

June 13, 2023

BY ELECTRONIC SUBMISSION

Ms. Vanessa A. Countryman
Secretary, Securities and Exchange Commission
100 F Street NE
Washington, DC 20549-1090

Re: File No. S7-02-22; RIN 3235-AM45; Supplemental Information and Reopening of Comment Period for Amendments Regarding the Definition of “Exchange”

Dear Ms. Countryman:

Andreessen Horowitz (“a16z”) appreciates the decision of the Securities and Exchange Commission (“Commission”) to reopen the comment period on its proposed amendments to Exchange Act Rule 3b-16(a) and related regulations (the “Proposed Rules”),¹ to provide supplemental explanation regarding the potential effects of those proposed amendments on decentralized finance (“DeFi”) systems and protocols, and to offer the public further opportunity to participate in the Commission’s rulemaking process. The supplemental explanation published by the Commission in the “Reopening Release,”² however, makes clear that the Commission intends to apply its regulations to DeFi. In so doing, the Commission is proposing rules that fail to recognize that DeFi systems and protocols operate in ways where “one-size-fits all” regulations do not achieve the goal of creating orderly markets and protecting investors. This is ill-advised from a public policy perspective. Moreover, the Commission’s failure to propose rules that are appropriately tailored to take into account how DeFi systems and protocols operate appears to stem from a lack of information from which to produce informed regulation. This suggests the Commission has not met its obligations under the Administrative Procedure Act (“APA”) or Securities Exchange Act of 1934 (“Exchange Act”). Lastly, we are concerned that, as proposed, the rules may fail due to serious constitutional concerns.

As this letter details, we believe the Commission should resolve shortcomings in the Proposed Rules that relate to DeFi by excluding DeFi from the Proposed Rules so that it may, consistent with the APA, gather sufficient information to allow it to develop a more suitable regulatory framework in this area. a16z stands ready and willing to help the Commission toward putting in place a proposal that more accurately reflects the economic and technological realities of DeFi. We look forward to engagement with the Commission and the Staff in working toward these objectives.

¹ See *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. 15,496 (Mar. 18, 2022) (“Proposing Release”).

² *Supplemental Information and Reopening of Comment Period for Amendment Regarding the Definition of “Exchange,”* 88 Fed. Reg. 29,448 (May 5, 2023) (“Reopening Release”).

BACKGROUND

A. The Commission Proposes To Expand The Definition Of “Exchange” Without Considering The Consequences For DeFi Systems And Protocols

Published by the Commission on March 18, 2022, the Proposed Rules, amongst other changes, would revise Exchange Act Rule 3b-16(a)³ to require systems that “offer the use of non-firm trading interest and protocols to bring together buyers and sellers of securities” to register as national securities exchanges or operate as registered broker-dealers and comply with Regulation ATS.⁴ In its initial comments to the Commission, a16z expressed its concern that the Proposed Rules, while making no specific mention of crypto assets,⁵ could be interpreted as applying to the DeFi systems that allow users to exchange those assets.⁶ a16z described how Exchange Act Rule 3b-16(a) and Regulation ATS were intended to regulate traditional, centralized securities exchanges while providing an alternative framework tailored to then-fledgling technologies—electronic communication networks and alternative trading systems (“ATSs”).⁷ This approach was intended to further the Commission’s investor-protection goals while promoting innovation in the financial system.⁸ Given the Commission’s historical approach to the regulation of novel technologies and systems, a16z observed that the Proposed Rules were most naturally read to exclude DeFi protocols and systems.⁹ After all, in promulgating the Proposed Rules, the Commission did not mention DeFi or reference crypto assets a single time.

a16z further explained that DeFi systems would face potentially insuperable practical difficulties and substantial costs in attempting to comply with the Proposed Rules.¹⁰ And a16z observed that the Commission’s failure to analyze these inevitable consequences of the Proposed Rules—as well as the risk that the Proposed Rules exceeded the Commission’s statutory authority and implicated constitutional rights—raised serious concerns under the APA.¹¹ Multiple comments submitted by market participants, academic institutions, nonprofit organizations, and industry experts expressed similar concerns.¹²

³ 17 C.F.R. § 240.3b-16(a).

⁴ See Proposing Release at 15,496; *id.* at 15,646.

⁵ For clarity, this letter uses terminology consistent with the definitions provided by the Commission in the Reopening Release. The term “digital assets” refers to “an asset that is issued and/or transferred using distributed ledger or blockchain technology,” and “crypto assets” are “digital assets [that] rely on cryptographic protocols.” See Reopening Release at 29,450 n.26.

⁶ Letter from A.H. Capital Management, LLC, dated Apr. 18, 2022 (“a16z Letter”) at 1.

⁷ *Id.* at 5-6, 9-10.

⁸ *Id.* at 9.

⁹ *Id.* at 9-10.

¹⁰ *Id.* at 7, 14-15.

¹¹ *Id.* at 17-26.

¹² See, e.g., Letter from Blockchain Association and DeFi Education Fund, dated June 13, 2022, at 5; Letter from Global Digital Asset & Cryptocurrency Association, dated Apr. 18, 2022, at 11; Letter from Andrew Vollmer, Mercatus Center at George Mason University, dated Mar. 11, 2022, at 2.

B. The Reopening Release Confirms That The Commission Did Not Sufficiently Contemplate The Impact Of The Proposed Rules On DeFi

One year later, the Commission responded by publishing the Reopening Release. The Reopening Release notes that the Commission had received “requests for information about the application of the Proposed Rules to trading systems for crypto asset securities and trading systems that use distributed ledger or blockchain technology (broadly referred to as ‘DLT’), including systems commenters characterize as decentralized finance or ‘DeFi.’”¹³ The purpose of the Reopening Release appears to be threefold. First, the Commission seeks to provide more information “regarding the potential effects of the [Proposed Rules] on trading systems for crypto asset securities and trading systems using DLT, including systems commenters characterize as various forms of ‘DeFi.’”¹⁴ Second, the Commission attempts to supplement its original economic analysis “by providing additional analysis on the estimated impact of the Proposed Rules on trading systems for crypto asset securities and those using DLT, which include various so-called ‘DeFi’ trading systems.”¹⁵ And third, the Commission requests “further information and public comment on aspects of the Proposed Rules.”¹⁶

The Reopening Release suggests that the Commission had always planned to extend the existing regulatory framework to crypto assets and DeFi systems and protocols. The Commission’s lack of clear disclosure of the purpose and effect of the new proposed regulatory regime is disconcerting. Market participants already face persistent uncertainty about their legal obligations relating to crypto assets;¹⁷ any further ambiguity creates additional openings for misinterpretations of market participants’ obligations under the Commission’s regulations. The Commission’s reluctance to acknowledge the difficulties and ambiguities in application of the requirements of the Exchange Act to crypto assets frustrates constructive engagement on these issues.¹⁸

In the Reopening Release, the Commission essentially asserts that there is no uncertainty surrounding whether any given crypto asset can be regulated as a security, that the vast majority of DeFi systems allow trading in securities, and that DeFi systems can comply with the existing

¹³ Reopening Release at 29,449.

¹⁴ *Id.*

¹⁵ *Id.*

¹⁶ *Id.*

¹⁷ See al6z Letter at 15-16; Comm’r Hester M. Peirce, *Kraken Down: Statement on SEC v. Payward Ventures, Inc., et al.*, U.S. SEC. & EXCH. COMM’N (Feb. 9, 2023), <https://www.sec.gov/news/statement/peirce-statement-kraken-020923>; Joel Khalili, *Binance and Coinbase Have Been Sucked Into a Regulatory Turf War*, Wired (Apr. 6, 2023) <https://www.wired.com/story/binance-coinbase-regulatory-turf-war/> (Commissioner Peirce stating that “[w]e [the Commission] haven’t done our job as a regulator. We have not provided a road to compliance, and instead have been bringing enforcement actions after the fact . . . the strategy is one of jurisdictional maximalization . . . [a]nd one way to plant a flag is to bring enforcement action”).

¹⁸ See Petition for Writ of Mandamus at 8-15, *In re Coinbase, Inc.*, No. 23 1779 (3d Cir. Apr. 24, 2023).

exchange regulatory framework.¹⁹ None of these assumptions is grounded in data or supported by reasoned analysis.²⁰

C. The Commission’s Attempts To Regulate DeFi Are Premature

The application of the Proposed Rules to DeFi systems and protocols is premised on the assertion that these systems are trading crypto assets that are securities, a broad assertion (i.e., that most crypto assets are securities) that has not been adopted by any court and fails to acknowledge the considerable debate about this view. The Commission states that “[b]ecause it is *unlikely* that systems [referring to DeFi systems] trading a large number of different crypto assets are not trading any crypto assets that are securities, these systems likely meet the current criteria of Exchange Act Rule 3b-16(a) and are subject to the exchange regulatory framework.”²¹

This Commission offers no evidence to support this statement. Rather than analyze the circumstances under which a crypto asset may be considered a security, the Commission simply cites the Supreme Court’s decision in *SEC v. W.J. Howey Co.*,²² which provided broad guidance as to the definition of “investment contract” under the federal securities laws.²³ The Commission fails to recognize the fact-intensive determination of whether a crypto asset is a security under *Howey*. Moreover, the Commission asserts, without support, that DeFi systems and protocols through which users can engage in peer-to-peer *secondary* transactions in crypto assets are likely trading crypto asset securities. But as many observers have noted, no caselaw supports the application of *Howey* to secondary transactions in crypto assets. In fact, “[o]f the many federal appellate and Supreme Court decisions in which the *Howey* analysis is applied, none directly dealt with secondary transactions in the objects of investment contracts by the original buyer.”²⁴ Applying the *Howey* test to crypto trades is problematic at best given that “[e]very item on the enumerated list of instruments that comprise the definition of a security under federal securities laws reflects the presence of a *legal relationship* established between an identifiable legal entity that acts as the *issuer* of the security and the *owners* of that security”—a legal relationship that the Commission, without explaining its thinking, seems to be inferring among the an issuer and parties to a secondary transaction.²⁵ The Commission’s statement also fails to acknowledge the widespread belief (both by the vast majority of the crypto industry as well as members of Congress) that the limited and now-outdated guidance that the Commission

¹⁹ See Reopening Release at 29,450-29,451; *id.* at 29,454.

²⁰ See *infra* Section I.

²¹ Reopening Release at 29,450-29,451 (emphasis added).

²² 328 U.S. 293 (1946).

²³ Reopening Release at 29,450.

²⁴ Lewis Rinaudo Cohen, Gregory Strong, Freeman Lewin, & Sarah Chen, Discussion Draft, *The Ineluctable Modality of Securities Law: Why Fungible Crypto Assets Are Not Securities* at 58, DLx Law (Nov. 10, 2022), <https://dlxlaw.com/wp-content/uploads/2022/11/The-Ineluctable-Modality-of-Securities-Law-DLx-Law-Discussion-Draft-Nov.-10-2022.pdf>.

²⁵ See Amicus Brief of Paradigm Operations LP at 10, *SEC v. Ripple Labs, Inc.*, No. 1:20-CV-10832 (S.D.N.Y. Nov. 11, 2022), available at <https://policy.paradigm.xyz/assets/writing/701-1%20Exhibit%20A%20Proposed%20Brief.pdf>.

Staff has issued on determining when a crypto asset is a security is not sufficient²⁶—especially given that this guidance does not reflect the authoritative word of the Commission itself.²⁷ Nor has the Commission heeded (repeated) calls from the industry and Congress for additional guidance on making this determination.²⁸

As a result of the foregoing uncertainty and the lack of a clear workable regulatory framework for crypto assets, al6z firmly believes that the potential applicability of the Proposed Rules to DeFi is premature and should be considered, if at all, only after stakeholders receive clear guidance on when a crypto asset is a security, and therefore subject to Commission jurisdiction, in the first place, and only after a workable regulatory framework is adopted for *centralized* crypto asset trading platforms.

Nevertheless, the remainder of this comment letter focuses on the issues presented by the Commission’s attempt to apply the Proposed Rules to DeFi systems and protocols and the Commission’s obligations under the APA, Exchange Act, and Constitution.

D. Understanding DeFi Systems Is Crucial To The Commission’s Rulemaking Process

The Reopening Release, which repeatedly characterizes DeFi systems as centralized,²⁹ suggests a misunderstanding of the technology underlying those systems. For example, the Commission states that DeFi systems can comply with Exchange Act Rule 3b-16 by designating a person or organization as responsible for compliance.³⁰ Specifically, the Commission states that DeFi systems typically have “a single organization [that] constitutes, maintains, or provides

²⁶ See Framework for “Investment Contract” Analysis of Digital Assets (April 3, 2019), <https://www.sec.gov/news/public-statement/statement-framework-investment-contract-analysis-digital-assets> (the “Framework”). In addition, the crypto market has dramatically changed since the Framework – now over four years old – was issued. See *The Crypto Report: Our Analysts On The State Of Cryptocurrency*, MORNING CONSULT (July 2022), https://go.morningconsult.com/rs/850-TAA-511/images/220630_State_of_Cryptocurrency_Report.pdf (describing growth in crypto asset ownership, diversity of owners, and range of motivations for ownership).

²⁷ The Framework notes that it represents the views of the Strategic Hub for Innovation and Financial Technology (“FinHub,” the “Staff,” or “we”) of the SEC; and is not a rule, regulation, or statement of the Commission, and the Commission has neither approved nor disapproved its contents. *Id.*

²⁸ For example, on July 21, 2022, Coinbase filed a petition for rulemaking with the Commission where it asked the Commission to provide clarity on, among other things, which crypto assets are securities subject to the federal securities laws. See Coinbase, *Petition for Rulemaking – Digital Asset Securities Regulation* (July 21, 2022) <https://www.sec.gov/rules/petitions/2022/petn4-789.pdf> (“Coinbase Rulemaking Petition”) When the Commission did not respond to Coinbase’s petition, Coinbase brought an action against the Commission seeking a Court ordered response. See Nikhilesh De, *Coinbase Asks U.S. Court to Force SEC Response to 2022 Rulemaking Petition*, COINDESK (Apr. 25, 2023) <https://www.coindesk.com/policy/2023/04/25/coinbase-asks-for-court-to-force-sec-response-to-2022-rulemaking-petition/>. The Third Circuit recently ordered the Commission to submit responses to several questions about Coinbase’s petition within seven days. See Order, *In re Coinbase, Inc.*, Case No. 23-1779 (3d Cir. June 6, 2023).

²⁹ See, e.g., Reopening Release at 29,454 (“The Commission understands that, typically, including for so-called ‘DeFi’ trading systems, a single organization constitutes, maintains, or provides the market place”); *id.* at 29,456 (“Often, a single organization constitutes, maintains, or provides a DLT-based market place”).

³⁰ *Id.* at 29,455.

the market place or facilities for bringing together buyers and sellers of securities. . . .”³¹ In this way, the Commission suggests that DeFi systems’ use of smart contracts does not mean that there is an “absence of human activity or a machine (or code) controlled by humans.”³² However, this characterization of DeFi systems is incorrect and conflates DeFi protocols with DeFi applications—the user interfaces run by companies that, unlike autonomous systems, are a definable group.

All software consists of a front end and a back end.³³ The front end refers to the website or application that users interact with (i.e., the user interface), which makes “calls” to the back end where the code behind the website or application resides.³⁴ In the DeFi context, the back end is the DeFi protocol where the blockchains, smart contracts, and networks reside.³⁵ This back end protocol is used to self-execute transactions without a central operator.

In addition to being decentralized and autonomous, most DeFi protocols (including all of the most popular DeFi protocols) cannot be turned off,³⁶ and there is no way to make wholesale changes or modify such protocols.³⁷ The immutability of these protocols is fundamental to their security. If the smart contracts underlying these protocols could be controlled or modified by anyone, users would be exposed to risks that such a person could steal their funds when using such protocols.

The front end in DeFi refers to the applications that provide user-friendly interfaces allowing users to connect to their wallets and interact with the back-end protocol.³⁸ These applications write transaction messages that the user can send to the network to execute transactions on the back-end protocol.³⁹ While applications are not required to interact with a DeFi protocol, they provide a convenient way for ordinary users without the ability to code to interact with protocols.⁴⁰

Once a protocol is established, anyone can build a front-end application that users can use to interact with a protocol so long as they have the technical capability to create a website or other application.⁴¹ No permission or authorization from the developer of the protocol is

³¹ *Id.* at 29,454.

³² *Id.*

³³ DeFi Education Fund, *What’s the Difference Between a Front End and a DeFi Protocol?* (January 2023) https://www.defieducationfund.org/files/ugd/e53159_6d1b6d3864e34a45bb35bff8f144c4e7.pdf.

³⁴ *Id.*

³⁵ *Id.*

³⁶ *Id.*

³⁷ For example, the Uniswap protocol is immutable, meaning that it cannot be changed or otherwise upgraded. This means that no party has the capability to pause a contract, reverse trade execution, or otherwise change the behavior of the protocol in any way. See *The Uniswap Protocol*, available at <https://docs.uniswap.org/concepts/uniswap-protocol>.

³⁸ DeFi Education Fund, *What’s the Difference Between a Front End and a DeFi Protocol?* (January 2023) https://www.defieducationfund.org/files/ugd/e53159_6d1b6d3864e34a45bb35bff8f144c4e7.pdf.

³⁹ *Id.*

⁴⁰ *Id.*

⁴¹ *Id.*

required. This feature of protocols, which is commonly referred to as “permissionlessness,” is also critical to the functionality and value proposition of DeFi. The autonomous and decentralized nature of protocols that is enabled by blockchain technology means that such protocols function like Internet infrastructure, similar to the protocols of web1, including SMTP (email) and HTTP (websites). If DeFi protocols were permissioned, their utility would be substantially reduced in the same manner that permissioned SMTP and HTTP protocols would have hindered the utility of the Internet during its first era.

Put simply, a DeFi *protocol* is the back-end, decentralized, code-based software used to self-execute transactions, while a DeFi *application* is the front-end user interface that businesses provide to users allowing them to access back-end protocols. Thus, the Commission’s characterization of DeFi systems as centralized wrongly conflates DeFi protocols with DeFi applications and represents a core misunderstanding of the technology underlying DeFi systems. This in turn results in the Commission proposing to apply an ill-fitting regulatory regime for which compliance is impossible and that threatens to effectively ban DeFi protocols and systems.

E. The Commission’s Proposed Rules Amount To A Ban On DeFi Protocols

To the extent the Commission genuinely believes that DeFi systems and protocols can comply with the Proposed Rules, it is wrong. The information-gathering, registration, and reporting requirements cannot be fulfilled by many decentralized systems where users engage in peer-to-peer transactions facilitated by smart contracts rather than a traditional intermediary.⁴²

Nowhere does the Commission meaningfully engage with the reality that truly decentralized systems cannot comply with exchange regulatory requirements.⁴³ For example, decentralized systems cannot comply with the listing and delisting requirements applicable to centralized exchanges because there is no central operator to establish, enforce, and carry out those rules, requirements, and procedures. Additionally, the reporting requirements that apply to centralized exchanges are not relevant in the DeFi context because the information that would be reported is freely available to all Internet users via the blockchain and not merely to a privileged group of persons. Likewise, because the details of every transaction are publicly available on the blockchain, the need for conflict of interest disclosure is mitigated in the DeFi context compared to centralized exchanges where principal-agent problems exist.

Instead of engaging with the reality that compliance is impossible for decentralized systems, the Commission simply assumes that, because many systems that currently comply “differ with respect to structure, participants, and established, non-discretionary methods and apply many assorted technologies to bring together buyers and sellers of various types of securities,” DeFi systems and protocols will be able to comply too.⁴⁴ The Commission catalogs some of the costs that DeFi systems and protocols would have to incur in order to attempt

⁴² See *infra* Section I.B.

⁴³ See *supra* note 37 and accompanying text (discussing Uniswap protocol); see also Hamed Taherdoost, *Smart Contracts in Blockchain Technology: A Critical Review*, 14 INFORMATION No. 117, at 9 (2023) (“[B]lockchain-based smart contracts provide an innovative technical solution to the issue of data tampering by supplying an immutable record of experimental history and serving as trusted administrators.”).

⁴⁴ Reopening Release at 29,457.

compliance, and even concedes that the Proposed Rules will “significantly reduce the extent to which these systems operate in accordance with ‘DeFi’ principles.”⁴⁵ Yet the Commission “disagrees that compliance would be ‘infeasible’” for these systems,⁴⁶ resisting the inevitable conclusion, raised by commenters, that the Proposed Rules will “operate as a ban.”⁴⁷

As outlined above, the Commission’s failure to distinguish between DeFi protocols and applications is a significant failure of the Proposed Rules. As noted, smart contracts for the protocol are generally immutable. There is no way for any person to control what assets are traded using the protocol or what applications get built by third parties to facilitate use of the protocol. Protocols have no way of complying with any restrictions or obligations the Commission might seek to apply to it if the Proposed Rules went into effect.

For instance, if the Commission wishes to prohibit a protocol from exchanging certain crypto assets it believes may be securities, such prohibition would have no way of being encoded into a protocol’s smart contracts due to their immutability. Further, even if such smart contracts could be modified, there would be no way to articulate in the smart contract code the technical specifications that objectively meet a securities classification. Such objective classification criteria are not possible because as noted above, making this determination requires a fact-intensive analysis. The determination of whether a transaction in a crypto asset is a securities transaction is subjective and requires an analysis of facts and laws. Attempting to embed second-order, subjective analyses into smart contracts is an exercise in futility. Just as with SMTP, there is no way for a decentralized and autonomous protocol like a decentralized exchange to perform a subjective analysis without adding human intermediaries, thereby negating a protocol’s decentralization and autonomy. As a result, the application of such regulations to a decentralized exchange like the Uniswap protocol would effectively ban such protocols, thus outlawing a burgeoning category of technological innovation in its entirety and jeopardizing the viability of all of web3.

F. The Commission Needs to Propose A Workable Regulatory Framework To Ensure That It Is Not Acting Arbitrarily

By clarifying that the Commission intends to apply the existing regulatory framework to DeFi protocols and systems, the Reopening Release strongly suggests that the Commission may be prepared to adopt a regulatory approach that does not protect investors or promote competition while harnessing the benefits of DeFi. The Commission’s cursory review of alternative regulatory approaches shows that the Commission appears to be prepared to adopt the Proposed Rules prior to establishing a workable framework for DeFi protocols and systems; this is not good public policy. The Commission’s obligations under the APA require the Commission to consider serious regulatory alternatives, as it has when tasked with responding to past technological innovations.

⁴⁵ *Id.* at 29,482.

⁴⁶ *Id.* at 29,486.

⁴⁷ *Id.* at 29,485 (quoting Letter from DeFi Education Fund, dated Apr. 18, 2022 (“DeFi Education Fund Letter”) at 8).

For the reasons summarized here, and described in further detail below, we believe the Commission’s proposed regulatory approach is fundamentally flawed.

The Commission’s insistence on applying the existing regulatory framework to DeFi protocols and systems will likely face judicial scrutiny. The Commission exceeds its authority when it promulgates rules that lack sufficient empirical support or underplay the rules’ inevitable costs. The Commission’s effort also raises constitutional concerns. Each of these fundamental flaws of the Proposed Rules bring into stark relief the Commission’s failure to consider reasonable alternatives to its effective ban.

Accordingly, the Commission should expressly exclude DeFi protocols and systems from the Proposed Rules and consider further how to best regulate DeFi. The public deserves thoughtful and informed regulation, not a hastily adopted and inadequately considered extension of an ill-fitting, and often inoperable, framework to novel technologies.

DISCUSSION

I. THE COMMISSION UNREASONABLY DISMISSES COMMENTERS’ CONCERNS AND PROPOSES RULES THAT WOULD EFFECTIVELY BAN DEFI PROTOCOLS AND SYSTEMS

The central tenet of lawful agency action is that “[f]ederal administrative agencies” such as the Commission “are required to engage in ‘reasoned decisionmaking.’”⁴⁸ “Not only must an agency’s decreed result be within the scope of its lawful authority, but the process by which it reaches that result must be logical and rational.”⁴⁹ An agency’s decision meets this standard only when it is “based on a consideration of the relevant factors.”⁵⁰ Agency action is arbitrary and capricious, and must be set aside under the APA, if the agency “has relied on factors which Congress has not intended it to consider, entirely failed to consider an important aspect of the problem, offered an explanation for its decision that runs counter to the evidence before the agency, or is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.”⁵¹

The Reopening Release does not demonstrate that the Proposed Rules are “the product of reasoned decision-making.”⁵² Previously, a16z, as did many other stakeholders, informed the Commission why applying a decades-old regulatory framework to DeFi systems and protocols would be unworkable.⁵³ The infeasibility of compliance, as one research and advocacy group told the Commission, means that the Proposed Rules would unreasonably “operate as a ban” on these systems.⁵⁴ The Commission dismissed these feasibility concerns and has denied, in a conclusory fashion, that the Proposed Rules would ban DeFi protocols and systems. It reached this conclusion only by making inaccurate assumptions about these systems, the technologies on

⁴⁸ *Michigan v. EPA*, 576 U.S. 743, 750 (2015) (quotation omitted).

⁴⁹ *Id.*

⁵⁰ *Motor Vehicle Mfrs. Ass’n of U.S., Inc. v. State Farm Mut. Auto Ins. Co.*, 463 U.S. 29, 42 (1983).

⁵¹ *Id.* at 43.

⁵² *Id.* at 52.

⁵³ a16z Letter at 14-15.

⁵⁴ Reopening Release at 29,485 (quoting DeFi Education Fund Letter at 8).

which they are built, and the roles of various actors in relation to them. These analytical flaws underscore that the Proposed Rules are not a “logical and rational” result of a proper rulemaking process.⁵⁵

A. The Commission Mischaracterizes DeFi Protocols And Systems By Assuming They Are Not Truly Decentralized

The Commission lacks critical information necessary to inform its regulatory decisionmaking. For example, the Commission lacks even ballpark data about the market for crypto assets,⁵⁶ an understanding of the entities in the crypto asset market to which the Proposed Rules would apply,⁵⁷ or a vision of the operational changes that certain systems would have to undertake in order to come into compliance.⁵⁸ This is not how regulation should occur under the requirements of the APA. Despite the Commission’s admitted lack of information, the Commission nonetheless bases its justification of the Proposed Rules on deeply mistaken assumptions about DeFi systems and how they might comply.

Central to the Commission’s analysis is its view that truly decentralized systems do not exist. Previewed in public comments,⁵⁹ this assumption pervades the Reopening Release. The Reopening Release unfailingly refers to “DeFi” in quotes, frequently following the label “so-called,” making clear that the Commission does not take seriously the possibility that its existing regulatory approach is inapt. This skepticism is reflected in the Commission’s unsupported assertion that DeFi systems “typically” rely on “a single organization” or an identifiable “group of persons” that “constitutes, maintains, or provides the market place or facilities for bringing together buyers and sellers.”⁶⁰

The Commission’s characterization of DeFi systems and protocols as centralized trading platforms by another name is demonstrably false. Traditional exchanges are necessarily centralized because the types of transactions that they facilitate have historically required the assistance of a trusted intermediary.⁶¹ The existing regulatory framework has therefore been designed to accommodate—and to keep in line—systems that rely on central intermediaries.⁶² This is reflected in the Commission’s principal example of the application of the Exchange Act to a “group of persons” operating an exchange: a group of “closely connected corporate affiliates” that together maintained “control over access to exchange facilities.”⁶³ But this does not describe DeFi systems or protocols. As a16z and other commenters have explained, DeFi

⁵⁵ *Michigan*, 576 U.S. at 750.

⁵⁶ See Reopening Release, 29,470-29,471.

⁵⁷ *Id.* at 29,474

⁵⁸ *Id.* at 29,483-29,484.

⁵⁹ See Dave Michaels & Paul Kiernan, *Crypto’s ‘DeFi’ Projects Aren’t Immune to Regulation*, *SEC’s Gensler Says*, WALL ST. J. (Aug. 19, 2021), <https://www.wsj.com/articles/cryptos-defi-projects-arent-immune-to-regulation-secs-gensler-says-11629365401>.

⁶⁰ Reopening Release at 29,454; see also *id.* at 29,455-29,456.

⁶¹ See Igor Makarov & Antoinette Schoar, *Cryptocurrencies and Decentralized Finance (DeFi)*, BROOKINGS PAPERS ON ECON. ACTIVITY 141, 145-146 (Spring 2022).

⁶² See a16z Letter at 9-10.

⁶³ *Intercontinental Exch., Inc. v. SEC*, 23 F.4th 1013, 1023-1025 (D.C. Cir. 2022).

systems allow users to transact with one another on a peer-to-peer basis rather than through an intermediary.⁶⁴ Decentralization is no empty promise—it is a profound innovation with proven benefits over the traditional financial system and the potential to power the Internet of the future.⁶⁵ The Commission’s assumption that DeFi systems and protocols are not, in fact, as decentralized as they claim fatally undermines its analysis.

Perhaps due to this mistaken assumption, the Commission unreasonably asserts that the purposes of the existing regulatory framework would be served by extending it to DeFi protocols and systems. The Commission leans on the truism that “[t]he investor protection, fair and orderly markets, transparency, and oversight benefits of the federal securities laws are just as relevant to a system that uses DLT ... as to any other system that meets the criteria under the exchange definition.”⁶⁶ But while these goals may be served by applying the existing regulatory framework to traditional, centralized systems, they are not furthered by extending this framework to decentralized systems under the Proposed Rules. As a16z has previously explained in detail, Exchange Act Rule 3b-16 and Regulation ATS are intended to bolster market integrity by regulating traditional intermediaries. Compliance with Regulation ATS—the path the Commission assumes most DeFi systems would attempt to pursue⁶⁷—requires the system operator to register as a broker-dealer, maintain membership in a self-regulatory organization (“SRO”), file initial reports describing their operations, keep the Commission abreast of any operational updates, implement increased transparency for significant systems that display orders, and adopt standards to ensure fair access.⁶⁸ An ATS is subject to rules that are aimed at regulating financial intermediaries, including rules related to net capital, customer protection, risk management, records maintenance, communications with the public, and conflicts of interest.⁶⁹ These rules, and the regulatory framework of which they form a key element, are not effective when applied to disintermediated DeFi systems.

B. The Commission’s Proposed Approach For These Protocols And Systems To Comply Is Not Workable And Demonstrates A Misunderstanding Of The Technology

As part of the Commission’s mischaracterization of DeFi systems as centralized, it erroneously identifies persons that may operate a DeFi system or protocol and could therefore comply with the Proposed Rules. Specifically, the Commission incorrectly cites the providers of the DeFi application user interface, developers of automated market makers and other DLT code, decentralized autonomous organizations (“DAOs”), validators or miners, and issuers or holders of governance tokens or other crypto assets for DeFi systems as the proposed centralized person or group of persons that operates a DeFi protocol.⁷⁰ In doing so, the Commission conflates the

⁶⁴ a16z Letter at 8-9.

⁶⁵ *Id.*; see also Chris Dixon, *Why Web3 Matters*, A16Z (Oct. 7, 2021), <https://future.a16z.com/why-web3-matters/>.

⁶⁶ Reopening Release at 29,456-29,457.

⁶⁷ *Id.* at 29,466.

⁶⁸ a16z Letter at 9-10 (citing *Regulation of Exchanges and Alternative Trading Systems*, 63 Fed. Reg. 70,844 (Dec. 22, 1998)).

⁶⁹ *Id.* (citing 17 C.F.R. §§ 240.15c3-1, 240.15c3-3; FINRA Rules 1012, 2150, 2210, 4330, 5210, 6110).

⁷⁰ Reopening Release at 29,455-29,456.

DeFi *protocol* and the DeFi *application*, and the persons involved in each. This is a profound category error by the Commission, and any rulemaking resting on this seriously wrong assumption will be subject to judicial vacatur under the APA.

As explained above, a DeFi protocol is the series of code where the blockchains, smart contracts, and networks reside, making up the back end of DeFi systems where transactions self-execute without intermediation or facilitation by a central operator. Because users without the ability to code cannot easily interact with code-based software like DeFi protocols, DeFi applications provide a convenient user interface allowing users to access and use DeFi protocols in the same way that Internet websites allow ordinary users to access the complex communications protocols underlying the Internet. Thus, by failing to distinguish between DeFi protocols and DeFi applications, the Commission has created an unworkable approach that seeks to bring the decentralized, autonomous series of code making up the back end of DeFi systems within the regulatory frameworks for national securities exchanges and ATSS, even though there is no human being to register or otherwise be responsible for regulatory compliance. This conflation demonstrates a fundamental misunderstanding of the technology underlying DeFi systems.

The Commission's proposed standard is also not workable for the highly decentralized participants that use DeFi protocols, which the Commission acknowledges in its cost-benefit analysis. For example, the Commission explains its belief that some systems will have to significantly alter their operations in order to comply with the exchange regulatory framework.⁷¹ In particular, the Commission predicts that the more a DeFi system makes "extensive use of [DLT]"⁷² or technology less "similar to technology that is used in traditional financial markets,"⁷³ the higher compliance costs will be for those DeFi systems. To lower compliance costs, the Commission suggests that DeFi systems could "make less extensive use of these novel technologies," even if this "significantly reduce[s] the extent to which these systems operate in accordance with 'DeFi' principles."⁷⁴ In this way, the Commission seeks to lower compliance costs by quashing innovation and forcing centralization of decentralized, autonomous DeFi systems.⁷⁵ As a result, the Commission is suggesting that DeFi systems subject users to greater risks (all the risks associated with traditional centralized exchanges) rather than utilize a technology that can obviate those risks. This is illogical.

The Commission's explanation that DeFi systems could reasonably bear the compliance costs associated with the Proposed Rules only by making less extensive use of decentralized DeFi technology effectively amounts to a ban on the use of blockchain technology. The Proposed Rules force DeFi systems to centralize (thereby sacrificing all of the advantages of

⁷¹ See *id.* at 29,482-29,486.

⁷² *Id.* at 29,485.

⁷³ *Id.* at 29,486.

⁷⁴ *Id.*

⁷⁵ See Comm'r Hester M. Peirce, *Rendering Innovation Kaput: Statement on Amending the Definition of Exchange*, U.S. Sec. & Exch. Comm'n (Apr. 14, 2023), <https://www.sec.gov/news/statement/peirce-rendering-innovation-2023-04-12>.

decentralized systems) and be regulated by a regime that makes sense only as applied to centralized systems.

Finally, the Commission suggests that validators of transactions may be required to comply with Rule 3b-16, as amended, another suggestion which demonstrates the Commission’s misunderstanding of DeFi systems and protocols.⁷⁶ Validators are the participants on the blockchain responsible for maintaining the security of the network by verifying transactions and adding them to the blockchain.⁷⁷ This verification involves confirming that all transactions are valid and conform to the network’s rules and ensuring that the sender has sufficient funds to complete the transaction,⁷⁸ services which validators perform for a fee.⁷⁹ Validators simply do not have information about the underlying purpose of the transaction and are not positioned to assess the details of the underlying transaction, what jurisdiction the transaction is being initiated from, and what regulatory constraints might apply. As a result, it is impossible for validators to comply with a regulatory framework for exchanges. Requiring validators to do so would not merely incentivize some validators to “choose to cease processing transactions of a blockchain”⁸⁰—it raises the specter of whether the act of validation is unlawful. As a result, the Proposed Rules would not just act to ban certain DeFi protocols, they could seriously disrupt the use of most blockchains, including Ethereum, the largest and most used programmatic blockchain in existence. Requiring validators to comply with the exchange regulatory framework is illogical and would be akin to requiring Internet Service Providers (“ISPs”) to comply with the regulatory framework for exchanges simply because users can execute securities transactions using the Internet’s underlying communication protocols. These possible consequences underscore the need for the Commission to acquire additional understanding of DeFi systems and protocols before anything like the Proposed Rules should be applied to DeFi.

C. The Commission’s Approach To DeFi Fails To Provide Notice To Market Participants As To Which Registration Obligations May Apply Under The Proposed Rules

The vast uncertainty surrounding which actors may be considered a “group of persons” under the Commission’s vague description of the term fails to put market participants on notice regarding whether they are required to register under Rule 3b-16. This uncertainty is demonstrated in the Commission’s caveat—repeated more than a dozen times throughout the Reopening Release—that determining which DeFi market participants may be required to

⁷⁶ The Commission provides that a “group of persons,” including “the provider(s) of the DeFi application or user interface, developers of AMMs or other DLT code, [DAOs], validators or miners, and issuers or holders of governance or other tokens” can “constitute[], maintain[], or provide[] a DLT-based market place or facilities for bringing together buyers and sellers of securities or perform[] with respect to securities the functions commonly performed by a stock exchange.” Reopening Release at 29,455-29,456 (emphasis added).

⁷⁷ Linda Ornes-Lerma, *What Is a Blockchain Validator* (Apr. 18, 2023) <https://www.ledger.com/academy/what-is-a-blockchain-validator>.

⁷⁸ *Id.*

⁷⁹ *Id.*

⁸⁰ Reopening Release at 29,484.

register as an exchange under the amended rule will depend on “the facts and circumstances.”⁸¹ In addition, the Commission states that the arrangement of a “group of persons” can be “formal or informal” and that “acting in concert” or “exercising control” over different functions of a market place would be “factor[s] to consider” in determining whether registration is required but does not provide meaningful guidance on how to evaluate the different “facts and circumstances” where these parties are not organized in any meaningful way.⁸²

The Commission suggests that Rule 3b-16, as amended, could reach as far as persons who have no knowledge of the purported exchange activity being performed: “[t]his could be the case even if the software developer’s code is subsequently adopted and implemented into a market place or facilities for securities by an unrelated person.”⁸³ Where a software developer creates and deploys code that is used by a third party without the developer’s knowledge, the developer would not be on notice and would have no way of knowing that they need to register pursuant to the rule. Beyond this lack of notice, even where a developer creates and deploys code, it does not necessarily exercise control over the activities performed by smart contracts in the code after implementation that would enable the developer to exercise control over the code. Thus, it appears that there is no way to definitively rule out any individual as engaging in exchange activity where the Commission determines that an exchange exists.⁸⁴ Not only do the Proposed Rules fail to give adequate notice to market participants to whom registration requirements might apply, but the Commission’s efforts to subject software developers to the exchange regulatory framework merely because they develop the code for the underlying protocols represents a restriction on those developers’ First Amendment rights to free speech and free expression.⁸⁵ Taken together, these considerations illustrate that the Proposed Rules are part of the Commission’s broader effort to ground its approach to regulating crypto assets in its inconsistent and changing views on how the federal securities laws apply to blockchain technology.

D. The Commission’s Attempt To Effectively Ban These Protocols And Systems and Blockchain Technology More Broadly Is Inconsistent With Its Historical Approach To Innovative Products

The Commission’s approach to DeFi systems and protocols in the Proposed Rules may fail under the APA because it is inconsistent with its approach to innovative technologies in the past and therefore subject to attack as arbitrary and capricious. Historically, the Commission has taken steps to understand the unique risks that innovative products pose by, among other things,

⁸¹ See, e.g., *id.* at 29,454 (“Whether persons act in concert or exercise control, or share control, requires an analysis of the activities of each person and the totality of facts and circumstances”).

⁸² *Id.* at 29,455-29,456.

⁸³ *Id.* at 29,456.

⁸⁴ Even if these parties could be identified, there is no meaningful way to assemble them in order to register with the Commission. Doing so would require a level of cooperation and consensus that does not exist and cannot exist for DeFi to fulfill its promise as the purpose of DeFi is to eliminate reliance on a centralized intermediary. Unlike traditional finance, DeFi is premised on the very notion of decentralization. The Commission’s exchange regulatory framework would force these decentralized parties into a central organized structure potentially generating the systemic risks and conflicts of interest associated with centralization that DeFi seeks to avoid.

⁸⁵ See *infra* Section II.D.1.

forming advisory committees and sponsoring roundtables to understand how to protect investors while embracing the benefits of new and innovative products.⁸⁶ Notably, as Commissioner Peirce highlights in her dissent, Regulation ATS was itself a customized solution to a then-existing question of how to regulate novel trading platforms run by registered broker-dealers.⁸⁷ More specifically, broker-dealers began running electronic limit order books designed to provide customers liquidity with more flexibility than other market participants could provide, and the Commission deemed that those novel trading platforms met the definition of “exchange” under Rule 3b-16.⁸⁸ However, forcing those broker-dealers to register as national securities exchanges would have led to the extinction of this novel technology because they were incompatible with the regulatory framework for national securities exchanges at the time.⁸⁹ Instead, the Commission gathered information and created Regulation ATS as a creative solution to the incompatibility between the then-existing regulatory framework for national securities exchanges and electronic limit order books run by broker-dealers. In the Reopening Release, however, the Commission states that DeFi systems should have to adapt their operations to fit the regulatory framework for ATSs and national securities exchanges but in doing so acknowledges that the costs of making these adaptations could be significant for many DeFi systems.⁹⁰ Further, such adaptations would undermine the fundamental benefits that DeFi systems afford users, including the elimination of the risks historically associated with trusted intermediaries. Rather than embrace these benefits, the Commission seeks to eliminate them.

The Commission’s approach is also inconsistent with how governments around the world have preserved the promise of other novel communications protocols—namely, the Internet—by accepting that the technology depends upon open-source, decentralized, autonomous, and standardized protocols but taking the necessary steps to protect consumers without disrupting the underlying technology.⁹¹ For example, when Congress passed the Scientific and Advanced Technology Act of 1992, it paved the way for a commercial Internet boom without tampering with TCP/IP, the communications protocol for computer networking.⁹² Likewise, Congress did not interfere with the way that data traverses telecommunications networks when it passed the Telecommunications Act of 1996, but it instead provided the necessary guardrails to allow industry and innovation to grow, resulting in many of the Internet services that we enjoy today.⁹³ One of the major enabling factors allowing Congress to provide guardrails while fostering innovation was regulating the applications through which users access the web like browsers, websites, and other user-facing software, commonly known as “clients.”⁹⁴ The Commission has failed to offer a rationale as to why it is in the public’s interest not to follow these same

⁸⁶ See, e.g., SEC, Concept Release on Equity Market Structure (Jan. 14, 2010) (“Concept Release”); Regulation NMS, 69 Fed. Reg. 77,424 (Dec. 27, 2004).

⁸⁷ See Peirce, *Rendering Innovation Kaput*, *supra* note 75.

⁸⁸ *Id.*

⁸⁹ *Id.*

⁹⁰ Reopening Release at 29,482-29,486.

⁹¹ Miles Jennings, *Regulate Web3 Apps, Not Protocols* (Sept. 29, 2022) <https://al6zcrypto.com/posts/article/web3-regulation-apps-not-protocols/>.

⁹² *Id.*

⁹³ *Id.*

⁹⁴ *Id.*

guidelines in the DeFi context, and adopt rules that provide the necessary guardrails to protect investors from the unique risks posed by DeFi without effectively banning the technology.

II. THE PROPOSED RULES MAY NOT WITHSTAND JUDICIAL SCRUTINY

The Commission’s failure to heed commenters’ concerns about the impossibility of compliance is reason enough for the Commission to abandon its attempt to extend the existing regulatory framework to DeFi protocols and systems. But this defect is not the only issue that plagues the Proposed Rules. In promulgating the Proposed Rules, the Commission exceeds its statutory authority, fails to assess adequately the relevant costs and benefits, ignores alternatives to its chosen regulatory approach, and raises serious constitutional concerns. a16z first raised these concerns in its initial comments,⁹⁵ but the Commission has only expanded upon the most troubling aspects of its proposal. If the Commission finalizes the Proposed Rules without excluding DeFi protocols and systems, its actions will be highly vulnerable to a challenge under the Exchange Act and APA.

A. The Commission Lacks Statutory Authority To Regulate DeFi Systems And Protocols Under The Proposed Rules

1. *The Commission’s Overly Broad Interpretation Of “Exchange” Is Not Supported By Statute*

The Commission’s intent in promulgating the Proposed Rules is to expand the class of trading systems and protocols subject to the exchange regulatory framework.⁹⁶ In its initial comments to the Commission, a16z expressed its concern that the Proposed Rules would reach DeFi systems by announcing for the first time that systems using “communication protocols” to bring together buyers and sellers of securities must register as exchanges or comply with Regulation ATS.⁹⁷ The Reopening Release not only made clear that these concerns were well-founded by clarifying that this amendment would sweep in some DeFi systems,⁹⁸ but it went further still, claiming that “many” DeFi systems “could meet the existing criteria of Exchange Act Rule 3b-16(a)” because such systems may function as an exchange by bringing together buyers and sellers, for example “through the provision of certain smart contract functionality.”⁹⁹ Such a broad definition of “exchange” cannot, however, be read into the authority conferred by the Exchange Act.

As a16z has previously explained in its prior comments, authority to regulate “communication protocols”—the broad new category of “established, non-discretionary methods” that systems might use to facilitate trades—is found nowhere in the text of the Exchange Act.¹⁰⁰ Nor does the Commission define its outer bounds or provide a single example. The Proposed Rules therefore have the potential to capture both traditional, centralized systems

⁹⁵ See a16z Letter at 17-26.

⁹⁶ See Proposing Release at 15,504-15,508.

⁹⁷ See a16z Letter at 6-7.

⁹⁸ Reopening Release at 29,453.

⁹⁹ *Id.*; see also *id.* at 29,450-29,451.

¹⁰⁰ a16z Letter at 24-25.

and DeFi systems that would not meet the statutory definition of “exchange.” In fact, the Proposed Rules could be interpreted so broadly as to capture ISPs and Internet browsers. As Commissioner Peirce has noted, however, the “exchange” statutory definition “is grounded in a concept of ‘stock exchange as that term is generally understood.’”¹⁰¹ This problem cannot be solved by replacing the term “communication protocols” with “negotiation protocols,” as suggested by the Reopening Release.¹⁰² The Commission does not provide examples to clarify the meaning of the term “negotiation protocols,” and what little information the Commission does offer suggests that “negotiation protocols” would still be an expansive category—it could, for example, capture any DeFi system using a smart contract that “sets requirements or limitations” designed for users to “interact and negotiate terms of a trade.”¹⁰³

Moreover, the Commission lacks statutory authority to force the exchange regulatory framework onto DeFi protocols and systems because they do not represent an “organization, association, or group of persons . . . which constitutes, maintains, or provides a market place or facilities for bringing together purchases or sellers of securities.”¹⁰⁴ As explained above, the Commission is wrong to assert that DeFi systems “typically” rely on “a single organization” to constitute, maintain, or provide trading facilities.¹⁰⁵ Nor is the Commission correct in arguing that the “multiple actors” involved in trading on DeFi systems may constitute a “group of persons” for purposes of the exchange regulatory framework.¹⁰⁶

In the Commission’s view, a “group of persons” can consist of a handful of independent entities purportedly “act[ing] in concert” to exercise control over DeFi systems.¹⁰⁷ The Commission cites the developers who invent codes used for smart contracts (but do not necessarily deploy them), the companies that provide a front-end user interface for crypto asset transactions, the validators and miners that verify transactions on massive blockchains not tethered to any particular DeFi system, and “significant holders” of governance tokens that can vote on the systems’ operational decisions.¹⁰⁸ But the only authority cited by the Commission makes clear that “group of persons” cannot be read so broadly. The D.C. Circuit recently held that “closely connected corporate affiliates” are “surely” within the definition of the term “group of persons” under the Exchange Act.¹⁰⁹ But the Court expressly declined to “confront” the question of under what circumstances “[u]naffiliated entities engaged in joint ventures or other concerted activity may or may not . . . be considered a ‘group of persons’ for the purposes of this statute.”¹¹⁰ The Court certainly did not suggest that the unrelated entities the Commission describes—who may act at different times and with different motives to produce incompatible

¹⁰¹ Peirce, *Rendering Innovation Kaput*, *supra* note 75 (quoting 15 U.S.C. § 78c(a)(1)).

¹⁰² *See* Reopening Release at 29,460.

¹⁰³ *See id.*

¹⁰⁴ *See* 15 U.S.C. § 78c(a)(1).

¹⁰⁵ Reopening Release at 29,454.

¹⁰⁶ *Id.* at 29,455-29,456.

¹⁰⁷ *See id.* at 29,454-29,456.

¹⁰⁸ *Id.* at 29,455-29,456.

¹⁰⁹ *Intercontinental Exch., Inc.*, 23 F.4th at 1024-1025.

¹¹⁰ *Id.* at 1024.

results—are “acting in concert.”¹¹¹ In fact, the Court warned that “the outer boundary of the term ‘group of person’ remains murky, and vigilance is necessary to ensure the term is not stretched too far.”¹¹² The Proposed Rules, in potentially sweeping up vast arrays of unaffiliated entities into the exchange definition, demonstrate no such vigilance, and therefore risk exceeding the Commission’s statutory authority.

2. *The Commission’s Effective Ban On DeFi Protocols And Systems and Blockchain Technology More Broadly Would Stifle Innovative New Technologies In Defiance Of Congressional Will*

The Commission insists that DeFi protocols and systems must comply with the exchange regulatory framework because it asserts, without factual basis, that it is “unlikely that systems trading a large number of different crypto assets are not trading any crypto assets that are securities.”¹¹³ As detailed throughout these comments, the inevitable consequences of the Commission’s attempt to regulate DeFi systems and protocols as traditional securities exchanges or ATSs would be to force them out of existence—a result the Commission recognizes when it observes that compliance with the Proposed Rules will mean that some systems can no longer “operate in accordance with ‘DeFi’ principles.”¹¹⁴ But the ripple effect of the Proposed Rules will spread even further. By imposing an effective ban on DeFi systems and protocols, the Commission will severely restrict the market for crypto assets themselves, stifling an innovative sector of the economy in defiance of congressional will. Even further, as detailed above, by seeking to bring validators within the scope of the Proposed Rules, the Commission threatens to ban blockchain technology more broadly by making validation activities unlawful.¹¹⁵ This has massive policy and national security implications, including for access to financial resources and technological innovation. President Biden has recognized that “the United States derives significant economic and national security benefits from the central role that the United States dollar and United States financial institutions and markets play in the global financial system,” making “[c]ontinued United States leadership in the global financial system” essential.¹¹⁶

As explained above, and at the risk of understatement, there is considerable uncertainty as to when a crypto asset is a security. And if one assumes a crypto asset is a security, *arguendo*, the Commission has failed to lay the groundwork for crypto assets to be registered as securities¹¹⁷ and traded on a securities exchange or ATS.¹¹⁸ While certain ATSs have been

¹¹¹ *See id.*

¹¹² *Id.* at 1025.

¹¹³ Reopening Release at 29,450.

¹¹⁴ *Id.* at 29,486.

¹¹⁵ *See supra* Section I.B.

¹¹⁶ *See* Executive Order on Ensuring Responsible Development of Digital Assets (Mar. 9, 2022) <https://www.whitehouse.gov/briefing-room/presidential-actions/2022/03/09/executive-order-on-ensuring-responsible-development-of-digital-assets/>.

¹¹⁷ *See* Coinbase Rulemaking Petition at 12-15, 21-22; *see also id.* at 22 (systems trading crypto assets represent “a fundamentally different business model” from traditional exchanges “and therefore present[] a different set of risks, necessitating a different regulatory regime”).

¹¹⁸ *See* Wells Submission on Behalf of Coinbase Global, Inc. and Coinbase, Inc., *In the Matter of Coinbase, Inc.*, File No. HO-14315, at 4 (U.S. Sec. & Exch. Comm’n Apr. 19, 2023) (describing “Coinbase’s

approved to trade crypto asset securities that, like traditional securities, represent ownership interest in a company, a16z is not aware of a single registered national securities exchange or ATS that allows the trading of crypto asset securities.¹¹⁹ As a result, there is not a viable path to trade crypto asset securities on a centralized platform where the operators of that platform are clear. This is a fundamental crypto market structure issue that should be solved before attempting to expand additional requirements to DeFi.¹²⁰ Moreover, imposing requirements on an entire asset class that are unworkable likely results in the elimination of the asset class—at least in the United States—which exceeds the Commission’s authority.

Together, the lingering confusion surrounding the status of crypto assets under the securities laws and the impossibility of complying with the existing regulatory regime threatens to stifle innovative new technologies. Commenters raised this concern with the Commission,¹²¹ and the Commission made no attempt to refute it. Instead, the Commission “acknowledge[s] that there could be less innovation as a result of the uncertainty and compliance costs associated with the broad formulation of the Proposed Rules.”¹²² Indeed, the Commission contests only the limited proposition that “innovation will be impossible under the Proposed Rules.”¹²³ Congress has not empowered the Commission to subject DeFi systems and protocols to the exchange regulatory framework, let alone to effectively ban them under the assumption that they are engaged in unregistered trading of crypto asset securities.¹²⁴ In fact, Congress is currently working to establish a regulatory framework for the crypto market structure.¹²⁵ The Commission

exhaustive and fruitless attempts—dozens of meetings and hundreds of hours of communications—to register a securities trading platform with the Commission since at least 2018”).

¹¹⁹ a16z acknowledges that certain ATSs have been approved to trade crypto asset securities – traditional securities issued using blockchain technology – but these assets are distinct because unlike crypto assets (e.g., Bitcoin and Ether) there is no debate that these assets are securities since they often represent ownership interest in a company. *See, e.g., Bosonic Securities Receives Approval To Operate A Broker-Dealer And ATS For Digital Asset Securities*, BUSINESSWIRE (Apr. 26, 2023), <https://www.businesswire.com/news/home/20230426005333/en/Bosonic%2%A0Securities%2%A0Receives%2%A0Approval%2%A0to-Operate-a%2%A0Broker-Dealer-and-ATS-for-Digital-Asset%2%A0Securities>.

¹²⁰ Chairman Patrick McHenry of the House Financial Services Committee and Chairman Glenn Thompson of the House Committee on Agriculture recently offered a proposal aiming to resolve this issue: They released draft legislation that would establish a market structure for crypto assets, including by vesting the CFTC with exclusive authority over certain crypto asset transactions and establishing a regulatory framework with which decentralized systems can comply. *See* Press Release, McHenry, Thompson, Hill, Johnson Release Digital Asset Market Structure Proposal, House Fin. Servs. Cmte. (June 2, 2023), <https://financialservices.house.gov/news/documentsingle.aspx?DocumentID=408838>.

¹²¹ *See* Reopening Release at 29,453-29454.

¹²² *Id.* at 29,482.

¹²³ *Id.*

¹²⁴ The Proposed Rules are also inconsistent with the Biden administration’s executive order emphasizing the importance of responsible innovation with respect to developing a regulatory framework that preserves the promise and broader policy benefits of crypto assets and blockchain technology. *See* Executive Order on Ensuring Responsible Development of Digital Assets, *supra* note 116.

¹²⁵ Chairmen McHenry and Thompson have proposed a market structure for crypto assets that would limit the Commission’s jurisdiction and establish a regulatory framework tailored to crypto assets and decentralized systems while ensuring investor protection. *See supra* note 120. House Majority Whip Tom Emmer and Representative Darren Soto have similarly attempted to provide regulatory clarity by proposing legislation that would make clear that any “investment contract” under the *Howey* test is distinct from the asset sold pursuant to that investment contract. Press Release, Emmer and Soto Introduce Bipartisan Bill to Provide Regulatory Clarity for

cannot preempt congressional authority to define the appropriate parameters of crypto regulation by simply extending the ill-suited exchange regulatory framework to DeFi systems. In doing so, the Commission would be usurping precisely the kind of “decisions of vast economic and political significance” that are reserved for Congress absent “clear authorization,” authorization which cannot flow from “a vague statutory grant.”¹²⁶ Even if the Exchange Act provided a “colorable textual basis” for the Commission to extend exchange registration requirements to DeFi systems and protocols—and it does not—“common sense” makes it “very unlikely” that Congress intended to confer such authority.¹²⁷ By using the term “group of persons” to sweep in DeFi systems, the Commission is appealing to the type of “modest words, vague terms, [and] subtle devices” that rarely contain such “[e]xtraordinary grants of regulatory authority.”¹²⁸ And where, as here, Congress has indicated its intent that products “remain on the market” subject to regulation, an agency’s attempt to effectively ban those products would “plainly contradict congressional policy.”¹²⁹

B. The Commission Failed To Weigh Appropriately The Costs And Benefits Of Its Effective Ban

The Commission rightly acknowledges that it is obligated to engage in cost-benefit analysis in these types of rulemakings. But the cost-benefit analysis put forward in the Reopening Release is insufficient. The Commission has failed to gather the relevant data on DeFi systems and protocols and has failed to account for the inevitability that the Proposed Rules will effectively ban this novel technology. The Commission has therefore failed its obligation to “examine the relevant data and articulate a satisfactory explanation for its action.”¹³⁰ Courts carefully scrutinize the Commission’s work and vacate Commission rules for failing to “adequately to assess [their] economic effects.”¹³¹ Here, the Commission’s cost-benefit analysis does not satisfy the Commission’s duty to “apprise itself—and hence the public and Congress—of the economic consequences” of its chosen regulatory approach.¹³²

1. The Commission Failed To Gather Sufficient Information On Which To Base Its Cost-Benefit Analysis

At the start, the Commission’s cost-benefit analysis is fatally undermined by its failure to gather sufficient information about the DeFi systems and protocols that it plans to subject to the exchange regulatory framework.¹³³ As noted above, the Commission’s concession that it lacks

Digital Assets (May 18, 2023), <https://emmer.house.gov/2023/5/emmer-and-soto-introduce-bipartisan-bill-to-provide-regulatory-clarity-for-digital-assets> .

¹²⁶ *West Virginia v. EPA*, 142 S. Ct. 2587, 2605, 2614 (2022).

¹²⁷ *See id.* at 2609.

¹²⁸ *See id.*

¹²⁹ *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 138-139 (2000).

¹³⁰ *FCC v. Fox Television Stations, Inc.*, 556 U.S. 502, 513 (2009).

¹³¹ *Business Roundtable v. SEC*, 647 F.3d 1144, 1147 (D.C. Cir. 2011).

¹³² *Id.* (quoting *Chamber of Commerce of U.S. v. SEC*, 412 F.3d 133, 144 (D.C. Cir. 2005)).

¹³³ Part of the reason that the Commission does not have full insight into crypto asset markets is due to the fundamental disagreement regarding the status of crypto assets under the federal securities laws and the Commission’s reluctance to provide any clarity despite calls for clarity from the industry. *See supra* note 28.

the information required to analyze these systems is a frequent refrain throughout the Reopening Release.¹³⁴ The Commission acknowledges glaring gaps in its understanding of the size and nature of trading systems operating in the market for crypto assets,¹³⁵ which it simply attributes to “rampant wash trading” and assumptions that these systems are concealing necessary information from the Commission by flouting the federal securities laws.¹³⁶ The Commission admits that it does not know how much trading activity takes place through various types of systems or protocols¹³⁷ or what kinds of “specific communication protocols” are used by systems that would be swept into the exchange regulatory framework under the Proposed Rules.¹³⁸ And the Commission further concedes that it has limited information on which to base its conclusion that certain actors can control the smart contracts that power DeFi systems or protocols or can feasibly modify the operations of these systems to come into compliance with the existing regulatory framework.¹³⁹

Those acknowledged information gaps makes adoption of the Proposed Rules perilous and unjustified. Instead of gathering this crucial information before promulgating the Proposed Rules, the Commission has assumed away much of its cost-benefit analysis without attempting to quantify many of the impacts of its regulations.¹⁴⁰ The only costs that the Commission specifically estimates are those related to paperwork, recordkeeping and establishing written procedures for protecting subscriber information.¹⁴¹ While the Commission acknowledges that many DeFi systems and protocols will face substantial—and even prohibitive—costs in attempting to comply with the exchange regulatory framework,¹⁴² it does not attempt to estimate them. These information gaps extend to the very entities that the Commission incorrectly believes can assume the burdens of regulatory compliance for decentralized systems and protocols. As noted above, the Commission asserts that validators can comply with the requirements of the exchange regulatory framework.¹⁴³ But the Commission does not gather or present relevant data on the costs of applying these compliance obligations to validators. Instead, the Commission merely “acknowledges that there may be circumstances in which the miners or validators of a blockchain could incur costs under the Proposed Rules,” and seeks

¹³⁴ See *supra* Section I.A.

¹³⁵ See Reopening Release at 29,470-29,471.

¹³⁶ *Id.*

¹³⁷ *Id.* at 29,471.

¹³⁸ *Id.* at 29,474.

¹³⁹ *Id.* at 29,483-29,484.

¹⁴⁰ In these comments, a16z has attempted to provide the Commission with sufficient information and context to demonstrate that the effect of its Proposed Rules will be a disastrous ban on DeFi systems and protocols, and even blockchain technology more broadly. If the Commission needs more information about the DeFi systems and protocols, it should withdraw these Proposed Rules and issue a Request for Information. The reasoned path to pursue in the context of new technologies is to understand the technologies and their place in the market first, and then regulate—not vice versa.

¹⁴¹ See Reopening Release at 29,476 tbl. V.1; see also Proposing Release at 15,624 tbl. VII.8; *id.* at 15,628 n.1120.

¹⁴² See, e.g., *id.* at 29,486.

¹⁴³ See *supra* Section I.B.

comment on such costs.¹⁴⁴ This framing fails to acknowledge the potentially material adverse impact applying the Proposed Rules to validators would have on the entire blockchain technology sector by effectively outlawing the act of validation.¹⁴⁵ The Commission’s analysis with respect to these known costs can be boiled down to the observation that some DeFi systems and protocols will be affected more than others.¹⁴⁶ This falls short of the Commission’s “statutory obligation to determine as best it can the economic implications of the rule it has proposed,” an obligation that holds even when “the Commission can determine only the range within which [the] cost of compliance will fall” because such costs may depend on actions taken by the systems themselves.¹⁴⁷

2. *The Commission Did Not Take Into Account The Transformative Benefits Of DeFi Protocols And Systems*

The Commission’s cost-benefit analysis is furthermore lacking because it nowhere addresses the many benefits of DeFi protocols and systems. The benefits of DeFi systems and protocols are well-documented.¹⁴⁸ They have already shown the potential to expand access to unbanked and underbanked communities,¹⁴⁹ to enhance privacy and transparency,¹⁵⁰ and to create efficiencies across the financial sector.¹⁵¹ Moreover, DeFi systems provide even fairer access to bilateral digital property transactions than any ATS does. This is a feature of DeFi systems’ peer-to-peer nature that provides fairer market access by allowing users to interact directly without involving an intermediary. Fostering an environment in which DeFi systems and protocols can thrive is also crucial to realizing future benefits. Most immediately, as President Joe Biden and Treasury Secretary Janet Yellen have each recognized, responsible development of crypto asset technologies is key to maintaining the nation’s competitive edge.¹⁵² Nurturing nascent DeFi technologies will also yield benefits far into the future, as their disintermediated and trustless manner allows DeFi systems and protocols to serve as the

¹⁴⁴ Reopening Release at 29,477; *see id.* at 29,484 (noting that if compliance obligations are imposed on validators, they may incur costs and pass those costs on to users or cease processing transactions altogether).

¹⁴⁵ *See supra* Section I.B.

¹⁴⁶ *See* Reopening Release at 29,485-29,486.

¹⁴⁷ *Chamber of Commerce*, 412 F.3d at 143.

¹⁴⁸ *See* a16z Letter at 10-12.

¹⁴⁹ Letter from Chamber of Digital Commerce to President’s Working Grp. on Fin. Markets, *Regulatory Framework to Address the Growth and Promise of Stablecoin Payments Systems* (Oct. 18, 2021), https://4actl02j1q5u2o7ouq1ymaad-wpengine.netdna-ssl.com/wp-content/uploads/2021/10/Chamber-of-Digital-Commerce_Presidents-Working-Group-Stablecoin-Policy-Recommendations_18-October-2021.pdf.

¹⁵⁰ *See* Makarov & Schoar, *supra* note 61, at 174-177.

¹⁵¹ *See, e.g.,* Annie Njanja, *Cryptocurrency Payments Key To Lowering Cross-Border Remittance Charges And Boosting Microwork Uptake In Africa, Study Shows*, TECHCRUNCH (Feb. 23, 2022), <https://techcrunch.com/2022/02/23/cryptocurrency-payments-key-to-lowering-cross-border-remittance-charges-and-boosting-microwork-uptake-in-africa-study-shows/?guccounter=1>.

¹⁵² Executive Order on Ensuring Responsible Development of Digital Assets, *supra* note 116 (“We must reinforce United States leadership in the global financial system and in technological and economic competitiveness, including through the responsible development of payment innovations and digital assets.”); Remarks from Secretary of the Treasury Janet L. Yellen on Digital Assets, U.S. DEP’T OF TREAS. (Apr. 7, 2022) (“[T]he government’s role should be to ensure responsible innovation – innovation that works for all Americans, protects our national security interests and our planet, and contributes to our economic competitiveness and growth.”).

fundamental building blocks for the emerging web3 ecosystem.¹⁵³ But the Commission does not factor these benefits into its overview of the regulatory baseline or its required assessment of the Proposed Rules’ effects on efficiency, competition, or capital formation.

3. *The Commission’s Cost-Benefit Analysis Fails To Recognize That Its Proposed Rules Would Effectively Ban DeFi Protocols And Systems Or The Resulting Consequences*

The Commission’s cost-benefit analysis is also inadequate because it does not take into account an obvious economic consequence of inflexible application of the legacy exchange regulatory framework to DeFi systems and protocols: they, and blockchain technology more generally, will be effectively banned.¹⁵⁴

The Commission asserts, time and again, that DeFi systems can comply with existing regulatory framework,¹⁵⁵ and appears to assume that they will do so by “elect[ing] to register as broker-dealers and comply with Regulation ATS” rather than registering as exchanges.¹⁵⁶ But Commission Chair Gary Gensler has expressed doubt that Regulation ATS is a viable option for “crypto asset platforms, which have millions and sometimes tens of millions of retail customers directly buying and selling on the platform without going through a broker.”¹⁵⁷ If the Commission’s economic analysis rests on a pathway to compliance that the Commission understands is unavailable, it is fundamentally flawed.

Despite these mixed signals, the Reopening Release purports to offer an overview of the range of costs that different systems would have to incur in order to comply with the exchange regulatory framework.¹⁵⁸ In several places, the Commission acknowledges that systems will face greater costs of compliance if they make extensive or exclusive use of blockchain technology, including smart contracts.¹⁵⁹ In fact, the Commission concedes that truly decentralized systems cannot comply unless they are “restructured to make less extensive use of these novel technologies.”¹⁶⁰ These structural changes, the Commission admits, “could significantly reduce the extent to which these systems operate in accordance with ‘DeFi’ principles.”¹⁶¹ But the Commission does not analyze the economic effects of regulating DeFi out of existence. It also does not consider that bringing participants like validators within the scope of the Proposed Rules would effectively ban blockchain technology more generally by

¹⁵³ See Daren Matsuoka, Eddy Lazzarin, Chris Dixon & Robert Hackett, *Introducing the 2022 State of Crypto Report*, A16Z CRYPTO (May 17, 2022), <https://a16zcrypto.com/state-of-crypto-report-a16z-2022/>.

¹⁵⁴ See *supra* Section I.B.

¹⁵⁵ See, e.g., Reopening Release at 29,486.

¹⁵⁶ *Id.* at 29,466.

¹⁵⁷ Chair Gary Gensler, *Prepared Remarks of Gary Gensler On Crypto Markets Association Annual Conference*, U.S. SEC. & EXCH. COMM’N (Apr. 4, 2022), https://www.sec.gov/news/speech/gensler-remarks-crypto-markets-040422?utm_medium=email&utm_source=govdelivery.

¹⁵⁸ See Reopening Release at 29, 475-29,485.

¹⁵⁹ *Id.* at 29,485-29,486

¹⁶⁰ *Id.* at 29,486

¹⁶¹ *Id.*

making validation activity unlawful, destroying a potential trillion-dollar industry.¹⁶² Instead, the Commission avoids discussing this inevitable result of its chosen regulatory approach.

Because the Commission does not confront the reality that DeFi systems and protocols cannot comply with the exchange regulatory framework, the Commission cannot adequately evaluate the costs of the Proposed Rules, including their effects upon “efficiency, competition, and capital formation.”¹⁶³ But the Reopening Release suggests that the Commission understands the consequences of the Proposed Rules will be dire. The Commission predicts “less innovation” as market participants “decrease and slow down the development of new products and technologies.”¹⁶⁴ In some cases, market participants will even “stop engaging in” “some areas of new product development.”¹⁶⁵ And those are merely the consequences that the Commission admits may follow from imposing a regulatory framework with which it insists DeFi systems and protocols *can* comply. The Commission’s analysis does not grapple with the disastrous results of imposing a regulatory framework under which compliance is impossible.

C. The Commission Failed To Consider Reasonable Alternatives To Its Effective Ban

The Commission had a duty, before promulgating the Proposed Rules, to consider reasonable alternatives to its chosen regulatory approach.¹⁶⁶ The Reopening Release offered the Commission yet another opportunity to meet this obligation, which requires the agency to “cogently explain why it has exercised its discretion in a given manner.”¹⁶⁷ In doing so, the Commission must weigh any alternative that is “neither frivolous nor out of bounds,” and any “alternative way of achieving the objectives” of the Exchange Act “should [be] addressed and adequate reasons given for its abandonment.”¹⁶⁸

I. *None Of The Alternatives The Commission Considered Represent Serious Efforts To Regulate, Rather Than Ban, DeFi Systems And Protocols*

The analysis of “reasonable alternatives” set out in the Reopening Release suggests that the Commission refused to consider an approach that would not regulate DeFi systems out of existence. At the outset, the Commission’s view of what constitutes a “reasonable alternative” to the Proposed Rules is tainted by its unsupported conclusion that many DeFi systems and protocols already “meet the current criteria of Exchange Act Rule 3b-16(a)” and are thus “subject to the exchange regulatory framework.”¹⁶⁹ As such, the Commission does not include DeFi systems and protocols that it believes already meet the definition of exchange in its cost-benefit analysis, instead limiting its analysis to roughly 20 trading systems that it speculates

¹⁶² See *supra* Section I.B.

¹⁶³ See *Chamber of Commerce*, 412 F.3d at 142 (citing 15 U.S.C. § 80a-2(c)).

¹⁶⁴ Reopening Release at 29,482.

¹⁶⁵ *Id.*

¹⁶⁶ *State Farm*, 463 U.S. at 46-49.

¹⁶⁷ *Id.* at 48.

¹⁶⁸ *Chamber of Commerce*, 412 F.3d at 145.

¹⁶⁹ Reopening Release at 29,450-29,451; see also *id.* 29,490-29,491.

would be newly affected by the Proposed Rules.¹⁷⁰ Most of these alternatives would not affect the application of the exchange regulatory framework to DeFi systems or protocols in any meaningful way.¹⁷¹ And none would facilitate the development of a regulatory framework with which DeFi systems and protocols can comply.

For example, the Commission considered delaying application of the exchange regulatory framework to the small collection of systems exclusively trading crypto asset securities that, in the Commission's, are newly encompassed by the Proposed Rules' expanded definition of exchange.¹⁷² This delay would not provide even temporary relief for what the Commission assumes to be the bulk of DeFi systems and protocols that may "meet the criteria of existing Exchange Act Rule 3b-16(a)."¹⁷³

The Commission's reasoning in rejecting a delayed application of the Proposed Rules to systems exclusively trading crypto asset securities also underscores the flaws of its cost-benefit analysis. The Commission asserts that delaying application of the Proposed Rules to systems exclusively trading crypto asset securities would delay the benefits of "enhancements to regulatory oversight and investor production," "reductions of trading costs," "enhancements of price discovery and liquidity," and "benefits from filing requirements."¹⁷⁴ The Commission claims that delay would also reduce efficiency by leading systems that exclusively trade crypto asset securities to manipulate their operations to avoid application of the Rule and harm competition by giving these systems a competitive advantage during the period of delay.¹⁷⁵ This discussion of costs and benefits is untethered from the reality that the infeasibility of compliance for DeFi systems and protocols will eviscerate any putative benefits and overshadow any costs described by the Commission. No benefits can redound to market participants or investors from the regulation of DeFi systems and protocols if they are effectively banned. As the Commission recognizes, imposing the existing regulatory framework on DeFi systems and protocols will cause significant distortions to efficiency¹⁷⁶ and competition.¹⁷⁷ This exposes the dearth of reason in the Commission's failure to propose an alternative regime under which DeFi systems and protocols can reasonably comply.

The Commission also claims to have considered taking "a more explicit and prescriptive approach in defining an exchange by providing a list of specific types of systems that meet the definition of an exchange (or, by providing a list of specific types of systems that do not meet the definition of an exchange)."¹⁷⁸ This alternative comes the closest to offering the type of

¹⁷⁰ See *id.* at 29,476 tbl. V.1.

¹⁷¹ See *id.* at 29,491-29,492 (describing alternatives of subjecting "New Rule 3b-16(a) Systems" to Proposed Rules only if they trade government securities or fixed income securities, exempting systems from the Fair Access Rule or Regulation SCI if they use only non-firm trading interest, and stipulating that systems offering non-firm trading interest only meet the definition of exchange if they offer anonymous interactions).

¹⁷² *Id.* at 29,490-29,491.

¹⁷³ *Id.* at 29,491.

¹⁷⁴ *Id.* at 29,491 & n.424.

¹⁷⁵ *Id.* at 29,491.

¹⁷⁶ See *id.* at 29,490.

¹⁷⁷ See *id.* at 29,485-29,486.

¹⁷⁸ *Id.* at 29,492.

regulatory clarity for which market participants have been clamoring,¹⁷⁹ especially because, in developing such a list, the Commission would likely have to reckon with the fact that the existing regulatory framework is poorly suited to DeFi systems and protocols. But the Commission rejects this alternative virtually out of hand. It simply states that, if it were to be forthright about which systems are covered by the exchange regulatory framework and which systems are not, some systems would change their operations “to operate as a non-exchange,” reducing efficiency and leading to fewer investor-protection benefits.¹⁸⁰ This discussion is particularly flawed given that the opacity of the Commission’s current approach “will drive decentralized protocols toward centralization, extinction, or expatriation,” resulting in far greater inefficiencies.¹⁸¹

The Commission’s admitted lack of information about DeFi systems and protocols¹⁸² makes it even more important for the Commission to be thoughtful if it intends to apply the exchange regulatory framework to these systems. The Commission would be better served to focus on regulations that are tailored to the systems about which it has ample information and can therefore make informed decisions.

2. *The Commission Ignored Obvious Regulatory Alternatives That Are Better Tailored For The Unique Risks Related To DeFi, Including Those Raised By Commenters*

The Commission’s failure to assess the feasibility of obvious alternatives to a wholesale extension of the exchange regulatory framework to DeFi protocols and systems is particularly glaring in light of the comments it received in response to the Proposed Rules. In its initial comments to the Commission, a16z suggested to the Commission that there were “a number of alternatives that would have furthered the agency’s goals without unnecessarily undermining the success of DeFi systems.”¹⁸³ But the Reopening Release suggests that the Commission did not seriously entertain these alternatives. In its initial comments and again here, a16z offers the Commission suggestions for “a more native regulatory structure for DeFi systems.”¹⁸⁴ These are examples of regulatory approaches that the Commission should consider in line with its obligation to weigh alternatives that are “neither frivolous nor out of bounds.”¹⁸⁵

Nowhere, even in general terms, does the Commission suggest that it considered the obvious alternative of regulating DeFi systems differently from traditional, centralized systems. This oversight, as Commissioner Hester Peirce has noted, shows that the Commission is no

¹⁷⁹ See Petition for Writ of Mandamus at 4, *In re Coinbase, Inc.*

¹⁸⁰ Reopening Release at 29,492.

¹⁸¹ Peirce, *Rendering Innovation Kaput*, *supra* note 75.

¹⁸² See *supra* Section II.B.1.

¹⁸³ a16z Letter at 23.

¹⁸⁴ *Id.*

¹⁸⁵ *Chamber of Commerce*, 412 F.3d at 145.

longer willing to “think creatively about regulatory alternatives that advance the Commission’s mission while preserving space for potentially disruptive innovation.”¹⁸⁶

In a recent series of articles, a16z has publicly proposed a new regulatory framework that preserves the benefits of DeFi technology and protects the future of the Internet while reducing the risks of illicit activity and consumer harm.¹⁸⁷ This approach focuses regulatory interventions on the businesses controlling user-facing DeFi applications rather than the decentralized, autonomous protocols that trading systems may use. The basic insight behind this proposed framework is that, while businesses can tailor their products to comply with regulations, protocols designed to be globally interoperable and autonomous cannot—they are incapable of making subjective determinations that compliance with a local regulatory regime may require. Just as governments regulate email providers rather than messaging protocols such as the SMTP (email) underlying them, governments should regulate DeFi applications rather than protocols. This approach would help preserve the ability of DeFi protocols to effectuate important policy objectives, including transparency, auditability, traceability, and responsible risk management, while ensuring that businesses cannot obtain a competitive advantage or facilitate illicit activity merely because they provide access to DeFi protocols.

a16z proposed the above-described framework because it believes that regulators must reassess existing regulatory schemes, commit themselves to a deeper understanding of web3 technology, and balance important policy objectives while allowing the Internet to evolve. This framework builds on two more targeted regulatory approaches that a16z presented to the Commission in its initial comments.

First, a16z described an alternative disclosure-based supervision regime under which a regulator would be able to set clear and tailored disclosure-based standards, and developers would be able to work those standards into the code governing a project to ensure ongoing compliance automatically.¹⁸⁸ This approach would accommodate the unique features of DeFi systems and protocols and ensure that, at key milestones, users are provided the information they need to responsibly participate in DeFi systems.

Second, a16z proposed that DeFi systems and protocols be governed by an SRO in the form of a DAO.¹⁸⁹ Under such a regime, DeFi systems would come together and leverage smart contracts and other DeFi innovations to establish various standards that promote investor protection. These standards could encompass disclosure, operation of DeFi protocols, potential risk to users, decentralized governance, decentralization policies, terms of service and terms of use, risk assessment, safety modules and self-insurance, open source standards, listing standards, and more. Membership of noncompliant systems could be challenged, allowing the decentralized community of DeFi systems to self-regulate.

¹⁸⁶ Peirce, *Rendering Innovation Kaput*, supra note 75.

¹⁸⁷ See Miles Jennings & Brian Quintenz, *Regulate Web3 Apps, Not Protocols Part II: Framework For Regulating Web3 Apps*, A16ZCRYPTO (Jan. 11, 2023), <https://a16zcrypto.com/posts/article/regulate-web3-apps-not-protocols-part-ii-framework-for-regulating-web3-apps/>.

¹⁸⁸ a16z Letter at 12.

¹⁸⁹ *Id.* at 13.

Both of these approaches would ensure transparency and investor protection in a way that makes sense for the realities of how DeFi protocols operate—leveraging the power of smart contracts, decentralization, and other DeFi innovations—without inhibiting economic and technological progress.

D. The Commission’s Effective Ban Raises Constitutional Concerns

In its initial comments to the Commission, a16z informed the Commission that requiring DeFi systems and protocols to comply with the exchange regulatory framework could implicate market participants’ constitutional rights. In particular, a16z warned that pivoting from regulation of traditional order-matching to regulation of communication and negotiation raises First Amendment concerns, and that the unjustified expansion of data collection and reporting requirements could trigger Fourth Amendment protections.¹⁹⁰ The Reopening Release—which does not address constitutional issues at all—suggests that the Commission has not taken into consideration the impact that the Proposed Rules would have on constitutionally protected free speech or privacy interests.

1. The Proposed Rules Chill The Speech Of DeFi Developers

Courts have recognized that “code is speech” protected by the First Amendment.¹⁹¹ And DeFi protocols are examples of code that can be developed and deployed in any number of ways by different actors. The Commission cannot draw conclusions about ownership or control of a trading system from those who develop or deploy them. Yet the Commission refuses to rule out requiring any developer of a DeFi protocol—even one who, “acting independently and separate from an organization, publishes or republishes code,” with no understanding that the code will be used in a trading system—to comply with the exchange regulatory framework.¹⁹² In its effort to effectively ban DeFi systems and protocols, the Commission therefore targets protected speech.

The Commission has made no effort to justify this speech regulation or to narrow its scope. As such, the Proposed Rules are vulnerable to a First Amendment challenge. Even if the Commission could show that its asserted interests in regulating DeFi systems and protocols were “important in the abstract,” it cannot justify the speech restrictions it proposes unless it established that the restriction “will in fact advance those interests.”¹⁹³ The Commission must, moreover, put forward evidence that regulating the speech of DeFi developers “advances its asserted interests in a[] direct and material way”—the agency “must demonstrate that the harms it recites are real and that its restriction will in fact alleviate them to a material degree.”¹⁹⁴ Courts

¹⁹⁰ *Id.* at 25-26.

¹⁹¹ *Green v. U.S. Dep’t of Justice*, 392 F. Supp. 3d 68, 86 (D.D.C. 2019); *see also Universal City Studios, Inc. v. Corley*, 273 F.3d 429, 450 (2d Cir. 2001); *Junger v. Daley*, 209 F.3d 481, 485 (6th Cir. 2000); *Bernstein v. U.S. Dep’t of State*, 922 F. Supp. 1426, 1437 (N.D. Cal. 1996).

¹⁹² Reopening Release at 29,456.

¹⁹³ *See Turner Broadcasting System, Inc. v. FCC*, 512 U.S. 622, 664 (1994).

¹⁹⁴ *Edenfield v. Fane*, 507 U.S. 761, 771 (1993) (citing cases); *see also Brewer v. City of Albuquerque*, 18 F.4th 1205, 1226 (10th Cir. 2021) (holding that ordinance violated First Amendment where its “expansive restrictions on speech and expressive conduct are juxtaposed against the paltry record evidence of real, non-speculative harms ameliorated by [it]”).

have cautioned that speech regulations—including regulations on code—may be content-based restrictions and thus “permissible only if they serve compelling state interests and do so by the least restrictive means available.”¹⁹⁵ Code contains both “functional and expressive elements,” and regulations that target code are considered content-neutral only when their effect on the code’s expressive component is “incidental.”¹⁹⁶

Even content-neutral code regulations, moreover, “must serve a substantial governmental interest, the interest must be unrelated to the suppression of free expression, and the incidental restriction on speech must not burden substantially more speech than is necessary to further that interest.”¹⁹⁷ The Reopening Release envisions broad application of the exchange regulatory framework to developers who write code that may be used by DeFi systems and protocols. In doing so, the Commission may chill or abridge developers’ speech, based on the functionality of the code they develop, the content of what that code expresses to users, or even the viewpoints of the developers.

The Commission’s continued focus on regulating the means by which users may communicate to express trading interest and confirm trades likewise raises First Amendment concerns. While the Commission appears open to narrowing the speech-related burdens of the Proposed Rules by regulating “negotiation protocols” rather than “communication protocols,”¹⁹⁸ the Commission must offer illustrative examples of such “negotiation protocols” so that the public can understand the extent to which the Proposed Rules may affect expressive activity.

2. *The Proposed Rules Could Implicate The Fourth Amendment By Forcing Users To Shift Away From Activity With Strong Privacy Protections And Toward Technologies Where Government Surveillance Power Is Broad*

In confirming that the Commission intends to subject DeFi systems and protocols to the exchange regulatory framework, the Reopening Release exacerbates the concern that the Commission intends to transform an industry with strong privacy protections into one subject to new and extensive government surveillance.¹⁹⁹ DeFi systems and protocols robustly safeguard user privacy by cutting out traditional third-party intermediaries. Those intermediaries historically collected user information because it was necessary to facilitate trading activity. The exchange regulatory system was designed, and has been honed over decades, to ensure that those intermediaries are operating honestly and fairly.²⁰⁰ Many users, including consumers who were previously unbanked or underserved by the traditional financial system, have flocked to DeFi because it allows them to access financial services without relinquishing their assets or their personal information to an intermediary they may not trust.²⁰¹

¹⁹⁵ *Corley*, 273 F.3d at 450.

¹⁹⁶ *Id.* at 454.

¹⁹⁷ *Id.*

¹⁹⁸ See Reopening Release at 29,460.

¹⁹⁹ See Eugene Volokh, *DeFi Gives Financial Privacy – Will Regulation Take It Away?*, A16ZCRYPTO (Jan. 13, 2022), <https://a16zcrypto.com/posts/article/defi-gives-financial-privacy-will-regulation-take-it-away/>.

²⁰⁰ a16z Letter at 9-10.

²⁰¹ See *id.* at 10-12; Letter from Chamber of Digital Commerce, *see supra* note 149.

The Commission’s effort to force DeFi systems and protocols into centralization would replace this shield of privacy with a conduit for increased government surveillance. The data collection, reporting, and recordkeeping obligations the Commission seeks to impose,²⁰² for example, cannot be accomplished in the absence of an intermediary. Forcing DeFi systems to interpose an intermediary to gather and turn over to authorities private user information may therefore be one example of how the Commission expects these systems to “significantly reduce the extent to which [they] operate in accordance with ‘DeFi’ principles.”²⁰³

This raises constitutional concerns. The “third-party doctrine” generally allows the government to obtain, without affording typical Fourth Amendment protections, information that users provide to traditional financial intermediaries.²⁰⁴ And because DeFi systems have proven that trades can be facilitated transparently and securely by protocols in the absence of such intermediaries, a purpose or effect of the new regime may be to insert intermediaries to increase the government’s surveillance power and to eliminate or diminish privacy-protecting tools. While the Supreme Court has recognized that the third-party doctrine should not be “mechanically” applied, particularly in the context of novel technologies where individuals seek to preserve their privacy protections,²⁰⁵ it is likely that users will lose Fourth Amendment and other privacy protections if DeFi systems must abandon their disintermediated nature.

CONCLUSION

For all of the reasons set forth above and in a16z’s initial comments, any amendments to Rule 3b-16 should expressly exclude DeFi systems and protocols. The Commission should instead take the same creative approach that it has previously taken with frameworks such as Regulation ATS—enabling oversight of novel trading platforms and ensuring investor protection while preserving the benefits of an emerging technology. Rather than require DeFi systems and protocols to register as “exchanges” under the misunderstanding that these systems represent “groups of persons” acting in concert, exercising control, or sharing control over a trading platform, the Commission should take further steps to understand how they work before proposing to effectively ban them. The Commission should determine the best method to guard against the unique risks that DeFi systems and protocols pose to protect investors without regulating the technology into extinction by creating a regulatory framework with which it is impossible to comply. Thus, DeFi systems and protocols should be excluded from Exchange Act Rule 3b-16.

²⁰² See Reopening Release at 29,473 (describing obligations of registered broker-dealers); *id.* (“An ATS is subject to Commission examinations and FINRA examinations and surveillance, trade reporting obligations, and certain investor protection rules ... required to ... protect subscribers’ confidential trading information ... [and] is subject to certain reporting and disclosure requirements.”); *id.* (“An ATS must file quarterly Form ATS-R to report to the Commission, among other things, trading volume, securities traded, and a list of subscribers that were participants during the relevant quarter.”).

²⁰³ *Id.* at 29,486.

²⁰⁴ See *United States v. Miller*, 425 U.S. 435, 443 (1976).

²⁰⁵ See *Carpenter v. United States*, 138 S. Ct. 2206, 2219-2220 (2018).

Respectfully submitted,

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