

Applying the SEC Custody Rule to Cryptocurrency Hedge Fund Managers

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INTRODUCTION

In the wake of the Bernard Madoff Ponzi scheme, the Securities and Exchange Commission (SEC) adjusted its rules to prevent future fraud.¹ Despite blindsiding the SEC and many in the financial industry, the culprit was all too familiar: a bad adviser fleecing his trusting clients.² The problem goes back millenia. In 1754 B.C., Hammurabi had already prescribed a way to circumvent bad financial actors. To protect the grain and precious metal stored in another’s house for safekeeping, the Code required a system of contracts and third-party verification.³ Law 122 read: “If a man wishes to give silver (or) gold or anything whatsoever to a man for safe custody, he shall show anything whatsoever that he gives to witnesses, he shall draw up a contract and (thus) give (them) for safe custody.⁴” Now, nearly four thousand years later, hedge funds and regulators must revisit what is considered safe custody when they eschew transactions in grain or bonds for the cryptographic technology behind Bitcoin and other cryptocurrencies.

For traditional investment funds, the SEC has protections in place to assure investors that their accounts contain the assets their advisers say they contain.⁵ In securities parlance, this is known as the *custody rule*.⁶ The rule requires registered investment advisers with possession of their clients’ assets to implement controls to protect those assets from being “lost, misused,

1. See Press Release, U.S. Sec. & Exch. Comm’n, The Securities and Exchange Commission Post-Madoff Reforms (Apr. 2, 2012), <https://www.sec.gov/spotlight/secpostmadoffreforms.htm> [<https://perma.cc/ZDT3-5U7Y>] [hereinafter Post-Madoff Reforms].

2. See Diana B. Henriques & Alex Berenson, *The 17th Floor, Where Wealth Went to Vanish*, N.Y. TIMES (Dec. 14, 2008), <https://www.nytimes.com/2008/12/15/business/15madoff.html> [<https://perma.cc/5USX-KGUD>].

3. See K.V. Nagarajan, *The Code of Hammurabi: An Economic Interpretation*, 2 INT’L J. OF BUS. & SOC. SCI. 108. (2011).

4. *Id.* at 111.

5. See Post-Madoff Reforms, *supra* note 1 (“The rules provide greater assurance to investors that their accounts contain the funds that their investment adviser and account statements say they contain.”).

6. See Advisers Act Rule 206(4)-2, 17 C.F.R. § 275.206(4)-2 (2019).

misappropriated or subject to the advisers' financial reverses."⁷ Failure to do so is considered "a fraudulent, deceptive, or manipulative act."⁸ The rule thus encourages registered investment advisers to hire a specialized, independent third party to maintain custody of their clients' assets.⁹ Whether we think of the shifty Babylonian grain custodian or Madoff's locked filing cabinet,¹⁰ the custody rule has commonsense appeal. We want an extra layer of protection between investor money and the adviser.

However, applying the custody rule to cryptocurrencies is difficult. New cryptocurrency-focused hedge funds¹¹ deal in a fundamentally different kind of asset than funds holding grain futures, precious metals, or stocks. On top of fraudulent advisers, funds holding cryptocurrency face a host of novel challenges: a simple programming mistake can cause millions of dollars of client assets to vanish into the abyss,¹² hackers can bring down entire exchanges,¹³ and new assets can form on top of existing assets.¹⁴ Although specialized qualified custodial services are emerging to cater to this market,¹⁵ they are few and far between and lack industry standards. As a result, if the SEC mechanically applies the custody rule to hedge funds investing in cryptocurrency, many will likely be in violation.

7. Custody of Funds or Securities of Clients by Investment Advisers, Investment Advisers Act Release No. IA-2876, 68 Fed. Reg. 56,692 (Oct. 1, 2003).

8. *Id.*

9. See Post-Madoff Reforms, *supra* note 1 ("Among other things, the new rules encourage registered investment advisers to place their clients' assets in the custody of an independent firm, unlike Bernard Madoff did.")

10. See Complaint at 5, SEC v. Madoff, No. 08 Civ. 10791 (S.D.N.Y. 2008) ("Madoff kept the financial statements for the firm under lock and key, and was 'cryptic' about the firm's investment advisory business when discussing the business with other employees of BMIS").

11. See Wolfie Zhao, *Morgan Stanley: Hedge Funds Poured \$2 Billion into Cryptos in 2017*, COINDESK (Dec. 20, 2017), <https://www.coindesk.com/morgan-stanley-hedge-funds-poured-2-billion-into-cryptos-in-2017> [<https://perma.cc/3JMR-4XKN>] ("The investment bank further detailed that more than 100 crypto-related hedge funds have sprung up over the past six years, [but] 84 of the funds launched in 2017.")

12. See Alex Hern, '\$300m in Cryptocurrency' Accidentally Lost Forever Due to Bug, GUARDIAN (Nov. 8, 2017), <https://www.theguardian.com/technology/2017/nov/08/cryptocurrency-300m-dollars-stolen-bug-ether> [<https://perma.cc/4BV3-76ZE>]; Stan Higgins, *Ethereum Client Update Issue Costs Cryptocurrency Exchange \$14 Million*, COINDESK (June 2, 2017), <https://www.coindesk.com/ethereum-client-exchange-14-million> [<https://perma.cc/8CWS-JCN9>].

13. Cameron Keng, *Bitcoin's Mt. Gox Goes Offline, Loses \$409M – Recovery Steps and Taking Your Tax Losses*, FORBES (Feb. 25, 2014), <https://www.forbes.com/sites/cameronkeng/2014/02/25/bitcoins-mt-gox-shuts-down-loses-409200000-dollars-recovery-steps-and-taking-your-tax-losses/#53fc792d5c16> [<https://perma.cc/QPX5-FGYW>].

14. See *Get Free Crypto Coins if You Own Bitcoins (BTC)*, CRYPTO MINING BLOG (July 24, 2017), <http://cryptomining-blog.com/tag/airdrop/> [<https://perma.cc/RA26-PD9Q>]; Jamie Redman, *Bitcoin Cash Network Completes a Successful Hard Fork*, BITCOIN.COM (Nov. 13, 2017), <https://news.bitcoin.com/bitcoin-cash-network-completes-a-successful-hard-fork> [<https://perma.cc/L6BN-YQSD>].

15. See, e.g., Information about "Coinbase Custody" available via their website, <https://custody.coinbase.com> [<https://perma.cc/M67Y-CWSS>].

This Note will review why it is difficult to apply the current custody rule to cryptocurrency hedge funds, and how the rule can be modified to better fit the peculiarities of this new asset class. First, this Note looks at the present state of the rule and its general application to hedge funds. Second, it examines how cryptocurrency is “held” and the challenges this presents to hedge fund managers and their custodians. Third, it analyzes why the current rule does not meet these challenges. Finally, this Note presents an alternative mechanism that the SEC can adopt for applying the rule.

I.

THE CUSTODY RULE: CURRENT FRAMEWORK

The SEC first began to regulate custodial practices in 1962, when it adopted Rule 206(4)-2 under the Investment Advisers Act of 1940 (“IAA” or “the Act”).¹⁶ This rule, which included adviser disclosure and surprise examinations, remained fundamentally unchanged until 2003,¹⁷ when the SEC amended the rule to introduce the concept of a qualified custodian.¹⁸ In 2010, following the Madoff scandal, the SEC again amended the rule to add additional controls.¹⁹

Under the IAA, an “investment adviser” is any person who advises others on the purchase or sale of securities in exchange for compensation.²⁰ Although this definition is quite broad, there are important exemptions. For example, most hedge fund managers will fall under the definition of “investment adviser,” but may nevertheless be exempt from required SEC registration. Since the custody rule only applies to SEC-registered investment advisers (“registered advisers”), managers falling under one of the exemptions may be able to avoid the requirements of the custody role.

A. Basic Mechanics of the Custody Rule

Before jumping into the custody rule’s application to cryptocurrency, we must first understand the traditional mechanics of the rule. Once investment advisers are both registered and deemed to have custody of their clients’ assets, Rule 206(4)-2 provides four requirements: a qualified custodian, notice to clients, delivery of account statements, and surprise examinations.²¹

16. Robert E. Plaze, *Regulation of Custodial Practices Under the Investment Advisers Act of 1940 Rule 206(4)-2*, Investment Adviser Association Investment Adviser Compliance Conference, Crystal City, VA at 1 (March 6–7, 2014), <https://docplayer.net/17221319-Regulation-of-custodial-practices-under-the-investment-advisers-act-of-1940-rule-206-4-2.html> [https://perma.cc/WH5D-8356].

17. *See id.*

18. *See id.* at 2.

19. *See Staff Responses to Questions About the Custody Rule*, U.S. SEC. & EXCH. COMM’N, https://www.sec.gov/divisions/investment/custody_faq_030510.htm [https://perma.cc/PJ5L-UEQN]; *see also* DOUGLAS L. HAMMER ET AL., U.S. REGULATION OF HEDGE FUNDS 325 (2013).

20. HAMMER, *supra* note 19, at 9.

21. *See* Advisers Act Rule 206(4)-2(a), 17 C.F.R. § 275.206(4)-2(a) (2018); HAMMER, *supra* note 19, at 325; Plaze, *supra* note 16, at 5.

1. *Qualified Custodian*

A registered investment adviser with custody of a client's assets must hold those assets with a "qualified custodian" in either (a) separate accounts under each client's name or (b) accounts in the adviser's name that hold only the clients' assets.²² Qualified custodians include banks, broker-dealer firms, futures commission merchants, and foreign financial institutions that customarily hold financial assets for their customers in segregated accounts.²³

An adviser may hold client assets with more than one qualified custodian.²⁴ However, the assets must be held in such a way that the custodian can provide account information to the clients.²⁵ In 2003, the SEC stated that stock certificates kept in an adviser's bank safety deposit box would not be considered held in "accounts" with the qualified custodian, and therefore would not satisfy the rule.²⁶ This will be at issue when we look at the unique characteristics of how cryptocurrency is held.

2. *Notice to Clients*

Once a registered investment adviser with custody opens an account on the client's behalf or makes changes to the custodial arrangement, they must promptly notify the client in writing. This notice must provide the qualified custodian's name, address, and information about how the funds are being held.²⁷ For hedge funds, discussed in more detail in Section B, limited partners who do not wish to receive these notices can elect an independent representative to act as an agent and receive the notices on their behalf.²⁸

3. *Delivery of Account Statements*

The qualified custodian must deliver account statements directly to the client at least quarterly. These statements must list the balance of funds for each type of security in the account, as well as all transactions occurring during the period.²⁹ In the case of hedge funds, the client would be any limited partner, member, or other beneficial owner of the fund.³⁰ The Act requires that the adviser have a reasonable basis for belief, after due inquiry, that the custodian is sending the statements.³¹

22. 17 C.F.R. § 275.206(4)-2.

23. *Id.*

24. See Custody of Funds or Securities of Clients by Investment Advisers, Investment Advisers Act Release No. 2176, 68 Fed. Reg. 56,692 n.17 (Oct. 1, 2003).

25. See 17 C.F.R. § 275.206(4)-2(a)(3).

26. See Custody of Funds or Securities of Clients by Investment Advisers, Investment Advisers Act Release No. 2176, 68 Fed. Reg. 56,692 n.18; Plaze, *supra* note 16, at 12.

27. 17 C.F.R. § 275.206(4)-2(a)(2).

28. *Id.* § 275.206(4)-2(a)(7); HAMMER, *supra* note 19, at 327.

29. 17 C.F.R. § 275.206(4)-2(a)(3).

30. See HAMMER, *supra* note 19, at 328.

31. 17 C.F.R. § 275.206(4)-2(a)(3).

4. Surprise Examination

Each adviser must ensure that an independent public accountant performs at least one surprise examination per year to verify their clients' assets.³² The accountant must schedule the examination at a different time each year to maintain the "surprise."³³ Under the agreement with the adviser, the accountant must (1) file Form ADV-E with the SEC within 120 days of the examination; (2) notify the SEC within one business day of finding any material discrepancy during the exam; and (3) if the engagement is terminated, notify the SEC of the date and reason for the termination.³⁴ Essentially, an independent accountant will make sure the assets that the adviser is telling its clients are there are actually there.

B. Hedge Funds and the Custody Rule

Some hedge funds enjoy exceptions to both SEC registration and these custody rule requirements. The term "hedge fund" refers generally to a professionally managed pool of assets that employs a wide range of investment strategies.³⁵ Most funds are structured as limited partnerships, with a fund manager serving as general partner and the investors acting as limited partners. The investors take a passive role while the investment manager determines strategy, manages risk, and makes investing decisions on behalf of the fund. The SEC and the Commodities and Futures Trading Commission are the primary federal agencies responsible for regulating both hedge funds and their managers. Whether the custody rule is applied to a certain hedge fund manager will depend on whether they are a registered investment adviser or fall under an exemption to the Act.

As discussed above, some hedge fund managers are exempt from SEC registration altogether. The most important exemption is for private fund advisers.³⁶ Under Rule 203(m)-1, as long as a manager advises only private funds and their assets do not exceed \$150 million, they will not be subject to the custody rule under the IAA.³⁷ This exemption is important because many

32. See *id.* § 275.206(4)-2(a)(4).

33. See 17 C.F.R. § 275.206(4)-2(a)(4); *In re Kaufman, Bernstein, Oberman, Tivoli & Miller, LLC*, S.E.C. Admin. Proc., File No. 3-11341 (Nov. 20, 2003), Plaze, *supra* note 16, at 17.

34. 17 C.F.R. § 275.206(4)-2(a)(4)(i)-(iii).

35. HAMMER, *supra* note 19, at 1.

36. *Id.* at 14.

37. Private Fund Adviser Exemption, 17 C.F.R. § 275.203(m)-1. However, even when exempt from SEC regulation, they may nonetheless be subject to an analogue under state law. For an example of state-level regulation of cryptocurrency custody, see the New York "Bitlicense," *Virtual Currencies*, N.Y. COMP. CODES R. & REGS., tit. 23, § 200.9 (2015), <https://www.dfs.ny.gov/legal/regulations/adoptions/dfsp200t.pdf> [https://perma.cc/KU46-WQ36] ("Each Licensee shall maintain a surety bond or trust account in United States dollars for the benefit of its customers in such form and amount as is acceptable to the superintendent for the protection of the Licensee's customers. To the extent a Licensee maintains a trust account in accordance with this section,

cryptocurrency hedge funds launched in 2016 and 2017 had well under \$150 million in assets under management. Their managers were therefore exempt from the custody rule.³⁸ But with the explosion in the price of Bitcoin and other cryptocurrencies that began in the summer of 2017, along with continued investor interest, many of these funds held above \$150 million in assets by 2018 or aspired to do so.³⁹ The SEC will have to decide how to apply the custody rule to these newly emerged funds as they surpass \$150 million.⁴⁰

In addition, even if the investment adviser is registered and has custody of client funds, the custody rule's requirements are different for hedge funds. If the registered investment adviser advises a limited partnership and sends each of the fund's clients audited annual financial statements within 120 days of each fiscal year, the adviser is not required to notify clients of the qualified custodian's information, have the qualified custodian deliver quarterly account statements, or have their clients' assets verified by a surprise examination.⁴¹ The accountant performing the audits must be independent from the adviser and registered with the Public Company Accounting Oversight Board (PCAOB), and the financial statements must be prepared in accordance with generally accepted accounting principles (GAAP).⁴² As long as the hedge fund's accountant is able to comply with GAAP in their reporting, the fund's manager will likely take advantage of the exemption.⁴³ As most funds will comply with GAAP and fall under the exception, we end up with two hard rules: first, the hedge fund manager must maintain its clients' assets with a qualified custodian; and second, the manager must arrange for a PCAOB-registered accountant⁴⁴ to audit the fund's assets every year.

Further complicating the application of the rule, there has been much debate as to whether cryptocurrency is a security at all. If a hedge fund does not engage in the "purchase or sale of securities," its manager will be exempt from

such trust account must be maintained with a Qualified Custodian." See also HAMMER, *supra* note 19, at 332.

38. See *Cryptocurrency Investment Fund Industry Graphs and Charts*, CRYPTO FUND RES., <https://cryptofundresearch.com/cryptocurrency-funds-overview-infographic> [https://perma.cc/Q8VX-NY9Q] ("The vast majority of crypto investment funds are small. Half have less than \$10 million in assets under management (AUM).").

39. See, e.g., Cryptocurrency Fund L.P., Notice of Exempt Offering of Securities (Form D) (July 7, 2017), <http://pdf.secdatabase.com/2809/0001711332-17-000001.pdf> [https://perma.cc/G2D5-V8YQ] (seeking a total offering of 200mm).

40. Form ADV is used by investment advisers to register with the SEC and state securities authorities. See *Fast Answers: Form ADV*, U.S. SEC. & EXCH. COMM'N, <https://www.sec.gov/fast-answers/answersformadv.htm> [https://perma.cc/Q28G-XRGP].

41. 17 C.F.R. § 275.206(4)-2(a)(4) (2019).

42. *Id.*

43. See HAMMER, *supra* note 19, at 330.

44. The Public Company Accounting Oversight Board is a non-profit corporation established by Sarbanes-Oxley Act of 2002 to supervise the audits of public companies and broker-dealers. The SEC approves the PCAOB's rules, standards, and budget. See *About the PCAOB*, PUB. COMPANY ACCT. OVERSIGHT BOARD, <https://pcaobus.org/About/Pages/default.aspx> [https://pcaobus.org/About/Pages/default.aspx].

regulation under the IAA. In addition, there is an argument that certain coins are not “client funds.”⁴⁵

When hedge funds are not investing in traditional securities, like stocks or bonds, but rather in cryptocurrency operating on a digital ledger, how do they comply with these rules? To answer this question, we must first look at how cryptocurrency is held and stored and how that differs from traditional securities. We will then look at challenges in applying the rule to this novel financial instrument.

II.

CRYPTOCURRENCY AND CUSTODY

Unlike traditional financial assets, cryptocurrencies are not based on institutional trust. This difference is important in the custody context. With traditional assets, we believe that a central party—whether a bank, Paypal, or a grain storage facility—is maintaining a ledger that is properly recording the assets they hold and marking which of those assets belong to us. We do not expect to see the ledger—we trust that the institution has protections in place to prevent internal fraud and attacks from outsiders. Blockchain, the technology that underpins cryptocurrencies like Bitcoin, is based on a fundamentally different premise. This Part will first describe how cryptocurrency functions in general, and then zero in on private keys, which relate directly to the application of the custody rule.

A. *The Nature of Cryptocurrency*

Bitcoin, the most popular cryptocurrency by market cap, operates off of a ledger database that is fully available to the public—anyone can view any part of the ledger and the software used to protect it (but perhaps not edit).⁴⁶ However, although everyone can see the amounts of coins being transacted on the ledger, the identity of who holds the coins is kept private. This underlying technology, known as blockchain, is therefore “like making everybody’s bank statements public online, but with the identity blacked out.”⁴⁷ This is part of why blockchain is referred to as a “decentralized, open source,” peer-to-peer protocol.⁴⁸

Although Bitcoin is the most popular cryptocurrency, with a first-to-market advantage, there are hundreds of other cryptocurrency coins known as

45. The rule states “If you are an investment adviser . . . it is a fraudulent, deceptive, or manipulative act, practice or course of business . . . for you to have custody of *client funds* or securities unless . . .” 17 C.F.R. § 275.206(4)-2(a) (emphasis added).

46. See PEDRO FRANCO, UNDERSTANDING BITCOIN 9–10 (2015).

47. *Id.* at 9.

48. See WINKLEVOSS BITCOIN TRUST, AMENDMENT NO. 8 TO FORM S-1 REGISTRATION STATEMENT 14 (Dec. 7, 2016), <https://www.sec.gov/Archives/edgar/data/1579346/000119312516786685/d302498ds1a.htm> [<https://perma.cc/T8NS-YL5T>].

“altcoins,”⁴⁹ including Ethereum, Ripple, and Litecoin. They often vary the protocol and structure of Bitcoin, such as how the coins are generated, which programming language is used, or the number of coins issued.⁵⁰ Nonetheless, an examination of what comprises each individual Bitcoin sheds light on the operation of other cryptocurrencies. And although this decentralized data structure can have many applications, for the purposes of hedge funds and the custody rule, we only need to examine how it is used to manage and “hold” cryptocurrency.

To “hold” one Bitcoin, you need (1) access to a blockchain, (2) a Bitcoin address, (3) the private key, and (4) some type of storage device, such as a Bitcoin wallet.⁵¹

The blockchain is essentially the ledger. It uses an algorithm to record all cryptocurrency transactions and appends them as cryptographic “blocks” onto the existing ledger.⁵² Like pages in a book, each block of information adds new data to the list of transactions.⁵³ The data in these blocks is then used to both prove current ownership and record transfer of ownership.⁵⁴ This ledger is shared and updated simultaneously for each user, or “node.”⁵⁵ While the grain merchant may be required to call in his witness in the event of a dispute, here a multitude of users all act as witnesses, free of individual influence.⁵⁶

Rather than posting the name of each owner on the ledger, the blockchain is made up of numbers, known as addresses. This is like the bank account number to which you can send funds.⁵⁷ Each address is represented by a long string of letters and numbers resembling the following:

1Jc3MuGF3ALn12anPN3Xzqq13PP1e

49. “Cryptocurrencies” are often referred to as coins, tokens, or altcoins. Bitcoin and other cryptocurrencies used as a transfer of value are referred to as “coins.” Cryptocurrencies that are built on top of platforms, like Ethereum, do not themselves facilitate the transfer of value and are referred to as “tokens.” “Altcoins” refers generally to cryptocurrencies that are modifications of Bitcoin’s code, such as Litecoin. For the purposes of this paper, we will refer to all three as cryptocurrencies, unless the topic requires further specificity. See *Altcoin*, INVESTOPEDIA, <https://www.investopedia.com/terms/a/altcoin.asp> [<https://perma.cc/7PAB-G8WQ>].

50. Sarah J. Hughes & Stephen T. Middlebrook, *Advancing a Framework for Regulating Cryptocurrency Payments Intermediaries*, 32 YALE J. ON REG. 495, 505 (2015).

51. See CONRAD BARSKI & CHRIS WILMER, BITCOIN FOR THE BEFUDDLED 7–14 (2015).

52. *Id.* at 19.

53. See DANIEL DRESCHER, BLOCKCHAIN BASICS 63–69 (2017).

54. See *id.* at 77.

55. In fact, there is an additional database called the “Unspent Transactions Outputs cache” that records available funds for each address. IMRAN BASHIR, MASTERING BLOCKCHAIN 125 (2017); FRANCO, *supra* note 46, at 15. However, like much of the overview here, a more simplistic overview is sufficient for purposes of applying the custody rule.

56. See DRESCHER, *supra* note 53, at 29–32, 79.

57. BARSKI & WILMER, *supra* note 51, at 10.

However, because this information is public, moving cryptocurrency from one account to another requires a private key.⁵⁸ Like the address, the private key is also a string of letters and numbers, for example:

E9873D79C6D87DC0FB6A5778633389F4453213303DA61F20BD67
FC233AA33262⁵⁹

When a party wishes to transfer cryptocurrency from one address to another, the private key functions like a password and applies a digital signature to an address, “unlock[ing]” the cryptocurrency stored there.⁶⁰ Only the private key can release cryptocurrency held at an address, and once the private key is lost, it is gone forever.⁶¹ If a private key is forgotten or lost, the cryptocurrency stored on the corresponding address will be irretrievable.

B. How Private Keys are “Held”

The indispensable nature of a private key highlights an important distinction. With traditional securities, we think of “holding” something—whether a stock certificate, a bearer’s bond, or a right to withdraw fiat currency from a bank—as a representation of a physical asset existing somewhere. With cryptocurrency, control of the private key and ability to use it to perform transactions on the blockchain is the entirety of possession.⁶² There are no coins in Bitcoin. Therefore, what separates a good custodian from a bad custodian will rest largely on how the collection of private keys and addresses is managed.

Most investors in cryptocurrency will store their collections of private keys and addresses in a “wallet.” The term refers to a variety of software tools that not only store private keys and addresses, but also perform tasks, such as generating addresses and making transactions.⁶³ Essentially, the wallet software enables individuals to “be [their] own bank.”⁶⁴ The obvious downside to this freedom is the need to take security precautions and choose from the wide array of storage options available. Such decisions usually require balancing convenience (time required to conduct a transaction) and security.

As a result, individual investors in cryptocurrency will often take advantage of the ease and simplicity of an online wallet program provided by one of the

58. *Id.* at 11.

59. *Private Key*, BITCOIN WIKI, https://en.bitcoin.it/wiki/Private_key [<https://perma.cc/ADU6-26XZ>].

60. BARSKI & WILMER, *supra* note 51, at 11.

61. RICHARD CAETANO, LEARNING BITCOIN 16 (2015) (“It is not possible to recover lost private keys.”).

62. *Bitcoin Hedge Fund FAQs*, HEDGE FUND LAW BLOG (May 19, 2017), <http://hedgefundlawblog.com/bitcoin-hedge-fund-faqs.html> [<https://perma.cc/EKV8-76LK>] (“[T]he investment management industry is used to a certain definition of custody (holding something) that may not fit within the digital asset space, where control and the ability to utilize an asset is really more of the applicable context.”).

63. BARSKI & WILMER, *supra* note 51, at 12.

64. *Id.* at 33.

major cryptocurrency exchanges.⁶⁵ These online hosted “wallet services” work much like a traditional online trading account.⁶⁶ The service manages the addresses and keys and security measures, and the user can transfer and receive funds without any understating of the underlying technology.⁶⁷ Other users manage their own digital wallets and store their keys either online or on their hard drive.⁶⁸

Hot storage refers to any storage method where the private keys are stored on a device connected to the internet. In contrast, “cold storage” refers to when the private keys are inaccessible via the internet.⁶⁹ An example of cold storage would be generating the private keys on an offline computer, transferring them (without saving to the computer) to a physical sheet of paper, and then storing those papers in a safe. Although cold storage is safe from malicious hackers, it is vulnerable to the traditional threats of physical theft, fire, and loss of human memory. In addition, paper held in a safe seems counter to the notion of digital money. Ironically, secure storage of a digital asset can often rely on old-fashioned, low-tech methods.

To increase the security of the private keys, holders of large amounts of cryptocurrency can take additional measures, such as offline transaction signing and the use of multiple keys. Offline transaction signing creates an “air gap,” a secure computer network physically isolated from any unsecure network.⁷⁰ Rather than uploading each key from cold storage when it is time to make a transaction, offline transaction signing allows the custodian to move the “digital signature” process offline. Once a transaction is initiated online (buy or sell, for example), the unsigned transaction is then moved to an offline computer containing the private keys.⁷¹ That offline computer will then perform the signature, which can be copied and uploaded back onto the unsecured online network.

The use of multiple keys adds security to crypto transactions by dividing the keys necessary to authorize transactions.⁷² This allows some keys to be lost without losing control of the coins.⁷³ By requiring multiple custodian employees

65. For examples of wallet services, see *Wallet Services*, COINBASE, <https://support.coinbase.com/customer/en/portal/topics/601112-wallet-services/articles> [<https://perma.cc/T2GP-N95G>].

66. *Id.*

67. See BARSKI & WILMER, *supra* note 51, at 36.

68. *Id.* at 33.

69. *Id.* at 33.

70. See Jared Polites, *Op-Ed: How Air Gap Technology Has and Will Secure Our Cryptocurrency Assets*, CCN (Sept. 29, 2018), <https://www.ccn.com/op-ed-how-air-gap-technology-has-and-will-secure-our-cryptocurrency-assets/> [<https://perma.cc/RVV5-VABL>]; Kim Zetter, *Hacker Lexicon: What Is An Air Gap?*, WIRED (Dec. 8, 2014), <https://www.wired.com/2014/12/hacker-lexicon-air-gap> [<https://perma.cc/6EK4-KLPF>].

71. BARSKI & WILMER, *supra* note 51, at 141.

72. See FRANCO, *supra* note 46, at 136.

73. *See Id.*

to authorize a single transaction, the use of multiple keys can also minimize the risk posed by bad internal actors.⁷⁴ Thus, multiple keys allow holders to avoid leaving the power for malfeasance in one individual. For example, a multiple-signature address could create five private keys that are all necessary to unlock one address. The qualified custodian could then distribute these keys to designated employees, giving the fifth key to a director. Similarly, a custodian could achieve the same effect by “fragmenting” the private keys. In this approach, the private key is split into multiple pieces, with a certain number of pieces required to come together to authorize a transaction. For example, the key could be split into three fragments with two necessary to perform a transaction, or a “2 of 3” private key.

The use of private keys is illustrated by the Winklevoss Bitcoin Trust exchange-traded fund⁷⁵ registration statement filed with the SEC in 2016.⁷⁶ The fund planned to use the Gemini Trust Company, LLC, as a custodian implementing a “Cold Storage System.”⁷⁷ The fund would issue shares tracking the price of bitcoin on the Winklevosses’ Gemini Exchange.⁷⁸ The fund’s management of the private keys listed the following features (emphasis added):

Private Key Management. The Custodian generates, stores and manages the **private keys** that control the Trust’s bitcoin The Cold Storage System only uses HSMs . . . used by the Custodian to **digitally sign** (i.e., authenticate) any transfer of the Trust’s bitcoin. The Custodian’s Cold Storage System utilizes **multiple-signature** (“Multisig”) technology with a “**2-of-3**” signing design that requires a signature from at least two (2) of three (3) potential Signers in order to move the Trust’s bitcoin.⁷⁹

From this language, we can see that “holding” cryptocurrency safely requires some technical sophistication and that digital assets have fundamentally different properties than traditional asset classes.

74. CAETANO, *supra* note 61, at 17.

75. An exchange traded fund, or ETF, would allow individuals to invest in cryptocurrency without owning the coin directly. Instead, they would own shares in the entity that hold the coins.

76. In 2017 the SEC rejected a proposed rule change that would have allowed for the Winklevoss Bitcoin Trust ETF to be listed on an exchange. See Joseph Adinolfi & Ryan Vlastelica, *Here’s What’s Next for Bitcoin After the SEC Killed the Winklevoss Bitcoin Trust*, MARKETWATCH (Mar. 13, 2017) <https://www.marketwatch.com/story/heres-whats-next-for-bitcoin-after-the-sec-killed-the-winklevoss-bitcoin-trust-2017-03-10> [<https://perma.cc/GG9K-ZH49>].

77. See WINKLEVOSS BITCOIN TRUST, *supra* note 48.

78. Order Disapproving a Proposed Rule Change, as Modified, Release No. 34-80206, File No. SR-BatsBZA-2016-30 (Mar. 10, 2017), <https://www.sec.gov/rules/sro/batsbzx/2017/34-80206.pdf> [<https://perma.cc/3CD6-8AYN>].

79. WINKLEVOSS BITCOIN TRUST, *supra* note 48 (emphasis added).

III.

CHALLENGES IN APPLYING THE CUSTODY RULE

The unique way that cryptocurrency is held and stored affects the ability of fund managers to comply with the rule. Several of these problems stem from the qualified custodian requirement. First, there is a lack of qualified custodians with experience in cryptocurrency. Second, even if the custodian has developed services in this area, different coins require different storage, and the custodian may not be able to hold every asset a manager wishes to invest in. Finally, a custodian who does accept a fund's cryptocurrency faces additional challenges from forks, airdrops, and liquidity.

*A. Challenges with Qualified Custodians**1. Lack of Qualified Custodians*

One of the primary problems for fund managers is the lack of qualified custodians and best practices for this asset class. Although there is a developed and sophisticated network of banks, broker dealers, and other entities that offer qualified custodian services, as of yet, few of these traditional custodians accept cryptocurrency.⁸⁰ The companies that do accept it often employ varying, complex storage methods. For example, Kingdom Trust, a non-depository trust company regulated by the South Dakota Division of Banking, can act as a qualified custodian under 206(4)-2 by both providing safe custody of cryptocurrency and reporting on the assets it holds. It holds cryptocurrency in a secure facility employing a cold storage method with multi-verification and multi-signature procedures.⁸¹ Xapo is another example. Although it is not a qualified custodian, Xapo stores Bitcoin using three underground vaults located on three different continents.⁸² In Switzerland, Xapo maintains a decommissioned Swiss military bunker, dug into the side of a mountain.⁸³ Coinbase Custody launched in 2018 and offers cold storage, auditing and

80. Although there are frequent news stories about large custodians developing cryptocurrency products, as of writing, none of the largest hedge fund custodians act as qualified custodians for cryptocurrency assets. Neer Varshney, *Coinbase's Cryptocurrency Custodial Service is Open for Business*, HARD FORK (July 2, 2018), <https://thenextweb.com/hardfork/2018/07/02/coinbases-cryptocurrency-custody> [<https://perma.cc/T7RL-QRHC>] ("There has been a lack of reliable custodian services for cryptocurrencies all across the globe due to uncertainty in the regulations.").

81. *Qualified Custodian Kingdom Trust Now Accepting Investments in cash and Stellar Lumens*, KINGDOM TRUST (JULY 5, 2018), <https://www.kingdomtrust.com/news/news-qualified-custodian-kingdom-trust-now-accepting-investments-in-zcash-and-stellar-lumens> [<https://perma.cc/F5WW-K4ZB>].

82. *See Vault: We've Built a Fortress for You*, XAPO, <https://www.xapo.com/en/security#vault> [<https://perma.cc/3TVH-QYZK>].

83. Joon Ian Wong, *Photos: The Secret Swiss Mountain Bunker Where Millionaires Stash Their Bitcoins*, QUARTZ (Oct. 17, 2017), <https://qz.com/1103310/photos-the-secret-swiss-mountain-bunker-where-millionaires-stash-their-bitcoins/> [<https://perma.cc/R8XW-JBFJ>].

reporting, and “geographically distributed” offline keys.⁸⁴ Brian Armstrong, Coinbase’s CEO claims the service holds more than \$500 million in assets.⁸⁵

The lengths these third-party companies are taking to securely store digital assets sound like promising avenues for fulfilling the “[s]afekeeping”⁸⁶ requirement of the custody rule. They address both the old enemies, fraud and reverses, and the new, technical failures and malicious cyber actors. There are other companies currently developing qualified custodian services.⁸⁷ However, even if more qualified custodians enter the space, there will still be challenges in complying with the rule.

2. *Different Coins Require Different Storage*

In addition to the limited number of qualified custodians, the custodians that do exist often limit the types of coins they accept. At the time of writing, Xapo only handles Bitcoin.⁸⁸ Most hedge funds, however, typically hold a variety of coins, from coins with high market caps and wide acceptance, like Ethereum and Litecoin, to coins that have not yet been released. Each of these coins may have technical particularities that require modifications to the operation of the qualified custodian. Olaf Carlson-Wee, founder of the cryptocurrency hedge fund Polychain Capital, explains that this challenge is “a complete disaster from a user experience perspective.”⁸⁹ It essentially becomes a:

[S]even-hour process of signing up on exchanges, purchasing bitcoin, registering your identity, registering bank accounts, actually getting your bitcoin, transferring your bitcoin, waiting for however long it takes for confirmation, then trading on a crypto-to-crypto order book, and

84. Sam McIngvale, *Coinbase Custody is Officially Open for Business*, THE COINBASE BLOG (July 2, 2018), <https://blog.coinbase.com/coinbase-custody-is-officially-open-for-business-182c297d65d9> [https://perma.cc/UB4T-E5DT].

85. Alex Morris, *Coinbase Custody Now Holds More Than \$500 Mln in Digital Assets*, U TODAY (Feb. 21, 2019), <https://u.today/coinbase-custody-now-holds-more-than-500-mln-in-digital-assets> [https://perma.cc/5QC8-V5VP].

86. 17 C.F.R. § 275.206(4)-2(a) (2019).

87. See David Hundeyin, *BitGo Receives Approval to Operate as Regulated Cryptocurrency Custodian*, CCN (Sept. 16, 2018), <https://www.ccn.com/bitgo-receives-approval-to-operate-as-regulated-cryptocurrency-custodian> [https://perma.cc/NZA9-R2HY]; Yogita Khatri, *TokenSoft to Offer Coincase Custody as STO Client Option*, COINDESK (Dec. 20, 2018), <https://www.coindesk.com/tokensoft-to-offer-coinbase-custody-as-sto-client-option> [https://perma.cc/52QD-VEDV].

88. See *Learning About Xapo – General: Does Xapo Support Other Cryptocurrencies Besides BitCoin?*, XAPO, <https://support.xapo.com/learning/about-xapo/general/does-xapo-support-other-cryptocurrencies-besides-bitcoin> [https://perma.cc/K6SE-4GS5] (“While you have access to any currency across the entire world with your Xapo account, the only cryptocurrency you can use and store is bitcoin (BTC)”).

89. Laura Shin, *Can’t Invest in a Crypto Hedge Fund? DIY With Shapeshift’s Prism*, FORBES (Aug. 7, 2017), <https://www.forbes.com/sites/laurashin/2017/08/07/cant-invest-in-a-crypto-hedge-fund-diy-with-shapeshifts-prism/> [https://perma.cc/78W4-HDF7].

then having to pull all those off the exchanges if you want to be secure.⁹⁰ After that, one might need to download “wallet software for 10 different cryptocurrencies and syncing with those blockchains.”⁹¹

Monero, a privacy-focused coin, illustrates why handling multiple coins can be challenging. Like Bitcoin, Monero uses a ledger to record transactions.⁹² However, to achieve superior privacy, it also uses a tool called “ring signatures” to mix the address of a transacting party with other addresses, making it more difficult to determine which address in the group produced the signature.⁹³ To achieve this design, Monero uses a different codebase than Bitcoin and its derivatives.⁹⁴ As a result, multisignature signing for Monero is not yet supported.⁹⁵ Because the code base is frequently updated by the developers, keeping abreast of the changes requires maintenance.⁹⁶ For coins without widespread adoption, it may not be worthwhile for even technologically savvy custodians to commit the manpower to hold these assets. Fund managers would thus be put in the difficult position of holding some assets with a qualified custodian while managing others in ways that violate the custody rule.

Some custodians might simply charge more. Coinbase Custody, which intends to offer support for most major cryptocurrencies, plans to charge a startup fee of \$100,000 along with a monthly fee based on assets.⁹⁷ For a smaller fund, this could be significantly higher than a typical fee of five to ten basis points on the assets under management.⁹⁸ These fees are indirectly billed to investors as a

90. *Id.*

91. *Id.*

92. See *Private Digital Currency*, MONERO, <https://getmonero.org> [<https://perma.cc/R3UY-7L2W>] (“Monero is a decentralized cryptocurrency, meaning it is secure digital cash operated by a network of users. Transactions are confirmed by distributed consensus and then immutably recorded on the blockchain.”).

93. See *Moneropedia*, MONERO, <https://getmonero.org/resources/moneropedia/ringsignatures.html> [<https://perma.cc/Y5BT-ULMR>] (“One of the security properties of a ring signature is that it should be computationally infeasible to determine *which* of the group members’ keys was used to produce the signature So, ring signatures ensure that transaction outputs are untraceable.”).

94. GenericShill, *Monero Wallets in 2018: Finally Some Progress in Light Wallets*, ALTCOIN TRADING (Jan. 3, 2017), <https://www.altcointrading.net/monero-wallet> [<https://perma.cc/C896-SMKV>].

95. *The Next Monero Client Release Will Have Full Multisig Support*, NEWSBTC (Dec. 18, 2017), <http://www.newsbtc.com/2017/12/18/next-monero-client-release-will-full-multisig-support> [<https://perma.cc/6UJT-USA9>] (“Monero, the coin known for its privacy and anonymity, will receive multisig support soon.”).

96. GenericShill, *supra* note 94.

97. It will be interesting to see how Coinbase Custody handles technological challenges and how many different coins it ultimately supports. See Frank Chaparro, *Coinbase is Going After Big Hedge Fund Money with its New Cryptocurrency Security Platform*, BUS. INSIDER (Nov. 16, 2017), <http://www.businessinsider.com/coinbase-going-after-hedge-fund-money-with-new-cryptocurrency-security-platform-2017-11> [<https://perma.cc/5H7S-G2KS>].

98. William F. Jarvis, *Understanding the Cost of Investment Management: A Guide for Fiduciaries*, COMMONFUND INSTIT. 6 (Oct. 2015), https://www.caia.org/sites/default/files/understanding_the_cost_of_investment_management.pdf

fund expense.⁹⁹ For funds like Carlson-Wee’s Polychain, which has expertise in handling numerous digital assets, managers as well as investors may be interested in avoiding the expense and likely limitations of a qualified custodian.

3. Forks and Airdrops

Sometimes owners of cryptocurrency can gain rights to different coins for free, with or without any action on their part, which presents qualified custodians with additional, unforeseen challenges. The two ways this happens are through “hard forks” and “airdrops.” A hard fork occurs when incompatible sets of rules governing the ledger emerge.¹⁰⁰ As a result, the ledger splits into two different chains, like a path separating at a fork.¹⁰¹ These forks can be created intentionally, resulting in a “coin split,” in which all holders of a certain amount of the original blockchain can claim new coins on the newly created chain. This process has created Litecoin, Bitcoin Cash, and Bitcoin Gold¹⁰². Similarly, an “airdrop” occurs when the holder of a designated amount of cryptocurrency at a particular time is rewarded with free coins in another currency. But rather than creating a fork in the blockchain, an entity initiates an airdrop by taking a “snapshot” of a particular ledger and sending the new currency to each address on the ledger that meets a certain holding threshold. Airdrops are a tool for the creator of a new coin to create publicity, whether to inflate the coin’s value, bring awareness, or achieve wider adoption.¹⁰³

For qualified custodians holding the fund manager’s digital assets, these giveaways present potential problems. To begin with, the newly awarded coins do not always show up in the wallet software. Instead, the recipient often must take extra steps before they can have access to the private keys. After a hard fork of Bitcoin created BitcoinCash on August 1, 2017, Coinbase did not support the newly minted currency until January 1, 2018.¹⁰⁴ Those who held Bitcoin at the time of the fork and maintained their assets with Coinbase’s online wallet were not able to withdraw—or even to see—their BitcoinCash balance until January.

[<https://perma.cc/MW7X-75WC>] (“As an example, these costs, which are generally 5 to 10 basis points for U.S. funds, rise to 10 to 25 basis points for large international funds and can easily exceed 25 basis points for small international funds.”).

99. Kent Oz, *Independent Fund Administrators as a Solution for Hedge Fund Fraud*, 15 *Fordham J. Corp. & Fin. L.* 329, 355 (2009).

100. See NARAYAN PRUSTY, *BUILDING BLOCKCHAIN PROJECTS* 32 (2017).

101. FRANCO, *supra* note 46, at 108–09.

102. IG Analyst, *What are Bitcoin Forks and How Do They Work?*, IG (Nov. 20, 2018), <https://www.ig.com/au/trading-opportunities/what-are-bitcoin-forks-and-how-do-they-work--181120>, [<https://perma.cc/QJZ8-XFMA>].

103. See, e.g., Ermos Kyriakides, *All You Need to Know About Airdrops*, HACKERNOON (July 31, 2018), <https://hackernoon.com/all-you-need-to-know-about-airdrops-98b1b5af7941> [<https://perma.cc/C5RN-PG2K>].

104. See *Bitcoin Cash – Frequently Asked Questions*, COINBASE, <https://support.coinbase.com/customer/portal/articles/2853600-bitcoin-cash---frequently-asked-questions> [<https://perma.cc/LW4E-4TDH>].

During that time, BitcoinCash experienced extreme fluctuations in value, ranging from \$200 to \$4,000 per coin.¹⁰⁵

This illustrates another uncertainty. In the event of a hard fork or airdrop, could a fund manager compel the independent custodian to update their system to support and distribute the newly created coin? Qualified custodians should have legitimate concerns in adopting new coins because they must consider the safeguards of the storage system.¹⁰⁶ Coinbase, for example, was concerned about the security and feasibility of BitcoinCash when it was first released.¹⁰⁷ Similarly, the exchange Poloniex initially held off on committing to support Bitcoin Gold, stating in a press release that “we cannot be certain about the security and stability of the software, nor the state or health of the network prior to launch.”¹⁰⁸ This makes the applicability of the custody rule even more important. For a manager of a smaller fund not subject to the custody rule, the solution is simple: retake control of the asset prior to the fork or airdrop, and then return it after, only without the unsupported asset. Funds that exceed \$150 million in assets would not have this flexibility. Thus, funds nearing the \$150 million threshold at the time of an airdrop or fork might be incentivized not to cross that threshold until the new asset is delivered.

This odd incentive would also implicate issues of valuation. Though valuation may be less problematic here than in the case of exchange-traded funds (ETFs), which must reach a net asset value on each business day,¹⁰⁹ hedge funds must also calculate net asset value to assess investor returns and incentive fees.¹¹⁰ In deciding whether or not to accept a new digital asset, the fund manager may

105. *Cryptocurrency Market Capitalizations for Bitcoin Cash*, COINMARKETCAP, <https://coinmarketcap.com/currencies/bitcoin-cash> [<https://perma.cc/5K8K-VEWQ>].

106. Coinbase, *Updated: What to Expect During the Bitcoin Cash Hard Fork*, COINBASE BLOG (Nov. 13, 2018), <https://blog.coinbase.com/what-to-expect-during-the-bitcoin-cash-hard-fork-f15fd03687db> [<https://perma.cc/L2TF-8XVP>].

107. *See id.*

108. *See Notice About Bitcoin Gold*, POLONIEX (Oct. 24, 2017), <https://poloniex.com/press-releases/2017.10.24-Notice-About-Bitcoin-Gold/> [<https://perma.cc/7L66-P7AH>]; *see also Update as of Tuesday, November 20, 2018*, THE COINBASE BLOG (Nov. 20, 2018), <https://blog.coinbase.com/what-to-expect-during-the-bitcoin-cash-hard-fork-f15fd03687db> [<https://perma.cc/L2TF-8XVP>] (“We will continue to evaluate the safety of the BCH SV chain . . . We anticipate this development work will take at least a few weeks, but may take longer . . . If network conditions significantly change or become unsafe at any point, Coinbase may revise these plans.”).

109. In a staff letter, the SEC cited valuation as one of the concerns in not allowing an ETF to be listed on an exchange. Staff Letter, Dalia Blass, Director, Div. of Inv. Mgmt., U.S. Sec. & Exch. Comm’n, *Engaging on Fund Innovation and Cryptocurrency-related Holdings* (Jan. 18, 2018), <https://www.sec.gov/divisions/investment/noaction/2018/cryptocurrency-011818.htm> [<https://perma.cc/9ZUF-ZGT7>] [hereinafter Staff Letter] (“Would funds have the information necessary to adequately value cryptocurrencies or cryptocurrency-related products, given their volatility, the fragmentation and general lack of regulation of underlying cryptocurrency markets, and the nascent state and current trading volume in the cryptocurrency futures markets?”).

110. Julia Kagan, *Incentive Fee*, INVESTOPEDIA (Jan. 9, 2018), <https://www.investopedia.com/terms/i/incentive-fee.asp> [<https://perma.cc/3Z8D-ERD6>]. (“In hedge funds, where incentive fees are more common, the fee is generally calculated based on growth of the fund’s or account’s net asset value (NAV).”).

have a conflict of interest balancing the security of the fund with the desire to meet certain high-water marks and hurdle rates. With traditional asset classes, fund managers already have an incentive to massage results through discretionary valuation of assets at the end of an accounting period.¹¹¹ Here, a qualified custodian may alleviate this concern: the custodian would have less incentive than a fund manager to take control of new assets before their security or viability could be verified.

Apart from the issue of whether or not to adopt a token arising from an airdrop or fork, the custodian and hedge fund manager may disagree on whether the new token is a fraudulent offering, which could violate securities laws. In 1999, the SEC acted against “free stock” offerings,¹¹² in which companies sought promotion by giving away free stock through their websites.¹¹³ Because future SEC actions could similarly target the companies involved in airdrops, a qualified custodian would be hesitant to hold these potentially fraudulent assets. If the fund manager disagreed with the qualified custodian’s risk assessment, they would once again be left choosing between violating the custody rule and forgoing holding the asset.

4. *Liquidity—Security vs. Convenience*

The need for security also creates problems with liquidity and timing. The time a custodian takes to move cryptocurrency in and out of storage has a direct bearing on a hedge fund’s liquidity. Unlike mutual funds and open-ended ETFs, hedge funds often restrict the limited partner’s ability to withdraw funds through notice periods, “lock-up” periods, and “gates,” which regulate the amount of liquidity needed at any one time.¹¹⁴ Therefore, these measures alleviate many of the concerns raised by the SEC with regard to ETFs’ ability to meet daily redemptions and the requirements of the new liquidity rule.¹¹⁵ The issue facing hedge funds will be whether the qualified custodian can release digital assets quickly enough to satisfy the fund manager’s trading needs. Xapo advertises a lengthy 48-hour transfer window to bring digital assets from its vault to a third-

111. DONALD R. CHAMBERS ET AL., *ALTERNATIVE INVESTMENTS: CAIA LEVEL 1 399* (3d ed. 2015); Vikas Agarwal, Naveen D. Daniel & Narayan Y. Naik, *Role of Managerial Incentives and Discretion in Hedge Fund Performance*, 64 J. OF FIN. 2221 (2009).

112. Press Release, U.S. Sec. & Exch. Comm’n, SEC Brings First Actions to Halt Unregistered Online Offerings of So-Called “Free Stock” (July 22, 1999), <https://www.sec.gov/news/headlines/webstock.htm> [<https://perma.cc/KHN4-T8S3>].

113. *See id.* (“In each of the four cases, the investors were required to sign up with the issuers’ web sites and disclose valuable personal information in order to obtain shares. . . . Through these techniques, issuers received value by spawning a fledgling public market for their shares, increasing their business, creating publicity, increasing traffic to their websites, and, in two cases, generating possible interest in projected public offerings.”).

114. Houman B. Shadab, *The Law and Economics of Hedge Funds: Financial Innovation and Investor Protection*, 6 BERKELEY BUS. L.J. 240, 252 (2009).

115. *See* Staff Letter, *supra* note 109.

party wallet.¹¹⁶ If fund managers are forced to comply with the custody rule, they may have difficulty executing certain trading strategies or acting in times of heavy volatility. For example, if the fund is relying on a prime broker that is not also a qualified custodian, it may have difficulty meeting margin calls within the required timeframe.

Secondly, even though hedge funds have discretionary liquidity restrictions, such as side pockets and gates,¹¹⁷ fund managers may struggle with liquidity restrictions in periods of mass sell offs. This highlights a problem with the current custody rule. In the event of a market crash, more nimble funds holding their own keys would be able to exit the market, further lowering the market. Meanwhile, non-exempt funds in excess of \$150 million would be left holding the bag as their qualified custodians worked to retrieve their keys from the vault. Foreseeing this illiquidity, prime brokers may be less willing to extend long-term credit.¹¹⁸

B. *Applicability of The Custody Rule to Particular Assets*

To further complicate the application of the custody rule to cryptocurrency hedge funds, there are valid arguments that the rule should not apply to certain types of digital assets. As mentioned previously, under the rule, custody means “holding, directly or indirectly, client funds or securities, or having any authority to obtain possession of them.”¹¹⁹ Given the unusual characteristics of cryptocurrency as an asset, there are not yet definitive rules for determining whether certain tokens are (1) securities, (2) client funds, or (3) exempt from the custody rule under the private placement exemption, which is discussed in further detail below. Therefore, until clear rules are established, savvy legal counsel can draw on each of these points to argue that certain tokens should not be subject to the rule.

1. *Is the Token Asset a Security?*

One of the central questions surrounding cryptocurrency regulation is whether the token asset is a security. The SEC has weighed in several times on

116. *Vault: We’ve Built a Fortress for You*, *supra* note 82.

117. A gate limits the amount of a hedge fund’s assets that can be withdrawn by investors. A side pocket is a type of account used by hedge funds to separate liquid and illiquid assets. See James Chen, *Gate Provision*, INVESTOPEDIA (Mar. 26, 2018), <https://www.investopedia.com/terms/g/gateprovision.asp> [<https://perma.cc/Q3ZA-YNXP>]; James Chen, *Side Pocket*, INVESTOPEDIA (Jan. 22, 2018), <https://www.investopedia.com/terms/s/sidepocket.asp> [<https://perma.cc/2PS2-CSHD>].

118. See GEORGE O. ARAGON ET AL., U.S. SEC. & EXCH. COMM’N, STAFF PAPER: HEDGE FUND LIQUIDITY MANAGEMENT (2017), https://www.sec.gov/files/dera_hf-liquidity-management.pdf [<https://perma.cc/Y72P-DQKT>] (“Interestingly, the committed period of financing from a fund’s creditors is unrelated to portfolio illiquidity. A possible interpretation for this ‘non-result’ is that, while funds pursuing illiquid strategies have a greater demand for longer-term financing, its creditors are less willing to extend long-term loans due to the illiquid nature of the fund’s assets.”).

119. 17 C.F.R. § 275.206(4)-2 (2019).

whether a particular initial coin offering (ICO) is a security. In a July 2017 investigative report, the SEC reviewed the “DAO,” a “decentralized” group selling a token to the public in order to raise funds for projects.¹²⁰ The SEC applied the test for investment contracts from *Securities and Exchange Commission v. W. J. Howey Co.* (the “Howey test”)¹²¹ and determined that the tokens were in fact securities.¹²² Under the Howey test, an investment contract is any (1) investment of money, (2) into a common enterprise, (3) with the expectation of profits, solely from the efforts of the promoter or a third party.¹²³

But others have disagreed with this conclusion. In December 2016, the New York firm Debevoise & Plimpton wrote a memo explaining why a token was not an investment contract under the Howey test.¹²⁴ The memo, later popularized by Coinbase, stated that if a token had certain characteristics, it could be more like a franchise or license agreement than an investment contract.¹²⁵ In a December 2017 public statement, SEC chairman Jay Clayton warned that “just as the SEC has a sharp focus on how U.S. dollar, euro and Japanese yen transactions affect our securities markets, we have the same interests and responsibilities with respect to cryptocurrencies.”¹²⁶ This includes market participants who “set up structures to invest in or hold cryptocurrency.”¹²⁷ It is not yet clear whether the SEC will take a granular approach towards differentiating “app tokens” with a use beyond currency from tokens that function more like commodity funds, such as Bitcoin. For now, fund lawyers can continue to argue that certain tokens are not securities and therefore fall outside of the custody rule.

2. *Are the Tokens “Client Funds?”*

Even if a fund manager’s tokens are not securities, the manager will also have to argue that they are not “client funds” to avoid application of the rule.¹²⁸

120. SEC. & EXCH. COMM’N, REPORT OF INVESTIGATION PURSUANT TO SECTION 21(A) OF THE SECURITIES EXCHANGE ACT OF 1934: THE DAO, RELEASE NO. 81207 (July 25, 2017), <https://www.sec.gov/litigation/investreport/34-81207.pdf> [<https://perma.cc/4MXK-C4YL>] [hereinafter the DAO Report].

121. SEC v. W.J. Howey Co., 328 U.S. 293 (1946).

122. The Dao Report, *supra* note 120, at 11.

123. SEC v. Shavers, No. 4:13-CV-416, 2013 WL 4028182, at *2 (E.D. Tex. Aug. 6, 2013), *adhered to on reconsideration*, No. 4:13-CV-416, 2014 WL 12622292 (E.D. Tex. Aug. 26, 2014); Alexander B. Lindgren, *Blockchain Regulation: Growing Pains of A Financial Revolution*, 59 ORANGE COUNTY LAW. 38, 40 (October 2017).

124. See *A Securities Law Framework for Blockchain Tokens*, COINBASE (Dec. 7, 2016), <https://www.coinbase.com/legal/securities-law-framework.pdf> [<https://perma.cc/AEL9-ZBG3>].

125. *Id.*

126. Public Statement, Jay Clayton, Chairman, Sec. & Exch. Comm’n, Statement on Cryptocurrencies and Initial Coin Offerings (Dec. 11, 2017), https://www.sec.gov/news/public-statement/statement-clayton-2017-12-11#_fn5 [<https://perma.cc/VMJ2-VMNR>].

127. *Id.*

128. As mentioned previously, custody is defined as “holding, directly or indirectly, *client funds* or securities, or having any authority to obtain possession of them.” Advisers Act Rule, 17 C.F.R. § 275.206(4)-2(d)(2) (2019) (emphasis added).

“Client funds” is not defined in 206(4)-2, but can be logically understood to mean fiat currency. In Form ADV, Item 9 asks whether there is custody over (1) “cash or bank accounts” or (2) “securities.”¹²⁹ Still, it is unclear whether widely used tokens, such as Bitcoin, Ripple, or Ethereum, are “cash.”

There is good reason for including fiat currency in the custody rule. If a fund manager were to store bricks of client cash under their mattress, it would certainly raise all of the concerns that prompted the original adoption of the rule, such as loss, misuse, and misappropriation. Similarly, if a cryptocurrency fund manager were to keep their client’s Bitcoin private keys in a safe in their home, those same concerns would likely arise. The introduction of cryptocurrency debit cards,¹³⁰ Bitcoin ATMs,¹³¹ and payment options at large vendors¹³² suggests that cryptocurrency can function much like fiat currency. Still, cryptocurrencies are functionally different from any other fiat currency in the world. They are not regulated by a central authority, they rely on a computer network, and they have not yet reached general acceptance. As discussed above, a sophisticated cryptocurrency fund manager handling their own private keys may have a significant operational advantage over a fund bound by the custody rule. Outside of the benefits of not having to comply with the rule, on the other hand, a fund manager dealing in traditional securities would have no operational advantage in taking custody of their client’s fiat currency, as there is a system of banks and qualified custodians that are better placed to handle currency.

Even if the SEC determines that cryptocurrencies constitute neither client funds nor securities, fund managers without a qualified custodian would still fall afoul of the rule. If an investor requests a redemption, the fund manager may have to convert the client’s funds from cryptocurrency to fiat on an exchange. As soon as that transaction occurs, the fund manager could be considered to have “access to client funds” for purposes of the rule. Funds could avoid this by having investors invest and take redemptions in only cryptocurrency. Such a policy would be impracticable for many investors and would require modification of

129. Form ADV: Uniform Application for Investment Advisor Registration and Report by Exempt Reporting Advisers, Item 9(F), <https://www.sec.gov/about/forms/formadv-part1a.pdf> [<https://perma.cc/2BVM-CKP7>] (added in 2011); see Rules Implementing Amendments to the Investment Advisers Act of 1940, Investment Advisers Act Release No. 3221, 76 Fed. Reg. 42,950, 42,972 (July 19, 2011).

130. See Gina Clarke, *Why Debit Cards and Visa Could Save Cryptocurrencies*, FORBES (Oct. 22, 2018), <https://www.forbes.com/sites/ginaclarke/2018/10/22/why-debit-cards-and-visa-could-save-cryptocurrencies/> [<https://perma.cc/7AAT-EESN>].

131. See Kurt Wagner, *World’s First Bitcoin ATM Opens In Vancouver, Canada*, MASHABLE (Oct. 30, 2013), <https://mashable.com/2013/10/30/bitcoin-atm-2/#uLHkI4tLRsqC> [<https://perma.cc/WUX8-Y96N>].

132. See *Paying With Bitcoin*, EXPEDIA.COM, <https://www.expedia.com/Checkout/BitcoinTermsAndConditions> [<https://perma.cc/72PZ-B3K6>] (“Our acceptance of Bitcoin is powered by our partner, Coinbase. We do not guarantee and are not responsible for the availability of Coinbase’s services.”).

Form D and many other registration documents that denominate minimum investment and offering amounts in US dollars.¹³³

3. *Do the Tokens Fall Under the Private Placement Exemption?*

If a token is a security, it can still be exempt from the qualified custodian requirement if it falls under the private placement exemption. This exemption applies to privately offered uncertificated securities.¹³⁴ To qualify, the token must be (1) acquired from the issuers, (2) uncertified, with ownership recorded only on the books of the issuer or the transfer agent, and (3) transferable only with the consent of the issuer or holders of the outstanding token.¹³⁵ It is unclear whether the exemption should apply to many tokens purchased in pre-ICOs—token sales directed to investors at a discount before the official ICO occurs.

To understand whether pre-ICOs should fit within the exemption, we can look to the Simple Agreement for Future Tokens (“SAFT”). The SAFT is a standard agreement promising to deliver future tokens, modeled after an agreement used by startups entering angel and seed-round investments.¹³⁶ In the SAFT and accompanying offering memorandum for Filecoin, for example, the agreement had a disclaimer explaining to the buyer that they were receiving an uncertified financial instrument private offering.¹³⁷ In addition, the tokens delivered were subject to a “use restriction” under which the investor could not sell, transfer, or exchange the tokens prior to vesting.¹³⁸ At face value, it would seem a pre-ICO sold under a SAFT and accompanying offering memorandum

133. See, e.g., Cryptocurrency Fund L.P., Notice of Exempt Offering of Securities, Form D (July 7, 2017), https://www.sec.gov/Archives/edgar/data/1711332/000171133217000001/xslFormDX01/primary_doc.xml [<https://perma.cc/83H5-MCRH>].

134. See Advisers Act Rule 206(4)-2(b)(2), 17 C.F.R. § 275.206(4)-2(b)(2) (2019); HAMMER, *supra* note 19, at 326.

135. 17 C.F.R. § 275.206(4)-2(b)(2).

136. See JUAN BATIZ-BENET, JESSE CLAYBURGH & MARCO SANTORI, THE SAFT PROJECT: TOWARD A COMPLIANT TOKEN SALE FRAMEWORK 15 (Oct. 2, 2017), <https://saftproject.com/static/SAFT-Project-Whitepaper.pdf> [<https://perma.cc/SD6P-AZP7>] (“In short, the SAFT provides investors with the right to fully-functional utility tokens, delivered once the network is created and the tokens are functional. The SAFT is very likely a security, namely an investment contract.”); see also Carolyn Levy, *Safe Financing Documents*, Y COMBINATOR (Sept. 2018), <https://www.ycombinator.com/documents> [<https://perma.cc/RM2E-97MQ>].

137. See *SAFT for Filecoin Token Presale (Series S-2)*, PROTOCOL LABS, https://coinlist.co/assets/index/filecoin_index/Protocol%20Labs%20-%20SAFT%20for%20Filecoin%20Token%20Presale-0f43e05c4ad1c0bd8993b60c4d6bf3cbd4f3d278dd7a62dde1972c9d82c65184.pdf [<https://perma.cc/A3W6-UBFD>] (“The offer and sale of this security instrument has not been registered under the U.S. Securities Act of 1933, As Amended (The “*Securities Act*”), or under the securities laws of certain states. This security may not be offered, sold or otherwise transferred, pledged or hypothecated except as permitted under the act and applicable state securities laws pursuant to an effective registration statement or an exemption therefrom.”) (alteration in original). The original SAFT template can be downloaded at <https://saftproject.com/static/Form-of-SAFT-for-token-pre-sale.docx> [<https://perma.cc/U7SQ-WEJL>].

138. See *SAFT for Filecoin*, *supra* note 137, at 2.

would meet the criteria of the private placement exemption and therefore would not require a qualified custodian. This would be attractive to fund managers who invest in a diverse range of pre-ICOs and would otherwise struggle finding custodians able to accommodate these yet-to-be-released tokens. However, other difficulties would arise, such as the applicability of a mandatory “holding period” under Rule 144.¹³⁹

IV.

INTRODUCING AN ALTERNATIVE MECHANISM FOR COMPLIANCE WITH RULE 206(4)-2

In light of the complications of applying the current custody rule to cryptocurrencies, the SEC has three possible options. First, it could institute a period of no action while the market for specialized qualified custodians develops. Funds would continue operating without fear of immediate censure in the hope that a mature and sophisticated set of qualified custodians would develop. Second, a more aggressive SEC could take enforcement action immediately and fine fund managers that are not complying with the rule. But in the absence of fraud or tangible harm to investors, wide-reaching fines and cease-and-desist orders may be hard to justify. Solving the fundamental inconsistency between the rule and practice requires a more comprehensive regulatory response. The third option is to issue a no-action letter that specifically sets out new requirements for the custody rule for investment advisers managing cryptocurrency hedge funds. This is the best choice. The rule should be adjusted to allow fund managers to maintain their client’s digital assets on exchanges and in their own custody, provided certain policies and procedures are met. These requirements can follow the spirit of the custody rule by mitigating the sorts of abuses the rule originally set out to prevent: investor funds being “lost, misused, misappropriated or subject to the advisers’ financial reverses.”¹⁴⁰ Where the rule cannot protect investors, the SEC should encourage the use of insurance to mitigate losses. This Part explores both the regulatory basis and rationale for changing the rule and what those modifications should entail.

A. Regulatory Basis and Rationale for Modifying the Rule

To argue for a change in the rule, we must first look at how cryptocurrency hedge funds fall into the SEC’s regulatory goals. Creating a special set of custody

139. Rule 144 is an SEC regulation that provides an exemption from registration for the sale of a security if certain conditions are met. One of those conditions set under 144(b)(1)(ii) and (d)(1)(ii) is a one-year holding period for securities issued by a non-reporting company, which includes the majority of ICOs. *See* 17 C.F.R. § 230.144 (“Persons deemed not to be engaged in a distribution and therefore not underwriters”); *Rule 144: Selling Restricted and Control Securities*, U.S. SEC. & EXCH. COMM’N, (Jan. 16, 2013), <https://www.sec.gov/reportspubs/investor-publications/investorpubsrule144.htm> [https://perma.cc/TB63-PYXP].

140. Custody of Funds or Securities of Clients by Investment Advisers, Investment Advisers Act Release No. IA-2876,68 Fed. Reg. 56,692 (Oct. 1, 2003).

rules for digital assets would necessarily discriminate between funds with traditional assets and funds with digital assets. But doing so is in line with the SEC's regulatory goals and prior actions.

The SEC's long-running mission has three prongs: (1) protect investors; (2) maintain fair, orderly, and efficient markets; and (3) facilitate capital formation.¹⁴¹ Under the leadership of Chairman Jay Clayton, the SEC has focused this mission on the protection of “[m]ain [s]treet” investors.¹⁴² To determine whether the three prongs are being met, the Commission has indicated that it will look to the “long-term interests of Mr. and Ms. 401(k).”¹⁴³ Reflecting this focus, SEC enforcement actions have concentrated on fraudulent initial coin offerings and other schemes preying on the enthusiasm of retail investors.¹⁴⁴ For hedge funds, the recent focus has been on retail-investor facing funds, namely cryptocurrency-linked ETFs, as demonstrated by a January 2018 staff letter on cryptocurrency-related fund innovation.¹⁴⁵

In terms of investor protection, hedge fund investors may not demand the same protections as main street investors. For one, investors in hedge funds are wealthier than the average individual. Most fund investors will be “accredited investors,”¹⁴⁶ which means they have income in excess of \$200,000 per year (\$300,000 if filing jointly) or a net worth over \$1,000,000.¹⁴⁷ Unlike main street investors, investors in hedge funds bring an understanding of options, leveraging, and the financial tools and risks that come along with them. Even when they do not understand the risk, they likely have the assets to recover from complete loss. Six months after Tim Draper lost forty thousand Bitcoins he held on the Mt. Gox exchange, he purchased nearly thirty thousand more from a US

141. *What We Do*, U.S. SEC. & EXCH. COMM'N, (June 10, 2013), <https://www.sec.gov/Article/whatwedo.html> [<https://perma.cc/F6SZ-LYQL>].

142. DIVISION OF ENFORCEMENT, U.S. SEC. & EXCH. COMM'N; ANNUAL REPORT: A LOOK BACK AT FISCAL YEAR 2017 (2017), <https://www.sec.gov/files/enforcement-annual-report-2017.pdf> [<https://perma.cc/E3XL-CMDW>].

143. Jay Clayton, Chairman, U.S. Sec. & Exch. Comm'n, Remarks at the Economic Club of New York (July 12, 2017), <https://www.sec.gov/news/speech/remarks-economic-club-new-york> [<https://perma.cc/CW8V-RFJJ>].

144. See *Testimony on “Virtual Currencies: The Oversight Role of the U.S. Securities and Exchange Commission and the U.S. Commodity Futures Trading Commission”*: Hearing Before the S. Comm. on Banking, Hous., & Urban Affairs, 115th Cong. (Feb. 6, 2018) (statement Jay Clayton, Chairman, U.S. Sec. & Exch. Comm'n) (“Cryptocurrencies, ICOs and related products and technologies have captured the popular imagination – and billions of hard-earned dollars – of American investors from all walks of life. In dealing with these issues, my key consideration – as it is for all issues that come before the Commission – is to serve the long-term interests of our Main Street investors.”).

145. See Staff Letter, *supra* note 109 (“As you know, the U.S. investment fund market is one of the most robust, varied and successful markets for investment products in the world. Its success can be attributed, in significant part, to the commitment of fund sponsors to responsible innovation and continuous improvement of the products they offer. This commitment is especially important because many of America's Main Street investors rely on registered funds to help them build toward education, retirement and other important goals.”).

146. See HAMMER, *supra* note 19, at 104.

147. 17 C.F.R. § 230.501(a)(5)–(6) (2019).

Marshals' Service auction of confiscated Silk Road assets.¹⁴⁸ Though not a hedge fund investor, Tim Draper exemplifies a certain appetite for risk in emerging technologies that we may not want to discourage.

As a counterpoint, although hedge funds were traditionally the target of wealthy individuals, institutional investors now make up more than 60 percent of hedge fund assets.¹⁴⁹ These institutions include pension funds, endowments, and other groups¹⁵⁰ where the underlying assets reach retail investors' savings. In addition, even if Bernard Madoff and other pre-Dodd-Frank scandals are in the rearview mirror as far as hedge fund investors are concerned, the securities rules should not adjust to the often-myopic mood of the hour. The idea of allowing investment advisers to manage their own funds "under the radar and outside the vision of regulators"¹⁵¹ is as unappealing today as it was before Dodd-Frank and Bitcoin.

On the other hand, by not modifying the rule, the SEC would be inhibiting capital formation in a promising industry, contrary to its third goal of facilitating capital formation. In Chairman Clayton's remarks at the Economic Club of New York in July 2017, he noted that in times of technological change, the SEC must "strive to ensure that our rules and operations reflect the realities of our capital markets."¹⁵² In order to facilitate capital formation (prong three), it is necessary to adjust the typical investor protections.

This has happened before. In the past, the SEC has allowed modifications to the custody rule when the circumstances were compelling and protections were adequate.¹⁵³ For example, in 2007, the SEC modified the custody rule for

148. Polina Marinova, *DFJ's Tim Draper on Bitcoin's Rise, Steve Jurvetson's Exit, and His Biggest Investing Regret*, FORTUNE (Jan. 31, 2018), <http://fortune.com/2018/01/31/dfj-tim-dra-per-bitcoin> [<https://perma.cc/KJM3-WQD5>]; Robert McMillan, *Someone Just Bought \$19M in Silk Road Bitcoins From the Feds*, WIRED (July 1, 2014), <https://www.wired.com/2014/07/silkroadauction/> [<https://perma.cc/4HHQ-6Q2U>].

149. See U.S. SEC. & EXCH. COMM'N, STAFF REPORT, IMPLICATIONS OF THE GROWTH OF HEDGE FUNDS (2003), <https://www.sec.gov/news/studies/hedgefunds0903.pdf> [<https://perma.cc/5UE7-JQDS>] ("The growth in hedge funds has been fueled primarily by the increased interest of institutional investors such as pension plans, endowments and foundations seeking to diversify their portfolios with investments in vehicles that feature absolute return strategies").

150. See *id.*

151. See Press Release, U.S. Sec. & Exch. Comm'n, SEC Adopts Dodd-Frank Act Amendments to Investment Advisers Act (June 22, 2011), <https://www.sec.gov/news/press/2011/2011-133.htm> [<https://perma.cc/7MR6-MHTA>].

152. Jay Clayton, Chairman, U.S. Sec. & Exch. Comm'n, Remarks at the Economic Club of New York (July 12, 2017), <https://www.sec.gov/news/speech/remarks-economic-club-new-york> [<https://perma.cc/CW8V-RFJJ>].

153. See Depository Trust Company of Delaware, LCC dba Delaware Depository, SEC No-Action Letter, (Sept. 12, 2016) <https://www.sec.gov/divisions/investment/noaction/2016/depository-trust-company-of-delaware-091216.html> [<https://perma.cc/7SX5-3X8>]; Investment Adviser Association, SEC No-Action Letter, File No. 132-3, at 1 (Sept. 20, 2007), <https://www.sec.gov/divisions/investment/noaction/2007/iaa092007.pdf> [<https://perma.cc/9YGB-U3ET>].

investment advisers.¹⁵⁴ In requesting the change, the Investment Adviser Association pointed out that third parties, like the IRS and class action fund administrators, were mistakenly sending funds to the client's investment advisers instead of to the clients directly.¹⁵⁵ The custody rule at the time required the advisers to return the funds to the sender within three business days.¹⁵⁶ The Association successfully argued that this rule would cause unnecessary delays to clients and increase the risk of loss.¹⁵⁷ It feared that third parties did not have the "established procedures to properly safeguard client assets."¹⁵⁸ Instead, the Association argued, advisers should be allowed to directly send these funds to their clients or their qualified custodian as long as they maintained certain policies and procedures.¹⁵⁹ The SEC was persuaded, noting the Association's assertion that reverting funds to third parties "may work to the detriment of their clients' interest and 'create more problems than it solves.'"¹⁶⁰ To maintain client safeguards in absence of enforcement, the SEC noted that it expected advisers to meet several conditions, including promptly identifying clients assets they received, forwarding the funds within no more than five days, and maintaining records of all receipts.¹⁶¹

The SEC has also granted exceptions to custody requirements in other contexts—such as under the Investment Company Act (ICA)—when there were sufficient safeguards in place. Like the IAA custody rule, Section 17(f) of the ICA requires that funds hold securities only with qualified custodians¹⁶²—typically banks or members of national securities exchanges.¹⁶³ When several precious metal custodians exited the market in 2016 due to increased risks and costs, one fund requested that the SEC allow them to keep their precious metal with a non-qualified custodian.¹⁶⁴ The fund argued that, although the Depository Trust Company of Delaware did not meet the definition of a qualified custodian under 17(f), it was "at least as secure and competent as the same services available through any entity that would qualify under Section 17(f)."¹⁶⁵ The

154. Investment Adviser Association, *supra* note 151.

155. *See id.*

156. *Id.* at 3.

157. *Id.* at 4.

158. *Id.*

159. *Id.*

160. *Id.*

161. *See id.*

162. Rule 17f-4 allows registered investment companies to deposit securities it owns into a securities depository. *See* Final Rule: Custody of Investment Company Assets with a Securities Depository, Release No. IC-25934 (Feb. 13, 2003), <https://www.sec.gov/rules/final/ic-25934.htm> [<https://perma.cc/47L2-2ZVT>].

163. Depository Trust Co. of Delaware, *supra* note 151. ("These qualified custodians include, for example, banks satisfying the qualifications specified within Section 26(a)(1) of the 1940 Act, a member of a national securities exchange, or other entities that the Commission has prescribed by rule, regulation, or order for the protection of investors.").

164. *Id.*

165. *Id.*

company was a licensed depository for gold and silver, had advanced internal control procedures, underwent a third-party audit by a PCAOB-registered auditor, and possessed a \$2 million cybersecurity liability insurance policy.¹⁶⁶ The SEC agreed to refrain from enforcement action as long as a majority of the fund's board agreed that keeping custody with the company was in the best interest of the fund and its members.¹⁶⁷ This included agreement that the precious metals would be subject to "reasonable care" and that the company's custody was "at least equal in nature and quality to the services that could be provided by bank custodians . . . after consideration of all of the relevant factors."¹⁶⁸

The SEC has also provided an exception to the 17(f) custody rule for funds holding cash or securities with the Chicago Mercantile Exchange or other clearing members while they cleared swaps.¹⁶⁹ After Dodd-Frank, the CFTC was charged with making new rules for the centralized trading of swaps.¹⁷⁰ While the custody issue was in flux during the rule-making process, the SEC issued a temporary no-action letter, finding "it was appropriate to flexibly apply the custody requirements" as the CFTC actively worked to improve protections for customer assets.¹⁷¹ Once a framework for centralized swap clearing was worked out, the SEC made the no-action letter permanent.¹⁷² However, the no-action was contingent on each clearing member following certain policies and procedures that brought the Exchange in line with the requirements of 17(f).¹⁷³

166. *Id.*

167. *Id.*

168. *Id.*

169. *See* Chi. Mercantile Exch., SEC No-Action Letter (Dec. 19, 2017), <https://www.sec.gov/divisions/investment/noaction/2017/chicago-mercantile-exchange-121917.htm> [<https://perma.cc/4YE5-TY26>] [hereinafter Chi. Mercantile Exch., No-Action Letter (Dec. 19, 2017)].

170. *See* Chi. Mercantile Exch., SEC Staff No-Action Letter (July 29, 2011), <https://www.sec.gov/divisions/investment/noaction/2011/cme072911-17f.htm> [<https://perma.cc/G4RF-YGW6>] [hereinafter Chi. Mercantile Exch., No-Action Letter (July 29, 2011)]; Chi. Mercantile Exch., SEC Staff No-Action Letter (Mar. 24, 2011), <https://www.sec.gov/divisions/investment/noaction/2011/cme032411-17f.htm> [<https://perma.cc/FPA4-LUXA>]. [hereinafter Chi. Mercantile Exch. No-Action Letter (Mar. 24, 2011)]. Swaps are over-the-counter (not traded on an exchange) contracts through which two parties exchange cash flows or liabilities from two different financial instruments. For an assessment of the post-Dodd-Frank CFTC rules on swaps, see J. CHRISTOPHER GIANCARLO, *PRO-REFORM RECONSIDERATION OF THE CFTC SWAPS TRADING RULES: RETURN TO DODD-FRANK* (Jan. 29, 2015), <https://www.cftc.gov/sites/default/files/idc/groups/public/@newsroom/documents/file/sefwhitepaper012915.pdf> [<https://perma.cc/LM4L-7KFG>].

171. *See* Chi. Mercantile Exch., SEC No-Action Letter (Dec. 19, 2017), *supra* note 169.

172. *See* Chi. Mercantile Exch., SEC No-Action Letter (July 29, 2011), *supra* note 170; Chi. Mercantile Exch., SEC No-Action Letter (Mar. 24, 2011), *supra* note 170.

173. These included following regulation for swap collateral, promptly furnishing copies of asset records, and preserving the ability of the fund to withdraw assets if the custodial arrangement ever falls out of line with 17(f). *See* Chi. Mercantile Exch., SEC No-Action Letter (July 29, 2011), *supra* note 170; Chi. Mercantile Exch., SEC No-Action Letter (Mar. 24, 2011), *supra* note 170.

Although most cryptocurrency hedge funds will be exempt from the Investment Company Act and not subject to rule 17(f),¹⁷⁴ the above examples show that the SEC has modified custody requirements for funds when (1) an inefficiency presents a clear and compelling rationale for doing so, and (2) the alternative provides protections that are at least as adequate as the qualified custodians under the original rule. The challenges in applying the current custody rule present a compelling case for modification. A difficult question is whether the current exchanges can provide adequate protections to satisfy concerns about investor protection.

B. *Modifying the Rule*

Unlike the funds in previous no-action letters, hedge funds do not have a viable qualified custodian option for their cryptocurrency assets. Therefore, there may be a low bar if we are merely looking for a modification that is “at least as secure and competent as the same services available” through the existing custodians.¹⁷⁵ In addition, forcing funds to meet the current custody rule “may work to the detriment of their clients’ interest and ‘create more problems than it solves.’”¹⁷⁶ The more challenging question the SEC and investors should be asking is whether it is “appropriate to flexibly apply the custody requirements” when there have been several instances of security breaches and ensuing losses on digital currency exchanges.¹⁷⁷ But I argue that the best option is for the SEC to issue a no-action letter allowing hedge funds to hold possession of their digital assets with themselves or on an exchange as long as certain policies and procedures are met. These would include (1) the fund hiring an independent, third-party administrator; (2) requiring the administrator to receive direct pricing from the exchange; (3) quarterly audits; (4) mandatory policy on custody and security; (5) adequate disclosure of risk; (6) mandatory best interest determination; and (7) encouraging the use of insurance. Although these procedures cannot eliminate all of the security risks digital currency exchanges present, they provide reasonable safeguards under which the industry can develop.

174. “Company Act section 3(c)(1) excludes any pooled investment vehicle from the definition of ‘investment company’ if it does not have more than 100 beneficial owners of its outstanding securities (‘the 100-Owner Limit’) and does not make or propose to make a public offering of its securities.” HAMMER, *supra* note 19, at 70.; *see also* 15 U.S.C. § 80a-3(c)(1).

175. *See* Depository Trust Co. of Delaware, *supra* note 151; *see also* Chi. Mercantile Exch., SEC No-Action Letter (July 29, 2011), *supra* note 170; Chi. Mercantile Exch., SEC No-Action Letter (Mar. 24, 2011), *supra* note 170.

176. *See* Investment Adviser Association, *supra* note 151; *see also* U.S. SEC. & EXCH. COMM’N, STAFF REPORT, IMPLICATIONS OF THE GROWTH OF HEDGE FUNDS vii (2003), <https://www.sec.gov/news/studies/hedgefunds0903.pdf> [<https://perma.cc/5UE7-JQDS>].

177. *See* Chi. Mercantile Exch., SEC No-Action Letter (Dec. 19, 2017), *supra* note 169. For a list of security breaches on cryptocurrency exchanges, *see* Alex Munkachy, *30+ Cryptocurrency Exchange Hacks — A Comprehensive List*, COINIQ (June 21, 2018), <https://coiniq.com/cryptocurrency-exchange-hacks> [<https://perma.cc/SK3U-BQTE>].

1. *Independent, Third-Party Administrators*

First, many protections offered by a qualified custodian can be replicated by requiring the fund to hire an independent, third-party administrator to handle clients' fiat currency, record keeping, and selection of auditors. Without holding the private keys, a third-party administrator could still add protections for investors by holding the fund's fiat currency and by maintaining reporting and disclosure records. For example, clients could direct their investments in fiat currency directly to a bank account under the control of the administrator. The fund manager would have no ability to withdraw funds from this account. The administrator would then take responsibility for directing the fiat currency to third parties, such as exchanges or parties to private negotiations. Since fiat currency does not present the same problems as digital assets, there is no reason to extend an exemption to custody for it.

In addition, the fund administrator would keep records on the fund's assets. These records would then be used to provide reports to investors and to calculate the fund's net asset value. If the fund manager involves any brokers or third-party traders in their transactions, the administrator must take responsibility for reconciling the accounts.

2. *Direct Pricing from the Exchange*

Second, the custody rule requires the fund to deliver account statements to customers to deter general partners from reaching into the cookie jar and taking improper payments.¹⁷⁸ To replicate the value of independent statements, the third-party administrator could be required to receive direct pricing from the exchange. To maintain records of the fund's trading activity, the administrator would not be permitted to rely solely on self-reporting by the fund. Cryptocurrencies do not have a standard pricing and the price of any coin can differ from exchange to exchange.¹⁷⁹ As such, there is room for manipulation in reporting. The third-party administrator should develop a methodology that looks to either the application programming interface (API)¹⁸⁰ of a particular exchange or an averaged blend of data from different APIs. Navigating APIs requires the administrator to employ technical knowledge. However, unlike

178. See HAMMER, *supra* note 19, at 328.; *see also* Custody of Funds or Securities of Clients by Investment Advisers, Adviser Act Release No. 2176, 68 Fed. Reg. 56,692, 56,694 (Oct. 1, 2003).

179. For a simple explanation, see Bob Pisani, *Here's Why Bitcoin Prices are Different on Each Exchange*, YAHOO FINANCE (Dec. 12, 2017), <https://uk.finance.yahoo.com/news/apos-why-bitcoin-prices-different-221200635.html> [<https://perma.cc/B6U4-SNVD>].

180. APIs, or application programming interfaces, are sets of protocols and standards that applications use to communicate with other applications. Several exchanges provide free APIs that can be used to gather real-time and historical market data with time stamps. *See, e.g.*, BITTREX, <https://bittrex.com/home/api> [<https://perma.cc/B3A8-PAZA>]; COINBASE, <https://developers.coinbase.com> [<https://perma.cc/2AY3-Z4CT>]; GDAX, <https://docs.gdax.com/#pagination> [<https://perma.cc/DEL9-BKK2>].

storing cryptocurrency, the use of APIs is standardized and widely understood.¹⁸¹ Just as qualified custodians for traditional assets can identify the authenticity of financial statements, third-party administrators could use APIs as a tool to achieve accurate reporting without the threat of manipulation by the fund managers.

3. *Quarterly Audit*

Third, like the surprise examination, a quarterly audit would help make sure that the assets that the adviser is telling its clients are there are actually there. Increasing the frequency of audits from annually to quarterly would extend protections to investors by decreasing an ill-intentioned fund manager's window of opportunity for fleecing their clients. Rather than extending a fraudulent scheme for years, as in the case of Bernard Madoff, a quarterly audit would detect misallocation or misappropriation of cryptocurrency and flag the issue for gatekeepers and regulators. While the procedures for storing cryptocurrencies are plagued with technological difficulties and malicious actors, accounting firms are fully capable of auditing digital assets. The only barrier to competency is whether accounting firms are willing to commit resources to learning the field. Many firms have already heeded the SEC's Chief Accountant's 2017 call for "lighting a lamp" to see how cryptocurrency affects financial reporting and have performed audits for cryptocurrency hedge fund clients.¹⁸²

4. *Custody and Security Policies*

Fourth, the fund must have a policy in place to address custody and security, including cybersecurity. This differs from anything found in the current custody rule. However, having a custody and security policy in place would help identify failures and warn investors of risks. In the case of a malicious actor, it would provide the SEC and non-malicious fund managers a roadmap for understanding where the failure occurred and how it could be remedied. In addition, policies would provide additional materials for investors to do due diligence. Especially in the context of cybersecurity, investors would have the opportunity to read the policy and determine whether it provided enough assurances to make them comfortable enough to invest. This is perhaps an idealistic notion—had Madoff provided potential investors with an accurate custodial policy, it is unclear how many would have been deterred. The exercise of drafting a policy would have

181. See, e.g., *Google Data APIs*, G SUITE DEVELOPER, https://developers.google.com/sites/faq_gdata [<https://perma.cc/6H7Q-S28Y>].

182. Wesley R. Bricker, Chief Accountant, U.S. Sec. & Exch. Comm'n, Remarks before the Financial Executives International 36th Annual Current Financial Reporting Issues Conference: Effective Financial Reporting in a Period of Change (Nov. 14, 2017), <https://www.sec.gov/news/speech/speech-bricker-2017-11-14> [<https://perma.cc/2YTP-KPN2>]; Brady Dale, *Top SEC Accountant Wants Auditor Eyes on Crypto*, COINDESK (Nov. 14, 2017), <https://www.coindesk.com/sec-top-accountant-cryptocurrency-study> [<https://perma.cc/V5SW-4F29>].

benefits regardless. For example, a market for compliance consultants may evolve and create industry standards.

5. *Disclosure of Risks*

Fifth, the fund must provide investors with a special disclosure stating risks stemming from the custody arrangement and trading on exchanges. Hedge funds file disclosures on Form ADV and/or Form PF.¹⁸³ In addition to traditional risks, fund managers who plan to have custody of their clients' digital assets should make an additional, separate disclosure stating the risks involved in that arrangement. This would put potential investors on notice that the fund manager is relying on an SEC no-action letter and that, by investing into this arrangement, the investor is potentially subjecting their digital assets to complete loss.

6. *Best Interest Determination*

Sixth, the general partner of the fund or fund manager must determine that holding client funds or securities on an exchange is in the best interest of the limited partners (investors). In the September 12, 2016, no-action letter to the Delaware Depository discussed in Part IV.A *supra*, the SEC's decision to allow the company to have custody of the fund's gold or silver was contingent on a majority of the fund's board members determining that "maintaining custody . . . with the Company is in the best interest of the Fund and its shareholders."¹⁸⁴ To make this determination, the SEC suggested the board consider whether (1) "the Gold and Silver will be subject to reasonable care," and (2) custody will be "at least equal in nature and quality" to custody by "bank custodians in the same market(s) after consideration of all of the relevant factors."¹⁸⁵

In the context of cryptocurrency funds, this is an attractive provision for investors. It puts the onus on the fund manager to ensure that it is meeting standards of safety when handling clients' digital assets. As time goes on and familiarity with this asset class increases, "reasonable care" may come to have a clearer definition. In the meantime, "reasonable care" provides needed flexibility to a field lacking technological standards.

7. *Insurance*

These requirements alone might still be insufficient. Do these rules provide a custodial framework that is "at least equal in nature and quality to the services

183. See HAMMER, *supra* note 19, at 189–97. Form PF is used by hedge funds to report assets under management to the Dodd-Frank-established Financial Stability Oversight Council. For an example, see Reporting Form for Investment Advisers to Private Funds and Certain Commodity Pool Operators and Commodity Trading Advisors, FORM PF (Paper Version), <https://www.sec.gov/rules/final/2011/ia-3308-formpf.pdf> [<https://perma.cc/8LWE-TJGQ>].

184. Depository Trust Co. of Delaware., *supra* note 151.

185. *Id.*

that could be provided by bank custodians . . . after consideration of all of the relevant factors?”¹⁸⁶ If the comparison is to current bank custodians without “established procedures to properly safeguard”¹⁸⁷ digital assets, then the answer is presumably yes. If the comparison is to current custodians holding traditional asset classes, then the answer becomes less clear. There is little stopping a fund manager who has custody over the fund’s digital assets from taking off with those assets. He is no different from the individual storing cash under a mattress. Even more importantly, holding cryptocurrency on an exchange could subject the funds to a total loss. Although there has never been a case of a cryptocurrency hedge fund absconding with assets, recent history is replete with large-scale theft of digital assets held on cryptocurrency exchanges.¹⁸⁸ The set of guidelines proposed above would provide significant protections to avoid funds being “lost, misused, misappropriated or subject to the advisers’ financial reverses.”¹⁸⁹ But they would not reduce the risk to the same level as traditional asset classes held with a qualified custodian.

Some of the risk inherent to keeping custody of cryptocurrencies can be mitigated through insurance. And insurance might make the SEC more willing to tolerate a set of rules that allows significantly more risk of misappropriation and loss from theft, depending on what type of assets a given hedge fund manager chooses to invest in. Although there is not yet a mature market for insuring cryptocurrency, it is foreseeable that one will evolve. For example, despite a lack of data and adverse results, Waymo’s autonomous ride sharing program was able to partner with an insurer.¹⁹⁰ In 2015, Xapo engaged an insurance consultant to set up a captive insurance plan.¹⁹¹ In granting a no-action letter to the Delaware Depository, the SEC noted the company’s extensive insurance regime, including one billion dollars in coverage to cover losses by customers and funds while in custody and a two-million-dollar cybersecurity liability insurance policy.¹⁹² The ability of cryptocurrency hedge funds to point to a comprehensive insurance policy would alleviate some concerns over the potential for investor losses.

In addition, new technologies and innovations may dramatically reduce the risk of fund managers and exchanges maintaining custody of digital assets. The private company Chainalysis offers investigative tools that can track Bitcoin

186. *Id.*

187. See Investment Adviser Association, *supra* note 151.

188. See Munkachy, *supra* note 177.

189. Custody of Funds or Securities of Clients by Investment Advisers, Investment Advisers Act Release No. IA-2876, 68 Fed. Reg. 56,692 (Oct. 1, 2003).

190. Peter Rudegeair & Nicole Friedman, *Riders in Alphabet’s Driverless Car Will Be Insured by Startup Trov*, WALL STREET J. (Dec. 19, 2017), <https://www.wsj.com/articles/riders-in-alphabets-new-driverless-car-will-be-insured-by-a-startup-1513688581?tesla=y&mod=e2tw> [<https://perma.cc/92WP-TBP8>].

191. *2015 Power Broker*, RISK & INSURANCE, <http://riskandinsurance.com/2015pb-financial-service> [<https://perma.cc/L72A-6DGH>].

192. Depository Trust Co. of Delaware., *supra* note 151.

transactions to wallets.¹⁹³ It is conceivable that a third-party administrator with sufficiently powerful investigative software could maintain an eye over digital assets such that custody becomes a minor concern. Furthermore, the recent failures of exchanges to prevent attacks may also be remedied by innovation. “Cross-chain atomic swaps”¹⁹⁴ (a simultaneous transaction between cryptocurrencies) and “decentralized exchanges”¹⁹⁵ (exchanges operating without ownership by a single company) are examples of potential security improvements currently being introduced to the market.

CONCLUSION

As hedge funds continue to invest in cryptocurrency, the market for custodial services will adapt to the changing landscape. In the meantime, the SEC will have to manage the challenge of applying the custody rule to a technologically complex asset class that was not contemplated during the rules’ inception. My proposed alterations of the custody rule will allow hedge funds to continue to invest in cryptocurrency while providing investors a higher degree of security. These requirements might still fall short of achieving protections that are “at least equal in nature and quality to the services that could be provided by bank custodians”¹⁹⁶ holding traditional assets. Still, they are preferable to the two likely alternatives: hedge funds acting as their own bank by holding cryptocurrency themselves, or a rigid application of the rule that stifles the industry. The question will be whether the SEC can stomach the idea of allowing funds to hold assets in a way that is known to contain significant risk of loss.

193. See CHAINALYSIS, <https://www.chainalysis.com> [<https://perma.cc/7B8F-CLYG>].

194. See Will Warren, *What is a Decentralized Exchange?*, COIN CENTER (Oct. 10, 2018), <https://coincenter.org/entry/what-is-a-decentralized-exchange> [<https://perma.cc/J3M9-SSJK>].

195. *Id.*

196. See Depository Trust Co. of Delaware., *supra* note 151.

