16 December 2014

Ken Hui
International Organization of Securities Commissions (IOSCO)
Calle Oquendo 12
28006 Madrid
Spain

RE: Consultation Report on Risk Mitigation Standards on Non-centrally Cleared OTC Derivatives

Dear Mr. Hui,

We welcome IOSCO's consultation on risk mitigation standards for non-centrally cleared OTC derivatives and are pleased to respond to it.

Chatham is the largest adviser to derivatives end users, advising more than 1,200 clients annually on interest rate, currency and commodity hedging. Since our founding in 1991, we have assisted clients in hedging approximately $3.5 trillion in notional amount across 80,000+ transactions. We assist our clients with all facets of the financial risk management process, from designing hedging policies, to analyzing risk, to structuring and executing hedges, to providing ongoing valuations, reporting, and accounting support. We have assisted our clients in navigating the pitfalls of a large swap dealer's failure, and provided litigation support services in connection with derivatives disputes. We are a global firm with operations in the United States, Europe, Australia, and Asia, and we provide advisory and technology solutions to clients from virtually all business sectors. Our clients include non-financial corporations, public and private owners of real estate, infrastructure investors, micro-finance funds, real estate and private equity funds, and regional and community banks.

Chatham has been extensively engaged in assisting our clients with compliance with regulations under the Dodd-Frank Act in the U.S. and the European Market Infrastructure Regulation (EMIR) in the E.U. We are also studying regulatory regimes in Asia and other jurisdictions, so that we can help clients understand and comply with derivatives regulations worldwide. For example, we have assisted 25+ clients with selecting and onboarding with clearing members in connection with the clearing mandate; we facilitate cleared trades daily for clients relying on market infrastructure that has emerged in response to regulatory mandates; we have on-boarded with multiple trading platforms and are regularly transacting on them for our financial end-user clients; we have reported more than 10,000 swaps to swap data repositories and trade repositories to help clients satisfy reporting requirements; we have helped clients complete more than 2,500 transaction documents and protocols to address regulatory requirements; we are assisting more than 100 clients with portfolio reconciliation requirements.

With respect to the consultation, we offer comments on several issues:

(1) The scope of coverage relative to non-financial counterparties and smaller financial entities
(2) Deadlines for trade confirmations for customized interest rate derivatives
(3) Swap valuations for the purpose of early termination
(4) Operational recommendations to increase the effectiveness of manual reconciliation
(5) Key impediments to achieving internationally harmonized standards

These comments reflect our experience with risk mitigation standards that have already been implemented in the U.S. and E.U.

1. Standard 1: Scope of Coverage Relative to Non-Financial Counterparties and Smaller Financial Entities

KENNETT SQUARE | 235 Whitehorse Lane, Kennett Square, PA 19348 | T 610.925.3120 | F 610.925.3125 | CHATHAMFINANCIAL.COM

We welcome IOSCO's recommendation that the provisions of the report apply to financial counterparties (FCs[1]) and systemically important non-financial entities (NFC+s). Chatham shares the view set forth in the final policy framework on margining requirements established by the Working Group on Margining Requirements (WGMR) that non-financial entities that are not systemically important (NFC-s) "are viewed as posing little or no systemic risk."[2] Because derivatives hedging by NFC-s pose little or no risk to financial stability, we believe it appropriate to exclude NFC- transactions from the risk mitigation requirements framework set forth in this paper.

We note further that smaller financial entities that use derivatives to hedge risk and whose failure could not jeopardize financial stability (i.e., financial end users) should similarly be excluded from the scope of these requirements. Regulatory jurisdictions around the world and international bodies have made accommodation for smaller financial end users in their derivatives regulatory regimes, taking into account the lower systemic risk contributions of these entities. We discuss such accommodations in section 5 of this comment letter. We believe it appropriate for IOSCO to recommend allowing national authorities to consider the systemic risk contribution of FCs when determining whether to apply the risk mitigation standards proposed in this consultation to FCs.

Except with respect to such smaller financial end users, we support IOSCOs key consideration 1.3[3] because it appropriately acknowledges the systemic risk contribution of NFC-s. However, we note that because the risk mitigation techniques recommended in this report are proposed to apply to FCs, and because FCs generally serve as counterparties to NFC-s, FCs may interpret that they are required to impose such requirements on their NFC- counterparties in order to meet their own obligations. Thus, even if the provisions herein are not intended to apply to NFC-s directly, absent clarification, the provisions may effectively apply to NFC-s because some FCs may interpret that they are required to apply these risk mitigation techniques as a condition of trading. For the avoidance of doubt, we believe it important for IOSCO to clarify that FCs are not required to apply these risk mitigation techniques when transacting with NFC-s. For example, with respect to key consideration 1.6, the bolded language might be inserted as a clarifying remark, "For transactions between covered entities and non-covered entities, covered entities are encouraged**, but not required,** to meet the relevant standards in this report based on the nature of the transaction and counterparty." Additionally, as further discussed in section 4 of this comment letter, we believe standard 5 (Reconciliation) should include an unambiguous clarification that trades between covered entities and NFC-s are not required to meet the relevant standard.[4]

2. Standard 3: Deadlines for Trade Confirmations for Customized Interest Rate Swaps

Chatham assists its clients in executing and documenting approximately 50+ OTC derivatives transactions each day. As part of these efforts, we review draft trade confirmations for accuracy, and coordinate any necessary edits to the documentation before indicating to our clients that the documents are ready for signature. While

---

[1] Hereafter, we generally adopt the E.U.'s entity naming conventions for simplicity; however, when using such conventions we refer more broadly to comparable definitions in other regulatory jurisdictions.
[2] http://www.bis.org/publ/bcbs261.pdf (p. 7, 2(c)). Chatham identifies key reasons why non-financial end users do not meaningfully contribute to systemic risk in its paper (28 November 2011), "Evaluating Criticisms of Derivatives End-User Exemption" (http://coalitionforderivativesendusers.com/uploads/sites/351/2011%2011.28%20Evaluating%20Criticisms%20of%20Derivatives%20Margin%20Exemption.pdf)
[3] "Only non-centrally cleared OTC derivatives transactions between two covered entities are subject to the standards in this report."
[4] As evidence as to the relevance of such a statement, we note that EMIR requires NFC-s to reconcile portfolios annually.

FX forward contracts and standardized interest rate swaps[5] can often readily be confirmed in the timeframes prescribed in the U.S. and E.U., we recommend that customized interest rate transactions receive special consideration. Because these trades are customized to match the terms of an underlying financing, it is important that the terms of the swap perfectly mirror the terms of the hedged financing. Because of this customization, our experience is that approximately one third of transaction confirmations on customized interest rate swaps require revisions. For certain types of transactions (e.g., lender-required interest rate caps – transactions essential to securitized lending markets), approximately two thirds of transactions require revisions. Further, approximately one tenth of transactions require two or more rounds of revisions.

Such revisions are rarely or never consequential to the mitigation of systemic risk. For example, it may be that the interest calculation periods are to be "unadjusted," whereas the confirmation may state "modified following." However, because such provisions are consequential to ensuring the hedge and hedged item match perfectly, end users are studious in ensuring that the trade confirmations are appropriately amended. In some cases, regulators globally have required trade confirmations to be complete within 2 business days. In order to accommodate the timing needs of customized interest rate transactions, we believe timeframes for these types of trades should be adjusted to not less than 5 business days. IOSCO's key consideration 3.2 would permit longer timeframes based on "factors such as the nature of the counterparty or transaction…" We recommend IOSCO further augment this key consideration by appending a sentence such as the following: "Deadlines should permit adequate time for coordinating revisions to documentation, especially for OTC derivatives with customized features."

3. Standard 4: Swap Valuations for the Purpose of Early Termination

Chatham supports standard 4, Valuation with Counterparties, and believes regulatory requirements that promote agreement on swap values are good for end users and the system as a whole. We believe standard 4 could be enhanced in ways that would further promote clarity and diminish circumstances in which parties disagree as to the value of the swap through various transaction lifecycle events.

Specifically, we believe the standard should encompass valuations determined *for the purpose of terminating a swap*. Since the financial crisis, many swap dealers have changed the manner in which they calculate swap termination values to take into account their own funding costs. Whereas prior to the financial crisis swap dealers discounted the future cash flows of a swap using LIBOR-based[6] discount factors, since the crisis they have discounted based on LIBOR[7] *plus their cost of funds*. However, this discounting methodology is not uniformly applied in all circumstances. Rather, it is typically applied only when a swap is an asset to an end user.

- **Swap Asset[8]**: When a swap is an asset to an end user (i.e., it has positive value to the end user), the higher discount rate resulting from the addition of the bank's funding cost reduces the amount payable to the end user, often substantially. Swap dealers generally incorporate their funding costs/credit spreads into termination values of swap assets.
- **Swap Liability**: When a swap is a liability to an end user (i.e., it has negative value to the end user), it is the end user's funding cost that becomes relevant. A dealer generally takes a borrower's funding costs (i.e., creditworthiness) into account when it values a swap, via credit valuation adjustments (CVA) that are now a common feature of derivatives accounting rules. However, when an end user seeks to terminate a swap liability, the dealer almost never takes the end user's

[5] Specifically, interest rate swaps with semi-bond conventions
[6] Or OIS
[7] Or OIS
[8] When referring to "swap asset" or "swap liability," we are doing so from the end user's perspective. A swap that is an asset to an end user, is a liability to the swap dealer. Similarly, an end user's swap liability is a swap dealer's asset.

creditworthiness/funding cost into account. Just as incorporating the dealer's funding cost into the termination value of a swap asset reduces the payment a dealer makes to the end user, incorporating the end user's funding cost (i.e., credit spread) into the termination value of a swap liability would similarly reduce the payment made by the end user to the dealer.

Thus, swap dealers asymmetrically account for credit spreads/funding costs. Dealers generally incorporate credit spreads/funding costs only when beneficial to them. By contrast, when including credit spreads/funding costs would adversely affect the dealer, the dealer almost always excludes such adjustments. It is worth noting that such issues are not generally present when values are calculated for the purpose of calculating margin, because swap dealers do not take credit spreads/funding costs into account when calculating margin amounts. Rather, when calculating margin amounts, dealers discount future cash flows using the LIBOR[9] swap curve.

While end users would generally prefer to terminate swaps without any adjustment for funding costs/credit risk, we acknowledge that contemplating such adjustments is not economically unreasonable. However, in addition to the problem of asymmetric application, such adjustments create practical problems, including the following:

- **Modeling Gaps**: Such adjustments are not generally taken into account in valuation/pricing models used by end users to calculate swap termination values.
- **Dealer-Specific Adjustments**: The appropriate funding cost adjustment varies by dealer and term. Consequently, different dealers would value the same swap differently based on their unique funding costs.
- **Undocumented Methodologies**: When and how funding adjustments apply to swap termination values are not reflected in transaction documentation. End users are thus typically made aware of funding adjustments only upon termination.
- **Procyclical Impact**: The impact of funding adjustments is especially significant during financial crises, when dealer credit risk and corresponding funding adjustments increase sharply.

The impact of these issues is a significant gap in the values at which an end user and swap dealer might expect to terminate a swap. Such a gap is at cross-purposes to the objective IOSCO seeks to achieve through standard 4. IOSCO could extend the benefits of standard 4 and reduce a further source of system wide risk by modifying the standard to fully encompass lifecycle events including swap terminations. Importantly, changes that address this concern are consistent with IOSCO's key consideration 4.1 insomuch as such changes would promote valuations that are determined "in a predictable and objective manner." Such changes are also consistent with key consideration 4.2, wherein "objective criteria" are proposed to apply. We strongly support IOSCO's efforts to promote predictability and objectivity in swap valuations.

To address concerns about disagreements in termination values due to asymmetric incorporation of funding costs, we propose the following changes to standard 4:

- **Purpose**: The standard presently reads that documented agreements on valuation methodologies and/or processes are "for the purpose of exchanging margins." We believe the standard should unambiguously encompass values used for the purpose of swap termination. This could be accomplished by eliminating the phrase "for the purpose of exchanging margins."
- **Methodologies vs. Process**: We note that agreed valuation methodologies, especially those in which key modeling inputs and calculation methods are clearly defined, could significantly improve the extent to which both parties to a transaction agree on its value. However, we believe agreed processes, while helpful, may do little to enhance the degree to which two parties agree on a value. For example, a process could be documented in such a way that the calculation agent (e.g., swap

[9] Or OIS

dealer) is the ultimate arbiter in the event of disputes. Even while such an approach might foster clarity, it would not necessarily foster agreement. Consequently, we propose that the standard be modified such that both methodologies *and* processes should be agreed (i.e., "/or" should be deleted from the phrase "process and/or methodology" such that it reads "process and methodology.") Conforming edits should also be made to key considerations 4.1, 4.3 and 4.4.

- **Proprietary Information**: While we appreciate IOSCO's priority for preserving confidentiality, we note that footnote 10 presents an impediment to objective, agreed upon termination values, especially as it relates to agreeing on an entity's funding costs. We are concerned that a swap dealer could produce unreasonable termination values, while claiming that the models producing such values are proprietary and confidential. We propose eliminating footnote 10, or, at a minimum, clarifying that model inputs, including funding costs, are not proprietary or confidential.
- **Agreed Early Termination Approaches**: We recommend that IOSCO encourage or propose to require market participants to specify whether funding adjustments are agreed to apply in the event of an early swap termination. Such an approach would promote IOSCO's priority for objective and predictable termination values, and would encourage market participants to bargain at inception of a transaction on an issue that would promote clarity. IOSCO could do so by adding key consideration 4.5 in a manner such as the following: "Covered entities should agree with their counterparties on whether funding adjustments are to apply when a transaction is terminated for reasons other than the default of a party,[10] and whether such adjustments are to be bilaterally applied." Unlike other provisions, we believe this approach would best be applied to all market participants, including NFC-s.
- **Explicit Optional Termination Right**: End users regularly terminate swap transactions prior to maturity; however, swap relationship documentation does not explicitly grant them the right to do so. Rather, swap terminations are presently an accommodation to end users. The absence of an explicit optional termination right enhances a swap dealer's ability to effect a termination value skewed in its favor. For example, a dealer could refuse to terminate a transaction unless the termination economics are sufficiently or even excessively favorable to the dealer.[11] IOSCO could address this issue by adding key consideration 4.5 in a manner such as the following: "Covered entities should agree with their counterparties on optional early termination rights." Or, IOSCO could address agreed termination approaches and explicit optional termination rights together, in a manner such as the following: "Covered entities should agree with their counterparties on optional early termination rights, whether funding adjustments are to apply when a transaction is terminated for reasons other than the default of a party and whether such adjustments are to be bilaterally applied."

4. Standard 5: Operational Recommendations to Increase the Effectiveness of Manual Reconciliation

As noted, Chatham assists more than 100 of our clients in reconciling their swap portfolios. We perform reconciliation for both FCs and NFC-s.[12] To date, we have primarily administered reconciliation manually across approximately 100 banks because automated portfolio reconciliation services are prohibitively expensive[13] for most market participants.

---

[10] We note that the default of a party could cause their credit spreads/funding costs to increase infinitely in a manner that would discount future swap cash flows to zero. Because end users should preserve their rights to recover the value of their swaps in bankruptcy, such a provision should not apply in the event of a default of a party.

[11] The ability to novate/assign a swap may serve to mitigate this dealer advantage, but the ability to novate/assign is generally possible only with the consent of the swap dealer, diminishing its value as a mechanism for ensuring a fair termination value.

[12] The E.U. requires FCs to reconcile quarterly, and NFC-s to reconcile annually, at a minimum

[13] The cost-benefit of portfolio reconciliation services is driven by the high fees charged by service providers, relatively low transaction volumes of most FCs and NFC-s, and the cost associated with manually reconciling portfolios.

Entering into portfolio reconciliation agreements and carrying out portfolio reconciliation on an ongoing basis can be confusing, operationally burdensome and costly for lower volume swaps users, whether NFC-s or FCs. Policymakers should thus be judicious in determining the class of entities to which such requirements apply (see our recommendation in item #1 of this comment letter). The cost of manually reconciling swaps portfolios depends on a number of factors.[14] Costs can further increase for a variety of reasons, and we urge IOSCO to adopt recommendations that would limit these costs and burdens. These reasons, along with recommendations to address these problems, are as follows:

- **Formats that Promote Comparison**: Some of the counterparties with whom we manually reconcile portfolios provide valuations in non-editable formats such as PDFs. While such formats are appropriate and desirable for trade confirmations, they are ill-suited to portfolio reconciliation because they do not permit electronic comparison. Spreadsheets, by contrast, afford the ability to set terms and valuations side-by-side and to set up formulas that facilitate comparison. For example, a dealer's and end user's valuations can be set up to be subtracted from each other to compare the absolute difference. Similarly, the percentage difference between the valuations can be readily calculated, allowing parties to quickly assess which transactions have discrepancies of sufficient magnitude to warrant dispute. We recommend that IOSCO add a key consideration as follows: "Material terms and valuations should be sent to counterparties in an electronic format, such as a spreadsheet, that promotes comparison."
- **Valuation Currency**: Because the swaps market is globalized, it is not uncommon for counterparties to transact in currencies that differ from the home currency of the end user or bank. For example, a U.S. end user may transact with a European bank a foreign currency forward that includes as one of its legs GBP, and as the other USD. In such situations, because the bank may be domiciled in a country whose home currency is the EUR, the bank may send valuations for the purposes of portfolio reconciliation in EUR. In such instances, in order to compare valuations, the end user must convert the valuation to USD, a time consuming step that increases the potential for error or dispute. At a minimum, we urge IOSCO to recommend that counterparties provide valuations in one or more of the transaction currencies. It could do so by adding a key consideration as follows: "Covered entities should send valuations in one or more of the transaction currencies."
- **Language**: We have encountered numerous situations in which counterparties send transaction details in languages other than those in which the transaction was consummated. Such situations make it difficult for end users to be confident that they are making accurate comparisons and thus limit the effectiveness of the portfolio reconciliation process. We urge IOSCO to recommend that portfolio reconciliation information be sent to counterparties in the language in which a transaction is consummated, in a key consideration such as the following: "Covered entities should send portfolio reconciliation details in the language of the transaction documentation."

IOSCO could combine each of these concerns into a single key consideration, such as that which follows: "Covered entities should send portfolio reconciliation details, including material terms and valuations, in (i) an electronic format, such as a spreadsheet, that promotes comparison, (ii) one or more of the transaction currencies (with respect to valuations), and (ii) the language of the corresponding transaction documentation."

5. **Standard 9: Key Impediments to Achieving Internationally Harmonized Standards**

[14] Portfolio reconciliation costs vary as a function of (1) the time it takes to (a) gather data, (b) review and compare economic terms, (c) review and compare valuations, (2) the percentage of trades with discrepancies/disputes, (3) the time it takes to resolve discrepancies/disputes, (4) the hourly cost of reconciliation and dispute resolution, (5) the frequency of reconciliation, (6) the number of counterparty relationships, and (7) the number of transactions

Chatham supports IOSCO's proposed standard 9 and believes it essential for mitigating risks to market fragmentation and for removing undue burdens that would otherwise arise when market participants transact across borders. We believe there are at least three primary impediments to achieving internationally harmonized risk mitigation standards for cross-border transactions:

(1) Consistent application of requirements to domestic and non-domestic market participants

In order to ensure a well-integrated cross border regulatory framework, it is essential that regulators equally apply risk mitigation requirements to domestic and non-domestic market participants. Inconsistent application of requirements to domestic and non-domestic market participants creates incentives for non-domestic participants to transact only with entities within their domestic markets, effectively fragmenting markets.

An important example of regulatory approaches that might contribute to fragmentation can be found in margin requirements proposed by the E.U. In its consultation on margin requirements for swaps that are not centrally cleared, the E.U. proposed to apply margin requirements to non-E.U. NFC-s, even while granting an exemption to E.U. domiciled NFC-s. This disparate treatment promotes market fragmentation in the following way. Because non-E.U. NFC-s are expected to be able to transact domestically without posting margin, they will inevitably choose domestic counterparties to avoid being subject to the margin requirements to which they would be subject if transacting with an E.U. bank. Non-E.U. end users that do transact with E.U. banks will face increased burdens and costs.

This inconsistent application of margin requirements is at odds with IOSCO's explanatory note 9.2 (i.e., "Inconsistent or conflicting requirements also would add to the regulatory burden and costs of compliance for the industry."). Such inconsistent application evidences a principle that applies equally to risk mitigation standards more broadly. We believe IOSCO could strengthen standard 9 by adding to standard 1 key consideration 1.4, as follows: "Each authority should apply risk mitigation standards consistently to domestic and non-domestic entities with similar characteristics."

(2) Different approaches to application of requirements to NFC-s.

The U.S. and E.U. do not presently treat NFC-s equivalently with respect to reconciliation requirements. The E.U. requires NFC-s to annually reconcile material terms and valuations with their counterparties, whereas the U.S. makes such requirements optional for non-financial end users. Such differences require end users to consider the regulatory burdens that might apply when they transact with various counterparties, and may limit their counterparty pools for the purposes of regulatory simplification. We believe IOSCO's key consideration 1.3 usefully encourages a standard around which the U.S., E.U. and other jurisdictions should align. Such alignment would reduce or eliminate the kinds of disparities currently evident in key regulatory jurisdictions.

(3) Different definitions of financial entity.

While jurisdictions globally are broadly aligned with respect to the application of derivatives regulatory requirements to financial entities, each jurisdiction has developed different financial entity definitions. A non-financial end user in one jurisdiction may be subject to rules applicable to financial entities in another jurisdiction.[15] Differences in financial entity definitions are especially evident in cross-border transactions. While such differences are consistent with the discretion granted national regulators in key consideration 1.1, they stand as an impediment to implementing key consideration 9.1, wherein authorities are proposed to “endeavor to reduce the risks of conflicts and inconsistencies between their regimes with respect to the cross-border application of risk mitigation requirements.” Notably, we believe key considerations 1.1 and 9.1 are incompatible and urge IOSCO to take steps to promote harmonization in financial entity definitions globally.

Many jurisdictions, including the following, have recognized that the risk management activities of certain financial entities do not pose meaningful risk to the financial system, and have made accommodation for such entities by excluding them from various derivatives regulatory requirements:

- The **United States** permits an exemption from central clearing for small banks, credit unions and farm credit institutions.
- **Australia** has proposed that its clearing requirement apply predominantly to large dealer banks and other specifically identified large financial institutions. Clearing requirements are not proposed to apply to smaller financial end users.
- The **European Union** has made special accommodation for pension funds, delaying and studying the effect clearing would have on such entities.
- **Singapore** has proposed to exclude from the clearing mandate financial entities that are determined to have minimal exposure in derivatives contracts.
- **Hong Kong** has proposed to exclude from its mandatory clearing obligation financial entities whose total amount of gross positions fall below specified thresholds.

Such approaches are not inconsistent with accommodations for smaller financial end users endorsed by international bodies. In its report on “Margin requirements for non-centrally cleared derivatives,”[16] the WGMR recommended that initial margin requirements apply only to those financial entities with material swaps portfolios.

Such an accommodation reflects the lower systemic risk contribution of smaller financial end users, and it implicitly reflects the reality of systemic risk in the the OTC derivatives market: that systemic risk is almost entirely a phenomenon associated with the activity of large dealer banks. This phenomenon was recently reflected in a report issued by the G20’s OTC Derivatives Coordination Group. In assessing whether OTC derivatives market participants had adequate incentives to centrally clear their OTC derivatives transactions, concluded that – based solely on the existence of such incentives to clearing members – the G20’s objective on OTC derivatives reforms has been achieved.[17] In other words, whether non-clearing members are subject to incentives to centrally clear has little bearing on systemic risk.

---

[15] For example, U.S. clearing rules apply to entities that are “predominantly engaged in activities that are…financial in nature,” including, for example, certain leasing companies. By contrast, no such activity-based test applies in the E.U.

[16] http://www.bis.org/publ/bcbs261.pdf

[17] http://www.bis.org/publ/othp21.htm. The report states, “After the reforms have been introduced, some indirect clearers may have incentives to clear centrally, while others may not. However, given that clearing members account for the bulk of derivatives trading, the conclusion of this analysis - there are incentives for them to clear centrally - indicates that the G20 objective on OTC derivatives reforms has, for the most part, been achieved.”

While specifically enabling effective application of key consideration 9.1, a globally harmonized approach to the application of risk mitigation standards and other OTC derivatives regulatory requirements would also promote the efficient and effective application of IOSCO's objective of increasing overall financial stability. It would do so by focusing financial stability objectives on those entities whose derivatives activities are most likely to contribute to systemic risk. For the purposes of this consultation, we urge IOSCO to add key consideration 1.4, "Authorities should consider whether financial entities whose use of derivatives does not meaningfully contribute to systemic risk should be excluded from the risk mitigation requirements set out in this report."

We thank you for considering these recommendations and are available to answer any questions you may have. Please contact Luke Zubrod (lzubrod@chathamfinancial.com; U.S. phone number 610.925.3136) with any questions.

Sincerely,

Luke Zubrod
Director, Risk & Regulatory Advisory Services