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IOSCO Issues Consultation Paper on Assessing Investment Funds' Use of Leverage; Member Call Scheduled for December 11 at 2 pm (Eastern)

[31511]

December 3, 2018 TO: ICI Members
ICI Global Members
Derivatives Markets Advisory Committee
ICI Global Trading & Markets Committee SUBJECTS: Derivatives
International/Global
Systemic Risk RE: IOSCO Issues Consultation Paper on Assessing Investment Funds' Use of Leverage; Member Call Scheduled for December 11 at 2 pm (Eastern)

The Board of the International Organization of Securities Commissions ("IOSCO") recently published a consultation paper requesting feedback on a proposed framework to assess investment funds' use of leverage.[1] The proposed framework is intended to assist regulators in calculating and analyzing leverage in funds in a sufficiently consistent manner, and would be carried out in two steps. The first step would use specified measures of leverage to identify and analyze funds that may pose a risk to financial stability. The goal of the first step is to efficiently exclude from consideration funds that are unlikely to pose risks to the financial system and do not warrant further review. The second step would involve further analysis of the remaining subset of funds.

IOSCO published the consultation paper in response to a Financial Stability Board report providing policy recommendations to address risks to global financial stability that may result from asset management activities, which included recommendations addressed to IOSCO related to the use of leverage in investment funds.[2] The consultation paper responds particularly to and focuses only on Recommendation 10 of the FSB report, which recommends that IOSCO, among other things, "identify and or develop consistent measures of leverage in funds to facilitate more meaningful monitoring of leverage for financial stability purposes and direct comparisons across funds and at a global level."[3] Comments on the consultation paper are due on or before February 1, 2019.

We have scheduled a member call to discuss the consultation paper for **Tuesday, December 11 at 2 pm (Eastern Time)**. Please contact Stefanie Andrews at

stefanie.andrews@ici.org to receive dial-in information for the call. If you have any comments on the consultation, please contact Ken Fang at kenneth.fang@ici.org. We summarize the consultation paper briefly below.

I. Leverage and Challenges in Measuring Leverage

The consultation paper defines "leverage" as a financial technique generally used to increase investment exposure through financial instruments (*e.g.*, derivatives) or borrowed money. It notes that leverage is typically expressed as a ratio of the fund's market exposure (however defined) over its net asset value.

The consultation paper then describes several challenges in measuring and monitoring leverage. First, different jurisdictions have developed different metrics to measure leverage, creating comparability issues. Second, there are challenges on how leverage is captured through these different metrics. Some metrics are appropriate for one type of fund or fund strategy but may not be appropriate for other strategies. Third, data availability presents challenges, as certain jurisdictions do not require detailed data on leverage. These challenges are further complicated, as certain financial instruments that may be used to increase market exposure may also be used to hedge out risks. Notwithstanding these challenges, the consultation paper recognizes that the jurisdictions overseeing the largest fund markets require regular reporting of leverage measurements, and that the two-step approach could build on existing measures, while facilitating cooperation among regulators across jurisdictions.

II. Step 1: Analysis of Potential Metrics

IOSCO identifies several measures available to measure leverage within investment funds, noting that any chosen metrics should meet at least three criteria:

- The metrics should be able to be applied across all strategies and methods of fund leverage;
- The metrics should avoid model risk; and
- The metrics should facilitate the identification of funds which may pose financial stability risks.

Potential Metrics – Given these criteria, IOSCO chose three metrics that could be used as the first step of its proposed two-step approach, listing pros and cons of each approach.[4]

A. Gross Notional Exposure ("GNE") Without Adjustment – This metric represents the 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.[5]

B. Adjusted Gross Notional Exposure – This metric would be calculated in the same manner as GNE but would reflect adjustments for interest rate derivatives and options. Interest rate derivatives would be duration adjusted either to a ten-year bond equivalent or relative to the fund's target duration for funds that have target durations. Options would be delta adjusted to better reflect the exposure that an option creates for its underlying reference asset.[6]

C. Net Notional Exposure ("NNE") – This metric would consider the extent to which a fund's investments may be netted (*i.e.*, where some positions eliminate all or part of the risks linked to other positions) and hedged *(i.e.*, those combinations of trades on derivatives or securities positions which do not necessarily refer to the same underlying assets but are concluded with the aim of reducing the risks of the trade in

other derivatives or securities positions).

For netting, the consultation paper suggests two approaches. First, regulators could define the circumstances under which positions will be permitted to net. Utilizing a limited universe of netting arrangements *(e.g.*, netting could be limited to transactions involving the same underlying assets) would balance the utility of NNE for filtering with the risk of impairing comparability across funds. Different maturities could require partial netting depending the magnitude of the difference in maturities. Second, regulators could consider information that indicates possible netting relationships without identifying specific trades that may be netted. This would avoid the challenges of specifying a detailed approach for calculating a net exposure metric.

For hedging, IOSCO acknowledges that it would be difficult for regulators to decide which positions should be regarded as hedges, given various changing correlations between instruments. Instead, IOSCO believes each jurisdiction should define particular hedges that are most important to it. The consultation paper then focuses on currency hedging and suggests only permitting hedging arrangements in which some or all the following conditions are met:

- The currency hedging arrangement is pre-disclosed to investors/regulators.
- Total notional amounts (in the fund's base currency) do not exceed the fund's net asset value;
- Maturity is equal to or shorter than the maturity of the fund or the hedged assets, whichever is shorter; and
- One leg of the currency pair is the base currency of the fund or hedged share class or classes.

Analysis of Metrics and Use of Supplementary Data Points – Recognizing that the three metrics in Step 1 may not provide regulators with sufficient information, the consultation paper suggests that regulators could compare the exposures from Step 1 by major asset classes (e.g., equities, commodities, credit, interest rates, or currencies) and by long and short position.[7] IOSCO reasons that more granular asset allocation breakdowns would give regulators more meaningful information to identify funds of interest and their exposure than single figures of gross or net market exposure. It also would allow for differentiating between low- and high-risk exposures.

IOSCO believes the Step 1 metrics could be combined with several types of supplementary data to better inform regulators about a fund's use of leverage. The supplementary data can include:

- Fund portfolio composition (*e.g.*, the percentage of the fund's portfolio that is long or short; concentration of holdings);
- Availability of assets to meet margin or collateral calls (*e.g.*, posted collateral or margin as a percentage of net asset value; holding of cash or cash equivalents)
- Data points to estimate the effects of changes in market factors (e.g., estimated value changes in a fund's portfolio in response to changes in market factors; value-at-risk measures); and
- Other general information (*e.g.*, strategy or strategies, including allocation of risk and assets across different strategies; size; amount of cash borrowings as a percentage of net asset value; counterparty exposures; sum of liabilities).

IOSCO acknowledges that there is no single measure that can capture leverage, so it believes that running a Step 1 analysis is inappropriate as a standalone measure. Instead, it states that it expects each regulator to determine the most appropriate combination of one or more Step 1 metric(s) and supplementary information to be used, then determine the risk that leverage presents in Step 2 by looking more closely at the subset of funds for which further analysis may be justified.

In an appendix to the consultation paper, IOSCO describes specific techniques on how GNE, Adjusted GNE (through delta adjustments for options and duration adjustments for interest rate derivatives), and NNE (through netting based on maturity buckets and netting based on duration equivalency) can be computed.[8]

III. Step 2: Risk-Based Analysis

The consultation paper states that Step 2 is designed to mitigate the limitation in the Step 1 metrics and facilitate a better understanding of leverage-related risks potentially posed, through risk-based analyses. In making these determinations, a regulator might consider, among other factors:

- The size and scope of the fund industry;
- The nature of each regulator's focus and mission; and
- The extent to which other domestic regulations may seek to address leverage-related risks in other parts of the financial system

The consultation paper adds that certain risk-based measures only may be necessary for certain types of investment funds. It provides examples of measures or analyses regulators could consider in analyzing leverage-related risks (*e.g.*, Value-at-Risk ("VaR") tests, Stressed VaR, stress tests or market factor sensitivity analyses). In an appendix to the consultation paper, IOSCO specifically identifies two leverage-related risks, market and counterparty risk, and provides possible Step 2 measures for these risks.[9] To evaluate market risk, IOSCO suggests that regulators could evaluate a portfolio's sensitivity to market changes[10] or conduct various VaR tests to identify which funds are more likely to reduce their liquidity faster or employ certain risk-taking strategies.[11] To evaluate counterparty risk (that both the fund and counterparty pose in not meeting its contractual obligations), IOSCO suggests that regulators could assign risk values to groups of assets, differentiated by maturity or duration for the relevant asset classes and that distinguish between investment and non-investment grade credit (*e.g.*, interest rates, FX and gold, investment grade credit, non-investment grade credit, commodities equity, other). These values then could be used to determine a fund's market exposure to the assets and the potential loss to or from the counterparty. Alternatively, IOSCO suggests using a whole netted portfolio approach to evaluate counterparty risk. Under that approach, regulators could add all the counterparty risk measures from all derivatives in the portfolio, with permitted netting and hedging (in a manner that could be similar to determining NNE), then use correlation parameters to arrive at measures of potential counterparty loss.

Additional supplementary data points could improve a fund's leverage analysis under Step 2 that in some cases are similar to some of the supplementary data points suggested for Step 1.[12] These could include (in absolute amounts):

- Initial margin posted;
- Value of cash/unencumbered cash;
- Use of exchange-traded derivatives vs. over-the-counter derivatives;
- Amounts of cash borrowed (both unsecured and secured);

- Amounts of synthetic borrowings via derivatives; and
- Value of collateral posted/received.

The consultation paper notes that regulators could combine the results of the Step 2 analyses with other types information (*e.g.*, looking at potential large, leveraged exposures to issuers or asset classes; market sectors experiencing stress). Regulators then may find it useful or necessary to engage actively with an identified fund or its sponsor.

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Addendum A: IOSCO Determined Pros and Cons of Proposed Step 1 Metrics

Proposed Metric

Pros

Cons

Gross Notional Exposure (GNE)

Relatively easy to calculate and apply on a reasonably consistent basis across different types of funds

Can overstate exposure, particularly short-dated interest rate derivatives and options

Uses simple data points

Does not account for netting or hedging relationships and may then overstate the extent to which a fund's net asset value will change in response to market changes if the fund is using derivatives to hedge or otherwise reduce market exposure

Avoids model risk

Does not differentiate between exposures to low-risk and high-risk assets

Does not account for netting or hedging relationships and so excludes any risk of impairing comparability of metrics undermining leverage

Tends to overstate leverage

Adjusted Gross Notional Exposure (Adjusted GNE)

Attempts to risk adjust interest rate derivatives and options exposures

Can still overstate exposure to interest rate derivatives and options although to a lesser extent than GNE

Relatively easy to calculate and apply on a reasonably consistent basis across different types of funds.

Does not account for netting or hedging relationships and may then overstate the extent to which a fund's net asset value will change in response to market changes if the fund is using derivatives to hedge or otherwise reduce market exposure

Uses simple data points

Does not differentiate between exposures to low risk and high-risk assets

Avoids model risk

Net Notional Exposure (NNE)

Accounts for some netting and currency hedging relationships

Can overstate exposure, although to a lesser extent than GNE and Adjusted GNE

May introduce model risk or similar risks to the extent that the netting and currency hedging relationships are determined based on approaches that require subjective evaluations, which also can limit the meaningfulness or appropriateness of aggregated figures of exposure

Does not differentiate between exposures to low risk and high-risk assets

Can understate leverage risk if the positions that have been netted and hedged retain some residual exposure

Not easy to aggregate values to the extent netting and currency hedging assumptions are determined based on approaches that require subjective evaluations

Addendum B: Example of How Regulators Might Organize a Fund’s Market Exposure Across Asset Classes

Investment Type

Market Exposure

Position (base currency)

% NAV

Long

Short

Long

Short

Equity securities

Equity derivatives

Fixed income securities

Credit derivatives

Non-base currency holdings

Foreign exchange derivatives

High-quality sovereign bonds

Interest rate derivatives

Commodities

Commodity derivatives

Cash and cash equivalents

Other

TOTALS

endnotes

[1] *See* IOSCO, IOSCO Report: Leverage (November 2018), *available at* https://www.iosco.org/library/pubdocs/pdf/IOSCOPD615.pdf.

[2] *See* Financial Stability Board, Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities (Jan. 12, 2017), *available at* http://www.fsb.org/wp-content/uploads/FSB-Policy-Recommendations-on-Asset-Management-Structural-Vulnerabilities.pdf

[3] *See id* at Recommendation 10. Recommendation 10 adds that IOSCO should "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." It also states that "IOSCO should consider appropriate netting and hedging assumptions and where relevant build on existing measures." *Id*.

[4] *See* Addendum A of this memo for a list of the pros and cons of each metric. In an appendix to the consultation paper, IOSCO lists the strengths and weaknesses of two metrics that "do not appear to be appropriate for the purposes of the work [IOSCO undertook]" and for which the consultation does not consult on. These are: a) a stress-based, worst loss measure; and b) a delta methodology measure. Under the worst loss measure, one would look at the absolute value of the maximum economic loss the fund could suffer from the most adverse market move, as determined on a portfolio level. Under the delta methodology measure, leverage would be measured based on the aggregate delta of a portfolio as compared to the fund's net asset value, in which the delta refers to the amount of the underlying assets that need to be held outright to replicate the performance of the derivative (*e.g.*, the delta of an option is the rate of change in the option price with respect to the price of the underlying asset). *See* consultation paper at Appendix B.

[5] IOSCO recognizes that "notional amounts" are used differently by different people in different contexts but that, for purposes of the consultation paper, the term generally refers

to the market value of an equivalent position in the derivative's underlying reference asset or the principal amount on which payment obligations are based.

[6] The consultation paper uses an example in which a fund sells an at-the-money call option on a particular security with a notion amount of $100. If the delta of the option is -0.5, then the delta-adjusted notional would be $50, producing a figure designed to better reflect the exposure the option creates to the underlying security.

[7] *See* Addendum B of this memo for an example of how IOSCO suggests regulators might organize information on a fund's market exposure allocated across asset classes.

[8] *See* consultation paper at Appendix A.

[9] *See* consultation paper at Appendix C.

[10] The consultation paper lists several tools measuring a portfolio's sensitivity to various measures: Net DV01, measuring sensitivity to interest rate changes; CS01, measuring sensitivity to credit spread changes; Net equity delta, measuring sensitivity to movements in equity prices; Vega exposure, measuring sensitivity to implied volatilities; Net FX delta, measuring sensitivity to currency rates relative to the base currency of the fund; and Net commodity delta, measuring sensitivity to movements in commodity prices.

[11] Although there are several VaR models, IOSCO believes that it would not be appropriate to recommend specific VaR parameters at a global level and encourages regulators to consider developing a local framework tailored to their market.

[12] *See* consultation paper at Appendix C.
