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Submitted electronically to
consultation-08-2018@iosco.org

Dr. Shane Worner
International Organization of Securities Commissions
Calle Oquendo 12
28006 Madrid
Spain

Re: *Public Comment on IOSCO Report: Leverage*

Dear Dr. Worner:

Vanguard¹ appreciates the opportunity to provide comments to IOSCO's Report on Leverage² which, in the context of systemic financial stability, seeks to establish a consistent assessment of the leveraging effect on funds of derivatives.

In multiple forums in recent years, Vanguard has engaged with global regulators to address the topic of the potential leveraging effect of derivatives' usage. Although systemically significant events related to fund derivatives usage are rare, and the likelihood and potential impact of such events has been mitigated by global derivatives reforms, we agree that regulators should have a fully transparent view into the build-up of fund leverage. Such transparency can better equip regulators to perceive and address emerging risks to global financial stability. We applaud IOSCO for engaging in a thoughtful, thorough effort to first define leverage, and then collect data for study, before assessing whether a systemically significant level of leverage has arisen, requiring potential control.

As a part of prudent management, Vanguard funds enter into derivatives contracts, including swaps and futures, to achieve a number of benefits for our investors, including hedging portfolio risk, lowering transaction costs, managing cash, and achieving more favorable execution compared with traditional investments. Vanguard has been fully supportive of global derivatives regulatory reform, including the mandate of the derivatives title of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "**Dodd-Frank Act**"), the European reforms under EMIR, MiFIR, and MiFID II, the Australian reforms by ASIC, and the Hong Kong reforms by the SFC, to bring much-needed transparency and regulation to the derivatives markets, including subjecting derivatives to regulatory oversight and requiring the reporting, margining, and central

¹ Vanguard is a global asset manager that offers about 400 funds with aggregate assets of approximately \$5 trillion.

² See IOSCO Report: Leverage Consultation Paper (November 2018) (the "Consultation"), available at <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD615.pdf>.

clearing of standardized swaps, and exchange-trading of the most liquid standardized swaps (collectively, “**Derivatives Reforms**”).

The Consultation is in response to the Financial Stability Board’s (“**FSB**”) 2017 report focusing on vulnerabilities in the asset management business. The FSB requested that IOSCO develop a consistent measure to assess leverage to enable both meaningful monitoring and global comparisons. IOSCO was not charged to recommend limits on derivatives usage, and this Consultation is appropriately limited in scope. In addition to the issues addressed in this Consultation, IOSCO was also tasked with (a) collecting leverage data, monitoring use, and recommending further action where appropriate, and (b) collecting aggregated data across member jurisdictions.

Vanguard met with IOSCO in late 2017 to discuss various approaches, and the Consultation includes questions identified through those discussions.

Summary of Vanguard’s Comments:

- **Derivatives Have Prudent Fund Management Purposes.** The vast majority of fund derivatives usage targets hedging risk, managing cash, and efficient synthetic investment.
- **Global Regulatory Reforms Mitigate Derivatives Risks.** Global reporting, margining, clearing and exchange trading of derivatives has created a much more resilient market.
- **Notional Amounts Are Not a Proxy for Leverage.** Derivatives’ notional amounts serve as payment calculation tools and in only limited circumstances indicate leveraged exposure.
- **Netting and Hedging Offsets Are Appropriate.** Allowances must be made to reflect that most derivatives are used to hedge portfolio risk, and dynamic hedging may result in sizeable notional positions with little to no added risk.
- **Risk Assessments Are Appropriate Once Net Exposures Exceed a Threshold.** In assessing systemic risk to financial markets, portfolios with sizeable net derivatives positions must also be assessed for the value-at-risk and consider risk mitigants such as margining and clearing.

1. Derivatives Have Prudent Fund Management Purposes.

A. IOSCO is Right to Recognize Derivatives Provide Many Benefits Beyond Leverage.

IOSCO notes leverage is a financial technique used to increase investment exposure. Funds may use financial instruments and/or borrowing to increase market exposure beyond fund NAV. We agree with IOSCO’s observation that while derivatives can be used for a leveraging effect, they are also routinely used to hedge risks, enhance liquidity, improve efficiency, manage cash, and other purposes. The Consultation recognizes that while member jurisdictions are inconsistent in their approach to identify leverage, and collect and monitor data, some already have robust approaches. In the United States, the Securities Exchange Commission (the “**SEC**”) requires leverage reporting using Form PF while AIFMD reporting and the IOSCO Hedge Fund survey also address leverage. UCITS Regulation in Europe imposes regulatory use limits directly

applicable to derivatives, and the European Securities Regulators (“CESR”) establish calculations and limits for UCITS funds’ derivatives use

Vanguard agrees with IOSCO’s acknowledgment of derivatives’ many beneficial uses, as it aims to identify a simple method to identify leverage and collect data to assess whether usage levels pose a potential systemic risk to financial stability. As IOSCO states in its Consultation: “*A fund’s use of derivatives alone – which can increase certain measures of market exposure – should not, therefore, be seen as solely synonymous with the amplification of risk and returns.*”³

Funds have long used derivatives in prudent portfolio management. The reason for such usage is abundantly clear: derivatives have served as a fundamental tool for market participants to mitigate perceived risks presented by other assets and to invest in assets synthetically in a cost-effective, risk-mitigating manner. Derivatives can serve to hedge against commodity price movements, interest rate fluctuations, foreign currency shifts, and other market risks and have thereby provided significant benefits to investors. In the United States, the SEC has long required that such usage, including any attendant risks and mitigants, be disclosed to regulated fund investors to afford the opportunity for investment decisions to be made on a fully-informed basis. It is these many benefits to the market, to investors, and to achieve risk-mitigated investing that must be preserved and strengthened.

B. Derivatives Are a Critical Portfolio Management Tool for Hedging Risk, Managing Cash, and Synthetically Investing in a Risk-Mitigating Manner

The lion’s share of derivatives use across the fund industry falls into two main buckets: risk mitigation and cash management. Vanguard firmly believes these uses must not be compromised as IOSCO and the FSB assess systemic risks potentially posed by the leveraging effect of derivatives.

i. Derivatives Provide Important Hedging Benefits

Risk mitigation takes a variety of forms. At the most basic level, foreign exchange spot and forward trades are extensively used to hedge foreign currency risk both with respect to settling buys and sells of foreign securities and in converting foreign currency proceeds into a fund’s currency to meet shareholder needs. To the extent that a fund invests in foreign securities, hedging may require foreign exchange spot and forward trade notional amounts equal in size to the fund’s entire net assets.

Foreign exchange risk management in particular may benefit from dynamic hedging approaches where an ongoing series of spots and forwards are executed over time to fine-tune the overall position. Sometimes overall positions need to be reversed, and sometimes a portion of the position may need to be upsized or downsized. The dynamic hedging decision-making is performed by the portfolio manager based on an overall assessment of the underlying exposure, the effect of the outstanding positions, and the impact of potential new positions on both the underlying portfolio and the outstanding positions. Other issues may also factor into the decision

³ See Consultation, p.3

making, such as the preference to spread out the maturities of large notional amount positions or the desire to address projected future cash flows.

In short, the complexities of dynamic portfolio management necessitate highly tailored choices involving a multitude of considerations, including the choice of hedging products to deploy, as well as their size, timing, direction, and other variables with the overall result often reflecting a combination of these multi-dimensional objectives. At any one time there may be a relatively large aggregate notional amount position if one were to add up the multi-layering of open buys and sells and upsize and downsize position adjustments. Of course, the overall risk associated with such trades may be relatively small especially given their intended risk-reducing effect. Vanguard funds typically address this risk via asset segregation and/or offset, as well as through exposure netting and collateralization.

Another example of hedging includes using interest rate swaps to adjust the duration risk in fixed income portfolios. The overall interest rate exposure of a portfolio is determined and then an interest rate swap is executed to mitigate some portion of the duration risk. The swap's notional amount may be quite large, and for the swap to have the intended risk-reducing effect it may require a notional amount equal to a significant portion, if not all, of the size of the overall portfolio.

Dynamic risk management also may be appropriate with respect to managing duration risk. A series of swaps may be executed to fine-tune the overall exposure over time and may result in a relatively large aggregate notional amount position if one were to add up the multi-layered swaps. As with foreign exchange hedging, dynamic duration hedging also may involve a variety of factors that produce sizeable aggregate notional amounts with an overall risk-reducing effect.

These two products dominate the derivatives usage of funds and also mean that while the overall effect on the fund is risk reducing, the notional amounts of the trading can be large including, in some cases, notional amounts equal to or in excess of the fund's net assets. If a fund's access to these key risk management tools was limited, its performance could be more volatile and investor returns less stable. It would be a mistake for IOSCO to equate derivatives' notional amounts with leverage and not be sensitive to the beneficial use of these tools by portfolio managers, especially as investors have long selected funds for investment with full disclosure that these products could be used for such beneficial purposes.

ii. Derivatives Provide Effective Cash Management Tools to Efficiently Invest Subscriptions and to Synthetically Invest to Maintain Cash for Redemptions

Portfolio managers need a flexible set of efficient tools for cash management, and derivatives often provide a cost-effective solution. A fund's cash management needs arise in the case of both cash inflows and outflows. When a fund receives new subscriptions, it is preferable to immediately invest the cash to best ensure that the expected return is available for fund shareholders. That being said, portfolio managers may need time to identify appropriate investments and to achieve preferred pricing. In the period during which securities investments are being made, portfolio managers may invest synthetically using either the futures or the swaps market. Futures and options and some credit default swaps are executed on an exchange and total return swaps may be executed over-the-counter, in each case to obtain immediate cost-effective

exposure to the underlying assets. Liquidity in the synthetic derivatives markets can be greater than in the securities markets and synthetic investing through derivatives provides the portfolio manager with the time needed to source and obtain the desired assets at the preferred price.

Prudent portfolio management likewise requires that managers make provisions to address potential redemptions to meet the anticipated liquidity needs of fund investors. To maintain a reserve of cash to fund potential redemptions, while at the same time ensuring that the fund is fully invested to provide investors with expected returns, derivatives often provide the most efficient, cost-effective solution. Futures, options, credit default swaps, and total return swaps are often used for this exact purpose. Funds can stay fully invested on a synthetic basis, while simultaneously reserving a pool of cash to meet redemptions. Rather than maintain direct investments in specific assets, funds with fixed income portfolios execute credit default swaps on an index of diversified issuers. Credit default swaps on such indexes often have greater liquidity than do the bonds of the underlying issuers. In selling credit protection, funds gain synthetic exposure to the bond market and thereby preserve cash reserves to meet redemption needs. Likewise, in equity portfolios, funds can execute highly liquid equity index futures contracts in which the fund receives any appreciation in the value of an asset or assets and the fund pays any depreciation—without the need to purchase the underlying asset. In gaining exposure to the asset in such a manner, funds can stay fully invested in the intended assets, while also maintaining a cash reserve to provide liquidity in the event of investor redemptions.

Effective cash management often requires the use of derivatives and this usage must not be compromised as IOSCO and the FSB address leverage concerns.

iii. Derivatives Provide Cost-Effective Synthetic Investing to Mitigate Volatility and Other Risks More Effectively Than Through Securities Investing

Synthetic investing through the use of derivatives also enables portfolio managers to meet investor objectives using approaches that mitigate the volatility and other risks that might arise through more traditional securities investments. It is important to note that while investing directly in securities always presents risks, the investment return presented by certain investment portfolios can also be targeted using synthetic investment tools. Such synthetic products often offer greater liquidity and can be managed in a more efficient and cost-effective manner than could be achieved using traditional securities markets.

Examples of such synthetic investment strategies include using commodity futures when it is impractical to take delivery of physical commodities. In addition, total return swaps are used to gain synthetic exposure to assets in emerging markets where there are barriers to enter the local securities markets. With respect to futures generally, a long/short strategy used by an alternative strategies fund could result in notional amounts of 200% of net assets, notwithstanding that the purpose of the positions is to reduce overall beta volatility and focus instead on a form of risk premium or alpha spread. A relatively low risk, long/short total return swap strategy including a \$100 long position on one asset and a \$100 short position on a related asset highlights the challenge of assessing the leveraging effect of derivatives for IOSCO's purposes as such strategies could produce an outcome of \$0, \$100, or \$200 depending on the approach. Of course, focusing on what should be the notional amount ignores the actual risk presented by the transaction. It is only the risk to fund investors that is relevant and risk bears no direct relationship with the derivative's notional amount.

Particularly in the managed-futures and alternative strategies space, the incentive to use derivatives products is not always to obtain leveraged returns (*e.g.*, enhanced returns through the use of derivatives to gain exposure to assets in excess of the fund's net assets), but instead to achieve investor goals while at the same time mitigating position volatility, liquidity and other risks. Derivatives enable portfolio managers to execute investor-driven strategies in the most cost-effective manner, while also mitigating a variety of risks to a degree often not possible through investing in securities alone. While in such portfolios there may be a significant usage of derivatives, it may be the case that such synthetic investing methods are intended to produce similar returns offered by more traditional securities' investments with much more flexibility in managing a series of risks.

Again, IOSCO and the FSB must carefully distinguish such investment methods from an assessment of leverage to avoid the potential limiting of efficient, risk-mitigating investment strategies and thereby compromise portfolio managers' tools to effectively limit risk to investors. It is for this reason that Vanguard supports a simple approach of assessing the net size of hedged derivatives positions before applying a more robust risk analysis to enable regulators to determine a portfolio's potential for systemic risk to financial markets.

2. Global Regulatory Reforms Mitigate Derivatives Risks.

While we recognize the role of derivatives in the context of the global financial crisis, it must be understood that the factors that contributed to the crisis did not arise in the context of funds' use of derivatives. In the United States, the SEC's well-established 1940 Act protections, including Section 18 asset segregation and offset requirements and the mandate to hold fund assets serving as collateral for over-the-counter derivatives at the fund's custodian, coupled with the consistent application of netting and collateralization, mitigated the possibility of the crisis seriously impacting funds' derivatives positions. In Europe, a similar framework applies to asset segregation under the AIFMD and UCITS Directive

Before the crisis, regulators had little insight into derivatives' risk concentrations, collateral was inconsistently applied, and few standardized trades were either traded on an exchange or centrally cleared and risk-managed. ***Since the crisis, however, regulators have systematically addressed sources of risk and have achieved a holistic, transparent, and stable framework within which derivatives are used.*** Significant volumes of formerly opaque over-the-counter derivatives are now transparently traded on an exchange, are centrally cleared and risk managed, and are margined consistently to mitigate both current market risk and potential market volatility.

Today, given all of the global derivatives regulatory reforms, it is likely that most swaps entered into by funds will be executed on an exchange and centrally cleared. While exchange trading provides full transparency to the regulator, mandated central clearing means that the clearinghouse has a window into sizeable market positions that provide robust trade data to enhance the effectiveness of the clearinghouses' centralized risk management tools including, especially, the requirement for initial margin to mitigate volatility risk.

IOSCO and the FSB can take considerable comfort that the critical mass of global derivatives reforms has established a much more transparent, stable and resilient derivatives

market than was the case during the global financial crisis. The collective impact of the derivatives reforms serves as an effective foundation for derivatives risk management which IOSCO must take into account in assessing the risks related to the leveraging effect of fund derivatives usage.

3. Notional Amounts Are Not a Proxy for Leverage.

Vanguard agrees with IOSCO's general approach whereby derivatives are first assessed for potential leverage using a globally consistent and relatively simple measure. Once overall usage exceeds some threshold, a risk analysis is then performed and reported to inform the regulators' assessment as to the level of systemic risk presented by the fund to financial stability.

In the two step process, it first makes sense to apply a simple and efficient calculation so that portfolios can be assessed on an apples-to-apples basis. While one could evaluate a host of variables as a part of the first step, we believe a more basic approach, which also recognizes approaches already mandated in some jurisdictions, will enable a winnowing of the vast majority of funds to identify those most relevant to perform a sensitive leverage-focused risk assessment.

It is important to emphasize that the intent of this effort is to identify funds which regulators may review to assess the potential for systemic risk. A reporting of the funds that have derivatives usage in excess of the threshold established at the first step must not be equated with presenting systemic risk. Even the reporting of the results of the risk analysis at the second step must not be equated with presenting systemic risk. Local regulators must examine the results of the reporting to make their own conclusions based on variables relevant to their local markets and the overall global financial system. We are of the firm belief that the limited aim of this effort is for funds with derivatives usage in excess of a threshold to be mandated to report the risks related to their portfolios for regulator review and analysis. We do not accept that any aspect of the first or second step data analysis, risk analysis, or reporting determines the systemic nature of the presented risk. We urge IOSCO to clarify that this effort serves merely as a sorting, analysis and reporting methodology, with no prejudice as to the systemic nature of the risk is derived thereby.

To the extent possible, the reporting contemplated by the Consultation should be implemented to acknowledge existing reporting regimes in individual jurisdictions. Where necessary, existing reports can be adjusted. In the absence of reporting, new reports can be required. Vanguard is very sensitive to the costs associated with additional reporting and to the extent possible urges IOSCO not to add a whole new reporting regime but instead work to tailor existing regimes to these aims.

As noted above, Vanguard firmly believes that a derivative's notional amount is not a proxy for either leverage or risk. It is for this reason that Vanguard wholeheartedly agrees with IOSCO's observation that the "Gross Notional Exposure" test ("GNE") (without adjustment) will overstate exposure and potential leverage as it ignores netting and hedging.

4. Netting and Hedging Offsets Are Appropriate.

While not a perfect representation of either leverage or risk, Vanguard believes the “Adjusted Gross Notional” test (“**Adjusted GNE**”), which lessens the overstatement of the leveraging effect of interest rate swaps and options, coupled with the “Net Notional Exposure” test (“**NNE**”), with a relatively conservative approach to netting and hedging, is the best, most simple, and most effective approach to identify appropriate portfolios for the systemic risk assessment. Through application of a relatively conservative approach to netting and hedging, Vanguard is convinced IOSCO can reasonably avoid the concerns about subjectivity and variability in application and calculation so that there is confidence in the results and an apples-to-apples comparison can be made.

An added benefit of this approach, as IOSCO notes, is that UCITS and AIFs allow for netting between derivatives and securities positions (and thus focus more on synthetic investments). In allowing for netting and hedging offsets in this manner, IOSCO can take advantage of approaches already mandated and implemented in jurisdictions with sizeable derivatives markets.

In terms of applying a conservative approach to netting and hedging, and affording simplicity and efficiency, Vanguard supports limiting netting to transactions on instruments referencing the exact same underlying assets in proportion to the positions’ values. In cases of different maturities, and using the below maturity buckets, we’d support the most simple approach whereby the netting benefit would be 100% within the same bucket, 60% across two adjoining buckets, 25% across two buckets separated by a bucket, and 0% otherwise. Vanguard supports the use of IOSCO’s proposed maturity buckets for netting are follows:

- 0 – 2 years
- 2 – 7 years
- 7 – 15 years
- > 15 years

Note that applying a duration equivalency model, instead of the above maturity buckets model, is not unreasonable, and would produce an acceptable result with respect to interest rate derivatives, in particular.

Likewise, Vanguard agrees with IOSCO’s approach to carve out currency hedging, provided the net currency positions are lower than the fund’s NAV and the currency maturities are equal to or shorter than the maturity of the hedged assets.

Vanguard believes that it is important for this exercise to be performed within each asset class. Especially given our support for netting and hedging carve outs, there is a risk that while overall adjusted derivatives usage is small, the level of use within one or more asset classes could be more relevant from a risk perspective. For this reason, Vanguard supports the performance of the Step 1 analysis within each asset class and then a reporting of the results using a chart similar

to that proposed in the Consultation and indicating long and short positions within each class. Our only recommended changes are to exclude the need to report totals (as the totals add no value in an asset by asset presentation) and to exclude the columns referencing the percentage of NAV for longs and shorts in each class. In the context of assessing systemic risk to financial markets, there is no relevance to an individual fund's NAV.

The benefit of reporting the results of Step 1 on an asset class basis is that it would facilitate the regulator's ability to aggregate the data across funds for analysis. While the purpose of this exercise is to assess individual fund systemic risk, a benefit would be to see if aggregate risk across funds in one or more asset classes requires further evaluation.

Given our support for a conservative, simple and effective approach to the calculation of NNE, Vanguard has not addressed the supplementary data points outlined by IOSCO in the Consultation.

5. **Risk Assessments Are Appropriate Once Net Exposures Exceed a Threshold.**

Vanguard agrees that following the application of a consistent calculation methodology to a fund's derivatives portfolio, subject to netting and hedging offsets as described above, levels should be compared to a materiality threshold to qualify for a robust risk analysis – all with the aim of providing data to regulators to make a systemic risk assessment. Likewise, Vanguard agrees that this preliminary threshold for risk analysis be set considering certain factors, which may include:

- The size and scope of the fund industry,
- The nature of each regulator's focus and mission, and
- The extent to which other existing domestic regulations may seek to address leverage-related risks.

It is important for IOSCO to recognize that these considerations, or the thresholds that are set, could differ in each jurisdiction and could also depend on the size and scope of the domestic financial markets. As a result, risk assessments will likely be most effective if undertaken on a jurisdiction-by-jurisdiction basis. That being said, Vanguard strongly believes that regulators must not lose sight of the ultimate goal, to provide data so that regulators are enabled to identify potential systemic risks presented by portfolio leverage.

We likewise agree that once appropriate funds are identified after application of the threshold, a fulsome risk analysis should be applied, which rightly would include:

- Value-at-risk ("VaR") tests,
- Stressed VaR,
- Other stress tests, or
- Market sensitivity analysis.

In light of existing risk mitigants noted above, many of which have been implemented globally to address risks identified during the global financial crisis, Vanguard agrees with IOSCO's suggestion that the risk analysis could be enhanced by consideration of additional data including:

- Variation margin posted / received,
- Initial margin posted / received,
- Value of cash held in reserve / cash borrowed,
- Ratio of exchange traded vs. OTC derivatives, and
- Value of synthetic investments through derivatives.

Vanguard supports the overall objectives of the Consultation and is pleased to provide recommendations based on our deep understanding of portfolio management, the use of derivatives for hedging, cash management and synthetic investing, and the risk mitigating benefits of global financial reforms. Above all else, as IOSCO seeks to define leverage, collect data, and assess potential systemic risks to the financial system, there must be an appreciation of the value and benefits of derivatives in prudent portfolio management. Recommending calculations based on Net Notional Exposure, allowing conservative netting and hedging offsets, carving out foreign exchange forwards, recognizing the risk mitigants of margin and clearing, and applying a market sensitive threshold will identify funds for further risk assessment. Such assessment must include VaR testing and other stressed test scenarios to clarify which, if any, portfolios present systemic risk to the financial system.

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We appreciate the opportunity to comment on the IOSCO Consultation. If you have any questions about Vanguard's comments or would like any additional information, please contact William C. Thum, Principal, at (610) 669-9823 or william_thum@vanguard.com.

Sincerely,

/s/ Gregory Davis
Managing Director
and Chief Investment Officer
Vanguard

/s/ Joseph Brennan
Managing Director
and Chief Risk Officer
Vanguard