

Morgan Stanley

March 3, 2020

Chris Kirkpatrick
Secretary
Commodity Futures Trading Commission
1155 21st Street, NW
Washington, DC 20581

Re: Capital Requirements for Swap Dealers and Major Swap Participants; RIN 3038-AD54

Ladies and Gentlemen:

Morgan Stanley appreciates the opportunity to provide comments to the Commodity Futures Trading Commission (the “**Commission**”) in response to its re-opened comment period on its proposed rulemaking to establish capital requirements for Swap Dealers and Major Swap Participants (the “**Proposal**”).¹

Morgan Stanley is a global financial services firm that provides its products and services to a large and diversified group of clients and customers, including corporations, governments, financial institutions and individuals. We have multiple consolidated subsidiaries that are provisionally registered as Swap Dealers with the Commission.

We support comments on the Proposal submitted by the Institute of International Bankers, the International Swaps and Derivatives Association, and the Securities Industry and Financial Markets Association (the “**Joint Associations’ Letter**”), and we support the Commission’s efforts to adopt a final rulemaking. We are submitting this letter to highlight particular issues of importance to Morgan Stanley and our clients.

I. Executive Summary

Our key recommendations include:

- Risk margin amount: The risk margin amount requirement should be restructured and revised to apply either:
 - As a “backstop” floor measured against the “tentative net capital” (“**TNC**”) of a Net Liquid Asset Swap Dealer or “net capital” of a Futures Commission Merchant (“**FCM**”) Swap Dealer; or

¹ 84 Fed. Reg. 69,664 (Dec. 19, 2019); 81 Fed. Reg. 91,252 (Dec. 16, 2016).

- With a 2% calibration, with offsets for segregated initial margin received, and with an exclusion for security-based swap (“SBS”) margin amounts that are subject to Securities and Exchange Commission (“SEC”) jurisdiction.
- Bank-Based Approach: Capital requirements should:
 - Be set consistently with prudential regulators’ Common Equity Tier 1 (“CET1”) “well capitalized” and “adequately capitalized” standards, resulting in a 6.5% CET1 effective requirement; and
 - Recognize all permissible U.S. Basel III credit and market Risk Weighted Asset (“RWA”) methodologies for use by Swap Dealers.
- Tangible Net Worth Approach: All commodity-focused Swap Dealers should be eligible to operate under a common capital methodology based on a bright-line, commodity reference asset notional-based standard, without regard to bank affiliation status.
 - This eligibility standard should be based on the well-established definitions of “exempt commodity” in the Commodity Exchange Act (“CEA”) and “agricultural commodity” in the Commission’s regulations.
 - Commodity-focused Swap Dealers should also be exempted from any quantitative liquidity requirements, even if they operate under the Bank-Based Approach.
- Liquidity: The Commission should rely on its existing supervisory authority to monitor and evaluate Swap Dealers’ liquidity risk management practices and:
 - Defer adoption of new quantitative liquidity requirements at this time; or
 - Provide exemptions for Swap Dealer subsidiaries of large U.S. bank holding companies (“BHCs”) subject to comprehensive, consolidated liquidity risk management requirements; or
 - Recognize a variety of offsets and recalibrations to more appropriately tailor any Swap Dealer quantitative liquidity requirements.
- Substituted Compliance: Regulated Swap Dealers operating in:
 - Major markets with extensive and comprehensive regulatory standards—e.g., Germany, Japan, and the United Kingdom—should receive early substituted compliance guidance; and
 - Other markets should be permitted to receive substituted compliance if local country capital requirements require capitalization generally equivalent to the Commission’s standards.

II. Capital

We submitted comments on the Proposal’s capital framework to the Commission in 2017 during the original comment period. Since that time, there have been several significant developments: the SEC finalized its capital rules for nonbank Security-Based Swap Dealers (“**SBSDs**”);² the Basel Committee on Banking Supervision (“**BCBS**”) adopted wide-ranging revisions to Basel III, which are now under review with U.S. prudential regulators for potential revisions to U.S. Basel III;³ and the U.S. prudential regulators adopted a final rule to implement the Standardized Approach for Counterparty Credit Risk (“**SA-CCR**”), which modifies derivatives counterparty credit risk standards in U.S. Basel III, including for swaps.⁴ We believe that these developments require a reevaluation of certain regulatory capital principles and methodologies included in the Proposal.

A. Risk Margin Amount

The Proposal would amend a longstanding FCM regulatory capital concept, “risk margin amount,” and apply it in the various Swap Dealer capital methodologies in different ways. We encourage the Commission to reconsider whether a swap-specific “risk margin amount” calculation is necessary in the Swap Dealer capital framework and, if so, whether it should be recalibrated and narrowed to more directly address Swap Dealers’ business activities and risk profiles.

1. Inconsistent application of risk margin amount requirements

Under the Proposal, risk margin amount-based requirements would apply differently to Swap Dealers operating under different capital methodologies. Specifically:

- Bank Swap Dealers subject to prudential regulators’ capital rules would be exempt from any risk margin amount-based requirement, consistent with U.S. Basel III.
- Bank-Based Approach Swap Dealers would be subject to an 8% CET1 risk margin requirement, which would operate as a separate, independent test to the Bank-Based Approach CET1 / RWA standard.⁵
- Tangible Net Worth Swap Dealers would also be required to apply an 8% risk margin amount requirement as a separate, independent test, but in this case the capital measure would be tangible net worth, not CET1.⁶

² 84 Fed. Reg. 43,872 (Aug. 22, 2019).

³ BCBS, *Basel III: Finalising post-crisis reforms* (Dec. 2017) (“**BCBS 2017 Accord**”).

⁴ 85 Fed. Reg. 4362 (Jan. 24, 2020).

⁵ 17 C.F.R. §§ 23.101(a)(1)(i)(B)-(C) (proposed).

⁶ 17 C.F.R. §§ 23.101(a)(2)(ii)(A)-(B) (proposed).

- Net Liquid Asset Approach Swap Dealers would be required to add 8% of their risk margin amount on top of credit risk, margin risk and non-allowable asset and other charges when calculating minimum net capital requirements.⁷
- FCM Swap Dealers would be subject to similar risk margin amount principles as Net Liquid Asset Swap Dealers, except FCM Swap Dealers would be required to add the swap-specific risk margin amount to existing FCM-specific customer and noncustomer risk margin amount requirements.⁸

The design and purpose of the risk margin amount varies significantly across these capital methodologies. In two cases, the risk margin amount is a standalone test isolated from other capital requirements; in two other cases, the risk margin amount is additive to credit, market and other charges; and in the prudential regulators' framework, there is no risk margin amount-based requirement at all. Moreover, the capital measures applied to risk margin amount-based requirements also vary significantly: CET1, an accounting-based concept of tangible net worth, and a Net Liquid Asset capital concept of net worth that includes qualifying subordinated debt instruments.

2. Segregated initial margin

The Proposal would apply risk margin amount requirements to all swap, SBS, futures and foreign futures counterparty relationships, regardless of margin collection exemptions or thresholds. The Proposal explained that inclusion of non-margined products was justified in the risk margin amount “so that capital would be available to cover the ‘residual’ risk of a counterparty’s uncleared swaps and security-based swap positions.”⁹ We note, however, that a Swap Dealer with non-cleared, non-margined swaps and SBS positions would separately be required to apply credit risk charges to these exposures. As such, it is unclear why a separate risk margin amount requirement is necessary to cover such exposures—which is underscored by the fact that, in some of the Proposal’s capital methodologies, the risk margin amount is additive to credit risk charges, whereas in other cases it is a standalone test that must be separately met in parallel to credit risk charges.

The risk margin amount concept would be improved through the recognition of offsets. As suggested by the Proposal, there is “residual” risk in non-margined relationships; in margined relationships, however, the Commission’s regulations require initial margin to be collected and segregated at independent custodians.¹⁰ As such, the risk margin amount might be reduced by initial margin that swap counterparties deliver to independent custodians to cover a Swap Dealer’s potential credit exposures in the event of the counterparty’s default. While the SEC did not include similar offsets in its SBS risk margin amount standards, providing an offset in the Commission’s swap risk margin amount calculation

⁷ 17 C.F.R. § 23.101(a)(1)(ii)(A) (proposed) (incorporating by reference Exchange Act Rule 18a-1), subject to the risk margin amount adjustments described in 17 C.F.R. § 23.101(a)(1)(ii)(A)(1) (proposed).

⁸ 17 C.F.R. § 1.17(a)(1)(i)(B) (proposed).

⁹ 81 Fed. Reg. at 91,258.

¹⁰ 17 C.F.R. § 23.157(b).

could be justified on the basis that the Commission, but not the SEC, requires initial margin to be posted to independent custodians.

Finally, we note that the scope and design of the Proposal's risk margin amount has certain parallels with leverage ratios that Commission representatives have criticized in recent years. The risk margin amount concept does not include accommodations for segregated initial margin or distinguish based on risk profile, and a new transaction that offsets risk from an earlier transaction results in higher requirements even when an entity's risk profile is reduced by the new, offsetting transaction.¹¹

3. Treatment of security-based swaps

The Proposal's definition of risk margin amount includes SBS. By contrast, the SEC's SBS net capital rule does not include CFTC-governed swaps.¹² The SEC approach follows long-standing FCM/broker-dealer net capital principles, which apply separate, greater-of minimum requirements for debit items (in a broker-dealer capacity) and margin required in connection with cleared customer and noncustomer positions (in an FCM capacity).¹³

The Proposal's intervention in setting SBS risk margin amount requirements poses both conceptual and practical challenges. The Proposal would require, for instance, Net Liquid Asset Swap Dealers to generally comply with the Exchange Act Rule 18a-1 net capital standards but would override the SEC's application of a 2% risk margin amount for SBS within Rule 18a-1. This would result in general deference to SEC net capital standards and calculations with a specific Commission override and recalibration for SEC-governed products.

¹¹ See, e.g., Letter from the CFTC to the OCC, Board of Governors of the Federal Reserve System, and the FDIC regarding Capital Adequacy: Standardized Approach for Calculating the Exposure Amount of Derivative Contracts (Feb. 15, 2019), at 3-4, available at <https://www.cftc.gov/sites/default/files/2019-02/SA-CCRCommentLetter021519.pdf> ("Under CFTC regulations, when margin is segregated, it remains the property of the client. A clearing member may only use client funds to meet that client's obligations. In the event of a client default, the clearing member may use the client's margin to cover losses resulting from the client's positions. The clearing member cannot use segregated client margin to leverage itself under any circumstance. Segregated margin is, by definition, risk-reducing. Failing to reduce a clearing member's exposure by the segregated client margin it holds results in an inflated measure of the clearing member's exposure for a cleared trade."); Richard Haynes, Lihong McPhail, and Haoxiang Zhu, *When the Leverage Ratio Meets Derivatives: Running Out Of Options?*, CFTC Policy Brief (Apr. 2019) at 27, available at https://www.cftc.gov/sites/default/files/2019-05/oce_leverage_and_options_ada.pdf ("[W]e find that the leverage ratio requirement has shifted market activities toward less constrained market segments, and by a significant amount. This change in the competitive landscape could, in turn, have important implications on market liquidity, the distribution of risks in financial markets, and access to key market infrastructure such as central clearing."); Remarks of Commissioner Brian Quintenz before the Structured Finance Industry Group Vegas Conference, Feb. 26, 2018, available at <https://www.cftc.gov/PressRoom/SpeechesTestimony/opaquintenz7> "[A]s a binding capital constraint, especially on conditional or probabilistic off-balance sheet exposures, a leverage ratio creates many perverse outcomes and is a poor regulatory construct.")

¹² 17 C.F.R. § 240.18a-1(c)(6).

¹³ 17 C.F.R. § 240.15c3-1(a)(ii); 17 C.F.R. §§ 1.17(a)(1)(i)(B), (b)(8).

4. 8% calibration

The proposed calibration of a risk margin amount requirement at 8% appears to be based on the existing FCM standard. There appears to be no evidence to support a conclusion that an 8% calibration is appropriate in the context of non-cleared swaps markets, which operate with fundamentally different regulatory standards and risk management principles than an FCM's customer and non-customer clearing activities. Moreover, while the SEC included an 8% SBS risk margin amount requirement in its original SBSB capital proposal, the SEC ultimately adopted a 2% SBS risk margin requirement, at least for an initial period.¹⁴

The 8% FCM risk margin amount standard has evolved over the past two decades in response to marketplace developments, supervisory data, and larger regulatory changes. What is clear, however, is that the Commission's calibration of the FCM risk margin amount has focused on, and been calibrated in response to, the specific role played by FCMs in customer and noncustomer clearing activities.¹⁵

Application of an 8% risk margin amount requirement to non-cleared activity, or to proprietary cleared activity, appears to be based on an extension of customer and noncustomer clearing considerations that are largely inapplicable in these other contexts. Swap Dealers facing counterparties in non-cleared swaps are acting as a principal, not as a clearing intermediary, and regulatory margin standards require counterparties to post initial margin to independent custodians, not to the Swap Dealer directly.¹⁶ As such, the policy rationale supporting an FCM risk margin amount requirement—a volume-based test to safeguard customer and noncustomer property—is inapplicable to Swap Dealers.¹⁷ Similarly, for proprietary cleared positions, a Swap Dealer acts as a principal vis-à-vis the clearinghouse, which is not analogous to the risks posed by customer and noncustomer clearing activities, where the FCM acts as agent.

5. Recommendations

We have highlighted a number of conceptual and practical concerns with adoption of a risk margin amount requirement as included in the Proposal. We recommend that the Commission reconsider whether any risk margin amount calculation is necessary in the various Swap Dealer capital approaches, particularly since non-cleared and proprietary cleared swap exposures are already captured by credit risk charges.

¹⁴ 17 C.F.R. § 240.18a-1(a)(1)(i).

¹⁵ See 69 Fed. Reg. 49,784, 49,786 (Aug. 12, 2004) (citing specific activities and risk in clearing markets when imposing an 8% risk margin amount customer requirement); 74 Fed. Reg. 69,279, 69,281 (Dec. 31, 2009) (raising the risk margin amount requirement for noncustomer positions to 8% on the basis that “recent events had demonstrated that the risk associated with noncustomer accounts may not necessarily be less than the risk associated with customer accounts.”).

¹⁶ 17 C.F.R. § 23.157(b).

¹⁷ While developments are still at an early stage, the calibration of any Swap Dealer risk margin amount should also be evaluated in the context of LIBOR transition, particularly if Swap Dealers increase dealing activities to facilitate the transition in swap reference rates—sometimes referred to as the “Increased Volume Effect.”

As an alternative, we recommend:

- For Net Liquid Asset Swap Dealers and FCM Swap Dealers, the risk margin amount requirement would be measured independently against TNC, creating a risk margin amount “backstop” to net capital requirements that reflect credit and market risk charges.¹⁸
 - The TNC minimum requirement would be a fixed dollar amount (\$100 million) combined with a specified percentage of the risk margin amount.
 - The net capital minimum requirement would not include a risk margin amount-based requirement and would, instead, be a fixed dollar amount to which credit and market risk charges would be added.
- Recalibrating and rescaling the risk margin amount calculation to:
 - Exclude SBS from its swap risk margin amount calculation, following the precedent of the independent FCM / broker-dealer volume-based tests;
 - Recognize segregated initial margin as an offset to risk margin amount requirements, reflecting the distinct and specific role that segregated initial margin plays in the Commission’s regulatory regime for non-cleared swaps; and
 - Adopt an initial 2% risk margin amount calibration, following the SEC’s precedent.

B. Bank-Based Approach

The Bank-Based Approach is a significant and necessary pillar in the Proposal’s regulatory capital framework. The Bank-Based Approach fosters greater comparability with Bank Swap Dealers, provides a risk-sensitive capital methodology for Swap Dealer business models that are not adequately captured in traditional net capital calculations, and provides Swap Dealer subsidiaries of bank holding companies with potential risk management and operational synergies.

As noted earlier in this letter, U.S. Basel III RWA standards are going through a period of significant change. To ensure that the Bank-Based Approach imposes robust capital requirements and remains viable in the long term, we recommend that the Commission align CET1 requirements with prudential regulators’ prompt corrective action (“PCA”) requirements and accommodate the range of evolving RWA methodologies permitted by prudential regulators’ U.S. Basel III standards.

¹⁸ While we refer here to TNC, which is the term used in the Net Liquid Assets Approach, the corresponding term in the Commission’s regulations is “net capital,” as defined in Rule 1.17(c)(1).

1. Prompt Corrective Action CET1 standards

The Proposal would require Bank-Based Approach Swap Dealers to meet a minimum 8% CET1 requirement, subject to a 20% early warning notification threshold, resulting in an effective minimum requirement of 9.6% CET1.¹⁹ This resulting 9.6% CET1 requirement is not grounded in any bank-based capital methodology.

We recommend that the Commission align Bank-Based Approach CET1 requirements with CET1 requirements in the prudential regulators' PCA standards. PCA standards include both "adequately capitalized" and "well capitalized" thresholds, creating the functional equivalent of an early warning notification threshold, and are calibrated based on U.S. Basel III RWA methodologies. Consistent with PCA standards, we recommend for the Bank-Based Approach:

- A minimum CET1 / RWA requirement of 4.5%, which is the adequately capitalized PCA standard; and
- An early warning notification CET1 / RWA requirement of 6.5%, which is the well capitalized PCA standard.²⁰

This two-tier approach would follow the Commission's mandate in the CEA to impose regulatory capital requirements on nonbank Swap Dealers that are "comparable" to those imposed by prudential regulators on Bank Swap Dealers.²¹ It would also rely on prudential regulators' supervisory experience and judgment in calibrating CET1 requirements, rather than modeling such requirements on FCM risk margin amount principles that are not analogous to bank capital requirements.

In making this recommendation, we believe that it is important to emphasize that an 8% CET1 capital requirement has no clear basis in bank-based capital methodologies. The 8% total capital standard in bank-based capital methodologies is an inapposite analogue in the Bank-Based Approach, as this 8% calibration includes Additional Tier 1 and Tier 2 capital instruments, whereas the Proposal exclusively recognizes CET1 instruments.²² Similarly, any focus on an 8% Bank-Based Approach capital calibration must take into account the 20% early warning notification feature of the Proposal, which would introduce fundamental differences—and lack of comparability—with bank capital standards.

An effective 6.5% CET1 requirement would also advance the Commission's statutory requirement to impose capital requirements that "help ensure the safety and soundness of the swap dealer" and "are appropriate for the risk associated with the non-cleared swaps held as a swap dealer."²³ A Bank-Based Approach Swap Dealer that failed to meet a 6.5% CET1 requirement would be unable to

¹⁹ 17 C.F.R. § 23.101(a)(1)(i)(B) (proposed); 17 C.F.R. § 23.104(c) (proposed).

²⁰ 12 C.F.R. §§ 6.4(c)(1)(iii), 6.4(c)(2)(iii) (OCC); 12 C.F.R. §§ 208.43(b)(1)(iii), 208.43(b)(2)(iii) (Federal Reserve); 12 C.F.R. § 324.403(b)(1)(iii) (FDIC).

²¹ CEA § 4s(e)(3)(D)(ii)(I).

²² See, e.g., 12 C.F.R. § 217.10(a)(1) (imposing, for Federal Reserve-regulated banking organizations, minimum risk-based capital requirements of a 4.5% CET1 ratio).

²³ CEA § 4s(e)(3)(A).

deplete its capital through dividends, similar to the prohibition on capital distributions that applies to banks that fail to meet PCA risk-based capital requirements.²⁴

2. Risk-Weighted Asset calculations

The prudential regulators have undertaken an extensive effort to revise U.S. Basel III RWA standards. While the stated goal of this effort is to maintain relatively consistent levels of capital requirements,²⁵ there are significant ongoing efforts to revise specific credit and market risk methodologies. These efforts will likely require at least two, and potentially several, years to reach finalization.²⁶ Accordingly, we recommend that the Commission provide Bank-Based Approach Swap Dealers with flexibility to operate under all permissible U.S. Basel III methodologies. This flexible approach would provide the Commission with certainty, in 2020, that the Bank-Based Approach is immediately viable and will remain so in the coming years notwithstanding ongoing revisions to U.S. Basel III.

In particular, we recommend that the Bank-Based Approach permit Swap Dealers to elect to calculate credit risk RWAs under any of these permissible U.S. Basel III methodologies:

- 12 C.F.R. Part 217, Subpart D, which provides the “Standardized Approach” for credit risk, including the “Current Exposure Method” for swap exposures;
- 12 C.F.R. Part 217, Subpart E, Sections 100-155, with counterparty credit risk in derivative transactions calculated in accordance with either:
 - the “Internal Models Methodology,” or “IMM”; or
 - the “Standardized Approach for Counterparty Credit Risk,” or “SA-CCR.”²⁷

This flexible approach would provide important accommodations for the diverse range of nonbank Swap Dealers’ business models, and would facilitate an orderly transition during a significant period of change in bank capital standards. While the prudential regulators’ amendments to U.S. Basel III to adopt SA-CCR take effect on April 1, 2020, transitional provisions permit banking organizations to defer implementation of SA-CCR until January 1, 2022.²⁸ The effect of the SA-CCR transition, however, should also be viewed in the context of pending changes to U.S. Basel III counterparty risk weights,

²⁴ 12 U.S.C. § 1831o(d)(1)(A).

²⁵ See, e.g., Remarks by the Hon. Randal K. Quarles, “Refining the Street Capital Buffer,” at 4, Sept. 5, 2019 (commenting on the “capital-building phase after the crisis” and observing that large BHCs “have built significant capital stores”).

²⁶ The BCBS 2017 Accord contemplates a 2022-2027 transition period. See BCBS 2017 Accord, “Output floor,” at 137-39. The prudential regulators have not yet issued proposed rules to implement many provisions of the BCBS 2017 Accord with a BCBS implementation date of January 1, 2022.

²⁷ While the SA-CCR methodology is contained in Sections 132-133 of Subpart E, the resulting exposure calculations must still be applied in the broader context of Subpart D, including the counterparty risk-weights in Section 32 of Subpart D. As such, it may be appropriate for the Commission to reference both Subparts D and E for the SA-CCR methodology in any Bank-Based Approach final rule.

²⁸ 12 C.F.R. § 217.300(g)-(h).

which would impact SA-CCR RWA calculations, as well as pending changes to market risk standards, including for swaps, as a result of the “Fundamental Review of the Trading Book” (“FRTB”). Counterparty risk-weight changes and FRTB are each components of the 2017 BCBS revisions to global Basel III standards, which prudential regulators have committed to adopt in the United States.²⁹

This significant period of regulatory change suggests that the Commission should avoid selecting a single credit risk methodology for the Bank-Based Approach and should, instead, permit firms to operate under either “standardized” calculations or one of the “advanced” methodologies, similar to how FCMs are permitted to operate under either “grid based” or “model based” capital methodologies today. Moreover, there are precedents in the prudential regulators’ framework for such a flexible approach. For example, in 2012, the Office of the Comptroller of the Currency adopted, in the lead up to the initial U.S. Basel III rulemaking process, an interim final rule that permitted banks with flexibility to select any of three different credit risk methodologies for lending limits purposes.³⁰

3. SA-CCR adjustments

The Commission is the lead U.S. market regulator for commodity derivative transactions. We encourage the Commission to exercise its independent judgment and expertise in commodity markets when considering how the SA-CCR credit risk methodology would apply in the Bank-Based Approach. In particular, for Swap Dealers relying on SA-CCR credit risk methodologies in the Bank-Based Approach, we encourage the Commission to reset the energy derivative “supervisory factor” at 10%, or to otherwise set this supervisory factor at a level consistent with U.S. market evidence, as determined by the Commission.

The prudential regulators adopted a final SA-CCR rule that varies the supervisory factor for energy derivatives between 18%, for oil and natural gas transactions, and 40%, for electricity transactions.³¹ When adopting these calibrations, the prudential regulators declined to calibrate “the supervisory factors for commodity derivative contracts to reflect the volatility driven by forward prices . . . because the value of short-term derivative contracts—which also are prevalent within the market—is driven by spot prices rather than forward prices.”³² In practice, however, Swap Dealers active in oil, natural gas and electricity derivatives are heavily concentrated in forward markets, which have very different volatilities and credit risk profiles than those of spot markets. Imposition of spot market-based energy derivative supervisory factors in SA-CCR is not consistent with U.S. market evidence or the credit risks faced by Swap Dealers active in energy derivatives.

²⁹ See, e.g., Federal Reserve Press Release, Dec. 7, 2017 (“The reforms finalized today are intended to improve risk sensitivity, reduce regulatory capital variability, and level the playing field among internationally active banks. The agencies will consider how to appropriately apply these revisions to the Basel III reform package in the United States and any proposed changes based on this agreement will be made through the standard notice-and-comment rulemaking process.”); Testimony of Vice Chair for Supervision Randal K. Quarles, Dec. 4, 2019, pp. 5-6 (“[W]e also understand the need to thoughtfully finalize implementation of Basel III”).

³⁰ 77 Fed. Reg. 37,265, 37,268 (Jun. 21, 2012) (“The interim final rule provides three methods for calculating credit exposure of derivative transactions other than credit derivatives.”).

³¹ 12 C.F.R. § 217.132 Table 3.

³² 85 Fed. Reg. at 4384.

As a general principle, we encourage the Commission to defer to prudential regulators' RWA standards when finalizing the Bank-Based Approach. However, given the Commission's direct role as a market regulator in U.S. commodity derivative markets, we believe targeted adjustments to the SA-CCR framework to recalibrate these supervisory factors would be appropriate. Included as Annex A to this letter is an explanation of how a 10% supervisory factor for energy derivatives is warranted based on BCBS's SA-CCR calibration formula.

We also support the recommendation made by the Joint Associations' Letter to recognize qualifying letters of credit as credit risk mitigants. Qualifying letters of credit, which we would define as a letter of credit issued by a bank that can be drawn against even after a counterparty's bankruptcy, insolvency or default, serve as a functional equivalent to initial margin for commercial end users exempted from regulatory margin requirements. Such letters of credit are commonly relied on by commercial end users to access energy derivatives markets when they otherwise do not have available cash to provide as collateral (and are exempted, by statute, from providing such cash collateral). Similar accommodations might be made for "right-way risk" lien-secured transactions.³³

C. Net Liquid Assets Approach

1. Amendments to Exchange Act Rule 18a-1

We support the Commission's effort to align with SEC net capital standards through inclusion of the Net Liquid Assets Approach in the Proposal. This approach is particularly well suited for Swap Dealers that are dual-registered with the SEC as SBSBs, as the dual-registered entity could comply with Exchange Act Rule 18a-1 net capital standards to meet both regulators' net capital requirements.

The SEC's 2019 SBSB capital final rule resolved many, but not all, of the Proposal's modifications to draft Exchange Act Rule 18a-1. In particular:

³³ Descriptions of lien-secured transactions are included on page 10 of the joint trade association comment letter on the SA-CCR proposal ([link](#)) as well as pages 6-7 the Morgan Stanley comment letter on SA-CCR ([link](#)) (quoted here):

By way of illustration, an oil exploration and production company may own land with substantial reserves of un-extracted oil. To mitigate the risk of declines in oil prices, the company may execute a commodity derivative with a banking organization that provides the company with short exposure to oil (e.g., the company is "in the money" if oil prices decline). In this example, the banking organization, as the derivative counterparty, would have long exposure through the derivative to oil prices. If the company provided the banking organization with a lien on underlying oil reserves, the banking organization would have right-way risk: if oil prices rise to the point where the company is "out of the money" on the derivative, the company would be selling its physical oil for a higher price and generating higher revenues with which to pay the banking organization. In this scenario, the banking organization has a legal claim through the lien to oil reserves that have increased in value during the derivative transaction.

The lien in this example operates in a manner similar, although not identical, to initial margin recognized as a credit risk mitigant in the Proposal.

- Risk margin amount: Our comments in Section II.A.5 suggest how the Commission should restructure and recalibrate risk margin amount-based requirements for Net Liquid Asset Swap Dealers.³⁴
- Market risk: The Proposal’s adjustments to market risk requirements appear designed to require Net Liquid Asset Swap Dealers to comply with “Basel 2.5” market risk standards, which is consistent with broader supervisory trends in market risk regulation.³⁵
- Credit risk charges for derivative receivables: Rule 18a-1 permits Net Liquid Asset SBSBs with internal model approvals to calculate credit risk charges in lieu of deductions for uncollected margin from margin-exempt counterparties, making it unnecessary for the Commission to address this point when tailoring Rule 18a-1 to apply to Net Liquid Asset Swap Dealers.³⁶
- Initial margin posted: While we support the Commission’s modification to Rule 18a-1 to classify initial margin posted as a “current asset” for net capital calculations, we note that this modification may be moot for dual-registered Swap Dealer/SBSBs, since the SEC separately requires a forgivable loan to cover the value of any initial margin posted.³⁷
- Margin difference: The SEC eliminated the “margin difference” deduction when adopting the SBSB capital final rule, making further Commission action unnecessary.³⁸

2. Netting principles

Net Liquid Asset Swap Dealers are likely to engage in dealing activities that were not contemplated by the SEC when designing Rule 18a-1 for SBSBs. In particular, the SEC did not design Rule 18a-1 to consider the range of dealing activities in interest rate, foreign exchange and commodity swaps in which Net Liquid Asset Swap Dealers may engage. As such, it is necessary to expand Rule 18a-1 netting methodologies to include these asset classes.

We support the statement in the Commission’s 2019 request for comment that “a comparable long or short position” in these asset classes should be eligible for netting.³⁹ This modification is necessary to avoid inconsistent product-based netting treatments for equity and credit products, which were specifically anticipated by Rule 18a-1, and interest rate, foreign exchange and commodity derivative products, which are within the Commission’s jurisdiction.

³⁴ 17 C.F.R. § 23.101(a)(1)(ii)(A)(1) (proposed).

³⁵ 17 C.F.R. § 23.101(a)(1)(ii)(A)(2) (proposed); see 77 Fed. Reg. 53,060 (Aug. 30, 2012).

³⁶ 17 C.F.R. § 23.101(a)(1)(ii)(A)(3) (proposed); 17 C.F.R. §§ 240.18a-1(a)(2), 240.18a-1(d)(1).

³⁷ 17 C.F.R. § 23.101(a)(1)(ii)(A)(4) (proposed); 84 Fed. Reg. at 43,887.

³⁸ 17 C.F.R. § 23.101(a)(1)(ii)(A)(5) (proposed); 84 Fed. Reg. at 44,010 (“[T]he final rules will not require a nonbank SBSB to deduct the margin difference for each account it carries that holds cleared security-based swaps or swaps.”).

³⁹ 84 Fed. Reg. at 69,672.

D. Amendments to FCM Standards

We agree that dual-registered FCM Swap Dealers should appropriately capitalize against risks arising from Swap Dealer activities distinct and separate from their FCM capacities. However, we believe that any risk margin amount-based requirements for FCM Swap Dealers should distinguish between an entity's FCM and Swap Dealer capacities and also create parity with swap-based risk margin requirements for non-FCM Swap Dealers.

As noted in Section II.A.5., we believe that the Commission could achieve these goals by either setting the swap-specific risk margin amount requirement relative to TNC or, in the alternative, by recalibrating and narrowing the scope of the swap-specific margin risk margin amount requirement.

A TNC-based requirement for FCM Swap Dealers would be logical, since its swap dealing exposures are principal risks that attract credit and market risk charges, which do not factor into net capital minimums. As such, setting the swap-specific risk margin amount requirement relative to TNC would allow the swap-specific risk margin amount requirement to act as a "backstop" to risk-based requirements, rather than as an add-on which combines risk-sensitive credit and market risk requirements with risk-insensitive risk margin amount requirements.

Alternatively, recalibrating and narrowing the scope of the swap-specific risk margin amount would appropriately distinguish between an FCM Swap Dealer's two capacities. In its FCM capacity, the Commission has determined, over two decades of supervisory observations and rulemakings, that an 8% risk margin requirement is a well-designed safeguard to address customer and noncustomer clearing activities, which include custody of customer assets. By contrast, there is no similar swap dealing marketplace evidence to suggest an 8% calibration is necessary for a swap-specific risk margin amount calibration, and swap dealing credit and market risks are otherwise adequately addressed by Rule 1.17.

E. Tangible Net Worth Approach

The Proposal includes a Tangible Net Worth Approach as an accommodation for Swap Dealers that are not "predominantly engaged in financial activities."⁴⁰ In practice, it appears that Swap Dealers likely to meet this non-financial standard are firms engaged in commodities activities. We recommend that Swap Dealers' eligibility for the Tangible Net Worth Approach be expanded to include all commodity-focused Swap Dealers, rather than introduce artificial and unnecessary distinctions in capital methodologies between commodity-focused Swap Dealers that are bank affiliates and non-affiliates.

Commodity-focused Swap Dealers—regardless of bank affiliation—are engaged in the same markets, face overlapping counterparties, and rely on similar risk management techniques. These Swap Dealers would face common challenges operating under either the Net Liquid Asset Approach (which generally imposes unfavorable charges and deductions on commodity positions) or the Bank-Based Approach, if Swap Dealers active in energy markets were forced to comply with SA-CCR energy spot market supervisory factor calibrations. Adopting a commodity firm-specific capital methodology would

⁴⁰ 17 C.F.R. § 23.101(a)(2).

also reflect the core mission of the CFTC, whose origins date to Congress’s creation of a commodities market independent agency in the Commodity Futures Trading Commission Act of 1974.

Eligibility for the Tangible Net Worth Approach could be limited to Swap Dealers whose swap notional amounts are least 85% concentrated in commodity reference assets. This notional test should focus on external customer swap “dealing” activities and disregard inter-affiliate or non-dealing swap transactions that hedge, for example, a commodity-focused Swap Dealer’s interest rate or foreign exchange risks. For purposes of this eligibility test, commodity reference assets would be Exempt Commodities and Agricultural Commodities, where “Exempt Commodity” is defined in section 1a(20) of the CEA, 7 U.S.C. § 1a(20), and “Agricultural Commodity” is defined in 17 C.F.R. § 1.3.

This simple, bright-line test would avoid potentially complex assessments of whether the Swap Dealer (or its parent company) is “predominantly engaged in financial activities,” a prudential regulator concept that may pose risk of confusion and uncertainty when applied to firms active in commodity swap markets. It would also ground eligibility in regulatory reports that could be examined and verified by the Commission.

III. Liquidity

The Proposal would require a Swap Dealer to meet quantitative liquidity requirements tied to its particular capital regime. Net Liquid Asset and FCM Swap Dealers would be required to operate under an internal liquidity stress testing (“**ILST**”) regime; Bank-Based Approach Swap Dealers would be required to meet the Liquidity Coverage Ratio (“**LCR**”), as adopted by the prudential regulators.⁴¹

We recommend that the Commission defer adoption of any quantitative liquidity standards and instead rely on its existing supervisory authority to confirm that Swap Dealers are appropriately managing their liquidity risks. Given the wide range of Swap Dealers’ business models, and significant variations in liquidity risk management programs between Swap Dealer subsidiaries of large U.S. BHCs and Swap Dealers operating outside of BHC structures, we do not believe that the liquidity risk management framework included in the Proposal would efficiently and effectively advance the Commission’s supervisory objectives.

A. Existing Commission supervisory authority

The Commission’s existing regulations require each Swap Dealer to adopt:

liquidity risk policies and procedures [that] take into account, among other things:

- (A) Daily measurement of liquidity needs;
- (B) Assessing procedures to liquidate all non-cash collateral in a timely manner and without significant effect on price; and

⁴¹ 17 C.F.R. §§ 23.104(a)(1), (b)(1).

(C) Application of appropriate collateral haircuts that accurately reflect market and credit risk.⁴²

The Commission adopted these regulations in 2012.⁴³ Without adopting a formal quantitative liquidity risk management requirement in connection with this rulemaking, the Commission still has examination authority to evaluate whether Swap Dealers are appropriately managing their liquidity risks against the Commission's requirements, as described above. The Proposal does not cite examination deficiencies in the existing Swap Dealer regulatory framework to justify imposition of a quantitative liquidity standard.

While not controlling for the Commission, we also note that the SEC declined to adopt, in its 2019 SBSB capital final rule, liquidity stress test requirements included in its original SBSB capital proposal. In taking this action, the SEC stated that it "continues to consider the comments received on those proposals."⁴⁴ Taking a similar wait-and-see approach would be particularly compelling in the case of the U.S. LCR, since we understand that the Commission does not currently receive U.S. LCR supervisory data, making it difficult to calibrate or tailor any Swap Dealer-focused U.S. LCR standards.

Finally, unlike regulatory capital requirements, the CEA imposes no statutory duty on the Commission to adopt liquidity risk management standards.⁴⁵ We encourage the Commission to focus its efforts on meeting its CEA duty to impose capital requirements on nonbank Swap Dealers and defer discretionary action on liquidity requirements.

B. Large U.S. BHC subsidiary exemptions

Swap Dealer subsidiaries of large U.S. BHCs are already subject to various forms of quantitative liquidity requirements, either directly or indirectly. U.S. LCR and Regulation YY-mandated ILST programs apply and operate on a consolidated basis across large U.S. BHCs, ensuring that liquidity risks arising in Swap Dealers are conservatively addressed in consolidated liquidity requirements. In addition, U.S. BHCs subject to Recovery and Resolution Planning ("**RRP**") requirements consider a variety of liquidity and funding analyses for material operating entity ("**MOE**") Swap Dealers, which results in positioning a substantial portion of liquidity and funding at MOE Swap Dealers. While the complexities of the U.S. LCR, Regulation YY and RRP are beyond the scope of this comment letter, the existence of BHC-wide comprehensive liquidity risk management programs strongly suggests that independent action by the Commission to impose new Swap Dealer-specific methodologies is unnecessary.

If the Commission moves forward with a new Swap Dealer liquidity requirement, it should include an exemption for Swap Dealer subsidiaries of U.S. BHCs subject to this complex set of prudential liquidity standards. Such an exemption could be conditioned, for example, on the Swap Dealer subsidiaries providing the Commission with relevant information to assess the Swap Dealer's liquidity risk profile in light of larger U.S. BHC liquidity risk management programs.

⁴² 17 C.F.R. § 23.600(c)(4)(iii).

⁴³ 77 Fed. Reg. 20,128 (Apr. 3, 2012).

⁴⁴ 84 Fed. Reg. at 43,874.

⁴⁵ See CEA § 4s(e)(3)(D)(ii)(I) (requiring the Commission to adopt capital rules for nonbank Swap Dealers but imposing no liquidity requirements).

C. Considerations governing a quantitative liquidity risk standard

While we urge the Commission to defer action on any quantitative liquidity risk management requirements at this time, or to exempt Swap Dealer subsidiaries of large U.S. BHCs from any new quantitative liquidity requirements, we believe any movement toward adoption of new liquidity requirements should be informed by several important considerations.

- Recognizing, where appropriate, parent BHC liquidity support for a Swap Dealer: To the extent that a Swap Dealer is required to meet Commission-specified liquidity requirements, some recognition should be provided to wider BHC-wide liquidity risk management practices. This approach would calibrate liquidity requirements at Swap Dealers in recognition of parent BHC liquidity reserves that are separately allocated to support the Swap Dealer’s liquidity needs.
- Optionality in liquidity standards: The Proposal would require a Bank-Based Approach Swap Dealer to meet the LCR, whereas a Net Liquid Asset or FCM Swap Dealer would be subject to an ILST requirement. This mandatory linking of capital and liquidity methodologies appears to be grounded in the fact that CET1 / RWA and LCR methodologies each originate in prudential standards. While that is true, prudential standards also include an ILST methodology (Regulation YY), so there is no clear reason to favor the LCR over an ILST requirement for Bank-Based Approach Swap Dealers. In fact, an ILST methodology is more likely, in many cases, to be well-suited for a Bank-Based Approach Swap Dealer, as the LCR imposes standardized, mechanistic outflow assumptions, whereas an ILST methodology can be adapted to apply to a range of Swap Dealer business models. As such, we recommend that capital and liquidity methodologies be delinked from each other, with Swap Dealers provided flexibility to elect either an ILST methodology or the LCR.
- LCR monitoring period: If the Commission were to move forward with an LCR requirement, we recommend that it first conduct an LCR monitoring period for three years to assess whether calibration and tailoring are required for Swap Dealers. The Commission was not involved in the development of the LCR (nor does it currently receive LCR supervisory data), and it would benefit from a more detailed engagement with specific LCR calculation features before finalizing any LCR requirement that would impose significant new costs and frictions on Swap Dealers’ operating models.
- Applying a 70% adjustment to LCR net outflows: If the Commission imposes an LCR requirement on Swap Dealers, LCR net outflows should be aligned with the prudential regulators’ tailoring framework, which was adopted in 2019, after the Proposal.⁴⁶ In that framework, the LCR generally only applies to “Category I, II, or III” BHCs—that is, generally those BHCs that are larger and more complex than any Swap Dealer assessed

⁴⁶ 84 Fed. Reg. 59,032 (Nov. 1, 2019); 84 Fed. Reg. 59,230 (Nov. 1, 2019).

on a standalone legal entity basis. Smaller BHCs—those in “Category IV”—are only subject to the LCR in limited circumstances, and then with net outflows calibrated to 70%.⁴⁷ If the Commission imposes an LCR requirement, we recommend that it permit Swap Dealers to apply a net outflow haircut based on whether those Swap Dealers would, on a standalone basis, qualify as Category I, II, III or IV BHCs in the tailoring framework, irrespective of parent company status.

D. Liquidity Considerations for Commodity-Focused Swap Dealers

The Commission has observed that “the Bank-Based Capital Approach is not a liquidity-based capital requirement in the manner similar to the Net Liquid Assets Capital Approach” and, therefore, it is considering whether to impose quantitative liquidity requirements on such Swap Dealers specifically.⁴⁸ The analysis provided in the preceding sections—a focus on existing qualitative risk management standards, the absence of a clear need for new quantitative liquidity requirements, exemptions for any Swap Dealer subsidiaries of BHCs, modifications to any quantitative liquidity requirements—applies with equal force to Bank-Based Swap Dealers and other Swap Dealers.

In response to the Commission’s specific liquidity questions on Bank-Based Swap Dealers, we note that large, “full service” U.S. Swap Dealers are likely to be dual-registered as FCMs or SBSDs and, as such, will generally operate as FCM Swap Dealers or Net Liquid Asset Swap Dealers, since they will be subject to similar net capital-style requirements in their other regulatory capacities. As a result, we expect U.S. Bank-Based Approach Swap Dealers will generally be Swap Dealers focused on narrow or tailored business lines (e.g., commodity swap dealing activities).

Commodity-focused Swap Dealers have limited and specific liquidity risks. Since they generally face margin-exempt end user counterparties, they face modest liquidity risks from variation and initial margin exchange obligations. Instead, these Swap Dealers’ liquidity risks are concentrated in the settlement of swaps at contractual maturities and collateral requirements at exchanges. The Commission’s existing liquidity risk management standards, particularly when integrated within a consolidated BHC liquidity risk management program, adequately address these risks, including through a focus on the “daily measurement of liquidity needs.”

In addition, as noted earlier in this letter, commodity-focused Swap Dealers operate similar business models, and face similar risks, regardless of bank affiliation status. The Commission has noted that Tangible Net Worth Swap Dealers would not be subject to quantitative liquidity requirements under the Proposal, since engaging predominantly in non-financial activities “would limit their activities as counterparties or financial intermediaries to other parties.”⁴⁹ A similar logic applies to all commodity-focused Swap Dealers.

⁴⁷ 12 C.F.R. § 249.30(c) Table 1.

⁴⁸ 84 Fed. Reg. at 69,678.

⁴⁹ *Id.*

Accordingly, we recommend that:

- Bank-Based Approach Swap Dealers be exempted from any new quantitative liquidity requirements; or
- Any application of new quantitative liquidity requirements to Bank-Based Approach Swap Dealers should include an exemption for commodity-focused Swap Dealers, based on the eligibility standard summarized in Section II.E of this letter.

IV. Substituted Compliance

A. Major non-U.S. market Swap Dealers

Many, if not most, non-U.S. Swap Dealers are subject to comprehensive, robust capital standards imposed by a home country regulator in a major, developed market. While the specific requirements vary by jurisdiction, and may contain “Pillar 2” add-ons or other locally tailored regulatory or supervisory requirements, these regulatory regimes are all based on widely-accepted global standards. We encourage the Commission to engage with foreign regulatory peers and non-U.S. Swap Dealers to familiarize itself with existing regulatory standards in these markets, with the goal of providing clear, early guidance during the development of final capital rules that regulated Swap Dealers operating in specified foreign markets will presumptively receive substituted compliance.

We recommend that the Commission consider whether regulated Swap Dealers operating in major markets with extensive and comprehensive regulatory standards such as Germany, Japan, and the United Kingdom should receive early guidance on substituted compliance for capital and liquidity requirements. Such early engagement and guidance would foster orderly planning and avoid significant uncertainties as firms evolve their business plans and control functions to meet the Commission’s requirements.

B. Other jurisdictions

Outside of the major non-U.S. markets referred to above, regulated Swap Dealers may be subject to home country requirements that result in levels of capital generally equivalent to those required by the Commission in the Swap Dealer capital framework. In these cases, substituted compliance is warranted.

We recommend that the Commission adopt an orderly, streamlined process for making substituted compliance determinations in these cases, with reasonable accommodations for interim substituted compliance while the Commission is assessing applications from specific jurisdictions. We recommend a process with these elements:

- Outside of the major non-U.S. markets referred to above, a regulated Swap Dealer in any other non-U.S. market should receive a two-year interim substituted compliance determination, if it or its regulator submits to the Commission a completed substituted compliance application, which would include relevant information on:

- local country regulatory standards,
 - explanations of similarities and differences from Commission standards, and
 - an assessment of whether Swap Dealers operating under local country standards are required to hold capital at levels generally equivalent to those required by the Commission.
- Before expiry of the two-year interim substituted compliance determination, the Commission would make a final substituted compliance determination, taking into account the application, that is primarily based on whether Swap Dealers operating under local country standards are required to hold capital at levels generally equivalent to those required by the Commission.
 - This final standard should not require non-U.S. Swap Dealers to create new, U.S.-equivalent capital methodology calculation processes and reporting systems if, in substance, the Commission is able to determine that the level of capital requirement is generally equivalent.

V. Conclusion

We appreciate the opportunity to comment on the Proposal. We would welcome an opportunity to discuss any of the points raised in this comment letter.

Respectfully submitted,



Sebastian Crapanzano
Managing Director



Soo-Mi Lee
Managing Director

cc: Hon. Heath P. Tarbert, Chair
Hon. Brian D. Quintenz, Commissioner
Hon. Rostin Behnam, Commissioner
Hon. Dawn DeBerry Stump, Commissioner
Hon. Dan M. Berkovitz, Commissioner
Joshua B. Sterling, Director, Division of Swap Dealer and Intermediary Oversight
Thomas J. Smith, Deputy Director, Division of Swap Dealer and Intermediary Oversight

Annex A: U.S. Market evidence supporting a recalibration of the SA-CCR supervisory factor for energy derivatives in the Bank-Based Approach

The SA-CCR methodology is based on a global SA-CCR standard adopted by the Basel Committee in 2014. BCBS has published a working paper (the “**SA-CCR Working Paper**”) explaining the design and calibration of SA-CCR.⁵⁰ We believe that the methodology described in the SA-CCR Working Paper supports a supervisory factor of approximately 10 percent for the energy asset class when forward, rather than spot, market data is used for energy derivatives.

As explained in the SA-CCR Working Paper, SA-CCR approximates trade-level volatility through the following formula:

$$\sigma_i = \frac{3 \text{ SF}_i^{(a)}}{2 \varphi(0)} \cdot |\delta_i| \cdot d_i^{(a)}$$

In this formula, “the first factor (the ratio) can be interpreted as the standard deviation of the primary risk factor at a one-year horizon.” To calculate the standard deviation, a supervisory factor, or SF, must be included in the calculation. (The two additional formula components, δ_i and $d_i^{(a)}$, can be disregarded for purposes of this analysis, as they correspond to portfolio-specific directionality and notional value, respectively, which will vary on a transaction-by-transaction basis.)⁵¹

A SF of 40 for the energy asset class would suggest a standard deviation at a one-year horizon of approximately 150 percent.

$$\sim 150\% = \frac{3 \cdot 40}{2 \cdot \sqrt{\frac{1}{2\pi}}}$$

By contrast, a SF of 10 would suggest an energy asset class standard deviation at a one-year horizon of approximately 38 percent.

$$\sim 38\% = \frac{3 \cdot 10}{2 \cdot \sqrt{\frac{1}{2\pi}}}$$

We evaluated ten calendar years of market data to identify the most stressful periods of market volatility in the average of two-year forward contract markets involving electricity, oil and natural gas.⁵² The results of this analysis were:

⁵⁰ Basel Committee, *Working Paper No. 26: Foundations of the standardised approach for measuring counterparty credit risk exposures* (Aug. 2014 (rev. Jun. 2017)).

⁵¹ SA-CCR Working Paper, at 6.

⁵² While we used calendar years for ease of reference, we expect the results of forward market data would be broadly consistent across any two-year time series within the 2008 to 2018 period.

| Asset category | Calendar year of greatest volatility | Standard deviation of forward markets in calendar year of greatest volatility |
|----------------|--------------------------------------|---|
| Electricity | 1/1/08-12/31/08 | 24% |
| Oil | 1/1/08-12/31/08 | 47% |
| Natural gas | 1/1/09-12/31/09 | 32% |
| BCOM | 1/1/08-12/31/08 | 29% |

A SF of 10 percent for the energy asset class would result in conservative estimates of electricity and natural gas volatility and would approximate observed volatility in oil markets in the most volatile years in the recent past.