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SEC Crypto TaskForce
Re: Response to Request for Public Comments
May 25, 2025

Subject: Challenges with Crypto Adoption

Dear Sir/Madam:

Thank you for the opportunity to comment on the pending legislation. The legislation is of critical importance to the digital future and competitiveness of the U.S. financial markets. As such, it is imperative to examine the weakest links in the current digital infrastructure.

In my personal opinion, there are several issues with market design of major blockchains vying to be the key players in the new digital payments economy. Bitcoin's order matching technology is a copy of NYSE's limit order book that is 100 years old. While proven tried and true by the financial markets over the years, it may or may not be optimal for the digital markets.

However, Ethereum presents an even greater challenge. Ethereum matching engine followed a periodic-auction market design proposed by Eric Budish (2013). Budish (2013) market design was aimed at curtailing high-frequency trading activity. It was never tested in real market applications. It certainly was never designed for large-scale validator-based systems like Ethereum. After deployment of Budish (2013) mechanism on Ethereum beginning 2022, several papers documented significant fraud committed by the validators themselves.

The observed fraud is a function of market design of Ethereum. The validators have all the information and incentives to manipulate the markets by forming the blocks to maximize their personal benefit at the expense of other chain participants. This creates systemic issues for the cryptocurrency markets.

One of the solutions to the conundrum is adoption of newer, better mechanism design alternatives. I will be happy to discuss the issues and solutions in more detail.

Kind Regards.
Irene Aldridge