SECONDARY TRADING CRYPTO FRAUD AND THE PROPRIETY OF SECURITIES CLASS ACTIONS

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ABSTRACT

Traders participating in secondary crypto asset markets risk significant loss. Some trading loss will arise simply because of market dynamics, including inherently volatile crypto asset prices. But secondary crypto asset traders also risk considerable monetary injury resulting from fraudulent statements or acts by crypto asset sponsors or others occurring in connection with their secondary transactions. If subjected to such fraud, the affected crypto asset traders may turn to a Rule 10b-5 class action for redress.

Crypto asset traders’ reliance on Rule 10b-5 class actions implicates important doctrinal and public policy questions. This Article analyzes two of these questions—one doctrinal and another in the domain of public policy. In its doctrinal analysis, the Article evaluates issues pertinent to the threshold definitional question of when an exchange-traded crypto asset will constitute an investment contract and therefore fall within the definitional perimeter of a security. The Article proposes a slight generalization of the horizontal commonality test that renders the test suitable for use in both primary transaction and secondary transaction cases, and also addresses aspects of Howey’s efforts of others prong that are relevant to Howey’s application in the crypto asset context.

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With respect to the public policy question, the Article evaluates whether the public policy justification for crypto asset-based Rule 10b-5 class actions is significantly weaker than for stock-based Rule 10b-5 class actions. The Article’s public policy determinations break in different directions and in some respects are to be considered preliminary, but the analysis does not justify limiting the availability of crypto asset-based Rule 10b-5 class actions any more than stock-based Rule 10b-5 class actions.

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INTRODUCTION

Asset digitization through distributed ledger technology has transformed trading markets. Traders in the United States now routinely trade hundreds of crypto assets on various crypto exchanges, and the pool of tradable assets is growing.\(^1\) Through these secondary transactions, crypto asset traders have seen both financial gain and financial loss, which at times have been substantial.

Recent events have amplified the prospect of secondary crypto asset traders incurring significant monetary loss through incidents of fraud. Misconduct was commonplace in the 2017 to 2019 time period, when a high frequency of crypto asset initial offerings were riddled with fraud, causing investors to lose substantial amounts.\(^2\) Now, traders transacting in secondary crypto asset markets risk being subject to fraud by crypto asset sponsors or others occurring in connection with their secondary transactions, which the Article refers to as secondary trading crypto asset fraud.\(^3\) The injurious effects of secondary trading crypto asset fraud extend beyond the defrauded traders. Such fraud, in combination with other types of misconduct, has the potential to fully undermine the legitimacy of the entire crypto asset

\(^1\) By crypto assets, this Article means any digital asset that relies on a distributed ledger. The Article focuses on exchange-traded crypto assets but refers to those assets simply as crypto assets rather than exchange-traded crypto assets when the context is clear. Likewise, the Article’s references to stock should be understood to mean exchange-traded stock.


\(^3\) Secondary crypto asset traders may be subject to other forms of fraud or some other type of misconduct such as market manipulation or hacking. While important, those other sources of secondary crypto asset trader harm are not the subject of this Article and their examination awaits future work.
ecosphere, including causing collateral damage to the reputation of economically scrupulous actors, and to strengthen the calls by some that the sector be subject to intense regulatory scrutiny.

To take an example that mirrors allegations from a recent fraud suit, suppose that a crypto asset sponsor develops a novel blockchain protocol and an accompanying crypto asset that serves as the blockchain’s native token.\(^4\) Suppose that the crypto asset goes on to trade on one or more crypto exchanges after its initial offering. At some later point, the crypto asset sponsor falsely represents that a payment provider has adopted the developed blockchain to process payments. Because the fraudulent statement is understood to evidence a new and potentially monetizable use value for both the blockchain and the associated crypto asset, secondary traders update their valuation of the crypto asset, which causes additional trading activity resulting in the crypto asset’s price appreciating on the secondary markets in which it trades. Traders who purchase the crypto asset at the resulting higher price will suffer financial harm once the market becomes aware of the falsity of the sponsor’s fraudulent statement and the crypto asset’s price falls in response. Depending on the magnitude and nature of the fraud, traders’ losses may be substantial.\(^5\)

Additional regulation of the crypto asset space may diminish the prospect of fraud ex ante, but defrauded crypto asset traders may seek ex post relief in the form of private litigation. Traders sustaining losses in connection with secondary transactions of stock and other more conventional assets routinely seek class-wide relief under Rule 10b-5,\(^6\) which serves as the workhorse of federal securities laws’ antifraud prohibitions. Given the prominence of Rule 10b-5 class actions in modern securities litigation, defrauded crypto asset traders likewise may turn to Rule 10b-5 class relief to recover their secondary trading losses.

These observations raise an important question: Should defrauded crypto asset traders be able to rely on Rule 10b-5 class actions to recover their secondary trading losses, both as a doctrinal matter and as a matter of public policy? A host of considerations bear on this question, and this Article focuses on two leading considerations, one doctrinal and one public policy

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related.

A primary consideration pertinent to the doctrinal propriety of secondary crypto asset traders relying on Rule 10b-5 class actions is the fundamental question: under what conditions will an exchange-traded crypto asset be within the definitional scope of a security because it is an investment contract under the multipronged test enunciated by the Supreme Court in Howey? Scholars have dedicated considerable attention to this definitional inquiry but not with a specific focus on exchange-traded crypto assets.

The Article evaluates the investment contract issue as it relates to exchange-traded crypto assets with an emphasis on Howey’s “common enterprise” and “efforts of others” prongs. The contours of these and Howey’s other prongs have been shaped by courts in primary transaction cases, that is, cases in which investors directly or indirectly transacted with the enterprise’s promoter. In a secondary transaction case—such as a case involving an exchange-traded crypto asset—investors will have transacted with their trading counterparties, perhaps with the involvement of one or more intermediaries, and those counterparties ordinarily will not have been the enterprise’s promoter. Unlike crypto assets, earlier occurring investment contract cases arising in connection with primary transactions did not involve instruments that readily lent themselves to secondary trading, so courts have not had much occasion to consider the operation of Howey in the secondary transaction context.

In many instances, the investment contract rules that courts have developed in primary transaction cases have been articulated in a manner that allows them to be sensibly applied to secondary transaction cases. That is not the case for the horizontal commonality test, one of the three tests that courts use to assess Howey’s common enterprise prong. As the Article

7. SEC v. W.J. Howey Co., 328 U.S. 293, 298–99 (1946). This Article follows the conventional approach and articulates the Howey question as an inquiry into whether the at-issue crypto asset is an investment contract. This articulation should be understood as a shorthand formulation adopted for expositional ease. In a securities case predicated on a set of crypto asset transactions, the relevant Howey question is not whether the crypto asset itself meets Howey’s prongs, but instead whether the universe of circumstances pertinent to the crypto asset transactions at issue satisfies Howey’s prongs. Courts in crypto asset cases recognize that distinction. See, e.g., SEC v. Telegram Grp. Inc., 448 F. Supp. 3d 352, 379 (S.D.N.Y. 2020) (“While helpful as a shorthand reference, the security in this case is not simply the [crypto asset], which is little more than alphanumeric cryptographic sequence . . . This case presents a ‘scheme’ to be evaluated under Howey that consists of the full set of contracts, expectations, and understandings centered on the sales and distribution of the [crypto asset]. Howey requires an examination of the entirety of the parties’ understandings and expectations.”).

Also, various cases discussed in this Article are well-known securities cases that academics and practitioners refer to almost exclusively by their short name. As such, in-text references to these cases—including Howey, Omnicare, and others—will follow this naming style and full case names and citations are provided in footnotes.

8. See infra note 59.
explains, because of its pooling requirement, that test is ill-suited for use in secondary transaction cases and thus requires reorientation.

The Article proposes a slight generalization of the horizontal commonality test that renders the test suitable for use in both secondary transaction and primary transaction cases. The generalized test recognizes that pooling is but one method by which investors’ financial interests in the underlying enterprise can become intertwined in the manner that horizontal commonality requires. Under the generalized test, horizontal commonality will be present if there is some mechanism, pooling or otherwise, that ties investors’ fortunes to one another and dependent on the enterprise in which they are invested.

The generalized test reasonably broadens the scope of instruments for which horizontal commonality would be found. As relevant to the Article’s question of interest, even if there were no pooling of a secondary crypto asset investors’ purchase amounts, the generalized horizontal commonality test may still be satisfied because the asset’s trading price can serve as a non-pooling mechanism that causes the pecuniary interests of the crypto asset’s traders to be linked and dependent on the success of the crypto asset and any of its associated applications. For the crypto asset’s price to actually have served that non-pooling role for purposes of the generalized horizontal commonality test, the crypto asset’s price must generally respond to material, public information in a directionally appropriate way. As part of its analysis, the Article also explains why certain facts that are present in the investment contract cases that courts have analyzed to date—such as the presence of a contract among the investment contract’s promoter and the investors—simply represent common factual features shared by the decided cases, rather than elements of the pertinent legal rule.

The Article also addresses two aspects of Howey’s efforts of others prong relevant to application of Howey to exchange-traded crypto assets. First, the Article explains that Howey’s efforts of others prong should not be understood as requiring the presence of a centralized body that exerts the requisite entrepreneurial or managerial efforts. Instead, Howey’s efforts of others prong is better understood as requiring investors to have reasonably believed that their profits were significantly determined by the entrepreneurial or managerial efforts of those other than the investors themselves, whether or not those “others” constituted a centralized group.

Second, as the Article explains, investors’ expectations concerning the use of their sales proceeds is doctrinally irrelevant to Howey’s efforts of others analysis, which instead focuses on investors’ expectations concerning whose entrepreneurial or managerial efforts significantly determined their
expected profits. Thus, the fact that investors’ sales proceeds in a secondary crypto asset transaction case may not have flowed to the crypto asset’s sponsors would not itself prevent Howey’s efforts of others prong from being met. This and the Article’s other Howey-related conclusions are not limited to the specific context of a Rule 10b-5 class action and instead also are applicable to other securities claims involving secondary crypto asset transactions.

The Article’s public policy analysis is prompted by the observation that stock-based Rule 10b-5 class actions have been the subject of academic criticism, intense at times. Supported by two longstanding primary critiques known as the circularity critique and the diversification critique, prominent voices have argued that stock-based Rule 10b-5 class actions fail to properly advance their intended public policy objectives of deterrence and compensation. Other scholars have disputed the relevance of the circularity and the diversification critiques and also have identified theories that provide alternate public policy justifications for stock-based Rule 10b-5 class actions, with the leading example being a corporate governance justification for stock-based Rule 10b-5 class actions.

A normative inquiry into whether defrauded crypto asset traders should be able to rely on Rule 10b-5 class actions implicates a range of subsidiary questions. One constituent question is whether the public policy justification for crypto asset-based Rule 10b-5 class actions is significantly weaker than for stock-based Rule 10b-5 class actions. If so, then that would support legal change that limits the availability of crypto asset-based Rule 10b-5 class actions, relative to stock-based Rule 10b-5 class actions, such as the adoption of prophylactic steps in the form of legislative action or doctrinal modification that would curb crypto asset-based Rule 10b-5 class actions before they become commonplace as stock-based Rule 10b-5 class actions have become. The Article evaluates that specific public policy question in terms of the circularity and diversification critiques and the corporate governance justification.

While its public policy determinations are mixed and in part preliminary, the Article’s analysis does not lend support to the notion that the public policy justification for crypto asset-based Rule 10b-5 class actions is significantly weaker than the public policy justification for stock-based Rule 10b-5 class actions. As reflected in the discussion below, the circularity critique has significantly less relevance in the crypto asset context than in the stock context. While the diversification critique may be more or less relevant in the crypto asset context than the stock context, nothing in the analysis indicates that it is significantly more relevant in the crypto asset context than the stock context. An offsetting consideration is that the corporate
governance justification loses its relevancy in the crypto asset context.

The Article is organized as follows. Part I provides a high-level summary of three key features of crypto assets that are pertinent to the Article’s substantive analysis. Part II addresses the investment contract question, while Part III provides the public policy analysis.

I. FEATURES OF EXCHANGE-TRADED CRYPTO ASSETS

While exchange-traded crypto assets vary in their characteristics and features, they share key points of commonality relevant to an inquiry into the propriety of defrauded secondary crypto asset traders relying on Rule 10b-5 class actions as a means of redress. Three points of commonality are discussed below: operational decentralization, the absence of cash flow, and significant price volatility.

A. OPERATIONAL DECENTRALIZATION

As a rough approximation, a crypto asset’s lifecycle will have three stages. The first stage is the period preceding the asset’s initial offering, during which the crypto asset’s sponsors develop the asset and any associated applications.9 The second stage of a crypto asset’s lifecycle is the asset’s offering period. During this stage, the asset’s sponsors first offer and sell the crypto asset, or rights to the future delivery of the crypto asset, to the public and others.10 Historically, crypto asset offerings have been unregistered offerings, with very limited exceptions.11 The third and final

9. The Article uses the terms “sponsors” and “application” broadly. The term “sponsors” is intended to refer to the class of persons or entities that develops, promotes, or initially sells the crypto asset, while the term “application” is intended to refer to any product or service that is directly facilitated by the crypto asset.

10. Most crypto asset offerings have involved the immediate sale of the offered crypto asset. However, some crypto asset offerings instead have involved the sale of a right to the future delivery of the crypto asset via an instrument referred to as a Simple Agreement for Future Tokens (“SAFT”). See infra note 23 and accompanying text.

11. In many instances, crypto asset sponsors do not register their offerings because they consider the offerings to be outside the scope of the Securities Act’s registration requirement, on the belief that the offered crypto assets do not constitute “securities” in the definitional sense. This has generated a string of enforcement actions by the SEC, in which the SEC contends that an unregistered crypto asset offering violated Section 5’s registration requirement on the SEC’s contrary position that the offered crypto assets were securities. See cases cited infra note 65. In limited instances, crypto asset sponsors have initially offered a crypto asset pursuant to a registration exemption. See infra note 23 and accompanying text (conducting crypto asset offerings pursuant to Regulation D). See also Daniel Payne, Blockstack Token Offering Establishes Reg A+ Prototype, LAW360 (Aug. 12, 2019), https://www.law360.com/articles/1186166 [https://perma.cc/QSQ8-ZDJJ] (describing an offering pursuant to Regulation A). There appears to be just one instance of a registered crypto asset offering. See INX Ltd., Registration Statement Under the Securities Act of 1933 (Form F-1) (Aug. 19, 2019), https://www.sec.gov/Archives/edgar/data/1725882/000121390019016285/ff12019_inxlimited.htm [http://web.
stage is the period following the crypto asset’s offering, or the period after the crypto asset is delivered to those who previously purchased rights to its delivery, during which the asset trades on one or more crypto exchanges.\textsuperscript{12} In some instances, a crypto asset may have a fourth stage when it is delisted from the crypto exchanges on which it trades and then ceases all secondary trading.\textsuperscript{13}

At some point in this lifecycle, the development, operation, management, and promotion of a crypto asset and any associated applications may move from a small group of sponsors to a significantly larger group of stakeholders. This latter process can be referred to as operational decentralization, and the resulting set of designated decision-makers ordinarily will include the crypto asset’s holders. The modifier “operational” reflects the fact that other aspects of a crypto asset or its application may be decentralized, but in ways not directly relevant to the securities law definitional question discussed in Part II below.\textsuperscript{14}

Operational decentralization is not a binary concept, and two different crypto assets may embody different degrees of operational decentralization. The extent of a given crypto asset’s operational decentralization also may differ at various points of its post-offering period. For instance, a crypto asset’s sponsors may seek to increase the extent of the asset’s operational decentralization as the asset proceeds through its post-offering period.\textsuperscript{15} For this reason, a crypto asset may become more decentralized as it continues to be the subject of further secondary trading.

As an example of these observations, consider the application Filecoin, which is an innovative blockchain-based data storage network that enables those needing computing storage to remotely use others’ idle computing storage.\textsuperscript{16} So, for instance, a large data center or an individual maintaining unused computing storage space can have that dormant storage incorporated in Filecoin’s storage network, thereby allowing other Filecoin users to access

\begin{itemize}
\item \textsuperscript{12} A crypto asset’s sponsors may conduct multiple offerings before the crypto asset begins trading on a crypto exchange. See infra note 23 and accompanying text.
\item \textsuperscript{14} For a discussion of the different ways that the term decentralization is used in the crypto asset context and an argument for precision in use of that term, especially when it is used to make legal determinations, see Angela Walch, Deconstructing “Decentralization,” in CRYPTOASSETS: LEGAL, REGULATORY, AND MONETARY PERSPECTIVES 39 (Chris Brummer ed., 2019).
\item \textsuperscript{16} FILECOIN, https://filecoin.io [https://perma.cc/Q7GF-MJTS].
\end{itemize}
its idle storage in exchange for payment.\textsuperscript{17} Filecoin generates economic benefit by facilitating mutually beneficial transactions, allowing unused computing storage space to be put to productive use.

The crypto asset “FIL” is associated with and facilitates Filecoin’s storage network. Transactions on the Filecoin network are conducted in FIL, in that users of Filecoin’s storage network pay storage providers in FIL rather than fiat currency.\textsuperscript{18} Filecoin’s users who want to acquire or sell their FIL holdings can do so on various crypto exchanges.\textsuperscript{19} As reflected in publicly available information, FIL’s holders do not buy and sell the crypto asset purely for its use value on the Filecoin network, but also, or perhaps primarily, trade the asset for investment purposes, seeking financial gain from appreciations in the crypto asset’s price.\textsuperscript{20} FIL presently has a market capitalization near $2.9 billion and its 24-hour transaction volume ordinarily exceeds $200 million.\textsuperscript{21}

Protocol Labs, an innovative research and development company founded in 2014, developed both Filecoin and FIL.\textsuperscript{22} In 2017, Protocol Labs conducted two Reg D offerings through which it sold accredited investors the rights to the future delivery of FIL\textsuperscript{23} and raised over $200 million.\textsuperscript{24} In 2020, Filecoin became fully operational, and Protocol Labs distributed FIL to the accredited investors who had purchased the future delivery rights to

\textsuperscript{17} See Get Started, FILECOIN, https://filecoin.io/provide/#get-started [https://perma.cc/5DDE-76ZF]. In Filecoin’s parlance, network participants who provide storage are referred to as “miners,” while network participants who use available storage are referred to as “clients.” See A Guide to Filecoin Storage Mining, FILECOIN (July 7, 2020), https://filecoin.io/blog/posts/a-guide-to-filecoin-storage-mining [https://perma.cc/WPN4-J93P].


\textsuperscript{22} About, PROTOCOL LABS, https://protocol.ai/about [https://perma.cc/LFZ9-SK7T].


\textsuperscript{24} Filecoin Sale Completed, PROTOCOL LABS (Sept. 13, 2017), https://protocol.ai/blog/filecoin-sale-completed [https://perma.cc/2NJM-RCL7].
FIL in the two 2017 Reg D offerings. The crypto asset thereafter began trading on a number of crypto exchanges.

FIL and its associated application Filecoin exhibit features of the operational decentralization discussed above. In the years following FIL’s initial offering in 2017, Protocol Labs continued to develop Filecoin and FIL but continuously expanded the ability of other stakeholders, including the general public, to contribute to Filecoin and FIL’s development. In the immediate period following FIL’s initial offering, the public’s role in facilitating Filecoin and FIL’s development was limited to referring potential employees and early users to Protocol Labs and suggesting improvements to the underlying protocol. Subsequently, but before Filecoin became fully operational and FIL started trading in secondary markets, Protocol Labs made several key aspects of Filecoin and FIL’s software code available to the public for review and comment. This important milestone provided the public with an indirect way to guide Filecoin and FIL’s development but ultimate authority remained vested in Protocol Labs.

Protocol Labs’ current decision-making authority over Filecoin and FIL is much more attenuated than before. Now, while Protocol Labs remains actively involved in Filecoin and FIL’s development and potentially may still maintain significant holdings of FIL, Protocol Labs does not have sole decision-making authority over the crypto asset or its associated application. First, another centralized body, Filecoin Foundation, facilitates governance of the Filecoin network. Moreover, any person can influence Filecoin’s governance by submitting a Filecoin Improvement Proposal.

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determine whether to adopt the proposal. Modifications and improvements to Filecoin’s technical features are undertaken through a similarly decentralized process, with any individual able to propose a technical change and then Filecoin’s many stakeholders deciding whether to adopt the technical modification.

B. ABSENCE OF CASH FLOW

A specific crypto asset may provide its holders with a range of benefits. In addition to investment gain, some crypto assets also may be used as methods of payment for conventional goods and services, while others may enable their holders to use an associated application or exercise governance rights with respect to the crypto asset or an associated application.

Despite these benefits, a crypto asset ordinarily will not provide its holders with dividends or cash flow in any form, realized or expected. Even if there exists a centralized body with some involvement in the crypto asset’s development and operation, the crypto asset’s holders usually will not be entitled to any income from the profits of that centralized body. In contrast, a public company’s common shareholders will receive cash flow at the board’s discretion in the form of dividends paid from the company’s net income.

More generally, a crypto asset’s holders usually will not be entitled to income from any entity or individual involved in the development and operation of the crypto asset and any associated applications. Holders of some crypto assets may earn income through staking, which is the process through which a crypto asset holder agrees to lock up their assets to facilitate the validation of transactions on a blockchain that uses a proof-of-stake consensus mechanism. But staking is an optional process that requires the holder to forgo transacting the staked assets. While it is theoretically possible for a crypto asset to entitle its holders to cash flow, very few crypto assets with this feature have actually been implemented to date.

33. See Governance, FILECOIN FOUND., supra note 32.
34. See, e.g., GitHub, supra note 32 (discussing Filecoin Technical Proposals).
35. See supra Section I.A (discussing FIL).
37. See id.
38. For instance, the crypto asset “INX” entitles its holders to a pro rata distribution of forty percent of the adjusted net cash flow from operating activities from the company INX Ltd., which seeks to develop a regulated crypto asset trading platform. See INX Ltd., Report of Foreign Private Issuer (Form 6-K) (May 16, 2022), https://www.sec.gov/Archives/edgar/data/1725882/000121390022027375/ea160089-6k_inxlimited.htm [https://perma.cc/HBL7-B92J]; INX Ltd., Annual Report (Form 20-F)
C. SIGNIFICANT PRICE VOLATILITY

Crypto assets exhibit significant price volatility. Crypto asset prices can change markedly, even in relatively short periods of time. Take for instance, “SOL,” the crypto asset associated with the Solana blockchain. On July 1, 2022, SOL traded at $32.80, according to CoinMarketCap’s calculated average price on a group of crypto exchanges.\(^{39}\) On August 1, 2022, and September 1, 2022, SOL traded at $41.79 and $31.59, respectively, according to CoinMarketCap’s calculated average price.\(^{40}\) So, within one month, the price of SOL appreciated by more than 27%, but then dropped by more than 24% the next month. Crypto asset prices can swing dramatically even over shorter durations, such as weeks or days.

Statistical analysis shows that crypto asset prices can be much more volatile than stock prices. For instance, Liu and Tsyvinski examined the returns of over 1,700 crypto assets between January 1, 2011 and December 31, 2018.\(^{41}\) The authors created an index of the crypto assets in their sample and found that over the sample period, the standard deviation of daily returns of the index was 5.46%, which was five times higher than the standard deviation of daily stock returns over the sample period.\(^{42}\) The authors also found that crypto asset returns over the sample period yielded extreme losses and gains with high probability.\(^{43}\) According to their findings, a trader who held the constructed index over the sample period would have experienced an extreme 20% negative return to daily returns with a probability of 0.48% and an extreme gain of 20% positive return to daily returns with a probability of 0.89%.\(^{44}\)

Though crypto asset prices may be more volatile than stocks, some crypto assets may exhibit significantly less price volatility than others.\(^{45}\) The volatility of some crypto assets may be closer to that of stock. Additionally,
there is some empirical evidence showing that crypto asset volatility decreases over time. For instance, returning to the study discussed above, the authors found that the standard deviation of the index’s returns diminished over the sample period.46

II. THE DOCTRINAL PROPRIETY OF CRYPTO ASSET-BASED RULE 10B-5 CLASS ACTIONS

The propriety of crypto asset traders using Rule 10b-5 class actions as a means of recovering losses caused by secondary crypto asset fraud implicates a set of important doctrinal and public policy considerations. In the discussion below, the Article focuses on the leading doctrinal question of when secondary trading crypto asset fraud constitutes securities fraud and so is properly within the scope of Rule 10b-5. The pertinent issue is whether the exchange-traded crypto asset on which the Rule 10b-5 claim is predicated is definitionally a security because it is an investment contract.47 To better frame the issue, it is helpful to first provide some observations on the nature of secondary trading crypto asset fraud and Rule 10b-5 relief.

A. THE NATURE OF SECONDARY TRADING CRYPTO ASSET FRAUD AND RULE 10B-5 RELIEF

Secondary trading crypto asset fraud can inflict trader harm by altering the prices at which traders transact. The motivating hypothetical from the Article’s Introduction involved the sponsor of an exchange-traded crypto asset making misrepresentations about a new and potentially monetizable use value for the crypto asset. Defrauded crypto asset traders who purchased at the resulting inflated prices may seek relief though a Rule 10b-5 class action. Their ability to viably do so requires, among other things, that (1) the at-issue crypto asset satisfies Howey’s four-part test for an investment contract—the focus of the discussion in the next Section; (2) the substantive elements of Rule 10b-5 are met; and (3) the pertinent elements of Rule 23 are met.

Different variants of the Introduction’s hypothetical may cause the case to turn more heavily on one of the necessary legal determinations. For instance, suppose that the false or misleading statement instead was made by a person of notoriety that the crypto asset sponsor had monetarily incentivized to provide promotional services, but all other facts of the

46. See Liu et al., supra note 41, at 2719 (“We find that the standard deviation of coin market returns decreased significantly from the first half to the second half of the sample period. The figure in the Internet Appendix shows a significant decrease in the volatility of the coin market returns over time.”).

47. As noted above, the relevant issue is articulated as an inquiry into whether the relevant crypto asset is an investment contract to simplify the exposition. See supra note 7.
hypothetical were unchanged. In this case, if the plaintiffs asserted their Rule 10b-5 claim against the influencer, greater focus may be on the materiality of the statement than if it were made directly by the crypto asset sponsor as in the baseline hypothetical. Depending on the circumstances, such as the identity of the influencer and other background considerations, a reasonable person may not consider the misrepresentation important to their trading decision, in which case it would not be material, while they may consider it important to their trading decision if it had instead been made by the crypto asset’s sponsor. Or consider a statement by an influencer opining about a crypto asset’s expected future price. In addition to the statement potentially being immaterial, it may be a nonactionable opinion statement under the rule in Omnicare.

Some crypto assets may be more amenable to secondary crypto asset fraud than others. In the hypothetical from the Introduction, the associated crypto asset had potential use value, in that its associated blockchain could be used to facilitate economically meaningful activity. That is not the case for all crypto assets. Consider meme coins, which are crypto assets that are based on an Internet meme or joke. These assets often have no use value, though they vigorously trade on crypto exchanges and can have significant market capitalization. The body of statements that investors may consider important to their trading decisions may be circumscribed. For instance, if a meme coin has no intended use value, and traders understand that fact, then they may not consider a statement about a potential use value for the crypto asset to be relevant to their trading decision.

The alleged fraud in each of these examples is an instance of statement-based fraud. Secondary trading crypto asset fraud can also be in the form of deceptive schemes. In the hypothetical in the Introduction, suppose that the crypto asset’s sponsor and the payment provider instead had devised a clandestine scheme that caused the crypto asset’s traders to believe that the payment provider would begin using the crypto asset’s blockchain to process

49. If asserting a claim under subsection (b) of Rule 10b-5, the plaintiffs may also face difficulties prevailing under the rule in Janus, which would require that the influencer had ultimate authority over the allegedly false or misleading statement. See Janus Cap. Grp., Inc. v. First Derivative Traders, 564 U.S. 135, 142 (2011). Depending on the factual circumstances, it may instead be that the crypto asset’s sponsor, rather than the influencer, had ultimate authority over the misrepresentation. See id. (“One who prepares or publishes a statement on behalf of another is not its maker.”).
51. This may not necessarily be the case, however, since some meme coins have gone on to have a use value, such as being accepted as forms of payment for some goods and services. See, e.g., Tesla Starts Accepting Once-Joke Cryptocurrency Dogecoin, BBC (Jan. 15, 2022), https://www.bbc.com/news/business-60001144 [https://perma.cc/6MAL-5RWV].
payments. Traders who purchased the crypto asset at the resulting higher prices would suffer financial injury, just as in the baseline hypothetical in which the fraud was in the form of a false statement by the crypto asset’s sponsor.

Finally, crypto asset traders’ ability to rely on Rule 10b-5 class actions to recover losses sustained in connection with secondary crypto asset transactions raises doctrinal issues beyond the definitional one addressed below. For instance, putting Affiliated Ute to the side, secondary market crypto asset traders will only be able to litigate their Rule 10b-5 claims as a class if they are able to avail themselves of fraud on the market. The question thus arises whether fraud on the market properly extends to the crypto asset context. Or, to take another example, a private plaintiff Rule 10b-5 claim only reaches transactions that are within the extraterritorial reach of the securities laws as defined by Morrison. But suppose the crypto exchange on which the at-issue transactions occurred is not a registered exchange and maintains no trading operations in the United States. This scenario raises the doctrinal question of whether those secondary crypto asset transactions cannot be the subject of a private Rule 10b-5 suit because they do not satisfy Morrison’s requirements. While some academic focus has been directed at these non-definitional doctrinal questions, additional research is necessary.

52. Affiliated Ute Citizens of Utah v. United States, 406 U.S. 128, 153–54 (1972) (holding that a plaintiff asserting a Rule 10b-5 claim need not prove reliance if the claim primarily involves material omissions and the defendant owes the plaintiff a duty to disclose).


55. This factual circumstance aligns with the allegations in Anderson v. Binance, No. 20-cv-2803, 2022 U.S. Dist. LEXIS 60703 (S.D.N.Y. Mar. 31, 2022). In that case, secondary crypto asset traders sued a major crypto exchange for violation of Section 12(a)(1) of the Securities Act of 1934 and Section 29(b) of the Securities Act of 1934. Id. at *5. The complaint acknowledged that the exchange was not a registered exchange and alleged no U.S. trading operations. See Defendant’s Reply Memorandum of Law in Further Support of Their Motion to Dismiss at 8, Anderson v. Binance, No. 20-cv-2803 (S.D.N.Y. Mar. 31, 2022). The court dismissed the complaint on Morrison grounds, concluding that the crypto exchange was not a “domestic exchange” and that the pertinent transactions were not “domestic transactions” as Morrison requires. See Anderson, 2022 U.S. Dist. LEXIS 60703, at *10–14. The Second Circuit recently reversed that decision. See Williams v. Binance No. 22-972, 2024 U.S. App. LEXIS 5616 (2d. Cir. Mar. 8, 2024).


57. For an analysis of the fraud on the market issue, see Menesh S. Patel, Fraud on the Crypto Market, 36 Harv. J.L. & Tech. 171 (2022). There does not yet appear to be any published academic...
B. IS SECONDARY TRADING CRYPTO ASSET FRAUD SECURITIES FRAUD?

If secondary crypto asset traders incur trading loss because of fraud, they will be able to pursue Rule 10b-5 relief based on those secondary transactions only if the exchange-traded crypto asset at issue is an investment contract under Howey’s multipronged test.58 Many issues pertinent to that definitional inquiry will be the same as those relevant to an assessment of whether a crypto asset at its offering stage satisfies Howey’s definition of an investment contract.59 For instance, if an exchange-traded crypto asset is promoted for its use value because it enables its holders to use an associated application, and if the asset’s holders in fact hold the asset primarily for that purpose rather than its investment value, then Howey’s “expectation of profit” prong would not be met under Forman’s investment/consumption distinction.60 This very issue has been litigated in cases in which a crypto asset was alleged to have been an investment contract at its offering stage.61

But there are issues pertinent to the application of Howey in the context of exchange-traded crypto assets that are not present, or are much less salient, in the context of crypto assets at their offering stage. This Section explores a set of such issues relating to Howey’s common enterprise and efforts of others prongs.

58. Traders may have other forms of relief available. As most relevant to this Section, if the underlying secondary crypto asset transactions do not constitute securities transactions, but do constitute commodities transactions, then the traders may have a claim under Commodity Futures Trading Commission (“CFTC”) Rule 180.1 based on those secondary transactions. See 17 C.F.R. § 180.1 (2014). While the present caselaw is limited, courts have taken a broad view of the Commodity Exchange Act’s definition of a commodity in the crypto asset context. See Commodity Futures Trading Comm’n v. My Big Coin Pay, Inc., 334 F. Supp. 3d 492, 497 (D. Mass. 2018); Commodity Futures Trading Comm’n v. McDonnell, 287 F. Supp. 3d 213, 225–26 (E.D.N.Y. 2018).

59. Legal scholarship includes significant discussion of the application of Howey in the crypto asset context. For a sample of this scholarship, see, e.g., JAMES J. PARK, WHEN ARE TOKENS SECURITIES? SOME QUESTIONS FROM THE PERPLEXED (2018); Jonathan Rohr & Aaron Wright, Blockchain-Based Token Sales, Initial Coin Offerings, and the Democratization of Public Capital Markets, 70 HASTINGS L.J. 463, 488–502 (2019); M. Todd Henderson & Max Raskin, A Regulatory Classification of Digital Assets: Toward an Operational Howey Test for Cryptocurrencies, ICOs, and Other Digital Assets, 2019 COLUM. BUS. L. REV. 443, 455 (2019); J.S. Nelson, Cryptocurrency Currencies, 105 CORNELL L. REV. 909, 939–53 (2020); CAROL GOFORTH & YULIYA GUSEVA, REGULATION OF CRYPTO ASSETS 263–327 (2d ed. 2022). However, these and other prior works do not focus on the definitional issue as it relates specifically to exchange-traded crypto assets.

60. United Hous. Found., Inc. v. Forman, 421 U.S. 837, 852–53 (1975) (“[W]hen a purchaser is motivated by a desire to use or consume the item purchased . . . the securities laws do not apply.”).

61. For instance, in the SEC’s Section 5 action against LBRY, the court rejected LBRY’s argument that Howey’s expectation of profit prong was not met because some purchasers acquired the at-issue crypto asset for its use value. See SEC v. LBRY, Inc., 639 F. Supp. 3d 211, 220–21 (D.N.H. 2022).
1. Exchange-Traded Crypto Assets and Common Enterprise

Doctrinal development of Howey’s common enterprise prong, as with all other parts of Howey’s test, has occurred through investment contract cases involving a primary transaction, that is, a transaction in which investors purchased the instrument when it was first offered for sale directly or indirectly from the enterprise’s promoter. That was the case in Howey, for instance. The other investment contract cases to date have similarly involved primary transactions and include such varied examples as sale-and-leasebacks, annuities, and crypto assets. There are virtually no investment contract cases concerning secondary transactions, in which investors purchased the putative investment contract from other investors.

The factual orientation of the body of investment contract cases naturally has resulted in courts shaping investment contract doctrine around primary transactions. But a Rule 10b-5 case involving an exchange-traded crypto asset will involve secondary transactions, rather than primary transactions, and the two transactions differ in important ways. As noted, in a primary transaction, investors transact directly or indirectly with the promoter. In a secondary transaction, investors transact with their trading counterparties, perhaps with the involvement of one or more intermediaries, and those counterparties ordinarily will not be the promoter. Also,

66. The only non-crypto asset investment contract case that appears to have involved a secondary transaction is Hocking v. Dubois, 885 F.2d 1449 (9th Cir. 1989) (en banc). With respect to crypto-asset-based investment contract cases, the SEC’s ongoing Section 5 actions against Coinbase, SEC v. Coinbase, No. 23-cv-04738 (S.D.N.Y. filed June 6, 2023), and Binance, SEC v. Binance, No. 1:23-cv-01599 (D.D.C. filed June 5, 2023), both involve the application of Howey to crypto assets that trade in secondary markets, but as of this Article’s writing, neither court has issued a decision concerning the investment contract question. The issue also was present in the crypto asset insider trading case discussed below, see infra note 137. The court in that case very recently granted the SEC’s motion for default judgment as to one of the three defendants and in that opinion, concluded that the pertinent secondary market traded crypto assets were investment contracts. See SEC v. Wahi, No. 22-cv-01009, 2024 U.S. Dist. LEXIS 36788 (W.D. Wash. Mar. 1, 2024).
67. In certain limited cases, an investor’s counterparty in a secondary transaction may have been the promoter. For instance, crypto asset sponsors sometimes seek to buy back their assets through open market transactions. See, e.g., Nexo Commits Additional $50 Million to Long-Standing Buyback Initiative, NEXO (Aug. 30, 2022), https://nexo.com/media-center/nexo-commits-additional-50-million-to-long-standing-buyback-initiative [https://perma.cc/7VLR-XA2L] (announcing allocation of additional funds for a crypto asset repurchase in the open market).
depending on the circumstances, it may also be that when a secondary transaction occurs, the promoter who facilitated the instrument’s initial offering no longer has any meaningful involvement in the underlying enterprise, though there may be other non-investors who facilitate the enterprise.

In many instances, the legal rules that courts have developed in primary transaction cases concerning the investment contract question are equally sensible in secondary transaction cases. Take, for instance, the rule that Howey’s “investment of money” prong does not require a cash payment and instead is satisfied when any form of consideration is provided. That rule is as sensible in the secondary transaction context as the primary transaction context, as consideration in either context may involve cash or noncash payment. That is not the case for the horizontal commonality test, one of the three commonality tests that courts have developed in primary transaction cases to evaluate the presence of common enterprise. As discussed below, the horizontal commonality test, as it is presently articulated, is analytically ill-suited for use in secondary transaction cases because of the test’s requirement that investors’ assets be pooled.

i. Secondary Transactions, Horizontal Commonality, and the Pooling Requirement

The horizontal commonality test evaluates relationships among the investment contract’s investors and inquires whether the investors’ fortunes are intertwined and collectively dependent on the success of the enterprise in which they are invested. The test usually is defined in relation to a pooling requirement, which requires investors’ assets be combined and

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68. See, e.g., Uselton v. Com. Lovelace Motor Freight, Inc., 940 F.2d 564, 574 (10th Cir. 1991) (“[I]n spite of Howey’s reference to an ‘investment of money,’ it is well established that cash is not the only form of contribution or investment that will create an investment contract. Instead, the ‘investment’ may take the form of ‘goods and services,’ or some other ‘exchange of value.’ ”) (citation omitted).

69. Howey does not define common enterprise or explain how its presence should be evaluated in a given case or how it was present in the case at bar. Lower courts have developed three tests to assess the presence of common enterprise: horizontal commonality and two versions of vertical commonality, broad vertical commonality and strict vertical commonality. See, e.g., Gordon, supra note 62, at 640–41 (discussing the three commonality tests). The circuit courts of appeals are fractured as to which of these tests may be used to assess the presence of common enterprise. See James D. Gordon III, Defining a Common Enterprise in Investment Contracts, 72 Ohio St. L.J. 59, 68 (2011) (“The circuit courts of appeal are profoundly divided over the definition of a common enterprise.”).

70. See, e.g., SEC v. Infinity Grp. Co., 212 F.3d 180, 187 n.8 (3d Cir. 2000) (“[H]orizontal commonality’ examines the relationship among investors in a given transaction . . . .”)

71. See, e.g., Revak v. SEC Realty Corp., 18 F.3d 81, 87 (2d Cir. 1994) (“In a common enterprise marked by horizontal commonality, the fortunes of each investor depend upon the profitability of the enterprise as a whole . . . .”). Some circuit courts recognize horizontal commonality as the only means of assessing Howey’s common enterprise prong. See, e.g., SEC v. SG Ltd., 265 F.3d 42, 49 (1st Cir. 2001) (identifying appellate cases where the courts demanded a showing of horizontal commonality).
commingled in a manner that causes investors’ fortunes associated with the enterprise to be codetermined. Specifically, in the primary market transaction cases in which the test was developed, courts usually find horizontal commonality only when there is “the tying of each individual investor’s fortunes to the fortunes of the other investors by the pooling of assets.”

A good description of the pooling requirement comes from the court in Savino v. E.F. Hutton:

“Pooling” has been interpreted to refer to an arrangement whereby the account constitutes a single unit of a larger investment enterprise in which units are sold to different investors and the profitability of each unit depends on the profitability of the investment enterprise as a whole. Thus, an example of horizontal commonality involving brokerage accounts would be a “commodity pool,” in which investors’ funds are placed in a single account and transactions are executed on behalf of the entire account rather than being attributed to any particular subsidiary account. The profit or loss shown by the account as a whole is ultimately allocated to each investor according to the relative size of his or her contribution to the fund. Each investor’s rate of return is thus entirely a function of the rate of return shown by the entire account.

In other words, pooling can be understood as the usual mechanism in a primary transaction case that causes investors’ fortunes in the enterprise to be interconnected and dependent on the enterprise’s success. Consider, for instance, the Seventh Circuit’s decision in Milnarik v. M-S Commodities. There, the plaintiff opened a discretionary trading account in commodities futures with a broker. Many other investors also had opened their own discretionary trading accounts with the same broker. The plaintiff’s account sustained losses, and the plaintiff sued for violation of Section 5’s

72. Revak, 18 F.3d at 87. See also Union Planters Nat’l Bank v. Com. Credit Bus. Loans, Inc., 651 F.2d 1174, 1183 (6th Cir. 1981) (“[A] finding of horizontal commonality requires a sharing or pooling of funds.”). Some courts may also require a pro rata distribution of profits for the test to be met. See, e.g., Revak, 18 F.3d at 87. Finally, while pooling for horizontal commonality purposes usually means the pooling of investors’ assets, see Gordon, supra note 62, at 645 n.72 (“By pooling their assets and giving up their claims to any profit or loss attributable to their particular investments, investors make their collective fortunes dependent on the success of a single common enterprise.”) (citing Hocking v. Dubois, 839 F.2d 560, 586 (9th Cir. 1988)), some courts articulate the pooling requirement as the pooling of risk and investments, rather than a pooling of the investors’ assets. See, e.g., Hart v. Pulte Homes of Mich. Corp., 735 F.2d 1001, 1005 (6th Cir. 1984) (“Nothing in the complaint intimates a pooling of risks and investments among these purchasers.”).

74. Id. (citation omitted).
75. Milnarik v. M-S Commodities, Inc., 457 F.2d 274 (7th Cir. 1972).
76. Id. at 275.
77. Id. at 276.
registration requirement, on the theory that the discretionary trading account contract was an investment contract. The Seventh Circuit rejected that claim because it found no pooling and thus no investment contract under Howey.

The absence of the pooling of investors’ funds unsurprisingly led to the court’s conclusion in Milnarik that the investors’ fortunes were not intertwined and mutually dependent on the success of their collective trading accounts. Because investors’ accounts were separately maintained and their funds not combined, the value of any given investor’s trading account was independent of the value of any other investor’s trading account. This would not have been the case had the arrangement instead involved the defendant combining the various investors’ funds in a single account, executing trades with respect to that single account, and then distributing any profits to the investors. If this had been the case, then every investor would have been made financially better off as the account became more profitable and financially worse off as its value dropped. In other words, the aggregation of investors’ funds would have caused the investors’ individual financial interests in the combined account to be tethered together and dependent on the underlying enterprise.

But pooling is not an analytically meaningful way of evaluating the presence of horizontal commonality in an investment contract case involving secondary transactions. In primary market transactions, like the ones in Howey and Milnarik, investors will have transacted directly or indirectly with the promoter. In such cases, the promoter may have pooled investors’ assets in a manner that caused investors’ fortunes in the enterprise to rise or fall together, as horizontal commonality requires.

On the other hand, secondary market investors will have transacted with trading counterparties. If those trading counterparties were separate persons or economic entities, then those counterparties would have no reason to aggregate the amounts they received from their sales, except in rare and idiosyncratic circumstances. If, alternatively, the trading counterparties included one or more persons or entities who sold to multiple traders, then it is possible that the counterparty aggregated the amounts it received for its sales, because it may have some business or other reason for doing so. Nonetheless, the counterparty’s aggregation of secondary investors’ assets, unlike the promoter’s aggregation of primary market investors’ assets, will
usually not create a linkage between the secondary investors’ financial interests in the enterprise because the success of the underlying enterprise will not turn on whether the counterparty aggregated the sales proceeds it received or how it used any aggregated amounts. Simply put, there is no analytical justification for the horizontal commonality question in a secondary transaction case to turn on the pooling requirement.

An evaluation of horizontal commonality in a secondary transaction case using the lens of pooling can be both underinclusive and overinclusive. First, in a secondary transaction case, investors’ financial interests in the underlying endeavor may still be interdependent even if the investors’ sales proceeds were not aggregated. To see this, suppose that in Howey, each of the primary market investors had sold their interests to another, later stage investor. Those secondary investors’ purchase amounts presumably will not have been pooled. The secondary investors purchased from the primary market investors, rather than the promoters, and those primary market investors would ordinarily have no reason to aggregate their individual sales proceeds. Nonetheless, horizontal commonality would be present with respect to the secondary investors because those investors’ profits would have been intertwined and dependent on the success of the enterprise. If, for instance, there was a poor harvest because of the promoters’ neglect or malfeasance, each of the secondary investors would have seen their profits fall.

Second, just as the absence of an aggregation of investors’ assets does not demonstrate a lack of horizontal commonality, the presence of asset aggregation, by itself, may not necessarily establish horizontal commonality in a secondary transaction case. In the example in the previous paragraph, suppose that the primary market investors in fact had aggregated the proceeds from their resales because, for instance, they wanted to collectively invest in a new venture. That pooling of the secondary investors’ assets by the primary market investors itself has no bearing on whether the secondary purchasers’ profits associated with the orange orchard enterprise would have moved in tandem as required by horizontal commonality.

Imposing a pooling requirement in secondary transaction cases not only would be analytically infirm but also would prevent nearly all investment contracts that arise in connection with secondary transactions from satisfying the horizontal commonality test. That would effectively cause those transactions to be categorically excluded from the investment contract category in those jurisdictions in which horizontal commonality is the only

82. The exception would be if the secondary investors’ assets were pooled and that pooling created linkages between the secondary investors’ individual pecuniary interests in the underlying enterprise.
recognized test for common enterprise. Such limitation finds no basis in logic or public policy and also runs roughshod over the Supreme Court’s directive that the term security be interpreted in fidelity to economic reality and not hindered by rigid formalities.

ii. Generalization of the Horizontal Commonality Test

Because it is logically inapt in secondary transaction cases, the pooling requirement renders the horizontal commonality test ill-suited for use in those cases. Hence, the test must be appropriately generalized so that it is articulated in a manner that renders it sensible both in secondary transaction cases and the primary transaction cases in which it and Howey’s other rules have been developed. As discussed below, the necessary reformulation of the horizontal commonality test requires only a slight generalization of the test from its present form.

As an initial observation, recall that pooling is neither necessary nor sufficient for investors’ profits to be intertwined and mutually dependent on the success of the underlying enterprise as doctrinally required. Instead, as discussed above, pooling is the usual way that the requisite financial linkages arise in a primary transaction case. In other words, pooling is the usual path to interrelated investor profits in a subset of investment contract cases. An appropriately generalized articulation of the horizontal commonality test must recognize pooling as just one possible mechanism that ties investors’ financial interests in the enterprise together.

So that it has a sensible analytical meaning in both primary transaction cases and secondary transaction cases, the horizontal commonality test must be framed so that the test is met whenever the pooling of investors’ assets or some other non-pooling mechanism causes investors’ fortunes to be tied to one another and dependent on the success of the enterprise in which they are invested. In other words, the horizontal commonality rule must be articulated so that it accurately reflects that pooling is but one mechanism that results in investors’ profits being intertwined, not the only mechanism. Note that the generalized test does not merely require that pooling or some other mechanism caused investors’ fortunes to be tied together but, consistent with the underlying analytical underpinning of the test, also requires their fortunes to be dependent on the underlying enterprise.

83. See supra note 71.
84. See, e.g., United Hous. Found., Inc. v. Forman, 421 U.S. 837, 848 (1975) (“[I]n searching for the meaning and scope of the word ‘security’ in the Act(s), form should be disregarded for substance and the emphasis should be on economic reality.”) (quoting Tcherepnin v. Knight, 389 U.S. 548, 553 (1967)).
85. See, e.g., Revak v. SEC Realty Corp., 18 F.3d 81, 87 (2d Cir. 1994) (horizontal commonality defined with reference to each investors’ fortunes being dependent on the profitability of the enterprise). See also Curran v. Merril Lynch, Pierce, Fenner & Smith, Inc. 622 F.2d 216, 223–24 (6th Cir. 1980),
The generalized test is consistent with *Howey*, in that there is nothing in the opinion indicating that the Court sought to impose a pooling requirement, even in primary market cases. In fact, it is difficult to support a conclusion that there was a pooling of investors’ assets in *Howey*, and for that reason the presence of horizontal commonality under the test’s present formulation. In *Howey*, the promoters sold each investor their own tract of land and an individual service contract. The promoter did not aggregate investors’ purchase amounts and then use that aggregated amount to sell investors’ a single tract of land serviced by the promoter in which each investor maintained a fractional interest, as the usual definition of pooling would require.

The proposed generalization is superior to the present articulation that implicitly assumes that pooling is the only path to investor wellbeing interdependence. First, a primary transaction case in which a court would find horizontal commonality under the present test would continue to satisfy the horizontal commonality test under the generalized test outlined above. The presence of pooling necessary for a finding of horizontal commonality under the current test would also cause the generalized test to be met.

Second, the generalized test does not excessively broaden the scope of horizontal commonality in primary transaction cases. If a primary transaction case would not satisfy the horizontal commonality test as it is presently articulated because of a lack of pooling, the generalized test would admit a finding of horizontal commonality only if there was some other mechanism that caused investors’ profits to be intertwined and dependent on the success of the underlying enterprise. For instance, returning to *Milnarik*, there are no facts in the opinion suggesting that there was some non-pooling mechanism that caused investors’ profits to be intertwined.

aff’d, 456 U.S. 353 (1982) (“[N]o horizontal common enterprise can exist unless there also exists . . . some relationship which ties the fortunes of each investor to the success of the overall venture.”).

86. See SEC v. W.J. Howey Co., 328 U.S. 293, 295–96 (1946) (each prospective investor was offered their own land sales contract by W.J. Howey Company and their own service contract by Howey-in-the-Hills Service, Inc.).

87. See *supra* note 72 and accompanying text. As Gordon has explained: The investment contracts in *Howey* indisputably involved vertical commonality. However, horizontal commonality was not present because each investor individually owned a separate tract of land. The Court did note that there was ordinarily no right to specific fruit, and that the produce was “pooled,” which probably meant that the fruit was put together for marketing. However, this is not what is usually meant by “pooling” in the horizontal commonality test.

Gordon, *supra* note 62, at 645 (footnotes omitted). See also Gordon, *supra* note 69, at 73 n.96 (citing sources noting there was no pooling in *Howey*).

88. See Milnarik v. M-S Commodities, Inc., 457 F.2d 274, 277 (7th Cir. 1972) (“Each contract creating this relationship is unitary in nature and each will be a success or failure without regard to the others. Some may show a profit, some a loss, but they are independent of each other.”).
The generalized formulation would admit a broader array of investment contracts in primary transaction cases than under the current formulation, but these would be sensible additions. For instance, suppose in Milnarik, the broker’s policy and practice was to execute identical transactions for each of the accounts over which it had discretionary authority. In this case, while there would be no pooling of the investors’ assets, there would be horizontal commonality under the generalized test, as the value of investors’ portfolios would move in unison because of the broker’s trading policy and practice. The investors in this example can be understood to be in a common enterprise with one another because the value of each of their accounts is dictated by the same trading practice, even though their funds were not pooled.

Unlike the present restrictive formulation, the generalized formulation would result in investment contracts that arise in connection with secondary transactions satisfying the horizontal commonality test even in the absence of pooling, so long as there was some non-pooling mechanism that met the doctrinal requirement that investors’ profits were interrelated and dependent on the success of the underlying enterprise. The generalized test is sufficiently circumscribed and not all investment contracts arising in connection with secondary transactions will meet it. For instance, suppose that the investors in Milnarik had sold their interests in their accounts to other investors, with all other facts the same. In addition to an absence of pooling, there would be no other mechanism connecting the profits of those later investors to one another and thus no finding of horizontal commonality as to those secondary transactions under the generalized test.

a. Application to Exchange-Traded Crypto Assets

Investors in a crypto asset offering ordinarily will have the proceeds from their purchases pooled by the crypto asset’s sponsors to facilitate the asset and any associated applications. That may not be the case for secondary crypto asset traders who transact on crypto exchanges, as those transactions would have occurred with trading counterparties and those trading counterparties, in turn, may have had no reason to pool the amounts they received. Despite any lack of pooling of the secondary investors’ purchase amounts, the crypto asset may still meet the generalized horizontal commonality test through its price, which can serve as a potential non-

89. See Savino v. E. F. Hutton & Co., 507 F. Supp. 1225, 1237 (S.D.N.Y. 1981) (in a case involving six discretionary trading accounts, holding that the investment manager’s practice of employing a similar investment strategy across the six accounts was insufficient to satisfy the pooling requirement).

90. See, e.g., SEC v. Telegram Grp. Inc., 448 F. Supp. 3d 352, 369–70 (S.D.N.Y. 2020) (in a case involving a crypto asset offering, finding that the horizontal commonality test was met in part because the sponsor pooled the proceeds received from the initial purchasers).
pooling mechanism that causes the pecuniary interests of the crypto asset’s traders to be linked and dependent on the success of the underlying enterprise, that is, the crypto asset and any associated applications.

Start first with the requirement that secondary traders’ fortunes in the crypto asset are linked. A given exchange-traded crypto asset can trade on multiple exchanges, which may either be centralized or decentralized. A centralized crypto exchange will involve an intermediary to facilitate transactions, while a decentralized crypto exchange will not. The two types of exchanges also may differ in their pricing mechanism. A centralized crypto exchange will use a limit order book to match buyers and sellers, and therefore the exchange’s prices will be set directly by traders’ submitted orders. Rather than relying on a limit order book, a decentralized exchange may facilitate transactions using an automated market maker, in which prices are set through a pricing algorithm.

Whether a crypto exchange uses a limit order book or an automated market maker, the exchange’s pricing mechanism will generate, for a given crypto asset, a single price at which any trader can transact, holding fixed other traders’ transactions. That single trading price links together the financial wellbeing of all the crypto asset’s secondary investors. Every investor holding the crypto asset is made financially better off as the crypto asset’s price on the exchange rises and each is made worse off as the price drops. The fact that a crypto asset trades on multiple exchanges does not break the linkages between the financial wellbeing of traders on different exchanges since arbitrage causes crypto asset prices across different exchanges to closely align.

A crypto asset’s trading price thus provides a mechanism that links together its secondary investors’ financial interests. It is the case that a crypto asset’s trading price will be influenced by market fluctuations, but the doctrinal relevance of that observation is better understood as concerning Howey’s efforts of others prong, which is discussed below, rather than the

93. See, e.g., The Uniswap Protocol, UNISWAP DOCS, https://docs.uniswap.org/concepts/uniswap-protocol [https://perma.cc/U63X-E8S6] ("The Uniswap protocol takes a different approach, using an Automated Market Maker (AMM), sometimes referred to as a Constant Function Market Maker, in place of an order book. At a very high level, an AMM replaces the buy and sell orders in an order book market with a liquidity pool of two assets, both valued relative to each other.").
94. Within a given country, a crypto asset’s price difference across the exchanges on which it trades usually will be modest. See, e.g., Igor Makarov & Antoinette Schoar, Trading and Arbitrage in Cryptocurrency Markets, 135 J. FIN. ECON. 293, 294 (2020).
common enterprise prong.95

A crypto asset’s price also may provide the doctrinally necessary linkage between the financial interests of the crypto asset’s secondary traders and success of the underlying enterprise. Empirical studies show that the prices of exchange-traded crypto assets generally respond in the directionally appropriate way to material, public information.96 For this reason, as a general matter, the financial interests of a crypto asset’s holders will be dependent on the success of the crypto asset and any associated applications. If, for instance, the crypto asset undergoes some value-enhancing change, then once that change is publicly known, the crypto asset’s price would be expected to increase, because of the directionally appropriate responsiveness of crypto asset prices to material, public information as a general matter.

Nonetheless, it is possible that while the prices of crypto assets—as an asset class—generally respond in a directionally appropriate way to material, public information, that is not the case for any given exchange-traded crypto asset. If the specific crypto asset being evaluated as a potential investment contract lacks that requisite informational responsiveness, then the crypto asset’s price would not connect the financial interests of the crypto asset’s secondary traders with success of the underlying enterprise. For instance, if the crypto asset underwent some value-reducing change, but the asset’s price was either impervious to material, public information or moved in the directionally inappropriate way to material, public information, then the value reducing change would either have generated no change to the crypto asset’s price (and thus would have made the crypto asset’s holders no better or worse off) or increased the crypto asset’s price (and thus would have made the crypto asset’s holders better, not worse, off).

Accordingly, a crypto asset’s price can serve the role of a non-pooling mechanism that satisfies the requirements of the generalized horizontal commonality test only if the crypto asset’s price generally responds to material, public information in a directionally appropriate way. If the plaintiffs in a crypto asset case implicating the Howey question rely on the asset’s price to serve that non-pooling role, then the generalized horizontal commonality test demands that there be a showing of the necessary price responsiveness. The plaintiffs can make that showing using an event study that demonstrates that the crypto asset’s price generally responds to material, public information in a directionally appropriate way.

95. See infra Section II.B.2.ii.a.
96. See Patel, supra note 57, at 109–111. In other words, empirical studies show that crypto asset prices generally rise when the market becomes aware of positive, material information pertinent to the crypto asset and generally decrease when the market becomes aware of negative, material information pertinent to the crypto asset. See id.
If the plaintiffs cannot establish the necessary price responsiveness of the crypto asset, then the asset’s price cannot serve the role of a non-pooling mechanism that satisfies the requirements of the generalized horizontal commonality test, because in that circumstance, the plaintiffs will not have established that the asset’s price connects the secondary investors’ pecuniary interests to the success of the enterprise in which they are invested. In this case, the generalized horizontal commonality test will be met with respect to the at-issue crypto asset only if there was pooling of the secondary traders’ purchase amounts or there was some non-pooling mechanism other than the crypto asset’s price that caused the pecuniary interests of the crypto asset’s traders to be linked and dependent on success of the crypto asset and any associated applications.

b. Other Reformulations of the Horizontal Commonality Test

In addition to generalizing Howey’s horizontal commonality test in the manner discussed above, there are other sensible ways to reformulate the test so that it is suitable for use in both secondary transaction and primary transaction cases. One possibility is to broaden the test so that it is also met in secondary transaction cases if (1) there was pooling of the primary market investors’ assets, and (2) the primary market investors purchased the instrument only because they reasonably expected the ability to resell their interests to secondary investors. If these two conditions are met, then the secondary investors can be understood to have effectively pooled their assets, in the sense that the reasonable expectation of eventual resales to secondary investors was a necessary condition to the primary market investors engaging in the transactions that resulted in their assets being pooled. This type of pooling by the secondary market investors can be referred to as effective pooling.

Finally, unlike the horizontal commonality test, the two vertical commonality tests do not require reformulation to be analytically workable notions in secondary transaction cases. Strict vertical commonality is met when “the fortunes of investors [are] tied to the fortunes of the promoter” and broad vertical commonality is met when the “the fortunes of the investors [are] linked . . . to the efforts of the promoter.”97 It is worth observing that the role of the promoter in secondary transaction cases will be different than in primary transactions cases. In a primary transaction case, the promoter ordinarily will have facilitated the enterprise in part by soliciting investors. In a secondary transaction case, the promoter likely will not have engaged in any such solicitation because it usually will not have been an active participant in the secondary markets, though the promoter.

may have directed other efforts to facilitate the enterprise.

c. The Irrelevance of a Contractual Relationship

Finally, while a primary transaction case ordinarily will involve contracts between the promoter and the investors, that usually will not be the case in secondary transaction case, because secondary market traders will not have transacted with the promoter, except in rare circumstances. Nonetheless, the absence of a contractual relationship between the promoter and investors—whether those investors were secondary market traders or purchasers in a primary market transaction—does not provide a proper basis for defeating a finding of an investment contract. In Howey, the Supreme Court did not limit the investment contract category to just formal contractual arrangements between the promoter and the investors. Instead, the Court articulated the definitional category more expansively so that, in addition to contractual arrangements, the investment contract category also encompasses “transactions” and “schemes.” Though the Court did not define the term “scheme,” had it meant for scheme to simply mean a series of contractual arrangements, then it would have just used the term “contracts” rather than scheme.

*Howey*’s lack of a contract requirement is sensible. As a matter of public policy, the investor protection objectives of the securities laws are not weakened simply because the relevant transactions were not undertaken pursuant to a formal contract. And while *Howey* and the other Supreme Court’s investment contract cases to date have involved contractual arrangements between the promoter and the investors, this common factual feature has not become a part of the Court’s enunciated rule. Instead, the

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98. Even in these rare circumstances, there may not have been any contract between the promoter and the secondary market trader. Consider, for instance, the circumstance in which a crypto asset sponsor engaged in a buyback of the asset in the open market. See *supra* note 67.

99. SEC v. W.J. Howey Co., 328 U.S. 293, 298–99 (1946) (“[A]n investment contract . . . means a contract, transaction or scheme.”) (emphasis added). See also Hocking v. Dubois, 885 F.2d 1449, 1457 (9th Cir. 1989) (“In defining the term investment contract, *Howey* itself uses the terms ‘contract, transaction or scheme,’ leaving open the possibility that the security not be formed of one neat, tidy certificate, but a general ‘scheme’ of profit seeking activities.”) (citation omitted). Courts in recent crypto asset cases have rejected the argument that *Howey* requires the presence of a contractual arrangement. See, e.g., SEC v. Kik Interactive Inc., 492 F. Supp. 3d 169, 178–79 (S.D.N.Y. 2020) (in a case involving the initial offering of a crypto asset, rejecting argument that *Howey* requires an ongoing contractual obligation).

100. For example, suppose that in *Howey* the land sales contract was not in writing and therefore unenforceable because of the statute of frauds. The public policy goals of the securities laws would not be met if an investment contract were not found in this circumstance even though the economic nature of the subject transaction is the same as the circumstance in which the land sale contract had been enforceable.

101. The same is true for the state law cases the Supreme Court cited in *Howey*. To determine the contours of the investment contract category, the Supreme Court relied on state court cases interpreting
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Supreme Court’s post-Howey investment contract cases have consistently invoked Howey’s articulation of the investment contract category as encompassing schemes.102

Stated differently, simply because a set of cases share a common factual predicate does not mean that the factual predicate necessarily becomes a component of the pertinent rule of law. As another example of this somewhat unremarkable observation, note that the profits that investors received in the Supreme Court’s investment contract cases arose through income generated by a business enterprise that was organized and facilitated by the promoter. But the fact that these cases share this common factual predicate does not mean that the factual predicate is part of the operative rule. As the cases recognize, investors’ “profits” for purposes of the Howey determination are not limited to proceeds from an investment in a business enterprise and

state securities laws, that is, state blue sky laws. See Howey, 328 U.S. at 298. While these state cases involved contractual arrangements between the promoter and the investors, the investment contract rule fashioned by the courts in those cases did not mandate a contractual relationship. For example, Howey’s leading state court citation is to State v. Gopher Tire & Rubber Co., 177 N.W. 937 (Minn. 1920). See Howey, 328 U.S. at 298. However, in that case, the Minnesota Supreme Court defined investment contract without reference to a contractual arrangement. See Gopher Tire, 177 N.W. at 938 (“No case has been called to our attention defining the term ‘investment contract.’ The placing of capital or laying out of money in a way intended to secure income or profit from its employment is an ‘investment’ as that word is commonly used and understood.”). The Supreme Court’s description of these state cases did not characterize them as requiring a contractual relationship between the promoter and investors and instead described those cases as admitting schemes. See Howey, 328 U.S. at 298 (“The term ‘investment contract’ is undefined by the Securities Act or by relevant legislative reports. But the term was common in many state ‘blue sky’ laws in existence . . . An investment contract thus came to mean a contract or scheme for ‘the placing of capital or laying out of money in a way intended to secure income or profit from its employment.’”) (emphasis added) (quoting Gopher Tire, 177 N. W. at 938). For a careful historical account of blue sky laws, see Jonathan R. Macey & Geoffrey P. Miller, Origin of the Blue Sky Laws, 70 Tex. L. Rev. 347 (1991).

102. See, e.g., SEC v. Edwards, 540 U.S. 389, 393 (2004) (“The test for whether a particular scheme is an investment contract was established in our decision in [Howey]. We look to ‘whether the scheme involves an investment of money in a common enterprise with profits to come solely from the efforts of others.’”) (emphasis added) (quoting Howey, 328 U.S. at 301); Int’l Bhd. of Teamsters, Chauffeurs, Warehousemen & Helpers of Am. v. Daniel, 439 U.S. 551, 558 (1979) (“To determine whether a particular financial relationship constitutes an investment contract, ‘[t]he test is whether the scheme involves an investment of money in a common enterprise with profits to come solely from the efforts of others.’”) (emphasis added) (quoting Howey, 328 U.S. at 301); United Hous. Found., Inc. v. Forman, 421 U.S. 837, 852 (1975) (“[T]he basic test for distinguishing the transaction from other commercial dealings is ‘whether the scheme involves an investment of money in a common enterprise with profits to come solely from the efforts of others.’”) (emphasis added) (quoting Howey, 328 U.S. at 301); marine Bank v. Weaver, 455 U.S. 551, 556 (1982) (“[T]he statutory definition of a security under the Securities Exchange Act includes ordinary stocks and bonds, along with the ‘countless and variable schemes devised by those who seek the use of the money of others on the promise of profits.’”) (emphasis added) (quoting Howey, 328 U.S. at 299).
instead include capital appreciation more generally.\textsuperscript{103} This observation is especially relevant to the crypto asset context because, as noted in Section I.B above, a crypto asset’s holders ordinarily do not receive and are not entitled to any income arising from development and operation of the crypto asset or any associated applications.

2. Exchange-Traded Crypto Assets and Efforts of Others

For a given instrument to be an investment contract, it must also satisfy Howey’s efforts of others prong. In the context of an exchange-traded crypto asset, that requirement will be met if investors reasonably expected the crypto asset’s value to be significantly determined by the entrepreneurial or managerial efforts of others.\textsuperscript{104} Whether this requirement is met will depend on the at-issue crypto asset’s specific features, including the extent of its operational decentralization. This subpart explores issues pertinent to application of Howey’s efforts of others prong in the secondary trading crypto asset context.

The discussion below makes two points regarding Howey’s efforts of others prong. First, the discussion explains why operational decentralization, by itself, is not a per se bar to Howey’s efforts of others prong being met, though there may be specific factual features that result in a particular exchange-traded crypto asset not satisfying that Howey element. Second, the discussion below also explains the doctrinal irrelevancy of investors’ expectations concerning the use of their sales proceeds.

i. Why Operational Decentralization Is Not a Per Se Bar

The first issue to consider is whether a crypto asset’s operational decentralization should preclude satisfaction of Howey’s efforts of others prong. To structure the analysis, consider two possibilities. The first
possibility is that the exchange-traded crypto asset has achieved some operational decentralization but a centralized third party continues to direct some entrepreneurial or managerial efforts toward the crypto asset’s success. The second possibility is that the crypto asset has achieved complete operational decentralization, in the sense that no centralized third party directs entrepreneurial or managerial efforts toward the success of the crypto asset; instead, those efforts are undertaken by a decentralized group of unaffiliated persons.105

a. Continued Involvement by Sponsors or Other Centralized Third Party

If the crypto asset’s sponsors or some other centralized third party continue to exert entrepreneurial or managerial efforts such that investors reasonably expect those efforts to significantly determine the crypto asset’s value, as usually embodied by its trading price, then Howey’s efforts of others prong will be met.106 This observation is reflected in courts’ determinations of the Howey question as it pertains to crypto assets at their offering stage,107 which have found the efforts of others prong to have been satisfied because the crypto asset’s investors reasonably expected their profits to arise from the sponsor’s entrepreneurial or managerial efforts.108

Presently, nearly all crypto assets appear to be associated with one or more centralized bodies that have at least some involvement facilitating their success, including through developing, operating, managing, and promoting the crypto assets and any associated applications.109 While the importance of the efforts of such centralized bodies on a given crypto asset’s success may ebb as the crypto asset matures and becomes the subject of additional

105. There is also the possibility that the crypto asset and any of its associated applications no longer require any entrepreneurial or managerial efforts to be viable. Howey’s efforts of others prong would not be met in this circumstance.

106. Under Howey, the requisite efforts need not be undertaken by the crypto asset’s sponsors and instead the efforts of other non-investors are included in the analysis. See Howey, 328 U.S. at 298–99 (test requires that profits are reasonably expected from “the efforts of the promoter or a third party”). See also Cont’l Mktg. Corp. v. SEC, 387 F.2d 466, 470 (10th Cir. 1967) (rejecting the argument that Howey’s requisite entrepreneurial or managerial efforts must be undertaken by the security’s seller or a third-party owned or controlled by the seller).

107. See cases cited supra note 65. As noted, no court has yet rendered a decision concerning the Howey question as it relates to secondary crypto asset transactions. See supra note 66.

108. For instance, in granting the SEC’s motion for a preliminary injunction in the SEC’s Section 5 claim against Telegram, the court found that the SEC had shown a substantial likelihood of success of proving that a reasonable initial purchaser of the at-issue crypto asset would have expected the asset’s resale price to increase because of the sponsor’s entrepreneurial and managerial efforts. See SEC v. Telegram Grp. Inc., 448 F. Supp. 3d 352, 375–78 (S.D.N.Y. 2020).

109. See, e.g., id. (in a case involving a crypto asset’s initial offering, granting the SEC’s motion for preliminary injunction and finding that the SEC had shown a substantial likelihood of establishing Howey’s efforts of others prong because of the activities of two centralized bodies).
secondary trading, those efforts may remain instrumental to the crypto asset’s success. Even crypto assets like ether that have experienced significant operational decentralization have at times benefited from the focused efforts of a collective group of developers.  

Whether the presence and activities of these centralized groups is sufficient to satisfy Howey’s efforts of others prong will hinge on the nature of the centralized third party’s involvement. A series of issues await judicial determination. For instance, a crypto asset or its associated applications, if any, ordinarily will have a presence on software code repositories and messaging platforms, where the crypto asset’s developers, investors, and others come together and communicate to improve the asset or its associated applications. Some of these activities may be managed by the crypto asset’s sponsors rather than investors. If those managerial efforts are important to the viability of the crypto asset or any associated applications, then that would militate in favor of a finding that Howey’s efforts of others prong was met.

The availability of pricing data opens the possibility of using empirical techniques to assess Howey’s efforts of others prong in investment contract cases involving an exchange-traded crypto asset. An assessment of whether a crypto asset’s trading price was influenced by the activities of a centralized body is relevant to the efforts of others question, which demands a determination whether reasonable investors would expect the asset’s value, as ordinarily measured by its price, to be significantly determined by the entrepreneurial or managerial efforts of the centralized body. If a crypto asset’s price was influenced by the efforts of a centralized body, then the crypto asset’s price would be expected to move in a directionally appropriate way once value-relevant activity by the centralized body became known to

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110. See, e.g., Walch, supra note 14, at 56–57 (discussing the role of developers in the 2016 hard fork of the Ethereum blockchain). See also PARK, supra note 59, at 6 (“[T]here are questions about whether the Ethereum project is truly independent of its founders.”). Furthermore, the mere fact that a crypto asset relies on a distributed ledger and therefore has its relevant data spread across a network with a multitude of sites or nodes does not resolve the efforts of others question, since, for instance, a centralized body could still have significant involvement in managing the network.


112. See, e.g., Solana, GITHUB, supra note 111.

113. In addition to a presence on message platforms and software code repositories, a crypto asset or its associated application may have an active presence on discussion sites like Reddit and social media sites like X. If the crypto asset’s sponsor undertakes activity on those sites that facilitates the success of the crypto asset or any associated applications, then that activity also would militate in favor of Howey’s efforts of others prong being met. See, e.g., SEC v. LBRY, Inc., 639 F. Supp. 3d 211, 217–18 (D.N.H. 2022) (evaluating Howey’s efforts of others prong in part using the crypto asset sponsor’s communications on Reddit).
the market. For instance, an announced improvement in a crypto asset’s associated application by the centralized body would be expected to cause the crypto asset’s price to increase, assuming that Howey’s efforts of others prong was met.

An event study therefore could be used to assess the extent to which the at-issue crypto asset does or does not respond to potentially value-relevant activities of a centralized body. However, the use of event studies in that context should be undertaken with care. First, there are important methodological considerations, such as the issue of low power, which are amplified in the crypto asset context because of high crypto asset price volatility. Second, the event study may be underinclusive in that it would not capture the effects of a centralized body’s ongoing influence on a crypto asset’s price and instead would be limited to analysis of how episodic events associated with the centralized body affected the asset’s price. Finally, even if the event study showed that the crypto asset’s price responds to value-relevant activities of a centralized body, that finding would not fully resolve the pertinent question of whether investors reasonably expected the crypto asset’s price to be significantly determined by the centralized body’s entrepreneurial or managerial efforts, though it would be one important determinant in that inquiry.

b. Absence of Any Centralized Third Party

Now, suppose instead that the crypto asset is fully decentralized in that there is no centralized third party that directs entrepreneurial or managerial efforts toward the crypto asset’s success; instead, those efforts are undertaken by a decentralized group of unaffiliated persons. The prospect of full decentralization raises the question of whether Howey’s efforts of others prong requires the existence of one or more centralized third parties whose entrepreneurial or managerial efforts significantly affect the investment contract’s success. If such centralized third parties in fact are necessary, then sufficient decentralization would by itself preclude satisfaction of Howey’s efforts of other prong.

SEC staff guidance concerning the application of Howey in the crypto asset context can be reasonably interpreted to envision the presence of one or more such centralized third parties for purposes of evaluating Howey’s efforts of others prong. That guidance defines an “Active Participant” as

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114. In connection with its Motion for Summary Judgment in its action against Ripple, the SEC sought to use an event study to show that the crypto asset’s price responded to the sponsor’s value-relevant activity. See Amended Expert Rep. of Albert Metz, SEC v. Ripple Labs, Inc., No. 20-cv-10832 (S.D.N.Y. Mar. 11, 2022), ECF No. 439, Exhibit B.

115. See infra Section III.D.

“a promoter, sponsor, or other third party (or affiliated group of third parties)” and then goes on to explain that Howey’s efforts of others prong in the crypto asset context requires an inquiry into whether “the purchaser reasonably expect[s] to rely on the efforts of an [Active Participant]” and the nature of those efforts. In other words, the SEC staff’s definition of an Active Participant could be read to exclude the efforts of a decentralized group of unaffiliated third parties from meeting Howey’s efforts of others prong. Scholars also have proposed tests for assessing Howey’s efforts of others prong in the crypto asset context that similarly appear to hinge on the presence of one or more centralized third parties, such as the crypto asset’s sponsors.

The well-publicized 2018 speech by the SEC’s then-Director of Corporate Finance, Bill Hinman, can also be interpreted as implicitly adopting the notion that Howey’s efforts of others prong requires the presence of a centralized third party. In that speech, then-Director Hinman observed that increasing operational decentralization during a crypto asset’s lifecycle could cause a crypto asset that previously satisfied Howey’s test of an investment contract to no longer satisfy that test because no centralized group is tasked with the crypto asset’s entrepreneurial or managerial functions. That proposition has been featured prominently in crypto asset litigation that implicate the Howey question and has been the subject of academic inquiry.

Howey should not be read as requiring the presence of one or more centralized third parties for purposes of its efforts of others prong. There is nothing in the language or reasoning of Howey suggesting that the requisite entrepreneurial or managerial efforts must be undertaken by a centralized


117. See id.
118. See, e.g., Henderson & Raskin, supra note 59, at 461 (proposing a test for evaluating the applicability of Howey to the crypto asset context, where the test specifies that “if the instrument is a decentralized one that is not controlled by a single entity, then it is not a security”).
119. As Hinman observed: [T]his also points the way to when a digital asset transaction may no longer represent a security offering. If the network on which the token or coin is to function is sufficiently decentralized—where purchasers would no longer reasonably expect a person or group to carry out essential managerial or entrepreneurial efforts—the assets may not represent an investment contract. . . . What are some of the factors to consider in assessing whether a digital asset is offered as an investment contract and is thus a security? Primarily, consider whether a third party—be it a person, entity or coordinated group of actors—drives the expectation of a return.

121. See, e.g., PARK, supra note 59; Henderson & Raskin, supra note 59.
third party. Howey’s efforts of others prong instead is better understood as requiring investors to have reasonably expected their profits to have been significantly determined by the entrepreneurial or managerial efforts of those other than the investors themselves, whether or not those “others” constituted a centralized group.

Compared with a formulation of Howey’s efforts of others prong that requires the presence of a value-enhancing centralized party, an advantage of a formulation that permits the prong to be satisfied even in the absence of a centralized party is that it better focuses the analysis on an essential feature of an investment: delegation of entrepreneurial or managerial efforts to those outside of the investor class. So long as investors are sufficiently passive, in the sense they ceded sufficient entrepreneurial and managerial efforts to others, the putative investment contract will bear this indicium, independent of the degree of centralization of the group to whom those efforts were delegated. The investment contract cases addressing whether investors’ managerial involvement in the enterprise defeats Howey’s efforts of others prong embody this observation. Those cases evaluate the efforts of others prong by focusing on the extent of investors’ passivity.

Because Howey’s efforts of others prong should not be understood as mandating the presence of a value-generating centralized body, the prong may be met even if a crypto asset has undergone substantial operational decentralization such that there is no centralized third party that exerts entrepreneurial or managerial efforts influencing the crypto asset’s value. The relevant inquiry is whether the crypto asset’s investors reasonably

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122. While the requisite entrepreneurial or managerial efforts in Howey were undertaken by centralized third parties (namely, W.J. Howey Company and Howey-in-the-Hills Service, Inc.), the Court’s reasoning was not grounded on the fact of that centralization.

123. As a separate point, most courts also evaluate the promoter’s pre-purchase activities when determining whether Howey’s efforts of others prong was met. See, e.g., SEC v Mut. Benefits Corp., 408 F.3d 737, 743–45 (11th Cir. 2005) (holding that the promoter’s pre-purchase activities are included in an evaluation of Howey’s efforts of others prong). Under this line of cases, regardless of whether the secondary transaction investment contract case involved a centralized group at the time of sale, the pre-purchase efforts of the promoter would be considered in the efforts of others analysis.

124. Consider, for instance, U.S. v. Leonard, 529 F.3d 83 (2d Cir. 2008), in which the Second Circuit evaluated whether the district court erred in concluding that the LLC interests at issue were investment contracts under Howey. The defendants argued that Howey’s efforts of others prong was not met because the purchasers of the LLC interests had been contractually delegated some managerial involvement in the enterprise. Id. at 88. The Second Circuit rejected that argument. Id. at 89–91. The court first distinguished between circumstances in which investors are passive and circumstances in which they maintain significant investor control. Id. at 89–90. It then held that when investors maintain or are delegated some control over the investment, Howey’s efforts of others prong may still be met so long as the investors were unable to exercise meaningful control and thus were effectively passive. Id. at 90–91. See also Steinhardt Grp. Inc. v. Citicorp, 126 F.3d 144 (3d Cir. 1997) (in a case involving a limited partnership interest, concluding that Howey’s efforts of others prong was not met because the limited partner was not sufficiently passive).
believed the asset’s value was significantly determined by the entrepreneurial or managerial efforts of individuals or entities other than the investors themselves. If the asset’s investors had those reasonable expectations, then Howey’s efforts of others prong would be met even if the pertinent efforts were undertaken by a dispersed and large number of unaffiliated individuals or entities.

Not all exchange-traded crypto assets will satisfy Howey’s efforts of others prong. First, if the putative investment contract is such that it requires no ongoing entrepreneurial or managerial efforts to succeed, then Howey’s efforts of others prong would not be met. Mining, the energy-intensive process of validating transactions on proof-of-work blockchains, should be considered ministerial rather than entrepreneurial or managerial. Second, if the investors were the ones who significantly directed the entrepreneurial or managerial efforts pertinent to the investment contract’s success, then Howey’s efforts of others prong also will not be met. This may be the case if the crypto asset provided investors with extensive governance rights that they can readily exercise.

Additionally, Howey does not admit as investment contracts instruments whose value is driven almost entirely by market forces. In such a circumstance, it would not be reasonable for the putative investment contract’s investors to believe that its value is significantly determined by any person’s entrepreneurial or managerial efforts. That is the case, for instance, for such varied tradeable items such as gold, baseball cards, and bitcoin, which are all understood to have their value driven almost entirely by market forces rather than by any person or persons’ entrepreneurial or managerial efforts. At the same time, even if the crypto asset’s price is determined in part by market forces—for instance, if its price moves in part because of price changes of another crypto asset such as bitcoin—investors may still reasonably expect the asset’s price to be significantly determined


126. Efforts that are not entrepreneurial or managerial in nature are not credited in an analysis of Howey’s efforts of others prong. See, e.g., SEC v. Life Partners, Inc., 87 F.3d 536, 545 (D.C. Cir. 1996).

127. See supra note 104; Fargo Partners v. Dain Corp., 540 F.2d 912, 914–15 (8th Cir. 1976) (finding that Howey’s efforts of others prong was not met because of the investor’s significant involvement in the alleged investment contract). See also id. at 914–15 (“Where the investors’ duties were nominal and insignificant, their roles were perfunctory or ministerial, or they lacked any real control over the operation of the enterprise, the courts have found investment contracts.”).

128. See, e.g., Noa v. Key Futures, Inc., 638 F.2d 77, 79 (9th Cir. 1980) (concluding that Howey’s efforts of others prong was not met with respect to silver bars because investors’ profits depended on market-wide price fluctuations of silver, not managerial efforts).
by the entrepreneurial or managerial efforts of others, in which case Howey’s efforts of others prong will be met.\textsuperscript{129}

\textit{ii. The Irrelevance of Investors’ Expectations Concerning the Use of Their Sales Proceeds}

In a primary transaction case, investors’ sales proceeds ultimately will flow to the promoter, who then is expected to use the proceeds to facilitate the enterprise in which the purchasers are invested. That will not be the case in a secondary transaction case. In this circumstance, investors’ sales proceeds instead will flow to the trading counterparties, who ordinarily will not be the enterprise’s promoter and also will not direct the sales proceeds to the promoter. For instance, in a secondary crypto asset transaction, the purchasers’ proceeds usually will not flow to the crypto asset’s sponsors and instead will be retained by the trading counterparties. For this reason, while investors in a primary transaction case may have a reasonable expectation that their sales proceeds will be used by the promoter to facilitate the enterprise in which they are invested, investors in a secondary transaction case generally will not reasonably have those expectations, as their sales proceeds will directly flow to trading counterparties, who will usually not be the promoter, though investors may reasonably have those expectations in certain circumstances.\textsuperscript{130}

The fact that investors in a secondary transaction case may not reasonably believe that their sales proceeds will be used by the promoter to

\textsuperscript{129} Of course, in this circumstance, it may be that other prongs of Howey are not met. Consider, for example, tickets to a popular concert. Suppose that the tickets can be resold on a secondary market and that the secondary market price is significantly higher than the initial purchase price. Because of the higher secondary market price, initial purchasers profited from their purchase, in the sense that the current value of their tickets exceeds the purchase price, but did their initial ticket purchases constitute an investment contract under Howey? One possibility is that the high secondary market price was driven by the relatively high willingness to pay of those who wanted to attend the concert but were unable to obtain tickets during the initial sale. Because the purchasers’ profits were the result of market forces, Howey’s efforts of others prong would not have been met. See supra note 128 and accompanying text. But suppose instead that the elevated secondary market price was because of the entrepreneurial or managerial efforts of the performer and others, for instance, through heightened promotion and marketing of the concert. While Howey’s efforts of others prong may have been met in this circumstance, this does not necessarily mean that the initial ticket purchases constituted an investment contract. If, for instance, the initial ticket purchasers purchased their tickets primarily to attend the concert instead of seeking profits through a resale, then Howey’s expectation of profits prong would not have been satisfied because of Forman’s investment/consumption distinction. See supra note 60 and accompanying text.

\textsuperscript{130} For instance, suppose that the promoter was able to conduct the offering only because the initial purchasers expected to resell the instrument to secondary investors. Suppose further that the secondary investors knew, or reasonably should have known, of the initial purchasers’ expectation and necessity of resale. In this case, it may have been reasonable for the secondary investors to have expected their sales proceeds to have effectively been used by the promoter to facilitate the enterprise, with the initial purchasers merely serving as a conduit of those proceeds.
facilitate the enterprise is doctrinally irrelevant to Howey’s efforts of others prong. Howey’s efforts of others prong requires that investors reasonably expected their profits to have been significantly determined by others’ entrepreneurial or managerial efforts, and the operative rule makes no mention of investors’ expectations concerning the use of their sales proceeds. So, for example, while investors’ sales proceeds in a secondary crypto asset transaction case may not have flowed to the crypto asset’s sponsors, Howey’s efforts of others prong will still have been met so long as traders reasonably expected the crypto asset’s value to have been significantly determined by the entrepreneurial or managerial efforts of others, such as the sponsor. In other words, the appropriate focus of Howey’s efforts of others prong is on investors’ beliefs about whose entrepreneurial or managerial efforts significantly determined their expected profits, not investors’ beliefs about how their sales proceeds specifically would be put to use.

There is no public policy justification for limiting the investment contract category to only those circumstances in which investors reasonably expected the promoter to use their funds to facilitate the enterprise in which they are invested. First, the adoption of that limiting rule would permit instruments that otherwise would be investment contracts to permissibly be the subject of an unregistered public offering if the offering were structured in a manner that investors could not readily discern whether their proceeds would flow to the sponsor. For example, if a promoter simultaneously

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131. See, e.g., United Hous. Found., Inc. v. Forman, 421 U.S. 837, 852 (1975) (Howey requires “a reasonable expectation of profits to be derived from the entrepreneurial or managerial efforts of others”).

132. Nonetheless, in its recent summary judgment decision, the court in the SEC’s Section 5 action against Ripple implicitly adopted the rule that Howey’s efforts of others prong cannot be met if investors do not reasonably expect their sales proceeds to be used by the sponsor to facilitate the underlying enterprise. See SEC v. Ripple Labs, Inc., No. 20-cv-10832, 2023 U.S. Dist. LEXIS 120486, at *35–37 (S.D.N.Y July 13, 2023). In that case, the crypto asset sponsor initially sold the crypto asset directly to certain counterparties using as conduits crypto exchanges in which secondary transactions of the crypto asset were already occurring. Id. at *8. The court concluded that because the class of investors who purchased the initially offered crypto asset on those crypto exchanges could not have known whether their sales proceeds flowed to the crypto asset’s sponsor or instead to a trading counterparty, they could not have reasonably expected that the sponsor would use their sales proceeds to increase the crypto asset’s value, thus defeating a finding of Howey’s efforts of others prong. See id. at *35–36. The case remains pending as of this Article’s writing, with the court recently denying the SEC’s motion to certify interlocutory appeal of the court’s summary judgment decision. See Order Denying Motion for Leave to Appeal, SEC v. Ripple Labs, Inc., No. 20-cv-10832 (S.D.N.Y. Oct. 3, 2023).

133. Howey’s efforts of others prong also does not require that the promoter itself, as opposed to some other non-investor, undertake the requisite entrepreneurial or managerial efforts. See supra note 106.

134. Others have made a similar point. See, e.g., John Coffee, The Next Big Case in the Crypto Wars, N.Y.L.J. (Sept. 20, 2023), https://www.law.com/newyorklawjournal/2023/09/20/the-next-big-
undertook multiple investment projects, the promoter could pool all investors’ funds, which may result in investors of any given project not knowing whether the promoter specifically used their funds to finance their project, even though there was no question that the investors’ profits would be significantly determined by the promoter’s entrepreneurial or managerial efforts.

Second, limiting the investment contract category so that it only encompasses circumstances in which investors reasonably expected the promoter to use their funds to facilitate the enterprise would exclude an expansive swath of secondary transaction investment contract cases from the scope of federal securities law. This near wholesale carveout of an entire transaction class from the reach of the securities laws would serve no public policy goal and instead would undermine the investor protection objectives that the securities laws seek to promote.

C. THE VALUE OF ADDITIONAL DEFINITIONAL CLARITY

Crypto asset sponsors and crypto exchanges sometimes criticize Howey’s investment contract analysis when applied to the crypto asset context as unreasonably uncertain. Any offering of securities, unless exempted, must be registered, and any exchange that facilitates securities transactions must register, unless exempted. It is thus important to crypto asset sponsors and exchanges that they have clear guidance on which of the crypto assets they may offer or list are securities under federal securities law. Crypto asset sponsors and crypto exchanges contend that Howey fails to clearly inform them which crypto assets may be securities, and thus subject them to federal securities law, including its robust registration requirements. The effect of Howey’s uncertainty on crypto asset sponsors
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and exchanges is heightened because the pertinent transactions are not one-off or episodic transactions but instead are the foundations of those market participants’ business models.

The discussion in the previous Section shows that the effects of any uncertainty in Howey’s application in the crypto asset context extends beyond crypto asset sponsors and exchanges and also encompasses crypto asset traders. Crypto asset traders who are subject to secondary crypto asset trading fraud, or other forms of misconduct prohibited by the federal securities laws such as market manipulation, may seek to recover through claims asserted under the securities laws but only to find their claims dismissed on grounds that the pertinent transactions did not involve securities.137

As the case law grows and matures, crypto asset market participants’ uncertainty about Howey’s analysis in the crypto asset context should abate.138 The opinions courts have authored to date in crypto asset cases concerning the investment contract question have been detailed and reasoned (even if one disagrees with their reasoning or conclusions).139 Future opinions at that level of care should provide market participants with a clearer understanding of when crypto asset transactions are within the scope of securities law. SEC staff may also offer additional guidance on crypto assets and the definitional question.140

The pace of such doctrinal development may be slower than market participants prefer, especially crypto asset sponsors and exchanges.141

137. Crypto asset traders may also unknowingly be swept within securities law’s various prohibitions, such as insider trading. In SEC v. Wahi, No. 22-cv-01009, 2023 U.S. Dist. LEXIS 89067 (W.D. Wash. May 22, 2023), the defendant traders who were alleged by the SEC to have unlawfully engaged in insider trading argued that due process prohibits the SEC from enforcing its position that the at-issue crypto assets were securities because market participants, such as the defendants in the case, lacked fair notice about the scope of the investment contract category. Defendants’ Motion to Dismiss at 38–39, SEC v. Wahi, No. 22-cv-01009 (W.D. Wash. May 22, 2023).

138. As cases are litigated, doctrinal fissures will arise, but the appellate process provides a mechanism for resolution of those fissures. For example, the court in the SEC’s case against Terra issued a decision in which it rejected the reasoning of the Ripple court’s decision discussed above concerning Howey’s efforts of others prong. See SEC v. Terraform Labs Pte. Ltd., No. 23-cv-1346, 2023 U.S. Dist. LEXIS 132046, *44–46 (S.D.N.Y. July 31, 2023) (rejecting the reasoning of the Ripple decision concerning Howey’s efforts of others prong); supra note 132 (describing the Ripple decision). The Second Circuit should have the opportunity to resolve this intra-circuit split at the appropriate time.

139. See supra note 65.

140. As noted, SEC staff has already issued some guidance on the definitional question, see supra note 104 and accompanying text, but some have questioned its clarity and value of that guidance in ameliorating market participants’ legal uncertainty. See, e.g., Carol R. Goforth, Regulation by Enforcement: Problems with the SEC’s Approach to Cryptoasset Regulation, 82 Md. L. Rev. 107, 143–48 (2022).

141. In addition to calling for legislative change, some crypto asset participants have also called on the SEC to engage in rulemaking to clarify when crypto assets are securities. See, e.g., Coinbase, Petition
Further clarity may come in the form of legislation that seeks to articulate with more specificity the circumstances when a given crypto asset will be within the scope of securities law. Some of the introduced or contemplated bills would define a large class of crypto assets as commodities rather than securities. To the extent a crypto asset is deemed to be a commodity rather than a security, traders sustaining losses from secondary trading crypto asset fraud could seek recovery through a CFTC Rule 180.1 class action rather than a Rule 10b-5 class action. If the substantive claim underlying secondary trading crypto asset fraud class actions were to shift to Rule 180.1, the public policy discussion in Part III below would also apply in that context.

Finally, it is worth observing that certain aspects of the securities laws’ registration and post-offering disclosure requirements are not especially well-suited for the crypto asset context. With respect to the registration process, scholars have observed that because the disclosures required by registration were developed with an eye to offerings of more conventional securities like stocks and bonds, they do not always align well with crypto asset offerings. This point about incongruity also applies to the regulatorily mandated post-offering disclosures. For instance, suppose that a crypto asset sponsor conducts a registered offering of the crypto asset. Through section 15(d) of the Securities Exchange Act, the sponsor becomes subject to the ongoing reporting requirements of section 13(a) of the Exchange Act, such as the requirement to prepare and file an annual report.

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143. See supra note 50.

144. According to Brummer:

[T]he base layer disclosure documents for securities law fail to anticipate the particular technological features of decentralized technologies and infrastructures. Instead, they assume and inquire only into governance, technology, and other operational features inherent to industrial economies, and which are often different, or altogether absent in digital and blockchain-based economies. As a result, securities forms—including Form S-1, the document initial issuers of securities file with the SEC to disclose key facts about their business—fail to anticipate decentralized architectures, and are both over- and under-inclusive in terms of the disclosure requirements that one would expect of issuers of blockchain-based securities.


report.\textsuperscript{146} Suppose that, at some point, the crypto asset undergoes complete operational decentralization such that the crypto asset sponsor ceases to be involved in any aspect of the crypto asset and instead the development, operation, management, and promotion of the crypto asset and any associated applications are undertaken by a decentralized group of other stakeholders.

In this case, should the sponsor, as the crypto asset’s issuer, still be obligated to make the required ongoing disclosures, on the ground that section 13(a) obligates the “issuer” to make those disclosures?\textsuperscript{147} Alternatively, if the ongoing reporting obligations instead were to somehow apply to the decentralized non-issuer group, then how, as a practical matter, could such a diffused group be able to prepare the necessary periodic and current reports? There is also the question of whether the information called for by the required post-offering disclosures is meaningful and appropriate for the crypto asset context. These questions demonstrate that some regulatory effort should be directed at reformulating the post-offering disclosure requirements so that they are better suited for the crypto asset context.\textsuperscript{148}

III. PUBLIC POLICY CONSIDERATIONS PERTINENT TO CRYPTO ASSET-BASED RULE 10B-5 CLASS ACTIONS

In addition to the doctrinal propriety of defrauded crypto asset traders relying on Rule 10b-5 class actions, there is the normative question of whether defrauded traders should be able to rely on Rule 10b-5 class relief as a matter of public policy. That issue arises in part because of the considerable skepticism that some legal scholars have expressed about the use of Rule 10b-5 class actions in stock-based cases as effective compensation and deterrence mechanisms.

The assault on stock-based Rule 10b-5 class actions has primarily been through two longstanding critiques—the circularity and diversification critiques.\textsuperscript{149} More recently, some scholars have challenged the relevancy of

\textsuperscript{146} See id. (issuer that conducts a registered offering becomes subject to the ongoing reporting requirements of Section 13(a) of the Securities Exchange Act, 15 U.S.C. § 78m); 15 U.S.C. § 78m(a) (ongoing reporting requirements).

\textsuperscript{147} See 15 U.S.C. § 78m(a) (requirements directed at the registered security’s “issuer”).

\textsuperscript{148} For a proposal to revise the Securities Act’s disclosure regime so that it is better suited for crypto asset initial offerings, see Chris Brummer, Trevor I. Kiviat & Jai Massari, What Should Be Disclosed in an Initial Coin Offering?, in CRYPTOASSETS: LEGAL, REGULATORY, AND MONETARY PERSPECTIVES 157 (Chris Brummer ed., 2019).

\textsuperscript{149} See, e.g., James Cameron Spindler, We Have a Consensus on Fraud on the Market—And It’s Wrong, 7 HARV. BUS. L. REV. 67, 77 (2017) (“As the assault on fraud on the market has progressed, two of the primary weapons have been the circularity and diversification critiques.”). Cox is understood to
those critiques, while others have articulated theories that provide alternate public policy justifications for stock-based Rule 10b-5 class actions, with the leading example being a corporate governance justification for stock-based Rule 10b-5 class actions. Despite the lingering skepticism by some academics that stock-based Rule 10b-5 class actions fail to achieve their public policy objectives, they remain a core fixture of securities practice.

If the public policy justification for crypto asset-based Rule 10b-5 class actions is significantly weaker than stock-based Rule 10b-5 class actions, then we may want a preemptive curtailment of those litigations through legislative action or doctrinal reorientation before they become commonplace as stock-based Rule 10b-5 class actions have become. More generally, if the public policy justifications are significantly weaker for crypto asset-based Rule 10b-5 class actions than stock-based ones, that would justify different legal treatment of the two types of class actions. This Part of the Article evaluates that particular public policy question viewed through the lens of the circularity and diversification critiques and the corporate governance justification.

The public policy determinations below are mixed and preliminary in part, but do not lend support to the notion that the public policy justification for crypto asset-based Rule 10b-5 class actions is significantly weaker than the public policy justification for stock-based Rule 10b-5 class actions. First, the circularity critique—the leading critique in the stock-based Rule 10b-5 context—is significantly attenuated in the crypto asset context because the principal factors supporting the circularity critique in the stock context are substantially absent in the crypto asset context. There are countervailing reasons why the diversification critique may be more or less relevant in the crypto asset context than in the stock context, but no reason to expect that the diversification critique has significantly more force in the crypto asset context than in the stock context. On the other hand, the corporate governance justification loses relevance in the crypto asset context.


151. The corporate law justification was developed by Fox. See Merritt B. Fox, Why Civil Liability for Disclosure Violations When Issuers Do Not Trade?, 2009 Wis. L. Rev. 297 (2009).
Sections A, B, and C below address the circularity critique, the diversification critique, and the corporate governance justification, respectively. Section D provides a few comments concerning the issue of frivolous litigation.

A. THE CIRCULARITY CRITIQUE

The key critique against Rule 10b-5 stock-based class actions is circularity, which is the idea that when class actions settle, as nearly all do, the settlement is ultimately paid for by the company’s shareholders. This serves to undermine both the deterrence and compensatory features of the class action process. Because of its centrality to public policy analysis of securities class actions, it is valuable to work through some of the details of the circularity critique before turning to its applicability in the crypto asset context.

1. Circularity in the Stock Context

Circularity arises in the stock context for two reasons. The first driver of the circularity critique is that individually named directors and officers usually will not directly pay any of the settlement amount because of D&O insurance and indemnification. A study by Klausner, Hegland, and Goforth, for instance, evaluated a sample of over two hundred and fifty securities class actions that had settled and found that directors and officers did not make any payments in 98% of those cases. That number is not surprising given that nearly all public companies purchase D&O insurance. Empirical studies also indicate that directors and officers may not pay any reputational penalty when they are accused of fraud. The lack of director and officer liability thus mitigates the deterrence effect of securities class actions on director and officer conduct.

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152. See, e.g., Spindler, supra note 149, at 69 (“The circularity critique holds that shareholder class actions amount to shareholders suing themselves.”) (quotation marks omitted).

153. Both the circularity critique and the diversification critique have been subjected to considerable academic inquiry. See id. at 91 (“The circularity and diversification critiques have been remarkably successful. Academic adherents are legion and comprise a veritable who’s who of securities law. . . . It appears most legal academics who propose significant securities class action reform have adopted some form of these arguments.”). Many academic articles have evaluated the circularity critiques and the diversification critique, though to a lesser extent. For a partial list, see id. at 91 nn.114–31.

154. Michael Klausner, Jason Hegland & Matthew Goforth, How Protective Is D&O Insurance in Securities Class Actions? An Update, PLUS J., May 2013, at 1, 3. Directors did not make payments in any of those settled cases and corporate officers made payments in 2% of the evaluated cases. Id.


The second driver of the circularity critique is the relationship between shareholders and the company’s net income. Because individually-named defendants ordinarily do not contribute to stock-based securities class action settlements, settlements instead are paid for by the company, either directly or through the company’s D&O insurance, or some combination of the two. Accordingly, settlement of a Rule 10b-5 class action against an issuer and its directors and officers usually will be funded by the issuer directly or indirectly through the cost of the D&O insurance that the issuer has purchased. Because shareholders are the company’s residual claimants, these corporate expenditures associated with settlement payments are ultimately borne by shareholders in the form of diminished cash flow.

One group of shareholders bearing the cost of settlement will be the same ones who were injured by the fraud (assuming they did not sell their shares). Because these shareholders will be partially footing their own recovery, full compensation will not be achieved. The other of the firm’s current shareholders responsible for the settlement will be ones who were not class plaintiffs. These shareholders have no direct responsibility for the fraud but will be paying for the injured shareholders’ recovery, which implicates fairness considerations.

The circularity critique can be more formally illustrated through a simple model that embodies these observations. Consider a stock-based Rule 10b-5 class action in which the subject company has N shares outstanding that were trading at a pre-fraud price of $P_0$ per share. Assume there was a fraudulent material misrepresentation attributed to the issuer and its directors and officers that increased the stock’s price to $P_1$, which eventually returned to the pre-fraud level of $P_0$ once the market became aware of the fraudulent statement.

Suppose that the class of the company’s shareholders who purchased shares at the inflated price bring a Rule 10b-5 class action against the company and its directors and officers. For simplicity, assume these injured shareholders do not sell their shares. Of the company’s N shares outstanding, suppose that n shares are represented by the litigating class. So, if $\pi$ is the fraction of the company’s outstanding shares represented by the litigating class, then $\pi = n/N$. The case settles and then pays $s$ dollars per share to each of the n shares purchased during the class period, for a total settlement payment of $s*n$. Given the discussion above regarding corporate obligations for class action settlements, the company will pay a fraction $\alpha$ of the

157. The study discussed above determined that of the settlements in the sample, the insurer paid the entire settlement amount in 57% of the cases, the insurer paid for just a part of the settlement in 28% of the cases, and the insurer paid for none of the settlement in the remaining 15% of cases. See Klausner et al., supra note 154, at 1.
settled, where $\alpha$ is between 0 and 1, which ultimately will be borne by the firm’s shareholders holding the $N$ shares. In discussions of the circularity critique it is ordinarily assumed, either expressly or implicitly, that the company directly or indirectly pays the entirety of the settlement, which corresponds to the circumstance in which $\alpha = 1$.

Given this setup, first consider the post-settlement welfare of the shareholders who were injured by the fraud because they paid the inflated price for the company’s stock. For expositional simplicity, consider a shareholder who is a member of the class and who purchased just a single share of the company’s stock. The value of the share that the shareholder maintains is $P_0$, but they purchased the share for $P_1$, which means that the net value of their portfolio is $P_0 - P_1$. The shareholder receives a settlement payment of $s$ but because shareholders ultimately bear the company’s settlement expenditure of $\alpha(s*\pi)$, each of the firm’s shareholders bears a per share settlement expense equal to $\alpha(s*\pi)/N$, or $\alpha(s*\pi)$. Thus, a class plaintiff receives a per-share net settlement amount of $s - \alpha(s*\pi)$. Collecting terms, the per-share post-settlement welfare of a class plaintiff is:

$$P_0 - P_1 + s(1 - \alpha*\pi)$$  \hspace{1cm} (1)

Even in the hypothetical but unrealistic world in which there are no litigation costs and no plaintiffs’ attorney fee awards, and even if the settlement were to compensate defrauded shareholders for the full amount of their overcharge, a settlement would not make the injured shareholders whole so long as the corporation pays at least some portion of the settlement. That is evident in the model above. To see this, suppose there are no litigation costs or plaintiffs’ attorney fee awards and the settlement fully pays the overcharge—that is, $s = P_1 - P_0$. In this case, the post-settlement welfare of the injured shareholder discussed above who holds one share of the stock is $- \alpha*\pi(P_1 - P_0)$, which is negative whenever the corporation pays at least some portion of the settlement, that is, whenever $\alpha$ is greater than 0.

In other words, while the settlement makes class shareholders whole in the first instance, they ultimately are not fully compensated because they each pay a portion of the settlement amount equal to $\alpha(s*\pi)$ per share. Each of the other firm’s shareholders also pay a per-share amount equal to $\alpha(s*\pi)$.

158. Those fees ordinarily account for nearly one quarter of the settlement amount in securities class actions. See Lynn A. Baker, Michael A. Perino & Charles Silver, Is the Price Right? An Empirical Study of Fee-Setting in Securities Class Actions, 115 COLUM. L. REV. 1371, 1389 tbl.1 (2015). However, the percentages are somewhat smaller for the largest settlements. See Stephen J. Choi, Jessica Erickson & A.C. Pritchard, Working Hard or Marking Work? Plaintiffs’ Attorneys Fees in Securities Fraud Class Actions, 17 J. EMPIRICAL LEGAL STUD. 438, 449 tbl.2 (2020) (attorney fees were 18.5% of the settlement among the top decile of settlements in the sample).

159. Using equation (1), the per-share post-settlement welfare of the injured shareholder under consideration is $P_0 - P_1 + (P_1 - P_0)*(1 - \alpha*\pi)$, which equals $- \alpha*\pi(P_1 - P_0)$. 


to finance the settlement. As this example shows, the circularity critique supports the position of those who argue that stock-based Rule 10b-5 class actions fail to meet compensation and deterrence objectives and implicate fairness concerns.160

2. Circularity in the Crypto Asset Context

Circularity is a significantly attenuated consideration for Rule 10b-5 crypto asset class actions because the drivers of the critique discussed above are substantially absent in the crypto asset context. To start, individual defendants in crypto asset Rule 10b-5 class actions are much less likely to be able to rely on insurance or indemnification as a shield from personal liability, relative to the stock-based context. First, because of the operational decentralization discussed in Section I.A above, an individual wrongdoer may not be associated with any entity such as a corporate body that provides indemnification rights or insurance coverage. Second, while publicly available data is lacking, D&O coverage appears very limited in the crypto asset context because of an avoidance by D&O carriers of the crypto space, as well as high premiums and unfavorable terms.161 So, even if an individual wrongdoer is affiliated with a centralized entity, the individual may not have the protection of D&O coverage, or only very limited protection, relative to an individual defendant in a stock-based Rule 10b-5 action. Furthermore, the apparent rarity of D&O coverage presumably would make indemnification a rarity as well, as a crypto asset entity would not be readily able to purchase Side B coverage to cover its indemnification expenses.162

The absence of crypto asset holders’ cash flow rights further diminishes the relevance of the circularity critique in the crypto asset context. As

160. For a summary of the arguments, see Spindler, supra note 149, at 86–91. Spindler does not agree that circularity poses an issue in stock-based Rule 10b-5 class actions. He uses the informational efficiency of stock prices to develop a model similar to the one above that shows that circularity will not arise because of a stock’s price fully adjusting to the expected settlement amount. See id. at 93–95.

161. See Noor Zainab Hussain & Carolyn Cohn, Insurers Denying Coverage to FTX-Linked Crypto Firms as Contagion Risk Mounts, Ins. J. (Dec. 19, 2022), https://www.insurancejournal.com/news/international/2022/12/19/699978.htm [https://perma.cc/VME7-JJG3] (“Insurers were already reluctant [prior to the collapse of the crypto exchange FTX] to underwrite asset and directors and officers (D&O) protection policies for crypto companies because of scant market regulation and the volatile prices of Bitcoin and other cryptocurrencies. Now, the collapse of FTX . . . has amplified concerns.”); Josh Liberatore, Crypto Winter Raises Host of D&O Coverage Issues, LAW360 (Feb. 10, 2023, 9:38 PM), https://www.law360.com/articles/1575237 [https://perma.cc/FLC9-2XG9] (quoting a D&O lawyer for the observation that “[m]ost D&O underwriters view crypto firms as toxic in today’s environment, so the availability of D&O insurance for those firms is quite limited . . . . Even when available, the insurance is expensive and somewhat limited in scope of coverage”).

discussed in Section I.B above, except in very rare circumstances, a crypto asset’s holders will not be the recipients of any profit distributions resulting from their crypto asset holdings. So, if a Rule 10b-5 crypto asset class action settles, then the crypto asset’s holders may not bear any of the cost of the settlement, as would be the case in the stock context.

For instance, suppose the defendant set in a Rule 10b-5 crypto class action includes an entity involved in developing the crypto asset and the entities’ directors or officers. Suppose that the class action settles for $s$ dollars per asset purchased during the class period. None of the settlement amount will be borne by the crypto asset’s holders (other than any defendant who may be a holder). Even if only some of the settlement is paid by the individual defendants, leaving some of the settlement to be paid by the named entity, that expenditure will not be passed down to the class plaintiffs or any other of the crypto asset’s traders because none have cash flow rights in the named entity.

With respect to the stylized model above, the named entity defendant may pay a fraction $\alpha$ of the settlement but because that amount is not borne by the crypto asset’s traders, the class plaintiffs’ welfare after the settlement is $P_0 - P_1 + s$ for each share purchased during the class period. Putting aside any litigation costs or attorney fee awards, this then supports the feasibility of complete compensation if the settlement amount is set equal to the overcharge.\textsuperscript{163} One countervailing consideration is that, to the extent the defendant is actively involved in developing or supporting the crypto asset or any associated applications, a settlement payment by the defendant may impede its ability to effectively engage in those facilitating efforts. By decreasing the perceived value of the crypto asset or any associated applications, the settlement may lower the crypto asset’s price, which would adversely affect the crypto asset’s holders, including class plaintiffs.

In addition to the possibility of full compensation, because crypto asset traders outside of the class are not paying for the settlement of the class plaintiffs, the fairness concerns noted above are ameliorated in the crypto asset context. A related implication of the circularity critique in the stock-based context is that putting litigation costs to the side, litigation is zero-sum, in that shareholders’ aggregate wealth is unchanged after a settlement or

\textsuperscript{163} As noted, plaintiffs’ attorney fees can be large in stock-based cases. See supra note 158. However, there is no reason to believe that this issue is significantly heightened in the crypto asset context. Furthermore, to the extent the market for plaintiffs’ lawyers is competitive, those fees should accurately reflect the cost of litigation and thus are a necessary ingredient to the private enforcement of the securities laws. Finally, if the fee awards were significantly higher in crypto asset Rule 10b-5 cases than in stock-based Rule 10b-5 cases, plaintiffs’ attorneys would be expected to substitute from the latter to the former, thus equalizing the fee awards in the two types of cases.
That is not the case in the crypto asset context. Because the cost of a settlement is not borne by the crypto asset’s traders, their aggregate welfare will increase after a settlement, putting aside the point above about a settlement potentially having adverse effects on development of the crypto asset or any associated applications. Finally, deterrence is heightened relative to the stock context because of the significantly greater likelihood that the individual defendants responsible for the fraud will incur monetary liability and thus be better incentivized to avoid that conduct in the first instance.

B. THE DIVERSIFICATION CRITIQUE

Diversification is another leading critique lodged in the literature against stock-based Rule 10b-5 class actions. While circularity focuses on compensation and deterrence considerations in a single securities class action, the diversification critique peeks with a broader lens. It inquires how a shareholder’s entire portfolio is affected by fraud and concludes that the cost of fraud can be diversified away, thereby nullifying the role of Rule 10b-5 class actions as a remedial mechanism.165

The key features of the diversification critique can be seen through a simplified model. Suppose that there are N publicly traded firms and a single investor. There are two time periods, period one and period two. In period one, the investor decides, for each one of the N firms, whether or not to purchase a single share of the firm’s common stock. So, in the first period, the investor can purchase up to N shares—one share of each of the N firms—but may invest in just a subset of the N firms. In the second period, the investor sells all of the shares that they purchased in the first period.

Suppose further that each of the N firms will be the target of fraud, the effect of which will be to artificially and temporarily inflate the firm’s stock price. Assume, for further simplicity, that all firms have the same fundamental, that is, non-fraud, share price and that the fraud will have the same price-inflating effect on each firm’s stock. For any given firm, there are two possibilities of the timing of the fraud. One possibility (which can be referred to as scenario one) is that the fraud occurred immediately before

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164. This requires the assumption that the company in the stock-based context directly or indirectly pays for the entire settlement. In this case, every dollar paid to a class plaintiff comes from the company, and therefore the company’s shareholders, and is thus a mere intra-shareholder transfer that leaves shareholders’ aggregate wealth unaffected.

165. The labeling of this critique as the diversification critique is from Spindler. See Spindler, supra note 149. Sometimes the diversification critique is considered a component of the circularity critique. See, e.g., Jill E. Fisch, Confronting the Circularity Problem in Private Securities Litigation, 2009 Wis. L. Rev. 333, 346 (2009) (“The theory behind the circularity argument is that the market consists primarily of diversified investors for whom the gains and losses from securities fraud net out.”).
period one and is revealed to the market between period one and period two. The second possibility (which can be referred to as scenario two) is that the fraud occurred immediately after period one and is revealed to the market after period two. Firms are randomly assigned to the two scenarios with equal probability and the firms’ assignments are uncorrelated.

This setup illuminates the two key tenants of the diversification critique. First, the diversification critique postulates that, for any given issuer, every shareholder of the firm ex ante is as likely to be a victim of fraud as a beneficiary. This can be seen in the model above. For any firm in which the investor became a shareholder in period one, the investor’s likelihood of being in scenario one (in which case the investor will have purchased at the fraud-inflated price and sold at the lower, fundamental price) is the same as the likelihood of being in scenario two (in which case the investor will have purchased at the fundamental price and sold at the higher, fraud-inflated price). This means that even without a compensatory scheme in place, the expected cost of fraud to the investor for any given stock in their portfolio is zero: the likelihood that a shareholder will incur the cost of fraud is the same as the likelihood that they benefit, and the cost and gains are the same. But note that while the expected cost to the shareholder from fraud directed at any given firm in which the shareholder is invested is zero, fraud still affects the variability of the shareholder’s portfolio, since half the time the trader will be a victim of fraud and the other half the time, a beneficiary.

The second key tenant of the diversification critique is that investors can diversify away the risk that fraud injects into their portfolio. In the stylized model above, that diversification occurs through the investor taking positions in a greater number of firms. In the context of that model, while fraud will have the same, non-zero effect on the expected value of a portfolio comprised of the shares of a single firm and a portfolio comprised of the shares of many firms, fraud will result in the latter portfolio being less risky than the former portfolio. If stock traders are sufficiently diversified, then fraud will not only have zero expected cost on their portfolios but also will cause traders’ portfolios to be exposed to only limited additional risk.166

166. Spindler traces the historical development of the diversification critique, culminating in its modern form, which is discussed in the text above and embodied by Grundfest’s articulation. See Spindler, supra note 149, at 77–86; Joseph A. Grundfest, Damages and Reliance Under Section 10(b) of the Exchange Act, 69 BUS. LAW. 307, 313–14 (2014). (“[B]ecause aftermarket transactors are both purchasers and sellers over time, and because the probability of profiting by selling into an aftermarket fraud is the same as the probability of suffering a loss as a consequence of buying into an aftermarket fraud, the aggregate risk created by aftermarket fraud can be viewed as diversifiable. Indeed, on average and over time, the risk of being harmed by aftermarket securities fraud (at least as measured exclusively by stock prices) averages to zero for investors who purchase and sell with equal frequency.”). Note that in Grundfest’s articulation, investors’ risk mitigation occurs through investors making numerous buy-sell decisions over time, while in the stylized model in the text above, the risk mitigation occurs through
As this discussion indicates, the strength of the diversification critique as a basis for concluding that fraud has no ex ante adverse effect on shareholder welfare turns primarily on two things. First, the theory’s strength depends on the extent to which shareholders are diversified. If shareholders are not well-diversified, then even though fraud will not affect the expected value of shareholders’ portfolios, it will increase their portfolios’ riskiness, which will undermine the welfare of risk averse shareholders. Second, the critique’s strength turns on the extent of shareholder risk aversion. If shareholders are strongly risk averse, then the effects of fraud on shareholder welfare through increased portfolio volatility will be more pronounced than if they were less risk averse, all else equal. The reason is that a more risk averse shareholder experiences greater disutility from an increase in portfolio risk than a less risk averse shareholder, all else equal.\(^\text{167}\)

These observations show that an assessment of whether the diversification critique is more or less pronounced in the crypto asset context than the stock context should focus, at least in the first instance, on comparing the extent of stock traders’ diversification and risk aversion with the extent of crypto asset traders’ diversification and risk aversion.\(^\text{168}\) Empirical work is needed in order to be able to competently assess how the extent of crypto asset investors’ diversification and degree of risk aversion compares to that of stock traders.

Though strong conclusions are not possible in the absence of this empirical analysis, it is reasonable to expect that the implications of the diversification and risk aversion considerations break in different directions, but nothing suggests that those considerations are such that the diversification critique has significantly greater relevance in the crypto asset context than in the stock context. Turning first to trader diversification, it is likely that stock traders are better diversified than crypto asset traders. Through the widespread availability of index funds, index-based exchange-traded funds (“ETFs”), and managed funds, equity traders can readily and investors increasing the number of firms in which they maintain an equity position.

\(^{167}\) Apart from an absence of sufficient diversification and sufficiently risk-averse traders, there may be other reasons why the diversification critique does not fully support the eradication of legal sanction for fraud. For instance, the critique assumes that shareholders’ portfolios are such that shareholders have an equal likelihood of being the beneficiaries of fraud as victims. However, some trader types may be more likely to be the victims of fraud than beneficiaries. See, e.g., Fisch, supra note 165, at 347 (“Informed traders are more likely to suffer net losses from securities fraud . . . because they trade on information, including fraudulent information.”). See also Spindler, supra note 149, at 102–13 (providing a game theoretic argument against the diversification technique based on precaution costs).

\(^{168}\) For simplicity, this discussion in this Section assumes that stock traders are distinct from crypto asset traders. Of course, some traders trade both stock and crypto assets. For those traders, the discussion in this Section can be understood as relating separately to the equity portion of their portfolio and the crypto asset portion of their portfolio.
cheaply diversify their stock portfolios. The prominence of those instruments suggests that many equity traders do maintain diversified stock portfolios. That likely is not the case for crypto asset investors given that the means for crypto asset investors to easily diversify their crypto asset holdings, such as through tokenized index funds that track a broad basket of crypto assets, are not commonplace, and crypto asset investors appear to prefer purchasing and selling individual crypto assets rather than funds.

To the extent crypto asset traders are less diversified than stock traders, this would translate into the diversification critique having less relevance in the crypto asset context than in the stock context. On the other hand, it is reasonable to expect the risk aversion consideration to work in the other direction, because crypto asset traders may be less risk averse than stock traders. As discussed in Section I.C above, crypto asset prices are very volatile as a general matter and more volatile than stock prices as a relative matter. That crypto asset traders are willing to trade in the face of such volatile prices may be reflective of those traders being more willing to accommodate risk than stock traders. To the extent that is correct, then this would provide a mechanism for the diversification critique to have more, not less, relevance in the crypto asset context than in the stock context.

C. THE CORPORATE GOVERNANCE JUSTIFICATION

The circularity and diversification critiques have been the primary arguments asserted against stock-based Rule 10b-5 class actions. One rejoinder to those critiques is a corporate governance justification that posits that stock-based Rule 10b-5 class actions advance public policy through improvements in corporate governance.169

The corporate governance justification focuses on securities law’s disclosure regime. The justification is based on the notion that more accurate disclosures by companies subject to the disclosure regime translate into improvements to legal and nonlegal channels of corporate governance. These improved corporate governance mechanisms, in turn, incentivize managers to be better focused on share value maximization, which results in economic gain. For example, the corporate governance justification posits that more accurate corporate disclosures increase the disciplinary power of a hostile takeover. The underlying reasoning is that more accurate company disclosures enable potential acquirers to more readily identify managerial deviations from share value maximization, where the threat of such takeover

169. See Fox, supra note 151 (developing the corporate governance justification). For an extension of Fox’s argument, see Fisch, supra note 165, at 345–49.
better incentivizes managers to maximize share value in the first instance. \textsuperscript{170} The corporate governance justification concludes that securities class actions work alongside public enforcement to improve the accuracy of company disclosures, which serves to facilitate these and other forms of economic gain. \textsuperscript{171}

The corporate governance justification loses relevance in the crypto asset context. The primary reason is that crypto asset sponsors are not reporting companies, and thus subject to the securities law’s ongoing disclosure obligations, at least under current law and practice. \textsuperscript{172} Crypto asset sponsors also do not voluntarily furnish the market with information that is substantively similar to the disclosures provided by public companies. \textsuperscript{173} So, it is not meaningful to ask whether crypto asset-based Rule 10b-5 class actions generate disclosure improvements.

Second, the various channels of corporate governance that the corporate governance justification posits to be improved by stock-based Rule 10b-5 class action have no or little applicability in the crypto asset context. For example, crypto asset sponsors are not publicly traded companies and so cannot be the subject of a takeover effort. Even if a party were to acquire significant amounts of a crypto asset, that would not allow the acquirer to exercise control over the crypto asset’s sponsor or to replace its management, as may be the case with the acquisition of sufficient voting shares of a publicly traded company.

\textsuperscript{170} See Fox, supra note 151, at 311–12.
\textsuperscript{171} See id. at 318–28. The justification also posits that accurate public company disclosures generate economic gain through an increase in liquidity. Id. at 311–12 (“Disclosure also enhances efficiency by increasing the liquidity of an issuer’s stock through the reduction in the bid/ask spread demanded by the makers of the markets for these shares.”). The corporate governance justification assumes that private enforcement of the securities laws deters misconduct and therefore results in more accurate disclosures. As a deterrence-based theory, it is subject to that aspect of the circularity critique that argues that D&O insurance and indemnification undermines, if not eliminates, Rule 10b-5’s ability to deter corporate directors and officers. See supra Section III.A.1.
\textsuperscript{172} This is not surprising. First, crypto asset sponsors are not reporting companies under section 15(d) of the Securities Exchange Act other than in the rarest of cases because crypto asset offerings are almost never registered. See supra note 11. Second, because crypto asset exchanges presently do not register as national securities exchanges, crypto asset sponsors are not reporting companies through section 12(b) of the Securities Exchange Act. Finally, even if a crypto asset sponsor is an entity with a class of “equity security,” it could stay under the triggering thresholds of section 12(g) of the Securities Exchange Act.
\textsuperscript{173} See Dirk A. Zetzsche, Ross P. Buckley, Douglas W. Arner & Linus Föhr, The ICO Gold Rush: It’s a Scam, It’s a Bubble, It’s a Super Challenge for Regulators, 60 HARV. INT’L’L J. 267 (2019) (reviewing over 1,000 white papers associated with crypto asset initial offerings and concluding that most included inadequate disclosures).
D. PRICE VOLATILITY AND FRIVOLOUS LITIGATION

The analysis above, when aggregated, does not provide a basis for concluding that the public policy justification for crypto asset-based Rule 10b-5 class actions is substantially weaker than the public policy justification for stock-based Rule 10b-5 class actions. The circularity critique is significantly less relevant in the crypto asset context than in the stock context, and the diversification critique may be more or less relevant in the crypto asset context than the stock context, but nothing indicates that it is significantly more relevant. An offsetting consideration is that the corporate governance justification ceases relevancy in the crypto asset context.

Absent from the discussion above is the issue of frivolous litigation, which can impose social cost by causing the defendants to divert resources away from value-enhancing activity to paying legal expenses and incurring settlement payments. One question pertinent to the Article’s public policy question is whether unmeritorious Rule 10b-5 class actions are more likely to be expected in the crypto asset context than in the stock context.

The prospect of frivolous lawsuits is heightened in the crypto asset context because of the significant price volatility discussed in Section I.C above. A crypto asset’s traders may lose significant amounts simply because of inherent price changes. In the face of a significant volatility-induced price drop, financially impaired crypto asset traders may seek to use Rule 10b-5 to recover their non-fraud losses, understanding that such cases often result in at least some recovery through settlement. Instead of crypto asset investors leading the charge to the courtroom in such circumstances, lawyers may be the first movers.\textsuperscript{174} In either case, frivolous suits may deplete or deteriorate the budgets of crypto asset sponsors and others who are involved in the development of crypto assets and their applications, which would serve to diminish incentives to innovate. That prospect of dampened innovative activity is amplified given the apparent current rarity of D&O insurance.\textsuperscript{175}

This is an important consideration, but the same price volatility that may incentivize non-meritorious suits may also work to disincentivize them. At

\textsuperscript{174} Some argue that this dynamic became commonplace in stock-based Rule 10b-5 class actions following the Supreme Court’s decision in \textit{Basic Inc. v. Levinson}, 485 U.S. 224 (1988), in which the Court recognized fraud on the market, making stock-based Rule 10b-5 class actions ubiquitous. As Pritchard has argued:

The incentives unleashed by Basic spawned a flood of securities fraud suits, often targeting start-up firms with high volatility, regardless of connection to actual fraud. When the stock prices of these firms fell, plaintiffs’ lawyers filed suits, and then combed disclosures for potential misstatements. Settlements followed quickly, however, obviating any need to prove fraud. The upshot was a tax on risk, which raised the cost of capital for start-up firms.


\textsuperscript{175} See supra Section III.A.2.
various points of their Rule 10b-5 class action, crypto asset traders will need to establish aspects of their case through statistical methods. For instance, the plaintiff traders will need to establish loss causation, which will necessitate use of an event study to show that the crypto asset’s price responded in a statistically significant manner to one or more corrective disclosures.176 As has been documented elsewhere, event studies in Rule 10b-5 class actions may not be able to identify statistically significant price effects because of low power.177 The issue of low power is heightened when there is high price volatility, as in the crypto asset context.178 For this reason, whether or not a crypto asset Rule 10b-5 case is meritorious or not, the issue of low power will make it difficult for crypto asset traders to establish elements of their claim. That inability combined with an awareness that other aspects of their claim may have poor factual support may dissuade crypto asset traders from bringing frivolous Rule 10b-5 cases.179 As this discussion shows, the same relatively high price volatility that could cause more frivolous crypto asset Rule 10b-5 class actions to be litigated than stock-based Rule 10b-5 class actions simultaneously provides a reason why there may be fewer frivolous suits of the former type than the latter.

CONCLUSION

Traders who participate in secondary crypto asset trading markets understand that any trading gains are accompanied by the risk of trading losses. Most traders presumably also understand that their losses at times can be significant because of the high volatility of crypto asset prices. But accompanying these market-determined losses are potentially significant trading losses caused by fraud occurring in connection with traders’ secondary transactions. In response to incidents of secondary trading crypto asset fraud, crypto asset traders may seek recovery for their trading losses through Rule 10b-5 class actions. The propriety of crypto asset traders relying on that form of relief implicates a host of doctrinal and public policy questions. This Article sought to analyze two such questions, one doctrinal and one public policy related.

In its doctrinal analysis, the Article evaluated issues pertinent to the threshold definitional question of when an exchange-traded crypto asset will constitute an investment contract and therefore fall within the definitional

178. See, e.g., Fisch & Gelbach, supra note 176, at 76–78.
179. As discussed in Section I.C above, studies indicate that crypto asset volatility may decrease with time, so the low power issue might mitigate as a crypto asset continues to trade in secondary markets.
perimeter of a security. That analysis identified a slight generalization of the horizontal commonality test so that the test is suitable for use in both primary transaction and secondary transaction cases. The analysis also explained why Howey’s efforts of others prong should not be understood to require the presence of a centralized third party and also explained why the prong does not concern itself with investors’ expectations concerning the use of their sales proceeds. These findings, though, are legal propositions. Whether or not a particular exchange-traded crypto asset is or is not an investment contract will depend on the pertinent facts and the totality of the circumstances.

In its public policy analysis, the Article evaluated whether the public policy justification for crypto asset-based Rule 10b-5 class actions is significantly weaker than stock-based Rule 10b-5 class actions. It structured its analysis around the primary theories advanced in the literature to assess whether stock-based Rule 10b-5 class actions advance their public policy objectives. The Article’s public policy determinations break in different directions and in some respects are to be considered preliminary, but the analysis does not justify limiting the availability of crypto asset-based Rule 10b-5 class actions any more than stock-based Rule 10b-5 class actions.