

September 14, 2026

VIA ELECTRONIC SUBMISSION

Commissioner Hester M. Peirce
U.S. Securities and Exchange Commission
100 F Street, N.E.
Washington, DC 20549-0213

**Re: Recommendations Regarding a Safe Harbor for Certain Applications
From the Exchange Registration Requirement of the Securities Exchange
Act of 1934**

Dear Commissioner Peirce:

Andreessen Horowitz (“a16z”) and the DeFi Education Fund (“DEF”) submit this letter to the Securities and Exchange Commission (the “SEC” or “Commission”) to propose a safe harbor from the “exchange” registration requirement under the Securities Exchange Act of 1934 (the “Exchange Act”) for decentralized exchange protocols on blockchain networks (“DEXs”), as well as for certain trading interfaces provided via a website or application that enable users to interact with such protocols (“DEX Apps”). In particular, this proposal focuses on DEX Apps that function as technical infrastructure that enables users to arrange transactions themselves. We welcome opportunities to meet with Commission staff to answer any questions and to discuss our proposal in more detail.

The purpose of this safe harbor proposal is to assist the Commission in creating clear rules for determining which DEXs and DEX Apps fall within the Commission’s jurisdiction based on objective criteria and in a manner consistent with multiple recommendations made by the President’s Working Group on Digital Asset Markets,¹ as well as Chair Atkins’s directive to modernize antiquated rules to unleash the potential of onchain software systems in securities markets.² The proposal is also consistent with similar safe harbors proposed in recent federal market structure legislation.³

¹ President’s Working Group on Digital Asset Markets, *Strengthening American Leadership in Digital Financial Technology* (July 30, 2025), <https://tinyurl.com/jfzmkwsy>.

² Paul S. Atkins, Chairman, U.S. Sec. & Exch. Comm’n, *American Leadership in the Digital Finance Revolution* (July 31, 2025), <https://tinyurl.com/s967bjcd>; Paul S. Atkins, Chairman, U.S. Sec. & Exch. Comm’n, Remarks at the Special Competitive Studies Project AI+ Expo (May 8, 2026), <https://tinyurl.com/yfpuktdy>. This safe harbor proposal can also serve as a complement to Chair Atkins’s directive to Commission staff to consider a conditional exemptive relief framework or “innovation exemption” that would allow registrants and non-registrants to bring onchain products and services to market. A safe harbor is not the equivalent of an exemption for a technical regulatory requirement, but it would similarly help the Commission accomplish the overarching goal of helping entrepreneurs bring products to market.

³ The House of Representatives passed the Digital Asset Market Clarity Act of 2025 (the “CLARITY Act”), which would establish a market structure regulatory framework for digital assets. CLARITY Act, H.R. 3633, 119th Cong. (2025). The CLARITY Act refers to DeFi Apps as “Decentralized Finance Messaging Systems,” *id.* § 103, and it exempts persons that “provid[e] a user-interface that enables a user to read and access data about a blockchain system” from the registration provisions of the Act. *Id.* § 309. The CLARITY Act also

The guiding principle of the safe harbor is that **only** those DEXs and DEX Apps that do not function as traditional exchanges and **do not** engender the risks that the Exchange Act's exchange regulatory regime was designed to address should be eligible; in such cases, registration as an exchange under the Exchange Act is unwarranted and inappropriate. Conversely, DEXs and DEX Apps that **do** pose traditional risks that exchange regulations were designed to address should not be able to avail themselves of this safe harbor.⁴

This approach has four primary benefits: (1) it establishes limits with respect to the application of federal securities laws to DEXs and DEX Apps that fall within the scope of the safe harbor and safeguards them and their developers from becoming subject to retroactive application of federal securities laws; (2) it aligns with the recent Commission staff statement on broker-dealer registration of certain user interfaces;⁵ (3) it is consistent with the historical lack of prohibition on persons engaging in private peer-to-peer securities transactions without

excludes from registration persons that engage in "developing, publishing, constituting, administering, maintaining, or otherwise distributing a decentralized finance messaging system, or operating or participating in a liquidity pool, for the purpose of executing a contract of sale of a digital commodity." *Id.* However, these registration exemptions would not apply to the anti-fraud and anti-manipulation authorities of the Commission. *Id.*

⁴ The goal of the safe harbor is to provide clear boundaries regarding the application of the federal securities laws to covered DEXs and DEX Apps and protect those DEXs and DEX Apps and their developers from uncertainty as to the potential application of the Exchange Act's definition of an "exchange" to their activities. Indeed, our proposed safe harbor would help prevent a recurrence of the unfortunate situation under the prior Administration when the Commission first proposed to expand the exchange definition in a manner that raised significant concerns, then re-proposed the proposal, then re-opened the comment period for the re-proposal, then supplemented the rule proposal and re-opened the comment period (again), before finally withdrawing (under this Administration) the proposed expansion of the exchange definition. *See* Regulation ATS for ATSs That Trade U.S. Government Securities, NMS Stock, and Other Securities; Regulation SCI for ATSs That Trade U.S. Treasury Securities and Agency Securities; and Electronic Corporate Bond and Municipal Securities Markets, 85 Fed. Reg. 87106 (Dec. 31, 2020); Amendments Regarding the Definition of "Exchange" and Alternative Trading Systems (ATSs) That Trade U.S. Treasury and Agency Securities, National Market System (NMS) Stocks, and Other Securities, 87 Fed. Reg. 15496 (Mar. 18, 2022); Reopening of Comment Periods for "Private Fund Advisers; Documentation of Registered Investment Adviser Compliance Reviews" and "Amendments Regarding the Definition of 'Exchange' and Alternative Trading Systems (ATSs) That Trade U.S. Treasury and Agency Securities, National Market System (NMS) Stocks, and Other Securities," 87 Fed. Reg. 29059 (May 12, 2022); Supplemental Information and Reopening of Comment Period for Amendments Regarding the Definition of "Exchange," 88 Fed. Reg. 29448 (May 5, 2023); Withdrawal of Proposed Regulatory Actions, 90 Fed. Reg. 25531 (June 17, 2025).

⁵ *See* Staff Statement Regarding Broker-Dealer Registration of Certain User Interfaces Utilized to Prepare Transactions in Crypto Asset Securities, Div. of Trading & Mkts., U.S. Sec. & Exch. Comm'n (Apr. 13, 2026), <https://tinyurl.com/mvkkzvrc> (the "Staff Statement"). Moreover, in other constructs, the Commission has provided an exemption from registration obligations for certain persons who engage in activities that otherwise require registration. For example, Rule 3a4-1 under the Exchange Act exempts natural persons associated with an issuer from being deemed a broker if their activities are solely limited to the sale of the securities of such issuer. Importantly, the continued operation of Rule 3a4-1 since 1985 has not undermined investor protection or orderly markets. *See* 17 C.F.R. § 240.3a4-1.

the participation of a registered intermediary,⁶ as well as Commissioner Peirce’s recent dictum that “we [should not] require an intermediary to step in the middle of peer-to-peer transactions;”⁷ and (4) it would also likely deepen liquidity, spur innovation, and encourage competition among trading venues in the nascent markets for tokenized securities.⁸

We submit this proposal based on our firsthand experience working with entrepreneurs in the crypto industry and seeing the negative impact of regulatory uncertainty.

a16z is a venture capital firm that invests in seed, venture, and growth-stage technology companies, focused on AI, bio and healthcare, consumer, crypto, enterprise, fintech, games, infrastructure, and companies building toward American dynamism. a16z currently has more than \$100 billion in assets under management across multiple funds, with more than \$9.8 billion in committed capital for crypto funds. In crypto, we primarily invest in companies using blockchain technology to develop protocols that people will be able to build upon to launch internet businesses.

DEF is a U.S.-based nonpartisan, nonprofit that advocates for sound policy for decentralized finance (“DeFi”), educates lawmakers about the technical workings and benefits of DeFi, and protects the rights of DeFi developers and users.

I. Introduction

We strongly support the goals of the Commission’s Crypto Task Force (“Task Force”) to offer guidance on the application of federal securities laws to the crypto asset market and recommend pragmatic policies that promote innovation and protect investors. As the Task Force carries out its mandate, we urge it to provide clarity on the application of the federal securities laws to DEXs and DEX Apps by creating a safe harbor from exchange registration

⁶ See, e.g., Policy Statement of the Securities and Exchange Commission of the Structure of A Central Market System (Mar. 29, 1973) (“All transactions in system securities in which a registered broker-dealer (including an electronic communications system registered as a broker-dealer) or exchange member is involved, either as principal or agent, would have to be reported through the system and executed subject to its rules. Initially, so-called ‘fourth’ market transactions would not be subject to these requirements, in large part because of the practical problems of imposing obligations of the system on investors who deal with each other without the participation of a broker or dealer. Should the fourth market develop as a means to avoid the reporting and other obligations of trading within the system, the Commission will give prompt consideration to corrective measures, including recommending legislation if necessary, to bring such transactions within the scope of the system.”). See also Subcomm. on Securities of the Senate Comm. on Banking, Housing and Urban Affairs, *Hearings on S. 2519*, 93d Cong., 1st Sess. (Comm. Print (1973)) (testimony of James Needham, NYSE Chairman: “Senator, ... the fourth market embodies the fundamental right of a citizen of this country to do business with whomever he wants without utilizing the services of some other person.”).

⁷ Hester M. Peirce, Comm’r, U.S. Sec. & Exch. Comm’n, Peanut Butter & Watermelon: Financial Privacy in the Digital Age, Remarks to the Science of Blockchain Conference (Aug. 4, 2025), <https://tinyurl.com/4tmzjst4>.

⁸ For purposes of this safe harbor proposal, we do not believe that it is necessary to address whether a given crypto asset is a security or whether a transaction in a crypto asset is a securities transaction. We have tailored the proposal in a manner that assumes securities will be transacted through Qualifying DEX Apps, but that registration of such DEX Apps is unnecessary given that such DEX Apps do not function as exchanges or engender the risks that exchange regulations under the Exchange Act were designed to address. This assumption is made to frame the requested safe harbor from exchange registration under the Exchange Act, and this letter should not be construed to suggest that DEX or DEX App activity involving solely non-securities crypto assets falls within the Commission’s jurisdiction.

when certain criteria are met. If effectively crafted, such a safe harbor would help fulfill the Commission’s mandate of protecting investors, maintaining fair, orderly, and efficient markets, and facilitating capital formation, while also promoting responsible innovation in blockchain technology.

Our proposal focuses on providing clarity through a safe harbor from any exchange registration requirement for DEXs and DEX Apps that meet the conditions set forth in Section VI below (such DEXs, “Qualifying DEXs” and such DEX Apps, “Qualifying DEX Apps”). We envision that such a safe harbor may first come in the form of staff guidance and subsequently the Commission may engage in formal rulemaking to codify such guidance on a permanent basis. This effort is further complemented by the discussion in our recent broker safe harbor submission (“Broker Safe Harbor Proposal”).⁹

Requiring a Qualifying DEX or Qualifying DEX App to register as an “exchange” would not advance Exchange Act policy goals as they relate to the registration of “exchanges.” The exchange registration regime is fundamentally directed at **centralized operators** of securities marketplaces—because it is the human intermediary acting as operator that introduces the risks the regime is designed to address, including conflicts of interest in determining how orders interact, the potential for manipulation by a centralized operator, and the need for governance and fair access rules where a centralized operator holds market power. As we explain below, Qualifying DEXs and Qualifying DEX Apps do not present these concerns precisely because they lack a centralized operator capable of exercising the kind of control that gives rise to those risks. Qualifying DEXs are open, permissionless software with no centralized gatekeepers or operators and no unilateral ability to change the underlying protocol functions governing trading, settlement, fees, or order execution once deployed. Qualifying DEX Apps—interfaces provided via a website, browser extension, or other software application (e.g., mobile application) that may be embedded in a wallet or separately available for download—are software tools that enable users to interact with blockchain networks and smart contract protocols. Qualifying DEX Apps provide user interface access to, and passively display information from, Qualifying DEXs without being able to exert any control over the underlying protocol, and are made available to users in connection with such users’ self-directed activities. As a result of their architecture, neither Qualifying DEXs nor Qualifying DEX Apps provide **trust-dependent services** to **customers**. In these contexts, imposing registration requirements would misapply rules designed for centralized financial intermediaries and force software developers to assume regulatory obligations designed for centralized financial institutions, effectively collapsing the distinction between non-custodial, technical infrastructure that enables users to arrange transactions themselves and financial intermediation.

In the sections that follow, we propose safe harbor criteria for both Qualifying DEXs and Qualifying DEX Apps, but our primary focus is on Qualifying DEX Apps, as they are inherently centralized and are therefore more likely to implicate the types of concerns that the

⁹ Miles Jennings et al., *Recommendations Regarding a Safe Harbor for Applications from the Broker Registration Requirements of the Securities Exchange Act of 1934*, DeFi Education Fund & Andreessen Horowitz (Aug. 13, 2025), <https://tinyurl.com/bdavx5vd> (“Broker Safe Harbor Proposal”).

exchange registration regime is designed to address. This distinction reflects the differing structures of these systems. Qualifying DEXs are decentralized, autonomous software protocols that are not controlled by, or composed of, any “group of persons.” Although Qualifying DEXs are initially developed by private software companies, they are fully autonomous and, once deployed, no one needs permission to trade on them. Together these attributes exclude them from the exchange registration regime. In contrast, DEX Apps are typically developed, published, constituted, administered, and/or maintained by centralized actors that could, at least under certain circumstances, be considered “groups of persons” subject to registration requirements. While such Apps generally function as neutral access points and do not perform the core functions of exchanges or other intermediaries—nor exercise control over the underlying DEX protocol—their centralized administration may, in certain circumstances, give rise to considerations more analogous to those underlying exchange regulation.

As we previously set forth in the Broker Safe Harbor Proposal, the legal uncertainty that DEX Apps face with respect to registration under the Exchange Act has a chilling effect on innovation, particularly for U.S.-based teams building software tools that support user self-directed onchain activity. Indeed, Commission actions under the prior administration included a Wells Notice to Uniswap Labs, which suggests that the Commission, at least previously, considered not only the DEX App, but also the underlying DEX, to be engaging in unregistered exchange activity. Yet, as Uniswap Labs explained in its response to the Commission, the Uniswap DEX does not constitute an exchange because it is not an “organization, association, or group of persons,” nor is there a person, entity, or place acting as an intermediary “bringing together purchasers and sellers,” among other reasons. Uniswap Labs further explained that the DEX App similarly did not constitute an exchange because the DEX App does not bring together the orders of multiple buyers and sellers, and it does not “[u]se[] established, non-discretionary methods ... under which ... orders interact with each other ...,” i.e., it is not an order book and does not provide access to one, among other reasons.¹⁰ In addition, the Uniswap DEX and the DEX App, like similar DEXs and DEX Apps, do not raise the intermediary-related risks described above. In such cases, registration is neither warranted nor appropriate. While we welcome the closure of its investigation of Uniswap Labs, without clear guidance, many developers are still uncertain as to whether certain DEX- and DEX App-related activities could expose them to enforcement in the future.

Our safe harbor proposal focuses on establishing a principled framework for identifying which DEXs and DEX Apps eliminate these intermediary-related risks. The central premise is straightforward: Qualifying DEXs and Qualifying DEX Apps whose technological architecture eliminates or otherwise does not implicate the market risks or investor protections addressed by exchange regulation should not be subject to it.

Importantly, requiring exchange registration by parties affiliated with neutral and disintermediated software would not only mischaracterize the risks of such products, it would

¹⁰ Uniswap Labs, Wells Submission on Behalf of Uniswap Labs (May 21, 2024), <https://tinyurl.com/43btp5km>.

require the reintroduction of centralized intermediaries, undermining the technological benefits that blockchains provide.¹¹ Specifically, the parties that currently develop, publish, constitute, administer, and/or maintain DEX Apps are typically tasked with maintaining the UX/UI features of the interface and other technical programming functions—not any of the key functions that exchanges typically perform on behalf of their customers. In such cases, imposing registration would not only be unnecessary from a market or investor protection standpoint, but would affirmatively harm investors by reintroducing intermediaries and associated costs into systems designed to operate without them,¹² undermining the core technological benefits of blockchains that enable peer-to-peer activity through neutral, permissionless infrastructure.¹³ It would effectively re-intermediate decentralized systems, increase investor transaction and other costs, and expose users to the heightened third-party risks inherent to intermediated systems—risks that the technology is specifically designed to eliminate. In short, extending exchange registration requirements would counterproductively reinstate the costs that blockchain technology can eliminate through its technological architecture.¹⁴

To this end, we propose that the Commission staff first issue guidance providing clarity that neither a Qualifying DEX nor a Qualifying DEX App is subject to exchange registration requirements if the conditions set forth in Section VI below are met, and subsequently engage in formal rulemaking to codify such safe harbor on a permanent basis.

In the discussion that follows, we first provide an overview of blockchain technology and the substantial benefits that it provides. Second, we provide an overview of DEXs and DEX Apps. We then explain why requiring DEXs and DEX Apps to register as statutory exchanges would not serve the stated aims of exchange registration and the accompanying regulatory regime. We then summarize the Exchange Act’s exchange registration requirement and its general non-applicability to most DEXs and DEX Apps, particularly the DEXs and DEX Apps that neither meet the statutory or regulatory exchange definitions nor operate like traditional exchanges. Lastly, we describe our safe harbor proposal. For an overview of the benefits of protocols and how they can mitigate risks, we direct the Commission’s attention to our recent submission on a related matter.¹⁵

¹¹ Miles Jennings, *Why decentralization matters, and needs incentives*, a16z crypto (Feb. 3, 2025), <https://tinyurl.com/3yh29e2b>.

¹² Importantly, the federal securities laws do not presume or require intermediation of securities transactions. *See, e.g.*, SEC Authority over Third Market Trading: Hearings on S. 3126 Before the Subcomm. on Sec. of the S. Comm. on Banking, Hous. & Urb. Affairs, 93d Cong. (Mar. 27-28, 1974) (describing the “fourth market” as “the market where two institutions or two individuals effect a trade without employing a broker or without going in to the public securities market” and stating that no existing or proposed regulations would require that such transactions occur with the involvement of a registered intermediary); Transfer Agent Regulations, Exchange Act Release No. 34-76743 (Dec. 22, 2015), at III.B (acknowledging that clearing “can be ‘bilateral,’ where the parties to the transaction work directly with each other to take the steps necessary to clear the transaction”); Exchange Act § 11A(a)(1)(C)(v) (finding it “in the public interest ... to assure an opportunity for investors’ orders to be executed without the participation of a dealer”).

¹³ *See* Broker Safe Harbor Proposal, *supra* note 9.

¹⁴ Moreover, extending the exchange regime in this manner would be at odds with Chair Atkins’s recent call to avoid “interpos[ing] intermediaries for the sake of forcing intermediation where the markets can function without them.” Paul S. Atkins, Chairman, U.S. Sec. & Exch. Comm’n, American Leadership in the Digital Finance Revolution (July 31, 2025), <https://tinyurl.com/5ppw242z>.

¹⁵ *See* Broker Safe Harbor Proposal, *supra* note 9.

II. Blockchain Technology Provides Substantial Benefits

Blockchain technology has the potential to serve as the backbone of a new, low-cost, interoperable, and globally accessible internet—an internet with an embedded financial system that enables new marketplaces and peer-to-peer transactions. Public blockchain networks not only function securely and according to rules that participants can independently verify, they are also highly scalable and composable, allowing anyone in the world to build on, integrate with, or transact on those networks without seeking permission or relying on centralized intermediaries.

DeFi is one of the most promising use cases for blockchain technology. DEXs are smart contract protocols that enable nearly instantaneous peer-to-peer transactions that are auditable and verifiable in real time, making possible a wide array of products and services in which users retain full custody of their assets. To date, the power of this technology has been trapped in a circular “crypto-for-crypto” economy—not because the tools were not useful, but because bridging into traditional finance was nearly impossible.¹⁶ Now, with improved legal clarity and institutional adoption, DeFi is poised to unlock a broader set of financial services with greater reach and fewer barriers than legacy systems. DEXs in particular can function as the connective tissue for the broader blockchain ecosystem, enabling users to seamlessly swap tokens across applications and blockchains. This interoperability will be especially critical in the coming years as stablecoin regulation catalyzes a proliferation of new dollar-pegged assets, each embedded in different networks or use cases. DeFi provides the infrastructure needed to make these assets functionally interchangeable at low cost and with minimal friction.

Blockchain networks and smart contract protocols offer these significant benefits to market participants while mitigating many of the intermediary-related risks that the federal securities laws were designed to address. Specifically, by replacing traditional intermediaries with automated algorithms, DEXs eliminate the need for a central operator that requires regulation to ensure they act as a trusted intermediary. The transparency, determinism, and resistance to unilateral change inherent in DEX architecture already accomplish the core investor protection objectives that exchange registration is designed to achieve, rendering traditional regulatory oversight duplicative and, in many respects, including by virtue of its forced imposition of a centralized rulemaking authority into the decentralized and autonomous structure, technically infeasible to implement. In these systems, no person can arbitrarily freeze funds, alter rules without consensus, or extract value through opaque fee structures. Users retain control over their assets through self-custodial wallets. Transactions are settled based on code, not subjective human discretion. Finally, pricing is determined through automated mechanisms or by users directly, not through behind-the-scenes negotiations or traditional intermediary order handling. In this way, these systems can achieve the goals of investor protection and market integrity more effectively than any regulatory scheme that relies on human oversight. Indeed, by reducing the need for trusted third parties,

¹⁶ Chris Dixon, *Stablecoins: Payments without intermediaries*, a16z crypto (Apr. 9, 2024), <https://tinyurl.com/b5ta9k8r>.

these applications not only expand access to creative development and economic participation—they can also reduce systemic risks associated with fraud, misappropriation, and gatekeeping in traditional content and commerce platforms.¹⁷

III. Background on DEXs and DEX Apps

DEXs are typically permissionless smart contract protocols that are not subject to unilateral alteration by any person or group under common control, non-custodial, and self-executing. A DEX self-executes transactions under the predetermined conditions of its smart contract and updates the applicable blockchain ledger in connection thereto. As such, DEXs function more like public financial infrastructure than a proprietary platform or an organization of financial intermediaries.

There are many different technical architectures for DEXs, with automated market maker (“AMM”) DEXs being the most common. Rather than matching orders of multiple buyers and sellers as done by traditional exchanges, AMM-based DEXs employ liquidity pools, which are smart contracts in which digital assets are paired and locked, thereby allowing users to individually interact with the liquidity pool to swap token pairs in an automatic and permissionless manner. Unlike traditional exchanges that may employ price-time priority execution methodologies, AMM-based DEXs do not rank orders based on time of arrival. Rather, orders may be priced individually and deterministically from the liquidity pool’s reserve assets at the moment the order is executed. These liquidity pools are transparent with respect to their available assets and prices at all times, and use a mathematical algorithm built into the pool’s smart contract to price assets based on supply and demand.¹⁸ Users interact with the pool on a unilateral basis and are incentivized to contribute tokens to seed these pools (“liquidity providers”) through fees allocated by the smart contract.

DEX Apps come in a variety of forms, including user interfaces provided through websites, separately downloadable applications that run on users’ computers or smartphones, and embedded applications within self-custody wallets. The range of functionality and connectivity provided by DEX Apps can vary. For example, a DEX App may provide connectivity and the ability to interact with (i) a specific DEX; (ii) multiple DEXs (e.g., DEX Apps serving as “aggregators” or providing a unified interface for interacting with different DEXs); and (iii) conceivably, with the increasing convergence and interaction of DeFi and traditional markets, both onchain DEXs and traditional centralized finance markets within a single unified interface.

¹⁷ Peirce, Peanut Butter & Watermelon, *supra* note 7.

¹⁸ Generally, AMM-based DEXs operate through smart contracts (onchain “liquidity pools”) that hold two assets (e.g., X token and Y token), with the price of X relative to Y (or the reverse) determined based on the relative number of each X and Y in the liquidity pool. Based on the typical AMM “constant product” pricing algorithm formula: $(x * y) = k$, where x and y are the total number of each of two assets in the pool, and k is the product of those two numbers. “k” generally remains constant at all times, even as the number of each X or Y token in the liquidity pool changes based on user activity. To the extent the values of X or Y deviate from prices on other DEXs or centralized exchanges, market participants may seek to profit from those differences and, in so doing, bring those prices in line. See *What is an Automated Market Maker?*, Uniswap (May 1, 2025), <https://tinyurl.com/43n97skw>.

In each case, DEX Apps function as software tools and technology infrastructure allowing users to interact with and engage in self-directed peer-to-peer transactions via DEXs without an intermediary. Specifically, DEX Apps function by passively providing onchain data and information to users; users provide directions and inputs to the DEX App using their self-hosted wallet;¹⁹ the self-hosted wallet then automatically generates messages using a data object from the DEX App; and the user then submits the message to a DEX, or multiple DEXs, via the user's self-hosted wallet and a remote procedure call node on the blockchain network. When the user sends the transaction message utilizing the user's wallet, the user then executes the transaction on the DEX(s) and the transaction is posted to the relevant blockchain, updating its state. While using the DEX App, the user always retains agency and control over whether to execute a transaction.

While a DEX App may surface potential execution routes based on user parameters and objective and transparent criteria, users retain agency and control at all times: a transaction occurs only if the user initiates and approves it. For example, a user may choose to swap a tokenized security for a payment stablecoin via a liquidity pool. At no point does a party engaging with the pool need to deposit assets with a central authority. Through the DEX App, the user packages the transaction parameters (e.g., pool addresses, amounts) into a transaction request, which the wallet presents for review. When the user approves and signs the transaction, the signed transaction is sent via a remote procedure call node to the blockchain network.²⁰ By automating and standardizing these processes, the DEX App's optimization software can enable efficient, transparent transactions, without granting any third party control over user funds or transaction execution and without altering the underlying protocol's decentralized logic.²¹ After the transaction is confirmed, the DEX App reads the updated onchain data and refreshes the user's view.

Importantly, DEX Apps are typically not required for users to interact with DEXs—DEX Apps usually do not serve as permissioned gatekeepers with special privileges to enable access to a given protocol. Rather, the underlying protocols are permissionless—anyone with an internet connection can interact with them directly, without gatekeeping. In fact, such DEXs are often accessible through multiple DEX Apps, including native integrations built directly into self-hosted wallets that are developed, maintained, and administered completely independently of such protocols. And many DEXs are built on open source or source available software. This openness not only democratizes access, but also fosters greater market integrity as anyone can verify execution logic, assess historical

¹⁹ In many cases, self-hosted wallets have their own embedded Apps that enable users to interact with blockchains and smart contract protocols.

²⁰ Remote procedure call nodes serve as the communication bridge between users and blockchain networks. They allow wallets and DEX Apps to query blockchain data, submit transactions, and interact with smart contracts. Although these nodes enable blockchain access, they do not control transactions or alter blockchain data, making them analogous to ISPs in traditional web infrastructure.

²¹ As we discussed in the Broker Safe Harbor Proposal, optimization software can give rise to risks that the broker registration regime is designed to address. For that reason, we suggested safe harbor criteria that would provide clarity regarding the sorts of optimization software that would not require a DEX App to register as a broker. Because these risks relate to broker—not exchange—registration, we do not address them further here. See Broker Safe Harbor Proposal, *supra* note 9.

behavior, and build new applications on top of existing systems. In this way, DEXs function more like public financial infrastructure than proprietary platforms.²²

DEXs and DEX Apps take many forms and present varying risk profiles.²³ Some designs introduce trust dependencies and related risks, while others are structured to remove such dependencies, which eliminates risks more effectively than traditional intermediary-based regulatory regimes.²⁴ But overall, most DEXs and DEX Apps do not resemble traditional exchanges in form, operation, or ownership. Accordingly, subjecting all DEXs and DEX Apps to the exchange registration regime would serve no reasonable purpose, least of all the aims of the exchange registration regime as the Commission has previously stated them. Given this range, it is critical that the Commission articulate clear parameters when addressing their treatment.

IV. Subjecting DEXs and DEX Apps to the Exchange Regime Will Not Achieve the Stated Goals of Registration

In the adopting release of the Regulation of Exchanges and Alternative Trading Systems (“Regulation ATS”) under the Exchange Act,²⁵ the Commission identified several benefits of exchange registration, including autonomy in daily operations and rulemaking, the ability to establish listing standards that promote investor confidence, direct participation in national market system mechanisms that enhance transparency, and expanded access for broker-dealers through unlisted trading privileges. The Regulation ATS Adopting Release also enumerated fundamental obligations of registered exchanges, such as enforcing compliance with exchange rules, surveilling for fraudulent and manipulative practices, ensuring fair access, maintaining audit trails, and providing fair representation of members in exchange governance. These benefits and obligations can be broadly categorized under the principles of autonomy, investor confidence, transparency, fair access, and market integrity.

DEXs and DEX Apps, by their inherent design, already satisfy many of these regulatory objectives without the need for registration. DEXs are automated smart contracts that, once deployed, operate according to predetermined rules that no single person or entity

²² For purposes of this submission, a “DEX App” is intended to refer to passive software tools that provide access to a decentralized exchange protocol without custodial user assets, exercising discretion or control, or otherwise engaging in financial intermediation. By contrast, it is not intended to refer to hybrid applications that combine a traditional, centralized user-facing application that integrates with decentralized, non-custodial backend infrastructure and may engage in financial intermediation activities. This submission addresses only DEX Apps and expresses no view on the treatment of hybrid applications.

²³ For the avoidance of doubt, we do not address optimization software (e.g., routers or solvers) here, as software tools that merely recommend or provide information regarding potential routing paths, without matching orders, exercising discretion, or operating a marketplace, are outside the scope of the exchange registration requirements. This view is reflected in the Wells Submission of Uniswap Labs, which explains that Uniswap’s autorouter is an open-source, informational tool that does not bring together buyers and sellers, does not match orders, and does not affect the analysis of whether a system constitutes an exchange. See Uniswap Labs, Wells Submission on Behalf of Uniswap Labs (May 21, 2024), <https://tinyurl.com/43btp5km>; see also Staff Statement (indicating that routing options absent a particular recommendation do not trigger broker registration for a “Covered User Interface”).

²⁴ Peirce, Peanut Butter & Watermelon, *supra* note 7.

²⁵ Regulation of Exchanges and Alternative Trading Systems, Exchange Act Release No. 34-40760, 63 Fed. Reg. 70844 (Dec. 22, 1998) (the “Regulation ATS Adopting Release”).

controls. They provide open, permissionless, and disintermediated access, eliminating certain intermediary-related conflicts of interest and risks that exchange regulation is specifically designed to address. Their use of transparent liquidity pools, mathematical pricing algorithms, and immutable blockchain ledgers ensures a level of transparency and market integrity that meets or exceeds the goals of traditional exchange oversight. In short, core investor protection objectives of exchange registration are already accomplished through DEX architecture itself.

For these reasons, neither the market integrity nor the investor protection concerns addressed by exchange registration would be meaningfully furthered by requiring DEXs or DEX Apps to register as exchanges. The Exchange Act’s registration framework is fundamentally designed to regulate centralized operators and intermediaries that possess unilateral market power—concerns that are largely inapplicable to decentralized, code-governed protocols. Imposing such requirements would be technically difficult to implement, would re-intermediate systems specifically designed to eliminate intermediary risk, would burden participants with substantial compliance costs related to operating a registered entity, and would counterproductively reinstate the very costs and conflicts of interest that blockchain technology is built to eliminate.

V. Overview of the Exchange Registration Requirements

Section 3(a)(1) of the Exchange Act defines the term “exchange” to include “any organization, association, or group of persons, whether incorporated or unincorporated, which constitutes, maintains, or provides a market place or facilities for bringing together purchasers and sellers of securities or for otherwise performing with respect to securities the functions commonly performed by a stock exchange as that term is generally understood[.]”²⁶ The Exchange Act specifically provides that an “exchange” includes not only the marketplace but also “the market facilities maintained by such exchange.”²⁷ To define what constitutes a “market facility” of an exchange, Section 3(a)(2) of the Exchange Act states that:

The term “facility” when used with respect to an exchange includes its premises, tangible or intangible property whether on the premises or not, any right to the use of such premises or property or any service thereof for the purpose of effecting or reporting a transaction on an exchange (including, among other things, any system of communication to or from the exchange, by ticker or otherwise, maintained by or with the consent of the exchange), and any right of the exchange to the use of any property or service.²⁸

Exchange Act Rule 3b-16(a) provides a functional test to assess whether a trading system meets the definition of exchange and provides, in relevant part, that an organization is

²⁶ 15 U.S.C. § 78c(a)(1).

²⁷ *Id.*

²⁸ *Id.* § 78c(a)(2). DEF requested the Commission clarify the meaning of “facility” and “group of persons” under the Exchange Act in a manner that will promote the continued innovation and growth of decentralized finance. See Request for Information Regarding National Securities Exchanges and Alternative Trading Systems Trading Crypto Assets, DeFi Education Fund (Apr. 1, 2026), <https://tinyurl.com/4mh6h6yz>.

“considered to constitute, maintain, or provide ‘a market place or facilities for bringing together purchasers and sellers of securities or for otherwise performing with respect to securities the functions commonly performed by a stock exchange’” if it:

- Brings together the orders for securities of multiple buyers and sellers;²⁹ and
- Uses established, non-discretionary methods (whether by providing a trading facility or by setting rules) under which such orders interact with each other, and the buyers and sellers entering such orders agree to the terms of the trade.³⁰

As a general matter, a system that falls within the definition of “exchange” under Section 3(a)(1) of the Exchange Act pursuant to the criteria set forth in Exchange Act Rule 3b-16(a) must either register as a National Securities Exchange under Section 6 of the Exchange Act or qualify for an exemption under Exchange Act Rule 3a1-1.³¹ This would include operating as an alternative trading system (“ATS”) in compliance with Regulation ATS under the Exchange Act, in each case, unless it does not satisfy the definition of exchange as provided under Rule 3b-16(b). We also note that the Commission has recognized certain instances where platforms that enable consumers to buy and sell securities do not fall within the definition of an “exchange.”³²

Congress passed the Exchange Act in the midst of the Great Depression during a time in which significant criticism had been leveled against securities intermediaries and concern existed over potential abuses in secondary markets.³³ Since then, regulations for exchanges have evolved significantly and now encompass requirements relating to conflicts of interests, order handling and execution, market surveillance, prevention of fraud and manipulation, fair access, trading rules and fee structures, governance, and recordkeeping.³⁴

²⁹ See 17 C.F.R. § 240.3b-16(a)(1). The term “order” is defined to include “any firm indication of a willingness to buy or sell a security.”

³⁰ See 17 C.F.R. § 240.3b-16(a)(2). “Established, non-discretionary methods” include methods that dictate the terms of trading among the multiple buyers and sellers entering orders into the system, including those that set procedures or priorities under which open terms of a trade may be determined. For example, trading algorithms of electronic trading systems and traditional exchanges’ rules of priority, parity, and precedence are “established, non-discretionary methods.”

³¹ 17 C.F.R. § 240.3a1-1.

³² A fact-specific analysis is required to determine whether a system is included in, or excluded from, the scope of Rule 3b-16. For instance, Rule 3b-16(b)(2) identifies certain single dealer systems as not satisfying the definition of an “exchange.” Further, Section III(D)(2)(a)–(k) of the Regulation ATS Adopting Release provides eleven illustrative examples of systems that fall outside the scope of Rule 3b-16, including, among others, a system that permits users to display buy and sell interest for common stock but where users contact each other outside of the system to execute a trade (*i.e.*, electronic bulletin boards). See Regulation ATS Adopting Release, *supra* note 25, at 70855-56. The Commission has held that persons who operate such passive electronic bulletin boards do not meet the definition of “exchange” under Rule 3b-16 because they do not establish non-discretionary methods under which buyers and sellers interact. See Real Goods Trading Corporation, SEC No-Action Letter (June 24, 1996); PerfectData Corp., SEC No-Action Letter (Aug. 5, 1996); Flamemaster Corporation, SEC No-Action Letter (Oct. 29, 1996).

³³ See *Coinbase, Inc. v. SEC*, No. 23-3202, 2025 WL 78330 (3d Cir. Jan. 13, 2025) (Bibas, J., concurring); see also Elisabeth A. Keller, Introductory Comment: A Historical Introduction to the Securities Act of 1933 and the Securities Exchange Act of 1934, 49 Ohio St. L. Rev. 339 (1988).

³⁴ See 15 U.S.C. § 78f(b) (requiring exchange rules to be “designed to prevent fraudulent and manipulative acts and practices,” to “promote just and equitable principles of trade,” and to “not impose any burden on competition not necessary or appropriate”); 15 U.S.C. § 78k-1(a)(1)(C) (directing the SEC to facilitate a national

Importantly, these regulations reflect the risks associated with the intermediary activities performed by centralized exchange operators, which typically include: (1) exercising control over how orders interact; (2) determining execution priority and pricing; (3) establishing rules governing access, fees, and trading conduct; (4) maintaining centralized order books and matching engines; (5) operating compliance programs; and (6) establishing governance structures applicable to exchange members.³⁵ In this regard, if a centralized entity controls the operations of a securities marketplace, regulatory oversight plays an important role in protecting market participants and promoting fair, orderly, and efficient markets.

A. *The Elements of an Exchange*

The Exchange Act takes a functional approach to determining whether an entity satisfies the definition of “exchange” under Section 3(a)(1) and Rule 3b-16. However, the definition does not directly identify the constituent elements of an exchange or the pieces of infrastructure that can be said to constitute an exchange. Clarification of those elements is necessary in order to identify which entities can be said to “constitute, maintain, or provide” an exchange within the meaning of Section 3(a)(1). The essential, functional elements of an exchange include providing a market place or facilities for bringing together purchasers and sellers of securities or otherwise performing the functions commonly performed by a stock exchange. This includes bringing together the orders of multiple buyers and sellers and using established, non-discretionary methods (whether by providing a trading facility or by setting rules) under which such orders interact with each other, and the buyers and sellers entering such orders agree to the terms of a trade.

An exchange’s established, non-discretionary methods also inform an exchange participant’s expectations regarding the manner in which its orders will be handled and executed. We believe that it is important to take exchange participants’ expectations into account. Orders instruct an exchange to carry out the intention of participants in accordance with trading procedures, and orders, along with established, non-discretionary methods as to how such orders interact, contribute to how participants expect to receive trade executions.³⁶ In the words of the Commission, “orders and established, non-discretionary methods undergirded Exchange Act Rule 3b-16 to reflect functions of exchange markets.”³⁷

market system to assure “fair competition,” “efficient execution,” and “the practicability of brokers executing investors’ orders in the best market”); Regulation NMS, Exchange Act Release No. 51808, 70 Fed. Reg. 37496 (June 29, 2005) (adopting national market system rules governing quotation protection and access for trading centers).

³⁵ See 15 U.S.C. § 78f(b)(1), (4), (5) (requiring exchanges to enforce compliance with trading rules, establish equitable access and fees, and discipline members).

³⁶ The SEC stated in the Regulation ATS Adopting Release that “an alternative trading system that posts firm orders to buy and sell a security does raise a certain expectation of execution at those quoted prices” and that “[t]he expectation is based on the life of the outstanding orders in the system, rather than continuous two sided quotations published by specialist and market makers.” See Regulation ATS Adopting Release, *supra* note 25, at 70899 n.532.

³⁷ Amendments Regarding the Definition of “Exchange” and Alternative Trading Systems (ATSs) That Trade U.S. Treasury and Agency Securities, National Market System (NMS) Stocks, and Other Securities, 87 Fed. Reg. 15496, 15500 (Mar. 18, 2022).

In a number of enforcement actions, including several involving crypto asset platforms, the Commission has performed a functional analysis when determining whether a particular platform was operating as an exchange. In some matters, these descriptions have referenced components such as a matching mechanism, a centralized repository or display of trading interest, and platform rules governing how trading occurs. For example, in its complaint in the *Bittrex* case (the “Bittrex Complaint”), the Commission specifically noted that Bittrex was the operator and provider of exchange technology, “including a single matching engine and order book.”³⁸ The Bittrex Complaint also noted that Bittrex provided on its website “detailed trading rules for operating” the Bittrex platform.³⁹ While the exchange analysis centers on whether a system, in practice, performs the function of providing a marketplace or facilities that bring together the orders for multiple buyers and sellers and on the role an entity plays in operating or controlling that functionality, the technological features described in these enforcement actions serve as contextual considerations rather than independent determinants.

B. The Requirement of an “Organization, Association, or Group of Persons” under the Exchange Definition

Even where the functional elements of an exchange may be present, exchange registration obligations should not apply absent an identifiable operator of the exchange. The Exchange Act’s registration requirements are directed at businesses and operators of exchanges, not automated software, because it is the intermediary acting as operator that introduces the control risks that exchange registration is designed to address. Under both Section 3(a)(1) and Rule 3b-16, the exchange definition goes beyond the functions of an exchange to describe the operator of an exchange. Both Section 3(a)(1) and Rule 3b-16 regulate exchanges that are “constituted, maintained, or provided” by “an organization, association, or group of persons.” Neither the definition under Section 3(a)(1) nor the one under Rule 3b-16 further define what the phrase “organization, association, or group of persons” means. However, Section 3(a)(1) specifies that the organization, association, or group of persons may be “incorporated or unincorporated,” suggesting that the Commission may look beyond the legal form of an entity to determine whether there is a group of persons that constitutes, maintains, or provides an exchange.

C. Exchange Registration for DEXs and DEX Apps

Beginning with DEXs, the statutory definition of “exchange” under Section 3(a)(1) of the Exchange Act requires both (i) an “organization, association, or group of persons” that constitutes, maintains, or provides (ii) a market place or facilities for bringing together purchasers and sellers using established, non-discretionary methods. DEXs satisfy neither requirement: a DEX that is automated, permissionless, and credibly neutral is not an “organization, association, or group of persons,” nor is it “constituted, maintained, or provided” by one—it is software that a user relies on to engage in self-directed transactions.

³⁸ Complaint at 5, *SEC v. Bittrex, Inc.*, No. 2:23-cv-00580 (W.D. Wash. filed Apr. 17, 2023), <https://www.sec.gov/files/comp25817.pdf>.

³⁹ *Id.* at 23.

Separately, and in addition, many DEXs, including the AMM-based DEXs that predominate today, do not perform the functional elements of an exchange, because they do not bring together the orders of multiple buyers and sellers at all. We address each element in turn.

First, there is no “organization, association, or group of persons” that constitutes, maintains, or provides the DEX. Although the statutory phrase “organization, association, or group of persons” has undefined boundaries, *Intercontinental Exchange v. SEC* provides instructive guidance on both what the term includes and, critically for present purposes, what it cannot reasonably be stretched to include. In that case, the D.C. Circuit held that wireless connectivity services provided by an exchange’s corporate affiliate constituted “facilities” of the exchange because (1) the affiliate and exchange together formed a “group of persons,” (2) the services were “maintained by or with the consent of the exchange,” and (3) the services were provided “for the purpose of effecting or reporting a transaction on an exchange.”⁴⁰ The court emphasized that closely connected corporate affiliates, and potentially unaffiliated persons acting in concert, may together constitute a “group of persons.” At the same time, the D.C. Circuit cautioned that “the outer boundary of the term ‘group of persons’ remains murky, and vigilance is necessary to ensure the term is not stretched too far.” This admonition directly supports our position: the term cannot reasonably be extended to encompass large numbers of unaffiliated individuals acting independently and without coordination—precisely the situation with DEXs. Unlike the corporate affiliates in *Intercontinental Exchange*, DEXs are autonomous smart contracts that, once deployed, are not controlled by any person or entity. Although private software companies often develop DEXs, such companies typically have no unilateral control over the DEX once deployed, and users access the DEX directly without any gatekeeper. There is no “consent of the exchange” because there is no organization, association, or group of persons to provide consent; the protocol simply executes according to its code. And unlike the wireless connectivity services at issue in *Intercontinental Exchange*, DEXs are not provided “for the purpose of effecting or reporting a transaction on an exchange”; they are general-purpose infrastructure for peer-to-peer transactions that neither depends on nor serves any exchange.⁴¹

The same conclusion regarding the lack of a “group of persons” holds even where limited parameters of a DEX’s smart contracts are administered through a broad-based decentralized governance system, including one organized under a legal wrapper such as a decentralized unincorporated nonprofit association. The administration of such parameters neither vests unilateral control over the DEX’s trading, settlement, fee, or execution functions in any group under common control nor amounts to the constitution, maintenance, or

⁴⁰ See *Intercontinental Exchange, Inc. v. SEC*, 23 F.4th 1013, 1022-24 (D.C. Cir. 2022). The court in *Intercontinental Exchange* warned that allowing exchanges to avoid SEC jurisdiction through corporate restructuring would cheat the statute of its intended reach, and held that the undefined term “group” “certainly includes closely connected corporate affiliates.” *Id.* at 1023. At the same time, the court concluded by cautioning that “the outer boundary of the term ‘group of persons’ remains murky, and vigilance is necessary to ensure the term is not stretched too far.” *Id.* at 1024.

⁴¹ This ground is independently sufficient. Where no “organization, association, or group of persons” constitutes, maintains, or provides the permissionless system, the system is not an exchange regardless of its specific technological architecture, including where the system utilizes an onchain order book or auction.

provision of a market place.⁴² Because there is no central operator—and no “group of persons” acting in concert to maintain or provide the facility—the Exchange Act’s registration requirements, which are directed at businesses and operators of exchanges, not autonomous software, should not apply.

Second, as a functional matter, many DEXs also fall outside the definition of “exchange” because they do not constitute, maintain or provide a market place or facilities for bringing together buyers and sellers, nor do they do so using established, non-discretionary methods. Where DEXs are automated, permissionless, and credibly neutral, no centralized operator has discretion or control over the operation of the DEX, meaning regulatory concerns that underlie exchange registration—such as conflicts of interest in determining how orders interact, manipulation of execution priority or pricing, and fair access concerns—are not implicated.⁴³

Further, many types of DEXs provide no facility in which the orders of multiple buyers and sellers interact with one another at all. For example, with respect to AMM-based DEXs, users interact solely with an AMM-based liquidity pool rather than with a buyer (or seller) as a counterparty.⁴⁴ Each transaction has one fixed, unchanging counterparty—the liquidity pool—and there is no central operator coordinating execution orders. This feature has significant consequences when compared to an exchange. On a traditional exchange, an execution requires both a buyer and seller. By contrast, on an AMM-based DEX, even if there are no sellers (or buyers) at a particular time, the liquidity pool may nevertheless be able to supply liquidity to multiple buyers (or sellers) to complete the transaction. In addition, unlike traditional exchanges, AMM-based DEXs solely enable trading against an autonomous pool without the use of a central order book. The absence of a central order book shapes participants’ expectations: participants understand that trading is shaped by an algorithm that adjusts pricing according to the relative liquidity and supply of pooled assets, that there is no

⁴² The CLARITY Act reflects the same principle, providing that a “decentralized governance system” shall not be considered a person or group of persons under common control, and defining a decentralized governance system as a transparent, rules-based system permitting persons to form consensus or reach agreement in the development, provision, publication, maintenance, or administration of a blockchain system, where participation is not limited to, or under the effective control of, any person or group of persons under common control. CLARITY Act §§ 101, 103.

⁴³ This letter addresses only the exchange registration requirement of the Exchange Act. We express no view on the status under other provisions of the federal securities laws of liquidity providers, pool deployers, or other participants in the systems described herein. See Broker Safe Harbor Proposal, *supra* note 9. Nor should anything in this letter be read to suggest that a person that supplies or prices liquidity for its own account, whether to a pool or through its own onchain program, is thereby a “dealer” or a “facility” of an exchange; those questions are outside the scope of this submission.

⁴⁴ For purposes of this submission, we analyze the technical architecture of AMM-based DEXs in the context of buyer and seller interactions. This submission does not address other technical architectures or models that may be characterized as DEXs for such purposes. The exclusion of any such model from the scope of this submission should not be construed as expressing any view as to whether that model is, or is not, subject to registration with the SEC as a national securities exchange or otherwise subject to the federal securities laws. Although this submission focuses on AMM-based DEXs, its legal principles are not limited to that architecture and may apply to other DEX models.

counterparty order flow and therefore no order book,⁴⁵ and that traditional order execution rules (for example, by price or time priority) do not apply at all.

This distinctive feature of AMM-based DEXs, whereby buyers or sellers engage with a liquidity pool, parallels systems that the Commission has expressly excluded from the exchange definition. Rule 3b-16(b)(2) states that “An organization, association, or group of persons shall not be considered to constitute, maintain, or provide [an exchange]... solely because such organization, association, or group of persons ... allows persons to enter orders for execution against the bids and offers of a single dealer.” In the Regulation ATS Adopting Release, the Commission further confirmed that because single dealer systems merely provide a more efficient means of executing the trading interest of separate customers with one dealer, they should not be considered exchanges. Accordingly, the Commission proposed to explicitly exclude from proposed Rule 3b–16 those trading systems that display the quotations of a single dealer and allow persons to enter orders for execution against the dealer’s proprietary account, usually at the dealer’s quote. This exclusion was intended to encompass systems operated by third-party market makers, as well as those systems operated by dealers, primarily in debt securities, who display their own quotations to customers and other broker-dealers on proprietary or vendor screens.⁴⁶

Turning to DEX Apps, the analysis is similar but distinct. As noted, the Exchange Act uses a functional approach to define and determine what constitutes an exchange. As a functional matter, a DEX App is not an exchange. Rather, a DEX App is a user interface for accessing an underlying protocol that does not have a matching engine, centralized order book that is subject to centralized control or discretion by the platform operator, or established, nondiscretionary trading rules, which are generally indicia of an exchange. Although a DEX App is typically developed, published, constituted, administered, and/or maintained by a centralized actor that could, in principle, be considered a “group of persons,” the analysis ultimately turns on these functional elements as well as **control**: the only way a DEX App could meaningfully be said to “constitute, maintain, or provide” an exchange is if its operator exercised control over the underlying DEX protocol—because the protocol, not the DEX App, is what supplies any arguable exchange-like functionality. Where the DEX App operator has no such control, the DEX App is not an exchange, and its developers are not operating one. This is precisely the distinction reflected in our proposed safe harbor criteria below: those criteria exclude DEX Apps from registration where the operator does not exercise control over the underlying protocol. This control-based framing also accords with the recent statement from the Division of Trading and Markets staff that certain user interfaces facilitating self-directed user activity do not, on that basis alone, give rise to

⁴⁵ We note that the applicability of federal exchange regulation should not be premised solely on the presence or absence of a single commercial or technological feature, such as an order book. If regulation turned on a single such feature, it would incentivize every developer to resort to some alternative to the order book. We reference the absence of order books on AMM-based DEXs only to illustrate that their operation and evolutionary trajectory differ from those of traditional securities exchanges—not to suggest that an order book, or any other particular architecture, defines the boundary of exchange regulation. Nor should AMM-based architecture itself be understood as the boundary of the principles articulated in this submission; other architectures may likewise fall outside the scope of federal exchange regulation where their functional characteristics warrant the same conclusion.

⁴⁶ Regulation ATS Adopting Release, *supra* note 25, at 70849.

registration obligations.⁴⁷ Although that statement addresses broker-dealer registration rather than exchange registration, it reflects a singular underlying policy: neutral software tools that operate based on objective, pre-disclosed parameters and do not exercise discretion over securities transactions are not the locus of the intermediary risks that securities registration regimes were designed to address. The same rationale for a control-and-neutrality framework should apply to the exchange context for Qualifying DEX Apps.⁴⁸

A related question is whether a DEX App that aggregates or displays potential execution routes across multiple Qualifying DEXs thereby “brings together” the orders of multiple buyers and sellers. It does not. Route aggregation and display do not cause any user’s order to interact with any other user’s order; each transaction is executed independently against pooled liquidity on the underlying Qualifying DEX pursuant to its deterministic code. A DEX App that surfaces potential routes accordingly provides no facility “under which such orders interact with each other,” and route display cannot supply that missing element of the exchange definition. Whether particular routing or optimization functionality involves the exercise of discretion in the handling of customer orders is a distinct question arising under the broker registration regime, which the Staff Statement addresses directly and which we addressed in the Broker Safe Harbor Proposal.⁴⁹

Consistent with that control-focused analysis, Qualifying DEX Apps do not present the risks that motivated Congress and the Commission to require exchange registration. Qualifying DEX Apps serve as communications tools that provide user interface access to the underlying Qualifying DEX and passively display information from it. While there may be a centralized software development team maintaining a Qualifying DEX App, that team is technologically unable to change the rules of the underlying Qualifying DEX—users retain agency in executing transactions according to the predefined parameters of the smart contract protocol in an automatic, transparent, and deterministic manner. In particular, Qualifying DEX Apps (i) do not actively control, amend, or supersede the parameters of the underlying Qualifying DEX, and (ii) do not “[u]se[] established, non-discretionary methods . . . under which . . . orders interact with each other,” because Qualifying DEX Apps merely provide access to the underlying Qualifying DEX. That is, centralized control over a Qualifying DEX App is typically limited to UI/UX updates and technical programming functions; Qualifying DEX Apps do not intermediate Qualifying DEX peer-to-peer transactions. Because the Qualifying DEX App developers do not control the protocol’s trading, settlement, or execution functions, none of the central-operator risks that animate exchange regulation are present.

These characteristics address the very problems that exchange registration was designed to address through regulatory oversight of centralized intermediaries. As such, registration would not serve investor protection goals and would instead impose compliance

⁴⁷ See Staff Statement, *supra* note 5 (acknowledging that software (a covered user interface) enabling user-directed, self-custodial crypto asset security transactions is not, by itself, a broker-dealer).

⁴⁸ *Id.*

⁴⁹ *Id.* (setting forth the conditions under which the display of potential execution routes, filtered or sorted based on objective factors, does not give rise to broker-dealer registration obligations); Broker Safe Harbor Proposal, *supra* note 9 (proposing safe harbor criteria for optimization software).

burdens without corresponding regulatory benefit, which could frustrate market efficiency and integrity. That said, because the range of DEXs and DEX Apps is broad and evolving, there may be edge cases that present closer questions. For that reason, we propose safe harbor criteria to provide clarity and ensure that only those systems that do not raise the concerns underlying exchange regulation fall outside its scope. To that end, the Commission should focus its inquiry on the circumstances in which DEXs and DEX Apps present the types of intermediary-related risks that motivated Congress and the Commission to require “exchange” registration. A safe harbor would provide the certainty necessary for continued innovation while preserving the Commission’s authority to act against any platform that, notwithstanding its claimed architecture, operates in a manner that reintroduces the intermediary risks the Exchange Act was designed to address.

VI. Safe Harbor Proposal

Although the functional and technological characteristics of many DEXs and DEX Apps strongly support the conclusion that they do not present the intermediary-related risks exchange registration is designed to address, we recognize that both the public and the Commission may benefit from clear, administrable criteria for distinguishing Qualifying DEXs and Qualifying DEX Apps from systems that do present traditional financial intermediary risks. To ensure that the exchange registration requirements of the Exchange Act are appropriately tailored to the functional realities of decentralized systems, we propose a safe harbor for a limited category of DEXs and DEX Apps: those that do not function as traditional exchanges and do not give rise to the risks that exchange regulations were designed to address. As with a16z’s prior safe harbor proposals for airdrops⁵⁰ and collectible tokens,⁵¹ this safe harbor is narrow in scope and builds on the principle that where certain forms of control are eliminated, the application of federal securities laws should be limited.

A four-part approach can be used to assess whether a DEX is a Qualifying DEX and thus is eligible for the safe harbor. The safe harbor should identify a DEX as a Qualifying DEX if the DEX enables users to transact in securities and the DEX: (1) is non-custodial;⁵² (2) is automated; (3) is permissionless; and (4) is credibly neutral.

A similar four-part approach should also be implemented for Qualifying DEX Apps. Specifically, a DEX App should: (1) be non-custodial;⁵³ (2) display pricing and market data

⁵⁰ See Miles Jennings et al., *SEC RFI: Safe harbor for certain airdrops & incentive-based rewards of network tokens*, a16z crypto (Mar. 13, 2025), <https://tinyurl.com/4m8e7hmh>.

⁵¹ Miles Jennings et al., *SEC RFI: Recommendations Regarding a Safe Harbor and Crowdfunding Regime for Collectible Tokens (NFTs)*, a16z crypto (Mar. 27, 2025), <https://tinyurl.com/2p3dnrvd> (“NFT Safe Harbor”).

⁵² The ability to take custody has not typically been part of the exchange status determination process, in contrast to that of broker registration. However, as a general matter, an autonomous DEX protocol, i.e., a protocol that functions without human control, is, by design, non-custodial, and this is both a feature and an inbuilt safeguard for DEX functioning. The absence of custody or control by the DEX is one of several fundamental reasons why DEXs should not be subjected to traditional intermediary regulation—the risk of loss of user assets at DEXs does not exist in the way that it exists for other intermediaries. We include the non-custodial criterion in the safe harbor for consistency with the control-based framework of the Broker Safe Harbor Proposal, not because custody is itself an element of the statutory exchange analysis.

⁵³ See *NFT Safe Harbor*, *supra* note 51.

using software that operates based on pre-disclosed, objective, and independently verifiable parameters, with such data sourced from onchain public data or independent third-party sources; (3) operate without any central authority, governance body, or developer exercising discretion over trade coordination, pricing, matching, or execution in a manner that advantages particular users, counterparties, or transactions; and (4) limit developer activity to the categories discussed below.

These conditions are grounded in the understanding that most DEXs are fundamentally autonomous, permissionless software, and most DEX Apps are fundamentally neutral software tools that enable users to interact directly with public, decentralized networks and protocol infrastructure. If a DEX or DEX App satisfies the aforementioned conditions, then it does not perform functions traditionally associated with exchanges, and thus does not expose users to the trust dependencies and consequent risks that the federal securities laws are intended to mitigate, even if it facilitates transactions in securities. Rather, such a DEX or DEX App empowers users to act with agency and execute transactions according to predefined rules in an automatic, transparent, and deterministic manner. If a DEX or DEX App satisfies these criteria, a rebuttable presumption should exist that it is not operating as an exchange and consequently not subject to exchange registration under the Exchange Act.⁵⁴

In the sections that follow, we describe in detail the conditions a DEX or DEX App must meet to qualify for this safe harbor.

A. Safe Harbor Proposal for Qualifying DEXs

As discussed, a control-based decentralization framework can be utilized to ameliorate the trust dependencies that arise from traditional financial intermediaries, and thus mitigate the intermediary-related risks that the Exchange Act registration regimes are intended to address. Where a Qualifying DEX can eliminate operational control by any person or group of persons under common control, it can eliminate the kind of control that is at the root of the risks that the federal securities laws were designed to mitigate with the exchange registration requirement. A DEX eliminates operational control when it meets the criteria listed below. Therefore, a DEX must possess each of the following characteristics to be considered a Qualifying DEX and, as such, not subject to exchange registration:

- 1) **Non-custodial.** A DEX is non-custodial where the system's source code enables participants to maintain total, uninterrupted, and independent control of crypto assets owned by them, with all asset management and transaction initiation governed solely by the user's private keys. The DEX must not provide any party with the unilateral ability—whether through administrative keys, upgrade

⁵⁴ Given the numerous ways that DEXs and DEX Apps can be structured and operated, the safe harbor should merely create a rebuttable presumption that where the criteria are met, a DEX or DEX App is unlikely to be categorized as an exchange. However, where the Commission finds that a DEX or DEX App, despite meeting the criteria specified herein, subjects users to intermediary risks that exchange registration would resolve, the Commission should maintain a path to overcome the proposed safe harbor.

mechanisms, or hard-coded privileges—to access, freeze, reallocate, or otherwise interfere with user-controlled assets. If a system is custodial, it introduces the potential for misappropriation, access denial, and execution without user consent—the core trust dependencies that intermediary regulation is designed to address.

- 2) **Automated.** A DEX is automated where it operates, executes, and enforces transactions and other activities without human intervention, functioning solely through transparent, predetermined rules embedded in source code, and no person or group under common control has unilateral authority or the ability to alter the functionality, operation, or rules of the system.⁵⁵ If a system is not yet automated, a user can be exposed to risks stemming from the manual performance of operations, the potential for unilateral changes to the system’s functioning such that transactions are executed in unforeseen ways, and the risks of potential mistakes in calculation or data storage.
- 3) **Permissionless.** A DEX is permissionless where no person or group under common control has unilateral authority or the ability to restrict or prohibit access to or operation of the system for any use.⁵⁶ If a system is not permissionless, a controlling party could gate user access or throttle transactions, enabling them to favor specific DEX Apps or extract economic rents from routing. This could introduce risks, such as pay-to-play access, order-flow intermediation, and discretionary control over executions, which the federal securities laws are designed to regulate.⁵⁷
- 4) **Credibly neutral.** A DEX is credibly neutral where the system’s source code does not empower anyone with private permissions, hard-coded privileges, or similar rights over others that would enable them to discriminate against particular users or use-cases. If a system is not credibly neutral, its operators could manipulate transaction ordering, impose selective fees, or advantage affiliated DEX Apps—thus turning the protocol into a venue for discriminatory routing. This

⁵⁵ See CLARITY Act §§ 101, 103.

⁵⁶ As we discussed in the Broker Safe Harbor Proposal, this condition must be balanced with the risks that removing operational control may create. Projects that eliminate operational control too early may place investors at risk by way of security or other vulnerabilities. For this reason, DEXs often do not eliminate control at conception. As such, taking too rigid of an approach to implementing this condition could impede innovation or subject investors to harm. Therefore, DEXs should still be able to qualify for the safe harbor if they have not yet eliminated control so long as: (a) the protocol is pursuing decentralization in good faith; and (b) transaction volumes or the total value of assets deposited in the protocol are below a specified threshold. The Commission may also consider offering greater leniency if a DEX is not engaged in for-profit activity. Such considerations would enable the Commission to simultaneously support investor protection and innovation.

⁵⁷ Permissionlessness is assessed at the level of the DEX protocol. Third parties may deploy individual liquidity pools that embed asset-level transfer restrictions, such as compliance-based whitelists applicable to tokenized securities offered in reliance on an exemption from registration. Such pool-level parameters, fixed at deployment and enforced uniformly by code, are not an exercise of gatekeeping control over the system by any operator and do not defeat a DEX’s permissionless character; any regulatory obligations associated with such restricted assets fall on their issuers, not on the neutral protocol infrastructure through which they trade. For the same reasons, a DEX App does not lose eligibility under the safe harbor set forth below by providing access to such pools.

creates informational asymmetries and conflicts of interest, especially in fragmented or opaque execution environments.⁵⁸

A DEX would only be eligible for the safe harbor if it meets, on an initial and ongoing basis, all four of the requirements above. Through these requirements, we have sought to preserve and promote the specific characteristics of DEXs that make exchange regulation both unnecessary and inappropriate. Thus, for example, through Requirement 1 (Non-custodial), Requirement 2 (Automated), Requirement 3 (Permissionlessness), and Requirement 4 (Credible neutrality), we seek to preserve and promote the values of autonomy, market integrity and fair access. A DEX that possesses these characteristics is not subject to operation or control by any organization, association, or group of persons—the threshold element of the statutory exchange definition. And if such a DEX executes user transactions against pooled liquidity pursuant to a deterministic algorithm, it does not maintain any facility in which the orders of multiple buyers and sellers interact—a structural feature that eliminates potential exchange-like risks, such as discretionary execution control, preferential access, or order-flow intermediation, that the federal securities laws seek to regulate.

B. *Safe Harbor Proposal for Qualifying DEX Apps*

A Qualifying DEX App that allows users to transact in securities should not be subject to exchange registration if it:

- 1) **Is non-custodial.** Users must maintain total, uninterrupted, and independent control of their assets at all times via their self-hosted wallets. The Qualifying DEX App must have no access to or control over users’ private keys or transaction submission, and no ability to access, freeze, reallocate, or otherwise interfere with user assets.⁵⁹ This ensures that the Qualifying DEX App cannot intermediate the transactions it enables, and it structurally distinguishes Qualifying DEX Apps from applications that engage in financial intermediation.
- 2) **Displays pricing and market data based on pre-disclosed, objective, and independently verifiable parameters.** Pricing and market data displayed to users must be generated by software that operates based on pre-disclosed, objective, and independently verifiable parameters, with such data sourced from onchain public data

⁵⁸ Credible neutrality concerns code-granted private permissions or privileges that enable discrimination against particular users or use-cases. Protocol-level fees that are adopted through a broad-based decentralized governance process, applied uniformly to all users interacting with a pool regardless of the interface or route through which they arrive, and transparent onchain, do not constitute “selective fees” and do not defeat credible neutrality. By contrast, authority to impose fees or restrictions targeted at particular users, applications, or routes would be inconsistent with this criterion.

⁵⁹ See Staff Statement, *supra* note 5 (excluding from its scope any provider “holding, having access to, handling, managing, or possessing user funds, securities, or stablecoins”); Broker Safe Harbor Proposal, *supra* note 9 (describing the indicators of non-custodial design).

or independent third-party sources.⁶⁰ This prevents the Qualifying DEX App developer from manipulating price displays to advantage certain transactions.

3) Operates without any central authority, governance body, or developer exercising discretion over trade coordination, pricing, matching, or execution in a manner that advantages particular users, counterparties, or transactions.

Structurally limiting the Qualifying DEX Apps to: (i) providing onchain data and information to users; (ii) converting user-identified transaction parameters into blockchain-legible commands for signature and transmission to a deterministic, publicly verifiable execution layer;⁶¹ and (iii) removing discretion and control over who has access to the Qualifying DEX App, ensures that all users have fair access to Qualifying DEXs and the Qualifying DEX App would not have discretionary authority over trade coordination, pricing, matching, or execution.⁶² This eliminates potential conflicts of interest that arise when an intermediary with control can influence transaction outcomes as well as the ability to determine who has access to the Qualifying DEX.⁶³

4) Limits developer activity to: (i) publishing, developing, and maintaining front-end user interfaces that allow users to interact with Qualifying DEX(s); (ii) implementing technical upgrades, bug fixes, and security patches; and (iii) applying objective, non-discretionary filters to exclude digital assets, provided such filters are based on publicly disclosed, neutral criteria and do not involve subjective investment judgment or qualitative assessments of asset merit (though assessments of fraudulent, malicious, or spam-like characteristics should not constitute assessments of asset merit for this purpose). This ensures that the Qualifying DEX App remains a neutral software tool rather than adopting the functional elements of a traditional exchange, including providing a market place or facilities for bringing together purchasers and sellers of securities or otherwise performing the functions commonly performed by a stock

⁶⁰ This condition tracks the standard set forth in the Staff Statement. *See* Staff Statement, *supra* note 5 (“for purposes of preparing a user’s trading instructions and displaying market data related to potential execution routes, the Covered User Interface only uses software that operates based on pre-disclosed and objective parameters that are independently verifiable”).

⁶¹ As we discussed in note 21, we do not address optimization software, which is outside the scope of the exchange registration requirements and may involve transaction routing, order configuration, or execution parameters. Routing—and whether it entails discretion on the part of a DEX App—is an issue within the scope of the broker-dealer registration regime. The SEC Staff Statement addressed the circumstances in which providing execution routes would not make a Covered User Interface Provider a broker. *See* Staff Statement, *supra* note 5. To the extent that a DEX App provides routing functionality that falls outside of the scope of the Staff Statement, the broker registration regime may be implicated.

⁶² Exceptions should be made for permissions that are required by law, such as sanctioned address screening/blocking or geoblocking certain jurisdictions to prevent users from accessing a DEX App in order to comply with sanctions and other laws. Any such gating must be based on objective and disclosed criteria, and be required for applicable compliance and safeguarding reasons. Jurisdictional gating implemented at the level of a DEX App does not bear on whether the underlying DEX is permissionless; that criterion is assessed at the protocol level.

⁶³ For the avoidance of doubt, this criterion applies only to discretion exercised by a DEX App developer over trade coordination, pricing, matching, or execution. Ordinary base layer infrastructure functions—including validation, block building, transaction ordering and inclusion, and transmission of signed transactions—are network-level infrastructure functions and do not, without more, constitute trade coordination, matching, pricing, or execution by a DEX App.

exchange.⁶⁴ Displaying sortable market data, or permitting users to filter or sort assets based on objective inputs such as liquidity, volume, or volatility, is not a qualitative assessment of asset merit. Nor is the display of third-party risk warnings generated pursuant to publicly disclosed, neutral criteria.

A DEX App would only be eligible for the safe harbor if it meets, on an initial and ongoing basis, all four of the requirements above. As with the safe harbor for Qualifying DEXs, through these requirements, we have sought to preserve and promote the specific features of DEX Apps that make exchange regulation both unnecessary and inappropriate. Requirement 1 (Non-custodial design) ensures that users retain control of their assets at all times and that a Qualifying DEX App cannot intermediate the transactions it enables. Requirement 2 (Pricing and market data based on objective, verifiable parameters) promotes transparency and systemic resilience. Requirement 3 (No discretion over trade coordination, pricing, matching, or execution) and Requirement 4 (Limits on developer activity) promote autonomy, market integrity and fair access.

Traditional exchanges require the involvement of broker-dealers that perform a range of intermediary functions on behalf of customers: broker-dealers receive and hold customer funds and securities and may exercise judgment in handling customer instructions. Customers must trust that the broker-dealer will safeguard their assets, execute orders faithfully, avoid front-running or other self-dealing, and remain solvent. A Qualifying DEX App, on the other hand, enables users to act with agency and execute transactions according to the user's predefined parameters in an automatic, transparent, and deterministic manner.⁶⁵ Accordingly, where these conditions are satisfied, there should be a rebuttable presumption that a Qualifying DEX App is not engaged in exchange activity and consequently not subject to exchange registration under the Exchange Act.⁶⁶

It should be noted that we are proposing a non-exclusive safe harbor, and that DEXs and DEX Apps that do not meet the conditions specified above should not be presumed to be exchanges under the Exchange Act. These conditions are not intended as rigid statutory thresholds, but rather as objective proxies for assessing whether a DEX or DEX App meaningfully eliminates the types of risks that Exchange Act registration regimes are

⁶⁴ The activity limitations in this criterion address only activities that could implicate exchange registration and should not be read as determinative with respect to activities that could trigger broker registration. As we discussed in our Broker Safe Harbor Proposal, engaging in activities such as active solicitation, exercising discretion, taking custody, or otherwise participating in transactions at key points in the chain of distribution may create risks that the broker registration regime is designed to address. *See* Broker Safe Harbor Proposal, *supra* note 9. By contrast, merely aggregating or displaying potential execution routes across DEXs does not itself bring together orders. Consistent with the SEC Staff Statement, providing such information through software that operates pursuant to objective, pre-disclosed, and independently verifiable parameters, and that does not exercise discretion over transaction routing or execution, should not by itself trigger broker registration.

⁶⁵ We do not discuss in this letter why Qualifying DEX Apps should not register as a broker-dealer as we have separately addressed this topic in the Broker Safe Harbor Proposal.

⁶⁶ Given the numerous ways that DEX Apps can be structured and operated, the safe harbor should merely create a rebuttable presumption that where the criteria are met, a Qualifying DEX App is unlikely to be categorized as an exchange. However, where the Commission finds that a DEX App, despite meeting the criteria specified herein, subjects users to intermediary risks that exchange registration would resolve, the Commission should maintain a path to overcome the proposed safe harbor.

designed to address.⁶⁷ Relevant activities that fall outside of the safe harbor should be assessed under the traditional facts-and-circumstances analysis applicable to exchange registration—specifically, whether the DEX or DEX App brings together the orders for securities of multiple buyers and sellers, and uses established, non-discretionary methods (whether by providing a trading facility or by setting rules) under which such orders interact with each other. The purpose of the criteria is to provide clear, administrable benchmarks that enable both the Commission and market participants to evaluate exchange status and distinguish Qualifying DEXs and Qualifying DEX Apps from those that introduce traditional intermediary risks.

We also note that this proposed safe harbor is consistent with pending legislation directing the Commission to engage in rulemaking to clarify the application of the Exchange Act to digital asset activities, as well as with the Commission staff’s recent statement regarding broker-dealer registration of certain user interfaces. Specifically, Section 15H(d) of the Exchange Act, as would be added by the CLARITY Act, requires that the Commission engage in rulemaking to “clarify the circumstances under which a person shall not be subject to this Act by reason of engaging solely in 1 or more of the following activities in relation to the operation of a decentralized finance trading protocol or any component thereof,” including: “(A) Providing a user interface that enables a user to read and access data, (B) Administering, maintaining, or otherwise distributing a decentralized governance system relating to a decentralized finance trading protocol, or a decentralized finance trading protocol, and (C) Administering, maintaining, or otherwise distributing a decentralized finance messaging system or operating or participating in a smart contract-based liquidity pool in a decentralized finance trading protocol.” These activities all fall within the ambit of Qualifying DEXs and Qualifying DEX Apps that are the subject of this proposed safe harbor, and the staff’s recent guidance on user interfaces reflects an analogous recognition that neutral interface software does not, on that basis alone, give rise to registration obligations.⁶⁸

VII. Conclusion

Imposing exchange registration on Qualifying DEXs and Qualifying DEX Apps would not advance the Commission’s investor protection mandate because these systems eliminate—rather than create—the intermediary-related risks that exchange registration is designed to address. Qualifying DEXs operate without discretionary control over the ways orders interact, without conflicts of interest in execution, and without the centralized points of failure that justify regulatory oversight of traditional exchanges. Qualifying DEX Apps, functioning solely as user interfaces, similarly lack the capacity to exercise discretion over trades, or otherwise interpose themselves between users and the underlying protocol in ways that would create intermediary-based risks. Requiring registration would introduce compliance burdens without corresponding investor protection benefits, would chill innovation in a domain delivering greater transparency and efficiency than legacy systems,

⁶⁷ The Commission could also consider providing greater leniency where DEXs or DEX Apps are not engaged in for-profit activity. See Miles Jennings & Brian Quintenz, *Regulate Web3 Apps, Not Protocols Part II: Framework for Regulating Web3 Apps*, a16z crypto (Jan. 11, 2023), <https://tinyurl.com/4c343xj7>.

⁶⁸ See Staff Statement, *supra* note 5.

and would counterproductively reintroduce intermediation into systems designed to function without it. A safe harbor grounded in objective, technology-based criteria would provide regulatory clarity, preserve the Commission's authority to oversee systems that do present traditional risks, and ensure that the United States remains competitive in blockchain innovation.

* * *

We greatly appreciate the opportunity to provide comments on these important matters, and we welcome engagement with the Commission on these issues.

Respectfully,

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