March 20, 2018

Via Electronic Submission
Christopher Kirkpatrick
Secretary of the Commission
U.S. Commodity Futures Trading Commission
Three Lafayette Centre
1155 21st Street NW
Washington, DC 20581

RE: Comments on Retail Commodity Transactions Involving Virtual Currency

Dear Mr. Kirkpatrick:

I appreciate the opportunity to provide the Commodity Futures Trading Commission ("CFTC" or the "Commission") with comments regarding the proposed interpretation for Retail Commodity Transactions Involving Virtual Currency ("Proposed Interpretation"). This letter is in response to the Commission's request for comments regarding "actual delivery" in the context of virtual currencies under the Commodity Exchange Act ("CEA" or "Act") pursuant to the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank Act"). This letter provides a narrative response to the Commission's questions regarding the meaning of actual delivery within the context of virtual currency transactions.

As background, I served as president of a registered Swap Data Repository ("SDR"). I was responsible for the SDR registration application with the CFTC (in addition to other repository applications in multiple international jurisdictions), which was the first applicant to receive a provisional SDR designation from the Commission. I was actively involved in commenting on the initial rulemakings related to swap data reporting and the CFTC's subsequent efforts to improve these rules.

The Commission has deemed virtual currency to be a commodity under the CEA. As such, the CEA provides the statutory framework for virtual currency and the CFTC has authority to establish regulations over this nascent market. The Commission's efforts to address actual delivery in the context of virtual currency is commendable and necessary to protect retail customers. The Commission should consider the following topics related to its treatment of virtual currency transactions:

1. Participants in the virtual currency market are predominately retail customers who are unable to fend for themselves in unregulated markets. Because of the 28-day delivery period under the actual delivery exception, virtual currency and market participants currently operate outside of the Commission's oversight.

2. Intermediaries allow customers to internally transfer virtual currency among counterparties to minimize mining fees. Such transfers are "off-chain" and unlikely represent a proper conveyance of title.

3. As with swap reporting, the Commission should consider promulgating reporting rules tailored to virtual currency. These reporting rules should further define requirements of the actual delivery exception and ownership information related to virtual currency transactions.

4. In a similar manner as an SDR, a potential depository should aggregate transactions and verify ownership of virtual currency for the Commission. This depository should operate in an independent manner from market participants and intermediaries to minimize conflicts of interest due to their potential reporting obligations.

I. Background Information

Virtual currency offers an open source and decentralized protocol that is used as a payment system or storage of value. The innovative aspect of virtual currency is the underlying distributed ledger or blockchain technology that facilitates decentralized transactions. This peer-to-peer system operates without an established central intermediary (e.g., clearinghouse). Blockchain technology provides a novel solution that prevents the double spending of a virtual currency via a public and decentralized ledger of transactions (the "public ledger").

Because the blockchain operates without a central authority, the technology relies on third-parties to verify and record transactions to the public ledger ("miners"). Miners employ specialized and powerful computers to verify and commit transactions to the public ledger. For this service, miners are compensated with virtual currency ("mining fee"). Miners must solve complex mathematical proofs as a condition to committing new transactions to the public ledger. The mining process has become increasingly taxing due to increasing transaction volumes and the subsequent growth of the public ledger. To transfer ownership of virtual currency, the owner must provide certain account numbers or codes that enable a miner to solve the required mathematical proof to mine or process the transaction between a purchaser and seller ("on-chain transaction"). The mining process relies on wallet software that is used by sellers and purchasers of virtual currency.

A wallet is the underlying software that stores the virtual currency addresses, and codes or "keys" of its owner. Keys are generated in a private/public pairing. Wallets also store the related outputs of the owner's virtual currency that were mined to the public ledger. In sum, virtual currency is stored on the public ledger and wallets store the necessary private/public keys to access an owner's virtual currency. In order to initiate a transaction, owners of virtual currency may directly deal with a purchaser or rely on intermediaries that bring together market participants to facilitate transactions.

A host of intermediaries have established operations to facilitate the matching of sellers and purchasers ("execution platforms"). The following is a summary of the delivery process for virtual currencies transacted on execution platforms. These venues call for sellers to deposit their virtual currencies into a central wallet. For example, execution platforms require sellers to fund their accounts by depositing virtual currency with these platforms.[1] As such, execution platforms are serving a custodial role by holding their customers' virtual currency in a central wallet or omnibus account. Lastly, customers are able to withdraw their virtual currency to an external wallet. Upon withdrawal customers pay a fee. The fee customers "pay for outgoing transactions is calculated dynamically at the time the transaction is created. This means that the fee may be higher or lower depending on the overall transaction volume currently on the digital currency network."[2] Per a customer's request to withdraw virtual currency, execution platforms place unconfirmed transactions into a memory pool. This pool is accessed by miners who confirm and commit virtual currency transactions to the public ledger. A mining fee is assessed to each transaction and paid by customers of the execution platform.[3]

Customers utilizing execution platforms regularly opt to avoid mining fees especially when frequently transacting or day trading. As a response, some execution venues have adapted to become more cost effective for customers. The leading U.S. execution platform is Coinbase.[4] Customers of Coinbase

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[1] "How to deposit and withdraw digital currencies." Global Digital Asset Exchange ("GDAX"). (Mar. 20, 2018). Retrieved from https://support.gdax.com/customer/en/portal/articles/2430150-how-to-deposit-and-withdraw-digital-currencies?b_id=13522.
[2] "What are miner fees and does Coinbase pay them?" Coinbase. (Mar. 20, 2018). Retrieved from https://support.coinbase.com/customer/portal/articles/815435-does-coinbase-pay-bitcoin-miner-fees-.
[3] Id.
[4] "State of Blockchain 2018." CoinDesk (Jan. 2018) at 27. Retrieved from https://www.coindesk.com/research/state-blockchain-2018/

have access to "fee-free transactions between Coinbase accounts! Any transactions sent between Coinbase customers by email address take place off-chain (not on the blockchain) at no cost."[5]   It is worth noting that this approach of internally transferring virtual currency among customer accounts does not commit the transaction to the public ledger. Such internal transfers are deemed off-chain transactions, which allow customers to transact without incurring mining fees. Customers rely on the execution platform's internal recordkeeping to track ownership until the virtual currency is committed to the public ledger. Coinbase maintains the assets of customer accounts in two different manners.   Cash balances are held in a pooled custodial account with one or more banks, which are FDIC insured on a pass-through basis.[6] Coinbase employs stringent security measures to protect the virtual currency of its customers and it maintains commercial insurance against theft.[7]   As evident by recent CFTC enforcement actions, not all service providers use industry best practices to hold customer funds or ethically manage customers' assets.[8] There is a need for a thoughtful framework that will regulate commercial activities related to virtual currency.

At present time, the CFTC does not regulate execution platforms because these platforms facilitate virtual currency transactions that deliver within a 28-day period ("spot transactions"). Spot transactions are not under the Commission's jurisdiction due to the actual delivery exception afforded to the commodities market.[9] In addition, other regulatory agencies have begun to address virtual currencies. The Financial Crime Enforcement Network ("FinCEN") has issued guidance that categorizes execution platforms as a Money Services Business ("MSB") under the Bank Secrecy Act. Further, New York State adopted a "bitlicense" that is similar in nature to MSBs. Lastly, the Uniform Law Commission ("ULC") established a committee that drafted the Uniform Regulation of Virtual-Currency Business Act (the "VCBA"). This act offers states a regulatory framework, but no state has enacted the VCBA as yet. The VCBA seeks to regulate market participants and service providers; however, it does not regulate the various forms of virtual currency. The VCBA contains customer protections for commercial activities related to exchanging, transferring, and storing virtual currency. The VCBA provisions addressing the exchange of virtual currency on execution platforms are similar to those of Designated Contract Markets ("DCMs") and DCM Core Principles (e.g., operation of orderly markets, price transparency, and cybersecurity measures). The VCBA sets forth novel solutions for transferring virtual currency among customers and providing fiduciary services regarding customer accounts. In sum, execution platforms facilitating spot transactions are a lightly regulated marketplace that have recently drawn the attention of regulators.

Today's execution platforms for virtual currency have experienced operational issues and risks to retail customers.[10]   CFTC Chairman Giancarlo identified "operational risks of unregulated and unsupervised trading platforms; cybersecurity risks of hackable trading platforms and virtual currency wallets; speculative risks of extremely volatile price moves; and fraud and manipulation risks through traditional market abuses of pump and dump schemes, insider trading, false disclosure, Ponzi schemes and

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[5] "What are miner fees and does Coinbase pay them?" Coinbase. (Mar. 20, 2018).

[6] "Cash Balances" Coinbase. (Mar. 20, 2018). Retrieved from https://www.coinbase.com/legal/insurance.

[7] Id.

[8] CFTC Release: PR7678-18. "CFTC Charges Randall Crater, Mark Gillespie, and My Big Coin Pay, Inc. with Fraud and Misappropriation in Ongoing Virtual Currency Scam." (Jan. 24, 2018); CFTC Release: PR7675-18. "CFTC Charges Patrick K. McDonnell and His Company CabbageTech, Corp. d/b/a Coin Drop Markets with Engaging in Fraudulent Virtual Currency Scheme." (Jan. 19, 2018); and CFTC Release: PR7674-18. "CFTC Charges Colorado Resident Dillon Michael Dean and His Company, The Entrepreneurs Headquarters Limited, with Engaging in a Bitcoin and Binary Options Fraud Scheme." (Jan. 19, 2018).

[9] CEA section 2(c)(2)(D)(ii)(III)(aa).

[10] Yuk, P. K., & Cornish, C. "Bitcoin exchanges suffer outages." Financial Times. (Dec. 12, 2017). Retrieved from https://www.ft.com/content/062e5d62-7f31-392e-a571-221e5e6f09fd; Ruso, C. "Bitcoin Mania Interrupted, for Now, After Outage Triggers Selloff." Bloomberg. (Nov. 29, 2017). Retrieved from https://www.bloomberg.com/news/articles/2017-11-29/bitcoin-mania-interrupted-for-now-as-outage-triggers-selloff; and Martin, T. W., Jeong, E., & Russolillo, S. "North Korea Is Suspected in Bitcoin Heist." Wall Street Journal. (Dec. 20, 2017). Retrieved from https://www.wsj.com/articles/north-korea-is-suspected-in-bitcoin-robbery-1513790899.

other forms of investor fraud and market manipulation."[11] Retail customers would benefit from execution platforms operating under thoughtful regulation. Gemini Trust Company recently issued a proposal for a self-regulatory organization for virtual currency.[12] The DCM Core Principles coupled with the best practices used by the leading execution venues provide a regulatory framework for virtual currency. As evident by the robust volumes and highly liquid markets of registered U.S. exchanges, retail customers have greatly benefitted from CFTC oversight and DCM Core Principles.

II. Virtual Currency under the 2-Day Delivery Period

In the Proposed Interpretation, the Commission requested comments on a 2-day delivery period for virtual currency. The Commission and the courts settled the delivery period for foreign exchange transactions, which are similar in nature to virtual currency. First under the CFTC Reauthorization Act of 2008 and later strengthened under the Dodd-Frank Act, Section 2(c)(2)(D) of the CEA was amended to address fraud related to foreign exchange transactions marketed to retail customers. CEA section 2(c)(2)(D) was a Congressional response to *CFTC v. Zelener*,[13] which limited the Commission's ability to oversee over-the-counter foreign exchange markets.

On face value, the 2-day delivery period for foreign exchange transactions may seem appropriate for virtual currency. However, the CFTC settlement order with *Coinflip* deemed "Bitcoin and other virtual currencies are distinct from 'fiat' currencies, which are the coin and paper money of the United States or another country that are designated as legal tender, circulate, and are customarily used and accepted as a medium of exchange in the country of issuance."[14] The Commission's guidance related to actual delivery uses a functional test to evaluate the delivery of a commodity instead of relying on the contract terms between purchaser and seller ("CFTC Guidance").[15] The CFTC Guidance provides the following functional test for actual delivery:

> "ownership, possession, title, and physical location of the commodity purchased or sold, both before and after execution of the agreement, contract, or transaction, including all related documentation; the nature of the relationship between the buyer, seller, and possessor of the commodity purchased or sold; and the manner in which the purchase or sale is recorded and completed."[16]

CEA section 2(c)(2)(D) excludes commodity transactions from CFTC oversight, provided such transactions actually deliver the underlying commodity within 28 days.[17] Therefore, virtual currency transactions must meet the CFTC Guidance for market participants to remain exempt from the CEA.

III. Actual Delivery Exception for Virtual Currency Transactions

Virtual currency and the operational practices used by market participants present the Commission with challenges related to the functional test for actual delivery.

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[11] Remarks of Chairman J. Christopher Giancarlo to the ABA and Futures Section Conference, Naples, Florida (Jan. 28, 2018).
[12] "A Proposal for a Self-Regulatory Organization for the U.S. Virtual Currency Industry." Gemini Trust Company, LLC (Mar. 20, 2018). Retrieved from https://gemini.com/blog/a-proposal-for-a-self-regulatory-organization-for-the-u-s-virtual-currency-industry/
[13] Commodity Futures Trading Commission v. Zelener, 373 F.3d 861 (7th Cir. 2004).
[14] In re Coinflip, Inc., CFTC No. 15-29 (Sept. 17, 2015).
[15] CFTC Release: RIN 3038–AD64 "Retail Commodity Transactions Under Commodity Exchange Act" (Aug. 3, 2013).
[16] Id.
[17] CEA section 2(c)(2)(D)(ii)(III)(aa).

1. *Do on-chain transactions facilitated by an execution platform meet the title requirements of the actual delivery exception?*

As previously discussed, execution platforms predominantly exchange fiat currency for virtual currency. On-chain transactions are settled between counterparties by the mining process, which includes committing transactions to the public ledger and broadcasting confirmation to the network.[18] For transactions that are mined within a 28-day period, it appears such transactions comport with the actual delivery exemption. However, title to virtual currency is a more nuanced requirement.

Possession is distinct from title.[19] One may have possession and the ability to exercise significant control over a property, but this is not equivalent to having title of the property. In *Rasmussen*, the Court put forth a three prong test to recognize a property right: "First, there must be an interest capable of precise definition; second, it must be capable of exclusive possession or control; and third, the putative owner must have established a legitimate claim to exclusivity."[20] From a technological perspective, access to private/public keys associated with an on-chain transaction delivers control, dominion features of possession, and even ownership.[21] The issue is whether access to private/public keys conveys a bundle of rights that makes the interest legally defensible.

For example, two parties are in a legal dispute over a storage drive containing a wallet with access to 100 coins of virtual currency stored on the public ledger. The storage drive is in the possession of Party A, but only Party B has the private/public keys to access and transfer the virtual currency. Who has title in this scenario? In the absence of any other facts, Party B that has title because of access to the private/public keys. By design, blockchain technology provides access to the private/public keys and is dispositive of dominion and control. Thus, Party B holds title to the virtual currency in this example. However, the parties to the example are not anonymous. One of the most interesting facets of blockchain technology is its anonymous design and pseudo-anonymous character related to public addresses or owners of virtual currency.[22] Personal information about owners are not stored on the public ledger.

Real estate is often titled in the name of a trust or a corporation in order to provide owners with a level of anonymity. The public ledger serves a similar role of anonymizing the identity of owners. However, there is an important distinction between these two approaches. In the case of real property, the legal entity providing title anonymity contains terms and conditions regarding the entity's relationship with the anonymous owner. Moreover, the legal entity providing title to an anonymous owner can be compelled by courts and regulators to disclose the identity.[23] This is not the case with virtual currency that is committed to the public ledger.

The public ledger operates without a central authority. As such, there is no party to compel in defense of title rights. To meet the actual delivery exception, execution platforms must gather the necessary information about its customers. By requiring execution platforms to gather meaningful disclosures (e.g., know your customer procedures), courts and regulators will have the necessary ownership information to effectuate recourse as related to title rights of virtual currency.

2. *Do off-chain transactions facilitated by an execution platform meet the title requirements of the actual delivery exception?*

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[18] Satoshi Nakamoto, "Bitcoin: A Peer-to-Peer Electronic Cash System" (Oct. 31, 2008) at 3, Retrieved from https://bitcoin.org/bitcoin.pdf.

[19] Possession, Black's Law Dictionary (10th ed. 2014); and Title, Black's Law Dictionary (10th ed. 2014).

[20] G.S. Rasmussen & Assocs., Inc. v. Kalitta Flying Serv., Inc., 958 F.2d 896, 899 (9th Cir. 1992) at 903.

[21] Hansen, J. D., & Boehm, J. L. "Treatment of Bitcoin under U.S. Property Law". *Perkins Coie*. (Mar. 2017) at 9.

[22] Id at 14.

[23] Id at 14-15.

The Commission deemed virtual currency as a commodity under the CEA.[24] As such, this new market is granted the same 28-day delivery period as other commodities with the exception of foreign exchange transactions. Off-chain transactions by execution platforms transfer virtual currency among customer accounts without submission to the public ledger. Contrary to the guiding principles outlined by Satoshi Nakamoto, no "proof of work" is conducted and the transaction is not committed to the public ledger.[25] As previously discussed, off-chain transactions enable customers of execution platforms to avoid mining fees. Therefore, it is unclear if off-chain transactions meet the ownership, possession, title, and physical location requirements of the actual delivery exception.

The process of mining transactions to the public ledger transfers ownership of virtual currency.[26] Transactions that are committed to the public ledger embody a complete and non-duplicative transfer between authoritative parties. Despite the fact personal information is omitted, committing transactions to the public ledger comports with the first example of an actual delivery contained in the Proposed Interpretation. Although, off-chain transactions among the customer accounts of an execution platform become far less certain of satisfying the functional test for actual delivery.

The dominion over off-chain transactions becomes subject to the operations, technology, and cybersecurity safeguards of the execution platform. In the case of bankruptcy, virtual currency accounts of an execution platform are unlikely to benefit from the same level of protection and security entitlements as those of futures and securities accounts. Absent clear contractual and corporate provisions, off-chain transactions would likely be entangled in receivership. Customers would be left as holders of credit interest against the assets of the defaulted execution platform.

In order to address these issues, blockchain technology is able to conclusively prevent duplicative transfers. Irrespective of bona fide efforts by execution platforms to provide customers with a cost effective alternative to on-chain transactions, it is clear that off-chain transactions provide less possession and dominion. On-chain transactions are dispositive of ownership over virtual currency.

IV. Virtual Currency and the Uniform Commercial Code

Another central issue for the Commission's consideration is: Does a transfer of virtual currency transfer clear title? For example, would a physical delivery of encumbered cotton meet the actual delivery exception? To answer this, the Commission should consider security interests in virtual currency as related to Article 9 of the Uniform Commercial Code ("UCC"). In the influential law article by Professor Jeanne Schroeder, she categorized virtual currency as a general intangible under the UCC.[27] This categorization under the UCC likely has liquidity concerns for virtual currency. As a general intangible, virtual currency can be commonly used as collateral and it cannot be transferred without the debtor's consent.[28] Today's process for transacting virtual currency does not identify security interests under Article 9.

The default rule under Article 9 is the first-in-time claimant prevails over a subsequent transferee. In other words, the sale of virtual currency with a perfected security interest is fraudulent without the secured party's consent. Under Article 9, virtual currency does not comport with the UCC's definition of money and is instead categorized as a general intangible. Security interests on general intangibles can be attached and perfected via the established procedures under Article 9 (e.g., filing the necessary financial

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[24] In re Coinflip, Inc., CFTC No. 15-29 (Sept. 17, 2015).

[25] Satoshi Nakamoto, "Bitcoin: A Peer-to-Peer Electronic Cash System" (Oct. 31, 2008) at 3. Retrieved from https://bitcoin.org/bitcoin.pdf.

[26] Id at 2.

[27] Jeanne L. Schroeder, "Bitcoin and the Uniform Commercial Code." University of Miami Business Law Review (June 1, 2016) at 8.

[28] Id at 8.

statement with the appropriate office). Therefore, purchasers of encumbered virtual currency would be subordinate to prior perfected security interests, which serves to prevent the fraudulent conveyance of title.[29]

It is fair to assume that today's execution venues and wallet technology do not adequately address the potential title issues raised under Article 9. As put forth under the Proposed Interpretation, the depository framework for precious metals transactions provides a valid regulatory solution for the virtual currency market. A virtual currency depository could validate transactions against the actual delivery functional test and Article 9 requirements for the conveyance of a general intangible. Therefore, such a depository would provide an independent validation and title register for virtual currency.

V. Virtual Currency Depository

A central issue for the virtual currency market is the proper conveyance of title for off-chain transactions. Off-chain transactions are recorded on private systems instead of committing such transactions to the public ledger. The growth of virtual currency volumes has greatly increased mining costs. As more transactions compete for miners' processing capacity, mining fees have consequently increased. CoinDesk reported the average mining fees for Bitcoin increased from $0.62 during Q1 2017 to $13.20 during Q4 2017.[30] This twenty-one fold increase in mining fees has led to execution platforms facilitating off-chain transactions to minimize mining fees for its customers. Otherwise, committing all transactions to the public ledger would be uneconomical for many transactions that are partial increments of a virtual currency. For example, a Satoshi is the smallest Bitcoin unit and it is equivalent to one hundred millionth of a single Bitcoin (0.00000001).[31] Customers of execution platforms need the ability to trade partial increments of a virtual currency without continuously incurring mining fees. This development necessitates an independent third-party solution that will store the title of virtual currency (e.g., on-chain and off-chain transactions) in order to meet the requirements of the CFTC Interpretation for actual delivery.

The reporting of transaction data is a fundamental component of various global regulations to increase transparency in markets. The Dodd-Frank Act and subsequent CFTC Regulations require market participants and registered boards of trade to report transaction data to a repository, which operates under SDR Core Principles.[32] As registered entities, SDRs must adhere to the System Safeguard Rules of the Commission.[33] These rules require registered entities to maintain policies and procedures for testing cybersecurity and analyzing system safeguard measures. The policies and procedures of registered entities must include: (1) vulnerability testing, (2) penetration testing, (3) controls testing, (4) security incident response plan testing, and (5) enterprise technology risk assessment.[34] Lastly, SDRs provide the Commission with a central facility of reported swap data that includes ownership information.

The Model State Commodity Code (the "MSC Code") established a depository entity for physical precious metals transactions. A depository provides third-party validation of ownership for precious metals transactions. The MSC Code requires payment and physical delivery of the precious metal to a depository within seven days of the transaction date.[35] The MSC Code defines a depository as either (a) a "financial institution" under the CEA; (b) an entity that warrants or warehouses receipts, which are recognized for

[29] Jeanne L. Schroeder, "Bitcoin and the Uniform Commercial Code." University of Miami Business Law Review (June 1, 2016) at 32.

[30] "State of Blockchain 2018." CoinDesk (Jan. 2018) at 17. Retrieved from https://www.coindesk.com/research/state-blockchain-2018/.

[31] Antonopoulos, A. M. Mastering Bitcoin. Sebastopol, CA: O'Reilly Media Inc. (2015) at 18.

[32] Dodd-Frank Act section 728 amended CEA section 21 pertaining to 17 CFR 49 Swap Data Repositories: Registration Standards, Duties and Core Principles (2011).

[33] CFTC Fact Sheet "Final Rules on System Safeguards Testing Requirements." (Sept. 8, 2016).

[34] Id.

[35] MSC Code section 1.04(2).

delivery on a CFTC designated contract market; or (c) a U.S. licensed storage facility.[36] These depository principles under the MSC Code coupled with those of SDRs provide the Commission with a framework for a virtual currency depository. Such a depository should maintain a title register of virtual currency and verify the functional test for actual delivery.

A virtual currency depository should operate in an independent manner from execution platforms and market participants. The independent nature of custodial and warehouse accounts has provided immense benefits to the financial industry. The governance framework of a virtual currency depository should sufficiently address conflicts of interest, comply with the CEA mandates of fair and open access to central services, and prohibit any mandatory purchases of bundled services.[37] To maximize the utility of a depository, it should have the authority to verify virtual currency stored on the public ledger and receive daily reports of off-chain transactions. The depository should receive from reporting parties identifying information regarding account holders. With the stewardship of a self-regulatory organization, it is feasible for the depository to search the public ledger to ensure transactions are not subject to an encumbrance or part of a hacking scheme.

In sum, a virtual currency depository should maintain an ownership or title register of on-chain and off-chain transactions. Such a depository would not store the underlying virtual currency because this is an inherent duty of the public ledger. Much like SDRs, a virtual currency depository would gather and aggregate transactional data in order to provide the Commission with the means to oversee market activity and protect the interests of retail customers.

VI. Summary

The passage of the Dodd-Frank Act greatly expanded the regulation of derivatives and commodities markets. As a core pillar of this regulatory expansion, providers of market infrastructures were required to register with the Commission and maintain compliance with comprehensive core principles. Mandatory CFTC registration by providers of market infrastructures has proven to be a successful oversight framework. Virtual currency and the underlying blockchain are transformative technologies that have advanced markets. In the interest of retail customers and infrastructure providers, the time has come to apply sensible and proven regulation.

I support the Commission's request for comments regarding actual delivery in the context of virtual currency and its intention to issue guidance on this topic. Lastly, I appreciate the opportunity to comment on the Proposed Interpretation. Should you have any questions or comments regarding this letter, please feel free to contact me (bruceatupper@gmail.com or 404.808.2592).

Sincerely,

Bruce A. Tupper

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[36] MSC Code section 1.04(2).
[37] CEA section 5b(c)(2)(C)(iii) and CEA section 21(f)(1).