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Chief Policy Officer

March 18, 2019

VIA ELECTRONIC SUBMISSION

Anne E. Misback, Secretary
Board of Governors of the Federal Reserve System
20th St. and Constitution Ave. NW
Washington, DC 20551
Docket No. R—1629; RIN 7100—AF22

Robert E. Feldman, Executive Security
Federal Deposit Insurance Corporation
550 17th St. NW
Washington, DC 20429
RIN: 3064—AE80

Legislative and Regulatory Activities Division
Office of the Comptroller of the Currency
400 7th St. SW
Washington, DC 20219
Docket ID OCC—2018—0030

Re: Standardized Approach to Counterparty Credit Risk

Dear Sir/Madam:

The Board of Governors of the Federal Reserve System; the Federal Deposit Insurance Corporation; and the Office of the Comptroller of the Currency (together, the “Agencies”) are requesting comment on a proposal to implement a new approach for calculating the exposure amount of derivative contracts under the Agencies’ regulatory capital rule (the “Proposal”).¹ Specifically, the Agencies are proposing to replace the current exposure method (“CEM”) with the standardized approach for counterparty credit risk (“SA-CCR”) for purposes of calculating total risk-weighted assets under the capital rule. As a

¹ *Standardized Approach for Calculating the Exposure Amount of Derivative Contracts—Notice of Proposed Rulemaking*, 83 FR 64660 (December 17, 2018).

global exchange operator and leader in exchange-listed derivatives, Cboe Global Markets, Inc. (“Cboe”)² appreciates the opportunity to provide feedback on the Proposal.

Having previously expressed considerable concerns with CEM,³ Cboe applauds the Agencies’ efforts to replace the methodology. From Cboe’s perspective, CEM’s primary flaws arise from the methodology’s insensitivity to actual risk. CEM does not account for the delta (i.e., market sensitivity) of an option position or fully recognize the offsetting of positions with opposite economic exposures. A simple illustration of CEM’s insensitivity to risk is a long put spread, which is a common options strategy used by investors to reduce downside exposure and entails selling one put at a particular strike price and buying another put at a higher strike price. The strategy can never incur a loss greater than the initial premium paid to enter the position. Yet, under CEM, the calculated exposures can be more than 20X higher than the actual potential loss. For instance, if the premium paid to enter a long put strategy is \$1,000, the CEM capital charge can be over \$20,000 for a position that has a maximum loss of \$1,000.

CEM’s insensitivity to risk is especially impactful for options market-makers, which tend to accumulate large, *hedged*, and generally *risk-neutral* portfolios. This causes banking organizations that clear options market-makers to hold capital that is well in excess of what is necessary to fully cover the actual risk posed by market-maker portfolios. Requiring excessively disproportionate amounts of capital for a particular risk has caused clearing service providers to constrain or withhold their derivatives clearing services, negatively impacting the ability of firms to access client clearing services.⁴ These clearing constraints have impacted the ability of options market-makers to accumulate positions in the exchange-listed options market where market-makers have traditionally provided the vast majority of liquidity for investors.⁵ The effect of a reduction in the ability of options market makers to accumulate

² Cboe operates four U.S. options exchanges (CBOE, C2, BZX, and EDGX), a futures exchange (CFE), four U.S. equities exchanges (BYX, BZX, EDGX, and EDGA), the largest pan-European stock Exchange (Cboe Europe), and a foreign exchange-trading platform (Cboe FX).

³ See Cboe’s letter to the BCBS in response to the consultation on the leverage ratio treatment of client cleared derivatives (January 16, 2019), *available at*, <http://www.cboe.com/aboutcboe/government-relations/pdf/basel-lr-comment-final.pdf>; letter to the FSB, BCBS, CPMI, and IOSCO in response to the consultation on incentives to centrally clear over-the-counter (OTC) derivatives (September 7, 2018), *available at*, <http://www.cboe.com/aboutcboe/government-relations/pdf/fsb-comment.pdf>; joint letter to the BCBS in response to the consultation on revisions to the Basel III leverage ratio framework (July 6, 2016), *available at*, <http://www.cboe.com/aboutcboe/government-relations/pdf/20160706-bcbs-lr-final.pdf>; and joint letter to the FSB, BCBS, and European Commission on the unintended consequences of the leverage ratio (October 27, 2015), *available at*, <http://www.cboe.com/publish/ComLet/20151027.pdf>.

⁴ See BCBS, CPMI, FSB and IOSCO, *Incentives to centrally clear over-the-counter (OTC) derivatives: A post-implementation evaluation of the effects of the G20 financial regulatory reforms*, November 2018, *available at*, <http://www.fsb.org/2018/11/incentives-to-centrally-clear-over-the-counter-otc-derivatives-2/> (the “DAT Report”) (citing respondents that indicate CEM’s flaws cause clearing service providers to hold capital well in excess of their estimates of the actual risk posed by a clients’ positions; firms are having difficulty establishing accounts with client clearing service providers or are being declined new accounts; firms that do have access to clearing services are seeing their clearing service providers place limitations on their derivatives activity; and some firms have been off-boarded entirely by their clearing service providers).

⁵ In the listed options market, the overwhelming majority of investor orders require market maker liquidity for execution.

options positions has been reduced liquidity, increased costs to investors, and a heightened possibility of market dislocation during volatile environments.

The implementation of SA-CCR will help correct CEM's flaws by incorporating risk-sensitive principles, such as delta weighting options positions and more beneficial netting of derivative contracts that have economically meaningful relationships. Cboe therefore welcomes the adoption of SA-CCR as an important step to ameliorate the effects of CEM and applauds the Agencies for moving forward with this implementation. However, Cboe remains concerned that these important changes will not be adopted soon enough. Cboe has also identified a few technical aspects of the Proposal that may inadvertently disrupt longstanding hedging relationships in the exchange-traded derivatives market and that may not be sufficiently risk-sensitive. Thus, as discussed more fully below, in order to correct CEM's disruptive effects, Cboe encourages the Agencies to swiftly finalize SA-CCR and amend the Proposal in limited, but important, ways that will encourage the early adoption of SA-CCR; help prevent the disruption of longstanding hedging relationships in the exchange-listed derivatives market; and help ensure SA-CCR is sufficiently risk-sensitive. Cboe believes these steps are necessary to enhance market liquidity and encourage the offering of client clearing services, which will ultimately help reduce systemic risk and promote financial stability.

The Proposal

The proposal requires a banking organization to calculate the exposure amount of derivative contracts at the netting set level. A netting set is defined as a derivative contract between a party and counterparty or a group of contracts that is subject to a Qualified Master Netting Agreement ("QMNA"). As proposed, the exposure amount of a netting set is equal to an alpha factor of 1.4 multiplied by the sum of the replacement cost ("RC") of the netting set and the potential future exposure ("PFE") of the netting set.

$$\text{Exposure amount of a netting set} = 1.4 * (\text{RC} + \text{PFE})$$

For purposes of calculating PFE, the Agencies propose to divide the derivative contracts within a netting set into five asset classes (and then again into hedging sets) designed to reflect different risk factors of the derivative contracts: interest rate, exchange rate, credit, equity, and commodities. Generally, "long and short derivative contracts within the same hedging set would be able to fully or partially offset one another" in recognition of the fact that "derivative contracts that share similar risk factors share economically meaningful relationships (i.e., are more tightly correlated) and thus netting would be appropriate."⁶ Each hedging set category would have its own specific formula⁷ that allows for full or partial netting and ultimately determines the amount of each hedging set. In order to determine PFE a banking organization would then sum the different hedging set amounts within a netting set and multiply the aggregated hedging set amounts (i.e., aggregated amount) by the PFE multiplier. As the aggregated amount formula does not recognize collateral and assumes a zero market value for all

⁶ Proposal at 64666.

⁷ See proposed section 132(c)(8)(i)-(v).

derivative contracts, the PFE multiplier is designed to account for excess collateral and negative fair value of derivatives contracts to reduce PFE accordingly.

$$PFE = PFE \text{ multiplier} * \text{aggregated amount}$$

Aggregated amount = sum of each hedging set amount within the netting set.⁸

Cboe's Comments

As an initial matter Cboe greatly appreciates the Proposal's incorporation of more risk-sensitive principles, such as delta-weighting options and netting derivatives contracts that have economically meaningful relationships. As previously noted, CEM's lack of delta-weighting, limited netting, and general lack of risk-sensitivity continues to negatively impact the exchange-listed derivatives industry. To prevent further damage and reverse the negative effects of CEM, Cboe respectfully requests the Agencies:

- Accelerate SA-CCR's Implementation: Finalizing SA-CCR in the near-term and amending the early adoption regime will accelerate the positive effects of replacing CEM for the centrally-cleared exchange-listed derivatives market.
- Amend Technical Aspects of the Proposal: Ensuring SA-CCR fully recognizes netting of derivatives with important, longstanding, economically meaningful relationships will prevent the unnecessary disruption of a vital ecosystem in the centrally-cleared exchange-listed derivatives market.
- Address Other Considerations: Ensuring SA-CCR is sufficiently risk-sensitive will materially reduce a disincentive for banking organizations to offer client clearing services, and will allow market-makers to provide more appropriate and beneficial levels of liquidity to investors.

Timing of SA-CCR Implementation

Cboe remains deeply concerned that SA-CCR will not be adopted in the near-term. As proposed, advanced approaches banking organizations would be required to adopt SA-CCR by July 1, 2020, but have the option to adopt SA-CCR as of the effective date of the final rule. Cboe appreciates and supports the proposed early adoption regime. However, as the Proposal recognizes, exposure amounts are likely to rise significantly for certain segments of these bank organizations.⁹ In general, if SA-CCR causes a banking organization's overall exposures to rise, the banking organization as a whole will not be incentivized to adopt SA-CCR early and will likely choose to adopt SA-CCR only when it is mandatory. This would unnecessarily prolong the negative effects of CEM on the centrally-cleared exchange-listed derivatives market.

⁸ See proposed section 132(c)(7).

⁹ Proposal at 64685.

Cboe respectfully request the Agencies modify the early adoption regime to allow a banking organization to adopt SA-CCR early for purposes of calculating exposures arising from a clearing guarantee, regardless of whether the banking organization adopts SA-CCR early bank-wide. If, in order to take advantage of the early adoption regime, a banking organization is required to apply SA-CCR bank-wide, Cboe believes it will effectively result in some banking organizations not adopting SA-CCR early due to potential increases in overall exposures. If, alternatively, a banking organization is allowed to adopt SA-CCR early to calculate exposures related to market-maker clearing clients or for the banking organization's entire client clearing services business, Cboe believes a banking organization is more likely to adopt SA-CCR early for those segments of its business. As previously noted, options market-makers and the centrally-cleared exchange-listed derivatives market have been negatively impacted by CEM. Cboe believes amending the early adoption regime as suggested would greatly accelerate the positive effects of replacing CEM.

If SA-CCR is not adopted in the near-term Cboe requests that the Agencies adopt interpretive or exemptive relief that would enable banking organizations to delta-weight options positions for purposes of calculating exposures arising out of a clearing guarantee.

Technical Aspects of the Proposal

- a. The Proposal may prevent centrally-cleared exchange-listed equity options from netting with centrally-cleared exchange-listed equity futures.

Cboe is concerned that a technical aspect of the Proposal may prevent centrally-cleared exchange-listed equity options, such as options on the S&P 500 Index ("SPX Options"), from netting against economically offsetting centrally-cleared exchange-listed equity futures, such as futures on the S&P 500 Index ("S&P Futures").¹⁰ S&P Futures are a natural hedge for SPX Options positions and have long been used by SPX Options market-makers to reduce risk. This important and economically meaningful relationship is critical to the exchange-listed derivatives ecosystem. Cboe is concerned that if SA-CCR does not fully recognize this important relationship, SA-CCR may inadvertently and unnecessarily disrupt this hedging relationship and vital ecosystem.

As proposed, when calculating PFE for a hybrid netting set (i.e., a netting set composed of at least one derivative contract subject to variation margin agreement under which the counterparty must post variation margin agreement and at least one derivative contract that is not subject to such a variation margin agreement),¹¹ a banking organization must divide the netting set into sub-netting sets.¹² Positions considered to be margined are in one sub-netting set and positions considered to be unmargined are in a separate sub-netting set. This prevents margined positions from netting against unmargined positions. Importantly, proposed section 132(c)(9)(iv)(C) provides that "[f]or purposes of paragraph (c)(9)(iv) of this section, derivative contracts with daily settlement are treated as derivative

¹⁰ Cboe notes that centrally-cleared exchange-listed options and futures on other broad-based indexes (e.g., the Cboe Volatility Index, Russell 2000 Index, MSCI EAFE Index, MSCI Emerging Markets Index, etc.) may be similarly impacted.

¹¹ Proposal at 64668.

¹² Proposed Section 132(c)(11)(ii).

contracts not subject to a variation margin agreement and daily settlement does not change the end date of the period referenced by the derivative contract.”¹³

Cboe’s understanding is that certain futures contracts, such as S&P Futures, are settled to market on a daily basis and therefore appear to be considered unmargined pursuant to section 132(c)(9)(iv)(C) and SA-CCR’s netting set rules. Exchange-listed equity index options, however, are collateralized to market on a daily basis and therefore appear to be considered margined for purpose of SA-CCR’s netting rules. The effect would be to prevent any netting between SPX Options and S&P Futures, which would cause hedged positions with little to no market risk to have capital charges that are magnitudes greater than the actual market risk of the positions.

Cboe believes the inability to net SPX Options and S&P Futures would be a perverse outcome. Moreover, the principle purpose of not allowing margined derivative contracts to offset unmargined derivative contracts in the PFE component calculation is because of their “different applicable risk horizons.”¹⁴ However, exchange-listed futures and exchange-listed options both effectively have a risk horizon of one day with exchanges of margin or collateral occurring daily. Additionally, disallowing netting between exchange-listed options and futures does not accurately reflect the actual exposure at default. Upon a counterparty’s default a banking organization would be able to net positions across settled to market and collateralized to market positions; as such, banking organizations should be allowed to net such positions for purposes of the capital rule.

Cboe does not dispute the reasoning for preventing truly unmargined derivative contracts from netting with margined derivative contracts. However, any inability to net exchange-listed options and exchange-listed futures would risk further harming the exchange-listed derivatives market by altering a natural, longstanding hedging relationship and disrupting an important ecosystem in the exchange-listed derivatives market. Thus, Cboe respectfully requests that the banking agencies ensure and/or clarify that SA-CCR recognizes these important relationships by allowing centrally-cleared exchange-listed equity futures to fully net with centrally-cleared exchange-listed equity options.

- b. The Proposal may prevent sufficient netting between centrally-cleared exchange-listed index options and centrally-cleared exchange-listed options on exchange-traded funds that track the same index.

The hedging set formula for equity derivatives allows full offsetting for equity contracts referencing the same entity; however, the formula only allows partial offsetting when aggregating across distinct reference entities.¹⁵ The effect would be to prohibit full netting of derivative contracts that are highly correlated and reference the same underlying index but technically do not reference the same entity. For example, the Proposal appears to prevent full netting between SPX Options and options on ETFs that track the S&P 500 Index (e.g., options on SPY, “SPY Options”).

¹³ Proposal at 64698.

¹⁴ Proposal at 64673.

¹⁵ Proposed section 132(c)(8)(iii).

Similar to the relationship between SPX Options and S&P Futures, SPX Options and SPY Options (or other ETFs tracking the S&P 500) have an important, longstanding, economically meaningful relationship. Cboe believes it's important for SA-CCR to more fully recognize these important economic relationships by looking through to the underlying exposures. Thus, Cboe supports allowing banking organizations to decompose index options and options on related ETFs into their component parts to allow more fulsome netting of offsetting positions. For example, when calculating exposures of a portfolio comprised of SPX Options and SPY Options, Cboe believes banking organizations should be able to decompose the positions into the S&P 500 Index's component parts and underlying exposures to determine whether the underlying exposures offset. This would allow more fulsome netting of contracts that are technically referencing different entities but are tracking the same underlying exposures.

Other Considerations

a. Supervisory Delta

The Agencies propose to adopt a supervisory delta multiplier that is designed to account “for the sensitivity of a derivative contract (scaled to unit size) to the underlying primary risk factor[.]”¹⁶ Cboe greatly appreciates the proposed adoption of a mechanism that accounts for the delta of derivative contracts and believes delta-weighting is an important principle that helps ensure the SA-CCR formula is sufficiently risk-sensitive. However, Cboe is concerned that prescribing the volatilities to be used when calculating the supervisory delta multiplier, as proposed, would prevent SA-CCR from being sufficiently risk-sensitive and thus perpetuate CEM's primary flaw (i.e., a lack of risk-sensitivity).

Prescribing supervisory option volatilities will prevent the supervisory delta multiplier from accurately reflecting the risk of different derivatives contracts by causing options with very different risk profiles to have similar deltas. For example, out-of-the-money options have a much lower delta than at-the-money options, reflecting the lower risk associated with out-of-the-money options. Yet, as proposed, the supervisory option volatilities will artificially inflate the delta of out-of-the money options and greatly overstate the risk of such positions when compared to at-the-money options. This general lack of risk-sensitivity is the exact flaw in CEM that has significantly, negatively impacted the exchange-listed derivatives market.

In the interest of further supporting a sufficiently risk-sensitive SA-CCR formula Cboe supports the ability of banking organizations to use their own delta models. However, for exchange-listed derivatives, it is most important that banking organizations be allowed to utilize their own volatilities when calculating the delta, regardless of whether Black-Scholes or another delta model is required. Cboe believes this will help ensure the supervisory delta multiplier is sufficiently risk-sensitive in all environments and that ensuring SA-CCR is sufficiently risk-sensitive is a critical component of encouraging participants to offer client clearing services and ultimately alleviating the effects of CEM.

¹⁶ Proposal at 64673.

b. Maturity Factor

The maturity factor multiplier is designed to scale down the default one-year risk horizon of the supervisory factor to the risk horizon appropriate for a particular derivative contract. For purposes of a derivative contract that is subject to a variation margin agreement (excluding derivative contracts that are subject to a variation margin agreement under which the counterparty is not required to post variation margin), the formula for determining the maturity factor multiplier includes a margin period of risk (“MPOR”) variable. MPOR is represented as a number of business days and designed to “account for a potential reduction in the value of the collateral during the period between the last exchange of collateral before the close out of the derivative contract (as in the case of default of the counterparty) and the replacement of the contract on the market.”¹⁷

For derivative contracts that are not cleared transactions MPOR is subject to a floor of 10 days. As the Agencies noted, cleared derivatives transactions typically have a holding period of less than 10 days;¹⁸ thus, as in other contexts,¹⁹ the Agencies recognize that a floor of 5 days is appropriate for cleared transactions. However, the Proposal states that “the exposure of a clearing member banking organization to its clearing member client is not a cleared transaction where the clearing member banking organization is either acting as a financial intermediary and enters into an offsetting transaction with a CCP or where the clearing member banking organization provides a guarantee to the CCP on the performance of the client.”²⁰ Thus, when an exposure arises from a clearing guarantee, MPOR appears to be floored at 10 business days.

Cboe asserts that whether a banking organization’s exposures arise from a clearing guarantee or from directly purchasing centrally-cleared derivative contracts, the exposures arise from a cleared transaction and therefore should be subject to the same floor of 5 business days. A floor of 10 business days for a clearing guarantee is an especially perverse result when a banking organization purchasing centrally-cleared derivative contracts would only be subject to a floor of 5 business days. The result is to effectively penalize banking organizations for offering a clearing guarantee. Cboe believes amending the Proposal to allow a clearing guarantee to receive a floor of 5 days is an important aspect of encouraging participants to offer client clearing services.

¹⁷ Proposal at 64664.

¹⁸ *Id.* at 64684.

¹⁹ See Proposal at 64684 (providing that “[f]or a repo-style transaction, the capital rule applies a scaling factor of 0.71 to the standard supervisory haircuts to reflect the limited risk to collateral in those transactions and effectively reduce the holding period to 5 days).

²⁰ Proposal at 64677.

c. Alpha Factor

Under the proposal the exposure amount of a netting set would be equal to an alpha factor of 1.4 multiplied by the sum of the replacement cost of the netting set and PFE of the netting set.

$$\text{Exposure amount} = 1.4 * (\text{replacement cost} + \text{PFE})$$

“The alpha factor was included in the Basel Committee standard under the view that a standardized approach, such as SA–CCR, should not produce lower exposure amounts than a modelled approach. Therefore, to instill a level of conservatism consistent with the Basel Committee standard, the proposal would apply an alpha factor of 1.4 in order to produce exposure measure outcomes that generally are no lower than those amounts calculated using IMM.”²¹

Cboe appreciates the goal of instilling a level of conservatism into the standardized approach; however, a concern remains that the proposed alpha factor needs calibration. To the extent the alpha factor can be lowered by even a small fraction, there may be profound positive implications for the entire clearing ecosystem. A marginally lower alpha factor would increase the amount of capital available to clear client positions, which may incentivize banking organizations to onboard new clients or expand their client clearing services.

d. Leverage Ratio and Offsets for Initial Margin

The Agencies are also proposing to require advanced approaches banking organizations to replace CEM with a modified version of SA–CCR to determine the on- and off-balance sheet amounts of derivative contracts for purposes of calculating total leverage exposure.²² Unfortunately, consistent with CEM, the Proposal would limit collateral recognition in the leverage calculation. Cboe is thankful that the Agencies “are sensitive to impediments to banking organizations’ willingness and ability to provide client-clearing services”²³ as there is ample evidence that post-crisis capital reforms, including the implementation of the leverage ratio, has negatively impacted the exchange-listed derivatives market and the ability of firms to access client clearing services.²⁴ Moreover, the Basel Committee’s recent consultation on the leverage ratio’s treatment of client cleared derivatives suggests there is movement toward allowing banking organizations to “take into account physical or financial collateral, guarantees or other credit risk mitigation techniques to reduce the leverage ratio exposure measure.”²⁵

Cboe encourages the Agencies to take this opportunity to modify the leverage ratio to allow banking organizations to take into account collateral to reduce leverage ratio exposures. Cboe believes allowing

²¹ Proposal at 64666.

²² *Id.* at 64683.

²³ Proposal at 64683.

²⁴ *See supra* FN 3.

²⁵ BCBS, Consultative Document, *Leverage Ratio Treatment of Client Cleared Derivatives*, October 2018, available at, <https://www.bis.org/bcbs/publ/d451.htm>.

collateral to reduce leverage ratio exposures is also an important aspect of encouraging participants to offer client clearing services.

Cboe greatly appreciates the opportunity to provide its views on the Proposal and encourages the Agencies to swiftly adopt SA-CCR as modified above. The CEM methodology has negatively impacted the exchange-listed derivatives market. In order to alleviate CEM's effects, Cboe believes it is necessary to adopt SA-CCR expeditiously; ensure SA-CCR fully recognizes derivative contracts with important, economically meaningful relationships; and ensure SA-CCR is sufficiently risk-sensitive. Cboe believes these steps are necessary to enhance market liquidity and encourage the offering of client clearing services, which will ultimately help reduce systemic risks and promote financial stability.

Sincerely,



Angelo Evangelou
Chief Policy Officer
Cboe Global Markets, Inc.