

September 10, 2021

VIA ELECTRONIC SUBMISSION

Basel Committee on Banking Supervision
Bank for International Settlements
CH-4002 Basel, Switzerland

Re: Consultative Document: Prudential treatment of cryptoasset exposures

CME Group Inc. (“CME Group”)¹ is the parent of the Chicago Mercantile Exchange Inc. (“CME”). CME is registered with the Commodity Futures Trading Commission (“CFTC”) as a derivatives clearing organization (“DCO”) and designated contract market (“DCM”). CME’s clearing house division (“CME Clearing”) offers clearing and settlement services for exchange-traded futures and options on futures contracts, as well as over-the-counter (“OTC”) derivatives transactions, including interest rate swaps (“IRS”) products. CME Clearing provides clearing and settlement services for four DCMs that include CME, the Board of Trade of the City of Chicago, Inc. (“CBOT”), the New York Mercantile Exchange, Inc. (“NYMEX”), and the Commodity Exchange, Inc. (“COMEX”). On July 18, 2012, the Financial Stability Oversight Council designated CME as a systemically important financial market utility (“SIFMU”) under Title VIII of the Dodd-Frank Wall Street Reform and Consumer Protection Act (“Dodd-Frank Act”), which resulted in CME also being a systemically important DCO (“SIDCO”).

CME Group appreciates the opportunity to comment on the Basel Committee on Banking Supervision’s (“BCBS”) consultative document on the *Prudential treatment of cryptoasset exposures* (“the Consultation”).² CME, as a registered DCM, lists futures and options products, including cryptocurrency derivative contracts and, as a registered DCO, provides central clearing for those products. Based on our review of the Consultation’s classification of cryptoassets, we believe the cryptocurrency products which CME lists on its DCM, as well as similar products listed at other exchanges, will be classified as Group 2 cryptoassets. As such, our comments are limited to Question 12 pertaining to the capital treatment of Group 2 cryptoassets.

¹ As a leading and diverse derivatives marketplace, CME Group enables clients to trade futures, cash and OTC markets, optimize portfolios, and analyze data - empowering market participants worldwide to efficiently manage risk and capture opportunities. CME Group exchanges offer the widest range of global benchmark products across all major asset classes based on interest rates, equity indexes, foreign exchange, energy, agricultural products and metals. The company offers futures trading through the CME Globex platform, fixed income trading via BrokerTec and foreign exchange trading on the EBS platform. In addition, it operates one of the world’s leading central counterparty clearing providers, CME Clearing.

² Basel Committee on Banking Supervision, Consultative Document, *Prudential treatment of cryptoasset exposures* [hereafter *the Consultation*] (June 2021).

Question 12. Do you think the proposed capital treatment of Group 2 cryptoassets, including the application of a 1250% risk weight instead of deducting the asset from capital (for the reasons explained above), appropriately reflects the unique risks inherent in these assets?

As a general matter, we do not believe that the proposed treatment outlined in the Consultation is appropriate given the risks of centrally cleared derivatives that reference Group 2 cryptoassets. While we've identified several concerns with the proposed treatment in our subsequent comments, we fundamentally believe that the existing prudential framework for highly regulated derivatives cleared through a Qualifying Central Counterparty ("QCCP") should be utilized rather than adopting an entirely new treatment for derivatives that reference Group 2 cryptoassets. The analysis underpinning our comments is also based on the observed correlation and volatility of two established derivatives on cryptoassets, i.e. CME listed futures on Bitcoin and futures on Ether. We recognize that cryptocurrencies represent a rapidly evolving space and that certain market factors, e.g. liquidity and depth, distinguish the risk profiles of more established cryptoassets from unproven ones and this distinction should be considered in the capital framework.

We have responded to Question 12 below, focusing on the risk-weighted assets ("RWAs") and counterparty credit risk requirements described in the Consultation under the capital requirements for Group 2 cryptoassets.

RWA Treatment

The proposed RWA treatment for Group 2 cryptoassets applies a 1,250% risk weight to the greater of either the absolute value of the aggregate long positions or the absolute value of the aggregate short positions to which the bank is exposed separately for each type of Group 2 cryptoassets, without allowing netting of long and short positions. Effectively, for banks subject to an 8% minimum total capital requirement, the 1,250% risk weight would require a full deduction of the cryptoasset exposure from the bank's Common Equity Tier 1 ("CET1") capital.³ This blunt, overly conservative approach to calculating the RWA requirements for Group 2 cryptoassets is inconsistent with the risk profile of more developed cleared derivatives such as Bitcoin futures and is, without clear rationale, a significant departure from the exiting prudential framework applied to other cleared transactions.

Counterparty Credit Risk Treatment

The Consultation's proposed approach for calculating exposure for counterparty credit risk for derivatives that reference a Group 2 cryptoasset is not risk sensitive and is not supported by empirical evidence reflecting the historical volatility of Group 2 cryptoassets. The Consultation proposes that for the purposes of calculating counterparty credit risk capital requirements, the exposure for derivatives that reference a Group 2 cryptoasset will be the Replacement Cost ("RC") plus Potential Future Exposure ("PFE"), where the PFE is 50% of the gross notional amount of the derivative.

50% PFE Add-on factor

³ For banks subject to a total minimum capital requirement above 8%, the 1,250% risk weight would create capital requirements in excess of their total exposure to Group 2 cryptoassets.

In comparison to the Standardized Approach for Measuring Counterparty Credit Risk (“SA-CCR”), which applies Supervisory Factors to reflect the volatility of each asset class, the 50% add-on factor for Group 2 cryptoassets is more than double the 18% applied to Oil and Gas commodities and even higher than the 40% add-on factor applied to the Electricity subclass.⁴

To evaluate the appropriateness of the proposed 50% add-on factor for derivatives that reference Group 2 cryptoassets, we compared the recently observed price moves of the front month CME Bitcoin futures contract relative to the price moves of the front month NYMEX RBOB Gasoline futures contract, which is grouped in the Oil and Gas Commodities subclass under SA-CCR.

For the period from July 2, 2019 to July 1, 2021:

- The maximum 1-day absolute percentage price change on CME’s front month Bitcoin futures contract was 23.49%, compared to 31.98% on NYMEX’s RBOB Gasoline front month futures contract;
- The average 1-day absolute percentage price change on CME’s front month Bitcoin futures contract was 2.86%, which was within 1% of that of NYMEX’s RBOB Gasoline front month futures contract, which had an average of 2.17%; and
- The 99th percentile 1-day absolute percentage price move for CME’s front month Bitcoin futures contract was 13.31%, compared to 23.24% on NYMEX’s RBOB Gasoline front month futures contract.

Notably, the maximum and 99th percentile observed volatility of CME’s front month Bitcoin futures contract over a recent two-year period is lower than the NYMEX RBOB Gasoline front month futures contract while the average 1-day price changes are broadly consistent. By way of comparison, the NYMEX front month RBOB Gasoline futures is assigned a lower Supervisory Factor (i.e., 18%) under SA-CCR, which according to BCBS is based on the estimate of realized volatility for that asset class. To quantify the impact of the differences in treatment between the two products, we compared the Exposure at Default (“EAD”) for one long NYMEX front month RBOB Gasoline futures contract using SA-CCR⁵ to one long CME front month Bitcoin futures contract using the proposed approach in the Consultation. According to our analysis, the NYMEX front month RBOB Gasoline futures contract results in an EAD of 4,508, which is just 4.05% of the 111,325 EAD calculated for CME’s front month Bitcoin futures contract using the proposed approach. Despite exhibiting lower recently observed volatility, the CME front month Bitcoin futures contract would generate a counterparty credit risk capital requirement under the proposed approach that is nearly 25 times higher than that generated by the NYMEX front month RBOB Gasoline futures contract under SA-CCR.

This analysis clearly demonstrates that the proposals in the Consultation will result in capital requirements for bank exposures to Group 2 cryptoassets that will dwarf the requirements for other,

⁴ Per SA-CCR standards, supervisory factors applied to the effective notional, for purposes of computing the add on amount or PFE, are based on the estimate of realized volatilities of the asset class and reflect a “single at-the-money liner trade of unit notional and one-year maturity.”

⁵ For the purposes of calculating EAD, we assume the NYMEX RBOB Gasoline futures contract is fully collateralized and we apply the unmargined Maturity Factor within SA-CCR.

more volatile futures contracts. It is clear that the proposed treatment of derivatives that reference Group 2 cryptoassets for counterparty credit risk is overly conservative and must be revised. We suggest revising the 50% PFE add-on to align with historical volatility metrics, similar to how other asset classes under existing BCBS methodologies have been treated.

Lack of netting benefit

It is also problematic that the proposed approach for calculating counterparty credit risk does not permit netting of long and short derivatives positions that reference the same Group 2 cryptoasset for calculating PFE or of different cryptoassets within the same netting set in the RC or PFE calculation. This treatment is inconsistent with the SA-CCR methodology that permits netting for computing RC at the netting set level and within hedging sets for computing PFE, where partial or full netting is recognized to account for correlations within assets classes (e.g. credit and equity derivatives). The proposed approach should consider allowing full netting between derivatives that reference the same Group 2 cryptoasset and partial or full netting between derivatives that reference different types of Group 2 cryptoassets where a bank is able to demonstrate that such positions are significantly and reliably correlated and a conceptual basis for the correlation exists.

This approach is supported by data CME has prepared that evidences consistent and reliable correlation within its listed suite of cryptocurrency derivatives that reference Group 2 cryptoassets. Dating back to the launch of CME's Ether futures on February 8, 2021, to July 1, 2021, the data compares the futures settlement prices of CME's front month Bitcoin and Ether futures contracts and includes the correlation between these two products. During this time period, the correlation between CME's Bitcoin futures and CME's Ether futures was 70%. Additionally, we examined the daily standardized reference rates to further evidence correlation within CME's suite of cryptocurrency products.⁶ For the period from July 2, 2019 to July 1, 2021, the CME CF Bitcoin Reference Rate and the CME CF Ether Dollar Reference Rate exhibited 80% correlation. This data analysis provides empirical evidence that correlation exists across cryptocurrency assets and should be taken into consideration when determining the approach for computing counterparty credit risk requirements.

Lack of maturity adjustment

The proposed 50% add-on factor does not consider the residual maturity of derivatives contracts or differentiate between transactions where daily variation margin is exchanged. For example, derivatives that reference Group 2 cryptoassets (e.g., CME's Bitcoin futures) expiring in one month would generate the same capital requirements as contracts expiring in five months, despite demonstrating less volatility.⁷ This treatment is not risk sensitive and does not incorporate differentiated maturity factors, such as exists within the SA-CCR framework, that consider whether daily variation margin is exchanged and capture the additional risks of holding derivative contracts for longer durations.

QCCP exposures

⁶ For more information, see: <https://docs-cfbenchmarks.s3.amazonaws.com/CME+CF+Reference+Rates+Methodology.pdf>

⁷ For example, for the period from July 2, 2019 to July 1, 2021, the average 1-day absolute percentage price change on CME's front month Bitcoin futures contract was 2.86% compared to an average of 3.35% on CME's fifth month Bitcoin futures contract.

Lastly, the proposed approach does not state explicitly if derivatives that reference Group 2 cryptoassets that are cleared through a Qualifying Central Counterparty (“QCCP”) would receive the standard counterparty credit risk treatment for banks’ trade exposures to a QCCP.⁸ Under the existing prudential framework, QCCPs are subject to heightened prudential supervision and risk management standards and mitigate counterparty credit risk inherent in derivatives transactions. BCBS should clarify that a bank acting as a clearing member or a client of a clearing member would apply the standard risk weights (i.e. 2% or 4%, assuming certain conditions are met) to all trade exposures resulting from derivatives that reference a Group 2 cryptoasset that are cleared through a QCCP.

Additional Treatment of Cleared Derivatives

It’s also troubling that the proposed RWA and counterparty credit risk treatment does not distinguish between cleared versus uncleared derivatives that reference Group 2 cryptoassets, even though the risk exposure to a bank is different based on if the derivative is cleared or not. At a minimum, banks should be able to recognize the risk mitigation tools applied by QCCPs for exchange-traded derivatives when computing the maximum loss it could incur from a derivative that references a Group 2 cryptoasset. For example, in the United States, QCCPs provide portfolio netting benefits between long and short positions in the same asset within a segregated customer account that would limit a bank’s exposure if their portfolio is hedged.⁹ QCCPs also collect initial margin and facilitate the exchange of variation margin between participants to cover the potential future exposure and current exposure of their positions, respectively. In contrast to the treatment for all other centrally cleared derivatives exposures, the proposed RWA treatment does not recognize the risk management tools that reduce outstanding exposure in centrally cleared derivatives markets.

Additionally, the risk exposures of exchange-traded cryptocurrency derivatives can be mitigated by various exchange mechanisms and credit controls that preserve market integrity. For example, the mechanisms employed on CME Globex prevent excessive price movements using price limits/circuit breakers, price banding, and velocity logic that protect against market disruptions. Additionally, CME employs pre-trade credit controls that allow clearing members to set exposure limits for order and trade activity, and all clearing members of CME Clearing are required to set their own credit controls for their individual customers. Banks should be able to recognize the risk management protections these tools provide when computing the maximum loss it could incur from an exchange-traded derivative that references a Group 2 cryptoasset.

Lastly, the Consultation outlines additional responsibilities for banks with direct or indirect exposures to any form of cryptoasset, which includes managing any risks that are not captured under BCBS’ framework. The Consultation provides three examples of such risks: risks attributable to operational and cyber risk, the underlying technology, and money laundering and financing of terrorism. These risks apply exclusively to the trading and holding of physical cryptoassets. Banks trading in exchange-traded

⁸ See Basel Committee on Banking Supervision, *Capital requirements for bank exposures to central counterparties*, (Dec. 2019)

⁹ Similar to the counterparty credit risk treatment, it is problematic that the proposed approach for calculating RWAs does not permit netting of long and short derivatives that reference the same Group 2 cryptoasset within the same netting set. This treatment is not reflective of the risk of derivatives that are cleared through a CCP, as a bank clearing member’s exposure to a CCP is calculated on a net basis.

and centrally cleared derivatives that reference a Group 2 cryptoasset do not face additional or unique cyber risks as compared to their other activity in well-established and highly regulated cleared derivatives markets, and BCBS should clarify that these additional responsibilities are not applicable to such exposures.

Conclusion

CME Group strongly encourages BCBS to ensure appropriate capital treatment of cleared derivatives that reference Group 2 cryptoassets that considers the unique risks of these assets. BCBS has already established a framework for centrally cleared derivatives under SA-CCR with risk parameters that are tailored to each asset class. Given that cleared derivatives that reference a Group 2 cryptoasset do not present any unique risks and have exhibited similar volatility to other assets for which SA-CCR applies, we believe that the existing prudential framework should be utilized, rather than adopting an entirely new treatment, particularly in light of the concerns we've identified above.

The proposed approach for computing RWAs and counterparty credit risk for derivatives that reference Group 2 cryptoassets is oversimplified and does not explicitly recognize the risk management benefits provided by QCCPs, contributing to inconsistent and overly punitive capital treatment in comparison to the treatment of other asset classes with similar volatility and risk profiles under SA-CCR. Additionally, BCBS has not provided any empirical analysis supporting the proposed counterparty credit risk treatment, which in our view does not appropriately reflect historical volatility or correlation across products within the same asset class, or the residual maturity of derivatives transactions. Lastly, for the purpose of computing the value of an exchange-traded and centrally cleared derivatives that reference a Group 2 cryptoasset, the proposed treatment should allow banks to be able to recognize the risk mitigation tools employed by QCCPs, as well as exchange mechanisms and credit controls, when computing the maximum losses it could incur.

We would be happy to further discuss or provide the underlying data referenced in our comments with the BCBS. If you have any comments or questions regarding this submission, please feel free to contact me at +1 312 634-1592 or Sunil.Cutinho@cmegroup.com. Alternatively, you may contact Sean Downey at +1 312 930-8167 or Sean.Downey@cmegroup.com.

Sincerely,



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