The Ethereum ecosystem, centralization, and Proof of Stake are complex topics, but I will start with an undenied truth: The Ether token was sold before a functioning Ethereum network was launched (https://www.coindesk.com/markets/2020/07/11/sale-of-the-century-the-inside-story-of-ethereums-2014-premine/ ). In other words, there was an implicit contract between Ethereum investors and the Ethereum Foundation, who promised to launch a network and code with remarkable capabilities. This sale is classified as an unregistered security offering since it passes all prongs of the Howey Test. Yet, there is an argument that Ethereum is now "sufficiently decentralized" and should be considered a digital commodity. As will be shown below, that is a bogus claim.

First, this concept of "sufficiently decentralized" is nebulous. But for the sake of argument, let's assume there is some mythical threshold that Ethereum can cross to allow it to be considered a commodity and not just a clever way for the Ethereum Foundation to avoid 90 years of security laws. If Ethereum can cross this mythical decentralization threshold in one direction, what would prevent it from crossing in the opposite direction if it becomes further centralized?

Considering that Proof of Stake is centralizing, that's probable. It's actually straightforward to understand why Proof of Stake is centralizing: those who stake more ether will obtain more staking rewards, which means that they can stake even more tokens. As their pile of the ether token increases, so does their ability to capture control over the network. Considering that insiders received the vast majority of the token at the initial coin offering, control over the network was never in question. So even if the mythical "decentralization threshold" was crossed, the centralizing aspects of Proof of Stake means it will cross back into the realm of centralized, digital securities.

Yet, the concept of "sufficiently decentralized" was never really accurate—the founding entities never relinquished control over the network. Under the previous consensus mechanism, Proof of Work, the developers implemented a "difficulty bomb" as a way to coerce the miners into following the developers' changes in the protocol. If the miners didn't execute the developers' changes, they would incur prohibitively expensive computing costs. The miners were faced with an ultimatum: follow our changes or go out of business. The "difficulty bomb" acted as a way for the Ethereum Foundation to control the network. If one entity can control the entire network, it really isn't decentralized. This is just one example of how the Ethereum network exhibits a hierarchical command-and-control organizational structure.

It should be emphasized that a command-and-control organization is centralized by definition—its de facto authority over the network. This is in stark contrast to the decentralized structure of the digital commodity Bitcoin, in which change is extremely difficult to implement. During Bitcoin's history, powerful entities such as exchanges, miners, chip manufactures, developers, and FinTech VCs, all attempted centralizing changes to Bitcoin—but were fended off by the community at large (Blocksize War by Bier; 2021). Even now, seemingly beneficial changes to Bitcoin are routinely met with extreme resistance and careful inspection from the global community. Bitcoin is truly a decentralized global commodity. Quite simply, no entity controls the Bitcoin network because there is no command-and-control hierarchy. Deceptive affinity marketing from the Ethereum Foundation's Communications Department is promoting the perception that Ethereum is decentralized when all evidence points in the opposite direction. Indeed, a Communications Department itself funded by the initial coin offering suggests that Ethereum is centralized.

This contrast in Bitcoin and Ethereum underlies the observation that Ethereum is a rapidly mutating protocol. What the SEC approves in 2024 could be completely different in just a few years. In fact, the co-founder recently issued a new roadmap that could lead to further centralization by increasing the number of the ether tokens required to run a validation node (from 32 eth to 4096 link: https://ethresear.ch/t/sticking-to-8192-signatures-per-slot-post-ssf-how-and-why/17989). Centralizing efforts appear to be increasing and not decreasing—erasing, once again, the mythical "decentralization threshold".

Clearly, the idea that "Ethereum is sufficiently decentralized" doesn't follow from the above facts. Importantly, it should be emphasized that the promises of upgrades to Ethereum constitute an implicit contract that continues to this day. Investors realize that the network, as currently constructed, won't fulfill the promises of the original implied contract. There are numerous updates promised to Ethereum investors, led chiefly by the co-founder and the Ethereum Foundation. Thus, the investment in Ether is contingent upon the Ethereum Foundation and paid developers fulfilling their continued promises. The original implicit contract lives on.

While the original Securities laws certainly couldn't anticipate a security like Ether, the original intent of securities classification holds today. It fits neatly into proven security laws created over 90 years ago. To create a novel exception of "sufficiently decentralized" for a well-worn classification would be entirely arbitrary. In fact, it would not be consistent with the facts and circumstances of the Ethereum network presented above.

While the Ethereum network is centralized, please also consider how much investor harm could be avoided if the Ethereum Foundation comes into compliance with security laws. In one example of many,

the co-founder and Ethereum Foundation have demonstrated a history of selling Ether at the market tops (see: https://m.youtube.com/watch?v=8TwNNgiNZ7Y time:26:57). In a typical security offering there are regulations for lack of disclosure for insider sales to prevent significant investor loss. Additionally, the Ethereum Foundation's significant token holdings can easily lead to market manipulation, clearly harming US investors. If the Ethereum Foundation has the ability to control the network and manipulate the price of the token, why shouldn't the Ethereum Foundation follow 90 years of securities laws? Unfortunately, approving an Ethereum ETF will cement Ethereum's classification as a commodity and any opportunity for accountability will be lost.

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