Rise of the Crypto Hedge Fund: Operational Issues and Best Practices for an Emergent Investment Industry

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Abstract

In the last several years, a discreet \$800+ billion financial system has emerged in the form of cryptocurrency markets. The extraordinary returns generated by cryptocurrencies such as Bitcoin have led to a frenzy of investment activity and interest from traditional investors. This interest has, in turn, spawned dozens of cryptocurrency-focused hedge funds to service this growing demand. Moreover, although this trading activity is highly speculative, it is subject to almost no regulatory oversight. Regulators at the IRS, CFTC, and most notably the SEC have only recently established a regulatory framework to govern cryptocurrency activity. Notably, that framework is a functional one, classifying each cryptocurrency either as a security or commodity based on its particular uses. However, most of the established and highly-traded cryptocurrencies, such as Bitcoin and Ether, qualify as commodities rather than securities, and thus they are not subject to securities laws. Hedge funds that trade in these cryptocurrency commodities, or "crypto funds," fall almost entirely outside the extensive securities regulations that would apply to traditional hedge funds.

This article argues that these crypto funds constitute a new type of financial institution that is not, and cannot be, governed by traditional hedge fund regulation because doing so would disregard the unique operational and technological features of cryptocurrencies. Existing rules and best practices for hedge funds in key areas—such as investor asset custodianship, capital formation, and distribution of returns—are frequently nonsensical or even counterproductive in the context of crypto funds. Without regulatory guidance, crypto funds will need—and have the opportunity—to develop a set of best practices tailored to cryptocurrency trading. In doing so, crypto funds also present a significant opportunity for much-needed financial innovation and problem-solving in the cryptocurrency markets. However, crypto funds also present a far greater risk of fraud or investor losses than a traditional hedge fund, as cryptocurrency markets lack the liquidity, stability, and regulatory certainty of traditional securities markets.

This article concludes with concrete recommendations regarding several of the most salient, cryptocurrency-specific concerns currently facing crypto funds, including (i) the types of cryptocurrencies that should be traded, (ii) the types of potential investors who can provide

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funding, (iii) internal procedures for safeguarding client assets, (iv) optimization of the tax treatment for the fund and its investors, and (v) cryptocurrency-related disclosures to investors. By encouraging the development of uniform best practices across the crypto fund industry, this article provides a starting point for regulators to adopt policies that can address investor protection concerns without strangling the innovation of the emerging cryptocurrency markets.

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Introduction

Over the last several years, few financial assets have generated returns comparable to those of cryptocurrencies.¹ For example, Bitcoin, the largest cryptocurrency by market capitalization, has risen over 500,000,000% in value between its creation in January 2009 and January 2018,² and 4,328% between December 2014 and December 2017.³ Ether, the third largest cryptocurrency by market capitalization, has risen 34,876% in value since its inception in 2015.⁴

The intense interest and extraordinary returns in such cryptocurrencies have led to the rapid and exponential creation of new cryptocurrencies, with over 1,300 currently in existence.⁵ Bitcoin, the first cryptocurrency, was conceived simply as a

- 1. To compare, some of the best NASDAQ performers between mid-2014 and mid-2017 increased in value by about 530% to 730%. Keith Speights, These 3 Stocks Are Up Over 500% in the Last Years, MOTLEY FOOL (June 25, 2017), https://www.fool.com/investing/2017/06/25/these-3-stocks-are-up-over-500-in-the-last-3years.aspx. The best-performing stocks of established, "traditional" companies showed returns in the 300% range, though one must note their relative stability. Frank Byrt, 10 Best-Performing Stocks in Three-Year Bull Market (Update2), STREET (Mar. 12, 2002), https://www.thestreet.com/story/11450815/1/10-best-performing-stocks-in-three-yearbull-market.html; Top-Performing Mutual Funds by Category, KIPLINGER (Dec. 31, 2017), http://www.kiplinger.com/tool/investing/T041-S001-top-performing-mutualfunds/index.php; Commodities Broad Basket, U.S. MONEY, https://money.usnews.com/funds/mutual-funds/rankings/commodities-broad-basket.
- 2. Some of the first Bitcoin exchanges took place on BitcoinMarket.com in early 2010, where user Theymos sold 15,000 Bitcoins for just \$0.003 each. About a month later, on May 22, 2010, Laszlo Hanyecz successfully traded 10,000 Bitcoins for two pizzas, giving those Coins the estimated value of \$0.01. Eight years later, the closing value of one Bitcoin on Jan. 5, 2018 was \$17,014.17. See Fun fact "I Sold 15,000 BTC on Bitcoin Market for ~0.003 USD: The All-Time Low Any Market, AFAIK.", Reddit https://www.reddit.com/r/Bitcoin/comments/5w4kpp/fun_fact_i_sold_15000_btc_on_bit coin_market_for/. See also If Bits Go from \$0.003 to \$0.006 It Doesn't Seem Like a Big Move. But if BTC Goes from \$3000 to \$6000 It Seems Like a Massive Unsustainable Bubble, REDDIT (July 2017), https://www.reddit.com/r/Bitcoin/comments/6gjnvy/if_bits_go_from_0003_to_0006_it_d oesnt seem like/.
- 3. Calculated using closing prices at end of month. Bitcoin was valued at \$13,955.2300 on Dec. 31, 2017 and \$315.1900 on Dec. 31, 2014.
- 4. Calculated using closing prices on first trading day and at end of month, respectively. Ether was valued at \$968.8357 on Jan. 5, 2018, and \$2.77 on close of its first day of trading.
- See Catherine Bosley, Global Central Banks Can't Ignore the Bitcoin Boom, BIS Says, BLOOMBERG (Sept. 18, 2017, 3:01 AM), https://www.bloomberg.com/news/articles/2017-09-17/world-s-central-banks-can-t-ignore-the-bitcoin-boom-bis-says. See also Joe Liebkind, How to Find Your Next Cryptocurrency Investment, INVESTOPEDIA (Sept. 7, 2017, 3:43 AM), http://www.investopedia.com/news/how-find-your-next-cryptocurrency-investment/; Rachel Rose O'Leary, WSJ, Bloomberg Latest to Claim Bitcoin Exchange Crackdown in China, COINDESK (Sept. 11, 2017, 1:00 PM), https://www.coindesk.com/wsj-latest-to-claim-bitcoin-exchange-crackdown-in-china/; Andrew Tarantola, How to Trade

decentralized currency, operating via peer-to-peer transactions. While the technology underlying and validating such transactions was novel, Bitcoin was meant to function similarly to existing currencies like the dollar. Thus, the term "cryptocurrency" was an accurate reflection of its function.

Newer cryptocurrencies, however, go far beyond the functionality of a traditional currency. Some facilitate the automatic execution of contracts using computerized protocols, also known as "smart contracting"; others support decentralized applications, like voting8; still others are used primarily as a means of company fundraising —often by companies or individuals that intend to bypass a more complicated private or public securities offering.9

The latter use—fundraising in lieu of an offering—has caught the attention of the Securities and Exchange Commission (SEC), which has recently issued guidance that classifies cryptocurrencies issued in such offerings as "securities" and thus subject to federal securities laws.¹⁰ In contrast, cryptocurrencies like Bitcoin have instead been classified as "virtual currencies" excluded from the application of federal securities

Bitcoin (And If You Should), GIZMODO (Jan. 4, 2014, 11:00 AM), http://gizmodo.com/how-to-trade-bitcoin-and-if-you-should-1484488823; Catherine Bosley, *Predicting the Future of Money*, Economist (July 1, 2017), https://www.economist.com/news/books-and-arts/21724374-new-book-argues-mobiles-are-future-predicting-future-money.

^{6.} In 1998, Wei Dai and Nick Szabo individually published descriptions of a decentralized electronic cash system, respectively named "b-money" and "bit gold." In 2004, Hal Finney built on Dai and Szabo's works and created the first reusable proof-of-work system. Dai, Szabo, and Finney all became early adopters and supporters of Bitcoin at its inception. Morgan Peck, Bitcoin: The Cryptoanarchists' Answer to Cash, IEEE SPECTRUM (May 30, 2012, 4:33 PM), https://spectrum.ieee.org/computing/software/bitcoin-the-cryptoanarchists-answer-to-cash/0. See also Wei Dai, Description of b-money (Untitled), http://www.weidai.com/bmoney.txt; Benjamin Wallace, The Rise and Fall of Bitcoin, WIRED (Nov. 23, 2011, 2:52 PM), https://www.wired.com/2011/11/mf_bitcoin/; Joshua Davis, The Crypto-Currency, New Yorker (Oct. 10, 2011), https://www.newyorker.com/magazine/2011/10/10/the-crypto-currency.

^{7.} See Smart Contracts: The Blockchain Technology That Will Replace Lawyers, BLOCKGEEKS (2017), https://blockgeeks.com/guides/smart-contracts/.

^{8.} What is a Decentralized Application?, COINDESK, https://www.coindesk.com/information/what-is-a-decentralized-application-dapp/. See also id. ("Insiders vouch that it is extremely hard for our voting system to be rigged, but nonetheless, smart contracts would allay all concerns by providing an infinitely more secure system. Ledger-protected votes would need to be decoded and require excessive computing power to access. No one has that much computing power, so it would need God to hack the system! Secondly, smart contracts could hike low voter turnout. Much of the inertia comes from a fumbling system that includes lining up, showing your identity, and completing forms. With smart contracts, volunteers can transfer voting online and millennials will turn out en masse to vote for their Potus[OTUS].")

^{9.} What is An Initial Coin Offering? Raising Millions In Seconds, BLOCKGEEKS (Mar. 2017), https://blockgeeks.com/guides/initial-coin-offering/.

^{10.} The Dao, Exchange Act Release No. 81207, 117 SEC Docket 5 (July 25, 2017), https://www.sec.gov/litigation/investreport/34-81207.pdf) [hereinafter "The DAO Report"] (distinguishing between cryptocurrencies that qualify as securities and those that qualify as virtual currencies).

laws, thus receiving the presumptive blessing of the SEC.¹¹ Subsequent actions and statements by the SEC have provided further instruction on the line between security and commodity tokens, discussed at greater length below. Nevertheless, the SEC's guidance leaves considerable ambiguity between cryptocurrencies that qualify as securities and those that do not.¹²

The distinction between security and non-security cryptocurrencies is of special interest to financial institutions seeking to profit from the cryptocurrency rush. Extraordinary returns have led to a frenzy of investment activity including the formation of new hedge funds focused partially or exclusively on trading cryptocurrencies.¹³ Funds that trade exclusively in non-security tokens, or "crypto funds," bypass most of the regulations imposed on traditional hedge funds.

These "crypto funds" present unique benefits and issues, however, because of the operational efficiencies and risks inherent in cryptocurrencies as well as the almost complete lack of regulation of their cryptocurrency trading activity. On the operational end, the technology underlying cryptocurrencies automates security measures, such that safeguarding client property is more secure and efficient for a crypto fund. ¹⁴ However, since cryptocurrency markets lack the liquidity, stability, and regulatory certainty of traditional securities markets, crypto funds generally have a far greater burden of disclosure to investors than a traditional hedge fund. On the regulatory end, crypto funds face significantly less regulation because, unlike traditional hedge funds, they trade exclusively in cryptocurrencies that do not qualify as securities. ¹⁵ As a result, they are permitted to solicit investment from a far broader swath of investors and have more flexibility in setting their fees, thus granting them a significant competitive advantage against other hedge funds. Conversely, crypto funds face more complicated tax concerns that may encourage them, for example, to distribute returns in-kind rather than in cash. ¹⁶

These differences are even more interesting considering the volatility of cryptocurrencies. Cryptocurrencies are more speculative than many of the instruments, such as stocks and bonds, that do constitute securities – yet institutional trading of cryptocurrencies offers less barriers to market entry, including less

^{11.} Id.

^{12.} See id.

^{13.} See Joe Liebkind, The Rise of the Crypto Hedge Fund, INVESTOPEDIA (Aug. 18, 2017, 11:16 AM), http://www.investopedia.com/news/rise-crypto-hedge-fund/. See also Frank Chaparro, Hedge Funds Are Cashing in on Bitcoin Mania – There Are Now More Than 50 Dedicated to Cryptocurrencies, Business Insider (Aug. 30 2017, 3:33 PM), http://www.businessinsider.com/bitcoin-price-surge-leads-to-growth-in-hedge-funds-2017-8.

^{14.} See, e.g., LIN WILLIAM CONG AND ZHIGUO HE, BLOCKCHAIN DISRUPTION AND SMART CONTRACTS 10-13 (2018); Blockchain Automates Compliance Processes that Overhead Banks, PAYPERS (Dec. 8, 2016), https://www.thepaypers.com/interviews/blockchain-automates-compliance-processes-that-overhead-banks/767255-38.

^{15.} See infra Part 3.

^{16.} See infra Part 3(C).

regulation, lower start-up costs, and easier fundraising.¹⁷ The crypto fund thus represents a new class of financial institution with significantly more risk, higher upside, and fewer barriers to entry than a traditional modern hedge fund.¹⁸

This article analyzes the rise of the crypto fund, compares it to the traditional hedge fund, and discusses unique operational issues and recommendations for managing a crypto fund. This article proceeds in four parts. Part I discusses the evolving state of cryptocurrency regulation considering recent guidance released by the SEC. In this Part, we first define the term "cryptocurrency" and then address the SEC's current functional test to distinguish cryptocurrencies that qualify as securities from those that do not. Part II briefly discusses current regulation of hedge funds under US securities law, including registration, filing, and disclosure obligations, trading activities, solicitation of investors, compensation arrangements, and tax treatment. Part III then discusses the unique benefits and operational issues that crypto funds face in four key areas: solicitation of investors, custodianship of client assets, tax treatment and distributions, and required disclosures to investors. Part IV concludes with recommendations and best practices for the crypto fund.

I. The Evolving State of Cryptocurrency Regulation

To understand the nature of crypto funds, their trading activities must first be understood. The key question is, "What is a cryptocurrency, and how is it regulated?"

The difficulty in regulating cryptocurrencies lies in understanding what they do. Contrary to their name, they can do far more than a typical currency, such as automating transactions or complex decision-making.¹⁹ In turn, the SEC has taken a functional approach to regulation, ignoring the underlying form or technical aspects of each currency and instead classifying the cryptocurrency based on its purpose and uses.²⁰ However, the SEC's guidance leaves substantial ambiguity, given the abundance of cryptocurrencies with substantially different functionalities.

This Part first provides an overview of cryptocurrencies and their uses and then defines the current line that separates cryptocurrencies that qualify as securities from those that do not under current SEC guidance.

A. Terminology

As a preliminary matter, a consistent terminology must be established for crypto funds and their trading activities, as cryptocurrencies and cryptocurrency-trading

^{17.} See infra Part 3(A).

See, e.g., Angela Walch, Islands No More: Crypto Hedge Funds Bring Cryptocurrency Risk Into Mainstream Financial System, FORBES (Oct. 11, 2017), https://www.forbes.com/sites/angelawalch/2017/10/11/islands-no-more-crypto-hedge-funds-bring-cryptocurrency-risk-into-mainstream-financial-system/#552de6225281.

^{19.} *Smart Contracts, supra* note 7.

^{20.} See infra Part I(C).

funds can take many forms. With respect to cryptocurrencies, this article draws two distinctions: a functional one between networks and tokens, and a legal one between commodities and securities. In this article, we consider a cryptocurrency "token" to be a unit of the cryptocurrency that can be bought or sold, and a cryptocurrency "network" to refer to the blockchain underlying the cryptocurrency.²¹ For example, a Bitcoin token is a tradeable unit that can be exchanged for services or other currencies, whereas the Bitcoin network is the Bitcoin blockchain, which records every transaction in the community.²² Cryptocurrency tokens may be treated either as securities or commodities depending on their functionality, as discussed below. This article refers to these as "security tokens" and "commodity tokens," respectively.

With respect to cryptocurrency-trading funds, this article defines and distinguishes between "crypto funds" and "ICO funds." The former deals exclusively in commodity tokens and, as a result, is subject to significantly different regulation than traditional hedge funds, which trade in securities.²³ The latter deals partially or wholly in security tokens and, as a result, is substantially similar to other hedge funds.²⁴ The crypto fund is the sole focus of this article because, unlike the ICO fund, it represents a new type of financial institution that faces substantial regulatory uncertainty.

B. What is a Cryptocurrency?

At the most basic level of understanding, a cryptocurrency is a "digital or virtual currency that uses cryptography for security."²⁵ This definition simply treats a cryptocurrency as a substitute for any currently existing fiat currency, like the US dollar or British pound. The sole difference lies in the form that the currency takes: a cryptocurrency does not take a tangible form of paper or coins in circulation, but rather is an encrypted, digital representation of value. A fiat currency is validated by the simple act of possession: if one tenders a physical dollar it is presumed to be the

^{21.} See Preethi Kasireddy, Bitcoin, Ethereum, Blockchain, Tokens, ICOs: Why Should Anyone Care?, HACKERNOON (July 5, 2017), https://hackernoon.com/bitcoin-ethereum-blockchain-tokens-icos-why-should-anyone-care-890b868cec06 (distinguishing among tokens, blockchains, and the many layers of a blockchain). For a discussion of the technical distinction between cryptocurrency blockchains and networks, see infra note 27.

^{22.} See id.

^{23.} See infra Part III.

^{24.} ICO Funds trade in the types of initial coin offerings that, under the SEC's analysis in The DAO Report, would be deemed securities. *See infra* Part I(C) for a discussion of the attributes that would cause such initial coin offerings to be deemed offerings of securities. *See infra* Part II for a brief overview of regulations that apply to all hedge funds trading in securities, which would include ICO funds.

^{25.} Cryptocurrency, INVESTOPEDIA, http://www.investopedia.com/terms/c/cryptocurrency.asp (last visited Jan. 28, 2018).

property of the person who tenders. In contrast, a cryptocurrency is validated in accordance with computerized security protocols.²⁶

Understanding cryptocurrencies, however, requires an understanding of their underlying technology, particularly the blockchain. A blockchain is a distributed public ledger system that records all transactions in a particular cryptocurrency.²⁷ Each cryptocurrency has its own blockchain, each with its own cryptographic security measures, including public-key encryption.²⁸ A 'typical' blockchain is decentralized, such that all transactions on the blockchain must be validated and recorded by holders of the cryptocurrency. This typically occurs through a process known as mining, whereby individual holders provide computational power to the blockchain sufficient to solve an encryption algorithm²⁹, thus verifying that a transaction is valid and

^{26.} Kasireddy, *supra* note 21 ("A blockchain is collectively maintained by 'miners', who are members within the network that compete to validate Bitcoin transactions in each block by solving the complex algorithmic problem associated with the block.")

^{27.} It is important to understand that the term "blockchain" is a complete, and potentially dangerous, misnomer for many cryptocurrency networks. We adopt it in this article only because it is widely used, and generally adopted by U.S. regulatory opinions, to refer to the distributed networks underlying each cryptocurrency. However, the actual "blockchain" technology, using proof-of-work systems and a completely distributed ledger, is only one of many solutions to the fundamental problem of trust in transactional networks amongst strangers. The actual solutions embodied in each cryptocurrency network vary widely but generally share some key characteristics. They almost universally attempt to use a combination of cryptography, distributed rewards, and extensive game theory to secure and stabilize their transactional networks without the need for a trusted and centralized third party. Bitcoin uses one particular solution - the blockchain - to solve several fundamental problems faced by human society: faith in the stability of the monetary supply, harmonization of ledger records, accuracy of recordation of ownership of money, and so forth. Normally, these recordation, inflationary control, monetary supply, and verification functions are solved through a combination of unique "tokens" with government identifiers (coins, dollar bills) and centralized ledger-keepers (banks) that are overseen by the master issuer and controller of the monetary supply (the government). By contract, the Bitcoin network and its attendant tokens distribute these essential functions by removing the physical aspect of the dollar bill and just keeping its unique identifying number, tying it directly to a distributed ledger accessible by all, and rewarding the stakeholders in the network for performing the recordation and verification function of banks via rewards that themselves are designed to ensure a deterministic monetary supply. Other cryptocurrencies solve other basic problems; Ethereum, for example, effectively does the same for contract and dispute-resolution systems. See, e.g. The Dao Report, supra note 10.

^{28.} See infra Part III(B) for a discussion of public-key cryptography.

^{29.} The choice of algorithm varies extensively among cryptocurrencies, but there are two primary categories of algorithms: proof-of-work and proof-of-stake. In a proof-of-work system, holders of the cryptocurrency compete to solve the cryptographic algorithm first; only the person who solves the algorithm—and thus adds a block to the blockchain—is given a reward of newly generated units of the cryptocurrency for such effort. In contrast, a proof-of-stake system assigns holders to solve the algorithm deterministically—with the probability of being chosen proportional to their amount of currency—and rewards transaction fees (rather than generating new units) for properly adding a new block to the blockchain. Proof-of-work algorithms are more computationally intensive, which some

recording the transaction onto the blockchain, in exchange for a small commission paid in the cryptocurrency being validated.

This role of the blockchain points to a more accurate, more technical, and simpler definition of a cryptocurrency—and of any currency more generally—as "limited entries in a database no one can change without fulfilling specific conditions."³⁰ A fiat currency, for example, is akin to "limited entries in a public physical database that can only be changed if you match the condition tha[t] you physically own the coins and notes[.]"³¹ That is, possession is the mechanism or condition for validating transactions in physical currencies, and the change of possession is similar to recording each transaction on a hypothetical public ledger that tracks how much currency each living human being owns.

Cryptocurrencies, however, are far more complex because the "conditions" that must be satisfied to transfer ownership on the blockchain include, but go beyond, simple validation of ownership.³² On the one hand, cryptocurrencies implement computerized security protocols to validate each transaction and record it on the blockchain, in lieu of physical tender and receipt of a tangible currency. On the other hand, cryptocurrencies have functions that exceed those of a typical currency: they can be used as a means of payment (like a fiat currency)³³, but also as tools to facilitate contracting³⁴, internet-based applications³⁵, and fundraising.³⁶

A brief overview of such functions follows.

1. Decentralized Payments

Several cryptocurrencies, including Bitcoin and Litecoin, focus primarily on payments for goods and services, akin to fiat currencies. For example, a merchant may

have criticized as causing cartel-like centralization of mining power and wasting significant amounts of energy. *See Proof of Stake FAQ*, GITHUB, https://github.com/ethereum/wiki/wiki/Proof-of-Stake-FAQ (last updated Jan. 14, 2018).

^{30.} What is Cryptocurrency: Everything You Need to Know [Ultimate Guide], BLOCKGEEKS (2017), https://blockgeeks.com/guides/what-is-cryptocurrency/.

^{31.} *Id.* Note, however, that this definition of a cryptocurrency is more accurate for cryptocurrencies that employ a proof-of-work system rather than a proof-of-stake system or other verification system. *See* The DAO Report, *supra* note 10.

^{32.} A cryptocurrency's cryptographic security measures set the conditions that must be accomplished to transfer ownership. *See infra* Part III(B) for a discussion of public-key cryptography.

^{33.} Kasireddy, *supra* note 21.

^{34.} Smart Contracts: The Blockchain Technology That Will Replace Lawyers, supra note 7.

^{35.} What is a Decentralized Application?, supra note 8. For a specific, technical example of a cryptocurrency that supports smart contracting and decentralized applications, see White Paper, GITHUB (Sept. 31, 2017), https://github.com/ethereum/wiki/wiki/White-Paper#applications.

^{36.} What is An Initial Coin Offering? Raising Millions in Seconds, supra note 9.

accept payment in Bitcoin in lieu of dollars.³⁷ Such cryptocurrencies enable that exchange in a decentralized manner, such that one individual can transfer payment directly to another without processing by a central bank, unlike fiat currencies.³⁸

2. Smart Contracts

Several cryptocurrencies, including Ether and NEO, facilitate smart contracting, or the automatic execution of contracts through computer code.³⁹ More particularly, a smart contract is:

a computerized transaction protocol that executes terms of a contract. The general objectives of smart contract design are to satisfy common contractual conditions (such as payment terms, liens, confidentiality, and even enforcement), minimize exceptions both malicious and accidental, and minimize the need for trusted intermediaries. Related economic goals include lowering fraud loss, arbitrations and enforcement costs, and other transaction costs.⁴⁰

Thus, the purpose is to facilitate peer-to-peer transactions, but with added automation to exclude middlemen and transaction fees and risks associated with middlemen, as well as standardize contractual language.

3. Decentralized Applications

Other cryptocurrencies support decentralized applications built on top of such cryptocurrency's blockchain. For instance, the Ethereum blockchain is open source, meaning the underlying code is freely available and licensed to the public for use in

^{37.} For a list of many merchants that already accept Bitcoin as payment, see Jonas Chokun, Who Accepts Bitcoins as Payment? List of Companies, Stores, Shops, 99 BITCOINS, https://99bitcoins.com/who-accepts-bitcoins-payment-companies-stores-take-bitcoins/ (last updated Jan. 14, 2018).

^{38.} Kasireddy, *supra* note 21.

^{39.} Smart Contracts: The Blockchain Technology That Will Replace Lawyers, supra note 7. Note that, technically, smart contracting is a feature built into the blockchain, rather than the cryptocurrency. However, each such blockchain issues cryptocurrencies which are then used to satisfy the objectives of the blockchain. For example, the Ethereum blockchain supports smart contracting and the cryptocurrency it issues, Ether, is the currency by which payment for such contracts is provided.

^{40.} See Nick Szabo, Smart Contracts, NICK SZABO'S ESSAYS, PAPERS, AND CONCISE TUTORIALS (1994), http://www.fon.hum.uva.nl/rob/Courses/InformationInSpeech/CDROM/Literature/LOT winterschool2006/szabo.best.vwh.net/smart.contracts.html. This definition appears to be the SEC's preferred definition. See also The DAO Report, supra note 10.

applications created by the public.⁴¹ It thus supports a variety of applications, including prediction markets (Augur⁴², Gnosis⁴³), banking services (Humaniq⁴⁴), investment or venture capital (DAO Tokens⁴⁵), and web browsing (Mist⁴⁶). Ether, the primary cryptocurrency token issued on the Ethereum blockchain, can either be used either directly within such applications or indirectly as payment for other cryptocurrencies built on the Ethereum blockchain that can be used in such applications.

4. Fundraising

Many cryptocurrencies are also issued primarily as a means of fundraising for private entities or individuals, similar to a private or public offering of stocks or other securities.⁴⁷ Such fundraising frequently occurs in the form of an "initial coin offering" ("ICO"), whereby a promoter makes an initial issuance of a newly-created cryptocurrency. The largest ICOs to date have been those of Filecoin (\$257 million in September 2017)⁴⁸ and Tezos (\$232 million in July 2017)⁴⁹. Other notable examples

41. The Ethereum source code is available on Github, a website that hosts software projects and code. *ethereum*, GITHUB, https://github.com/ethereum/ (last visited Dec. 5, 2017) (containing 137 repositories of code related to various implementations of Ethereum and related tools and software). The most popular, official implementation of Ethereum (in the Go software language) is licensed under the GNU Lesser General Public License v. 3.0, though other tools and software may have different licenses. *go-ethereum/COPYING*, GITHUB, https://github.com/ethereum/go-ethereum/blob/master/COPYING (last visited Dec. 5, 2017).

^{42.} See Augur, https://augur.net/ (last visited Nov. 8, 2017). ("Augur combines the magic of prediction markets with the power of a decentralized network to create a stunningly accurate forecasting tool").

^{43.} See GNOSIS, https://gnosis.pm/ (last visited Nov. 8, 2017) ("Speculate on anything with an easy-to-use prediction market").

^{44.} See Humaniq, https://humaniq.com/ (last visited Nov. 8, 2017) ("Humaniq is a simple and secure mobile app, delivering financial inclusion solutions to the 2.5 billion unbanked / 1 billion underbanked globally.").

^{45.} See infra Part I(C).

^{46.} See Mist, DAO WIKI (May 29, 2016), https://daowiki.atlassian.net/wiki/spaces/DAO/pages/1212461/Mist.

^{47.} Julie Verhage et al., What's an ICO? Like an IPO but with Digital Coins, Bloomberg Businessweek (Sept. 17, 2017, 9:00 PM), https://www.bloomberg.com/news/articles/2017-09-18/what-s-an-ico-like-an-ipo-but-with-digital-coins-quicktake-q-a.

^{48.} Stan Higgins, \$257 Million: Filecoin Breaks All-Time Record for ICO Funding, COINDESK (Sept. 7, 2017, 8:45 PM), https://www.coindesk.com/257-million-filecoin-breaks-time-record-ico-funding/.

Omri Barzilay, Tezos' \$232 Million ICO May Just Be the Beginning, FORBES (July 15, 2017, 8:39 AM), https://www.forbes.com/sites/omribarzilay/2017/07/15/tezos-232-million-ico-may-just-be-the-beginning/#77b018ae4c52.

include Bancor (\$153 million in June 2017)⁵⁰, Brave (\$35 million raised in May 2017)⁵¹, and Gnosis (\$12.5 million raised in April 2017)⁵². Notably, Kik, a company that has raised over \$120 million in traditional venture capital, also conducted an ICO to raise roughly \$100 million in September 2017⁵³ in lieu of an initial public offering⁵⁴

As a result of these various cryptocurrency functions, regulating the entire cryptocurrency space and adopting a one-size-fits-all solution would ignore the realities underlying the use of these cryptocurrencies, particularly that many are not acting primarily as currencies. Unsurprisingly, the SEC has never defined the term "cryptocurrency," instead opting to define each cryptocurrency according to its function.⁵⁵ The result is an evolving framework that classifies some cryptocurrencies as securities and some as commodities, and leaves substantial ambiguity on the line between the two.⁵⁶

C. SEC Regulation of Security Tokens

Prior to mid-2017, the SEC had been largely silent with respect to directly regulating the purchase or sale of cryptocurrencies. Most of its regulation in this area had, instead, solely attempted to protect the public from issuers or exchanges which operate cryptocurrency-related businesses and offer conventional securities. The SEC regulated online exchanges that use cryptocurrencies to trade in securities⁵⁷, redemptions of shares in a trust that held cryptocurrencies as its sole assets⁵⁸, issuers selling shares in themselves in exchange for cryptocurrencies⁵⁹, and issuers holding cryptocurrency assets or operating cryptocurrency-related businesses that did not

Stan Higgins et al., \$150 Million: Tim Draper-Backed Bancor Completes Largest-Ever ICO, COINDESK (June 12, 2017, 6:45 PM), https://www.coindesk.com/150-million-tim-draper-backed-bancor-completes-largest-ever-ico/.

^{51.} Jonathan Keane, \$35 Million in 30 Seconds: Token Sale for Internet Browser Brave Sells Out, COINDESK (May 31, 2017, 5:40 PM), https://www.coindesk.com/35-million-30-seconds-token-sale-internet-browser-brave-sells/.

^{52.} Roger Aitken, *Gnosis' Prediction Market Scores* \$12.5M in 'Record-Breaking' Crypto Auction, FORBES (April 24, 2017, 9:23 PM), https://www.forbes.com/sites/rogeraitken/2017/04/24/gnosis-prediction-market-scores-12-5m-in-record-breaking-crypto-auction/#66e62c69e87d.

^{53.} Jon Russell, *Kik Raises Nearly \$100M in Highest Profile ICO to Date*, TECHCRUNCH (Sept. 26, 2017), https://techcrunch.com/2017/09/26/kik-ico-100-million/.

^{54.} Eric Jackson, *Why a Messaging Start-up is Making its Own Digital Currency Instead of Going Public*, CNBC (July 11, 2017, 2:08 PM), https://www.cnbc.com/2017/07/11/kik-looks-to-cryptocurrency-instead-of-an-ipo-commentary.html.

^{55.} See, e.g., The DAO Report, supra note 10 (the DAO Report never uses the term "cryptocurrency.")

^{56.} See infra Part I(D).

^{57.} BTC Trading, Corp., Exchange Act Release No. 73783, 110 SEC Docket 8 (Dec. 8, 2014).

^{58.} Bitcoin Investment Trust, Exchange Act Release No. 34-78282, 114 SEC Docket 11 (July 11, 2016).

^{59.} In re Erik T. Voorhees, Securities Act Release No. 9592, 109 SEC Docket 1 (June 3, 2014).

disclose sufficient information about such assets⁶⁰ or made fraudulent representations (including operation of Ponzi schemes).⁶¹

However, this changed with an investigation report released on July 25, 2017 (the "DAO Report"), where the SEC found for the first time, that cryptocurrencies issued for the purpose of raising funds are securities and thus subject to securities laws. 62 Notably, the SEC refused to create a one-size-fits-all solution and instead chose to regulate cryptocurrencies based on the particular functionality of each cryptocurrencies stating that "securities law may apply to various activities, including distributed ledger technology, depending on the particular facts and circumstances, without regard to the form of the organization or technology used to effectuate a particular offer or sale." Thus, the standard for determining whether a financial instrument, including a cryptocurrency, constitutes a security remains a functional one. The SEC disregards the underlying technology, including the blockchain, on which the cryptocurrency is based.

The SEC then applied the Howey test to specifically determine that the DAO Token it was investigating was an "investment contract," a type of security, and, as a result, the DAO Token's ICO violated federal securities laws.⁶⁴ To understand this determination, the nature of the DAO Token must be analyzed in more depth.

1. Background

The DAO Tokens closely resembled a conventional security in both function and structure. Functionally, the underlying purpose of the DAO Token was raising "funds to grow [a] company in the crypto space." This would be accomplished by submitting project proposals to the holders of the DAO Tokens, who would be entitled to vote on such proposals. Accepted proposals would be funded, with returns from those proceeds being distributed to the token holders. The creators of the DAO Token were the co-founders of an unincorporated organization, Slock.it UG, which planned to submit the first funding proposal in order to raise funds for use in Slock.it.

In re Sunshine Capital, Inc., Exchange Act Release No. 80435, 116 SEC Docket 10 (Apr. 11, 2017).

SEC v. Homero Joshua Garza, Civil Action No. 3:15-CV-01760 (D. Conn. filed Dec. 1, 2015); SEC v. Trendon T. Shavers, Civil Action No. 4:13- CV-416 (E.D. Tex. filed July 23, 2013).

^{62.} The DAO Report, supra note 10.

^{63.} Id. at 10.

^{64.} Id. at 11.

Christoph Jentzsch, The History of the DAO and Lessons Learned, SLOCK.IT BLOG (Aug. 24, 2016), https://blog.slock.it/the-history-of-the-dao-and-lessons-learned-d06740f8cfa5#.5062zo8uv.

^{66.} The DAO Report, supra note 10, at 4.

^{67.} Id.

^{68.} Id. at 12.

Moreover, the DAO Token went significantly beyond fundraising, essentially functioning as a proxy for stock ownership in a corporation. Conceptually, the DAO Token was meant to serve as the initial implementation of a Decentralized Autonomous Organization, or "DAO entity." A DAO entity is one which replaces a "traditional corporate form" by using smart contracts to automate corporate governance functions. 69 More specifically, buying DAO Tokens, would act similarly to "buying shares in a company and getting... dividends", 70 because token holders would have the right to vote on, and share in the proceeds of, project proposals. Those proposals would be filtered and submitted to the token holders by a group of curators. 71 Thus, like a board of directors in a typical corporation, the curators would submit significant matters to the token holders. Like stockholders, the token holders would then both vote on proposals significant to the community of holders and share in the proceeds. 72

2. Application of the Howey Test to the DAO Tokens

The DAO Tokens were determined to be "investment contracts," a form of security, under the Howie standard.⁷³ Under this standard, an investment contract is an (1) "investment of money in a common enterprise," (2) "with a reasonable expectation of profits," (3) "to be derived from the entrepreneurial or managerial efforts of others."⁷⁴

The first two prongs received relatively little scrutiny from the SEC.⁷⁵ DAO token holders invested Ether, another cryptocurrency, for their tokens, satisfying the first prong.⁷⁶ token holders were also entitled to returns on funded project proposals, satisfying the second.⁷⁷

The third prong received the bulk of the SEC's analysis. Of key concern was whether the token-holding relationship bore a greater resemblance to a stockholder in a corporation or a partner in a partnership, with the former implicating an investment contract.⁷⁸ Here, the SEC found that token holders resembled stockholders based on

^{69.} See Christoph Jentzsch, Decentralized Autonomous Organization to Automate Governance Final Draft – Under Review (unpublished manuscript), https://download.slock.it/public/DAO/WhitePaper.pdf (last visited Jan. 28, 2018).

^{70.} See Slockit, Slock.it DAO demo at Devcon1: IoT + Blockchain, YOUTUBE (Nov. 13, 2015), https://www.youtube.com/watch?v=49wHQoJxYPo.

^{71.} The DAO Report, supra note 10, at 7-8.

^{72.} Id. at 3.

^{73.} Id. at 10.

^{74.} See SEC v. Edwards, 540 U.S. 389, 393 (2004); SEC v. W.J. Howey Co., 328 U.S. 293, 301 (1946).

^{75.} The entire analysis for both prongs spans approximately half a page, whereas the analysis for the third spans almost four pages. *See* The DAO Report, *supra* note 10, at 11-15.

^{76.} The DAO Report, *supra* note 10, at 11.

^{77.} Id. at 11-12.

^{78.} Id. at 14-15.

two key factors. First, the centralization of control in, and efforts exerted by, Slock.it, the Slock.it co-founders and the curators, including their solicitation of token holders, constituted significant managerial efforts by non-token holders.⁷⁹ Second, the decentralization and lack of "meaningful control" of the DAO token holders made such token holders dependent on Slock.it, the Slock.it co-founders, and the curators.⁸⁰

Perhaps most notably, the SEC may have carved for itself a broad catch-all exception by which to find nearly any token as satisfying the requirements of the Howey standard. As stated above, the first two prongs were satisfied with little scrutiny. As for the third, the SEC particularly emphasized that the token holders were numerous, dispersed, and pseudonymous (token holders did not know each other's identities), so that their control was significantly diminished.⁸¹ However, nearly all cryptocurrencies will have such diffuse, pseudonymous ownership, as discussed in the following Subpart.

Subsequent statements by the SEC and its staff, alongside commensurate enforcement actions by the new Cyber Crimes Unit within the SEC⁸², have maintained this fact-based Howey approach and provided greater insight into the line between security and commodity tokens. In a public statement on ICOs, SEC Chairman Jay Clayton highlighted a number of security-like aspects of many ICOs.⁸³ Promoters of ICOs whose marketing efforts which emphasize the secondary market trading of the tokens were called out as particularly troubling.⁸⁴ Other public statements have expressed concern over celebrity promotion of ICOs⁸⁵, issued investor alerts on the dangers of ICOs⁸⁶ and alerted investors to the risk of market manipulation with regards to public companies making ICO-related claims.⁸⁷

^{79.} Id. at 12-13.

^{80.} Id. at 13-15.

^{81.} *Id.* at 14 ("The voting rights afforded DAO Token holders did not provide them with meaningful control over the enterprise, because (1) DAO Token holders' ability to vote for contracts was a largely perfunctory one; and (2) DAO Token holders were widely dispersed and limited in their ability to communicate with one another.").

^{82.} See infra Part III(D) for a discussion of recent SEC enforcement actions in the cryptocurrency sector.

^{83.} Press Release, SEC Chairman Jay Clayton, Statement on Cryptocurrencies and Initial Coin Offerings, (Dec. 11, 2017), https://www.sec.gov/news/public-statement/statement-clayton-2017-12-11.

^{84.} Id. at 3.

^{85.} Press Release, SEC Division of Enforcement and SEC Office of Compliance Inspections and Examinations, Statement on Potentially Unlawful Promotion of Initial Coin Offerings and Other Investments by Celebrities and Others (Nov. 1, 2017), https://www.sec.gov/news/public-statement/statement-potentially-unlawful-promotionicos.

^{86.} Press Release, SEC, Investor Bulletin: Initial Coin Offerings (July 25, 2017), http://www.sec.gov/oiea/investor-alerts-and-bulletins/ib_coinofferings.

^{87.} Press Release, SEC, Investor Alert: Public Companies Making ICO-Related Claims (Aug. 28, 2017), https://www.sec.gov/oiea/investor-alters-and-bulletins/ia_icorelatedclaims.

D. Non-Regulation of Virtual Currencies

In the DAO Report, the SEC also distinguishes cryptocurrencies that qualify as securities from those that qualify as "virtual currencies." 88 A "virtual currency" is:

a digital representation of value that can be digitally traded and functions as: (1) a medium of exchange; and/or (2) a unit of account; and/or (3) a store of value, but does not have legal tender status (i.e., when tendered to a creditor, is a valid and legal offer of payment) in any jurisdiction. It is not issued or guaranteed by any jurisdiction, and fulfils the above functions only by agreement within the community of users of the virtual currency." Virtual currency is distinguished from fiat currency (a.k.a. "real currency," "real money," or "national currency"), which is the coin and paper money of a country that is designated as its legal tender; circulates; and is customarily used and accepted as a medium of exchange in the issuing country.⁸⁹

Note that a virtual currency is, for tax purposes, treated as a commodity but not a currency. However, for purposes of securities laws, the SEC's analysis suggests that the distinction between virtual and fiat currency is formal, with fiat currency being in tangible form and having the official backing of a governmental entity. Thus, the determining factor regarding whether an instrument constitutes a currency—virtual or not—is functional: is the instrument a medium of exchange, a unit of account, and/or a store of value? If so, it is a currency.

Currencies are, in turn, not securities. The term "security" is defined in section 2(a)(1) of the Securities Act of 1933 (the "Securities Act") and section 3(a)(10) of the Securities Exchange Act of 1934 (the "Exchange Act"), neither of which includes currencies. 91 The DAO Report implicitly validates the exclusion of virtual currencies

^{88.} *Compare id.* at 2-3 (noting that Ether is a virtual currency) and *id.* at 11 (noting that the DAO tokens are securities). At no point is Ether referred to as a security, nor the DAO token as a virtual currency. *Id.*

^{89.} FIN. ACTION TASK FORCE, VIRTUAL CURRENCIES, KEY DEFINITIONS AND POTENTIAL AML/CFT RISKS (June 2014), http://www.fatf-gafi.org/media/fatf/documents/reports/Virtual-currency-key-definitions-and-potential-aml-cft-risks.pdf.

^{90.} IRS Notice 2014-21 addresses the tax treatment of at least some cryptocurrencies. The guidance applied only to "convertible virtual currency" ("CVC"): those that have "an equivalent value in real currency, or that act[] as a substitute for real currency." The guidance explicitly cited Bitcoin as an example. The Notice made clear that CVC is treated as property for tax purposes. This means its character is determined based upon whether the CVC is a capital asset or not. Thus, gains and losses from CVCs purchased, held, or exchanged for investment purposes are treated as capital gains and losses. The Notice explicitly declined to address the status of CVC trading under the 864 commodities exemption. I.R.S. Notice 2014-21 (April 14, 2014)...

^{91.} The definition in each statute is substantially similar but not identical. Under § 3(a)(10) of the Exchange Act, currency is expressly excepted from the definition of "security,"

from securities laws by mentioning, in passing, that both Bitcoin and Ether qualify as virtual currencies, but never referring to the DAO Tokens as virtual currencies.⁹²

Unsurprisingly, the SEC failed to acknowledge the DAO Token's capacity as, or similarity to, a virtual currency because doing so could omit the DAO Token from the purview of securities laws. In the SEC's analysis, a virtual currency seems to be something altogether different from the DAO Tokens and other security tokens whose primary purpose is raising capital.

This is particularly notable because security tokens and virtual currencies have more commonalities than dissimilarities. Nearly all security tokens could conceivably meet the SEC's functional test for determining whether an instrument qualifies as a virtual currency because a cryptocurrency, by definition, operates as a store of value that is generally freely transferable (and thus a medium of exchange) and supported by a blockchain that records each transaction (such that it is also a unit of account). For example, the DAO Tokens were freely transferable and ran on the Ethereum blockchain.

Similarly, virtual currencies tend to have at least some of the attributes of securities because of their reliance on blockchain technology. Each blockchain is typically developed by a small and close group of developers. The holders, conversely, tend to be diffuse and numerous, limited ability to act in concert. For instance, Bitcoin had reached over 10 million wallets, each corresponding to a separate Bitcoin holding,

whereas § 2(a)(1) of the Securities Act simply omits currencies. The Exchange Act defines a security as:"any note, stock, treasury stock, security future, security-based swap, bond, debenture, certificate of interest or participation in any profit-sharing agreement or in any oil, gas, or other mineral royalty or lease, any collateral-trust certificate, preorganization certificate or subscription, transferable share, investment contract, voting-trust certificate, certificate of deposit for a security, any put, call, straddle, option, or privilege on any security, certificate of deposit, or group or index of securities (including any interest therein or based on the value thereof), or any put, call, straddle, option, or privilege entered into on a national securities exchange relating to foreign currency, or in general, any instrument commonly known as a "security"; or any certificate of interest or participation in, temporary or interim certificate for, receipt for, or warrant or right to subscribe to or purchase, any of the foregoing; but shall not include currency or any note, draft, bill of exchange, or banker's acceptance which has a maturity at the time of issuance of not exceeding nine months, exclusive of days of grace, or any renewal thereof the maturity of which is likewise limited." Securities Act of 1933, 15 U.S.C. § 77 (2012); Securities Exchange Act of 1934, 15 U.S.C. § 78c(a)(10) (2012).

^{92.} Additional insight as to the distinction between those cryptocurrency tokens which qualify as securities, and those which are merely virtual currencies and do not qualify as securities, can be gleaned from the recent FinCEN BTC-E decision. There, FinCEN imposed monetary penalties on an overseas cryptocurrency exchange and its operator for violations of the Bank Secrecy Act. The exchange in question, BTC-e, was described as an "exchanger of convertible virtual currencies, offering the purchase and sale of U. S. dollars, Russian Rubles, Euros, Bitcoin, Litecoin, Namecoin, Novacoin, Peercoin, Ethereum, and Dash." *Id.* at 2. The consistency of terminology, and near-simultaneous release of the FinCEN decision alongside the SEC's DAO guidance, suggest that these listed cryptocurrencies may also qualify as virtual currencies, not securities. U.S. Dept. of Treas., Fin. Crim. Enforc. Network., BTC-E a/k/a/ Canton Bus. Corp. and Alexander Vinnik., FinCEN, 2017-03 (July 26, 2017).

by the end of 2015.⁹³ In addition to the problem of numerosity, the pseudonymous nature of blockchain transactions further inhibits organized action by token holders. For example, Bitcoin holdings are identified by a custom address rather than the name or other personal information of the holder.⁹⁴ Thus, like the DAO Tokens, virtual currencies tend to exhibit at least some hallmarks of stock ownership which the SEC weighed so heavily against the DAO Token.

However, the Securities Act and Exchange Act (having been largely written over 80 years ago) do not contemplate such a nuanced treatment, and so the SEC has no choice but to ignore some of the currency-like functionality of security tokens and classify them purely as investment contracts so that they are subject to securities regulation. In contrast, virtual currencies face no such regulation.

II. The Current State of Hedge Fund Regulation

Having addressed the treatment of the financial instruments that crypto funds trade, this Part now proceeds to discuss and compare the regulations that traditional hedge funds and crypto funds face.

This Part specifically focuses on four of the most significant areas in which traditional hedge funds are regulated: anti-fraud and non-solicitation provisions under the Securities Act and Exchange Act; investment activity regulation under the Investment Advisers Act of 1940 (the "Advisers Act") and the Investment Company Act of 1940 (the "Investment Company Act"); taxation under various statutes; and regulation by the Commodities Futures Trading Commission (CFTC).

In contrast to the extensive regulations governing traditional hedge funds, many of these regulations do not apply to crypto funds. While crypto funds face similar regulation under the Securities Act, Exchange Act, and certain taxation statutes, they need not comply with any of the same investment activity regulations or CFTC regulation.

A. Anti-Fraud and Non-Solicitation Provisions under the Securities Act and Exchange Act

The general provisions of the Securities Act and the Exchange Act generally prohibit public solicitation and fraud in connection with a public offering of securities. ⁹⁵ Interests in a hedge fund, such as limited partnership interests, are treated as "equity securities" under both the Securities Act and the Exchange Act. ⁹⁶ Offerings

^{93.} Michael Jackson, *Bitcoin's Big Challenge in 2016: Reaching 100 Million Users*, COINDESK (Jan. 1, 2016, 4:34 PM), https://www.coindesk.com/2016-bitcoin-challenge-100-million-users/.

^{94.} *See infra* Part III(B) for a public-key cryptography, by which holders can engage in secure transactions without the need to provide or verify identifying information.

^{95. 15} U.S.C. § 77e (2012) (unlawful to make offer for sale or sell securities through mails or interstate commerce, barring lawful registration).

^{96.} See 17 C.F.R. § 230.405; 15 U.S.C. § 77(3)(a)(11-1) ("equity security is hereby defined to include [. . .] limited partnership interests. . .").

on interests in a hedge fund must therefore either comply with the registration requirements of the Securities Act or seek an exemption from registration. Most hedge fund managers therefore choose to avoid the costs of registration by conducting their offerings pursuant to one or more of the available exemptions.⁹⁷

Onshore offerings of hedge fund interests are frequently conducted pursuant to Regulation D under the Securities Act. 98 Regulation D codifies several safe harbors which ensure exemption from section 4(a)(2) of the Securities Act so long as the securities are "restricted" 99, the offering is conducted in accordance with the requirements of the particular exemption sought, and the offeror files Form D with the SEC. 100 Generally, hedge funds choose to either forego general solicitation or advertising in marketing the securities in which case they may sell to an unlimited number of accredited investors 101 and up to 35 other purchasers. 102 Those funds wishing to make an unlimited offering and make use of general solicitation or advertising must restrict their sales to accredited investors. 103

Hedge funds are similarly subject to the anti-fraud, insider trading protections, and related disclosure requirements common to all security offerings. Hedge funds have been previously prosecuted on this basis for a variety of offenses, including misrepresentation of investment manager experience, prior success, and/or disciplinary history;¹⁰⁴ misappropriation of investor funds;¹⁰⁵ Ponzi schemes;¹⁰⁶ and excessive or unfair management and performance fees,¹⁰⁷ among many others.¹⁰⁸ A

^{97. 17} C.F.R. §§ 230.504-.506 (2017).

^{98. 17} C.F.R. § 230.506 (2017).

^{99. 17} C.F.R. §§ 230.501-.508 (2017).

^{100.} Form D is a limited notice including basic information on directors and the offering entity.

^{101.} Rule 501 of Regulation D defines an accredited investor, and includes natural persons whose individual net worth (with their spouse) exceeds \$1,000,000, or who had an individual income in excess of \$200,000 in each of the two most recent years or joint income with that person's spouse in excess of \$300,000 in each of those years and has a reasonable expectation of reaching the same income level in the current year. 17 C.F.R. § 230.501 (2017).

^{102.} Rule 504 permits any type of person to be included among the 35 unaccredited purchasers, but limits the offering to \$5,000,000. 17 CFR §230.504. Rule 506(b) allows an unlimited amount of funds to be raised in the offering, but requires that the unaccredited purchasers be "sophisticated", with sufficient knowledge and experience in relevant matters to make them capable of evaluating the merits and risks of the prospective investment. 17 C.F.R. § 230.506(b) (2017).

^{103. 17} C.F.R. § 230.506(c) (2017).

^{104.} See SEC v. GEI Financial Services, No. 12-7927 (N.D. Ill. filed October 3, 2012).

^{105.} See SEC v. Lion Capital Management, No. CV 12-05116-EJD (N.D. Cal. filed October 3, 2012).

See SEC v. Yusaf Jawed, No. 12-1696 (D. Or. filed September 20, 2012); SEC v. Angelo A. Alleca, No. 1:12-cv-03261-WSD (N.D. Ga.).

^{107.} See GEI Financial Services, No. 12-7927, supra note 104.

E.g., SEC v. Mark Megalli, No. 1:13-CV-03783-AT (N.D. Ga., Nov. 11, 2013) (hedge fund trader prosecuted for insider trading); SEC v. Sigma Capital Management, No. 13-civ-

non-exhaustive list of typical disclosures to investors includes each fund's investment strategies and permissible investments; details on the fund's sponsors and other key personnel; essential terms regarding price, liquidity, manager compensation, and redemption; and risks inherent to the particular strategies or markets in which the fund will engage.¹⁰⁹

B. Regulation of Investment Activity under the Investment Advisers Act and Investment Company Act

1. Investment Advisers Act

Under the Advisers Act, investment advisors are generally required to register with the SEC.¹¹⁰ Prior to the passage of the Dodd-Frank Act of 2012, investment advisers with fewer than fifteen clients were not subject to registration or compliance under the Advisers Act.¹¹¹ Because a hedge fund was treated as a single client, almost all hedge fund managers were entirely exempt from regulation under the Advisers Act.¹¹²

The passage of the Dodd-Frank Act eliminated this private adviser exemption. Title IV of Dodd-Frank brought hedge fund investment advisers into the purview of the Advisers Act. ¹¹³ Consequently, hedge fund now investment advisers must generally register with the SEC. "Small advisers" are not permitted to register with the SEC, but they must register with the relevant state agencies, if any. ¹¹⁴ In addition to registration, the Advisers Act subjects hedge fund managers to a variety of requirements regarding their compensation, custodianship of client assets, investor reporting, and other key issues.

^{1740 (}S.D.N.Y. filed Mar. 19, 2013) (hedge fund advisory firm prosecuted for insider trading); SEC v. Tiger Asia Management, No. 12-cv-7601 (D.N.J. filed Dec. 13, 2012) (hedge fund managers prosecuted for illegal and deceptive offshore trading activities).

^{109.} For a practical discussion of recommended disclosure topics, see Asset Managers' Committee to the President's Working Group on Financial Markets, Best Practices for the Hedge Fund Industry (2009), http://www.cftc.gov/idc/groups/public/@swaps/documents/file/bestpractices.pdf.

^{110.} Investment Advisors Act, 15 U.S.C. § 80b-3 (2012).

^{111.} The Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank Act"), repealed section 203(b) of the Investment Advisers Act, as in effect in 2011. This eliminated the "15 client private fund adviser" exemption from registration previously relied upon by most private investment fund managers. Dodd-Frank Wall Street Reform and Consumer Protection Act., 12 U.S.C. § 53 (2012).

^{112.} Id.

^{113.} Id.

^{114.} Section 203A of the Investment Advisers Act of generally prohibits an investment adviser from registering with the Commission unless that adviser has more than \$25 million of assets under management or is an adviser to a registered investment company. For example, California law provides that an investment adviser is required to register with the state and adhere to certain requirements, and generally tracks the language of the IAA and ICA.

Section 205 of the Advisers Act was amended by the 1970 Act to provide protection against performance fee agreements.¹¹⁵ Prior to its passage, many performance fee agreements failed to provide for any kind of penalty or disincentive for the investment adviser in the event of a loss.¹¹⁶ These performance agreements were viewed as inherently unfair to investment companies because they disproportionately incentivized high-risk behavior on the part of the investment adviser. To combat this risk, section 205 prohibits all performance fees unless the investors in question are "qualified clients," who must have a net worth of \$2.1M excluding primary residence, or have at least \$1M under the management of the investment adviser.¹¹⁷

In addition, compensation under performance fee arrangements must increase and decrease proportionately with the investment performance of the company over a specified period in relation to the investment record of an appropriate index of securities prices. This type of performance fee is commonly referred to as a "fulcrum" fee or an "incentive" fee. Consideration of the fairness of a performance fee arrangement must start with the midpoint or "fulcrum fee" (the fee paid when the investment company's performance equals that of the index). The maximum and minimum incentive fee rates and all performance increments are measured from the fulcrum fee. 120

Although section 205 does not require a particular length of time over which to measure performance, investment advisers are nevertheless obligated to use an interval sufficiently long to provide a reasonable basis for indicating the adviser's performance. ¹²¹ The SEC has indicated approval for the use of intervals that specifically minimize the possibility that payments will be based upon random or short-term fluctuations. ¹²²

^{115.} The Investment Company Amendments Act, 15 U.S.C. § 80 (1970).

^{116.} See, e.g., H.R. Rep. no. 2639, 76th cong., 2d Sess. 29 (1940); S. Rep. No. 1775, 76th Cong., 3d Sess. 22 (1940) (characterizing performance fees based on capital gains or appreciation as nothing more than "heads I win and tails you lose" arrangements).

^{117. 17} C.F.R. § 275.205-3 (2017).

^{118. 15} U.S.C. § 80b-5(b)(2)(B) (2012).

^{119.} Inv. Co. Act Rel. No. 7113, Pg. 2 (Apr. 6, 1972).

^{120.} Id. at 2.

^{121.} Id.

^{122.} Factors to be Considered in Connection with Investment Company Advisory Contracts Containing Incentive Free Arrangements, Investment Company Act Release No. 7113, Investment Advisors Act Release No. 315 (1972), http://www.brightlinesolutions.com/files/Plaze/Release%20IA-0315%20Incentive%20Fees.pdf (finding that 103 of 999 investment companies surveyed measured their performance over a period of at least one year).

The Advisers Act also requires investment advisers with custody¹²³ of client funds and securities to use the services of a third-party "qualified custodian"¹²⁴ to maintain control of those funds and assets. As most hedge fund managers are subject to the Advisers Act following the passage of Dodd-Frank, hedge funds generally fall under this rule. 'An investment adviser for a pooled investment fund (such as limited partnerships or limited liability companies) meeting the requirements under Rule 206(4)-2(b)(4) must obtain the services of a "qualified custodian" to maintain client funds and securities¹²⁵ but is exempt from the other gatekeeping requirements in Rule

^{123. &}quot;Custody" means "holding, directly or indirectly, client funds or securities, or having any authority to obtain possession of them." An investment adviser has custody if a related person holds, directly or indirectly, client funds or securities, or has any authority to obtain possession of them, in connection with advisory services [the investment adviser] provide[s] to clients. Custody includes: (i) Possession of client funds or securities . . . unless . . . receive[d] . . . inadvertently and . . . returne[d] . . . to the sender promptly but in any case within three business days of receiving them; (ii) Any arrangement (including a general power of attorney) under which [the investment adviser is] authorized or permitted to withdraw client funds or securities maintained with a custodian upon [the investment adviser's] instruction to the custodian; (iii) Any capacity (such as general partner of a limited partnership, managing member of a limited liability company or a comparable position for another type of pooled investment vehicle, or trustee of a trust) that gives [the investment adviser or the investment adviser's representative] legal ownership of or access to client funds or securities 17 U.S.C. § 206(4)-2(d)(2) (2012).

^{124. &}quot;Qualified custodians" include bank or savings associations that have deposits insured by the Federal Deposit Insurance Corporation under the Federal Deposit Insurance Act; broker-dealers registered with the Commissioner and with the Securities and Exchange Commission holding the client assets in customer accounts insured by the Securities Investor Protection Corporation (SIPC); registered futures commission merchants registered under § 4f(a) of the Commodity Exchange Act (7 U.S.C. 6f(a)), holding the client assets in customer accounts, but only with respect to clients' funds and security futures, or other securities incidental to transactions in contracts for the purchase or sale of a commodity for future delivery and options thereon; and foreign financial institutions that customarily hold financial assets for their customers, provided that the foreign financial institution keeps the advisory client's assets in customer accounts segregated from its proprietary assets. .17 U.S.C. § 206(4)-2(d)(6) (2012).

^{125.} There is a "privately offered securities" exemption, whereby restricted securities purchased in a private offering or private chain of transactions can be held by the investment manager without the involvement of a qualified custodian. *See* 17 U.S.C. § 206(4)-2(b) (2012). While profoundly helpful to venture capital and other private equity funds, this exemption is of limited use to hedge funds primarily trading public securities.

206.¹²⁶ For those hedge funds too small to register federally most states have statutes that track the federal custody requirements for investment advisers.¹²⁷

2. Investment Company Act

The Investment Company Act (as modified by Dodd-Frank Act of 2010) places significant limitations on the behavior of entities falling within its definition of "investment company." ¹²⁸ This includes limitations on shorting, use of leverage, and other trading activities. These limitations are highly prohibitive to the investment strategies employed by hedge funds. Thus, almost by definition, hedge funds are investment companies which seek exemption from treatment or classification as such under the Investment Company Act. Most hedge funds rely on either of section 3(c)(1) or 3section (c)(7) of the 1940 Act to avoid classification as an investment company.

Section 3(c)(1) exempts entities whose outstanding securities are beneficially owned by not more than 100 persons and that are not making and do not presently propose to make a public offering of those securities.¹²⁹ Section 3(c)(7) similarly exempts entities whose outstanding securities are owned exclusively by persons who, at the time of acquisition, are qualified purchasers and do not presently propose to make a public offering of those securities.¹³⁰ "Qualified purchasers" include any individual who owns more than \$5 million in investments; any closely held corporation holding the same; certain types of trusts; and any person who, on their own account or the accounts of other qualified purchasers, in the aggregate invests on a discretionary basis at least \$25 million in investments.¹³¹

^{126.} Advisers need not comply with the reporting requirements of § 260.237(a) with respect to pooled investment vehicles, if the pooled investment vehicle is audited at least annually and distributes its audited financial statements, prepared in accordance with GAAP, to all limited partners (or members or other beneficial owners) within 120 days of the end of its fiscal year. Nonetheless, the adviser must submit Form ADV notifying the Commissioner that the adviser has or may have custody of client assets and intends to provide audited financial statements to the limited partners.

^{127.} For example, the language and structure of California's investment advisor custody rules are almost identical to the federal rules. *Compare* C.F.R. § 275.206(4)-2 (2017) *with* CAL. CODE ANN. tit. 10, § 260.237 (2016).

^{128.} An "investment company" means "any issuer which is or holds itself out as being engaged primarily, or proposes to engage primarily, in the business of investing, reinvesting, or trading in securities; (B) is engaged or proposes to engage in the business of issuing face-amount certificates of the installment type, or has been engaged in such business and has any such certificate outstanding; or (C) is engaged or proposes to engage in the business of investing, reinvesting, owning, holding, or trading in securities, and owns or proposes to acquire investment securities having a value exceeding 40 per centum of the value of such issuer's total assets (exclusive of Government securities and cash items) on an unconsolidated basis." 15 U.S.C. § 80a–3 (2012).

^{129. 15} U.S.C. § 80a-3 (2012).

^{130.} Id.

^{131. 15} U.S.C. § 80a-2(a)(51)(A) (2012).

C. Hedge Fund Taxation

In order to avoid entity-level corporate taxation, a hedge fund must avoid being classified as a publicly traded partnership. A publicly traded partnership is one whose interests are traded on an established securities market or are readily tradable on a secondary market or its substantial equivalent. Absent an applicable safe harbor, this is a fact-specific determination considering all circumstances. There are several safe harbors available, a number of which are commonly utilized by hedge funds. The "100 partner private placement safe harbor" requires that the interests in a partnership of 100 or fewer partners be exempt from registration under the Securities Act. Other relatively common safe harbors include those setting limits upon partnership interest liquidity and redemptions, and the "qualifying income" safe harbor for buying and selling commodities derivatives.

Protecting foreign investors from effectively-connected business income taxation is another major regulatory problem for many hedge funds. Generally, dividends received from a foreign corporation are treated as taxable income in the United States unless "less than 25 percent of the gross income from all sources of such foreign corporation for the 3-year period ending with the close of its taxable year preceding the declaration of such dividends (or for such part of such period as the corporation has been in existence) was effectively connected (or treated as effectively connected other than income described in § 884(d)(2)) with the conduct of a trade or business within the United States." ¹³⁶

The Foreign Investor Tax Act of 1966 creates a safe harbor from US taxation for foreign corporations. Specifically, it provides that in the case of a non-resident alien,

"trade or business within the United States" . . . does not include . . . [t]rading in stocks or securities for the taxpayer's own account, whether by the taxpayer or his employees or through a resident broker, commission agent, custodian, or other agent, and whether or not any such employee or agent has discretionary authority to make decisions in effecting the transactions. This clause shall not apply in the case of a dealer¹³⁷ in stocks or securities.¹³⁸

^{132.} I.R.C. 1.7704 (a) et seq. provides the requirements and exemptions discussed in this Part.

^{133. 6} C.F.R. § 1.7704-1(h)(1)(ii) (2017).

^{134. 6} C.F.R. § 1.7704-1(e)(1)(vii) (2017).

^{135. 6} C.F.R. § 1.7704-1(k)(1)(ii)(B) (2017).

^{136. 26} U.S.C. § 861(a)(2)(B) (2012).

^{137.} A "dealer" in securities or commodities (the language is identical) is one who: "regularly purchases securities from or sells securities to customers in the ordinary course of a trade or business or regularly offers to enter into, assume, offset, assign, or otherwise terminate positions in securities with customers in the ordinary course of a trade or business." Foreign Investor Tax Act of 1966, 26 U.S.C. § 475(c) (2012).

^{138. 26} U.S.C. § 864(b)(2)(A)(ii) (2012).

A similar exemption in the same section provides an equivalent safe harbor for commodities interests trading. However, the commodities exemption has the additional limitation that the exemption "shall apply only if the commodities are of a kind customarily dealt in on an organized commodity exchange and if the transaction is of a kind customarily consummated at such place."¹³⁹

In addition to the usual idea of commodities (e.g., gold, grains, etc.), the IRS has ruled that spot and forward contracts in precious metals and foreign currencies are commodities for purposes of the safe harbor provision under § 864(b)(2)(B) of the Code. The commodities transactions in question need not actually occur on an organized commodity exchange. Rather, the transactions need only be similar to transactions carried out on an organized exchange.

D. Commodities Futures Trading Commission Oversight

The CFTC, under the Commodities Exchange Act (the "CEA"), has jurisdiction¹⁴³ over all commodity swaps and other derivative contracts, as well as the investment advisers and pooled investment funds dealing in such commodity interests.¹⁴⁴ Trading of such products must occur on designated self-regulated exchanges, authorized and supervised by the CFTC. Investment managers and pooled investment vehicles trading on such exchanges must also register with the CFTC and abide by a set of requirements comparable to those funds operating under the Advisers Act and Investment Company Act.¹⁴⁵

^{139. 26} U.S.C. § 864(b)(2)(B)(iii) (2012); S. REP. No. 89-1707, at 17 (1966) ("It is not intended that as a result of [§ 864(b)(2)], a foreign investment company . . . is to be permitted to locate its general business activities in the United States and avoid taxation at the regular corporate rates on its income and gains effectively connected with its business in this country. However, a foreign investment company conducting its general business activities in a foreign country (i.e., having its principal office there) can conduct trading activities in the United States through an agent with discretionary authority, without this giving rise to its being considered as conducting a trade or business in the United States.").

^{140.} I.R.S. Priv. Ltr. Rul. 8527041 (Apr. 8, 1985).

^{141.} Id.

^{142.} Id.

^{143.} Futures Trading Practices Act of 1992, 7 U.S.C. §§ 6(a), 6(c)–(d) (2012) (authorizing CFTC to exempt swaps and OTC energy derivatives from regulation under the CEA) [hereinafter "FPTA"]; Commodity Futures Modernization Act of 2000, 7 U.S.C. 6g (2012) (exempting all OTC derivative instruments from regulation by the CFTC and SEC) [hereinafter "CFMA"].

^{144. 7} U.S.C. § 2 (2012).

^{145.} Private funds investing in commodity derivatives must register with the National Futures Association ("NFA") as a commodity pool operator ("CPO") or seek an exemption, which

Although many swaps and other derivative contracts were previously excluded from CFTC jurisdiction, the Dodd-Frank Act expanded its ambit to include commodity swaps and derivative contracts of any type. 146 Only so-called forward delivery contracts, involving cash settlement and physical delivery of the commodity, escape regulation under the CEA. 147

Little opportunity for arbitrage or other returns exists in pure commodity markets, such that derivatives, swaps, and leveraged products are essential to generating returns for a pooled investment fund trading in commodity interests. Thus, the expansion of CFTC authority under Dodd-Frank to include trading previously excluded swaps and other derivative contracts, combined with the end of the fifteen-client private adviser exemption, effectively brought all traditional hedge funds under regulation. ¹⁴⁸

E. Non-Applicability of Investment Activity Regulation to Crypto Funds

Like all hedge funds, crypto funds must comply with the Securities Act and Exchange Act with respect to the sale of their limited partnership interests. However, the interplay between the Investment Company Act, Advisers Act, and CEA with recent regulatory decisions has placed at least some cryptocurrency investment funds outside the regulatory framework which normally governs hedge funds.¹⁴⁹

The SEC has distinguished between cryptocurrency tokens qualifying as securities, such as the DAO Token, and those which are virtual currencies. ¹⁵⁰ The latter are for regulatory purposes treated as general commodities, and are not subject to the special rules regarding foreign national currencies. ¹⁵¹ Because of the high volatility and

are significantly more limited than those available under the Investment Company Act. Similarly, commodity trading advisers ("CTAs") must also register or seek an exemption.

^{146.} Dodd-Frank Wall Street Reform and Consumer Protection Act, *supra* note 111 (repealing the exemptions made under the FTPA and CFMA).

^{147.} Section 2(c)(2)(D) of the Commodity Exchange Act (CEA) provides the CFTC with direct oversight authority over "retail commodity transactions" – defined as agreements, contracts or transactions in any commodity that are entered into with, or offered to retail market participants on a leveraged or margined basis, or financed by the offeror, the counterparty or a person acting in concert with the offeror or counterparty on a similar basis. Such a transaction is subject to the CEA "as if" it were a commodity future. This statute contains an exception for contracts of sale that result in "actual delivery" within 28 days from the date of the transaction. See infra note 155.

^{148.} In 2002, the SEC first proposed an elimination of the 'private client exemption', which was adopted despite a split vote and met vociferous opposition from market participants. See Advisers Act Release No. 2333 (Dec. 2, 2004), 69 Fed. Reg. 72,054 (Dec. 10, 2004) (includes the dissent of the 2 Commissioners who opposed the new rules). These efforts were stymied in part by Goldstein v. SEC, 451 F.3d 873 (D.C. Cir. 2006), which held that the 2004 Rule eliminating the private client exemption exceeded the statutory authority of the SEC. Full regulation of hedge funds did not come until the passage of the Dodd-Frank Act.

^{149.} See supra Parts I(C)-(D) and II(D).

^{150.} See supra Parts I(C)-(D).

^{151.} See id.

other unusual traits of these "commodity tokens," trading or investing in these pure commodities—in contrast to derivative contracts thereon—can be highly lucrative, far more so than investing or trading in traditional commodities such as gold. As a result, "pure" commodity investment and trading is a viable strategy for hedge funds in the cryptocurrency sector.

By only trading in commodities, such funds do not "engage primarily, in the business of investing, reinvesting, or trading in securities." Their investment advisers are also not engaged in the "business of advising others... as to the value of securities or as to the advisability of investing, purchasing, or selling securities." They do not engage with securities markets at all. Because the Advisers Act and the Investment Company Act apply only to those investing or advising on investing in securities, funds investing or trading in commodity tokens do not qualify as investment companies. Advisers for such funds similarly do not qualify as investment advisers at all.

Nor do these crypto funds fall under the purview of the CFTC. Following the passage of Dodd-Frank, nearly all commodity swap or derivative transactions are regulated under the CEA.¹⁵⁴ Most, if not all, of the primary market trading in commodity tokens involves forward delivery contracts specifying physical delivery and cash settlement, removing the transactions—and the funds engaging in them—from the requirements of the CEA and its implementing regulations.¹⁵⁵ These funds are largely creations of common law concepts (such as fiduciary duties), rather than

^{152. 15} U.S.C. § 3(a)(1)(A).

^{153. 15} U.S.C. § 202(a)(11).

^{154.} Commodity Exchange Act, 7 U.S.C. § 1a(47) (2016).

^{155.} The CFTC exempts a commodity option transaction from certain swap requirements if the following conditions are satisfied: (i) the offeror of the option is either an "eligible contract participant" as defined in section 1a(18) of the Commodity Exchange Act ("CEA") or a commercial participant (a producer, processor, commercial user of, or merchant handling, the underlying physical commodity and entering into the option solely related to its business as such); (ii) the offeree of the option is a commercial participant; and (iii) the parties intend to physically settle the option so that, if exercised, the option would result in the sale of a nonfinancial commodity for immediate (i.e., spot) or deferred (i.e., forward) shipment or delivery. Commodity Options, 77 Fed. Reg. 25,320 (Apr. 27, 2012). However, the CFTC recently issued further guidance and a request for comment on the matter of the physical delivery settlement treatment of digital commodities. Retail Commodity Transactions Involving Virtual Currency, 82 Fed. Reg. 60335 (proposed Dec. 20, 2017). The CFTC noted that the "one-size-fits-all 28 day delivery period in CEA ... may not properly account for ... virtual currency transactions that would presumably take much less than 28 days to deliver to a purchaser in a typical spot transaction." Id. The CEA restricts the authority of the CFTC to shorten the 28-day delivery period. 7 U.S.C. § 2(c)(2)(D)(ii)(III)(aa). Nevertheless, the CFTC specifically inquired in the request for comment as to whether it would be appropriate to lobby Congress for authority to shorten the statutory delivery period. Retail Commodity Transactions Involving Virtual Currency, 82 Fed. Reg. 60335 (proposed Dec. 20, 2017). Such a change could have a significant impact on the nature of cryptocurrency markets and impinge upon the trading strategies available to crypto funds.

proscriptive regulation (or the need to claim exemptions from such regulation). The net result is a hedge fund structure that is much more lightly regulated and flexible than that of a 'traditional' hedge fund. This was an essential and perhaps prophetic move by regulators, and gives much-needed room for innovation in the sector. The unique challenges of crypto funds will require new and different solutions than the best practices embodied in current regulation.

III. The Crypto Fund: Administrative and Operational Issues

The potential rate of return and volatility of cryptocurrencies far exceed the rate of return and volatility of other commodities. As a result, a new wave of hedge funds that trade significantly or exclusively in these currencies is emerging. Examples include MetaStable Capital (~\$70 million in assets under management as of June 2017 and over 500% in returns between September 2014 and March 2017)¹⁵⁶ and Polychain Capital (~\$200 million in assets under management as of July 2017).

In addition to such potential returns, crypto funds possess a significant competitive advantage over traditional hedge funds, but also carry additional operational and regulatory risks. This Part discusses such advantages and risks in four key areas: (i) regulations governing the solicitation of investors, (ii) custodianship of client assets, (iii) tax treatment of cryptocurrency transactions, including foreign investor qualifications and in-kind redemptions, and (iv) disclosure obligations to investors.

A. Solicitation of Investors

Limiting the types of investors who can invest in a hedge fund limits the hedge fund's access to capital. The Investment Company Act draws a distinction among four types of investors, in order of the amount of assets held and/or income generated by those investors: qualified purchasers (very large investors), qualified clients (wealthy investors), accredited investors (mid-sized investors), and non-accredited investors (small investors). Hedge funds typically attain an exemption to the Investment Company Act under section 3(c)(1) or section 3(c)(7), which impose higher non-solicitation requirements than required for other entities pursuant to Regulation D. Those exemptions require limiting fundraising to either (i) 100 accredited investors or (ii) 2,000 qualified purchasers—and hedge funds typically opt to either comply with the latter to maximize their funding, and their ability to take performance fees, or

^{156.} Jen Wieczner, Sequoia and Andreessen Horowitz Are Secretly Backing This Cryptocurrency Hedge Fund, FORTUNE (July 26, 2017), http://fortune.com/2017/07/26/Bitcoincryptocurrency-hedge-fund-sequoia-andreessen-horowitz-metastable/.

^{157.} For a discussion of the requirements for qualifying as a qualified purchaser or accredited investor, *see supra* Part II(B) (qualified purchasers) and Part II(A) (accredited investors).

^{158.} See supra Part II(B).

restrict their fundraising under the former to qualified clients. ¹⁵⁹ Thus, the current regulatory regime applicable to security-trading hedge funds favors limiting capital to the largest investors. The intent is for the risk of speculative activity to be borne only by high-worth persons who can most easily shoulder the burden.

However, crypto funds do not need to obtain an exemption to the Investment Company Act.¹⁶⁰ By trading in non-securities, they are not subject to the Investment Company Act.¹⁶¹ As a result, they do not need to comply with the Investment Company Act's amplified non-solicitation provisions.

Crypto funds thus have far broader discretion in choosing and marketing to smaller investors, and in turn a significant competitive advantage to other hedge funds. Most notably, Rules 504 and 506 of Regulation D provides safe harbors where fundraising is limited to either (i) accredited investors or (ii) accredited investors and up to thirty-five sophisticated non-accredited investors so long as general solicitation or advertising is not used. 162 That provides crypto funds vis-à-vis other hedge funds exclusive access to smaller funding sources in non-accredited, sophisticated investors and easier access to mid-sized accredited investors. For example, a crypto fund could target itself solely to mid-sized or small investors. Fund managers who have difficulty raising large amounts of funds due to lack of contacts, expertise, or otherwise could also create "micro crypto funds" comprised primarily of funds from non-accredited, sophisticated investors. In addition, because such funds are not subject to the Advisers Act limitations on performance fees, 163 these fledgling managers can take advantage of the traditional profits allocation—the 20% normally only available for investment advisers with much wealthier investors who are qualified clients. As a result of such flexibility, crypto funds have significantly fewer legal barriers to entering the market and earning profits than other hedge funds.

B. Custodianship of Assets

By automating transactional validation and security, blockchains not only obviate the need for a third-party custodian as might be desirable for most other investments, but make first-party custodianship the only responsible form of safeguarding client assets. To understand how blockchain changes the ideal form of custodianship, the benefits and operational issues of traditional custodianship must be compared with those of blockchain.¹⁶⁴

^{159.} Id.

^{160.} See supra Part II(E) for a more extensive discussion of this exemption.

^{161.} Id.

^{162.} See supra Part II(A) for a more extensive discussion of Regulation D.

^{163.} See supra Part II(E).

^{164.} Paul Schott Stevens & Timothy W. Cameron, SEC Interpretive Letter, (January 18, 2018), https://www.sec.gov/divisions/investment/noaction/2018/cryptocurrency-011818.htm.

Investment advisers registered under the Advisers Act are required to use third-party "qualified custodians," such as banks, to hold client assets. ¹⁶⁵ The underlying assumption is that a specialized, independent third-party will keep client assets more secure than the investment adviser and/or investment company. ¹⁶⁶ Because most hedge fund advisers are not exempt from the requirements of the Advisers Act, most hedge funds must turn to such traditional third parties to manage client assets, in order to mitigate risk of theft, misappropriation, or accounting inconsistencies.

In the context of most transactions, third-party custodians, at a minimum, perform three valuable functions: validation, security, and trust. ¹⁶⁷ First, they validate transactions by controlling and transferring the funds in the account and releasing only on the authorization of the holder of the funds or his agent. ¹⁶⁸ Those transfers also create a clear record of transactions that can be easily audited to ensure accuracy and correct anomalies. ¹⁶⁹ Second, third-party custodians implement security measures to protect against both internal and external attacks, such as hacks or identity theft. ¹⁷⁰ Banks, for example, are subject to extensive regulation with respect to consumer privacy, consumer protection, and unfair or deceptive practices. ¹⁷¹ Applying such regulations to investment companies would significantly increase their burden, resulting in legal costs and significant compliance programs, nor would they have the extensive experience of regulated financial institutions such as banks. Third, by performing such validation and security functions, third-party custodians generate public trust and confidence in transactions effected by the custodian, which in turn facilitates efficient market activity. ¹⁷²

With respect to cryptocurrencies, however, all three of those functions are automatically performed by the public key encryption underlying the corresponding blockchains, obviating the need for a third-party custodian. In public key encryption, a user generates two keys using a cipher, or encryption algorithm: a public key that is

^{165.} See supra Part II(B).

^{166.} Id.

^{167.} See, e.g., 2009 CCOutreach Regional Seminars: Safeguarding Clients' Assets Under Management through Asset Verification and Reconciliation," SEC (April 2009), https://www.sec.gov/info/iaiccco/iaiccco-custody.pdf (providing recommendations to investment advisers for safeguarding client assets).

^{168.} See The Clearing House, The Custody Services of Banks 4 (2016), https://www.davispolk.com/files/20160728_tch_white_paper_the_custody_services_of_banks.pdf ("In providing custody services, custodians act solely on instructions from their clients and do not exercise any discretion over the use or reuse of client assets under custody, or use them for proprietary purposes. In this regard, the role of a custodian is different from that of an asset manager, which typically has discretion over investments made with, and the use and reuse of, client assets under its management.").

^{169.} See id.

^{170.} See id. at 24-26.

^{171.} See Major Consumer Protection Laws, THE FEDERAL RESERVE BOARD (last updated May 17, 2007), https://www.federalreserve.gov/pubs/Complaints/laws.htm.

^{172.} See The Clearing House, supra note 168, at 3-5

visible to those who have access to the blockchain (usually, the entire public) and a private key that is held only by the owner of the cryptocurrency. ¹⁷³ The public key is used for encryption, while the private key is used for decryption. ¹⁷⁴ When the user purchases or sells a cryptocurrency, the user must create a "digital signature" by processing his private key with the cipher. ¹⁷⁵ Holders of the public key can then check whether the digital signature is valid using the public key. ¹⁷⁶ If any data have been changed—for example, if an intruder attempts to change the address of the user so that purchases are sent to another address—the digital signature will be automatically invalidated, and the transaction cannot be added to the blockchain. ¹⁷⁷

In turn, public-key encryption validates, secures, and creates trust in cryptocurrency transactions. Since valid digital signatures cannot be forged by an intruder, and only valid signatures result in blocks on the blockchain, a block on the blockchain will always be valid insofar as it is authorized by the appropriate owner.¹⁷⁸ All members of the public also have a copy of the blockchain that they can themselves audit to verify the integrity of transactions.¹⁷⁹ Moreover, transactions are secure insofar as it is unfeasible for any transaction to be entered onto the blockchain without the authorization of the owner.¹⁸⁰ Only the owner can generate a valid digital signature, and any change in that signature's data by an intruder (for example, changing the owner's address) will immediately invalidate the signature.¹⁸¹ Those validation and security features, especially the fact that all members of the public can themselves copy and examine the blockchain, create trust in the efficient and accurate operation of the cryptocurrency markets.¹⁸²

^{173.} Chris Pacia, *Bitcoin Explained Like You're Five: Part 3 – Cryptography*, ESCAPE VELOCITY (Sept. 7, 2013), https://chrispacia.wordpress.com/2013/09/07/Bitcoin-cryptography-digital-signatures-explained/.

^{174.} Id.

^{175.} Id.

^{176.} Id.

^{177.} Id.

^{178.} Of course, this ignores instances in which a hacker has gained access to the holder's private key. However, this situation is no different than any other theft of account credentials or identity, and is equally a risk with electronic third-party custodianship. For example, if a hacker gains access to one's bank account username and password, the hacker can wire money out of such person's account.

^{179.} Sacha Huber, Blockchain and the Auditing Revolution – Real Time Audit within the Capabilities of Blockchain, FINTECH NEWS SWITZERLAND (June 24, 2016), http://fintechnews.ch/blockchain_bitcoin/blockchain-auditing-revolution-real-time-audit-within-the-capabilities-of-blockchain/3864/.

^{180.} See Pacia, supra note 173 ("Digital signatures are the key ingredient in Bitcoin that allows only the owner of a particular Bitcoin address, and no one else, to publish a transactions to the block chain transferring bitcoins from that address to another.").

^{181.} Id.

^{182.} This is otherwise known as "trustless consensus" because participants need not trust one another to validate and accept transactions. See Alexsandr Bulkin, Explaining Blockchain — How Proof of Work Enables Trustless Consensus, KEEPING STOCK (May 3, 2016),

More importantly, the primary security risk in cryptocurrency transactions is the private key. ¹⁸³ Transactions are solely effected by use of a user's private key, without need for any identifying information. ¹⁸⁴ Thus, whoever holds the private key is effectively treated as the owner of the currency. ¹⁸⁵ The risk is solely on the user to safeguard that key, lest he lose his ownership rights. ¹⁸⁶

Moreover, if the key is intercepted and cryptocurrencies stolen, there is in most instances no effective remedy due to two factors: immutability and pseudonymity. Blockchains are immutable, such that transactions are irreversible. 187188 Thus, once a cryptocurrency is stolen, it cannot be retrieved. 189 Ownership in most cryptocurrency blockchains is also pseudonymous, with the only piece of identifying information being the person's address for receiving the cryptocurrency. 190 Thus, the identities of both the rightful owner and of any offending intruder will not be generally known, so that an owner whose cryptocurrency has been stolen through hacking generally will not be able to recover his holdings from the wrongdoer. 191

The safeguarding of private keys, then, is the utmost security concern for fund managers, and any dissemination of those keys—including to third-party custodians—will only serve to increase the risk of theft. The more people have access to keys, and the more computers or servers on which those keys can be found, the more likely that those keys can be hacked or misappropriated. Unlike with traditional securities or funds, storage risk for cryptocurrencies lies solely on the fund managers and cannot be effectively delegated to others. The tradeoff for blockchains' automated

https://keepingstock.net/explaining-blockchain-how-proof-of-work-enables-trustless-consensus-2abed27f0845.

^{183.} See Chad Arroyo, Holding Cryptocurrency—The Real Risks, HACKERNOON (Oct. 7, 2017), https://hackernoon.com/holding-cryptocurrency-the-real-risks-3c54ca8d73b6 ("The biggest determinant of your cryptocurrency's security is completely dependent on how you choose to hold it.")

^{184.} See Jen Wieczner, Hacking Coinbase: The Great Bitcoin Bank Robbery, Fortune (Aug. 22, 2017), http://fortune.com/2017/08/22/bitcoin-coinbase-hack/.

^{185.} Id.

^{186.} Arroyo, supra note 183.

^{187.} Immutability means that a block in the chain can never be overridden or rewritten. To undo a transaction, one would have to affect a second transaction on the blockchain with the opposite effect. For example, if a holder sells 100 Bitcoin, that transaction can never be canceled; however, the holder can then repurchase 100 Bitcoin, which would place the holder in the same position, barring fluctuations in price or transaction costs.

^{188.} In limited instances, a community can "fork" a blockchain to reverse a transaction (i.e., create an identical blockchain without the offending transaction). However, that is an extreme remedy that is rare in practice. An example includes Ethereum's fork in July 2016 to reverse a \$50 million hack of the DAO Token.

^{189.} See Arroyo, supra note 173.

Eric Boughman, The Myth of Using Cryptocurrencies for Asset Protection, FORBES (Apr. 4, 2017, 9:00 AM), https://www.forbes.com/sites/forbeslegalcouncil/2017/04/04/the-mythof-using-cryptocurrencies-for-asset-protection/#d2c7705526d7.

^{191.} See Wieczner, supra note 184.

validation and security procedures, which largely lower transaction costs and human-related security risks, is greater storage risk.

Crypto fund managers must take care to implement robust security measures with respect to storage of private keys. That includes maintaining those keys internally, minimizing the number of people who have access to those keys, and minimizing the number of computers on which those keys are stored. These and related recommendations are discussed in Part IV.

C. Tax Treatment: Foreign Investor Exemptions and Redemptions In-Kind

A complete discussion of the tax treatment of cryptocurrencies is beyond the scope of this article. However, a brief summary is helpful in understanding the unique issues faced by crypto funds. "Convertible Virtual Currencies" (CVCs), including Bitcoin and at least some other cryptocurrencies, are treated as property under U.S. tax rules. 192 Thus, the tax treatment and timing of any taxable event regarding a CVC transaction is related to whether they are received as income or held for investment purposes. Following this guidance, cryptocurrencies such as Bitcoin received in payment for goods or services are taxable as such at the personal income tax rate. Conversely, the change in value of cryptocurrencies held for investment is treated as short- or long-term capital gains. The basis value of the asset—in this case each "token" or "coin"—is determined at the time of purchase. Tokens held for long periods will generally receive beneficial tax treatment, but be subject to substantial tax payments upon recognition of any gain. Generally, such gains may not be recognized until the investment asset—say, a Bitcoin—is exchanged into fiat currency or otherwise exchanged for a good or service. 193

^{192.} I.R.S. Notice 2014-21 (April 14, 2014).

^{193.} Although the analysis presented here seems the most likely interpretation, the full tax implications of cryptocurrency transactions are complex and uncertain, as the following examples should demonstrate.

Ex. 1: Suppose an investor, Jane, purchases a Bitcoin in year one for investment purposes. Jane's Bitcoin is purchased for a basis value of \$1, and held for ten years, at which point the market value of the Bitcoin is \$100. If Jane sells her Bitcoin for USD in year ten, she will owe (probably long-term) capital gains tax on the \$99 gain from the basis value.

Ex. 2: Now, suppose instead that in year ten, Jane exchanges her Bitcoin for a 1974 vintage Ford Mustang. Although she has secured a great deal on a car, she now has a liquidity problem. The purchase of the car may have been an excellent deal, but she has now (probably) recognized the gain in value of her Bitcoin. Assuming for simplicity that the gain is determined by reference to Bitcoin spot prices, rather than the value of the car, Jane once again owes taxes on her \$99 capital gain—but does not have the liquidity to pay those taxes unless she has additional available fiat currency, or liquidates more Bitcoins (incurring even more tax liability).

Ex. 3: It turns out Jane is quite a savvy cryptocurrency investor, and in year ten spots an opportunity in the Ether market during a temporary correction. Jane buys ten Ether with her Bitcoin, then worth \$100. She has now *probably* recognized the gain in value in her Bitcoin, and owes taxes. This seems the likely result because both Ether and Bitcoins are treated as virtual currencies, and are fully convertible to USD or other fiat currency.

This tax treatment has a number of effects upon crypto funds. Because the act of exchanging a cryptocurrency token for a readily valued asset, good, or service is likely a recognition of any gains, it encourages a last-in, first-out accounting methodology to minimize tax payments. 194 Such accounting ensures that long-held coins with a low relative tax basis are not taxed unless necessary. Perhaps more significantly, the possibility of avoiding a recognition event encourages the use of in-kind distributions and redemptions by the fund. Many hedge fund investment adviser agreements provide the investment managers with wide latitude to make distributions and redeem interests in kind as well as cash. Often, in-kind redemption options are intended as 'emergency' provisions, allowing the fund to protect the ready cash of the fund in the event of a large investor redemption and preserve redemption rights when the fund is invested in highly illiquid positions. Historically, such in-kind redemption

Ex. 4: As in Ex. 3, but instead of purchasing ten Ether for her Bitcoin, Jane purchases a single AltCoin, a new cryptocurrency. AltCoin is subject to transfer restrictions, may be a security, and is *not* readily exchangeable to fiat currencies. AltCoin doubles in value during the one-year restriction period, at the end of which Jane exchanges her AltCoin in an over-the-counter transaction for two Bitcoins, each still worth \$100. Now, we have a problem.

Normally, the equivalent transaction would involve selling a commodity (say, gold) for USD, triggering a recognition, and then exchanging those USD for an equity interest. Returning to gold from that equity interest naturally requires selling the interest for USD, and then purchasing gold with those funds. In Jane's case, her commodity to equity to commodity exchanges occur without ever returning to fiat currency. Because the return to fiat is the normal 'trigger point' for recognition or gains, it's not clear when or whether Jane recognized her gains, or potentially even what the basis value of the various assets in question is. One possibility is that gains on both the Bitcoin and the AltCoin were recognized at the time of each purchase/sale event. Another possibility is that the gains could remain unrecognized until the (now two) Bitcoins are finally exchanged for fiat currency. In that case, Jane may well have a different basis value for each of the two Bitcoins, with one 'retaining' the basis value of her original Bitcoin (\$1) and the other having a new, higher basis value based on the AltCoin transaction (\$100). That would mean that, even if exchanged at the same time, the gain recognized and taxes owed on each Bitcoin would be substantially different. Suffice to say, it will be some time before the precise tax treatment of cryptocurrencies is resolved.

Although its exact consequences are still being worked out, the tax reform bill passed at the beginning of 2018 may have clarified this issue. Specifically, it clarified that exchanging one cryptocurrency for another does not qualify for like-kind exchange treatment, meaning that in the above examples, exchanging a Bitcoin for an Altcoin would likely result in a taxable realization of gains. Nevertheless, last-in, first-out (LIFO) treatment, whereby the investor can choose to transact using its highest basis-value tokens, was preserved in the final version of the bill. This is of particular importance in crypto hedge funds, where investors making in-kind investments may have a very low tax basis for their tokens and wish to avoid transacting in them directly as much as possible.

194. At the time of this writing, there was a proposed bill in the U.S. House of Representatives to exempt payments for goods and services worth less than \$600 from reporting and tax requirements. While this would resolve the tax-at-transaction issue for small payments, it would likely be of little help to hedge funds in this sector. *See* H.R. 3708, 115th Cong. (2017).

strategies were viewed as negative to investors. ¹⁹⁵ In crypto funds, the inverse becomes true. In-kind distributions may minimize taxes, and generally allow individual investors to handle recognition according to their own needs and jurisdiction's tax rules.

1. 864(b)(2) Exemption

As discussed infra, the IRS specifically declined to address the section 864 exemptions in Notice 2014-21.¹⁹⁶ As a result, the IRS has left substantial uncertainty as to the applicability of the section 864(b) exemption to cryptocurrency and other virtual currency investment and trading activities. However, prior precedent and subsequent rulings by other regulatory bodies suggest that the section 864(b)(2)(B) commodities exemption is applicable to cryptocurrency investments.

IRS Letter Ruling 8850041 (September 19, 1988) ruled that "commodities of a kind customarily dealt in on an organized commodity exchange" include both exchange-traded and non-exchange-traded currencies. ¹⁹⁷ In that ruling, a taxpayer whose activities consisted solely of trading futures contracts, forward contracts, index futures contracts, option contracts, and spot contracts for its own account entered into transactions with respect to two categories of foreign currency. ¹⁹⁸ The first category consisted of foreign currencies traded on U.S. and foreign commodity exchanges ("regulated currencies"). The second consisted of foreign currencies that were not traded on an organized commodity exchange, but rather were traded on the interbank market ("unregulated currencies"). ¹⁹⁹ The Ruling concluded that both regulated and unregulated currencies were "of a kind customarily dealt in on an organized exchange", and qualified for the safe harbor. ²⁰⁰

It is uncertain whether commodity tokens are a "commodity of a kind customarily dealt in on an organized commodity exchange and is the transaction of a kind customarily consummated at such place." However, helpful indicia on the matter has emerged not from the IRS, but another agency altogether.

On July 6, 2017, the CFTC issued a registration order to LedgerX LLC, granting it status with the CFTC as a Swap Execution Facility (SEF).²⁰² SEFs are platforms that

^{195.} E.g., Susan Antilla, Wall Street In the Face of a Fund Panic, N.Y. TIMES (June 27, 2003), http://www.nytimes.com/1993/06/27/business/wall-street-in-the-face-of-a-fund-panic.html ("in-kind redemptions are rarely made").

^{196.} I.R.S. Notice 2014-21 (Apr. 14, 2014).

^{197.} Nick D. Hansen, Charles J. Bay & David N. Bowen, Foreign Activities of U.S. Taxpayers, 44 TAX LAW. 1287, 1288-300 (1991).

^{198.} Id.

^{199.} Id.

^{200.} I.R.S. Priv. Ltr. Rul. 8850041 (Sept. 19, 1988).

^{201. 26} U.S.C. § 864(b)(2)(B)(iii).

Press Release, CFTC, CFTC Grants SEF Registration to Ledger X LLC (July 6, 2017), http://www.cftc.gov/PressRoom/PressReleases/pr7584-17.

operate under the CFTC's regulatory oversight for trading of swaps. LedgerX is an institutional trading and clearing platform, which trades and clears options in Bitcoin. It is the first federally regulated Bitcoin options exchange and clearing house which will list and clear fully collateralized, physically-settled Bitcoin options for institutional markets. In other words, the CFTC has formally endorsed virtual currency cryptocurrencies as commodities and authorized the creation of "regulated exchanges" for commodity token transactions.

IRS Notice 2014-21 was issued before the CFTC or SEC had issued much guidance on any major aspects of cryptocurrency markets.²⁰³ It is possible that the IRS wished to wait and defer to its sister agencies as to their regulatory classification of this new asset class. Based on this recent treatment by the CFTC and the IRS private letter rulings regarding section 864(b)(2)(B)(iii), it is also possible that the IRS may include cryptocurrency investments under the safe harbor provision of section 864(b)(2)(B) as "a transaction of a kind customarily consummated" in an organized exchange.

D. Disclosure of Cryptocurrency Risks, Investment Strategy, and Regulatory Uncertainty to Limited Partners

Hedge funds have disclosure obligations under securities laws, as well as a duty of disclosure under state partnership statutes.²⁰⁴ Both disclosure obligations are extensive and generally require disclosure of information that is relevant to investors.²⁰⁵ Given the intense regulatory uncertainty and market risks associated with cryptocurrencies, these disclosure obligations require that crypto funds make greater disclosures vis-à-vis other hedge funds, including by disclosing regulatory risks, investment and operational risks associated with cryptocurrencies in general, and investment and operational risks associated with the specific cryptocurrencies that the fund intends to trade.

Hedge fund managers face two disclosure obligations. First, as discussed in Part I(A), the anti-fraud provisions of the Securities Act and Exchange Act require disclosure of material information with respect to the initial sale of limited partnership interests to potential investors. ²⁰⁶ In this context, "material information" includes all information for which there is a "substantial likelihood that a reasonable investor would attach importance in determining whether to purchase the security registered." ²⁰⁷ Second, partners in a partnership have a duty of disclosure under state statutes. ²⁰⁸ Hedge funds are typically structured as limited partnerships, with the fund managers acting as the general partners and investors acting as limited partners, and

^{203.} For example, the earliest SEC action relating to cryptocurrencies at all was in July 2013. See SEC v. Shavers, No. 4:13-CV-416, 2013 WL 4028182 (E.D. Tex. Aug. 6, 2013).

^{204.} See discussion infra Part III(D).

^{205.} See id.

^{206.} See Supra Part II(A).

^{207. 17} C.F.R. § 230.405.

^{208.} See Unif. P'ship Act §§ 19, 403 (Nat'l Conference of Comm'rs on Unif. State Law 1997).

thus they are subject to state partnership statutes.²⁰⁹ Notably, there are only two primary partnership statutes in effect in the United States: the Uniform Partnership Act of 1914 (the "UPA"), and the Revised Uniform Partnership Act (1997) (the "RUPA"). The RUPA has been adopted, in whole or in part, in thirty-nine states, Washington, D.C., and the U.S. Virgin Islands,²¹⁰ while the UPA is in effect in another ten states.²¹¹ Both model rules impose a duty of disclosure²¹² on partners. The RUPA requires that limited partners (i) receive access to partnership books and records and (ii) be provided all information related to partnership business or the partner that is either requested by the limited partner or required for such partner's duties.²¹³ The

^{209.} Hedge funds may also be structured as LLCs. There is less uniformity in state LLC statutes; however, to the extent that state LLC statutes provide explicitly for disclosure obligations, or provide for fiduciary duties of care and loyalty under which a duty of disclosure could be implied, the analysis in this Part will equally apply.

^{210.} The states which have adopted the RUPA include Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, District of Columbia, Florida, Hawaii, Idaho, Illinois, Iowa, Kansas, Kentucky, Maine, Maryland, Minnesota, Mississisppi, Montana, Nebraska, Nevada, New Jersey, New Mexico, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, South Dakota, Tennessee, Texas, U.S. Virgin Islands, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, and Wyoming. Partnership Act (1997) (Last Amended 2013), UNIFORM LAW COMMISSION, http://uniformlaws.org/Act.aspx?title=Partnership%20Act%20%281997%29%20%28Last %20Amended%202013%29 (last visisted Jan 28, 2018).

^{211.} Only Louisiana has adopted neither statute, although many provisions of the Louisiana partnership statute echo provisions of the UPA and RUPA. *Id*.

^{212.} This duty should not be confused with the fiduciary duties of care and loyalty. The duty of disclosure is a statutory, not fiduciary, duty.

^{213.} Unif. P'ship Act § 403 (Nat'l Conference of Comm'rs on Unif. State Law 1997) ("(a) A partnership shall keep its books and records, if any, at its chief executive office. (b) A partnership shall provide partners and their agents and attorneys access to its books and records. It shall provide former partners and their agents and attorneys access to books and records pertaining to the period during which they were partners. The right of access provides the opportunity to inspect and copy books and records during ordinary business hours. A partnership may impose a reasonable charge, covering the costs of labor and material, for copies of documents furnished. (c) Each partner and the partnership shall furnish to a partner, and to the legal representative of a deceased partner or partner under legal disability: (1) without demand, any information concerning the partnership's business and affairs reasonably required for the proper exercise of the partner's rights and duties under the partnership agreement or this [Act]; and 64 (2) on demand, any other information concerning the partnership's business and affairs, except to the extent the demand or the information demanded is unreasonable or otherwise improper under the circumstances.").

UPA provides a similar, but narrower, right to information that includes access to books and all requested information related to partnership business.²¹⁴ ²¹⁵

Both securities and partnership disclosure obligations are broad, limited primarily to all relevant information. Just as disclosures under securities laws limit disclosure to information relevant to the investor's role as an investor²¹⁶, disclosures under the UPA and RUPA are limited to information relevant to the partnership or to the partner's role as a partner.²¹⁷ Moreover, because limited partners in hedge funds take on a passive role, with almost no managerial rights, their role as a partner is largely synonymous with their role as an investor. Thus, both obligations significantly overlap.

The breadth of these disclosure obligations, together with the amount or risk and novelty in the cryptocurrency field, likely requires crypto fund managers to make significantly greater disclosures to potential investors than would be required with respect to a hedge fund trading in traditional securities. There are three primary areas where such risks are greater than typical: (1) regulatory uncertainty concerning all cryptocurrencies, (2) operational, technical, and market risks common to all cryptocurrencies, and (3) specific risks associated with individual cryptocurrencies.

First, the regulatory landscape with cryptocurrencies is significantly changing, both domestically and internationally, and crypto fund managers should make significant disclosures with respect to the likelihood of such changes. The SEC's first decision regulating an ICO was made on July 20, 2017. Since then, it has shown an inclination to prosecute more ICOs and has gone so far as to establish a new Cyber Unit specifically to tackle "misconduct involving distributed ledger technology and initial coin offerings," among other cyber-related crimes.²¹⁸ This division has since

^{214.} *Id.* § 19 ("The partnership books shall be kept, subject to any agreement between the partners, at the principal place of business of the partnership, and every partner shall at all times have access to and may inspect and copy any of them." UPA § 20 provides, "Partners shall render on demand true and full information of all things affecting the partnership to any partner or the legal representative of any deceased partner or partner under legal disability.").

^{215.} Note that a similar obligation to disclose could be inferred from the fiduciary duties of care and loyalty. For example, in the corporate context, Delaware has held that the "duty of disclosure is not an independent duty, but derives from the duties of care and loyalty." Pfeffer v. Redstone, 965 A.2d 676, 684 (Del. 2009) (internal quotation marks omitted).

^{216.} See 17 C.F.R. § 230.405 (2017); supra Part II(A).

^{217.} See Unif. P'ship Act (1997), supra note 208.

^{218.} Press Release, SEC, SEC Emergency Action Halts ICO Scam (Dec. 4, 2017), https://www.sec.gov/news/press-release/2017-219 ("The [Cyber Unit] was created in September to focus the Enforcement Division's cyber-related expertise on misconduct involving distributed ledger technology and initial coin offerings, the spread of false information through electronic and social media, hacking and threats to trading platforms."). On December 4, 2017, the Cyber Unit filed its first charges, putting a halt to the PlexCoin ICO for its creator's fraudulent representations that investors would receive "a 13-fold profit in less than a month." *Id.* In September 2017, the SEC also prosecuted the creator and companies behind two ICOs for selling fraudulent tokens that did not exist. Press Release, SEC, SEC Exposes Two Initial Coin Offerings Purportedly Backed by Real

opened prosecutions against recidivist securities fraudsters operating "fraudulent and unregistered offer and sale of securities called 'PlexCoin'"²¹⁹, suspended trading of a publicly-listed stock with blockchain connections²²⁰, and ordered a cease-and-desist of an ongoing ICO,²²¹ amongst other activities.

The foreign regulatory landscape also remains in dramatic flux. On September 4, 2017, China banned ICOs as an unlawful fundraising tool and began investigations into sixty ICO platforms.²²² South Korea followed suit and banned ICOs on September 28, 2017.²²³ Regulation will likely increase significantly over the next few months and years. While crypto funds are currently largely unregulated, their trading activity may be regulated significantly in the future. Moreover, individual partners must be made aware of the risk of tax complications and investment risks, such as potential loss of investment, if the treatment of some or all cryptocurrencies is changed. Such investors should be notified of their need for their own individual counsels and accountants, particularly if they are residents of foreign jurisdictions or do business in multiple jurisdictions.

Second, cryptocurrencies as a category of assets pose investment and operational risks that should be disclosed. Few, if any, assets fluctuate as wildly as cryptocurrencies do. For instance, on June 21, 2017, the price of Ether momentarily crashed from approximately \$319 to 10 cents as a result of a multimillion dollar sell order on the GDAX exchange, which in turn triggered 800 stop orders and margin calls as the price of Ether plummeted.²²⁴ Millions in wealth would have been lost to investors had GDAX not agreed to credit affected customers out of its own cash reserves.²²⁵ Potential investors in crypto funds should be made aware of such instances of intense volatility and the risks of transacting with young, inexperienced exchanges.

Moreover, cryptocurrency assets operate on unregulated markets with little to no consumer protection. For example, the DAO Tokens that the SEC investigated were hacked during their ICO, leading to a potential loss of \$50 million, or one third of the

Estate and Diamonds (Sept. 29, 2017), https://www.sec.gov/news/press-release/2017-185-0.

^{219.} SEC v. PlexCorps, No. 1:17-cv-07007-DLI-RML (E.D.N.Y. filed Dec. 1, 2017).

^{220.} The Crypto Company, Exchange Act Release No. 34-82347 (Dec. 18, 2017).

^{221.} In the Matter of Munchee Inc., Exchange Act Release No. 10445 (Dec. 11, 2017).

^{222.} See Sahely Roy Choudhury, China bans companies from raising money through ICOs, asks local regulators to inspect 60 major platforms, CNBC (Sept. 5, 2017), https://www.cnbc.com/2017/09/04/chinese-icos-china-bans-fundraising-through-initial-coin-offerings-report-says.html.

Cynthia Kim, South Korea bans raising money through initial coin offerings, REUTERS (Sept. 28, 2017) https://www.reuters.com/article/us-southkorea-bitcoin/south-korea-bans-raising-money-through-initial-coin-offerings-idUSKCN1C408N.

^{224.} Adam White, ETH-USD Trading Update, GDAX (June 21, 2017), https://blog.gdax.com/eth-usd-trading-update-5d8142b5bdc1.

^{225.} Adam White, ETH-USD Trading Update #2, GDAX (June 23, 2017), https://blog.gdax.com/eth-usd-trading-update-2-216a3b946ef6.

ICO amount.²²⁶ To resolve that hack, the core developers of Ethereum, the blockchain underlying the DAO Tokens, agreed to effect a "fork," creating an identical blockchain that omitted the offending transaction.²²⁷ Forking, however, is a rare, extreme, and controversial remedy²²⁸ that is not likely to be implemented to resolve most cybersecurity issues, nor could investors have forced the developers to perform such change. It was a unilateral decision not subject to the oversight of law enforcement or regulators. Such lack of effective consumer protections and judicial or legislative remedies, as well as the risk of hacking or other cybersecurity issues, can significantly impact an investor's return and so should be clearly disclosed to potential investors.

Third, each cryptocurrency poses its own regulatory, market, and operational risks, such that crypto funds should disclose their trading strategy, all traded cryptocurrencies that will be traded, and those cryptocurrencies' unique risks. Cryptocurrencies have multiple functions, including decentralized payments, smart contracts, decentralized applications, and fundraising²²⁹—and each may be regulated differently. Since certain cryptocurrencies are securities, the trading of which would require crypto funds to comply with securities obligations like more stringent non-solicitation provisions under the Investment Company Act, each cryptocurrency should be separately assessed to determine whether it is a security, and investors should be warned to make their own assessments.

Moreover, each cryptocurrency employs different technology. For example, the coin Monero is used for decentralized payments, but, unlike Bitcoin, it is untraceable.²³⁰ While the Monero blockchain is publicly viewable, all transaction amounts, sending addresses, and receiving addresses are encrypted.²³¹ Thus, there is no way to link any transaction on the blockchain to a particular person. Not surprisingly, it is very popular for money laundering.²³² Cryptocurrencies like Monero, which employ unique technology and/or technology that can be used for illicit

^{226.} Nathaniel Popper, *A Hacking of More Than \$50 Million Dashes Hopes in the World of Virtual Currency*, The New York Times (June 17, 2016), https://www.nytimes.com/2016/06/18/business/dealbook/hacker-may-have-removed-more-than-50-million-from-experimental-cybercurrency-project.html.

See Joon Ian Wong & Ian Kar, Everything You Need to Know About the Ethereum 'Hard Fork,'
QUARTZ (July 18, 2016), https://qz.com/730004/everything-you-need-to-know-about-theethereum-hard-fork/.

^{228.} The decision was highly controversial because it undermined the notion of immutability, since the community forcibly reversed a transaction on the blockchain. As a result, many holders of Ethereum stayed on the original blockchain, which is now known as Ethereum Classic. See David Z. Morris, The Bizarre Fallout of Ethereum's Epic Fail, FORTUNE (Sept. 4, 2016), http://fortune.com/2016/09/04/ethereum-fall-out/.

^{229.} See supra Part I(A).

^{230.} Monero, MONERO, https://getmonero.org/ (last visited Jan. 28, 2018).

^{231.} What is Monero (XMR)?, MONERO, https://getmonero.org/get-started/what-is-monero/ (last visited Jan. 28, 2018) ("Every Monero transaction, by default, obfuscates sending and receiving addresses as well as transacted amounts.").

^{232.} Andy Greenberg, *Monero*, the Drug Dealer's Cryptocurrency of Choice, is on Fire, WIRED (Jan. 25, 2017), https://www.wired.com/2017/01/monero-drug-dealers-cryptocurrency-choice-fire/.

purposes, may be more susceptible to regulation. At a minimum, then, crypto fund managers should make disclosures explaining such unique technologies and the risks associated with them.

IV. Best Practices for Crypto Funds

As discussed throughout this article, crypto funds face significant risks, including regulatory uncertainty. This Part brings together the regulatory and technological discussions throughout this article to distill best practices for crypto funds. The goal is to briefly address the most salient, pressing problems and opportunities that crypto funds will confront.

Note that the recommendations in this Part are not exhaustive, nor are they a substitute for the qualified assistance of legal and accounting advisers with expertise in this area of the law. The formation and operation of crypto funds poses other significant issues that are beyond the scope of this article. However, this Part provides several practices of which every crypto fund should take notice.

A. Comply with the Simpler Non-Solicitation Rules of Regulation D

When raising a crypto fund, the promoters must comply with securities laws with respect to their sale of limited partnership interests to potential investors. That includes the non-solicitation rules of Regulation, which in most instances will require limiting fundraising to accredited investors and/or up to thirty-five unaccredited investors (and no more than 2,000 total investors).²³³ However, that is a significantly lower bar than faced by security-trading hedge funds, which (1) cannot raise from unaccredited investors, (2) are limited to 100 accredited investors, and (3) otherwise can only raise from qualified purchasers.

Thus, crypto funds have significantly more, but not unlimited, discretion in choosing their investors. If they desire, they can take advantage of such rules to tailor their solicitations to smaller investors than in a traditional hedge fund.

B. Trade Established, Pure Currencies

The SEC has drawn a bright line: Each cryptocurrency is either a virtual currency or a security.²³⁴ It cannot be both, and only the latter is regulated under federal securities laws.²³⁵ However, the line between the two is far murkier than the SEC's guidance would suggest, as all cryptocurrencies, to some extent, have features of currencies as well as securities. The SEC's application of the Howie test is also worded

^{233.} See supra Parts II(A) and III(A) for a more extensive discussion of this requirement.

^{234.} See supra Parts I(C)-(D).

^{235.} See id.

so broadly that the SEC could, if it were so inclined, treat any cryptocurrency as a security.²³⁶

Thus, crypto funds can protect themselves against such a risk by solely focusing their trading activities on those cryptocurrencies which have received the direct blessing of the SEC or which closely resemble such currencies. Currently, the SEC has referenced the following cryptocurrencies as virtual currencies: Bitcoin and Ether.²³⁷ By extension, cryptocurrencies which resemble Bitcoin or Ether will likely also qualify as virtual currencies. For example, of the top 12 cryptocurrencies by market capitalization,²³⁸ at least four—Litecoin, Dash, Monero, and Bitcoin Cash—act primarily as a peer-to-peer unit of exchange akin to Bitcoin.²³⁹

Unsurprisingly, the cryptocurrencies currently approved as virtual currencies also happen to be the two currencies with the largest market capitalization²⁴⁰ and trading volume.²⁴¹ While not directly relevant to the Howie test, the DAO Report emphasizes the security risks in the DAO Tokens, including an attack by hackers that nearly stole roughly one third of the tokens.²⁴² Thus, security concerns, particularly the risk of defrauding investors, may be relevant to the SEC's enforcement policy.

The safest option, then, is for funds to concentrate their trading activity on currencies with high liquidity, a history of continuous trading activity, and an established record for security.

Moreover, where a crypto fund does wish to trade in unconventional or less established cryptocurrencies, it may be preferable to create separate funds for their securities and non-securities activities.

^{236.} See id. Nevertheless, the CFTC has explicitly taken the position that "[t]here is no inconsistency between the SEC's analysis and the CFTC's determination that virtual currencies are commodities and that virtual tokens may be commodities or derivatives contracts depending on the particular facts and circumstances." A Virtual Primer on Virtual Currencies, CFTC (Oct. 17, 2017), http://www.cftc.gov/idc/groups/public/documents/file/labcftc_primercurrencies100417. pdf.

^{237.} See The DAO Report, supra note 10, at 2–3, 11.

^{238.} As of January 6, 2018, the top twelve cryptocurrencies by market capitalization (in descending order) were Bitcoin, Ripple, Ether/Ethereum, Bitcoin Cash, Cardano, Litecoin, NEM, Stellar, TRON, IOTA, Dash, and Monero. *Cryptocurrency Market Capitalizations*, COINMARKETCAP.COM, https://coinmarketcap.com/ (last visited Jan. 6, 2018).

^{239.} See The Cryptocurrency for Payments, LITECOIN, https://litecoin.org/ (last visited Jan. 28, 2018); Dash Is Digital Cash, DASH, https://www.dash.org/ (last visited Jan. 28, 2018); What is Monero (XMR)?, supra note 231; BitcoinCash: Peer-to-Peer Electronic Cash, BITCOINCASH, https://www.bitcoincash.org/ (last visited Jan. 28, 2018.

^{240.} As of January 6, 2018, Bitcoin's market capitalization was \$293,094,614,674, and Ethereum's was \$102,301,022,625. Cryptocurrency Market Capitalizations, supra note 238.

^{241.} As of January 7, 2018, Bitcoin's 24-hour trading volume amounted to over \$17 billion of traded units, while Ethereum's amounted to almost \$5 billion. *Historical Snapshot - January 07, 2018*, CoinMarketCap.com, https://coinmarketcap.com/historical/20180107/ (last visited Jan. 7, 2018).

^{242.} See The DAO Report, supra note 10, at 9–10.

Finally, given the prevalence of cryptocurrencies and interest in cryptocurrency trading, the SEC will likely issue further guidance within the next several months, either through enforcement actions or no-action relief. Cryptocurrency funds should, in turn, continually re-evaluate the virtual currencies they can trade.

C. Safeguard Private Keys and Limit Trading Authorization

Cryptocurrency blockchains use cryptography to handle the validation and security functions that would normally be performed by third party-auditors and/or custodians.²⁴³ However, the tradeoff for such cryptography is use of private keys that places the onus of safeguarding the property on the holder of the key.²⁴⁴ Any transmission or disclosure of that key—whether internally or to a third-party custodian—significantly increases the risk of theft.²⁴⁵

The following best practices should thus be implemented to limit exposure of private keys:

- Never transmit keys electronically (by email, text messaging, or file upload): Almost all commercially available methods of electronic transmission, including emails on secure and/or private servers, can be hacked. Moreover, administrative, IT, and other employees may have access to email accounts or other electronic systems. In turn, there is significant risk of employees stealing such information, particularly because thefts of cryptocurrencies are generally irreversible and untraceable. To the extent possible, keys should be left on the computer that effected the corresponding transaction.
- Limit trading authorization: Trading authorization—and with it, access to private keys or electronic wallets—should be limited only to those who need it. For example, traders should not authorize junior-level or administrative employees to enter trades on their behalf.
- 3. Manage keys with a secure electronic wallet: It may be difficult to securely store hundreds or thousands of private keys, as some crypto funds will have. An electronic wallet allows those keys to be imported into one location for easy access. ²⁴⁶ However, extreme care should be taken in choosing a secure wallet. Most notably, wallets should provide for "sweeping." In such a wallet, the

^{243.} Supra Part III(B).

^{244.} See id.

^{245.} See id.

^{246.} See Cryptocurrency Wallet Guide: A Step-By-Step Tutorial, BLOCKGEEKS, https://blockgeeks.com/guides/cryptocurrency-wallet-guide/ (last visited Jan. 28, 2018).

importing of private keys "sweeps," or generates a new transaction on the applicable blockchains and, in turn, creates new private keys that are then available only inside of that wallet.²⁴⁷ In contrast, wallets that import without sweeping can be hacked if they import an insecure private key.²⁴⁸

D. Mitigate and Devolve Tax Risk

The tax treatment of cryptocurrency transactions is complex, uncertain, and fast-changing. Unlike in a traditional hedge fund, where conversion to fiat currency is generally the best practice in handling distributions and redemptions, crypto funds are best served by preferring in-kind distributions and redemptions. This potentially avoids unwanted tax recognition events and permits investors to exit their investments in the way best suited to their local jurisdiction and personal requirements. At the same time, it protects the remaining investors by preventing the kind of liquidity crunch that can occur when a large investor withdraws. Finally, in-kind redemptions reduce the need for a large fiat currency cushion to handle the above exigencies and therefore serves investors better by maximizing the share of investor capital deployed for profit generation.

Crypto funds should also be sure to work with their accountants to maintain LIFO treatment and minimize tax burden to their investors. This is of particular concern in crypto funds as compared to other hedge funds, because of the unusually low tax basis many of the digital assets their investor may contribute for subscriptions compared to traditional instruments.

E. Mitigate Regulatory Risks

Currently, there are over 1,300 cryptocurrencies,²⁴⁹ and the number is rising exponentially. The SEC has only taken preliminary steps in regulation, but has yet to issue any opinion on the vast majority of cryptocurrencies and likely would lack the resources necessary to analyze and issue an opinion with respect to each new cryptocurrency. This combination of exponential growth and regulatory delay creates substantial regulatory uncertainty and risk, particularly for funds that opt to trade unconventional or novel tokens.

In order to mitigate that risk, crypto funds and their attorneys can take several steps, including (among others) the following:

1. Disclosing a clear trading strategy to LPs, including the cryptocurrencies that the fund will trade: Funds that can change

^{247.} *Private Keys: Import vs. Sweep*, 99 BITCOINS, https://99bitcoins.com/know-more-private-key-import-vs-sweep-difference/ (last visited Jan. 28, 2018).

^{248.} See id.

^{249.} Cryptocurrency Market Capitalizations, supra note 190.

- their investment strategy or arbitrarily choose the cryptocurrencies in which they invest may face stricter scrutiny, both from unhappy LPs and regulatory agencies. Since each such cryptocurrency carries its own unique risks, funds should disclose risks associated with each traded cryptocurrency.
- 2. Disclosing the risk of regulatory changes to LPs and include a "catch-all" exception for regulatory changes: Funds should disclose risks associated with the ambiguity in current regulation of cryptocurrencies and the likelihood of extraordinary regulatory changes over the next few years. Just as importantly, funds can include a "catch-all" or "back-door" exception that would permit all necessary actions by the fund to comply with current and future regulations or regulatory guidance.
- Proactively seeking no-action relief: When in doubt, the safest
 path is to request no-action relief for the activities of the fund,
 particularly with respect to the trading of unconventional or novel
 cryptocurrencies on which the SEC has provided no opinion.
- 4. Knowing your customers: Work closely with other service providers on due diligence and compliance. Although this article has not gone into the issue at length, money laundering and similar issues are rife in the cryptocurrency world, and most administrators, banks, and other service providers are new to the issues involved in cryptocurrencies. Funds and their providers should take advantage of the immutable nature of blockchain records to conduct additional diligence and verification on their investors. Particularly where the fund is taking investments and making distributions in Bitcoin or other virtual currencies, attorneys should work closely with service providers to incorporate cryptocurrency-specific diligence alongside (but not in place of) more traditional methods.
- 5. Establishing internal procedures and controls to protect the crypto fund's unregulated status: Internal procedures should be established to ensure that cryptocurrency trades satisfy the 28-day physical delivery exemption from CFTC jurisdiction. Moreover, the fund should conduct internal reviews and use counsel to assess the security or commodity status of a new cryptocurrency prior to investment.

Note that these steps are not an exhaustive list and any such disclosures should be made in consultation with experienced counsel.

V. Conclusion

This article has provided a brief overview of a new financial institution, the crypto fund. By trading exclusively in commodity tokens, the crypto fund evades most hedge fund-focused regulation. They thus have a significant competitive advantage vis-à-vis other hedge funds, insofar as they can more freely solicit funding from small to mid-sized investors, set compensation more flexibly, and receive preferential tax treatment for conversions of cryptocurrencies. However, crypto funds also face additional regulatory and technological risks, which require them to make additional disclosures and safeguard client property internally.

The crypto fund represents a small niche in which funds can innovate, free of excessive regulation. On first glance, the crypto fund may seem an accidental oversight by regulators, who did not expect a commodity to be created that is as speculative as cryptocurrencies. However, the timing and consistency of regulatory decisions from the SEC, CFTC, and IRS suggest that these agencies are potentially communicating with one another and attempting to build a coherent framework for cryptocurrencies, slowly but incrementally. The crypto fund, then, may be less a historical accident, and more an experiment to let the market operate, judge the results, and reevaluate regulation.

Nevertheless, the current public fascination and increasing regulatory scrutiny of cryptocurrencies nearly guarantees that further regulations will not be long to follow. Future regulation may treat the crypto fund like any other hedge fund, or even increase regulation beyond that. As this article has shown, however, cryptocurrencies are not one-size-fits-all, and neither should cryptocurrency trading be typecast. Regulators should take account of the unique technology underlying various types of cryptocurrencies and make a regulatory regime that acknowledges and regulates those differences according to the risks they pose.