



Via electronic submission to rule-comments@sec.gov

June 13, 2023
Vanessa A. Countryman
Secretary
U.S. Securities and Exchange Commission
100 F Street NE
Washington, DC 20549-1090

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

Dear Ms. Countryman:

The Uniswap Foundation (“UF”) appreciates the opportunity to comment on the U.S. Securities and Exchange Commission’s proposed “Amendments to Exchange Act 3b-16 Regarding the Definition of Exchange,” Release No. 34-940602 (January 26, 2022) (“Proposed Rule”), and its “Supplemental Information and Reopening of Comment” on the Proposed Rule, Release No. 34-97309 (April 14, 2023) (“Reopening Release”).

As a non-profit organization founded to support the growth, decentralization, and sustainability of Decentralized Finance (“DeFi”), UF believes it is important for the Commission to understand the intricacies of the nascent and rapidly evolving digital asset industry before it redefines who might qualify as an “exchange.” UF wants to emphasize the importance of regulatory clarity when dealing with DeFi systems. Just last year, the U.S. Court of Appeals for the D.C. Circuit cautioned against a broad interpretation of the phrase “group of persons” in the Exchange Act’s definition of “exchange.”¹ The “outer boundary” of that term, the court explained, “remains murky, and vigilance is necessary to ensure the term is not

¹ *Intercontinental Exch., Inc. v. SEC*, 23 F.4th 1013, 1025 (2022).

stretched too far.”² UF agrees and is worried that, based on the Reopening Release, the court’s admonition has fallen on deaf ears.

There are far too many unanswered questions that arise from the Reopening Release, and weigh against adopting the Proposed Rule: How can a DeFi protocol be an “exchange” as that term has been generally understood? What entity or group of persons within a DeFi platform might qualify and why? What viable path might exist for DeFi stakeholders—many of whom do not know each other—to register and comply with the Commission’s Exchange Act regulations? Would DeFi businesses need to restructure themselves to ensure regulatory compliance? And, if so, would it be possible to continue to operate as a DeFi protocol following a restructuring? Or is exiting the U.S. market the only feasible option amid such uncertainty?

If adopted, UF believes that the Proposed Rule would force many DeFi businesses to face an untenable trilemma: These businesses could figure out how to restructure the DeFi protocols, or continue to operate in their current form and risk a potential enforcement action, or leave the U.S. market altogether. Rather than waiting to be regulated out of existence, DeFi businesses might be forced to recognize what others in the digital industry have been slowly realizing: Operating in the United States amid regulatory uncertainty is unsustainable. Exiting the U.S. market and operating overseas might be the only realistic option for stakeholders committed to the growth of the DeFi ecosystem. Because UF is confident that that outcome is not in our nation’s interests, it urges the Commission not to adopt the Proposed Rule, at least not as drafted.

Discussion

I. General Background

The Reopening Release confirms what multiple commenters have already flagged: The Commission’s proposed changes to the definition of “exchange” would extend the reach of the Exchange Act beyond recognition, thereby addressing a major question that Congress has yet to resolve. Until now, both Congress and the Commission have made clear that an “exchange” requires an “organization, association, or group of persons” that “constitute[s], maintain[s], or provide[s] a market place or facilities” that performs certain functions—including, but not limited to, taking orders and matching and executing trades through “established, non-discretionary methods.”³ The Proposed Rule seeks to do away with this core feature—with the element that there must be a group of “persons” that is “generally

² *Id.*

³ 17 C.F.R. § 240.3b-16(a); *see* 15 U.S.C. § 78c(a)(1).

understood” to act as a “stock exchange” would when, for example, matching orders and executing trades.⁴

The Proposed Rule seeks to cover protocols that, by their very nature, lack a defined entity using non-discretionary methods to match orders and execute trades. Although there is no formal definition of these protocols in the Proposed Rule, the Commission has expressed its intention to regulate protocols that use non-firm trading interest to bring together traders—what the Commission calls “communication” or “negotiation” protocols.⁵ Accordingly, the Commission’s proposed amendments might encompass platforms that lack the traditional hallmarks of a typical “exchange.” We say “might” because, as discussed below, the uncertainty continues to be pervasive. But one set of platforms that the Proposed Rule would seem to target—at least in certain unspecified circumstances—are DeFi protocols.

A. Decentralized Finance Protocols

DeFi protocols facilitate all sorts of economic activities and financial services on a distributed ledger (or “blockchain”) network. As relevant here, DeFi protocols establish a peer-to-peer marketplace where digital assets can be transitioned to different forms. As is the case with novel technologies, DeFi protocols evolve rapidly, and their designs can vary across competitors. Generally speaking, however, here’s how DeFi works: Liquidity providers contribute and lock up their funds in a liquidity pool in exchange for fees. When users (or “swappers”) use these funds in their transactions, fees are automatically paid to the liquidity providers through self-executing agreements called “smart contracts.” The pricing of the transactions is algorithmically pegged to the total ratio of the digital assets being processed. The idea is that swappers can alter the form of their digital assets without having to negotiate the price or even engage each other through a bid/ask feature. Rather, swappers engage with the liquidity pool, and ultimately transact with others based on the algorithmically determined price.

Put simply: DeFi protocols, in their most prominent form, operate both automatically and autonomously.

The “automatically” means that DeFi protocols rely on algorithmic processing through programming to provide pricing for the buying and selling of digital assets and to facilitate transactions. The programming consists of open-source code on the

⁴ 15 U.S.C. § 78c(a)(1) (defining “exchange” in terms of “the functions commonly performed by a stock exchange as that term is generally understood”); *accord Bd. of Trade of City of Chicago v. SEC*, 923 F.2d 1270, 1272 (7th Cir. 1991).

⁵ *See, e.g.*, Supplemental Information and Reopening of Comment Period for amendments Regarding the Definition of “Exchange,” 88 Fed. Reg. 29,448, 29,460 (May 5, 2023); Amendments Regarding Definition of “Exchange,” 87 Fed. Reg. 15,496, 15,497 n.5 (Mar. 18, 2022).

blockchain that gives rise to smart contracts. These contracts ensure that specific actions invariably take place when certain conditions are present, allowing for transactions to be automatically processed, settled, and recorded on the blockchain.

The autonomous nature of DeFi protocols arises from the lack of an intermediary or centralized entity that processes the transactions between users. And just as no one needs to process the transaction for it to occur, so too no one can prevent the transaction from happening.

In the absence of an intermediary, DeFi protocols sustain a diffused ecosystem where a large variety of stakeholders participate and coexist. In addition to supplying a platform for owners of digital assets, here are some of the numerous stakeholders that are part of the protocol stack:

- **Developers:** Write the open-source code for the smart contracts and other software features on the blockchain networks.
- **Integrators and aggregators:** Make possible cross-service interaction within the same blockchain and across networks, allowing users to access liquidity and services in multiple protocols.
- **Client Developers/maintainers:** Write open-source code to maintain blockchain networks and develop node infrastructure upholding each network.
- **Governance token holders:** Hold tokens that carry voting rights over limited matters, such as decisions concerning whether to create new fee tiers, modify existing fee structures, launch the protocol on other chains, or spend treasury funds. They cannot execute or stop any trade.
- **Liquidity providers:** Contribute and lock their funds in the liquidity pool used for transactions in exchange for fees from swappers.
- **Swappers:** Swap tokens algorithmically.
- **Validators and miners:** Verify and add transactions across blockchain networks in exchange for digital assets.
- **Cross-chain bridges:** Enable the transfer of digital assets across blockchain networks, and facilitate the passing of governance messages to reflect changes (such as updates) to be propagated across networks.
- **Wallets:** Manage the assets stored and exchanged on each blockchain network.

- Remote procedure call (RPC) endpoint providers: Give access to blockchain networks and the features therein.
- Blockchain data indexers and data infrastructure: Track, locate, and retrieve data—whether it is the record of a transaction, price of a digital asset, or balance of a particular token—on the blockchain.

To add to the mix, stakeholders can disagree on the common rules governing a specific blockchain network. And when consensus is lost, protocols might change and a new blockchain emerges with its own rules, thus creating a “fork”—more aptly called, a “hard fork.” Similarly, updates can be added to the existing blockchain to improve its functionality, leading to minor splits called “soft forks.” With each division, like a tree branching out, the DeFi ecosystem is highly dynamic by nature.

Consider the number of active developers across the top crypto ecosystems, which is an important metric in emerging platforms. As of April 1, 2023, there were approximately 21,697 monthly active developers.⁶ With respect to DeFi, approximately 3,901 were DeFi monthly active developers by the end of 2022—a 240% increase since the summer of 2020.⁷ In the past two years, between 534 and 1,108 developers continue to join DeFi every month.⁸ Of the transactions in the popular Ethereum blockchain, which has approximately half of all DeFi developers, the percentage of DeFi trades ranged from 5.6% to 11.5% between January and November 2022.⁹ And in terms of DeFi trading volume and revenue, approximately \$1.1 trillion was generated during that same time period.¹⁰

As described above, true permissionless and decentralized platforms like Uniswap (more on the Uniswap protocol below, § I.B), rely on algorithmic pricing and can be accessed through the programming of smart contracts with non-custodial wallets to swap digital assets. In contrast, centralized exchanges like Coinbase facilitate trading between fiat and digital assets through an intermediary or central entity. That entity holds custody of the funds, provides pricing for the assets being traded, matches orders, and executes, settles, and oversees the transactions. In other words, centralized exchanges are custodial in nature and do not operate neither automatically nor autonomously. In terms of the trading volume between January and May 2023, Uniswap generated approximately \$235.18

⁶ Explore, *Developer Report*, <https://tinyurl.com/5yz4hx7c>.

⁷ Electric Capital, *Developer Report: January – December 2022*, at 161, <https://tinyurl.com/mry5ttn>.

⁸ *Id.* at 164.

⁹ *Id.* at 169; The Block Research, *2023 Digital Asset Outlook Report*, at 102-103, <https://tinyurl.com/52y6tjvh>.

¹⁰ The Block Research, *supra* note 9, at 104.

billion in trading volume and Coinbase generated approximately \$206.34 billion.¹¹ Nonetheless, the average ratio of decentralized to centralized trading volume during that same time period was approximately 14%—which means that centralized exchanges still account for most of the crypto-based transactions in the market.¹²

B. The Uniswap Protocol

Uniswap—the leading DeFi protocol on the market in terms of both revenue and popularity—launched in 2018. The Uniswap Protocol consists of a suite of smart contracts that, as described above, allows users to add their tokens to the platform and transition their holdings to other assets from the relevant liquidity pool. Uniswap launched on the Ethereum blockchain, but has been deployed also on other chains like Optimism, Arbitrum, Celo, Polygon, among others.

In terms of asset pricing, the Uniswap Protocol relies on something called the “constant product formula”—an algorithm that updates the price of the assets being swapped based on the ratio of assets in liquidity pools. So, for example, when someone wants to transition from token A to token B, the cost of token B increases while the cost of token A decreases. Which means that as more token A goes into the liquidity pool, less token B comes out as the price of token B continues to increase. This formula is what makes swapping possible without an order book, user bids, negotiation among swappers, or an even an intermediary.

There are three different versions of the Uniswap Protocol that have been deployed to date—Uniswap v1 in November 2018, v2 in May 2020, and v3 in May 2021. By the end of 2022, Uniswap v3 represented approximately 59% of the DeFi market across all protocols.¹³ The Uniswap Protocol is written on open-source code, which means it is completely visible to the public and developers can adapt the protocol to launch their own projects and platforms—as they have done, creating a “hard fork” (see, e.g., Sushiswap). Indeed, most DeFi systems are forks of Uniswap.

As a true DeFi platform, no group or entity owns or controls the Uniswap Protocol. It has a decentralized governance system that revolves around the UNI token. There were approximately 1 billion UNI minted in September 2020. This system consists of a global community of governance token holders known as UNI token holders that have voting power over limited matters concerning the development and usage of the Uniswap Protocol.¹⁴ UNI token holders can vote to

¹¹ The Block, DeFi: Exchange, <https://tinyurl.com/43c6t693> (providing information on DEX volume, Share of DEX volume, and Uniswap v. Coinbase Trade Volume); *accord id.*, Markets: Spot, <https://www.theblock.co/data/crypto-markets/spot> (providing cryptocurrency monthly volume for Coinbase and others).

¹² The Block, DeFi, *supra note* 11 (providing information on DEX to CEX Spot Trading Volume (%)).

¹³ *Id.*

¹⁴ *Id.*

create protocol fee tiers (or modify existing fee structures), turn on fees, launch the protocol on other blockchain networks, or spend treasury—nothing more. Critically, they lack control over the protocol, company operations, and any transactions made through the protocol. For example, they cannot redesign the core functioning of the protocol, and can neither execute nor prevent any transaction. That is because, as a true DeFi system, Uniswap strictly adheres to the DeFi principles of “neutrality” and “trust minimization,” which ensure that governance is diffused across the community and limited to the greatest extent possible.

The decentralized governance and democratized access of the Uniswap Protocol has been key to its success. Since 2018, Uniswap has yielded over 152 million trades and \$1.4 in trade volume. With over 300 integrations of different DeFi Apps and stakeholders from all over the world, the Uniswap ecosystem has become an ever-growing network that provides a wide array of features in an open and accessible marketplace. As of April 1, 2023, Uniswap had a total of 63 monthly active developers.¹⁵ Approximately 24 of these developers worked “full time,” committing original code for the Uniswap Protocol for more than 10 days of the month—a 243% increase from two years ago.¹⁶ Also, just last month, more than 30 million active users accessed the platform, yielding a total value locked (TVL) across six blockchain networks of approximately \$4.08 billion.¹⁷ In terms of the liquidity providers’ revenue from swapping fees, Uniswap is the undisputed leading protocol with an annual revenue of \$792 million in 2022.¹⁸

C. The Uniswap Foundation

In August 2022, UNI token holders voted to approve a proposal to streamline the preexisting Uniswap Grant Program and improve the protocol’s governance system. As a result, the Uniswap Foundation (or UF) was born. UF is a Delaware-based nonprofit organization whose mission is to promote greater accessibility, efficiency, and transparency in the digital asset industry by providing funding and resources to individuals and organizations committed to the Uniswap Protocol, its ecosystem, and DeFi systems generally.

UF is deeply committed to the continued innovation of financial technologies and the existence of an open and fair ecosystem. To that end, UF awards grants across four categories: (1) protocol growth; (2) governance stewardship; (3) community growth; and (4) research and development. In FY2022, UF awarded grants to approximately 62 projects across all four categories—over half of them

¹⁵ *Supra* note 6.

¹⁶ *Id.*

¹⁷ Abiodun Oladokun, *Uniswap contributors open up discussion on deploying V3 iteration on Base*, Amb Crypto, <https://tinyurl.com/2vqx5nja> (May 19, 2023). At its peak, in November 2021, Uniswap Protocol’s TVL hit the \$10 billion mark. *Id.*

¹⁸ The Block Research, *supra* note 9, at 104.

(35) involving U.S.-based grantees. These projects included apps, tools, and events such as conferences and workshops.

UF has awarded grants to projects that support DeFi education and provide training on things like open-source programming and the technicalities of Uniswap v3 smart contract code. UF also has made it a priority to incentivize decentralization by supporting projects that explore its benefits and identify potential avenues for decentralized development in the Uniswap ecosystem and other protocols. These projects might include conferences and workshops, as well as reports providing data analyses. For example, Metagov (or the Metagovernance Project), an interdisciplinary research collective that is one of UF's grantees, has focused its efforts on developing standards and infrastructure for digital self-governance. Among other things, Metagov has helped organize the DAO Harvard Conference, which brings together an interdisciplinary set of stakeholders to discuss decentralized social technologies and the role that decentralization can play in enabling equitable forms of enterprise.

UF has supported projects targeting communities in developing countries—including competitions around the world called “blockchain hackathons” where participants use blockchain technology to solve challenges through innovative solutions, as well as workshops, bootcamps, and courses in countries like Argentina (“DeFi LATAM”); Ghana (“Ghana Crypto and DeFi Summit 2022”); Uganda (“Blockchain Club of Uganda”); India (“Blotic”); and Thailand (“Uniswap v3 Development Course”). Similarly, UF has sought to empower underrepresented and diverse communities in the United States. One such project is “Pursuit,” which seeks to develop an open-source programming course for software engineers from diverse backgrounds and low-income families so they can become contributors of Uniswap and other leading blockchain protocols. Pursuit’s mission to promote social entrepreneurship and technological innovation as a means of economic mobility for disadvantaged communities is perfectly aligned with the public goods that UF seeks to promote and maintain across DeFi platforms. Another example is “Miss O Cool Girls,” which offers educational and technical resources to girls so they can learn about DeFi and building in web3.

Ultimately, UF believes that funding and technical support can be critical to developers and early-stage technology companies in the financial services industry. UF seeks to provide that funding and support, benefiting the Uniswap global community, strengthening its ecosystem, and fostering technology leadership at home and abroad.¹⁹

¹⁹ For more information about UF's funded grants—including, a list of apps, tools, and events—see Uniswap Foundation, *Grants*, <https://tinyurl.com/ea7va3tx>.

II. DeFi Systems Yield Countless Benefits That Can Easily Vanish Under the Proposed Rule

To its credit, the Reopening Release recognizes that the Commission has limited and (arguably unreliable) data about the digital asset industry’s baseline and the full economic impact of the Proposed Rule’s amendments.²⁰ For instance, the Commission acknowledges that it “has less data on the functioning of the market for crypto asset securities” and therefore “has a greater degree of uncertainty in its analysis of the costs that the Proposed Rules would impose on market participants for crypto asset securities than it did in its discussion of costs for non-crypto asset securities.”²¹ The Commission further concedes that the “costs of compliance may be significantly higher for market participants” using DeFi protocols and smart contracts,²² but that it “lacks some information necessary to precisely estimate the degree to which these market participants may experience greater costs of compliance.”²³

The Commission’s uncertainty counsels in favor of waiting and proceeding carefully once more data and information is obtained. That additional data and information is especially critical given the many benefits that DeFi yields, which could easily vanish under the weight of new regulatory burdens and the indeterminate costs of compliance. Among those benefits are:

- *Greater and improved market access:* DeFi protocols are available 24/7, allowing individuals to swap digital assets with a single keystroke—anytime and anywhere. All that is required is an internet connection. Accordingly, individuals across the United States and the world can gain access to a large variety of financial services. DeFi protocols also eliminate some of the barriers to entry that exist with exchanges and traditional financial institutions, such as bank account requirements and geographic limitations.
- *Greater efficiency and inclusivity in financial services:* Because DeFi relies on automatization through smart contracts, it eliminates the need for an intermediary that performs the classic “exchange” function of matching orders and executing trades. That means DeFi protocols do not have an intermediary that can determine who gains access to the marketplace and whose transactions can go through. This allows for a faster settlement of ongoing transactions and vastly reduces (if not eliminates) the risk of discriminatory treatment against market participants based on their identity.

²⁰ See 88 Fed. Reg. at 29,470-90.

²¹ *Id.* at 29,474-76.

²² *Id.* at 29,486.

²³ *Id.* at 29,485-86.

- *Greater transparency, auditability, and security:* Because all transactions are recorded on the blockchain using open-source software, they can be publicly verified and audited, while simultaneously protecting personal information of users and ensuring that transactions cannot be manipulated or amended.
- *Greater democratization of financial services through diffused governance:* By eliminating the need for an intermediary, stakeholders and participants in the DeFi ecosystem are collectively accountable to each other, without having any particular person or group of persons being able to control the protocol’s existence and operations. It bears repeating that no particular entity or group has control over the asset swapping or the underlying protocol—which continues to exist on the blockchain regardless of what any market participant might do.
- *Greater liquidity and reduced “counterparty risk”:* In addition to the existence of the 24/7 marketplace, there is a potentially infinite variety of tokens that can be created and funded on the blockchain. So, the risk of illiquidity is greatly reduced. Users also maintain control over their own assets, which reduces the risk that some other party, such as the intermediary in a traditional exchange, will default.
- *Greater opportunities for financial and technological innovation through competition:* DeFi provides a fertile ground for the creation of new financial products and services in response to consumer preferences and demand. This is especially so because users can easily move their assets across protocols and blockchain networks, which means that DeFi protocols must innovate constantly to remain a viable option for consumers.

At a time when our country has experienced the crash of various banks and when the risk of capital dislocation in traditional financial institutions is ever so present, the last thing the U.S. economy needs is to eliminate a reliable alternative that yields numerous benefits and continues to spur financial innovation and technology leadership.²⁴ DeFi protocols should be allowed to develop further in the United States, which is only possible without the looming uncertainty inherent in the many gaps in the Commission’s assessment of the Proposed Rule’s economic impact. Or as Metagov, one of UF’s grantees, might put it: Regulatory certainty

²⁴ See, e.g., Adam Blumberg, Coindesk, *Crypto Is the Solution to Bank Runs, Not the Cause*, <https://tinyurl.com/4p2f7dfv> (March 23, 2023; updated May 9, 2023); Medium, *How Blockchain Could Prevent Bank Runs and Silicon Valley Bank Collapse*, <https://tinyurl.com/3nk87vvi> (March 12, 2023). For a more thorough discussion about how decentralization and blockchain technology can operate as an alternative to traditional financial institutions, see Samuel N. Weinstein, *Blockchain Neutrality*, 55 Ga. L. Rev. 499 (2021).

and collaboration between regulators and developers are necessary for experimentation and innovation to take place.

III. The Proposed Rule’s Vague Line-Drawing Deprives DeFi Systems of Much-Needed Regulatory Guidance on How the Term “Group of Persons” in the New “Exchange” Definition Applies to Them

One of the most ambiguous elements of the Proposed Rule is the lack of guidance on how the term “group of persons” in the definition of “exchange” would apply to DeFi protocols. That lack of guidance deprives market participants—including the large variety of stakeholders in the Uniswap ecosystem and even UF’s grantees—of sufficient notice on whether they will be regulated and, if so, how they could possibly comply. As a result, the Proposed Rule is both deficient as a legal and a practical matter.

First, on the law, it is well settled that regulated parties “have a due process right to fair notice of regulators’ requirements.”²⁵ Regulators must speak with “ascertainable certainty.”²⁶ Or as the Supreme Court put it, “precision and guidance are necessary so that those enforcing the law do not act in an arbitrary or discriminatory way.”²⁷ Only by “know[ing] what is required of them,” could private parties be expected to “act accordingly.”²⁸ In the absence of such precision and guidance from the regulator, private parties have no choice but to “divine the agency’s interpretations in advance or else be held liable when the agency announces its interpretations for the first time in an enforcement proceeding.”²⁹ This is especially problematic in light of the D.C. Circuit’s admonition that a broad interpretation of the term “group of persons” in the definition of “exchange” would cause further uncertainty surrounding an already “murky” term.³⁰

The Proposed Rule and the Reopening Release fall far short of providing the required notice, precision, and guidance. Not only did the Reopening Release fail to clarify that DeFi protocols, in their most prominent form, are excluded from the Proposed Rule. But also, the Reopening Release tentatively states that the Commission “preliminarily believes” that the Proposed Rule would capture “some

²⁵ *Fortyone v. City of Lomita*, 766 F.3d 1098, 1105 (9th Cir. 2014).

²⁶ *Knapp v. U.S. Dep’t of Agric.*, 796 F.3d 445, 457 (5th Cir. 2015); *Gen. Elec. Co. v. EPA*, 53 F.3d 1324, 1329 (D.C. Cir. 1995).

²⁷ *FCC v. Fox Television Stations, Inc.*, 567 U.S. 239, 253 (2012).

²⁸ *Id.*; see *Grayned v. City of Rockford*, 408 U.S. 104, 108 (1972) (“[B]ecause we assume that man is free to steer between lawful and unlawful conduct, we insist that laws give the person of ordinary intelligence a reasonable opportunity to know what is prohibited, so that he may act accordingly.”); *Alaska Prof’l Hunters Ass’n v. FAA*, 177 F.3d 1030, 1035 (D.C. Cir. 1999) (“Those regulated by an administrative agency are entitled to know the rules by which the game will be played” (internal quotation marks omitted)).

²⁹ *Christopher v. SmithKline Beecham Corp.*, 567 U.S. 142, 159 (2012).

³⁰ *Intercontinental Exch.*, 23 F.4th at 1025.

so-called ‘DeFi’ systems,” with little guidance as to which systems will be newly captured—or even who within those systems would be subject to regulation and why.³¹ The lack of precision and guidance is understandable given that, by its own admission, the Commission “is uncertain as to the range of specific communication protocols used for trading crypto assets,” and “lacks information on the entities involved providing New Rule 3b-16(a) Systems in the market for crypto asset securities,” (whichever those may be).³²

Second, as a practical matter, the lack of precision and guidance on the threshold issue of what “group of persons” qualifies as an “exchange” puts DeFi protocols in a bind. Users and stakeholders in DeFi systems have no principled roadmap to determine who must (or even should) undertake the regulatory burdens and responsibilities. The confusion stems from the Commission’s unsupported suspicion that there must be a “group of persons” in each DeFi system that is pulling the strings of the operation—one that has sufficient control over the protocol and is capable of being held “collectively responsible for ensuring that the[re is a] designated member of the group [that] fulfills its regulatory responsibilities” and “registration requirements.”³³

The unknowns from the Proposed Rule are pervasive, and affect everyone along the development stack described above. Given that different stakeholders have varied interactions with the DeFi protocol and the transactions that take place, there is no way of knowing which entity or “group of persons” performs the functions of an “exchange.” The term “group of persons” is simply too vague and abstract to require registration in this context where stakeholders work alongside each other to support the DeFi ecosystem—including, client developers and maintainers, aggregators and integrators, validators and miners, wallets, cross-chain bridges, RPC endpoint providers, data indexers, and those more directly tied to each specific protocol like protocol developers, governance token holders, liquidity providers, and swappers. It is also unclear how any of these stakeholders—many of which do not know each other—would be able to coordinate their registration and provide a viable path to compliance to the DeFi protocol. Nor is it clear how these stakeholders, whose work often spans across various protocols and blockchains, are expected to comply with the Commission’s regulatory oversight and requirements.

What’s clear is that none of the “groups” in the DeFi ecosystem has control over the protocol’s core functioning once it is written and released. Nor do they have control over the transactions made in the blockchain. That is true of the developers—the approximately 4,000 DeFi monthly active developers in December

³¹ 88 Fed. Reg. at 29,453; *accord id.* at 29,451 (“The Commission preliminarily believes that some amount of crypto asset securities trade on New Rule 3b-16(a) Systems, and that such systems may use DLT or be ‘DeFi’ trading systems, as described by some commenters.”).

³² *Id.* at 29,474.

³³ *Id.* at 29,455 n.70.

2022 (or the more than 500 that join DeFi every month).³⁴ Imposing regulatory burdens on any of these stakeholders based on their writing and releasing of open-source code in the blockchain would raise significant First Amendment concerns. After all, computer programming is a form of communication that is constitutionally protected.³⁵ It is also true of the governance token holders, whose control and authority is limited to certain aspects relating to protocol fees, such as their activation or creation of tiers, and treasury expenditures. Like the developers, these token holders cannot interfere with the protocol's existence, or its automatic and autonomous operation. The Reopening Release adds to the confusion, listing some factors that governance token holders can consider when assessing whether they are part of the “group of persons” that qualifies as an “exchange” without explaining how those factors would be weighed to make that determination.³⁶

The confusion across DeFi stakeholders along the development stack is well justified. The Commission already announced that it takes an “expansive view” of what qualifies as a “communication protocol,” and that it will apply a functional and totality-of-the-circumstances approach in each case to determine a platform’s “exchange” status.³⁷ At the same time, however, the Commission concedes that it lacks information about the range of DeFi protocols, their structure, and ability to comply with the Commission’s regulatory requirements and oversight. Similarly, the Commission’s practice and enforcement history does not help given that DeFi protocols are drastically different from the typical “exchange” that has been the longstanding subject of regulation. Add to this lack of precedent Congress’s silence on the major questions of whether the Exchange Act extends to the digital assets industry—and, if so, to which groups or entities within that industry.³⁸

The shifting and inconsistent views within the Commission on these major questions do not help either. In August 2021, Chair Gensler noted that the Commission “need[ed] additional congressional authorities to prevent transactions,

³⁴ Electric Capital, *supra* note 7, at 161, 164.

³⁵ See, e.g., *Universal City Studios Inc. v. Corley*, 273 F.3d 429, 449 (2d Cir. 2001); *Junger v. Daley*, 209 F.3d 481, 485 (6th Cir. 2000); *Karn v. U.S. Dep’t of State*, 925 F. Supp. 1, 9 (D.D.C. 1996). Commissioner Peirce agrees, stating that the Reopening Release’s “ambiguity undermines fundamental First Amendment protections.” Commissioner Hester M. Peirce, *Rendering Innovation Kaput: Statement on Amending the Definition of Exchange*, <https://tinyurl.com/5n98zm83> (August 14, 2023).

³⁶ The factors, which are buried in a footnote, consist of: the number of total token holders; the size of their holdings; the parameters the governance tokens are set to control; among other unspecified things. See 88 Fed. Reg. at 29,455 n.68.

³⁷ 87 Fed. Reg. at 15,507.

³⁸ Where, as here, a federal agency seeks to assert “unheralded regulatory power over a significant portion of the American economy,” a major question is presented that one must presume Congress intended to resolve itself. *West Virginia v. EPA*, 142 S. Ct. 2587, 2608-09 (2022) (internal quotation marks omitted).

products and platforms from falling between regulatory cracks,” and be able to oversee DeFi and the crypto market.³⁹ The Proposed Rule marks a dramatic departure from that statement. And so, in less than two years, we have gone from a public acknowledgment that “[t]here’s a gap in our system” that only Congress could address because “[t]here is no federal authority to actually bring a regime to the crypto exchanges,”⁴⁰ to statements that “the law is clear” that crypto exchanges “must come into compliance [and] register” with the Commission.⁴¹ The Commission cites nothing that changed in the law to prompt this radical shift in position—indeed, nothing did. But the result is that stakeholders in the digital asset industry are being forced to navigate a complex regulatory framework without much, if any, guidance, thus facing the suboptimal reality of regulation through enforcement. The Proposed Rule’s lack of clarity and guidance for DeFi protocols does little to address that reality.

The inconsistency is also reflected across federal agencies. One court put it best when it stated that “regulators themselves cannot seem to agree as to whether cryptocurrencies are commodities ... or whether they are securities ... or neither, or even on what criteria should be applied in making the decision.”⁴² If the “current regulatory environment” is “uncertain” as to what law and regulatory framework should apply, “the future regulatory environment can only be characterized ... as virtually unknowable.”⁴³ To be sure, the courts are not alone in their assessment of the current situation. Members of the Commission and Congress have expressed similar concerns about the ongoing uncertainty.⁴⁴

³⁹ Thomas Franck, *The SEC needs more power from Congress to fully regulate crypto*, Chair Gensler says, CNBC (Aug. 3, 2021), <https://tinyurl.com/ymaevm5j>.

⁴⁰ Youtube, *Watch CNBC’s full interview with SEC Chair Gary Gensler* (May 7, 2021), <https://tinyurl.com/bdfx25yy>; accord Bernice Napach, *SEC’s Gensler: Crypto Trading Needs More Federal Oversight*, Think Advisor (May 10, 2021), <https://tinyurl.com/yc6f74vp>; see also *Game Stopped? Who Wins and Loses When Short Sellers, Social Media, and Retail Investors Collide*, Part III (107th Cong. 12) (2021) (statement of SEC Chair Gary Gensler), <https://tinyurl.com/mpvrm8sk> (“I do think that working with Congress, and I think it’s only Congress that could really address it, it would be good to consider ... whether to bring greater investor protection to the crypto exchanges.”); Youtube, *SEC Chair Gary Gensler testifies at House hearing on GameStop* (May 6, 2021), <https://tinyurl.com/3jmmuwpm>.

⁴¹ Ari Levy & MacKenzie Sigalos, *SEC’s Gensler says ‘the law is clear’ for crypto exchanges and that they must comply with regulators*, CNBC (April 27, 2023), <https://tinyurl.com/nhztncp>.

⁴² *In re Voyager Digit. Holdings, Inc.*, 649 B.R. 111, 119 (Bankr. S.D.N.Y. 2023).

⁴³ *Id.*

⁴⁴ See, e.g., Peirce Statement, *supra* note 35 (“This [Reopening] release articulates confusing and unworkable standards for decentralized activity, participants in that activity, and providers of the underlying technologies.”); *Oversight of the SEC: Hearing Before the Fin. Serv. Comm.*, 118th Cong. (Apr. 18, 2023) (Chairman Patrick McHenry to SEC Chair Gensler, “You have failed to provide clarity on how digital asset firms should adhere. You

Given all this, DeFi stakeholders are left to guess which “group of persons” would qualify as a “New Rule 3b-16(a) System” under the Commission’s concededly “expansive view” of an “exchange.” That is not legal and it is not fair.

IV. The Proposed Rule’s Vague Line-Drawing Jeopardizes the Continued Operation of DeFi Systems in the United States and Threatens to Stifle Innovation

The Proposed Rule, if adopted, would be a step in the wrong direction—one with potentially irreversible effects to the economy and technological innovation. We agree with Commissioner Peirce that, with this release, the Commission has proposed “to embrace stagnation, force centralization, urge expatriation, and welcome extinction of new technology.”⁴⁵

It is well known that digital asset firms and DeFi stakeholders have become increasingly wary and reluctant to navigate an uncertain regulatory framework filled with indeterminate burdens and compliance costs. In a recent joint hearing of the digital assets subcommittees of the House Agriculture and House Financial Services committees, Congressman French Hill aptly explained that the digital asset industry currently faces “an impossible situation,” that ultimately will “push[] entrepreneurs, developers, and job creators offshore.”⁴⁶

The Reopening Release has exacerbated these concerns. Real-world evidence confirms that an uncertain legal framework will push businesses to exit the U.S. market; and, for those DeFi protocols that decide to stick around, that same uncertainty might well be their death knell. Either way, there is no denying that the Proposed Rule’s adoption carries a significant risk that investors and the U.S. economy might be harmed, and that the United States’ competitive position as the global leader in financial innovation and technological leadership might be irreparably undermined.

Forced Expatriation. Some digital asset firms have already left the United States amid the current regulatory uncertainty. One such firm is Bittrex, a top 25 platform that processed an average daily transaction volume of \$23 million.⁴⁷ Bittrex left the market because, in the words of its CEO, it was “just not economically viable for us to continue to operate in the current U.S. regulatory and

are punishing these firms for failing to apply to these laws, without knowing how they apply.”).

⁴⁵ Peirce Statement, *supra* note 35.

⁴⁶ Youtube, *Hearing Entitled: The Future of Digital Assets: Identifying the Regulatory Gaps in Digital Asset Market Structure* (Apr. 27, 2023), <https://tinyurl.com/4tb8sej6>; Digital Asset Market Structure Regulatory Gaps: Hearing before the H. Fin. Servs. Subcomm. on Dig. Assets, Fin. Tech. & Inclusion (Apr. 27, 2023).

⁴⁷ Abdelaziz Fathi, *Crypto Exchange Bittrex Exits US Market Amid Regulatory Woes*, Finance Feeds (Apr. 1, 2023), <https://tinyurl.com/mv3kjfwv>.

economic environment,” where the “[r]egulatory requirements are often unclear and enforced without appropriate discussion or input, resulting in an uneven competitive landscape.”⁴⁸ Another example is the crypto lending platform Nexo, which exited the U.S. market and has already replaced its lost market share with growth in the Middle East, North Africa, and Southeast Asia.⁴⁹ The same is true for major market makers like Jane Street Group and Jump Crypto, which attribute their scaling back and gradual withdrawal to the Commission’s unpredictable crackdown on digital asset trading.⁵⁰ Each of these has found that operating in the United States was no longer feasible should they wish to survive. Other companies like Optimism, Worldcoin, and The Graph have raised hundreds of millions of dollars and established their own foundations overseas—unlike Uniswap Labs and UF, both of which are based in the United States.⁵¹ Similarly, companies like Ripple have been expanding to other jurisdictions that are more hospitable, as these companies have come to realize that the ongoing confusion and regulation by enforcement is unsustainable.⁵² And giants like Coinbase and Binance have announced that they are considering exiting the U.S. market and moving to the United Kingdom.⁵³

Meanwhile, jurisdictions across Latin America, Europe, and Asia have been developing legal frameworks to attract U.S.-based businesses. Just last month, for example, the European Union approved a comprehensive set of regulations to govern digital assets uniformly across all EU states.⁵⁴ That has allowed countries like France to invite crypto businesses to leave the United States and move there.⁵⁵ Similarly, countries like the United Kingdom, Switzerland, Australia, United Arab

⁴⁸ *Id.*

⁴⁹ Jeff Wilser, *US Crypto Firms Eye Overseas Move Amid Regulatory Uncertainty*, Coindesk: Consensus Magazine (Mar. 27, 2023), <https://tinyurl.com/2s4x6p5d>; Gabrielle Saulsbery, *Nexo to exit US market after regulator talks hit dead end*, Banking Dive (Dec. 6, 2022), <https://tinyurl.com/2p9au5dx>.

⁵⁰ Aditya Anand, *US Regulatory Crackdown Prompts Jane Street And Jump Crypto To Exit*, Coin Edition (May 10, 2023), <https://tinyurl.com/ytxvk5wb>; Wayne Duggan, *June 2023 Crypto Market Forecast*, Forbes: Advisor (June 1, 2023), <https://tinyurl.com/2p8zn6am>.

⁵¹ See, e.g., Optimism, *What is the Optimism Foundation?*, <https://tinyurl.com/uw4vfb9u> (Foundation established in the Cayman Islands); Worldcoin, *A primer on decentralization at Worldcoin*, <https://tinyurl.com/223uzkyf> (same); The Graph Foundation, <https://tinyurl.com/2ymbknkx> and <https://tinyurl.com/ya7cvsex> (same); see also Brandy Betz, *Sam Altman’s Crypto Project Worldcoin Raises \$115M, Led By Blockchain Capital*, Coindesk (May 25, 2023), <https://tinyurl.com/4kasawet>.

⁵² Sheila Chiang, *Ripple CEO says more crypto firms may leave U.S. due to ‘confusing’ rules*, CNBC (May 18, 2023), <https://tinyurl.com/44zpnj33>. Anand, *supra* note 50.

⁵³ Emily Nicolle, *Coinbase CEO Won’t Rule Out Relocating Company Away From US*, Bloomberg (Apr. 18, 2023), <https://tinyurl.com/y5kpusam>; Duggan, *supra* note 50.

⁵⁴ Rhadika Parashar, *France Extends Invitation to Crypto Firms Looking to Exit US’ Loose Crypto Ecosystem*, Gadgets 360 (May 17, 2023), <https://tinyurl.com/32wmp3s6>.

⁵⁵ *Id.*

Emirates, Singapore, India, China, Ukraine, and others in Latin America and Africa have strengthened their competitive position vis-à-vis the United States, attracting DeFi stakeholders and crypto businesses to capture blockchain development share from the United States.⁵⁶ Indeed, the United States has lost approximately 2 percent market share per year since 2017, coming down last year to its all-time low of a 29% market share, thus being tied with Europe.⁵⁷ And with respect to DeFi in particular, the Cayman Islands has embraced businesses (including foundations) looking to expand their growth in financial innovation and blockchain technology by offering a clear regulatory framework and striking a healthy balance between legal certainty and investor protection.⁵⁸

Forced Centralization. The Commission acknowledges that DeFi protocols that do not exit the U.S. market may find it necessary “to restructure their technology to facilitate a lower compliance cost ... with the applicable regulations,” and that such restructuring “may result in significant alteration to the manner in which such systems operate.”⁵⁹ But this approach is counterintuitive at best and potentially destructive to the future of DeFi in the United States. The Commission is effectively signaling that centralization may be the only way to comply with its registration requirements and accompanying regulatory oversight. After all, the Reopening Release does not hide the ball when it advises DeFi stakeholders—particularly, governance token holders—“to form an organization or association, or to designate a member of a group of persons, which would be responsible for undertaking the activities necessary to bring the New Rule 3b-16(a) System into compliance.”⁶⁰

The Commission’s centralization proposal threatens the benefits that DeFi systems yield and exposes investors to greater security risks and financial hacks.⁶¹ More importantly, the Commission’s proposal would effectively ban DeFi systems in the United States. As explained above, there is no particular entity or group of persons that has control over the code in the blockchain’s open-source projects and

⁵⁶ See, e.g., Geographic Data, *Developer Report*, <https://tinyurl.com/5a355355>; Biman Mukherji, *Singapore, Hong Kong could emerge as crypto hubs as US cracks down on industry*, South China Morning Post (June 4, 2023), <https://tinyurl.com/ttdn36bk>; Sam Jones, *Switzerland’s crypto valley looks past cold market winds*, Financial Times (June 6, 2022), <https://tinyurl.com/45aww5h5>.

⁵⁷ Geographic Data, *supra* note 56.

⁵⁸ See Micah Abiodun, *How did the Cayman Islands Embrace DAOs?*, Cryptopolitan (June 8, 2023), <https://tinyurl.com/5n6r9eej>.

⁵⁹ 88 Fed. Reg. at 29,485; *id.* at 29,486 (“The Commission additionally believes that many systems that would experience these higher costs could be restructured to make less extensive use of these novel technologies, although this could significantly reduce the extent to which these systems operate in accordance with ‘DeFi’ principles.”).

⁶⁰ *Id.* at 29,483.

⁶¹ See Joe Uchill, *Centralization, ironically, most common cause of decentralized finance hacks*, SC Media (Jan. 19, 2022), <https://tinyurl.com/2km67brb>.

over its application to future swapping activity. Nor is there any mechanism in the DeFi system permitting stakeholders to assume such control, since that would be antithetical to the basic tenets of a DeFi protocol designed to operate both automatically and autonomously. Indeed, once designed and deployed, the Uniswap Protocol's core functioning cannot be revised or changed. That remains true even if someone can gather a large number of UNI tokens, since the voting rights are purposely limited to ancillary issues unrelated to the protocol's core functioning. And it also remains true even if all Uniswap developers were to stop development. In either circumstance, the smart contracts would continue to run on the various blockchains—whether it is Ethereum, Optimism, Arbitrum, Celo, or Polygon.

Given the risk that forced centralization would cause DeFi protocols to be regulated out of existence, expatriation seems the most likely choice.

The Effects. The forced expatriation and centralization of DeFi protocols likely will stifle innovation, deny the U.S. economy of a novel and revolutionary technology, and weaken the role of the United States as a global leader in financial innovation at a time when such leadership is a competitive and national security imperative.⁶²

Without the DeFi industry, the U.S. financial services sector would be deprived of any new technological development that will take place offshore. Access to emerging techniques of DeFi protocol development might be curtailed, and the options for financial markets, products, and services may be limited significantly. Therefore, far from encouraging innovation and competition, the Proposed Rule runs the risk of further entrenching traditional and centralized financial systems to the detriment of investors and the economy. Other countries may become crypto hubs and replace the United States as the current leader for DeFi protocols.

These harms are no small matter. To be clear, DeFi protocols will continue to thrive across blockchain networks in perpetuity, regardless of what the Commission's regulatory efforts might accomplish. The question is who will benefit from that DeFi protocol development. Pushing DeFi businesses out—or regulating them out of existence—would reduce the ability of the U.S. government to make sure that its interests are adequately represented and safeguarded in the global financial infrastructure. Also, more foreign stakeholders will compete for funding and R&D grants, undermining the technological progress at home. Given these serious harms, the Commission should reconsider adopting a Proposed Rule that is contrary to President Biden's executive order on digital assets, which calls for "ensuring that [the United States] remains at the forefront of responsible

⁶² For more detailed discussion of the risks of regulatory uncertainty in pushing crypto businesses overseas, see Jack Solowey and Jennifer J. Schulp, *We Need Regulatory Clarity to Keep Crypto Exchanges Onshore and DeFi Permissionless*, Cato Institute (May 10, 2023), <https://tinyurl.com/3v4939dn>.

development and design of digital assets and the technology that underpins new forms of payments and capital flows in the international financial system.”⁶³

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UF strongly supports the Commission’s goals of striving “towards greater efficiency through competition and transparency.”⁶⁴ Doing so would assure that the United States is at the helm of DeFi’s global paradigmatic shift in providing financial services. To do so, however, the Commission should abandon the Proposed Rule as currently drafted, obtain additional information and data to fill in the gaps in its Reopening Release, and decide whether to await a clear congressional directive on how to regulate the digital asset industry or propose a separate rule that provides much-needed guidance to DeFi protocols on how to navigate the current legal framework.

Thank you, again, for the opportunity to comment on the Proposed Rule and the Reopening Release. If the Commission staff has any questions about this letter, please feel free to reach out to me at devin@uniswapfoundation.org, or either to Josh Rosenkranz at jrosenkranz@orrick.com, or David McGill at dmcgill@orrick.com, of Orrick, Herrington & Sutcliffe LLP, outside counsel to the Uniswap Foundation.

Sincerely,



Devin Walsh
Executive Director
Uniswap Foundation

Cc: Gary Gensler, Chair
Hester M. Peirce, Commissioner
Allison Herren Lee, Commissioner
Caroline A. Crenshaw, Commissioner

⁶³ The White House, *Executive Order on Ensuring Responsible Development of Digital Assets* (Mar. 9, 2022), <https://tinyurl.com/e68k7sp6>.

⁶⁴ Gary Gensler, *Prepared Remarks: “Dynamic Regulation for a Dynamic Society” Before the Exchequer Club of Washington, D.C.*, SEC (Jan. 19, 2022), <https://tinyurl.com/49w5dfmt>.