



Angelo Evangelou
Chief Policy Officer

February 1, 2019

VIA ELECTRONIC SUBMISSION

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

Re: IOSCO Report: Leverage

Dear Dr. Shane Worner:

The International Organization of Securities Commissions (“IOSCO”) is seeking comment on a proposed framework to help assess leverage used by investment funds (the “Consultation”). As a global exchange operator, a leader in exchange-traded derivatives and a leader in exchange-traded products, Cboe Global Markets, Inc. (“Cboe”)¹ welcomes the opportunity to provide feedback on the Consultation. Cboe appreciates the goal of developing a consistent measure of leverage in funds but encourages IOSCO to promote a risk-sensitive leverage measure that is not only more likely to provide regulators with useful data on financial stability, but also would help prevent harmful unintended consequences. Cboe is concerned that the adoption of a leverage measure that is insufficiently risk-sensitive would prejudice funds that incorporate exchange-listed derivatives and could also have broader, negative effects on underlying exchange-listed derivatives markets.

The Financial Stability Board (“FSB”) requested IOSCO “identify and or develop consistent measures of leverage in funds to facilitate more meaningful monitoring of leverage for financial stability purposes, and help enable direct comparisons across funds and at a global level. IOSCO should also consider identifying and/or developing more risk-based measure(s) to complement the initial measures with a view to enhance authorities’ understanding and monitoring of risks that leverage in funds may create. In both cases, IOSCO should consider appropriate netting and hedging assumptions and where relevant build on existing measures.”² In response to the FSB’s request IOSCO developed the proposed

¹ Cboe operates four U.S. equities exchanges (BYX, BZX, EDGX, and EDGA), one of which is a listing venue that currently lists over 290 exchange-traded products, four U.S. options exchanges (CBOE, C2, BZX, and EDGX), the largest pan-European stock Exchange (Cboe Europe), a futures exchange (CFE), and a foreign exchange-trading platform (Cboe FX).

² FSB, *Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities*, January 2017, available at, <http://www.fsb.org/wp-content/uploads/FSB-Policy-Recommendationson-Asset-Management-Structural-Vulnerabilities.pdf>.

framework set forth in the Consultation with the goal of enabling regulators to calculate and analyze leverage in funds over time and across jurisdictions. IOSCO proposes a two-step process to accomplish this goal: Step One – Identify funds that are unlikely to pose risks to the financial system and exclude them from further analysis and Step Two – Conduct risk-based analysis on the subset of funds identified in step 1.

The Consultation is focused on the first step of the proposed two-step process and seeks feedback on which metric (or combination of metrics) is most appropriate to calculate leverage of funds in Step One, The Consultation considers three potential calculation methodologies:

- 1) Gross Notional Exposure (“GNE”) without adjustment: gross market exposure of a fund which is calculated by summing the absolute values of the notional amounts of a fund’s derivatives and the value of the fund’s other investments;
- 2) Adjusted GNE: GNE with adjustments for interest rate derivatives (e.g., expressing interest rate derivatives as ten-year bond equivalents) and options (e.g., delta weighting); and
- 3) Net Notional Exposure (“NNE”): allowing fund’s investments to be netted (i.e., positions eliminating all or part of the risks linked to other positions).

The FSB is seeking the development of consistent measures of leverage in funds “to support the assessment of the potential build-up of leverage within the financial system and its potential impact on financial stability.”³ As an initial matter, it is potential losses becoming more or less realized losses that generally impact financial stability. Thus, in order for a measure of leverage to aid in the assessment of a fund’s potential impact on financial stability prior to realized losses, it is necessary for the calculation methodology to provide an indication of a fund’s risk of loss. Calculation methodologies that are risk-insensitive do not provide insight into a fund’s risk of loss and therefore are insufficient for financial stability analysis. Calculation methodologies that incorporate risk-sensitive elements, such as delta weighting options and netting economically offsetting positions, better reflect economic realities; better inform financial stability analysis, and reduce unintended consequences that can arise from adopting metrics that are not adequately risk-sensitive.

Unintended consequences of adopting a risk-insensitive leverage measure.

Cboe is concerned that the adoption of a risk-insensitive leverage measure could inadvertently hinder further adoption of option-based funds, which multiple studies have shown tend to improve overall performance and reduce investor risk. For example, a 2015 study conducted by the Institute for Global and Risk Management (“IGRM”) found that strategies employed by options-based funds had volatility-reducing effects on fund performance.⁴ A 2014 study from the University of Augsburg yielded similar

³ *Id.* at 1.

⁴ Keith Black and Edward Szado, *Performance Analysis of Options-Based Equity Mutual Funds, Closed-End Funds, and Exchange-Traded Funds*, Journal of Wealth Management, Summer 2016, Vol. 19, No. 1, pp. 51-69. The study performed an analysis of the equal-weighted performance of options-based funds that made significant use of U.S. stock index options and/or equity options during the 15-year period from 2000 through 2014, and found that: (1) the options-based funds had substantially lower annualized standard deviations (by 2.4 to 12 percentage points) than the Treasury Bond (Citi), S&P 500, MSCI EAFE, and S&P GSCI Indexes; (2) the options-based funds had lower maximum drawdowns than the S&P 500, MSCI EAFE, and S&P GSCI Indexes; 3) the options-based funds had similar

results, noting that option-based funds appear to lower systemic risk and are mainly used for hedging strategies.⁵ The study also found that the use of options by mutual funds provided higher risk-adjusted performances compared to funds that do not use options. A study by Goldman Sachs similarly suggested that higher-returns and lower volatility for options-based funds (when compared to their peer/non-option using funds) resulted in higher risk-adjusted returns.⁶

GNE-based leverage measures are particularly risk-insensitive and potentially harmful because such measures cannot determine whether a fund's derivatives positions are being used to provide leverage or are being used to hedge or offset exposures. As IOSCO noted, GNE-based measures have significant flaws: They overstate leverage; overstate exposures (particularly for options); do not account for netting or hedging relationships, which then overstates the extent to which a fund's net asset value will change in response to market changes; and do not differentiate between exposures to low-risk and high-risk assets. These characteristics demonstrate that GNE-based metrics do not measure risk. Cboe is concerned that utilizing a measure of leverage that does not measure risk would increase regulatory burdens and operational costs for funds that do not pose a risk to financial stability, such as option-based funds.

With regards to NNE, IOSCO states that NNE may help correct some of the limitations of GNE and Adjusted GNE. Cboe agrees. NNE would correct the inability of GNE and Adjusted GNE to account for economically offsetting positions. However, NNE would still result in overstated exposures and little differentiation between low-risk and high risk assets. In order to generate more meaningful data and give regulators a better basis to determine which funds require further analysis, Cboe believes it's necessary to adopt an NNE metric that incorporates risk-sensitive elements, such as delta-weighting options.

Moreover, in other contexts, the application of insufficiently risk-sensitive leverage metrics has had significant, negative consequences. For example, the Basel III capital requirements noted in the FSB policy recommendations require a GNE-based metric known as the current exposure method to be used for risk-based and leveraged-based capital ratios. For the exchange-listed, centrally cleared options market CEM's lack of risk-sensitivity has led to reduced access to clearing, reduced liquidity, increased customer costs, and increased possibility of market dislocation.⁷ Although the Consultation does not propose a portfolio limit or cap on the use of leverage, Cboe is very concerned that if the leverage measure applied to funds is not sufficiently risk-sensitive the untended consequences could be similarly harmful.

returns as the S&P 500 Index, and higher returns than the MSCI EAFE and S&P GSCI Indexes; and 4) the options-based funds had higher risk-adjusted returns than the S&P 500 and S&P GSCI Indexes. The study also provided analysis of performance since mid-1988 that showed lower volatility for key options-based benchmark indexes, including the Cboe S&P 500 BuyWrite Index (BXM).

⁵ Markus Natter, Martin Rohleder, Dominik Schulte and Marco Wilkens, *The Benefits of Option Use by Mutual Funds* (January 24, 2016), *Journal of Financial Intermediation*, available at, https://papers.ssrn.com/sol3/papers.cfm?abstract_id=24995244.

⁶ Goldman Sachs Research, *Mutual Fund Considerations: Enhancing Alpha with Options* (November 27, 2012).

⁷ See Letter from Angelo Evangelou, Chief Policy Officer, Cboe Global Markets, Inc., to the FSB, BCBS, CPMI, and IOSCO in response to the consultation on incentives to centrally clear over-the-counter (OTC) derivatives (September 7, 2018), available at, <http://www.cboe.com/aboutcboe/government-relations/pdf/fsb-comment.pdf>.

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Cboe greatly appreciates the opportunity to provide its views on the Consultation and encourages IOSCO to promote a more risk-sensitive leverage methodology, such as an NNE metric that incorporates delta-weighting of options positions. Cboe believes this will provide regulators with more useful data on financial stability and also help prevent the negative consequences that can arise from adopting a leverage measure that is not sufficiently risk-sensitive.

Sincerely,

A handwritten signature in black ink, appearing to read "Angelo Evangelou". The signature is fluid and cursive, with the first name "Angelo" and last name "Evangelou" clearly distinguishable.

Angelo Evangelou
Chief Policy Officer
Cboe Global Markets, Inc.