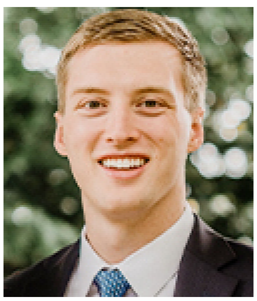
The Crypto Conundrum: Difficulties in Valuing Cryptocurrency Assets Held in Exchange Custody: Part One

Committee: Young and New Members



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Popular cryptocurrency exchange Coinbase surprised many in its first 2022 quarterly report when it informed customers that "custodially held crypto assets may be considered to be the property of a bankruptcy estate, in the event of a bankruptcy,… customers could be treated as our general unsecured creditors." [2] While Coinbase assured customers it was not in danger of bankruptcy and was issuing this guidance in accordance with new Securities and Exchange Commission guidelines, [3] customers understandably panicked, resulting in a 15.6% drop in Coinbase's stock price in after-hours trading. [4] By way of background, crypto asset custody is an agreement by which the record owner of crypto assets (the "record owner") asks the exchange to hold the assets' private keys in safekeeping for the benefit of the record owner. [5]

The impact of a cryptocurrency exchange failure is difficult to estimate, as most exchanges are not subject to U.S. financial disclosure requirements. Coinbase, however, reported that it held approximately $246 billion in crypto assets as of March 31, 2022. [6] Coinbase is a major exchange, but it pales in comparison to its competitor, Binance, which reports nearly seven times greater trading volume. [7] While greater trading volume does not necessarily equate to a greater value of assets held in custody, it is safe to assume Binance and other large exchanges hold a substantial amount of crypto asset value in custody. Furthermore, despite the extreme volatility in crypto asset value, even 10% of current custodially held crypto assets represents tens of billions in value. Given the magnitude of value in custodially held crypto assets, a cryptocurrency exchange filing for bankruptcy under chapter 7 or 11 (an "exchange bankruptcy") would have a significant impact on record owners and their crypto assets.

Since Coinbase issued its risk guidance, several authors have published articles explaining how and why crypto assets held in exchange custody would likely become property of the bankruptcy estate in the event an exchange filed for bankruptcy protection. [8] These articles have not discussed, however, the implications of an exchange bankruptcy on calculating the intrinsic value of a record owner's crypto assets held in exchange custody. Intrinsic value refers to an asset's true value based on its "fundamental financial characteristics," including market and asset class risk factors. [9] While the current market price of a crypto asset may reflect its fair market value, determining the asset's intrinsic value may be a more accurate valuation for crypto assets held in exchange custody.

Part One of this two-part article gives a brief overview of custodially held crypto assets as part of an exchange's bankruptcy estate, and Part Two will discuss the factors trustees and counsel should consider when estimating the intrinsic value of crypto assets held in exchange custody, as well as risk-mitigation approaches for trustees and counsel seeking to preserve asset value.

Crypto Assets as Property of an Exchange's Bankruptcy Estate
Crypto Asset Custody by Possession of the Assets' Private Keys

When an exchange holds crypto assets in custody, it takes control of the assets' private keys and holds them for the benefit of the record owner. [10] Crypto assets generally have public and private keys. Public keys serve as an identifier for the cryptocurrency and are similar to a vehicle's VIN, as they help identify the asset but hold no legal power over the asset itself. [11] Private keys function as passwords and authorize the transfer of crypto assets from a seller to

Private keys function as passwords and authorize the transfer of crypto assets from a seller to a buyer. [12] Ownership of a crypto asset's private key allows for total control of the asset and is akin to owning a vehicle's title. Custodial agreements, therefore, revolve around the safekeeping of private keys. [13] While the advantages and disadvantages of custody safekeeping could themselves encompass a full article, the primary advantages of storing crypto assets in exchange custody are the ease of access and simplicity for customers, while the primary disadvantages are security/theft risks and the risk of an exchange bankruptcy. [14]

Under the "bundle of sticks" metaphor commonly used in property law analyses, exchanges holding crypto assets in custody hold the possessory (if not controlling) [15] interest "stick" in the crypto assets by holding the assets' private keys. [16] The record owner that "owns" crypto held in exchange custody therefore owns what might best be described as the directing interest "stick." With this directing interest, the record owner can direct that the exchange either transfer the owned crypto assets to a separate location or trade the assets for other cryptocurrencies or fiat currency. [17]

Transfer of Ownership Interests to the Bankruptcy Estate

Upon filing a petition under the Bankruptcy Code, all of a debtor's legal and equitable property interests as of the petition date immediately transfer to the bankruptcy estate. " [18] Filing a bankruptcy petition does not expand or change a debtor's interest in an asset; it merely changes the party who holds that interest.... To the extent an interest is limited in the hands of a debtor, it is equally limited as property of the estate." [19] When an exchange files bankruptcy, therefore, the property interests held in custody also pass into the estate. As the exchange holds the possessory interest "stick" of the crypto assets by way of possessing the private keys, this ownership interest will pass into the exchange bankruptcy estate.

Herein lies the crux of the issue behind exchange custody agreements: Prior to the exchange's bankruptcy petition and the imposition of the automatic stay, the record owner's directing interest "stick" holds the vast majority of the crypto assets' value because the record owner can, at any time, direct the exchange to trade the credited crypto assets at or near market value or withdraw the assets from the exchange. Once the exchange files its petition, however, the value of the record owner's directing interest drops precipitously, because the assets' private keys enter the bankruptcy estate and the record owner can no longer direct the exchange to trade or transfer the assets. The directing interest "stick" value then falls to the expected proportional payout for general unsecured creditors. Similarly, at the filing of the expected proportional payout for general unsecured creditors. Similarly, at the filing of the petition, the exchange's possessory interest "stick" experiences a sharp increase in value. Where, before the petition, the exchange was obligated to follow the record owner's directions in trading or transferring the crypto assets, the exchange may hold or liquidate the crypto assets to fulfill its obligations to creditors after filing the petition.

As the private keys of crypto assets held in exchange custody will enter the exchange bankruptcy estate, customers will be treated as creditors. Furthermore, as customers are often prohibited under the terms of an exchange's user agreement from taking a security interest in custodially held crypto assets, [20] the customers will almost certainly be treated as general unsecured creditors. [21] This treatment is especially harsh for crypto customers, because Securities Investor Protection Corporation (SIPC) insurance does not insure customers for crypto assets lost during an exchange bankruptcy. [22]

This first part of the article series has set the stage demonstrating how custodially held crypto assets enter the exchange bankruptcy estate. The upcoming second half of this article will focus on the unique characteristics of crypto assets that trustees and counsel should consider when calculating the intrinsic value of custodially held crypto assets, as well as risk-mitigation strategies that may be used to minimize the difference between the assets' fair market value and their intrinsic value.

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[1] Jon Schlotterback wrote this article during his tenure as the 2021–22 term law clerk for Hon. Paul M. Black, Chief Judge of the U.S. Bankruptcy Court for the Western District of Virginia. The views expressed herein are those of the author and not of the U.S. Bankruptcy Court for the Western District of Virginia.

[2] Coinbase Global Inc., Q. Report (Form 10-Q), at 83 (Mar. 31, 2022).

[3] SEC Staff Accounting Bulletin No. 121, 17 C.F.R. 211 (Apr. 11, 2022).

[4] A multitude of factors likely caused the drop in stock price, including the company's bankruptcy risk, its nearly $430 million quarterly loss, and a 19% drop in monthly users. Coinbase Global Inc., *supra* n. 2.

[5] *See infra* Subsection I.A.

[6] Coinbase Global Inc., *supra* n. 2, at 13.

[7] "Top Cryptocurrency Exchanges Ranked by Volume," *CoinMarketCap, available at* https://coinmarketcap.com/rankings/exchanges/ (data collected on June 1, 2022).

[8] *See, e.g.*, Darren Azman & Gregg Steinman, "What a Crypto Exchange Bankruptcy Filing Could Look Like," Law360 (May 27, 2022), *available at* https://www.law360.com/bankruptcy/articles/1496836; Adam Levitin, "What Happens If a Cryptocurrency Exchange Files for Bankruptcy?," *Credit Slips* (Feb. 2, 2022), *available at* https://www.creditslips.org/creditslips/2022/02/what-happens-if-a-crypto....

[9] James M. Lukenda, "Valuation Fundamentals in Bankruptcy: Overview," *Westlaw Practical Law* (2022).

[10] Glob. Digit. Fin., "Crypto Asset Safekeeping and Custody: Key Considerations and Takeaways," at 2 (2019).

[11] Dubai Fin. Servs. Auth., Deloitte, "A Market Overview of Custody for Digital Assets," at 6 (2020).

[12] *Id.; see also* Daniel Saval, "Expert Q&A on Cryptocurrency and Insolvency," *Westlaw Practical Law* (2019).

[13] Dubai Fin. Servs. Auth., *supra* n. 11, at 7.

[14] *Id.*

[15] Certain exchanges may have more than just a possessory interest in crypto assets. Depending on the terms of the user agreement, exchanges may also own interests in staking rewards. *See* Coinbase, Coinbase User Agreement § 1.2, *available at* www.coinbase.com/legal/user_agreement/united_states (last updated June 6, 2022) (distributing staking awards to customers less a 25% commission to Coinbase).

[16] Binance.US, *Binance.US Terms of Use*, at 5, 14, *available at* https://static.binance.us/static/files/agreement/termsOfUse/BAMTrading-T... (last updated June 1, 2022); Coinbase, *supra* n. 15, § 2.7; FTX US, FTX.US User Agreement, § 6, *available at* https://ftx.us/TermsOfService.pdf (last updated May 6, 2022) ("All cryptocurrency or dollars

(or other supported currencies) that are held in your account are held by FTX.US for your benefit.").

[17] *E.g.*, U.S. dollars or any currency a government considers legal tender.

[18] 11 U.S.C. § 541(a)(1).

[19] *Helms v. Metro. Life Ins. Co. (In re O'Malley)*, 633 B.R. 332, 348 (N.D. Ill. 2021) (citing *In re Sanders*, 969 F.2d 591, 593 (7th Cir. 1992)).

[20] See Binance.US, *supra* n. 16, at 28.

[21] Cryptocurrency brokerage Voyager Digital likely confirmed this conclusion in its recent chapter 11 petition when it designated its customers unsecured creditors. Voluntary Petition for Non-Individuals Filing for Bankruptcy, *In re Voyager Digit. LLC*, No. 22-10945 (Bankr. S.D.N.Y. July 5, 2022), ECF No. 1.

[22] *What SIPC Protects*, SIPC, *available at* **www.sipc.org/for-investors/what-sipc-protects** (last visited June 7, 2022).