

To:

Secretariat of the Basel Committee
on Banking Supervision
Bank for International Settlements
Centralbahnplatz 2
CH-4002 Basel, Switzerland
Email: baselcommittee@bis.org

Date:

30 September 2022

**Re: Second public consultation on the prudential
treatment of banks' cryptoasset exposures**

Coinbase Global, Inc. (**Coinbase**) welcomes the opportunity to respond to the second public consultation on the prudential treatment of banks' cryptoasset exposures published by the Basel Committee on Banking Supervision (**Basel Committee**).

We appreciate the Basel Committee's active engagement on the development of a prudential framework for cryptoassets, and we look forward to continuing to share our expertise in this area.

Sincerely,



Faryar Shirzad
Chief Policy Officer
Coinbase Global, Inc.

Coinbase's response to the Basel Committee's second consultation on the prudential treatment of banks' cryptoasset exposures

The fundamental purpose of bank capital requirements is to serve the public interest – to safeguard financial stability and thus sustain long-term economic growth. To that end, we appreciate the Basel Committee's recognition of cryptoassets as an important part of the future of financial services, in which banking organizations will want, and need, to participate. Coinbase supports and encourages banks' increasing engagement with cryptoassets and their underlying blockchain technology. We believe that banks' participation, coupled with a well-designed prudential framework, will bring efficiency, security, and credibility to the cryptoasset ecosystem.

Coinbase responded to the Basel Committee's first consultation on this topic with extensive comments and analysis. The core message of our response was that cryptoassets' risk profile is highly comparable to well-understood asset classes in the traditional financial system, and we believe that banks are well equipped to manage the risks of cryptoassets using existing risk management tools. We stand by that message and believe it remains true.

In the further development of the second consultation from the first, the Basel Committee made a number of refinements that go in the right direction, including:

- Certain updates to the classification conditions, in particular the test for Group 1b assets (stablecoins)
- A limited degree of hedge recognition for certain Group 2 cryptoassets in the calculation of a bank's net exposure
- Recognition of a distinction between trading book and banking book assets, resulting in better alignment with the Basel Committee's long-standing principles

We appreciate these beneficial changes. Nonetheless, we believe the framework set forth in the Basel Committee's second consultation could still be significantly improved. In this letter, we focus on three key areas where we believe our perspective would especially contribute to your assessment of policy considerations.

The first area relates to aspects of the capital and risk management treatment of cryptoassets, which we believe are overly punitive. The second relates to the Group 1b classification conditions for stablecoins, which we believe are well-intentioned but not well-suited to cryptoasset markets that operate 24×7×365. The third relates to the infrastructure risk add-on, which we believe is unnecessary and unwarranted. In the first two areas, we provide quantitative analyses using updated data since our response to the first consultation in September 2021, including the period of significant cryptoasset market stress in May 2022.

1. Punitive capital and risk management treatment of cryptoassets

Our September 2021 response to the first consultation addressed several provisions of the Basel Committee's proposed framework that, in our view, constrained banks' ability to participate in the cryptoasset ecosystem far more than necessary to protect their safety and soundness. With respect to those provisions that the Basel Committee has

retained in the second consultation, we believe the arguments and analysis in our first submission continue to apply.

We especially affirm our previous arguments and analysis in two areas: the 1250% risk weight, and the disqualification of cryptoassets (other than Group 1a) as eligible financial collateral. The 1250% risk weight is flawed because it requires banks to set aside more capital for exposures to Group 2b cryptoassets than could be lost even if the cryptoasset were completely wiped out.¹ We also believe that cryptoassets in Groups 1b and 2 should be recognized as eligible financial collateral for secured credit, subject to reasonable haircuts and in accordance with the BCBS criteria in CRE 22.²

To these previously proposed measures, the second consultation would add further disincentives for banks to engage with cryptoassets, including the infrastructure risk add-on for Group 1 cryptoassets and the limitation on banks' exposures to Group 2 cryptoassets to 1% of Tier 1 capital. The Group 2 exposure limit is especially restrictive in that it applies on a gross basis, requiring banks to add long and short positions together, with hedging recognized only minimally for Group 2a cryptoassets.

While the merits of each of these measures could be debated in isolation, we believe their cumulative impact is not merely conservative but unnecessarily punitive. The 1250% risk weight for Group 2b cryptoassets wholly suffices to protect banks against any potential losses; indeed, the total wipeout of a bank's cryptoasset exposures would have the counterintuitive effect of improving its capital ratios. The requirement so thoroughly constrains banks' exposure to cryptoassets that it is difficult to discern what additional measure of safety the 1% exposure limit could provide.

Effective risk management for cryptoassets

The shocks to cryptoasset markets in May and June 2022 were an inflection point for the industry, following the well-publicized failures of a number of firms engaged in cryptoasset-related activities. In our view, the primary cause of these failures was not any unique feature of cryptoassets or blockchains, but poor risk management. The underlying issues were foreseeable and *credit-specific*, not *crypto-specific*.

All of these businesses amassed risks that would be familiar to traditional financial market participants: asset-liability mismatches, excessive leverage and concentrations, and inadequate underwriting standards. The ensuing insolvencies are reminiscent of Long-Term Capital Management in the 1990s, Lehman Brothers in the 2000s, and Archegos Capital Management in 2021.

To the extent the Basel Committee has confidence in the risk management tools and practices used in the traditional financial system, we ask only for credence in the same tools and practices when applied to cryptoassets. We of course recognize that cryptoassets may differ for traditional assets in certain respects. Fundamentally,

¹ The 1250% risk weighting effectively assumes a total wipeout as applied to an 8% minimum capital ratio. Most banks, however, are subject to considerably higher capital requirements than the 8% minimum. According to the Federal Reserve's 2022 Stress Test Results, the aggregate common equity tier 1 (CET1) capital ratio for large banks in the United States was 12.4% in the fourth quarter of 2021. See Federal Reserve, 2022 Federal Reserve Stress Test Results, <https://www.federalreserve.gov/publications/files/2022-dfast-results-20220623.pdf>.

² See CRE22 - Standardized Approach: Credit Risk Mitigation, https://www.bis.org/basel_framework/chapter/CRE/22.htm.

however, BTC, ETH and other cryptoassets have matured enough to be comparable to traditional securities in terms of market risk. We believe they should receive similar treatment.

The exhibits to this submission include updates to the data presented in our September 2021 submission demonstrating the comparability of BTC to publicly traded equities in terms of volatility and market depth. Exhibits 1 and 2 compare the 99th percentile 10-day value-at-risk and average daily trading volume of Bitcoin to the 10 smallest stocks in the S&P 500 by market capitalization. We believe that BTC compares favorably to the referenced equities on these metrics.

2. Excessively stringent requirements for stablecoin exposures

We appreciate many of the improvements that the Basel Committee has made since its initial consultation in June 2021 to the Group 1b classification criteria. We support in particular the creation of the “narrowly passed” category for the basis risk test under classification condition 1. This will set a very high bar for stablecoin issuers to benefit from preferential treatment relative to other cryptoassets, while avoiding cliff edge effects. Nonetheless, we believe that the Group 1b classification requirements as proposed cannot be implemented in a way that matches their intent. We propose a more practical methodology, which is fundamentally the same with respect to intent, and in crucial respects more stringent, by monitoring for breaches at a higher frequency: minute-by-minute instead of daily.

Our proposed methodology addresses unclear statements in the second consultation as to how the basis risk test should be applied. SCO60.14 states that “banks must first monitor *daily*” a stablecoin’s peg-to-market value difference (emphasis added). Footnote 4 to SCO60.14 states that the number of breaches to be counted for a particular stablecoin “is based on the number of days in which a breach has been observed to occur.” But the proposed SCO60.14 methodology does not distinguish between breaches that are fleeting — occurring for mere seconds or milliseconds and quickly closed upon activation of arbitrage mechanisms — and breaches that persist for longer periods. If the standard is that a breach of a millisecond counts as a breach for the day, it is doubtful whether any custodial instrument of any kind, traditional or otherwise, could ever fully pass a 10 bps basis risk test. To this point, as shown in the joint trade associations’ comment letter on behalf of the banking industry, few if any of even the largest and most liquid of traditional exchange-traded products could fully pass the basis risk test under this interpretation.³

An alternative and similarly problematic reading of what the Basel Committee intended is that the peg-to-market value difference should be measured once a day, at the same time on each day. This may lead to determinations that differ arbitrarily depending on what time is designated for measurement (Exhibit 3). Notwithstanding the potential undercounting of breaches, there is no obvious time of day to choose to measure a breach. The convention in traditional securities markets is to determine the price of a security for a given day as of the close of the stock market at 4:00 pm. But

³ See [Joint Associations response \(GFMA - SFS - FIA - IIF - ISDA - Chamber\)](#) dated 20 September 2021, in response to the Basel Committee’s initial consultation. We understand that an updated version of this analysis will be included in the Joint Associations’ response to the second consultation.

the concept of market close doesn't exist for cryptoasset markets that operate 24×7×365.

In our view, the consultation proposes reasonable thresholds for what should constitute a breach, provided that the determination also takes into account the duration of the breach. Specifically, daily measurement is not sufficiently granular for cryptoasset markets, and the risk management measurements should reflect that cryptoasset markets entail continuous trading.

Using the same thresholds of 10 bps to fully pass, 20 bps to narrowly pass, we propose a 1% limit on the number of minutes in which a breach of any duration is observed, measured on a rolling basis over the previous twelve months. If a threshold is breached at any point within a one-minute period, that minute would count as breached.

The 1% limit approximates the thresholds that the Basel Committee has already proposed – i.e., no more than 3 days out of 365 in a year. To fully pass, a stablecoin's peg-to-market value difference must not exceed 10 bps at any point during more than 1% of the preceding 525,600 minutes. To narrowly pass, a stablecoin's peg-to-market value difference must not exceed 20 bps at any point during more than 1% of the preceding 525,600 minutes.

This proposed methodology is far clearer in its application but would not meaningfully alter what we believe is the intended standard.

To illustrate this proposed methodology, we calculated the number of breaches occurring for each of the three largest stablecoins by market capitalization (USDT, USDC, and BUSD) during each minute over a 12-month measurement period from 1 September 2021 to 31 August 2022. The percentage of minutes during which there is a breach of the 10 bps threshold for each of the three largest stablecoins is as follows:

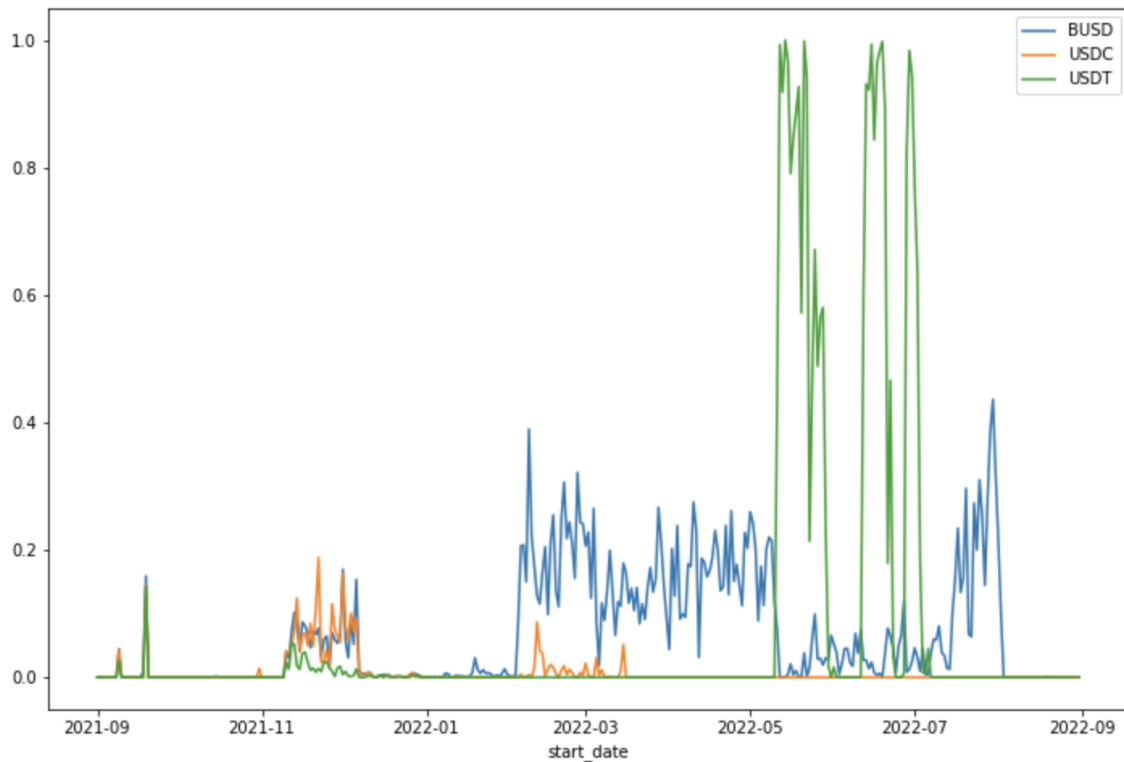
- USDT: 7.5107%
- USDC: 0.8331%
- BUSD: 6.7753%

Under this proposed methodology, only USDC would fully pass the basis risk test.

Figure 1 below provides a visualization of the number of breaches occurring each day over the measurement period. A value of 1 indicates that 100% of the minutes in a given day were counted as a breach and thus provides an indication of the duration of the intraday breach.

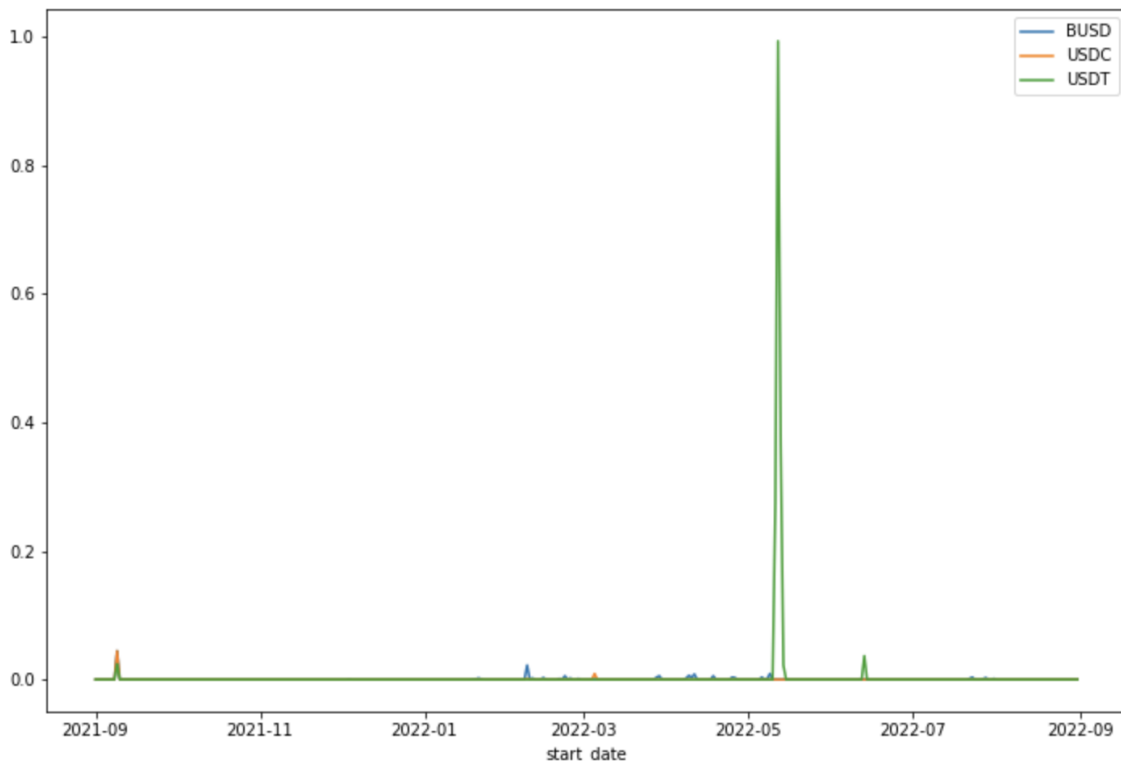
Of note, this methodology will give the same results for day-long breaches (i.e., 1,440 breached minutes out of 525,600 is equivalent to 1 day out of 365) but assigns appropriate weighting to short-term intraday movements. The Basel Committee's proposed methodology would significantly overweight the severity of a breach that lasts only a fraction of a second, treating it as equal in severity to a breach that lasts a full day. Our methodology corrects for this over-weighting.

Figure 1. 10 bps breaches, minute-by-minute, aggregated daily: USDT, USDC, BUSD



Below is a graph of the same exercise, but with a 20 bps threshold for peg-to-market value difference:

Figure 2. 20 bps breaches, minute-by-minute, aggregated daily: USDT, USDC, BUSD



The percentage of minutes during which there is a breach of the 20 bps threshold for each of the three largest stablecoins over the measurement period is as follows:

- USDT: 0.4707%
- USDC: 0.0170%
- BUSD: 0.0413%

Under our proposed methodology, all three of the largest stablecoins would narrowly pass the basis risk test.

We note that, although USDT passes under this test, the granular analysis of the proposed methodology also demonstrates a difference in the nature of USDT's breaches as compared to the other stablecoins. The spike in Figure 2 above reflects that USDT depegged at the height of the cryptoasset market stress in May 2022 and was unable to restore its peg for several days.

In light of this, we recognize that it may be prudent for the Basel Committee to consider additional criteria for the basis risk test that would differentiate a major depegging event, i.e. the persistence of a substantial deviation for an extended period, from minor shortcomings in the speed or efficacy of arbitrage mechanisms. Such criteria need not be numerical and may already have been contemplated in the second consultation's other provisions, such as the redemption risk test under classification condition 1.

Another important aspect to consider is the source of the data used to measure breaches.⁴ Exchanges differ with respect to the availability of liquidity and presence of arbitrageurs, and a stablecoin might pass the test using data from one exchange, but not from another.

We urge the Basel Committee to adopt a clearer methodology for the basis risk test, and we propose this alternative which we believe is far better suited to cryptoasset markets than the standard that the second consultation set out.

3. Infrastructure risk add-on is unnecessary and unwarranted

We expect the Basel Committee would generally agree that regulatory standards should be consistent and technology-neutral. And yet, the infrastructure risk add-on departs from this approach. The second consultation provides little justification beyond a general concern about "various unforeseen risks" that distributed ledger technology (DLT) might pose.

The tokenization of traditional financial assets can be accomplished in different ways using DLT. The first and easiest is to use a permissioned blockchain. Permissioned blockchains are resilient, controlled environments, where transactions can be reversed and actors are known. For these uses of DLT, there is no justification for an infrastructure add-on.

Group 1 assets could also be issued on an open, permissionless blockchain such as Ethereum, Solana, Avalanche, Algorand, Tezos and others. Each of these blockchain networks and the protocols they run may present substantially different risks, and a

⁴ The data shown in Figures 1 and 2 was sourced from CoinMarketCap, see coinmarketcap.com/api.

uniform 2.5% add-on could either over- or under-estimate the level of infrastructure risk. Issuing a security on a brand new, untested permissionless blockchain could pose very high security risks, whereas well-tested blockchains that have benefited from years of open-source scrutiny and development would have much lower risk exposure. Rather than a blunt 2.5% add-on, we recommend a risk-based approach for addressing infrastructure risk that considers a permissionless blockchain's operational, implementation, and design risk. Even a simple measure like time elapsed since the initial deployment of the blockchain would go a long way to assess risk adequately.

While distributed ledger technology could well be risk-reducing overall – in particular as to settlement risk, and related credit risk – the Basel Committee gives no indication of what standard must be satisfied for it to determine that “various unforeseen risks” no longer justify a 2.5% add-on. We agree that the Committee should continue monitoring the evolution of distributed ledger technology and “if appropriate, adjust the calibration of the add-on.” But given the other proposed measures, we recommend that the Basel Committee eliminate the infrastructure risk add-on for permissioned blockchains and adopt a risk-based approach for permissionless blockchains, with clear criteria for downward adjustment of the add-on for a particular blockchain as it matures over time.

Finally, we note the Basel Committee's admonition that, “As currently specified, it is highly unlikely that any cryptoassets based on permissionless blockchains will be able to meet the classification conditions to be included in Group 1.”

We strongly disagree with the suggestions in classification conditions 3 and 4 that a network cannot be “designed and operated to sufficiently mitigate and manage any material risks” unless nodes and validators all are subject to bank-level supervisory requirements. In our view, empirical observation of a Group 1 cryptoasset's ability to maintain strong adherence to its peg over an extended period and through market stress should be determinative.

To treat decentralization and permissionless-ness categorically as shortcomings would be a mistake. These features can in fact enhance a network's security and resilience. As compared to traditional market structures, DLT reduces reliance on central intermediaries that could become vectors of systemic risk, makes real-time transaction data more transparent and accessible across markets, and reduces market participants' exposures to settlement risk and related counterparty credit risk.

Conclusion

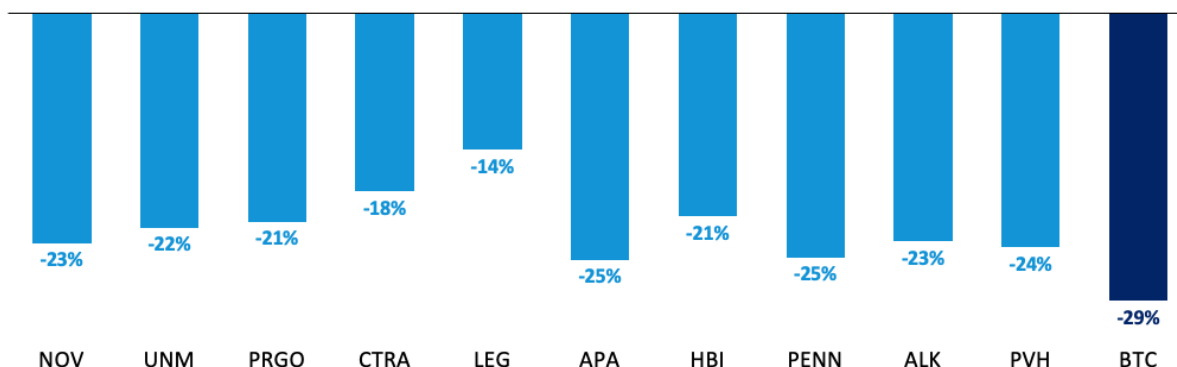
We appreciate that the Basel Committee's mandate calls for complex and technical judgments in service of the public interest, to finely balance banks' need for safety and soundness with their role as facilitators of future economic growth. We recognize that cryptoassets pose risks, some of which are novel, but they can be effectively managed using existing risk management tools and practices. We believe that the Basel Committee errs in its bias toward the status quo and sacrifices too much of the benefit that would flow from banks' responsible engagement with cryptoassets. Banks' engagement will improve both the cryptoasset ecosystem and the quality of the financial services banks can offer. We believe the Basel Committee can pursue this course without relaxing its vigilance or the rigor of prudential standards.

Exhibit 1. BTC vs mid-size equities: Volatility

99th Percentile 10-day Value at Risk

BTC vs. 10 smallest equities from the S&P 500 index by market cap

January 1, 2015 – August 31, 2022



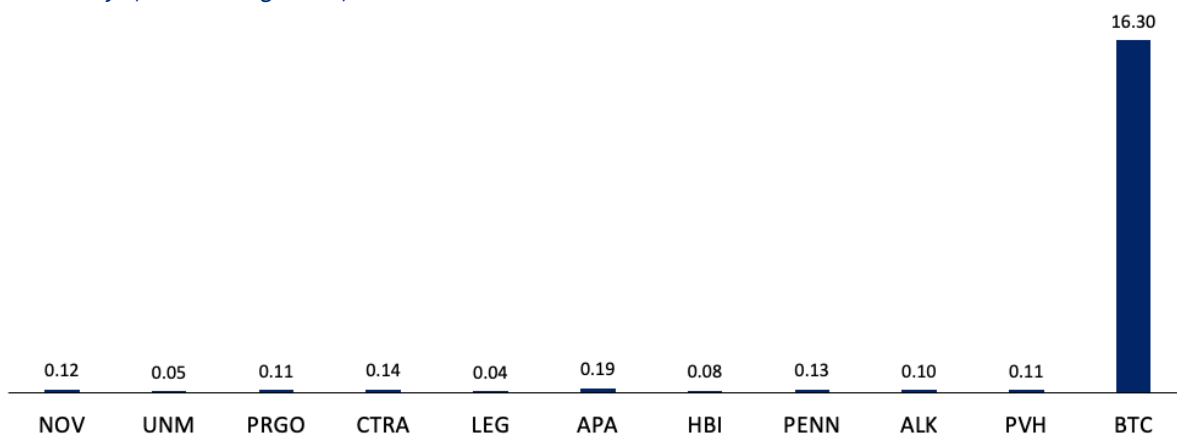
Sources: S&P Global, Yahoo Finance. Data series cover 1/1/2015 to 8/31/2022 for all assets. Daily prices for BTC are as of stock market close. Securities shown include the 10 smallest stocks in the S&P 500 by market capitalization as of 8/2/2021 that remain in the index as of 8/31/2022, updating our September 2021 submission. The securities shown are: National Oilwell Varco, Inc (NOV), Unum Group, incorporated (UNM), Perrigo Company plc (PRGO), Coterra Energy Inc. (CTRA), Leggett & Platt, Incorporated (LEG), Apache Corporation (APA), Hanesbrands Inc. (HBI), PENN Entertainment, Inc. (PENN), Alaska Air Group, Inc. (ALK), PVH Corp (PVH). Note that ticker COG (Cabot Oil), which was included in our September 2021 submission, changed to CTRA (Coterra Energy) following a merger in 2022. Our 2021 submission also included PBCT (People's United), which no longer trades on key exchanges. We have replaced it with PENN (Penn Entertainment Inc), which had the 11th smallest market cap in the S&P 500 as of 8/2/2021.

Exhibit 2. BTC vs mid-size equities: Market Depth

Average daily trading volume (\$ billions)

BTC vs. 10 smallest equities from the S&P 500 index by market cap

January 1, 2015 – August 31, 2022



Sources: S&P Global, Yahoo Finance. Data series cover 1/1/2015 to 8/31/2022 for all assets. Daily prices for BTC are as of stock market close. Securities shown include the 10 smallest stocks in the S&P 500 by market capitalization as of 8/2/2021 that remain in the index as of 8/31/2022, updating our September 2021 submission. The securities shown are: National Oilwell Varco, Inc (NOV), Unum Group, incorporated (UNM), Perrigo Company plc (PRGO), Coterra Energy Inc. (CTRA), Leggett & Platt, Incorporated (LEG), Apache Corporation (APA), Hanesbrands Inc. (HBI), PENN Entertainment, Inc. (PENN), Alaska Air Group, Inc. (ALK), PVH Corp (PVH). Note that ticker COG (Cabot Oil), which was included in our September 2021 submission, changed to CTRA (Coterra Energy) following a merger in 2022. Our 2021 submission also included PBCT (People's United), which no longer trades on key exchanges. We have replaced it with PENN (Penn Entertainment Inc), which had the 11th smallest market cap in the S&P 500 as of 8/2/2021.

Exhibit 3. Basis risk test analysis of USDT, USDC, BUSD

September 1, 2021 – August 31, 2022

USDT			USDC			BUSD		
	>10 bps	>20 bps		>10 bps	>20 bps		>10 bps	>20 bps
12 AM	29	3	12 AM	5	1	12 AM	23	1
1 AM	30	2	1 AM	2	0	1 AM	26	0
2 AM	28	2	2 AM	4	0	2 AM	29	0
3 AM	22	2	3 AM	5	0	3 AM	34	1
4 AM	28	2	4 AM	3	0	4 AM	24	1
5 AM	28	2	5 AM	5	0	5 AM	17	1
6 AM	28	2	6 AM	5	0	6 AM	21	0
7 AM	27	2	7 AM	6	0	7 AM	18	0
8 AM	28	1	8 AM	6	0	8 AM	27	0
9 AM	25	1	9 AM	5	0	9 AM	26	0
10 AM	26	1	10 AM	5	0	10 AM	23	0
11 AM	23	2	11 AM	5	0	11 AM	19	0
12 PM	27	2	12 PM	3	0	12 PM	34	0
1 PM	22	2	1 PM	3	0	1 PM	20	0
2 PM	25	1	2 PM	2	0	2 PM	23	0
3 PM	27	1	3 PM	7	0	3 PM	19	0
4 PM	29	1	4 PM	9	0	4 PM	28	0
5 PM	28	1	5 PM	4	0	5 PM	21	0
6 PM	27	1	6 PM	2	0	6 PM	23	0
7 PM	26	2	7 PM	4	0	7 PM	30	0
8 PM	33	2	8 PM	1	0	8 PM	16	0
9 PM	26	2	9 PM	2	0	9 PM	28	0
10 PM	25	2	10 PM	2	0	10 PM	21	0
11 PM	27	2	11 PM	4	0	11 PM	26	1

- Fully passes the basis risk test if observations are done at this hour every day
- Narrowly passes the basis risk test if observations are done at this hour every day
- Fails the basis risk test if observations are done at this hour every day

Source: Hourly stablecoin prices as reported by coinmarketcap.com. Hours specified in NYC local time.