or create a new smart contract on the Blockstack network and as currency on the network.[314] Since its 2019 offering, Blockstack PBC has had to file regular reports with the SEC, including an annual report on Form 1-K, but it later rebranded to Hiro PBC, and after the launch of the Stacks 2.0 blockchain it announced that it no longer treats the Stacks token as securities under U.S. federal securities law and filed what it expected to be its annual report with the SEC.[315]

While Regulation A offers an avenue for blockchain developers to raise capital, it imposes regular reporting requirements and financial disclosures that, to date, have continued to prove daunting to many developers, especially where there is an intention to create a decentralized network.

Mar. 15, 2021), https://www.federalregister.gov/documents/2021/01/14/2020-24749/facilitating-capital-formation-and-expanding-investment-opportunities-by-improving-access-to-capital.

310. *Id*.

311. *Id*.

312. *Id*.

313. Blockstack PBC, Regulation A Offering Statement under the Securities Act of 1933 (Form 1-A/A) (July 10, 2019); Blockstack PBC, Offering Circular (July 11, 2019).

314. Paul Vigna, *SEC Clears Blockstack to Hold First Regulated Token Offering*, WALL ST. J. (July 10, 2019), https://www.wsj.com/articles/sec-clears-blockstack-to-hold-first-regulated-token-offering-11562794848; Blockstack PBC, Annual Report (Form 1-K) (Apr. 29, 2020).

315. *See* Blockstack PBC, Annual Report (Form 1-K) (Apr. 29, 2020); Muneeb Ali, Hiro Files Final Annual Report with the SEC, Hiro (last visited June 15, 2026), https://www.hiro.so/blog/hiro-files-final-annual-report-with-the-sec.

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[E] Federal Digital Asset Legislation, Market-Structure Bills, and Executive Orders

Congress has continued to consider digital asset legislation, some of which has been enacted, some of which did not advance, and some of which remains pending, as discussed below.

[E][1] Earlier Proposed but Unenacted Federal Legislation

[E][1][a] Eliminate Barriers to Innovation Act of 2021

The Eliminate Barriers to Innovation Act of 2021 would direct the CFTC and the SEC to jointly establish a digital asset working group to evaluate the regulation of digital assets in the United States in various circumstances, such as primary and secondary trading and custody.[316] The working group would also be charged with providing the SEC and CFTC with recommendations and best practices for the regulation of digital assets.

[E][1][b] Crypto-Currency Act of 2020

The Crypto-Currency Act of 2020 would have defined "crypto-commodity," "crypto-currency," and "crypto-security," and then placed each respective type of asset under the purview of the CFTC, the U.S. Department of the Treasury (acting through the Financial Crimes Enforcement Network, or "FinCEN," and the Office of the Comptroller of the Currency), and the SEC, respectively.[317]

[E][1][c] Token Taxonomy Act of 2019

The Token Taxonomy Act of 2019 would have defined "digital token" and then would explicitly exclude any such asset from the definition of "security" under the federal securities laws.[318] Among the components of the bill's "digital token" definition was that the token itself is not intended to function as a security or financial interest in a business association.[319] The legislation also would have preempted any applicable state law.[320]

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316. Eliminate Barriers to Innovation Act of 2021, H.R. 1602, 117th Cong. (2021). The House passed the Act on April 20, 2021, and it was received in the Senate and referred to a Senate committee but was not enacted before the end of the 117th Congress.
317. Crypto-Currency Act of 2020, H.R. 6154, 116th Cong. (2020).
318. Token Taxonomy Act of 2019, H.R. 2144, 116th Cong., § 2(b) (2019).
319. H.R. 2144 § 2(a).
320. H.R. 2144 § 2(d).

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[E][1][d] Financial Innovation and Technology for the 21st Century Act

The Financial Innovation and Technology for the 21st Century Act (FIT21) would have established a federal market-structure framework for digital assets, including by allocating regulatory authority between the SEC and CFTC and creating registration pathways for certain digital asset intermediaries.[321]

[E][1][e] Lummis-Gillibrand Responsible Financial Innovation Act

The Lummis-Gillibrand Responsible Financial Innovation Act (RFIA) would have created a broad federal framework for digital assets, including provisions addressing digital asset classification, CFTC and SEC jurisdiction, stablecoins, tax treatment, custody, consumer protection, and agency coordination.[322]

[E][2] Enacted Federal Legislation

[E][2][a] The GENIUS Act

The Guiding and Establishing National Innovation for U.S. Stablecoins Act of 2025 (the "GENIUS Act") establishes a federal framework for permitted payment stablecoin issuers, including reserve, redemption, disclosure, supervisory, insolvency, and compliance requirements.[323] It also amends the federal securities laws and the CEA to exclude payment stablecoins issued by permitted payment stablecoin issuers from specified definitions of securities and commodities.[324] The GENIUS Act is discussed further (see section 46:3.3 below) because it is a payment-stablecoin statute, not a general securities-status statute. The GENIUS Act was enacted on July 18, 2025, but its operative provisions take effect on the earlier of January 18, 2027 (eighteen months after enactment) or one hundred twenty days after the primary federal payment-stablecoin regulators issue final implementing regulations.[325] As of this writing,

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321. Financial Innovation and Technology for the 21st Century Act, H.R. 4763, 118th Cong. (as passed by House, May 22, 2024).
322. Responsible Financial Innovation Act, S. 2281, 118th Cong. (2023).
323. Guiding and Establishing National Innovation for U.S. Stablecoins Act (GENIUS Act), Pub. L. No. 119-27, §§ 3–6, 13, 139 Stat. 419, 423–47, 459–60 (2025) (codified at 12 U.S.C. §§ 5902–05, 5913).
324. GENIUS Act § 17,139 Stat. at 462–63.
325. GENIUS Act § 20, 139 Stat. at 466; *see also* 12 U.S.C. § 5901 note.

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implementing regulations had not been finalized, and the framework is enacted but not yet operative.[326]

[E][3] Pending Federal Legislation

[E][3][a] Digital Asset Market Clarity Act of 2025

On July 17, 2025, in the 119th Congress, the U.S. House of Representatives passed the Digital Asset Market Clarity Act of 2025 (the "CLARITY Act").[327] The bill would establish a federal market structure framework for digital assets, including by allocating regulatory authority between the SEC and CFTC, defining categories of digital assets and digital commodities, and creating registration and conduct requirements for certain digital asset intermediaries.[328] The Senate Banking Committee advanced the bill by a 15–9 vote on May 14, 2026, and the bill then moved to the Senate floor.[329] As of the date of this publication, however, no comprehensive federal digital asset market-structure statute has been enacted.[330]

The CLARITY Act remains important to the securities law analysis because, if enacted, it would materially affect how federal law treats digital assets, secondary-market trading, and the line between SEC and CFTC jurisdictions. One issue in the Senate process that received significant industry attention has been the treatment of yield or rewards connected to payment stablecoins. The Senate Banking Committee's May 2026 summary would prohibit covered digital asset service providers and affiliates from paying U.S. customers passive, deposit-like interest or yield on payment-stablecoin balances, while allowing bona fide activity-based or transaction-based rewards under joint rules.[331] This issue overlaps with the stablecoin discussion below in section 46:3.3.

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326. *See, e.g.*, GENIUS Act Implementation, 90 Fed. Reg. 45159 (Sept. 19, 2025) (Treasury advance notice of proposed rulemaking); GENIUS Act Requirements and Standard for OCC-Supervised Payment Stablecoin Issuers, 91 Fed. Reg. 10202 (Mar. 2, 2026) (proposed rule).
327. H.R. 3633, Digital Asset Market Clarity Act of 2025, 119th Cong. (as passed by House, July 17, 2025).
328. *Id*.
329. Press Release, U.S. Senate Comm. on Banking, Hous. & Urb. Affs., Chairman Scott, Senate Banking Committee Advance CLARITY Act in Historic Bipartisan Vote (May 14, 2026), https://www.banking.senate.gov/newsroom/majority/chairman-scott-senate-banking-committee-advance-clarity-act-in-historic-bipartisan-vote.
330. *Id*.
331. S. Comm. on Banking, Housing, and Urban Affairs, Digital Asset Market Clarity Act, Section-by-Section Summary, sec. 404 (May 12, 2026).

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[E][4] Executive Orders and Executive Branch Policy

In January 2025, Executive Order 14178 revoked Executive Order 14067 and directed federal agencies to review digital asset regulations, guidance, orders, and other items.[332] It also established the President's Working Group on Digital Asset Markets, chaired by the Special Advisor for AI and Crypto, directed the Working Group to recommend a federal digital asset regulatory framework, and prohibited agencies from taking action to establish, issue, or promote a U.S. CBDC except as required by law.[333] The Working Group's July 2025 report supported market-structure legislation, implementation of the GENIUS Act, and additional federal action on CBDCs, banking, custody, tokenization, and illicit finance.[334]

A later executive order, Executive Order 14405, is not limited to digital assets, but it directs federal financial regulators to review regulations, guidance, supervisory practice, no-action letters, and application processes that may impede fintech firms from partnering with regulated financial institutions or obtaining federal licenses, registrations, and authorizations while preserving safety and soundness, investor protection, market integrity, financial stability, and oversight considerations.[335] It also requests that the Federal Reserve review access to Reserve Bank payment accounts and services by uninsured depository institutions and non-bank financial companies, including firms engaged in digital assets and other novel financial activities.[336]

§ 46:3.3 Stablecoins

The term "stablecoin" generally refers to "a digital asset that purports to minimize price volatility."[337] In an attempt to reduce price volatility, a stablecoin may be pegged to or backed by specific assets, controlled by algorithms, or allowed to float within a stabilization

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332. Exec. Order No. 14,178, Strengthening American Leadership in Digital Financial Technology, 90 Fed. Reg. 8647, 8648-49 (Jan. 31, 2025).
333. *Id*.
334. President's Working Group on Digital Asset Markets, Strengthening American Leadership in Digital Financial Technology (July 2025), https://www.whitehouse.gov/presidential-actions/2025/01/strengthening-american-leadership-in-digital-financial-technology/.
335. Exec. Order No. 14,405, Integrating Financial Technology Innovation into Regulatory Frameworks, 91 Fed. Reg. 30475, 30475–77 (May 22, 2026).
336. *Id*. at 30,476–77.
337. Self-Regulatory Organizations; NYSE Arca, Inc.; Order Disapproving a Proposed Rule Change, As Modified by Amendment No. 1, Relating to the Listing and Trading of Shares of the Bitwise Bitcoin ETF Trust Under NYSE Arca Rule 8.201-E, 84 Fed. Reg. 55382, 55389 n.101 (Oct. 16, 2019).

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mechanism.[338] Current stablecoin analysis distinguishes among payment stablecoins subject to the GENIUS Act, fiat-backed "Covered Stablecoins" addressed in SEC staff guidance, algorithmic or synthetic stablecoins, yield-bearing arrangements, tokenized deposits, and tokenized money market fund shares. SEC Senior Advisor for Digital Assets and Innovation Valerie A. Szczepanik addressed stablecoins in a 2019 talk at SXSW in Austin, Texas.[339] The proposed Crypto-Currency Act of 2020 would have differentiated between "reserve-backed stablecoins" and "synthetic stablecoin."[340] The May 2022 collapse of the Terra USD/Luna ecosystem illustrates that a token described as a stablecoin may present materially different risks depending on whether stability is maintained by reserves, redemption rights, and issuer obligations, or algorithmic market-incentive mechanisms. Because of their intended price stability, stablecoins may serve as a medium of exchange, settlement asset, collateral asset, or smart-contract payment path, but each must be analyzed separately from a registered fund share, bank deposit, or CBDC.[341]

[A] Legal and Regulatory Treatment of Stablecoins in the United States

The legal and regulatory treatment of stablecoins is no longer entirely open, although it still depends on the facts and circumstances of the particular instrument. The United States has enacted, but not yet made operative, a federal statutory framework for payment stablecoins: once effective, the GENIUS Act will establish a category of "permitted payment stablecoin issuer" and reserve, redemption, disclosure, insolvency, and AML/sanctions-related requirements for payment stablecoins, and will direct federal payment stablecoin regulators to issue implementing rules.[342] Of note, the statute does not eliminate all classification questions. Non-payment stablecoins, algorithmic stablecoins, yield-bearing arrangements, tokenized deposits, and other synthetic or investment-like instruments may still require

338. INT'L ORG. OF SEC. COMM'NS, GLOBAL STABLECOIN INITIATIVES 3 (Mar. 2020), https://www.iosco.org/library/pubdocs/pdf/IOSCOPD650.pdf.

339. Guillermo Jimenez, *SEC's Crypto Czar: Stablecoins Might Be Violating Securities Laws*, DECRYPT.CO (Mar. 15, 2019), https://decrypt.co/5940/secs-crypto-czar-stablecoins-might-be-violating-securities-laws.

340. Crypto-Currency Act of 2020, H.R. 6154, 116th Cong. §§ 2(9), 2(11) (2020).

341. See *supra* sections 46:2.1, 46:2.2, and 46:2.3 for transfer-agency, custody, and settlement issues.

342. Guiding and Establishing National Innovation for U.S. Stablecoins Act (GENIUS Act), Pub. L. No. 119-27, 139 Stat. 419 (2025), https://www.govinfo.gov/content/pkg/PLAW-119publ27/pdf/PLAW-119publ27.pdf.

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analysis under applicable rules and regulations, including the federal securities laws, the CEA, banking law, money transmission law, sanctions laws, tax law, and the Investment Company Act.

[A][1] Federal Payment Stablecoin Framework

At a high level, the GENIUS Act regulates who may issue payment stablecoins into the U.S. market[343] and the conditions under which those instruments may be issued and redeemed. A "permitted payment stablecoin issuer" generally must maintain permitted reserve assets at least equal to the amount of outstanding stablecoins, segregate those reserves from issuer property, provide one-for-one redemption rights, make required disclosures, obtain reserve examination or attestations, and operate with the oversight of a federal or state supervisory pathway. The Act bars a permitted payment stablecoin issuer from paying holders interest or yield solely for holding a payment stablecoin, reflecting Congress's treatment of these instruments as a means of payment rather than a deposit or investment product.[344]

The GENIUS Act also addresses insolvency and holder-priority issues.[345] Required payment-stablecoin reserves are treated separately from the issuer's general estate, and payment stablecoin holders receive statutory priority for claims arising directly from holding payment stablecoins if required reserves are insufficient. The Act further bars a permitted payment stablecoin issuer from paying interest or yield to a holder solely in connection with holding, using, or retaining a payment stablecoin. That prohibition is particularly important when comparing payment stablecoins with registered money market funds, tokenized cash-management products, tokenized deposits, staking arrangements, and other yield-bearing digital asset products.

For asset managers, the federal payment stablecoin regime warrants an additional diligence framework. A fund or adviser considering a stablecoin as a cash-management, settlement, collateral, or trading asset should evaluate whether the issuer is a permitted payment stablecoin issuer, whether reserves and redemption rights satisfy the statutory framework, whether the stablecoin is marketed and used as a payment instrument rather than an investment, whether foreign-issuer or reciprocity rules are implicated, and whether the adviser or

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343. *Id*.

344. GENIUS Act § 4(a)(11), Pub. L. No. 119-27 (prohibiting a permitted payment stablecoin issuer or foreign payment stablecoin issuer from paying the holder of any payment stablecoin interest or yield solely in connection with holding, using, or retaining the stablecoin).

345. Guiding and Establishing National Innovation for U.S. Stablecoins Act (GENIUS Act), Pub. L. No. 119-27, 139 Stat. 419 (2025), https://www.govinfo.gov/content/pkg/PLAW-119publ27/pdf/PLAW-119publ27.pdf.

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fund can satisfy custody, valuation, liquidity, AML, sanctions, and tax-reporting obligations.

In April 2026, FinCEN and OFAC proposed an AML/CFT and sanctions-compliance framework for permitted payment stablecoin issuers, making sanctions screening, suspicious-activity monitoring, lawful-order compliance, blocking or rejection of prohibited transactions, and illicit-finance controls part of the stablecoin analysis rather than only a general AML cross-reference; in June 2026, FinCEN, together with the OCC, Federal Reserve, FDIC, and NCUA, jointly proposed a customer identification program rule for those issuers.[346]

[A][2] Stablecoins As Securities

Depending on its structure and marketing, a stablecoin designed to maintain a one-for-one value relative to a fiat currency, commodity, or other low-risk, readily liquid reserves may not be a "security" under the federal securities laws.[347] SEC Corporation Finance staff

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346. FinCEN & OFAC, Permitted Payment Stablecoin Issuer Anti-Money Laundering/Countering the Financing of Terrorism Program and Sanctions Compliance Program Requirements, 91 Fed. Reg. 18582 (proposed Apr. 10, 2026), https://www.fincen.gov/resources/statutes-regulations/federal-register-notices/permitted-payment-stablecoin-issuer-anti; *Treasury Proposes Rule to Implement the GENIUS Act's Requirements to Counter Illicit Finance*, FINCEN (Apr. 8, 2026), https://www.fincen.gov/news/news-releases/treasury-proposes-rule-implement-genius-acts-requirements-counter-illicit. The federal banking and credit-union regulators have separately begun proposing BSA and sanctions-compliance standards tailored to the permitted payment stablecoin issuers they supervise. *See, e.g.*, Bank Secrecy Act and Sanctions Compliance Standards for FDIC-Supervised Permitted Payment Stablecoin Issuers, 91 Fed. Reg. 34171 (June 5, 2026) (proposed rule), https://www.govinfo.gov/content/pkg/FR-2026-06-05/pdf/2026-11342.pdf; Implementing the Guiding and Establishing National Innovation for U.S. Stablecoins Act of the Issuance of Stablecoins by Entities Subject to the Jurisdiction of the National Credit Union Administration, 91 Fed. Reg. 28956 (May 18, 2026) (supplemental proposed rule), https://www.govinfo.gov/content/pkg/FR-2026-05-18/pdf/2026-09915.pdf. *See also* Permitted Payment Stablecoin Issuer Customer Identification Program, 91 Fed. Reg. 37234 (joint notice of proposed rulemaking of FinCEN, OCC, Bd. of Governors of the Fed. Reserve Sys., FDIC & NCUA) (filed for public inspection June 18, 2026; scheduled for publication June 22, 2026), https://www.federalregister.gov/public-inspection/2026-12460/permitted-payment-stablecoin-issuer-customer-identification-program.

347. *See* SEC Div. of Corp. Fin., Statement on Stablecoins (Apr. 4, 2025), https://www.sec.gov/newsroom/speeches-statements/statement-stablecoins-040425; Caroline A. Crenshaw, Comm'r, SEC, "Stable" Coins or Risky Business? (Apr. 4, 2025), https://www.sec.gov/newsroom/speeches-statements/crenshaw-statement-stablecoins-040425.

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stated in April 2025 that the offer and sale of "Covered Stablecoins," as described in that staff statement, do not involve the offer and sale of securities.[348] This statement is staff guidance, not a rule or judicial holding, and is limited to stablecoins designed and marketed for payments, money transmission, or storage of value, redeemable one for one for U.S. dollars, backed by low-risk and readily liquid reserves, and not marketed as investments or as providing interest, profit, governance, or other ownership rights. Stablecoins outside those facts—including yield-bearing, algorithmic, reserve-sharing, or investment-marketed products—remain subject to security analysis.

[A][3] Stablecoins As Commodities

A stablecoin that is one-for-one backed by a fiat currency or commodity, or that involves the use of margin or leverage, may be a "commodity" or a commodity interest such as a swap.[349] The GENIUS Act changes the treatment of permitted "payment stablecoins" going forward by excluding payment stablecoins issued by permitted payment stablecoin issuers from the CEA definition of "commodity," but it does not displace CFTC anti-fraud and anti-manipulation authority over commodity transactions outside the statute's carveouts. For a discussion of the CFTC's jurisdiction over and regulation of such products, see section 46:3.1[C] above.

[A][4] Stablecoins As Currency Substitutes

A stablecoin that is one-to-one backed by a fiat currency or commodity and that "serves as a currency substitute may be considered a payment instrument under state money transmitter laws."[350] In 2019, Kenneth A. Blanco, the Director of FinCEN, said in prepared remarks that for purposes of AML, as well as countering the financing of terrorism (CFT), transactions in stablecoins as a currency

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348. SEC Div. of Corp. Fin., Statement on Stablecoins (Apr. 4, 2025), https://www.sec.gov/newsroom/speeches-statements/statement-stablecoins-040425.

349. Summary Overview of Stablecoins and the Law Regarding Stablecoins, CFTC Technology Advisory Committee, Subcommittee on Virtual Currencies 12-13 (2019), https://www.cftc.gov/media/2731/TAC100319_Stablecoins/download [hereinafter Summary Overview of Stablecoins and the Law Regarding Stablecoins]; *see also* Marco Dell'Erba, Stablecoins in Cryptoeconomics: From Initial Coin Offerings to Central Bank Digital Currencies, 22 N.Y.U. J. Legis. & Pub. Pol'y 1, 34 (2019) [hereinafter Dell'Erba] (noting that there is a possibility that a stablecoin could be characterized as a "swap" under the CEA); 7 U.S.C. § 1a(47) (defining "swap").

350. Summary Overview of Stablecoins and the Law Regarding Stablecoins, *supra* note 349, at 12.

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substitute are covered by FinCEN's definition of "money transmission services."[351] The GENIUS Act adds a federal issuer framework for payment stablecoins, but BSA, AML, sanctions, Travel Rule, money-transmission, and state licensing controls remain central to the use of payment stablecoins and other dollar referenced digital assets in asset-management workflows.

[B] Utilization of Stablecoins

Stablecoins, in their variety of formats, seek to hold a stable value in order to address the price volatility associated with other digital assets.[352] As such, stablecoins may serve as a medium of exchange, unit of account, settlement asset, collateral asset, or liquidity tool in a variety of contexts. Current products include fiat-backed or payment stablecoins, commodity-referenced or crypto asset-referenced stablecoins, algorithmic or synthetic stablecoins, and yield-bearing or reward linked arrangements; not all of these products are payment stablecoins under the GENIUS Act, and several may raise securities, commodities, banking, or Investment Company Act issues despite being described in the market as stablecoins. Payment stablecoins are private issuer obligations, subject, if within the GENIUS Act, to the federal payment–stablecoin framework discussed above. Tokenized deposits are different in that they are generally a digital representation of a bank deposit claim and therefore raise bank balance sheet, deposit, payment, and settlement issues different from a nonbank stablecoin or a registered money market fund.

[C] Stablecoins Versus Money Market Funds

Through their intended price stability, certain stablecoins may resemble government money market funds that seek to maintain a stable share price (for example, $1.00), but the legal frameworks are materially different. As noted above, a payment stablecoin is designed to function as a payment or settlement instrument and, if within the GENIUS Act, is subject to the permitted payment-stablecoin issuer framework. A Rule 2a-7 money market fund, in contrast, is a registered investment company that issues redeemable securities and is subject to the Investment Company Act portfolio, liquidity, valuation,

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351. Kenneth A. Blanco, Director, Fin. Crimes Enforcement Network, Prepared Remarks of FinCEN Director Kenneth A. Blanco at Chainalysis Blockchain Symposium (Nov. 15, 2019), https://www.fincen.gov/news/speeches/prepared-remarks-fincen-director-kenneth-blanco-chainalysis-blockchain-symposium.

352. Dell'Erba, *supra* note 349, at 5.

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disclosure, board oversight, distribution and custody requirements. Franklin Templeton's government money market fund, WisdomTree's digital money market funds, and similar products are therefore better understood as registered fund shares recorded or mirrored on a blockchain, not as stablecoins.[353] The blockchain record may affect transfer agent, shareholder record, settlement, and operational controls but does not convert a registered fund share into a payment stablecoin or eliminate the official transfer agent record. These funds would typically be offered through a mobile device application and would record a copy of the fund's shares on a blockchain.[354] Using the blockchain to track share ownership in a government money market fund presents unique possibilities for the implementation of blockchain technology in more traditional financial products. These types of money market funds demonstrate continued adoption of blockchain technology by funds. Such products may be positioned to continue to utilize blockchain technology to a further degree if various legal and regulatory hurdles continue to be met at both the federal and state level. For instance, a government money market fund on a blockchain would not require its transfer agent to perform all of the transfer agency services discussed (see section 46:2.1 above).[355] In addition, because of the price stability of money market fund shares, such a fund could consider issuing its shares on the blockchain directly (as opposed to mirroring) and then utilize smart contracts for the calculation and distribution of dividends. The transfer agent and shareholder-record implications are addressed principally in section 46:2.1.

Separately, registered or exempt money market and liquidity funds may serve as reserve-management vehicles for stablecoin issuers. For example, dedicated reserve funds and on-chain reserve vehicles have been launched or filed to invest in short-term government securities or high-quality liquid assets for stablecoin reserve purposes. Those products may support an issuer's reserve-management obligations under the GENIUS Act, but the fund share remains a fund share; the stablecoin holder's claim is against the stablecoin issuer, not a direct claim on the reserve fund.

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353. For a more in-depth discussion of these funds, see *supra* section 46:2.1[F][2].

354. *See supra* section 46:2.1[F][2]; *see also* Keen & Ahmadifar, *supra* note 5, at 30.

355. *See* Arca Registration Statement, *supra* note 73; *see also supra* section 46:2.1[F][2].

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§ 46:3.4 Registered Pooled Investment Entity Products

[A] SEC-Registered Closed-End Fund with Digital Shares

An early example of a registered closed-end fund that used blockchain-based shares was the Arca Fund, which issued its digital shares ("ArCoins") through the Ethereum blockchain.[356] Generally, registered closed-end funds are investment companies that are not required to satisfy shareholder redemption requests on a daily basis like a mutual fund. Instead, these types of funds offer liquidity to their shareholders by publicly listing their shares on the secondary market (that is, publicly traded shares) or by periodically offering to repurchase their shares at a price based on the fund's net asset value per share (NAV) (that is, interval or tender offer funds). The Arca Fund was organized as a "continuously offered, diversified, closed-end management company" intending to operate as an interval fund.[357] It intended to invest at least 80% of its assets in U.S. Treasuries and the rest in cash and cash equivalents.[358] Of note, the fund itself did not invest in digital assets. The shares were offered (including subsequent peer-to-peer transfers) only to "whitelisted" investors who completed its AML/KYC process. To impose this limitation, the Arca Fund utilized an Ethereum token standard to deploy smart contracts that restricted who can receive ArCoin transfers and how many ArCoins could be transferred at a time—the latter being an important limitation for interval closed-end funds like the Arca Fund that typically limit their periodic repurchase offers to a certain percentage of their outstanding shares.[359]

The Arca Fund's transfer agent maintained the official record of the ArCoin, even though the peer-to-peer transactions were viewable on the Ethereum blockchain as well.[360] In case of conflict between the records of the transfer agent and the Ethereum blockchain, the former controlled.[361] The transfer agent maintained a list of the shareholders and sent proxy statements, dividend distributions, tax reports, and other shareholder items to shareholders as applicable.[362]

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356. *See* Arca Registration Statement, *supra* note 73; *see also supra* section 46:2.1[F][2].
357. *See* Arca Registration Statement, *supra* note 73.
358. *See id*.
359. *Id*.
360. *Id*.
361. *Id*.
362. *Id*.

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[B] Crypto Asset Exchange-Traded Products and Grantor Trusts

Grayscale Bitcoin Trust began as a Delaware statutory trust that offered its shares only to "accredited investors" within the meaning of Rule 501(a) of Regulation D.[363] The trust was not registered as a fund under the Investment Company Act and thus its investors did not benefit from the regulatory protections provided under the Investment Company Act. Following the D.C. Circuit's decision in *Grayscale Investments, LLC v. SEC*, the Trust's registration statement on Form S-3 became effective in January 2024, and its shares began trading on NYSE Arca.[364] As originally disclosed in the trust's registration statement:

> The Trust's purpose is to hold bitcoins, which are a digital commodity based on the cryptographic protocols used by the decentralized, peer-to-peer bitcoin computer network. The investment objective of the Trust is for the Shares to reflect the performance of the value of a bitcoin as represented by the [TradeBlock XBX Index], less the Trust's liabilities and expenses.

The exchange-traded product developments after 2021 materially changed that operational posture. The SEC approved exchange rule changes to list and trade spot bitcoin exchange-traded product shares on January 10, 2024, and spot ether exchange-traded product shares on May 23, 2024.[365]

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363. "Accredited investors" generally, subject to certain exceptions, means individuals who hold certain professional designations (such as FINRA Series 7, 65, or 82), have income in excess of $200,000 (or joint income with a spouse (or spouse equivalent) in excess of $300,000), or have $1 million in net worth, or entities with $5 million in total assets.

364. Grayscale Invs., LLC v. SEC, 82 F.4th 1239 (D.C. Cir. 2023); SEC Order Granting Approval of Spot Bitcoin ETP Proposals, Exchange Act Release No. 34-99306 (Jan. 10, 2024); SEC Order Granting Approval of Spot Ether ETP Proposals, Exchange Act Release No. 34-100224 (May 23, 2024); *see also* Grayscale Bitcoin Trust (BTC), Annual Report (Form 10-K) (Feb. 23, 2024), https://www.sec.gov/Archives/edgar/data/1588489/000119312524043678/d736998d10k.htm.

365. *Grayscale Invs., LLC*, 82 F.4th 1239; Self-Regulatory Organizations; NYSE Arca, Inc.; The Nasdaq Stock Market LLC; Cboe BZX Exchange, Inc.; Order Granting Accelerated Approval of Proposed Rule Changes, As Modified by Amendments Thereto, to List and Trade Bitcoin-Based Commodity-Based Trust Shares and Trust Units, Exchange Act Release No. 34-99306 (Jan. 10, 2024), https://www.sec.gov/files/rules/sro/nysearca/2024/34-99306.pdf; Self-Regulatory Organizations; NYSE Arca, Inc.; The Nasdaq Stock Market LLC; Cboe BZX Exchange, Inc.; Order Granting Accelerated Approval of Proposed Rule Changes, As Modified by Amendments Thereto, To List and Trade Shares of

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These products generally are commodity-based trust products registered under the Securities Act of 1933 and listed pursuant to Securities Exchange Act of 1934 exchange rules; they are not registered investment companies and, despite industry references to them loosely as "ETFs," are not exchange-traded funds within the meaning of the Investment Company Act of 1940. That distinction continues to matter for custody, board oversight, redemption mechanics, fund-of-fund limits, and tax treatment, and the approvals did not resolve the custody, valuation, market-manipulation, and disclosure questions that arise when registered funds and advisers seek digital asset exposure.

Product mechanics have continued to evolve. In July 2025, the SEC approved orders permitting in-kind creations and redemptions for bitcoin and ether ETPs. In September 2025, the SEC approved generic listing standards for Commodity-Based Trust Shares, allowing qualifying products, including digital asset products, to be listed without individual exchange-rule filings. The staff of the Division of Corporation Finance separately issued disclosure guidance for crypto asset ETP registration statements, confirming that product-specific disclosure remains important even as listing standards are streamlined.[366] Under those streamlined standards, the SEC and the exchanges moved beyond bitcoin and ether as spot Solana, XRP, and other exchange-traded products began trading shortly thereafter. These products remain Securities Act registered commodity-based trust products listed under the Exchange Act exchange rules, not registered investment companies, and the proliferation of single-asset and multi-asset crypto exchange-traded products does not alter the

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Ether-Based Exchange-Traded Products, Exchange Act Release No. 34-100224 (May 23, 2024), https://www.sec.gov/files/rules/sro/nysearca/2024/34-100224.pdf.

366. Press Release No. 2025-101, SEC, SEC Permits In-Kind Creations and Redemptions for Crypto ETPs (July 29, 2025), https://www.sec.gov/newsroom/press-releases/2025-101-sec-permits-kind-creations-redemptions-crypto-etps; Self-Regulatory Organizations; The Nasdaq Stock Market LLC; Cboe BZX Exchange, Inc.; NYSE Arca, Inc.; Order Granting Accelerated Approval of Proposed Rule Changes, As Modified by Amendments Thereto, To Amend Certain Bitcoin and Ether-Based Commodity-Based Trust Shares to Permit In-Kind Creations and Redemptions, Exchange Act Release No. 34-103571 (July 29, 2025), https://www.sec.gov/files/rules/sro/nasdaq/2025/34-103571.pdf; Press Release No. 2025-121, SEC, SEC Approves Generic Listing Standards for Commodity-Based Trust Shares (Sept. 17, 2025), https://www.sec.gov/newsroom/press-releases/2025-121-sec-approves-generic-listing-standards-commodity-based-trust-shares; SEC Div. of Corp. Fin., Crypto Asset Exchange Traded Products (July 1, 2025), https://www.sec.gov/newsroom/speeches-statements/cf-crypto-asset-exchange-traded-products-070125.

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custody, valuation, market-integrity, and disclosure analysis applicable when registered funds and advisers seek digital asset exposure.

Market participants increasingly refer to a related next-stage product concept as "ETF 2.0": tokenizing listed fund or exchange-traded product shares, or using tokenized records, so that the investor-facing product remains a security issued under the existing securities-law framework while the transfer, recordkeeping, settlement, collateral, or distribution layer uses DLT. Potential benefits include faster or continuous settlement, greater transferability, fractionalized access, collateral mobility, and better data transparency. Tokenized ETFs or ETPs also raise practical and legal challenges, including whether on-chain transfers can be reconciled with the official share register and authorized-participant creation/redemption process; whether liquidity will fragment between traditional and tokenized venues; how intraday or around-the-clock token prices will track NAV or secondary-market prices; how market makers and arbitrage mechanisms will function outside ordinary exchange hours; and how custody, valuation, market-integrity, shareholder communications, tax reporting, loss allocation, correction, and reversal issues will be handled. A tokenized ETF or ETP share also should be distinguished from a DeFi platform token that references, wraps, or synthetically tracks ETF exposure; absent a legal structure giving the holder an entitlement to the underlying fund shares, the DeFi token generally is not direct ownership of those shares and may raise separate securities, commodity, derivatives, custody, sanctions, and issuer/intermediary issues.[367]

Exchanges have begun to build toward this model. In 2026, the Nasdaq and NYSE Arca adopted rule changes designed to permit eligible listed securities to trade in tokenized form on the same order book and under the same CUSIP as their conventional shares, while continuing to clear and settle through the existing national clearance and settlement system. Nasdaq's approved framework would become operational only after DTC established the requisite infrastructure and Nasdaq provided advance notice.[368]

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367. *See* SEC Tokenized Statement, *supra* note 25; Lin William Cong, Simon Mayer & Daniel Rabetti, *Tokenizing Real-World Assets*, WHARTON INITIATIVE ON FIN. POL'Y & REGUL. (May 2026), https://wifpr.wharton.upenn.edu/wp-content/uploads/2026/05/WIFPR-Tokenizing-Real-World-Assets-Cong-Mayer-and-Rabetti.pdf.

368. *See* Order Approving a Proposed Rule Change to Enable the Trading of Securities in Tokenized Form, Exchange Act Release No. 34-105047 (Mar. 18, 2026), 91 Fed. Reg. 13900 (Mar. 23, 2026) (Nasdaq), https://www.sec.gov/files/rules/sro/nasdaq/2026/34-105047.pdf; Notice of Filing and Immediate Effectiveness of Proposed Rule Change to Amend the Exchange's Rules to Enable the Trading of Securities on the Exchange in Tokenized Form; Exchange Act Release No. 34-105347

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Because ether and other proof-of-stake assets may generate protocol rewards only if staked, staking could be a product-structure and disclosure consideration for crypto asset ETPs that hold proof-of-stake assets. For those products, considerations include whether the trust will stake the portfolio assets, who controls the staking decision, how any rewards and slashing risks are allocated, whether staking affects custody or liquidity, and how those features are disclosed to investors. Staff statements addressing specified protocol staking and liquid-staking facts are useful but limited as they do not by themselves resolve the treatment of staking a registered ETP grantor-trust structure.

[C] Tokenized Registered Funds and Cash Management Products

Tokenized registered money market funds and similar products generally do not invest in digital assets; they use blockchain rails to record, integrate, mirror, or facilitate transfer of conventional fund shares. The governing legal questions are therefore transfer agent recordkeeping, shareholder eligibility, AML/KYC, custody under section 17(f), valuation, liquidity, Rule 2a-7 compliance, affiliated transaction relief, and fund disclosure, not the securities status of a native token. See section 46:2.1 above for transfer agent recordkeeping and section 46:2.2 above for custody.

For example, a money market fund had recently filed a registration statement seeking to offer its shares on the Stellar blockchain at the time of the prior edition and is now operating as the Franklin OnChain U.S. Government Money Fund.[369] The fund is a registered government money market fund whose transfer agent maintains the official record of share ownership through a proprietary blockchain-integrated system that uses features of traditional book-entry form and one or more public blockchain networks.[370] The fund operates as a stable NAV fund (that is, it seeks to maintain a $1.00 share price) that invests at least 99.5% of its assets in government securities, cash, and repurchase agreements that are fully collateralized by government securities or cash.[371] Of note, it does not invest in digital assets. Investors are able to purchase or redeem the fund's shares through

(May 1, 2026) (NYSE Arca), https://www.sec.gov/files/rules/sro/nysearca/2026/34-105347.pdf.

369. Franklin Registration Statement, *supra* note 73; *see also supra* section 46:2.1[F][2].

370. Franklin Registration Statement, *supra* note 73.

371. *Id*.

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a Franklin Templeton Investments mobile app and other approved interfaces. Upon account creation, a blockchain wallet and corresponding public and private key pair may be created for the investor, depending on the account and wallet design.[372] The fund's blockchain functionality should therefore be understood as a shareholder-record and transfer-technology development, not as a fund investment in digital assets.

WisdomTree similarly operates a money market fund that utilizes blockchain technology. Current disclosures state that WisdomTree Transfers maintains the official record through an integrated system with book-entry records and digital representations recorded on the applicable blockchain, and the transfer agent reconciles book-entry and blockchain transactions at least daily.[373] While Franklin, WisdomTree, and others take a blockchain-integrated recordkeeping approach, they still rely on a registered transfer agent rather than an autonomous blockchain protocol. For Franklin, similar to WisdomTree approach, the transfer agent maintains the official record through a blockchain-integrated system.[374] The WisdomTree exemptive order and related 24/7 trading and instant-settlement announcement illustrate how tokenized registered-fund shares may support secondary liquidity and settlement functionality while preserving the fund's registered-fund framework; they do not convert the fund shares into stablecoins or native tokens.[375]

Tokenization has also extended beyond registered funds. Sponsors have launched privately placed, Treasury and cash-focused vehicles outside the registered investment-company framework that record or mirror investor interests on a public blockchain while a transfer agent, administrator, or other responsible recordkeeper maintains the legally operative ownership record. Examples include BlackRock's BUIDL and Ondo's OUSG, among others.[376] These products are analytically distinct from Rule 2a-7 money market funds and from

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372. *Id*.
373. WisdomTree Registration Statement, *supra* note 73.
374. *Id*.; Franklin Registration Statement, *supra* note 73.
375. WisdomTree Digital Trust, Investment Company Act Release No. IC-35968, Order Under Sections 6(c) and 17(d) of the Investment Company Act of 1940 and Rule 17d-1 Thereunder (Feb. 23, 2026), https://www.sec.gov/files/rules/ic/2026/ic-35968.pdf; Press Release, WisdomTree, WisdomTree to Launch 24/7 Trading and Instant Settlement for Tokenized Money Market Fund Shares (Feb. 24, 2026), https://ir.wisdomtree.com/news-events/press-releases/detail/777/wisdomtree-to-launch-247-trading-and-instant-settlement.
376. BlackRock USD Institutional Digital Liquidity Fund Ltd., Form D, SEC Accession No. 0002014390-24-000001 (Mar. 2024), https://www.sec.gov/Archives/edgar/data/2013810/000201439024000001/xslFormDX01/

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payment stablecoins regulated under the GENIUS Act, and should not be conflated with either. The analysis turns on the issuer's Investment Company Act status or exemption, its Securities Act distribution avenue, transfer restrictions, custody, investor eligibility, and redemption rights, and on whether any on-chain token is merely a record, a tokenized security entitlement, or itself a transferable security. The SEC staff's 2026 statement on tokenized securities underscores that changing the recordkeeping or settlement technology does not by itself change whether an instrument is a security or eliminate the applicable securities law requirements.[377]

[D] Rejected Applications for SEC-Registered ETPs and the Shift to Spot Crypto ETP Approvals

One of the most anticipated products in the digital assets space was, for several years, the launch of an SEC-registered ETP that invests in digital and related assets. The SEC and its staff had been wrestling since 2017 with whether to approve the registration or exchange listing of such ETPs. As of the chapter's prior edition, the SEC staff had not approved any such applications.[378] At that time, many applicants

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primary_doc.xml; Ondo Finance, OUSG, https://ondo.finance/ousg (last visited June 17, 2026).

377. *See* SEC Tokenized Statement, *supra* note 25.

378. *See* Order Disapproving a Proposed Rule Change, As Modified by Amendments No. 1 and 2, to BZX Rule 14.11(e)(4), Commodity-Based Trust Shares, to List and Trade Shares Issued by the Winklevoss Bitcoin Trust, Release No. 34-80206 (Mar. 10, 2017); Order Disapproving a Proposed Rule Change, As Modified by Amendment No. 1, Relating to the Listing and Trading of Shares of the SolidX Bitcoin Trust Under NYSE Arca Equities Rule 8.201, Release No. 34-80319 (Mar. 28, 2017); Order Setting Aside Action by Delegated Authority and Disapproving a Proposed Rule Change, As Modified by Amendments No. 1 and 2, to List and Trade Shares of the Winklevoss Bitcoin Trust, Release No. 34-83723 (July 26, 2018); Order Disapproving a Proposed Rule Change to List and Trade the Shares of the ProShares Bitcoin ETF and the ProShares Short Bitcoin ETF, Release No. 34-83904 (Aug. 22, 2018); Order Disapproving a Proposed Rule Change Relating to Listing and Trading of the Direxion Daily Bitcoin Shares, Release No. 34-83912 (Aug. 22, 2018); Order Disapproving a Proposed Rule Change to List and Trade the Shares of the GraniteShares Bitcoin ETF and the GraniteShares Short Bitcoin ETF, Release No. 34-83913 (Aug. 22, 2018); Order Disapproving a Proposed Rule Change, as Modified by Amendment No. 1, Relating to the Listing and Trading of Shares of the Bitwise Bitcoin ETF Trust Under NYSE Arca Rule 8.201-E (Bitwise Order), Release No. 34-87267 (Oct. 9, 2019) (subsequently withdrawn while the delegated action was under review by the Commission on Jan. 13, 2020, *see* SR-NYSEArca-2019-01); Order Disapproving a Proposed Rule Change, As Modified by Amendment No. 1, to Amend NYSE Arca Rule 8.201-E, Commodity-Based Trust Shares,

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ended up withdrawing their applications in response to a request from the director of the SEC's Division of Investment Management, while others did so to avoid the inevitable fate.[379] Shortly thereafter, many issuers filed or refiled similar applications expecting a different result.[380] The renewed conviction from practitioners concerning the viability of these applications derived from increased adoption of bitcoin in the economy, recent developments in the blockchain space and related service providers, approval of bitcoin ETP products in other jurisdictions, and hoped-for changes in direction at the SEC. After the D.C. Circuit's *Grayscale* decision, the SEC approved exchange rule changes to list and trade spot bitcoin ETP shares on January 10, 2024,

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to List and Trade Shares of the United States Bitcoin and Treasury Investment Trust Under NYSE Arca Rule 8.201-E, Release No. 34-88284 (Feb. 26, 2020).

379. In January 2018, the director of the SEC's Division of Investment Management, Dalia Blass, requested that already-proposed Bitcoin futures ETFs withdraw their applications and outlined a series of concerns she had for such products, including valuation, access to information, and liquidity. Letter from Dalia Blass, Dir. Div. Inv. Mgmt., Sec. & Exch. Comm'n, to ICI and SIFMA (Jan. 18, 2018), https://www.sec.gov/divisions/investment/noaction/2018/cryptocurrency-011818.htm. The SEC's March 23 Order instituted a new period review into such products and requested comments from the public that focus on twelve areas of interest for the SEC. The subjects of interest included issues relating to the Bitcoin futures ETFs' investment practices, as well as concerns related to the underlying Bitcoin and Bitcoin futures markets and how such markets may in turn affect ETFs that invest in Bitcoin futures. For instance, the SEC requested comments on how the ETFs' investment adviser will select the appropriate Bitcoin futures contracts as well as how it will navigate the respective terms of each contract from the different futures exchanges. In addition, the SEC requested comments on whether the ETFs will have enough information to be able to adequately value the ETFs' assets. The SEC also focused many of its concerns around the potential for manipulation of the underlying Bitcoin markets and what, if any, such potential could have on the ETFs' net asset value (NAV). Finally, the SEC asked for comments on liquidity issues, and whether the relatively high margin requirements for Bitcoin futures contracts may present liquidity issues for the Bitcoin futures ETFs to meet redemption requests.

380. *See, e.g.*, First Trust SkyBridge Bitcoin ETF Trust, Registration Statement Under the Securities Act of 1933 (Form S-1) (Mar. 19, 2021); WisdomTree Bitcoin Trust, Registration Statement Under the Securities Act of 1933 (Form S-1) (Mar. 11, 2021); NYDIG Bitcoin ETF, Registration Statement Under the Securities Act of 1933 (Form S-1) (Feb. 16, 2021); Valkyrie Bitcoin Fund, Registration Statement Under the Securities Act of 1933 (Form S-1) (Jan. 22, 2021); Vaneck Bitcoin Trust, Registration Statement Under the Securities Act of 1933 (Form S-1) (Dec. 30, 2020).

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and spot ether ETP shares on May 23, 2024, as discussed above in section 46:3.4[B].[381]

Before these approvals, the pre-2023 orders denied the applications, finding the proposals were not consistent with requirements that national securities exchange rules be "designed to prevent fraudulent and manipulative acts and practices." For example, in the Bitwise Order, the SEC noted the lack of surveillance-sharing agreements with regulated markets of "significant size" relating to the underlying assets. The staff rejected the applicant's position that surveillance-sharing agreements were unnecessary because Bitcoin and related markets were "uniquely resistant to manipulation and fraudulent activity." In rejecting this argument, the SEC noted that although the applicant asserted that 95% of trading data in spot markets represented "fake" and non-economic trading, the applicant did not establish that the surveilled markets constituted the "real" spot market for Bitcoin or that the "real" market was isolated from fraudulent and manipulative activity. The staff also observed that the markets identified as "real" were not registered with a U.S. regulator and half of these markets lacked internal or third-party market surveillance tools. It further noted that the exchange and the sponsor provided no data showing that the prices in the "fake" market did not affect prices on the "real" market. The staff discussed some of the data deficiencies and noted that the sponsor would need to address the issue of partially real volume on "fake" platforms and the depth of institutional market activity.

In the various rejection orders, the staff acknowledged that the market could eventually grow to be large enough, but it declined to explain when or how such markets might meet the "significant size" threshold. The staff's analysis in rejecting these applications shows that the SEC's main concerns include the lack of sufficient means under each of the securities exchange's rules to sufficiently prevent fraudulent and manipulative practices relating to the proposed ETPs' shares. These rejection orders retain historical and analytical

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381. Grayscale Invs., LLC v. SEC, 82 F.4th 1239 (D.C. Cir. 2023); Self-Regulatory Organizations; NYSE Arca, Inc.; The Nasdaq Stock Market LLC; Cboe BZX Exchange, Inc.; Order Granting Accelerated Approval of Proposed Rule Changes, As Modified by Amendments Thereto, to List and Trade Bitcoin-Based Commodity-Based Trust Shares and Trust Units, Exchange Act Release No. 34-99306 (Jan. 10, 2024), https://www.sec.gov/files/rules/sro/nysearca/2024/34-99306.pdf; Self-Regulatory Organizations; NYSE Arca, Inc.; The Nasdaq Stock Market LLC; Cboe BZX Exchange, Inc.; Order Granting Accelerated Approval of Proposed Rule Changes, As Modified by Amendments Thereto, to List and Trade Shares of Ether-Based Exchange-Traded Products, Exchange Act Release No. 34-100224 (May 23, 2024), https://www.sec.gov/files/rules/sro/nysearca/2024/34-100224.pdf.

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importance because the surveillance sharing, "significant size," correlation, and manipulation concerns the SEC articulated shaped the later approval analysis. They no longer represent the current law, however, and the current spot crypto ETP approval, in-kind creation/redemption, generic listing-standard, and non-Investment Company Act product-status discussion is addressed in section 46:3.4[B] above.

[E] Central Bank Digital Currencies

Generally, a central bank digital currency (CBDC) is a digital form of money issued by, and a direct liability of, a central bank. A CBDC is not itself a registered pooled investment product, but it remains relevant background for digital asset payment and settlement infrastructure. Historically, the disruptive nature of DLT, particularly with respect to digital assets and related "stablecoins," caught the attention of various central banks and they began assessing the feasibility of issuing a CBDC of their own, including central banks in the United States,[382] the United Kingdom,[383] the European Union,[384] and Canada.[385] China's central bank, the People's Bank of China, took the additional step of announcing the beginning of a pilot program in four cities to test its CBDC payment system.[386]

The United States had not taken any meaningful steps at that time to issue its own dollar-backed CBDC, although many were advocating for the Federal Reserve to study the issue.[387] Disruption related

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382. Lael Brainard, Governor, Bd. of Governors of the Fed. Reserve Sys., Speech at the Symposium on the Future of Payments: The Digitalization of Payments and Currency: Some Issues for Consideration (Feb. 5, 2020), https://www.federalreserve.gov/newsevents/speech/brainard20200205a.htm.

383. BANK OF ENG., CENTRAL BANK DIGITAL CURRENCY: OPPORTUNITIES, CHALLENGES AND DESIGN (Mar. 12, 2020), https://www.bankofengland.co.uk/paper/2020/central-bank-digital-currency-opportunities-challenges-and-design-discussion-paper.

384. Yves Mersch, Member of the Exec. Bd. of the Eur. Cent. Bank and Vice-Chair of the Supervisory Bd. of the Eur. Cent. Bank, Speech at the Consensus 2020 Virtual Conference: An ECB Digital Currency—A Flight of Fancy (May 11, 2020), https://www.ecb.europa.eu/press/key/date/2020/html/ecb.sp200511~01209cb324.en.html.

385. *Technology Approach for a CBDC*, BANK OF CANADA (Feb. 2020), https://www.bankofcanada.ca/2020/02/staff-analytical-note-2020-6/.

386. Jonathan Cheng, *China Rolls Out Pilot Test of Digital Currency*, WALL ST. J. (Apr. 20, 2020), https://www.wsj.com/articles/china-rolls-out-pilot-test-of-digital-currency-11587385339.

387. Letter from Jerome Powell, Chairman of the Fed. Reserve, to Rep. Hill (Nov. 19, 2019), https://src.bna.com/MYB (discussing the merits of implementing a central bank digital currency (CBDC) in the United States).

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to the COVID-19 pandemic, particularly the delay in getting stimulus funds to citizens in a speedy and efficient manner, highlighted the shortcomings of the current system.[388] To address these issues, members of Congress proposed bills to implement a "digital dollar," which notably did not contemplate the use of blockchain technology.[389]

Since then, central bank work on CBDCs has remained active internationally, with recent BIS survey work reporting that most surveyed central banks continue to explore retail CBDCs, wholesale CBDCs, or both. Separate BIS work has also emphasized tokenized central-bank reserves, tokenized commercial-bank money, and tokenized government bonds as potential components of wholesale settlement infrastructure.[390] U.S. policy, however, has moved against a retail CBDC: Executive Order 14178 states a policy of protecting Americans from CBDC risks and directs agencies not to establish, issue, or promote a U.S. CBDC except as required by law, and legislation to similar effect

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388. *See, e.g.*, DIGIT. DOLLAR FOUND. & ACCENTURE, THE DIGITAL DOLLAR PROJECT: EXPLORING A US CBDC (May 2020), https://www.banking.senate.gov/imo/media/doc/Giancarlo%20Testimony%20Addendum%206-30-202.pdf; *The Digitization of Money and Payments: Hearing Before the S. Comm. on Banking, Housing and Urban Affairs*, 116th Cong. (June 30, 2020) (testimony of Hon. J. Christopher Giancarlo), https://www.banking.senate.gov/imo/media/doc/Giancarlo%20Testimony%206-30-20.pdf.

389. During the U.S. House Financial Services Committee Task Force on Financial Technology virtual hearing held on June 11, 2020, the Committee discussed a CBDC and digital wallets to create an open transparent digital dollar. Both Chairman Stephen F. Lynch and Ranking Member Rep. Tom Emmer in their opening remarks highlighted the need for technology to provide banking access to Americans in the wake of COVID-19. The digital dollar was in early drafts of the House of Representatives COVID-19 relief bill, but was not included in the final Coronavirus Aid, Relief, and Economic Security Act (CARES) bill. Several House bills have been introduced in recent months to help support underbanked and unbanked Americans that have included a digital dollar or Federal Reserve bank account as potential solutions. *See Inclusive Banking During a Pandemic: Using FedAccounts and Digital Tools to Improve Delivery of Stimulus Payments: Hearing Before the H. Comm. on Financial Services*, 116th Cong. (June 11, 2020), https://www.congress.gov/116/chrg/CHRG-116hhrg42895/CHRG-116hhrg42895.pdf; H.R. 6379, Take Responsibility for Workers and Families Act (2019), https://www.congress.gov/bill/116th-congress/house-bill/6379/text.

390. ANAMARIA ILLES, ANNEKE KOSSE & PETER WIERTS, BANK FOR INT'L SETTLEMENTS, BIS PAPERS NO. 159, ADVANCING IN TANDEM: RESULTS OF THE 2024 BIS SURVEY ON CENTRAL BANK DIGITAL CURRENCIES AND CRYPTO (Aug. 22, 2025), https://www.bis.org/publ/bppdf/bispap159.htm; BANK FOR INT'L SETTLEMENTS, ANNUAL ECONOMIC REPORT 2025, CH. III, THE NEXT-GENERATION MONETARY AND FINANCIAL SYSTEM (June 24, 2025), https://www.bis.org/publ/arpdf/ar2025e3.htm.

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advanced in Congress.[391] For U.S. asset managers, CBDCs are best understood as payment and market-infrastructure context related to stablecoin and tokenized-deposit discussions.

[F] Traditional Registered Funds' Exposure to Digital Assets

Asset managers, registered funds (mutual funds, closed-end funds, and exchange traded funds registered under the Investment Company Act), and their boards are increasingly receptive to providing shareholders modest exposures to digital assets, but registered funds today are more likely to obtain digital asset exposure indirectly—through bitcoin or ether futures and options, shares of spot crypto ETPs, affiliated or private funds, or issuers with digital asset businesses or treasury holdings—than through direct spot holdings. Such exposures in general present fewer obstacles for investment by registered funds and may prove an effective means of providing exposure to the asset class.

Digital asset-linked registered products remain subject to ordinary Investment Company Act, derivatives, valuation, liquidity, custody, and disclosure analysis even as the product landscape has changed since the SEC staff's May 2021 statement on funds investing in bitcoin futures.[392]

[G] Digital Assets As Corporate Treasury Assets

A number of public companies hold digital assets, particularly bitcoin, in their corporate treasuries.[393] The 2021 examples involving MicroStrategy, Square/Block, and Tesla remain useful historical markers, but the practice has become more formalized since then.[394] Some

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391. Exec. Order No. 14,178, Strengthening American Leadership in Digital Financial Technology, 90 Fed. Reg. 8647, 8649–50 (Jan. 31, 2025). See *supra* section 46:3.2[E] for further discussion of CBDCs and U.S. legislative resistance to it.

392. *See* SEC Div. of Inv. Mgmt., Staff Statement on Funds Registered Under the Investment Company Act Investing in the Bitcoin Futures Market (May 11, 2021) (withdrawn May 6, 2025), https://www.sec.gov/rules-regulations/no-action-interpretive-exemptive-letters/division-investment-management-staff-no-action-interpretive-letters/staff-statement-investing-bitcoin-futures-market; SEC Div. of Corp. Fin., Crypto Asset Exchange-Traded Products (July 1, 2025), https://www.sec.gov/newsroom/speeches-statements/cf-crypto-asset-exchange-traded-products-070125; *see also supra* section 46:3.4[B].

393. *See, e.g.*, Strategy Inc., Annual Report (Form 10-K) (Feb. 19, 2026); GameStop Corp., Current Report (Form 8-K), ex. 99.2 (Mar. 25, 2025).

394. *See* Vicky Ge Huang & Alexander Osipovich, *What's Flying Higher Than Bitcoin? The Software Company Buying Up Bitcoin*, WALL ST. J.

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issuers now describe themselves as digital asset treasury companies; Strategy describes itself as a bitcoin treasury company; GameStop announced an investment-policy update to add bitcoin as a treasury reserve asset; BitMine Immersion Technologies describes itself as holding ether as its primary treasury reserve; and a March 2025 executive order established a Strategic Bitcoin Reserve for certain forfeited government bitcoin and a U.S. Digital Asset Stockpile for certain other forfeited government digital assets.[395] The March executive order also directed Treasury and Commerce to develop budget-neutral strategies for acquiring additional government bitcoin, while providing that additional Stockpile Assets may not be acquired except through forfeiture or civil-money-penalty process without further executive or legislative action.[396] These developments do not convert corporate or public-sector digital asset holdings into registered fund products. For asset managers, they primarily affect portfolio-company exposure,

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(updated Nov. 25, 2024, 5:13 PM ET), https://www.wsj.com/finance/currencies/whats-flying-higher-than-bitcoin-the-software-company-buying-up-bitcoin-748fdbd2 (reporting that MicroStrategy held approximately $36 billion of bitcoin); Telis Demos, *Square Bets on Bitcoin to Shape Its Future*, WALL ST. J. (Feb. 24, 2021), https://www.wsj.com/articles/square-bets-on-bitcoin-to-shape-its-future-11614182819; Caitlin Ostroff & Rebecca Elliott, *Tesla Buys $1.5 Billion in Bitcoin*, WALL ST. J. (updated Feb. 8, 2021), https://www.wsj.com/articles/tesla-buys-1-5-billion-in-bitcoin-11612791688; Christine Ji, *Why More and More Companies Are Buying Bitcoin*, BUS. INSIDER (June 6, 2025), https://www.businessinsider.com/bitcoin-strategy-mstr-btc-price-metaplanet-demand-treasuries-2025-6 (reporting that, to date, eighty companies have adopted the "bitcoin standard" and hold 3.4% of the total bitcoin supply); *see* Isabel Wang, *Wall Street's Biggest Bull Reveals What Investors Got Wrong This Year—and What's Ahead for Stocks and Crypto*, MARKETWATCH (updated Nov. 10, 2025, 2:00 PM ET), https://www.marketwatch.com/story/wall-streets-biggest-bull-reveals-what-investors-got-wrong-this-year-and-whats-ahead-for-stocks-and-crypto-e7fd79bc (reporting that BitMine Immersion Technologies held approximately 3.5 million ether, had total crypto and cash holdings of approximately $13.2 billion, and was the second-largest crypto-treasury company after Strategy).

395. Strategy Inc., Annual Report (Form 10-K) (Feb. 19, 2026); GameStop Corp., Current Report (Form 8-K), ex. 99.2 (Mar. 25, 2025); BitMine Immersion Technologies, Inc., Annual Report (Form 10-K) (Nov. 21, 2025), https://www.sec.gov/Archives/edgar/data/1829311/000149315225024679/form10-k.htm; *Establishment of the Strategic Bitcoin Reserve and United States Digital Asset Stockpile*, WHITE HOUSE (Mar. 6, 2025), https://www.whitehouse.gov/presidential-actions/2025/03/establishment-of-the-strategic-bitcoin-reserve-and-united-states-digital-asset-stockpile/.

396. *Establishment of the Strategic Bitcoin Reserve and United States Digital Asset Stockpile*, WHITE HOUSE (Mar. 6, 2025), https://www.whitehouse.gov/presidential-actions/2025/03/establishment-of-the-strategic-bitcoin-reserve-and-united-states-digital-asset-stockpile/.

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index and classification issues, disclosure, accounting, valuation, custody, and investment-company-status analysis. Accounting treatment has also evolved: FASB Accounting Standards Update 2023-08 now requires fair value measurement of qualifying crypto asset holdings, with changes recognized in net income.[397]

§ 46:3.5 Issues Related to Holding Digital Assets

The early enthusiasm for ICOs and similar digital assets has cooled, but regulated and semi-regulated routes to digital asset exposure have expanded. Asset managers now have a broader menu of digital asset exposure available through spot crypto ETPs, futures and options, tokenized fund shares, payment stablecoins, private tokenized cash-management products, staking, custody arrangements, and portfolio-company exposure. These routes reduce some operational barriers, but they also require more disciplined analysis of custody, valuation, market integrity, AML and sanctions, tax reporting and disclosure.

[A] Custody

Although meaningful progress has been made since 2021, custody remains a threshold issue for registered funds, investment advisers, broker-dealers, and other intermediaries seeking to hold or obtain exposure to, or facilitate direct holdings of digital assets in a manner that complies with regulation. The key practical questions include the legal status of the asset; the identity and regulatory status of the custodian or intermediary; segregation and control of private keys; bankruptcy treatment; and the ability to value, transfer, and liquidate the position.

As discussed above in section 46:2.2[B][1], section 17(f) of the Investment Company Act requires a registered fund to "maintain its securities and similar investments in the custody of [, among certain other kinds of entities,] a bank or banks having the qualifications prescribed in [section 26(a)(1) of the Investment Company Act]."[398] Advisers and broker-dealers face related, but distinct, custody and customer-protection issues under the Advisers Act custody rule and Exchange Act Customer Protection rule, as discussed above in section 46:2.2. Where a fund obtains digital asset exposure through commodity interests such as futures, options on futures, or swaps, or posts digital or tokenized assets as margin collateral, the CEA/CFTC requirements

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397. Fin. Accounting Standards Bd., Accounting Standards Update No. 2023-08, Intangibles-Goodwill and Other-Crypto Assets (Subtopic 350-60): Accounting for and Disclosure of Crypto Assets (Dec. 2023), https://storage.fasb.org/ASU%202023-08.pdf.

398. Investment Company Act §§ 17(f), 26(a)(1), 15 U.S.C. §§ 80a-17(f), 80a-26(a)(1).

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discussed above in section 46:3.1 apply in addition to, and do not displace, the custody analysis for directly held digital assets.

Various market participants continue to develop bank and trust-company custody models for digital assets. The OCC's 2021 conditional approval of Anchorage Digital Bank, N.A. was a first-of-its-kind national trust bank development, and later supervisory developments relating to Anchorage, including the 2025 termination of a 2022 consent order and the 2026 termination of its 2021 operating agreement, illustrate that digital asset custody by national trust banks remains subject to ongoing supervisory expectation.[399] Since the prior edition, the OCC has also reaffirmed national-bank and federal-savings-association authority for crypto asset custody, certain stablecoin activities, and related distributed-ledger activities; rescinded the prior supervisory non-objection gating process; and confirmed that national banks and federal savings associations may provide and outsource crypto asset custody and execution services subject to safe-and-sound banking practices and applicable third-party risk-management expectations. Federal banking agencies also issued risk-management guidance for crypto asset safekeeping.[400]

Another promising option is a state-chartered trust company. The Investment Company Act defines "bank" in a manner that incorporates both federal and state concepts. As defined in section 2(a)(5) of the Investment Company Act, a "bank" includes, among other things, any "trust company, whether incorporated or not, doing business under the laws of any State or of the United States, a substantial portion of the business which consists of receiving deposits or exercising

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399. *See* OCC Conditional Approval No. 1257, Application by Anchorage Trust Company to Convert to a National Trust Bank (Jan. 13, 2021), https://www.occ.gov/topics/charters-and-licensing/interpretations-and-decisions/2021/ca1257.pdf; *OCC Issues Consent Order Against Anchorage Digital Bank*, OCC NEWS RELEASE NO. 2022-41 (Apr. 21, 2022), https://www.occ.gov/news-issuances/news-releases/2022/nr-occ-2022-41.html; OCC, Order Terminating Consent Order, AA-ENF-2025-44 (Aug. 18, 2025), https://www.occ.gov/static/enforcement-actions/eaAA-ENF-2025-44.pdf; OCC, Supervisory Condition Letter 2026-01, Termination of Operating Agreement (Feb. 9, 2026), https://www.occ.gov/topics/charters-and-licensing/interpretations-and-decisions/2026/scl2026-01.pdf.

400. OCC Interpretive Letter No. 1183, OCC Letter Addressing Certain Crypto-Asset Activities (Mar. 7, 2025), https://www.occ.gov/topics/charters-and-licensing/interpretations-and-decisions/2025/int1183.pdf; OCC Interpretive Letter No. 1184, Clarification of Bank Authority Regarding Crypto-Asset Custody Services (May 7, 2025), https://www.occ.gov/topics/charters-and-licensing/interpretations-and-decisions/2025/int1184.pdf; BD. OF GOVERNORS OF THE FED. RSRV. SYS., FDIC & OCC, CRYPTO-ASSET SAFEKEEPING BY BANKING ORGANIZATIONS (July 14, 2025), https://www.federalreserve.gov/newsevents/pressreleases/files/bcreg20250714a1.pdf.

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fiduciary powers similar to those permitted to national banks under the authority of the Comptroller of the Currency, and which is supervised and examined by state or federal authority having supervision over banks, and which is not operated for the purpose of evading the provisions of this title . . . ."[401] In assessing whether a trust company could qualify as a custodian, therefore, it is necessary to consider whether the trust company exercises fiduciary powers similar to national banks under the authority of the OCC.

That particular analysis requires a review of federal banking law and regulation that turns on the meaning of "fiduciary powers" and the interplay between state and federal regulation with respect to what states consider to be a fiduciary power for purposes of the state's banking oversight function.

In New York State, for example, a New York State–chartered limited purpose trust company may satisfy this test. The New York Department of Financial Services has publicly stated that it intends that any limited purpose trust company charter that it grants should be for "the limited purpose of exercising fiduciary powers."[402] That suggests that all or virtually all powers exercised by a New York State–chartered limited purpose trust company would be considered fiduciary powers, whether expressly enumerated under state law or not. Further, N.Y. Banking Law 100 gives trust companies fiduciary powers to "receive, take, manage, hold and dispose of" property according to the applicable trust, duty or power.[403] Similarly, New York State–chartered limited purpose trust companies may qualify as qualified custodians under the Investment Advisers Act where the rule's definition and the 2025 staff no-action conditions are satisfied. Since the original edition, national banks, federal savings associations, and state trust companies have continued to develop crypto asset custody services for customers. In 2025, the SEC Division of Investment Management staff provided no-action relief under which it would not recommend enforcement action against registered advisers or regulated funds, under specified facts and conditions, for treating a qualifying State Trust Company as a bank for custody of crypto assets and related cash or cash equivalents under the Advisers Act and the Investment Company Act.[404] This addresses the uncertainty identified above, but it remains conditional: the adviser or fund (and

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401. Investment Company Act § 2(a)(5), 15 U.S.C. § 80a-2(a)(5).
402. *Commercial Banks and Trusts: Organization of a Trust Company for the Limited Purpose of Exercising Fiduciary Powers*, N.Y. DEP'T OF FIN. SERVS., https://www.dfs.ny.gov/apps_and_licensing/banks_and_trusts/commercial_banks_trusts.
403. N.Y. BANKING LAW § 100.
404. Simpson Thacher & Bartlett, SEC No-Action Letter, *supra* note 116.

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its board for certain components) must conduct due inquiry into the State Trust Company's authority and safeguarding controls, review specified financial statement and control-report materials, obtain contractual protection addressing segregation and rehypothecation, disclose material risks, and obtain the required best-interest board determinations. The removal of an accounting impediment has also reinforced this trend. The SEC Staff Accounting Bulletin No. 121 had directed entities safeguarding crypto assets to record both a liability and a corresponding asset on their own balance sheets, a treatment that weighed against bank and trust-company custody at scale, and the staff rescinded it in 2025 through Staff Accounting Bulletin No. 122. That accounting change does not itself determine whether a custody arrangement satisfies the applicable regulations.

In addition, the SEC previously issued a statement that, under certain circumstances, relaxed the requirements under the Customer Protection Rule for broker-dealers limiting their business to digital securities.[405] That special purpose broker-dealer position was time-limited and has lapsed by its terms, and it must now be read together with the 2025 withdrawal of the 2019 SEC/FINRA joint staff statement on broker-dealer custody of digital asset securities and subsequent Division of Trading and Markets Staff guidance and FAQs addressing the custody of crypto asset securities by broker-dealers. Under that December 2025 statement, the Division of Trading and Markets said it would not object to a broker-dealer treating itself as having "physical possession" of a crypto asset security under the Customer Protection Rule, provided the firm can transfer the asset on the relevant ledger, follows written procedures to assess the network, controls the private keys so that no other person can move the asset, and has arrangements to respond to events such as forks or a lawful order to freeze or transfer the asset. The staff described the December 2025 position as addressing a subset of circumstances covered by the expired special-purpose broker-dealer statement; the position is staff-level comfort confined to the physical possession requirement and does not decide whether a given asset is a security or address an adviser's or fund's own custody obligations.[406] The staff has also issued FAQs reiterating that non-security crypto assets are not SIPA-protected, although Article 8 treatment as "financial assets" carried in a "securities account" may help address customer-property treatment if a broker-dealer becomes insolvent.

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405. For additional discussion, see *supra* section 46:2.2[C].

406. SEC Div. of Trading & Mkts., Statement on the Custody of Crypto Asset Securities by Broker-Dealers (Dec. 17, 2025), https://www.sec.gov/newsroom/speeches-statements/trading-markets-121725-statement-custody-crypto-asset-securities-broker-dealers.

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Post-2021 crypto-platform failures are a reminder of the need to diligence account terms, customer-property treatment, omnibus or segregated wallet structures, rehypothecation rights, private key control, on-chain segregation, insurance, auditability, and insolvency risk when evaluating a digital asset custodian.[407]

Holding digital assets also entails technology-specific risks distinct from those affecting traditional financial instruments. Because many digital assets are bearer-type instruments controlled by private keys, theft is frequently irreversible, and losses may arise not only from compromise of custodial systems but also from vulnerabilities in protocols, smart contracts, cross-chain bridges, wallet software, or other code on which the asset or its transfer depends. Continued DeFi, bridge, and smart-contract exploits underscore that operational diligence should address not only the legal status of the asset and the identity of the custodian, but also the technical dependencies through which the asset is issued, transferred, bridged, staked, or otherwise used. Emerging tools, including AI-assisted code generation and code analysis, may affect both the discovery and remediation of vulnerabilities as well as their exploitation.[408] Over a longer horizon, advances in quantum computing could threaten the public-key cryptography securing many digital assets, making post-quantum migration a relevant long-term custody and recoverability consideration.[409]

[B] Valuation

Given the volatility and speculation associated with investments in bitcoin and other crypto assets, valuation remains paramount. Registered funds holding crypto assets or crypto-linked instruments must be able to value them in accordance with the requirements

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407. *See, e.g.*, *In re* Celsius Network LLC, 647 B.R. 631 (Bankr. S.D.N.Y. 2023).

408. *See, e.g.*, Vicky Ge Huang, *Under the Radar: Zcash Plunges After Researcher Discovers Critical Bug*, WALL ST. J. (June 5, 2026), https://www.wsj.com/livecoverage/may-jobs-report-stock-market-06-05-2026/card/-under-the-radar-zcash-plunges-after-researcher-discovers-critical-bug-CcgBh2Ipe45nYXNXbtXz.

409. *See* U.S. DEP'T OF THE TREASURY, ILLICIT FINANCE RISK ASSESSMENT OF DECENTRALIZED FINANCE 34–35 (Apr. 2023), https://home.treasury.gov/system/files/136/DeFi-Risk-Full-Review.pdf; NIST, FIPS 203, MODULE-LATTICE-BASED KEY-ENCAPSULATION MECHANISM STANDARD (Aug. 13, 2024), https://nvlpubs.nist.gov/nistpubs/FIPS/NIST.FIPS.203.pdf; NIST, FIPS 204, MODULE-LATTICE-BASED DIGITAL SIGNATURE STANDARD (Aug. 13, 2024), https://nvlpubs.nist.gov/nistpubs/FIPS/NIST.FIPS.204.pdf; NIST, FIPS 205, STATELESS HASH-BASED DIGITAL SIGNATURE STANDARD (Aug. 13, 2024), https://nvlpubs.nist.gov/nistpubs/FIPS/NIST.FIPS.205.pdf.

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of the Investment Company Act and applicable rules thereunder. Investment advisers and private funds must similarly be able to validate the values at which they are holding the assets for fee, performance, custody, financial statement, tax and disclosure purposes. In this respect, it remains important to put robust valuation methodologies in place that rely on established methods for fair valuing difficult to value securities and that address various topics, including trading venue selection, index methodology, stale or manipulated prices, forks and airdrops, liquidity, fair-value triggers, and whether the asset is held directly, through a derivative, through a tokenized fund share, or through an exchange-traded product.

[C] Market Manipulation

A frequently expressed concern of SEC officials relates to the asymmetry of information that may exist in a digital asset market. Whereas the federal securities laws have established robust procedures to ensure fair markets, through a disclosure-based system and limitations on trading while in possession of material non-public information, the application of all elements of this regime is open to question and interpretation in digital asset markets. For example, under certain blockchain protocols, founders retain substantial amounts of the tokens, with various methodologies for releasing the tokens at later points into the ecosystem, creating ample incentive for manipulation. This was an element cited in the *Kik* case, in which the court noted, "Moreover, as Kik's CEO explained, Kik had a unique incentive to increase demand for Kik because it retained for itself 30% of the tokens created."[410]

Certain digital assets may be thinly traded, with limited liquidity, on digital exchanges that may not have robust procedures to monitor markets and prevent manipulation. Even relatively developed markets, such as the market for bitcoin and ether, have been subject to manipulation. The digital asset market has also historically proven fertile grounds for "pump and dump," layering and spoofing, wash trades, and churning.

While investors must be wary, the responsibility lies with digital exchanges to develop rigorous surveillance programs. These programs should look at baseline trading patterns and be able to identify abnormal patterns. Exchanges will also need to develop monitoring systems around unstructured data—such as internet posts, news releases, and analyst summaries—to identify either aberrant trading before or after a significant news event or evidence of manipulated information. IOSCO

410. Sec. & Exch. Comm'n v. Kik Interactive Inc., No. 19-cv-05244-AKH, 2020 WL 5819770, at *7 (S.D.N.Y. Sept. 30, 2020).

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similarly recommends market-surveillance requirements designed to detect and report suspicious transactions, whether on-chain or off-chain.[411]

These concerns have begun to be addressed as regulated venues have matured. The exchange listing rules for spot bitcoin and ether exchange-traded products rely on a more developed record concerning surveillance sharing, correlation, and exchange-rule standards, and international standard-setters have posited recommendations directed specifically at market manipulation, conflicts of interest, custody, operational risk, and the protection of client assets in crypto markets.

Recent enforcement actions underscore that market manipulation risk continues to be a challenge. The SEC has continued to bring actions alleging wash trading, artificial volume, and market-maker manipulation in crypto assets offered and sold as securities, and the CFTC has brought an oracle-manipulation action involving decentralized digital asset exchanges. This highlights that exchange surveillance, listing standards, and information-sharing arrangements are only partial answers. They are most attractive where activity occurs through regulated venues or intermediaries; they do not themselves address activity that occurs entirely on-chain through decentralized protocols, foreign venues, private wallets, or software layers outside the centralized trading infrastructure. A durable framework therefore should combine responsible enforcement against fraud and manipulation with market-led controls, including trade surveillance tools, blockchain analytics, information sharing initiatives, protocol risk controls, and responsible disclosure practices, while preserving room for lawful software development and other responsible innovation in the United States.[412]

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411. INT'L ORG. OF SEC. COMM'NS, POLICY RECOMMENDATIONS FOR CRYPTO AND DIGITAL ASSET MARKETS, FINAL REPORT, Recs. 8–9 (Nov. 2023), https://www.iosco.org/library/pubdocs/pdf/IOSCOPD747.pdf.

412. Press Release No. 2024-166, SEC, SEC Charges Three So-Called Market Makers and Nine Individuals in Crackdown on Manipulation of Crypto Assets Offered and Sold As Securities (Oct. 9, 2024), https://www.sec.gov/newsroom/press-releases/2024-166; Press Release No. 8647-23, CFTC, CFTC Charges Avraham Eisenberg with Manipulative and Deceptive Scheme to Misappropriate over $110 Million from Mango Markets, a Digital Asset Exchange (Jan. 9, 2023), https://www.cftc.gov/PressRoom/PressReleases/8647-23; *Leading Digital Asset Firms Launch Crypto Market Integrity Coalition, Committing to a Safe and Sensibly-Regulated Crypto Industry*, BUS. WIRE (Feb. 7, 2022), https://www.businesswire.com/news/home/20220207005459/en/Leading-Digital-Asset-Firms-Launch-Crypto-Market-Integrity-Coalition-Committing-to-a-Safe-and-Sensibly-Regulated-Crypto-Industry; *Crypto ISAC, Crypto ISAC Expands Leadership Team to*

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[D] SEC Division of Examinations Risk Alert on Digital Asset Securities

In February 2021, the SEC's Division of Examinations (the "Division") issued a Risk Alert covering digital asset securities. The Risk Alert focused on many of the items discussed above.[413] It both (1) provided the Division's observations from examinations of investment advisers, broker-dealers, national securities exchanges, and transfer agents, and (2) outlined areas of focus for the Division's future examinations of those entities, with a focus on issues related to digital assets. The Division encouraged "market participants to reflect upon their own practices, policies and procedures, as applicable, and to promote improvements in their supervisory, oversight and compliance programs."

The Division highlighted primary risk areas involving digital asset securities, including for:

- *Investment Advisers*: portfolio management, recordkeeping, custody issues, investor disclosures, pricing client portfolios, valuation, AML, and sanctions controls where applicable, tax-reporting records, and compliance with registration requirements.
- *Broker-Dealers*: safekeeping funds and operations, compliance with registration requirements, customer protection and crypto asset-security custody issues, disclosing conflicts, anti-money laundering procedures and controls, offerings, conflicts of interest disclosures, and outside business activities procedures and controls.
- *National Securities Exchanges*: exchange registration and compliance with Regulation ATS.
- *Transfer Agents*: compliance with transfer agent rules.[414]

The 2021 Risk Alert remains useful, but it is now only one part of the examination framework for digital asset activity. Its core observations continue to be relevant for advisers and broker-dealers active in digital assets, and should be read together with the Division of

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Support Next Phase of Industry Collaboration and Operational Scale, PR NEWSWIRE (May 2, 2025), https://www.prnewswire.com/news-releases/crypto-isac-expands-leadership-team-to-support-next-phase-of-industry-collaboration-and-operational-scale-302445078.html; Exec. Order No. 14,178, Strengthening American Leadership in Digital Financial Technology, 90 Fed. Reg. 8647, 8648 (Jan. 31, 2025).

413. SEC Div. of Examinations, *The Division of Examinations' Continued Focus on Digital Asset Securities*, RISK ALERT (Feb. 26, 2021).

414. *Id*.

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Examinations' current examination priorities, including custody, complex and novel products, cybersecurity, artificial intelligence and emerging financial technologies, Regulation S-P incident-response requirements, AML, and OFAC sanctions controls.[415]

§ 46:4 Conclusion

The asset management industry is no longer merely watching the advent of blockchain technology and digital assets in real time. Some early use cases have faded and others remain experimental, but the period since the prior edition has shown that blockchain can be applied to particular parts of the investment management business in increasingly concrete ways. Transfer agent recordkeeping, custody, settlement and collateral workflows, stablecoin arrangements, registered and exchange-traded products, and digital asset compliance each now present more concrete questions than they did when this chapter was first published. At the same time, the governing legal framework is still taking shape, with Congress enacting targeted legislation and considering additional market-structure legislation, and with much of the current regime resting on agency interpretation and staff guidance rather than settled rules. For asset managers, the question is no longer whether blockchain will transform the industry in the abstract. It is which uses can be made to work within the securities, commodities, banking, tax, AML, sanctions, custody, and fiduciary frameworks, and which remain too uncertain, costly, or operationally fragile for regulated funds and advisers.

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415. SEC Div. of Examinations, 2026 Examination Priorities (Nov. 17, 2025), https://www.sec.gov/files/2026-exam-priorities.pdf.

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