

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

***Re: Release No. 34-94062; File No. S7-02-22  
Proposed Amendments to Exchange Rule 3b-16***

Dear Ms. Countryman:

Delphi Digital (“*Delphi*”) submits this comment letter<sup>1</sup> in response to the above-referenced proposal by the U.S. Securities and Exchange Commission (the “**Proposed Amendments**”), which would revise certain terms used in the statutory definition of an “exchange” under Section 3(a)(1) of the Securities Exchange Act of 1934 (the “**Exchange Act**” or “**34 Act**”), 15 U.S.C. §78c(a)(1). While the stated purpose of the proposed amendment is trading in Government Securities, the proposal as currently drafted sweeps much more broadly, and, if enacted in its current form, would have a grave and chilling effect on technological innovation and commerce in digital assets. Delphi provides the comments below to express its concern over the language of the Proposed Amendments and, in particular, the concept of a “communication protocol” as currently proposed.<sup>2</sup>

The introductory portion of the Commission’s Proposed Amendments carefully traces how the present proposal grew out of a September 2020 Proposal to Amend Regulation ATS and Regulation SCI for Government Securities, and from an accompanying Concept Release by the Commission. That 2020 Proposal and Concept Release were focused on trading in government securities instruments and in fixed income electronic trading platforms, respectively. While this focus certainly falls within the Commission’s remit, terminology within the 654 page release muddies the waters in troubling ways.

The Commission’s Proposed Amendments do not make one single reference to cryptocurrencies, decentralized finance (“*DeFi*”), financial technology (“*FinTech*”), blockchain, or the like. Nevertheless, because the proposal can be read to require open-source software developers and others involved in “communication protocols” to register as broker-dealers or exchange operators, it has significant potential implications that are of great concern among the communities that Delphi serves. Of special concern is the risk that the Proposed Amendments, if adopted in their current form, may constitute a *de facto* prohibition on many open-source software systems operated on global, peer-to-peer, decentralized networks such as Bitcoin and Ethereum<sup>3</sup>. We do not believe that this technology can or should be outlawed by the unelected staff of a single nation, without a single national legislature ever weighing in on the subject.

Compliance by software developers, data analytics providers and other technologists with the rules applicable to broker-dealers and exchange operators would be a daunting prospect, if not an impossible one. The process of registering and then operating lawfully as an exchange or as a broker-dealer is onerous, time-consuming, and expensive. Typically, it requires the assistance of counsel and the expenditure of

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<sup>1</sup> We are indebted to Stephen Palley at Anderson Kill, for his assistance preparing this comment letter.

<sup>2</sup> This comment is intended to directly address, among other things, Requests for Comment (“RFQ”) 1 through 11 on pages 63 to 64 of the proposal. Delphi does not believe that Exchange Act Rule 3b-16 should be amended as proposed.

<sup>3</sup> Note that both Bitcoin and Ethereum were opined by the SEC’s Corporate Finance division to be “sufficiently decentralized” to avoid regulation under the U.S. federal securities laws. See William Hinman, Dir. of the Div. of Corp. Fin., Sec. & Exch. Comm’n, Digital Asset Transactions: When Howey Met Gary (Plastic), June 14, 2018, available at <https://www.sec.gov/news/speech/speech-hinman-061418>

countless hours and millions of dollars, including ongoing reporting and supervision requirements. Yet these requirements – which make sense in traditional “market places” – make no sense when applied to software protocols that involve trading without a financial intermediary (peer-to-peer transactions) and (in some cases) even without a human counterparty (user-to-smart-contract transactions). In these contexts, a given protocol or website may be created by as few as one person, and operated autonomously, without human oversight and without even generating revenue. Here, the risks are not fiduciary, but technological. Instead of raising questions around trust in, solvency of and legal enforcement of rights against intermediaries and counterparties, risk analysis for these new systems involves questions such as “Is this software properly designed?” and “What other software systems does this software depend on, and under what conditions could a failure in those systems cause a failure of this software?” The registration, disclosure and supervision requirements imposed on regulated intermediaries simply do not make sense here, and in many circumstances would be impossible to satisfy even for well-capitalized parties who wish to comply with the law.

For these and other reasons, Delphi has significant concerns about the Proposed Amendments. As experts in the research, development and investment in DeFi technologies, we recognize that they present significant risks; however, as we will show, these are not risks that the Proposed Amendments or the SEC’s current approach to regulating exchange operators or broker-dealers will address. By the same token, we recognize that the Proposed Amendments, by threatening to saddle DeFi developers and other “communications protocol” technologists with ill-fitting and onerous regulatory burdens, could drive them into anonymity, secrecy, and unwillingness to engage with regulators – causing “race to the bottom” effects that would only exacerbate the unique risks of DeFi while depriving the mainstream U.S. economy of the major opportunities DeFi offers.

## I. Delphi’s Interest in the Proposed Amendments

“Delphi Digital” is a collaborative association researching, developing and investing in technologies at the cutting edge of the digital economy. Delphi’s global team includes a broad range of talent from economists, quantitative analysts, and developers, to lawyers and UX designers dedicated to building the future of the digital economy and helping people realize its potential.

We at Delphi firmly believe that the technologies underpinning the digital economy, by their nature, can significantly advance the Commission’s policy goals of transparency and real-time disclosure practices. We believe that emerging best practices in the sector, supported by well-tailored regulation, can achieve these goals. Delphi’s deep engagement in the digital asset space forms the impetus for Delphi’s submission of this comment letter.

## II. Stock Exchanges, Digital Asset Exchanges and the SEC

### A. Regulation of Stock Exchanges under the Securities Exchange Act of 1934

Section 3(A)(i) of the Exchange Act defines an “exchange” as “any organization, association or group of persons that constitutes, maintains, or provides a market place or facilities for bringing together purchasers and sellers of securities, or for otherwise performing with respect to securities the functions performed by a stock exchange as that term is generally understood, and includes the market place and the market facilities maintained by such exchange.” 15 U.S.C. § 78c.

The SEC, through Exchange Act Rule 3b-16, 17 CFR §240 3b-16, has long enshrined Congress’s intended scope of the Exchange Act by finding an “exchange” to be present only if the relevant organization, association or group of persons brings together the “orders for securities of multiple buyers and sellers” by using “established, non-discretionary methods...under which such orders interact with each other, and the buyers and sellers entering such order agree to the terms of a trade,” In other words, Congress passed, and

the SEC has historically enforced, a law regulating marketplaces where parties negotiate and enter into contracts of sale for securities via the making and matching of orders. As stressed by the SEC itself, the hallmarks of exchange activity of the kind intended to be regulated by the Exchange Act are “matching counterparties’ orders, executing trades, operating limit order books, and facilitating active price discovery.”<sup>4</sup> As contemplated by Congress and the SEC, the marketplaces exhibiting these characteristics are ones owned or controlled by a specific organization, association or group which admits “members” who typically trade on behalf of others. The relevant regulations thus assume that there exists an owner/operator of the exchange responsible for “facilitating the direct transfer of information between buyer and seller” so as to enable the two parties “to negotiate and consummate purchases” of securities.<sup>5</sup>

On December 22, 1998 the SEC adopted Regulation ATS,<sup>6</sup> and related rule amendments primarily to exempt certain securities trading systems from full exchange compliance obligations while still providing regulatory oversight and transparency. In its adopting release, the SEC explained its primary goal in passing Regulation ATS to be the reduction or prevention of market fragmentation. Thus, the Regulation ATS regime is primarily designed to require a measure of public transparency into the trading activity occurring on alternative trading systems. In the SEC’s own words, Regulation ATS was adopted because the relevant markets were “private, available only to chosen [subscribers, and [run by] broker-dealers [rather than SROs]],” a situation which, in the absence of Regulation ATS, would “create disparities that affect investor protection and the operation of markets as a whole.” This led the SEC to include the following categories of requirements in Regulation ATS to address these issues:

- Broker-Dealer Registration. The owner/operator of the ATS must register with the SEC as a broker-dealer under s. 15 of the Exchange Act and thus be subject to FINRA membership requirements and oversight.
- Operating Report. The owner/operator of the ATS must file and keep up to date an “operating report” with the SEC which includes a detailed description of operations, prospective subscribers, and securities it intends to trade, as well as procedures for reviewing systems capacity and security and contingency planning.
- Order Display and Execution Access; Fair Access The owner/operator of an ATS meeting relevant thresholds must disclose its best priced orders on covered securities to a national securities exchange to be made available in quotation data of the exchange and provide the ATS’s subscribers with equivalent access, and establish reasonable written access standards.
- Fees. The owner/operator of an ATS is required to charge fees consistent with equivalent access requirements and within the guidelines established by applicable SROs.
- Capacity, Integrity and Security of Automated Systems. The owner/operator of an ATS meeting certain thresholds must establish detailed technical standards and processes.
- Miscellaneous. The owners/operator of an ATS must put in place adequate safeguards on confidentiality of trades, must maintain records establishing an audit trail of transactions, and must file quarterly reports with and be subject to oversight by the SEC and an applicable SRO.

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<sup>4</sup> Securities Exchange Act Release No. 40760 (December 8, 1998), 63 FR 70844, 70863 (December 22, 1998) (Regulation of Exchanges and Alternative Trading Systems) (“Regulation ATS Adopting Release”)

<sup>5</sup> LTV Fed. Credit Union v. UMIC Gov’t Sec., Inc., 523 F. Supp. 819, 824 (N.D. Tex. 1981), aff’d, 704 F.2d 199 (5th Cir. 1983).

<sup>6</sup> Mark Klock, *The Sec’s New Regulation Ats: Placing the Myth of Market Fragmentation Ahead of Economic Theory and Evidence*, 51 Fla. L. Rev. 753 (1999)

As can be seen, these requirements, including as they have been modified in subsequent years and are proposed to be modified by the Proposed Amendments, are clearly focused on adding legal counterbalances to the fact that ATSSs are:

- privately owner/operated;
- not visible (in order data, trade data) to the general public and major exchanges;
- not available to be used by all general market participants (e.g., retail traders);
- hosted on centralized infrastructure and thus subject to arbitrary architectural changes as well as episodic arbitrary interventions (e.g., transaction ordering, censorship, etc.) at the discretion of the owner/operator of the exchange;
- run for the profit of the owner/operator of the exchange, who receives fees; and
- not intrinsically geared toward auditability.

As will be seen, these premises, the risks ATSSs carry, and the remedies that are prescribed for them, do not apply to Automated Market Makers (“AMMs”). Thus, there is no rational basis for requiring providers of “communications protocols” involved in AMMs to register under Regulation ATS.

#### B. The SEC’s Historical Approach to Regulating Digital Asset Exchanges

The SEC’s earliest foray into the regulation of digital asset exchanges under the securities exchange framework was the investigation and consent order against Zachary Coburn<sup>7</sup> as the owner/operator of EtherDelta, a purported “decentralized digital asset exchange” (“DEX”) for secondary market trading of ERC20 tokens.<sup>8</sup> This action was brought against Mr. Coburn as an individual (not a well-capitalized business) long after he had ceased operating the relevant exchange and was never ruled upon by any court at any stage. Although it is not binding legal precedent, the SEC’s settlement announcement articulates the Commission’s reasoning, focusing on the traditional securities exchange framework as set forth above, and for years has been used by industry participants to delineate the types of digital asset exchange infrastructure which may lend itself to the SEC’s regulatory authority to the extent that the digital assets traded thereon constitute securities.

EtherDelta provided an interface that resembled online securities trading platforms, where users could enter orders to buy or sell specified quantities of digital assets at a specified price and with a specified time-in-force. EtherDelta brought together orders by receiving and storing orders in a centralized order book and displaying the top 500 orders (including token symbol, size, and price) as bids and offers on the EtherDelta website. EtherDelta further provided the means for these orders to interact and execute through the combined use of the EtherDelta website, order book, and pre-programmed trading protocols defined in the EtherDelta smart contracts.<sup>9</sup> Tokens listed on the EtherDelta platform were found to be securities under a *Howey* analysis.<sup>10</sup>

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<sup>7</sup> *In the Matter of Zachary Coburn, Respondent.*, Release No. 84553 (Nov. 8, 2018), available at <https://www.sec.gov/litigation/admin/2018/34-84553.pdf>.

<sup>8</sup> ERC20 tokens are blockchain-based assets that have value and can be sent or received. Instead of operating on their own blockchain, ERC20 tokens are issued on the Ethereum network. See <https://www.investopedia.com/news/what-erc20-and-what-does-it-mean-ethereum/>

<sup>9</sup> A “smart contract” is computer code on a blockchain system which verifiably executes a specific function, providing users strong assurances that code they choose to run will operate on a distributed network without third-party interference.

<sup>10</sup> See *Securities and Exchange Commission v. W. J. Howey Co.*, 328 U.S. 293 (1946)

After EtherDelta, the Commission issued its *Statement of Digital Asset Securities Issuance and Trading*.<sup>11</sup> According to the Commission, regardless of an entity's self-characterization, "a functional approach (taking into account the relevant facts and circumstances) will be applied when assessing whether a system constitutes an exchange." The Commission provided the following guidance that reemphasized its analysis pertaining to the function test:

The activity that actually occurs between the buyers and sellers—and not the kind of technology or the terminology used by the entity operating or promoting the system—determines whether the system operates as a marketplace and meets the criteria of an exchange under Rule 3b-16(a). For instance, the term "order" for purposes of Rule 3b-16 is intended to be broadly construed, and the actual activities among buyers and sellers on the system—not the labels assigned to indications of trading interest—will be considered for purposes of the exchange analysis.

The exchange analysis includes an assessment of the totality of activities and technology used to bring together orders of multiple buyers and sellers for securities using "established non-discretionary methods" under which such orders interact. A system "brings together orders of buyer and sellers" if, for example, it displays, or otherwise represents, trading interest entered on a system to users or if the system receives users' orders centrally for future processing and execution.

A system uses established non-discretionary methods if it provides a trading facility or sets rules. For example, an entity that provides an algorithm, run on a computer program or on a smart contract using blockchain technology, as a means to bring together or execute orders could be providing a trading facility. As another example, an entity that sets execution priorities, standardizes material terms for digital asset securities traded on the system, or requires orders to conform with predetermined protocols of a smart contract, could be setting rules.

Both the SEC's settlement with Coburn and its subsequent guidance rightfully focused on the underlying policy issues contemplated by Congress when it first sought to regulate securities exchanges under the Securities Exchange Act of 1934. Through EtherDelta, Coburn ran, and gated access to, a centralized electronic order book which served as a forum for buyers and sellers of securities to match their respective buy and sell orders and thus, in effect, negotiate and settle potential securities sale contracts. Although EtherDelta utilized some "smart contract" architecture on Ethereum, the order book relied on centralized server architecture hosted by Mr. Coburn. Accordingly, Mr. Coburn controlled access to, and was in a position to modify, manipulate, censor or fail to preserve accurate records of this electronic order book just as the owner/operator of a traditional exchange is in a position to control access to a literal trading floor. Thus, the SEC's approach to EtherDelta was conceptually aligned with Congress's intended scope of, and the SEC's longstanding interpretation of, the Securities Exchange Act of 1934.

### C. The Proposed Amendments Expand the Definition of "Exchange" and Threaten Disruption of Established Digital Asset Markets

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<sup>11</sup> *Statement on Digital Asset Securities Issuance and Trading*, U.S. Sec. & Exch. Comm'n (Nov. 16, 2018), available at <https://www.sec.gov/news/public-statement/digital-asset-securities-issuance-and-trading>.

The Commission now proposes to amend Rule 3b-16 so as to “include systems that offer the use of non-firm trading interest and communication protocols to bring together buyers and sellers of securities.” (Proposal, p. 1.). More specifically, the Commission now proposes to revise Rule 3b-16 to read as follows:

**§ 240.3b-16 Definitions of terms used in Section 3(a)(1) of the Act.**

(a) \* \* \*

- (1) Brings together buyers and sellers of securities using trading interest; and
- (2) Makes available established, non-discretionary methods (whether by providing a trading facility or communication protocols, or by setting rules) under which buyers and sellers can interact and agree to the terms of a trade . . .
- (e) For purposes of this section, the term trading interest means an order as the term is defined under paragraph (c) of this section or any non-firm indication of a willingness to buy or sell a security that identifies at least the security and either quantity, direction (buy or sell), or price.

(Proposal, pp. 556-7, emphasis added.)

For years, participants in the digital assets markets have studied the SEC’s reasoning in EtherDelta and the SEC’s above-cited guidance on digital asset exchanges. In doing so, these market participants and their legal advisors have formed a rough consensus view on how the Exchange Act applies to digital asset markets. According to this view, centralized order book platforms (or decentralized-in-name-only platforms like EtherDelta) are potential securities exchanges, but systems lacking in order-book logic, or which are sufficiently decentralized (i.e., lacking any particular owner/operator who could rationally be expected to comply with the SEC’s intermediaries-based regulatory regime), are not. These new, decentralized-in-actuality software systems – including “automatic market-making” smart contract systems – have been viewed as outside the ambit of securities exchange regulation.

Now, unless the SEC clearly carves out such systems from the Proposed Amendments’ definition of “communications protocols,” the Proposed Amendments threaten to throw years of established legal consensus into doubt, imposing impossible compliance obligations on persons who may merely write open-source “communications protocol” code or publish information about the contents of communications systems which they do not control. When combined with the SEC’s continuing unwillingness either to clarify when digital assets are not securities, or to provide a viable compliance path for those that are, adoption of the Proposed Amendments in their current form would throw the digital asset markets into turmoil, disrupt established sources of liquidity, close widely relied upon decentralized price discovery channels, risk widespread financial losses to both “retail” and “venture capital” investors, and further thicken the already substantial pall of regulation-by-enforcement uncertainty which today hangs over DeFi and the digital asset industry in the United States.

**III. Application of the Proposed Amendments to Automated Market Maker Smart Contract Systems Would be Unfair and Counterproductive**

Automated Market Makers are a new form of market infrastructure first theorized in the early 2000’s: algorithmic agents that provide liquidity in electronic markets. In many markets, there is insufficient organic liquidity to support active trading and price discovery. An AMM solves this problem by acting as an automated counterparty which prices transactions for traders in these illiquid markets. However, due to the difficulty of inventory management and the likelihood of operating at a loss, AMMs did not come into practical use until the development of digital asset technology, particularly the open,

distributed computing environment of Ethereum blockchain. Because they provide a mechanism for price discovery and the trust-minimized trading of tokens, AMMs are now a foundational technology in DeFi.

In the context of digital assets, AMMs allow users to trade digital assets in a decentralized, permissionless, and programmatic way by using “liquidity pools” and algorithmically-determined prices rather than a traditional market of buyers and sellers making and matching orders. A typical liquidity pool represents assets in (and a market for) a single token pair. Rather than orders placed by traders, liquidity on the platform comes from contributors to the liquidity pool (“**Liquidity Providers**”, or “**LPs**”), who deposit digital assets in the pool and receive “LP Tokens” representing a proportional share of the pool’s underlying assets. These deposits are “locked” within smart contracts, putting them outside the control of any individual and ensuring that interactions with the pool’s assets are governed exclusively by the AMM system. Whenever a user trades against the assets in the liquidity pool, the trade gives rise to a price adjustment according to a deterministic price algorithm. By interacting with the AMM code, users abandon the traditional market framework of negotiation of agreements among potential counterparties, instead deferring to the price set by the algorithmic logic of the AMM smart contract system, with LPs automatically receiving a share of trading fees as compensation for their exposure to other users’ arbitrage opportunities. In effect, LPs are simultaneously buyers and sellers providing liquidity to an automated, deterministic market-maker that is not controlled by any one organization, association or group of persons.

The smart contract code is open and transparent, enabling anyone to view, access, audit, and interact with it. Anyone can interact directly with the liquidity pool by broadcasting messages on the blockchain network. Website operators may provide a convenient, user-friendly interface for accessing the AMM, but such activities are non-exclusive and do not confer or imply any sort of control over the underlying AMM code or operations. Indeed, a true blockchain AMM can be accessed permissionlessly through multiple open interfaces including wallets, block explorers and command-line node software, and is not centrally controlled by any entity, thus falling outside the traditional rubric of a “market place” or “facility”.

The most popular type of DeFi AMMs are known as “constant product pools”. While traditional exchanges work through the bid and ask process and are accepted based on a buyer and seller coming together, neither liquidity providers nor the AMM system as a whole have control over orders. Instead, these AMMs price assets such that the product of the quantities of the two assets in the pool is constant ( $x * y = k$ ). By way of example, if an AMM represented the BTC-ETH pair, every sale of BTC for ETH would increase the amount of BTC in the pool while decreasing the amount of ETH. Consequently, the exchange rate (or “price”) of BTC, denominated in ETH, will fall. The constant product rule ensures that, regardless of the quantity of assets in the pool, the total value of BTC in the pool will equal the total value of ETH in the pool. This constant readjustment of price, no matter how much or how little liquidity the pool represents, allows for extremely efficient price discovery.

Importantly, the same features that make AMMs valuable and trust-reduced make it impossible to gate access to them. In a typical AMM smart contract system, any person may permissionlessly create a liquidity pool for any two tokens. The fact that the certain software developers may have developed and deployed the AMM smart contract system, or that such software developers or other software developers may have developed or may be running a non-exclusive interface to the blockchain (including the AMM), does not mean that they determine which tokens are “listed” (so to speak) on the AMM. The AMM is, after all, nothing more than software logic. Thus, if any digital assets intrinsically constitute securities (a matter which remains unclear under U.S. federal securities law), there is no organization, group or association which would be in a position to control their compliance burdens by ensuring that no securities are “listed” on the AMM.

Even if tokens that may constitute securities are “listed” on an AMM, nevertheless, AMMs have a number of unique properties that put them and the providers of related “communication protocols” outside

the definition of “exchange” as that term was intended to be understood by Congress in passing the Exchange Act. We discuss these unique properties below.

A. AMM Functionality Is an Emergent Property and Does Not Rely on Any Organization, Association or Group of Affiliated or Externally Coordinated Persons

The Exchange Act envisions each “exchange” as a “market place” located in a particular country (the U.S.) and operated by a cohesive “organization, association, or group of persons”. To conform with the detailed regulations applicable to exchange owners/operators, this organization, association or group must be capable of being a single SEC- or FINRA-registered securities intermediary that can actively manage the exchange so as to ensure it conforms to a set of prescribed rules. However, there is no person or group of affiliated persons who are both necessary and sufficient for AMM functionality, and AMMs cannot be actively managed so as to conform to rules, because their code is immutable.

In fact, there are many distinct groups or types of participants without which an AMM cannot operate, and each of these groups or types of participants may be (and usually are) entirely different from, and unaffiliated and uncoordinated with, one another:

- the software developer(s) who write the relevant AMM software code;
- the persons who deploy a copy of the AMM software code to a particular blockchain network (and pay the associated transaction fees for doing so) such that the code becomes a specific executable AMM smart contract on that network;
- the persons who call functions on the AMM smart contract to create specific liquidity pools;
- the “liquidity providers” to each liquidity pool governed by the AMM code;
- the users, who wish to swap between the tokens comprising each liquidity pool; and
- where applicable, the arbitrageurs who keep the algorithmically-generated AMM price in line with prices found on extrinsic, centralized markets;
- all of the participants in the “layer 1” blockchain ecosystem on which the AMM smart contract system and the tokens that trade on it depend, including:
  - the software developer(s) who write the free open-source blockchain system protocol code (the “client”);
  - the node operators who run clients on their personal/business hardware, including:
    - the “block producers” for the blockchain;
    - operators who maintain commercial-grade infrastructure to relay transactions from ordinary users to the network (and vice versa);
  - the wallet software developers and hosts who provide consumer interfaces to commercial node operators;
  - the web and app interface developers and hosts who provide consumer interfaces to the more sophisticated functions of wallet software, tailored to particular use contexts (e.g., a specific smart contract system); and
  - ancillary (but important) infrastructure providers such as block explorer maintainers, data analytics providers, venture capital funds and other well-financed parties which fund new open-source software development (sometimes with no clear and direct upside—e.g., giving grants to protocol client developers).

Each of these independent, unaffiliated entities is arguably necessary to, but insufficient to separately achieve, the existence and continued functioning of an AMM. For example, a software developer may write the code underlying AMM smart contracts, but does not “maintain or provide...facilities for bringing together purchasers and sellers” or handle orders. The original creator of a liquidity pool – who might be anyone – simply broadcasts a message on the blockchain network, and may have no further involvement in the system. Liquidity Providers capitalize the liquidity pool, but do not handle or match

orders and have no discretion to accept, to decline, or to set a price of a trade, nor do they have any effect on the execution of a trade. Traders transmit their orders on their own account, and do not handle or match orders. And, while block producers do in a sense handle orders – by validating and relaying the messages on a blockchain network – their activities are analogous to those of an Internet service provider relaying packets from one computer to another, not a securities exchange. Critically, none of the participants are necessarily affiliated with each other. In practice, few participants in the AMM system have more than one of the roles identified above, and hardly any have more than two. There is no “operator” that can interpose itself to intercept or block orders.

Critically, rather than all such participants jointly owning and operating the AMM in some kind of cohesive single enterprise, each is using the AMM for their own disparate purposes. For example, the profit of one LP may come at the expense of another LP, based on timing of entry/exit to and from the relevant AMM pools, relevant range selection (where applicable), and various other extrinsic aspects of their strategies; this is highly uncharacteristic of persons running a single enterprise. Meanwhile, although the protocol developers may stand to profit from the system, they are completely indifferent to any particular participant’s profits. Arbitrageurs run complex and risky businesses of their own, and their profits come at the expense of LPs and ordinary traders. Block producers are seeking their own profits by reliably running the AMM smart contract system – profits which come from independent user transaction fees paid through wallets and (where applicable) new token issuance by the network, not from any particular smart contract system.

Thus, the exchange functionality of an AMM is an emergent property of decentralized activity on the part of many different persons with a diverse set of interests and motivations. Characterizing all of the disparate types of persons who are collectively necessary (but not individually sufficient) for the exchange functionality to emerge, as an “...association or group of persons, whether incorporated or unincorporated, which constitutes, maintains, or provides a market place or facilities for bringing together purchasers and sellers of securities” would break new ground on theories of corporate law, agency, and more. The diverse participants in AMM ecosystems cannot function as a single securities intermediary registered with the SEC or FINRA, nor as a coordinated set of separate securities intermediaries running a single “exchange”. They do not co-own assets or operate a single enterprise for profit, do not know each other’s identities, and have diverse (and often competing) motivations. They may number in the hundreds or thousands and be distributed all over the world.

It is only through the game-theoretic effects of incentive design in autonomously operating, decentralized, ownerless blockchain systems that all these individual, unaffiliated, un-coordinated activities produce a functionally coherent result. The fact that something resembling “exchange functionality” is thereby achieved, and that potential securities could be exchanged using that functionality, does not entail that there is someone who could reasonably become a “securities intermediary” for that exchange and ensure that the exchange functionality conforms to a particular country’s rules. To say that all of these different types of people with different incentives form an “association” in the corporate law sense beggars all belief, and would imply a litany of absurd results, such as requirements that market makers on NASDAQ have the same registration and reporting obligations as Nasdaq, Inc. itself.

## B. AMMs Do Not Rely On Interaction of Buyers and Sellers

Notably, an AMM does not rely on the traditional interaction between buyers and sellers. In fact, there *is* no interaction between buyers and sellers. Buyers and sellers do not negotiate or exchange information.<sup>12</sup> Indeed, a typical AMM does not require a counterparty to effectuate a trade: the

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<sup>12</sup> See SEC, *Statement of Digital Asset Securities Issuance and Trading, op. cit.* (focus is on the interaction between buyers and sellers).

“counterparty” in an AMM is a construct, the liquidity pool. In essence, users of AMMs are not trading against counterparties; instead, they are trading against the liquidity locked inside a smart contract.

Similarly, there are no “orders” on an AMM. In contrast to a centralized platform which permits “makers” and “takers” to agree upon a price, an AMM sets the price. Rather than determining a clearing price through matched bids and asks, prices are algorithmically determined based on the composition of deposits by Liquidity Providers. The moment a trader trades assets in the pool, a new price is determined based on changes to the underlying composition of the pool. At no point are orders on both sides of the market paired. Buyers and sellers do not determine the price and are not both needed to execute a trade. Users trade against the liquidity in the pool, rather than other users. Due to the constant asset formula, a pool can always provide liquidity, regardless of the size of the trade (albeit at the cost of slippage relative to extrinsic markets in the same assets, if any). The main reason for this is that the algorithm asymptotically increases the price of the token as the desired quantity increases relative to the quantity in the pool. The larger the pool compared to a trade, the lower the price impact.

It could perhaps be argued that Liquidity Providers, in forming the liquidity pool, act as the counterparty to every trade on an AMM. Due to how the AMM operates, however, this framework effectively conceptualizes LPs as offering trades on both the “buy” and “sell” sides of the market, at every price, in infinitesimally small quantities, and without the ability or discretion to accept or decline any particular trade.<sup>13</sup>

We view this interpretation as strained. Apart from the fact that this behavior is radically different from that of typical market participants, the essential role of a trader is arbitrage: profit by exploiting price differences in two markets. However, Liquidity Providers in their capacities as such are explicitly *not* arbitrageurs. In fact, an essential feature of liquidity pools and their LPs – the elements that make AMMs useful for price discovery – is that they are *exposed* to arbitrage. Moreover, a key function of an “exchange” is to mitigate counterparty risks by ensuring that orders are executed on a non-discretionary basis. Because the AMM is just computer code with deterministic and verifiable operations, there are no such counterparty risks.<sup>14</sup>

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<sup>13</sup> Certain more recent AMM protocols, known as “concentrated liquidity” AMM protocols, allow LPs to configure their deposits to only provide liquidity to the pool within a selected range of token ratios (prices). This range will typically still be fairly broad (otherwise the LP activity would be inefficient), and, within the range, LPs again have no discretion and are not engaging in a process of discovery price through making and matching orders.

<sup>14</sup> Because smart contract runtime operations are executed by the block producers on a blockchain network, there can exist some potential for these block producers to exercise discretion in the exact timing or sequencing of when smart contract operations are recorded to the blockchain and thus become final. This discretion is a good example of the “unique risks” of DeFi we refer to above – and which are entirely unaddressed in the Proposed Amendments. See Daian, P., Goldfeder, S., Kell, T., Li, Y., Zhao, X., Bentov, I., Breidenbach, L., Juels, A.: *Flash boys 2.0: Frontrunning, transaction reordering, and consensus instability in decentralized exchanges*. arXiv preprint arXiv:1904.05234 (2019).

Although – in stark contrast to *developers* of “communications protocols” – miners and validators do have some limited discretion over exchange-like functionality (e.g. in deciding the order in which transactions are finalized by recording them to the applicable blockchain), it would also be deeply mistaken to seek to cover these block producers under the SEC’s securities intermediary framework for the regulation of exchanges:

1. they are not the creators or deployers of the relevant “communication protocols”;
2. they cannot pick and choose which “communication protocols” run on the network, no less which specific tokens trade on them, whether or not any “securities tokens” are excluded from them, etc.; and

#### **IV. Delphi's Objections to the Proposed Amendments**

We respectfully submit the following objections to the Proposed Amendments.

##### **A. “Communication Protocol” is Broad and Undefined**

The Proposed Amendments introduce into the definition of an exchange a new concept – namely, the “communication protocol”. However, neither the Proposal nor the Proposed Amendments even attempt to formulate a definition that explains what a “communication protocol” is (or is not). Instead, the Proposal provides four illustrative examples, namely: request-for-quote (RFQ) systems; stream axes (that is, systems that electronically display continuous firm or non-firm trading interest); negotiations systems; and conditional order systems. Nor is “communication protocol” included in the statutory definition of “exchange” or reasonably within the conception of a “market place” or “facility”, as those terms were understood in 1934 or are understood today.

By redefining the term “exchange” as used in the Exchange Act so as “to include systems that offer the use of non-firm trading interest and communication protocols to bring together buyers and sellers of securities” (Proposal, p. 1) (emphasis added), the Proposed Amendments can be read to mean that the SEC is imposing a new requirement upon those involved in unhosted protocols and their interfaces to either (a) attempt to register as an exchange operator, or (b) attempt to register as a broker-dealer and comply with Regulation ATS, despite being ill suited to do so. Simply stated, “communication protocol” is so broad on its face that it could capture a significant amount of technology with no relation to securities markets or trading and no feasible means to comply.

This expansion is both unsupported by the language or intent of the Exchange Act and will undermine the stated policy intentions and mission of the SEC, which include among other things protecting investors and promoting capital formation. The breadth of the term “communication protocol system” could arguably extend to even simple websites like block explorers<sup>15</sup>, telecommunication providers or social media sites that “make available” the means for individuals to trade on a peer-to-peer basis. But if a block explorer is deemed to fall within the proposed definition of “Communication Protocol System”, it would be required to register as a national securities exchange or operate under the ATS exemption, which would require it to register as a Broker Dealer, join an SRO (like FINRA) and comply fully with Reg ATS. The sheer cost of compliance, together with the grave consequences for non-compliance, would have the effect of chilling, restricting or prohibiting outright the creation of code for peer-to-peer digital asset trading or websites that provide access to information about those protocols. This would be an absurd result, an unintended consequence of which would be to diminish, rather than enhance, information available to market participants.

The Exchange Act was created to regulate “market places” and “facilities” that “perform the functions performed by a stock exchange as that term is commonly understood”.<sup>16</sup> And a securities

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3. they are unaffiliated with one another, have a global presence, and may drop in and out of network participation dynamically; thus, they do not form an “organization, association or group of person” capable of registering and reporting with the SEC or FINRA as a single securities intermediary owning/operating a securities exchange.

<sup>15</sup> The term “block explorer” refers generically to a browser application that allows users to see blockchain transactions and in some cases create those transactions. (See, e.g., <https://www.sofi.com/learn/content/blockchain-explorer>). These are not market places or facilities as those terms were understood in 1934 or as they are understood today. They are information portals that allow individuals to examine and verify blockchain data, in real-time, without financial intermediaries and without the creation of a centralized market place.

<sup>16</sup> 15 U.S.C. § 78c(a)(1)

exchange, as commonly understood, is more than a mere “communication protocol” that has been “made available”. Nor was the Exchange Act intended to create an agency with plenary authority over all of commerce or communication. This nearly century-old statutory definition cannot be stretched to apply to modern forms of technological exchange that have as much in common with a stock exchange as a cow does with a milk truck. That is what the term “communication protocol” in the proposed regulation does, and it is a flaw that can and should be remedied before the regulation is adopted.

B. Expression of “Trading Interest” is an Inchoate Act Outside the Exchange Act

Under the Proposed Amendments, an “order” to buy or sell a security is no longer an essential feature defining an “exchange.” As noted, Section 3(A)(i) of the Exchange Act defines an “exchange” as a market place for “purchasers” and “sellers” of securities; and at present Rule 3b-16(a)(1) further defines an “exchange” as a market place that “brings together the orders for securities of multiple buyers and sellers...” (Emphasis added.)

But Rule 3b-16(a)(1) of the Proposed Amendments instead defines an “exchange” as a market place that brings together buyers and sellers “using trading interest.” And 3b-16(a)(2) of the Proposed Amendments further defines a trading interest as including “any non-firm indication of a willingness to buy or sell a security that identifies at least the security and either quantity, direction (buy or sell), or price”. The Proposal further explains that “the use of firm or non-firm trading interest by a system should no longer be a factor in determining whether a system performs the function of a market place because both firm and non-firm trading interest can be used by a system with the same purpose and effect to bring together buyers and sellers of securities.”

In other words, an “exchange” would now be defined by the Proposed Amendments to include a market place where a mere “non-firm indication of a willingness” to buy or sell is expressed; it need not be a market place where actual “orders” to buy or sell are in fact placed and executed. This is not supported by or contemplated in the meaning of the word “exchange” in the ’34 Act.

The purpose of an exchange is ultimately to definitively settle transactions, not merely to provide a forum in which individuals express non-firm interest or identify potential counterparties. Indeed, the Commission’s own function test for exchanges specifies that “the activity that actually occurs between the buyers and sellers...determines whether the system operates as a marketplace...” (emphasis added). We agree that a platform for expression of firm trading interest, or where orders are received centrally for future processing and execution, is properly subject to regulation. But non-firm trading interest is only the first step. Such expressions of interest, taken alone, cannot result in an executed transaction.

C. The Proposed Amendments Improperly Encompass Parties Who are not Traditional Securities Intermediaries

At present, Rule 3b-16(a)(2) defines an “exchange” in part as a marketplace that uses established non-discretionary methods (whether by providing a trading facility or by setting rules) under which orders interact with each other, and the buyers and sellers entering such orders agree to the terms of a trade. But the Proposed Rule 3b-16(a)(2) applies to an “exchange”: 1) that merely “makes available”, rather than “uses”; 2) among other methods, “communication protocols” (as opposed to rules); 3) under which buyers and sellers (as opposed to orders) interact with each other and agree to the terms of a trade.

The net effect of all these proposed revisions to Rule 3b-16 is a fundamental and unwarranted transformation of the concept of an “exchange.” As the language of Section 3(A)(i) of the ’34 Act indicates, when Congress passed the ’34 Act into law Congress envisioned an exchange as a “market place” or “facility” where people either bought or sold securities by placing orders through financial intermediaries – in other words, a traditional stock exchange (such as the New York Stock Exchange). However, under

the Proposed Amendments an “exchange” will now include any “group of persons” “making available” a “communication protocol” through which a party or parties can express a mere interest in buying or selling a security and (in the case of AMMs) where there is no human counterpart in the traditional sense.

Thus, the Proposed Amendments do not (as the Proposal itself argues) merely elaborate upon the Exchange Act’s definition of an “exchange” in order to adapt that definition to new circumstances and new conditions in the securities markets. Rather, the Proposed Amendments wholly rewrite the definition on an “exchange” so as to embrace fundamentally different forms of commercial activity that fall far outside the intended scope of the Exchange Act.<sup>17</sup>

#### D. Compliance With Registration Requirements Is Infeasible or Impossible

Entities which would be subject to the Commission’s revised definitions cannot feasibly comply with the Exchange Act’s registration requirements. The process of registering and then operating lawfully as an exchange or as a broker-dealer is onerous, time-consuming, and expensive. Typically, it requires the assistance of counsel and the expenditure of countless hours and millions of dollars, including ongoing reporting and supervision requirements. But, as discussed above, the Commission’s proposal threatens to capture operators of information services and interfaces such as block explorers and website front-ends. It makes no sense to reclassify websites that provide a front-end to decentralized trading protocols – but which do not actually control those interfaces – as “exchanges” or “broker-dealers” and thereby subject them to onerous and ill-fitted regulatory requirements. Saying any of these websites is an “exchange” is saying a website that provides instructions on how to place orders on NASDAQ is an “exchange”. Further problems are presented by the inclusion within the proposed rule of systems that merely “make available the use of non-firm trading interest and communication protocols to bring together buyers and sellers of securities.” (Proposal at p. 231) (emphasis added).

As applied to AMMs, the Proposed Amendments would potentially capture all Liquidity Providers by interpreting their contributions to liquidity pools as an “expression of trading interest”. As we explained above, by depositing digital assets into a liquidity pool, a Liquidity Provider is arguably indicating a “willingness to buy or sell a security that identifies at least the security and either quantity, direction (buy or sell), or price”. The pricing rules of an AMM effectively treat every LP as offering trades on both the “buy” and “sell” sides of the market, at every price, in infinitesimally small quantities, and without the ability or discretion to accept or decline any particular trade. A consequence of this strained interpretation is that the AMM system, taken as a whole, would be required to register with the SEC, as it would both i) bring together orders, and ii) use established, non-discretionary methods (in the form of deterministic computer code) under which such orders interact with each other.

The requirements of operating as an “exchange” or “broker-dealer” are at odds with the functionality and design of many peer-to-peer trading protocols powered by blockchain technology, including AMMs. As described above, AMMs are not composed of “persons”: they are constructs embodied by computer code, whose functions are conducted piecemeal by a vast, fragmented, and

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<sup>17</sup> The purpose of the ‘34 Act was not to create a new federal agency to oversee all technological innovation but, rather to address flaws in the ‘33 Act that made enforcement difficult. As one commentator explains: “The many complexities and inadequacies of the Securities Act and the need for an independent administrative body to enforce the federal securities laws, regulate stock market practices, and curb the evils in the stock exchanges themselves led Congress to enact the Securities Exchange Act of 1934. Benjamin Cohen and Tom Corcoran drafted a bill designed to establish the Securities and Exchange Commission to regulate the securities business; require the stock exchanges to adopt rules of fair dealing; apply the full disclosure requirements of new securities under the Securities Act to all securities traded on a national exchange; and instruct the Federal Reserve Board to regulate the use of borrowed money in the stock market.” Elizabeth Keller, “Introductory Comment: A Historical Introduction to the Securities Act of 1933 and the Securities Exchange Act of 1934”, Ohio State Law Journal 49, (1988): 329-352.

decentralized network of unaffiliated individuals. Accordingly, there is no discernable entity or group that operates or controls the AMM.

There are numerous questions regarding how this proposal, if adopted, would or could apply to AMMs or similar technological innovations. Does “make available” include, for example:

- (i) writing and publishing AMM code?
- (ii) deploying AMM code?
- (iii) making available a website that helps people use the AMM code through third party wallets, because the website provides information about protocol commands that can be sent to the smart contract through the third-party wallet to achieve indicated user aims?
- (iv) a combination of (i) and/or (ii) with (iii)?
- (v) being a miner or validator on a blockchain network upon which AMM has been deployed?

As currently conceived, each of the activities above could fall within the Proposed Amendments. But compliance by dint of any of the activities above would be impossible because AMMs are by the nature autonomous and do not provide any of the persons who might be “making available” the AMM with sufficient powers and information to satisfy the rules. Because there is no entity which could feasibly even attempt to comply with the Commission’s registration requirements, the Proposed Amendments would operate as a de facto ban of this technology.

#### E. The Proposed Amendments Exceed Congress’ Grant of Authority Under the Exchange Act

It is well-settled that administrative agencies including the Commission have the authority to interpret their enabling statutes.<sup>18</sup> Accordingly, we concede the Commission’s power to define “exchange” and similar terms, as well as to update those definitions in light of changes in technology and market structure. However, while the Commission’s powers here are elastic, they are not infinitely elastic: the Commission’s authority in this context is constrained by the organic statute.

While courts give deference to agency interpretation of statutory grants of authority, that deference is not unlimited. *Chevron* deference presupposes statutory ambiguity. As the Supreme Court articulated in *Smiley v. Citibank (South Dakota)*, “*Chevron* is rooted in a background presumption of congressional intent: namely, that Congress, when it left ambiguity in a statute administered by an agency, understood that the ambiguity would be resolved, first and foremost, by the agency, and desired the agency (rather than the courts) to possess whatever degree of discretion the ambiguity allows.”<sup>19</sup> This discretion is still ultimately bounded by Congressional delegation of authority: “Congress knows to speak in plain terms when it wishes to circumscribe, and in capacious terms when it wishes to enlarge, agency discretion.”<sup>20</sup>

Deference is not warranted where there is no ambiguity and where the agency acts outside a statutory grant of authority. There is no such ambiguity in this case: there is nothing about the existing definition of exchange that could reasonably be deemed to include “communication protocol” providers – things which did not exist a century ago, and are nothing like traditional securities exchanges.

The Proposed Amendment as currently drafted extends the definition of an “exchange” to embrace many technology platforms in a way that was never remotely contemplated by Congress when it enacted

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<sup>18</sup> *Chevron U.S.A., Inc. v. NRDC*, 467 U.S. 837 (1984)

<sup>19</sup> *Smiley v. Citibank (South Dakota)*, N. A., 517 U. S. 735, 740741 (1996).

<sup>20</sup> *City of Arlington, TX v. FCC*, 133 S. Ct. 1863, Slip at 5 (2013).

the Exchange Act in 1934, and it goes far beyond the statutory language of Section 3(A)(i) of the Exchange Act.

Delphi maintains that modern digital asset platforms – including those in the DeFi space – are part of a new form of commerce that is fundamentally different from securities marketplaces such as stock exchanges. This form of digital commerce cannot properly be brought within the scope of the Exchange Act as an “exchange” by a mere regulation, any more than today’s spacecraft could properly be regulated as a “train” in early twentieth century railroad legislation. Because these technologies’ and platforms’ fundamental differences from traditional markets render them incapable of compliance with the regime created by the Exchange Act, doing so would have the effect of a blanket prohibition.

It is hornbook law that Congress must “speak clearly” when enacting laws that have an impact on major questions, including where, as here, statutory authority is claimed for justification of regulations that could have the impact of banning an entire class of technology.<sup>21</sup> As the Sixth Circuit recently and correctly observed: “broad assertions of administrative power demand unmistakable legislative support.”<sup>22</sup> Whatever form of legal supervision is ultimately imposed on the trading of digital assets, risks associated with new types of trading facilitated by blockchain technology should be imposed by Congress through new legislation – unified and comprehensive legislation that is carefully crafted after extensive consideration with the new world of FinTech and DeFi specifically in mind. The Proposed Amendments impermissibly usurp the power of Congress to legislate in this field.

We acknowledge that the Proposed Amendments grow out of the Commission’s previously expressed concern over certain aspects of trading in government securities and fixed income electronic trading platforms. While that concern may be well-founded, Delphi respectfully suggests that the Proposed Amendments be revised so as to limit its scope to government securities and fixed income electronic trading platforms, and that generic definitions, which on their face include new technologies outside traditional concepts of securities market places, be refined to make clear that these technological innovations do not fall within the Amendments’ ambit.

#### F. The Proposed Amendments Would Upset Expectations Created By Prior Guidance

As noted above, the Proposed Amendments would upset settled expectations created by the Commission’s own prior guidance and no-action letters upon which the industry has justifiably relied, and would likely harm digital asset innovation in many significant ways.

#### G. The Proposed Amendments Provoke Legal Challenge Including Constitutional Concerns

In addition to the issues raised above, the Proposed Amendments, as applied to DeFi exchanges, raise a host of legal concerns that could lead to years of legal challenges, while creating needless market uncertainty. For example, the broad scope of the proposed definition of “communication protocol”, which purports to impose regulation on base layer communications technology, easily falls within the statutory remit of the Federal Communications Commission, which has authority under the Communications Act of

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<sup>21</sup> Alabama Assn. of Realtors v. Department of Health and Human Servs. , 594 U. S. \_\_\_, \_\_\_ (2021) ( per curiam) (slip op., at 6) (“We expect Congress to speak clearly when authorizing an agency to exercise powers of vast economic and political significance.”) (internal quotation marks omitted); *See also* NFIB v OSHA, \_\_\_\_\_ (addressing scope of required statutory agency authority when agency attempts to expand regulatory authority); ALA v. FCC, No. 04-1037, slip at 2 (DC Cir. May 6, 2005) (It is axiomatic that administrative agencies may issue regulations only pursuant to authority delegated to them by Congress).

<sup>22</sup> *See In re: MCP No. 165, Occupational Safety and Health Admin., Interim Final Rule: COVID19 Vaccination and Testing*, 86 Fed. Reg. 61402, No. 21-7000 (6th Cir. 2021).

1934 to “all interstate and foreign communication by wire or radio and all interstate and foreign transmission of energy by radio, which originates and/or is received within the United States, and to all persons engaged within the United States in such communication[.]”<sup>23</sup>

The use of the term “make available” also raises potentially serious First Amendment speech issues. As conceived and drafted, it is possible to imagine an interpretation of this language that would restrict or limit the ability of software developers or repositories to make AMMs and other related software available for users. Interpreted and applied in this fashion, constitutional concerns – and necessary legal challenges – are unavoidable.<sup>24</sup>

The concerns and examples we have raised are by no means exhaustive. Many other issues are raised by creating the new and extremely overbroad concept of “communication protocol” and engraving it onto the definition of “exchange.”

#### H. AMMs Do Not Pose the Risks Addressed by Regulation ATS

Regardless of whether any organization, association or group of persons may be deemed to be making available a “communications protocol” in connection with AMMs, it does not make sense to regulate these persons under Regulation ATS. AMMs are intrinsically structured to avoid the public policy risks associated with privately-run, centralized securities markets and the requirements of Regulation ATS are not suitable for any of the many different categories of persons relevant to AMMs. Let us look at each category of requirements under Regulation ATS and assess them against the objective reality of AMMs:

##### 1. Broker-Dealer Registration

The software developers, node operators, Liquidity Providers, arbitrageurs and others necessary to AMM functionality are not “engaged in the business of effecting transactions in securities for the accounts of others.” Instead, they provide (but do not host) the software or interfaces by which persons may engage in any digital asset transactions for their own accounts or for the accounts of others. Similarly, these persons are not “engaged in the business of buying and selling securities for his own account, through a broker or otherwise”.

Whether the digital assets underlying AMM transactions are securities is irrelevant to how these entities actually operate. It is currently unknown to the general market which digital assets, if any, are securities. Since these digital assets have a “bearer nature” and almost never serve as instruments expressly representing rights and liabilities (like stock certificates), no software developers, node operators, liquidity providers, arbitrageurs and others involved in AMMs understand themselves to be, or seek to be, persons engaged in the business of buying and selling securities for their own account. These entities operate *digital asset* businesses, rather than *securities* businesses. Accordingly, broker-dealer registration is neither necessary for, nor available to, any such persons.

##### 2. Operating Report

The prescribed contents of an ATS operating report would make no sense as applied to AMMs. AMMs do not have “subscribers” (prospective or otherwise) and which “securities”, if any, are listed on

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<sup>23</sup> See 47 U.S. Code § 152(a), *et seq.*

<sup>24</sup> See *Bernstein v. DOJ*, 176 F.3d 1132 (Regulations restricting publication of encryption software were impermissible prior restraint). While this opinion was withdrawn by an en banc panel, the case was never reargued because of a change in federal regulations that mooted the issue. The panel’s reasoning provides persuasive authority against restriction of software publication and distribution, as the proposed amendment, read literally, would appear to do.

AMMs is not subject to the control of any particular person (thus cannot be predicted in advance and filed on a report). Nor is any report needed with respect to AMMs, since all facts about them are necessarily recorded on a freely-available public blockchain that is, for all practical purposes, immune to alteration and tampering. Furthermore, AMM code, as instantiated in a particular smart contract, is immutable, and thus there are no policies and procedures beyond those embedded in the publicly accessible code which could possibly be of interest to any users of the AMM or any other persons.

### 3. Order Display and Execution Access; Fair Access

AMMs are not access-gated, and all relevant information about AMMs is freely available on public blockchains. If anything, the Proposed Amendments, should they be interpreted to extend to providers of websites which may constitute “communications protocols” in connection with AMMs, would cause this information to be less readily available to the public, as providers of block explorers and other websites which present blockchain information may shut down or limit access by U.S. persons to avoid falling under impractical regulations. As we have noted, there can be fairness issues with execution of AMM trades, but these are caused by blockchain miners, bot operators and other specialists in “miner extractable value” rather than by persons who are “making available” the AMM as a “communication protocol.” Thus, the Proposed Amendments would do nothing to regulate those who actually do have some discretion over execution logic.

### 4. Fees

There is no owner or operator of an AMM. All fees from a given pool are either received by the Liquidity Providers for that pool, or by a mix of those Liquidity Providers and the total pool of all Liquidity Providers for all or a subset of the pools of the AMM. To the extent that fees are adjustable (which is not always the case, or may only be the case on a per-pool rather than a per-AMM basis), they are adjustable through votes of governance tokens held by the Liquidity Providers themselves or by the particular person who deployed the particular liquidity pool. Such decisions occur on a decentralized and potentially rivalrous basis rather than by a single fee-setter who could rationally be expected to register as a broker-dealer and become subject to FINRA’s dictates on fee fairness. Such rivalry is facilitated by the open-source nature of AMM smart contracts; to the extent users find fees exploitative, they can simply deploy a competing set of smart contracts, identical to the original in all respects but the fees. Participants are highly empowered and incentivized to find optimal trade-offs between fee levels and usage levels in order to maximize the profits of their respective activities.

### 5. Capacity, Integrity and Security of Automated Systems

Because of the unhosted, decentralized and immutable nature of AMMs, they are not susceptible to having policies and procedures which govern them. If something is wrong with a given AMM smart contract system, new code can be written and deployed as a separate smart contract system, and activity can migrate to that new system. AMM developers do not make any guarantees that, merely because they developed one AMM, they will develop additional AMMs which improve upon or fix known issues in the existing AMMs. Instead, AMM developers offer AMMs under open-source software licenses which disclaim all warranties and offer the software on an “as-is basis”. No cybersecurity policies are necessary or even desirable, since no one is in control and a new and improved system can always be written and deployed by anyone with a wish or incentive to do so.

### 6. Miscellaneous

The ATS owner/operator requirements relating to confidentiality, recordkeeping, and similar matters are similarly inapplicable to those who make AMM protocols available. All AMM activity is intrinsically recorded on blockchains, and blockchains are intrinsically auditable. For the same reason, no

person using an AMM can have a reasonable expectation of confidentiality of their trades and other activities, as all relevant data is necessarily recorded on a public blockchain ledger. AMMs do not pose the risks of “market fragmentation” which motivated Regulation ATS, since AMM activity is transparent in real-time and in fact inherently relies on arbitrageurs who are incentivized to propagate price information between the AMM and other digital asset exchanges (including centralized exchanges).

### **Conclusion**

By expanding the scope of Exchange Act regulations to the foundational technologies of the digital economy without providing a credible path toward compliance, the Proposed Amendments threaten to strangle this nascent industry in its crib. Adoption of the current proposal would cause great harm to technological innovation in the United States, without protecting markets or investors. Apart from the adverse impact the Proposed Amendments would have on the burgeoning digital economy, we believe that broad regulation of “communication protocol systems” falls outside of the Commission’s statutory remit under the Exchange Act, exceeds its jurisdiction, and creates a legal minefield for itself, markets, and the investors the Commission was created to protect.

Accordingly, Delphi respectfully submits that the Amendment should not be enacted in its current form. The Proposed Amendments should instead be revised so as to be expressly limited to those issues concerning government securities and fixed income platforms that they were originally designed to address.

We appreciate the Commission’s willingness to consider comments on this topic, and we would be pleased to discuss any questions that the Commission may have with respect to this letter.

Respectfully submitted,

Delphi Digital

cc:     The Hon. Gary Gensler, SEC Chairman  
         The Hon. Hester M. Peirce, SEC Commissioner  
         The Hon. Allison Herren Lee, SEC Commissioner  
         The Hon. Caroline A. Crenshaw, SEC Commissioner