SBAI Comments on IOSCO Report CR08/2018: "Leverage"

The Standards Board for Alternative Investments (SBAI) welcomes the IOSCO consultation on Leverage. The SBAI has responded to past consultations on financial stability issues[1] and held financial stability workshops with central banks and securities regulators. The SBAI also actively contributes to the global debate on financial stability through its participation in IOSCO as an Affiliate Member.

General observations

The SBAI welcomes the Two Step approach proposed by IOSCO. As highlighted in previous consultation responses, there are a number of issues and risks/pitfalls IOSCO should take into account:

- Data collection challenges, including cross-border data sharing and taking account of existing data collection frameworks (which may already provide many of the required data points)
- Mechanistic rear-view mirror approach to detecting systemic concerns instead of looking for the "unknown unknowns", which requires a more creative approach to exploring and monitoring financial stability risks, taking account of behavioural economics, multi-agent modelling, etc. and which goes beyond collection and analysis of historic data
- Leverage measures are not stand-alone risk measures, and need to be complemented with more risk-centric approaches as part of the second step of the overall approach
- The counterparty risk transmission mechanism is best assessed by collecting the data from the limited number of global investment banks exposed to these risks
- Critical importance of using available data, for example Form PF or AIFM-D Annex IV

We also would like to note that the SBAI added the **Open Protocol (OP)**[2] to the SBAI Toolbox in 2017. OP is an open risk-reporting standard that managers and investors are free to adopt. It was developed in 2011 by a working group of leading investors, managers and other industry stakeholders to improve alternative investment fund transparency and to aid investors in aggregating their exposure across funds. OP standardises the collection, collation and representation of risk information of alternative investment funds and other types of investment funds. It provides a uniform framework with consistent data inputs, standard calculation methodologies and regular and timely reporting. Funds accounting for an est. USD 1.4tn in assets provide OP reports. Many of the risk analyses proposed in the IOSCO Report can be conducted on the basis of OP reports. The SBAI would be interested in providing a more detailed overview of the OP data specification to

[1] See consultation responses here: http://www.hfsb.org/regulatory-engagement/financial-stability/
[2] Open Protocol specification and documentation: www.sbai.org/toolbox/open-protocol-op-risk-reporting/

IOSCO to explore how this risk-reporting standard could help with the collection of relevant fund data to calculate various leverage measures as well as other risk metrics (incl. stress testing).

Questions on GNE

Question 1: Do respondents agree with the discussion above concerning the information that can be provided by this metric as well as its limitations?

The SBAI agrees with the assessment of Gross Notional Exposure (GNE). As highlighted in the previous SBAI consultation responses[3], the information value of aggregate GNE is limited to assessing economic exposure or risk[4], given that it does not account for the riskiness of underlying assets and does not account for hedging. By reporting GNE on a by asset class basis (long and short), the information value of GNE can be improved.

Question 2: Do respondents see merit in scoping out of step 1 assessments certain funds, such as for example, smaller funds? Please elaborate.

Many regulatory regimes exempt smaller and start-up funds from extensive (costly) reporting burdens to avoid creating additional barriers to entry to the sector. Systemic risk regulators should adopt these proportionate approaches. Regulators also can adjust the reporting frequency as a function of the size of a fund.

Question 3: Is this an appropriate metric to use as part of this two-step framework? Does it provide any information that is not provided by the other potential step 1 metrics discussed below?

As indicated in the IOSCO Report, GNE is easier to collect and calculate consistently but has limitations compared to adjusted GNE or NNE and tends to overstate risk.

Questions on Adjusted GNE

Question 4: Do respondents agree with the discussion above concerning the information that can be provided by this metric as well as its limitations?

The SBAI agrees with the assessment of pros and cons of adjusted GNE, including the adjustment for interest rate derivates (10-year bond equivalents) and delta adjustments for notional values of options. However, in practical terms, it is important to highlight that a more complex adjustment methodology will be more difficult to implement in a consistent manner across jurisdictions.

Question 5: Do respondents agree with the proposed adjustments of the gross notional exposure? To what extent would these adjustments provide improvements to the listed metrics and address the concern that metrics based on gross market exposure could overstate a fund's market exposure? Would respondents favour further adjustments and if so which one(s)? For example, should a measure of adjusted gross notional exposure consider adjusting a derivative's notional

[3] See SBAI Response to "Proposed Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities" (09-2016), Questions 12

[4] The UK FCA highlighted in its 2015 hedge fund survey that gross notional exposure (GNE) "does not directly represent an amount of money (or value) that is at risk of being lost" but, instead, represents the gross size of positions taken in the market. The Survey also acknowledged "that hedge funds use risk management techniques to net out directional exposures". Therefore, the UK FCA also refers to the **"market footprint"** in the context of GNE.

amount based on the volatility of the underlying reference asset? If so, what would be an appropriate measure of volatility? What other adjustments would be appropriate and why?

As stated above, delta-adjustment of options and using 10-year bond equivalents make sense and limit the overstatement of a fund's exposure. Additional consideration can be given to accounting for offsetting hedges with identical underlying assets.

Question 6: With respect to the duration adjustment, do respondents agree that it would be appropriate to express interest rate derivatives as ten-year bond equivalents? Would respondents favour adjusting the fund's interest rate derivatives relative to its target duration rather than a ten-year bond equivalent? If the "10-year-bond equivalent" approach were preferred, which reference bond(s) should be used depending on market? If the "fund's target duration" were preferred, what should be done with the funds that have no target duration? Are there alternative approaches that should be considered? Which ones and why?

A consistent application of 10-year bond equivalents is preferable to allowing the application of "target durations" (not all funds have target durations).

Question 7: Are there any funds that could be missed as a result of an analysis using adjusted gross notional exposure metrics but may warrant further regulatory attention? For example, a fund that invests significantly in investments with embedded leverage (e.g., an inverse floating rate note) may have a low gross notional exposure while nonetheless having highly volatile returns. As another example, if options are delta adjusted, would this raise the concern that a deeply out-of-the money option (with a corresponding low delta) could be given a very low adjusted gross notional exposure value but could represent a significant risk? If respondents agree with this risk, how could it be mitigated?

The Committee of European Securities Regulators (CESR) has set out "Guidelines on Risk Measurement and the Calculation of Global Exposure and Counterparty Risk for UCITS"[5] to capture more complex derivatives/structured products and the relevant conversion methodologies, including:

- Conversion of financial derivatives into the equivalent position in the underlying assets of those derivative
- Netting methodologies / principles
- …

This could serve as a starting point for IOSCO's analysis of more complex products.

Questions on NNE

Question 8: Do respondents agree that information about a fund's net exposure, when used in conjunction with metrics based on gross market exposure, may provide additional information about a fund's potential leverage? Please elaborate.

More accurate measures of leverage will need to account for netting and hedging; however, before a new "methodology" is developed, IOSCO should review the existing calculation methodologies, such as the AIFM-D and UCITS commitment approach. Given the challenge of changing existing

[5] https://www.esma.europa.eu/document/guidelines-risk-measurement-and-calculation-global-exposure-and-counterparty-risk-ucits

reporting frameworks, IOSCO may consider accepting the existing netted reporting methodologies to avoid duplicating reporting requirements. While this may introduce an element of "imprecision", it is more pragmatic than seeking to develop a complex set of netting and hedging methodologies and rules which would have to be adopted consistently at national level.

Question 9: To what extent should netting assumptions be considered to ensure that netting conventions applied may not impair consistent calculation of one fund's net exposure to another and from one jurisdiction to the other? We invite respondents to comment on the approach set forth in Appendix A.

Despite the known shortcomings, the existing methods such as AIFM-D and UCITS approaches are well understood and should be given preference over the newly developed methodologies.

Question 10: Do respondents agree with the proposed conditions of currency hedging arrangements?

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Question 11: Are there any funds that may warrant further regulatory attention but that could be missed as a result of an analysis using NNE based on the approach proposed in Appendix A?

The SBAI is not aware of any funds or activities that are not captured by the existing calculation methods (e.g. Commitment Method).

Question 12: Would information that serves as a proxy for potential offsetting relationships be informative when evaluating a fund's potential leverage? How comparable would these proxies be across jurisdictions? Do respondents believe the examples discussed above would be informative? Are there other proxies that would be informative?

No comment.

Questions on GNE, Adjusted GNE or NNE

Question 13: GNE represents the gross market exposure of a fund which is calculated by summing the absolutes values of the notional amounts of a fund's derivatives by asset class plus the value of the fund's other investments by asset class, as noted above. Should cash and cash equivalents be included in the calculation of exposure, or not? Please explain.

Base currency cash and cash equivalents do not create any economic exposure and should therefore be excluded.

Question 14: Should the greater of the cash borrowed and the current value of the assets purchased with the borrowings be retained when calculating the metrics or should it consider, once cash is reinvested that the value of the corresponding investment should be used? In some jurisdictions, regulatory calculations include the greater of the amount of cash borrowed or the value of the investments purchased with the borrowing. For example, if a fund borrows $100 and invests all of it in securities that later decline in value to $50, under this approach the calculation would include the greater amount of the cash borrowing, rather than the value of the security. Please elaborate.

- Investments/assets held are accounted for at market value (so, in the example above at $50)
- The liabilities (here: 100$) will be accounted for in the denominator of the calculation (NAV = Assets – liabilities)

- Cash/unencumbered cash and initial margin posted/received are excluded from GNE
- Borrowings can be reported separately from the respective leverage metrics

Illustration:

Assets (A)	Liabilities (L)	Market Exposure (ME)	NAV =Assets-Liabilities (excluding cash borrowing)	GNE= ME/NAV
100 (cash)	0	0	100	0
100 (invested)	0	100	100	1
200 (cash)	100 borrowed cash	0	100	0
300 (invested)	100 borrowed cash 100 borrowed stock (sold, proceeds reinvested)	300	100 (= 300-200)	4 (=300+100)/100

Question 15: GNE and adjusted GNE discussed above, are both presented on a gross basis, that is, the metrics represent the sum of the absolute values of long and short positions and by asset class, without any netting or hedging. Where positions are closed out with the same counterparty and result in no credit or market exposure to the fund, should they be excluded from these metrics? This would be consistent with data reporting on the SEC's Form PF, for which advisers do not include these closed-out trades when reporting the aggregate value of all derivatives positions. For example, if a fund enters into a future contract to sell a given commodity, and then enters into a contract to buy the same commodity for the same delivery month on the same futures exchange in order to eliminate the fund's exposure under both contracts, should the metrics exclude those contracts' notional amounts from any exposure figure?

Netting of hedged positions with the same counterparty should be allowed since they do not create market and counterparty risk.

Presentation of GNE, Adjusted GNE or NNE by asset class

Question 16: Would notional exposure metrics allocated across asset classes allow for more effective step 1 screening for leverage and leverage-related risks than aggregating a fund's exposure into a single figure? That is to say, would this approach more effectively achieve the goal of step 1—efficiently excluding from consideration funds that are unlikely to pose significant leverage-related risks and which thus do not warrant further analysis? Do respondents further believe that the additional inclusion of a "total" aggregated number could be of interest under the proposed approach? Please elaborate.

GNE and adjusted GNE broken down by investment type/asset class is preferable to a single GNE number which can be misleading. NNE should be provided on an aggregate basis (given that netting and adjustments can lead to a more "comparable" result).

Question 17: How granular should the split of asset classes be? Would the more granular presentations in Form PF and AIFMD requirements, for example, be most informative? Should the answer depend on the type of fund or regulations that apply to the fund's use of leverage (i.e., more granularity where the regulatory scheme permits greater leverage)? Would allocating exposure across major asset classes such as equities, commodities, credit, interest rates, or currencies, provide sufficient information?

A split by asset class is useful.

Question 18: Would it be helpful to examine other details that could supplement the allocation of a fund's exposure by asset class - for example, identifying the types of derivatives instruments in which a fund invests? Different derivatives instruments can have different risks associated with them, such as different counterparty risk, or a linear risk profile (e.g. futures) versus a non-linear risk profile (e.g., options). A fund's allocation of exposure across asset classes also could include the relevant counterparty, or those counterparties to which the fund has significant exposure. Would this information be useful in evaluating potential impacts of a dealer or central counterparty coming under market stress? Do respondents think that such additional data points would provide useful information, taking into account allocation of exposure across asset classes? What other data points might be helpful in this regard?

As highlighted in previous SBAI consultation responses to IOSCO/FSB, understanding the risk-taking by banks is an important component of the overall analysis. The most efficient way to assess counterparty exposure is to collect the data from the limited number of global investment banks. In its "Hedge Funds as a Counterparty Survey", the UK FCA analysed this potential transmission channel for systemic risk.[6] By drawing on the aggregate data from banks, it is possible to assess the exposure of individual banks in the context of their overall risk exposure, levels of capital etc.

Counterparty risk is also currently reported in the existing reporting frameworks such as Form PF (US), AIFM-D Annex IV (EU) and UCITS.[7]

Illustration: Available data via AIFM-D reporting (for top 5 counterparties)

Name	Aggregate exposure (bn €)*	Equity Long Bias	Equity Long/Short	…
1. XY Bank	35	5	10	
2. YZ Prime	25			
3. ABC Securities	10			
…				

Breakdown of aggregate exposure by strategy type (AIF 24.1H)

[6] https://www.fca.org.uk/publication/data/hedge-fund-survey.pdf

[7] Form PF (US Private Funds) provides information on top 5 counterparties (both positive and negative mark-to-market) [Q22-23] [excludes collateral, but requested in Q 43 and 45]
AIFM-D Annex IV: All prime brokers of funds (AIF 24.1G); top five counterparties that have the greatest mark-to-market net counterparty credit exposure to the AIF, measured as a percentage of the NAV of the AIF; breakdown of aggregate exposure by strategy type (AIF 24.1H)

Questions on supplementary data points

Question 19: Would these data points supplement step 1 metrics in a relevant manner? Do respondents believe that certain of these supplementary data points should be given more or less weight than others? Which ones and why?

The supplementary data points provide a more detailed perspective on risk and should be included in the Step 2 assessments. Form PF and AIFM-D provide much of this information already.

The risk-based assessment in step 2 will enable putting the leverage metrics (with the shortcomings discussed above and highlighted in the IOSCO Report) in the context of overall absolute and relative risk. The types of risk measure used will depend on the type of investment strategy.

Value at Risk (VaR) is one measure that is already included in Form PF, AIFM-D Annex IV and UCITS (Luxembourg) reporting. The parameters (e.g. time period, confidence level) used for calculating VaR differ across jurisdictions, and IOSCO and national regulators are encouraged to work towards a common definition.

Scenario analysis/stress testing is another approach to better understanding the sensitivity of portfolios to certain downside risks (e.g. shift in interest rate curve, market drops, etc.) already included in the existing regulatory reporting frameworks including Form PF Question 42, AIFM-D Annex IV 24 (2) C, Item 279 and UCITS (Luxembourg) Section IV.

As indicated under Question 18, counterparty risk information is most efficiently captured from the entities taking those risks, such as banks, broker dealers, central counterparties etc. to facilitate a meaningful assessment in the context of the overall risk-taking and capitalisation of such systemically relevant entities.

As highlighted in the *General Observations* on p. 1, Open Protocol provides a well-documented methodology and the SBAI would be interested in presenting the Open Protocol framework to IOSCO.

Question 20: Are there other useful data points that would supplement step 1 metrics? Do respondents consider these or other data points as part of their leverage risk management? If so, which ones and how do respondents use them?

Information on cash borrowing (incl. repo) could be useful to assess “balance sheet” leverage.

Questions on step 1

Question 21: a) Should we consider other metrics than the one consulted on? If so, which one(s) and why? b) What’s your view of the metrics detailed in appendix B?

As highlighted in the previous SBAI consultation responses, scenario analysis / stress-testing can provide additional insight into portfolio sensitivities. The regulatory reporting frameworks such as Form PF and AIFM-D Annex IV (see question 19), as well as the Open Protocol risk-reporting template, provide commonly accepted definitions of stress scenarios.

Question 22: Do respondents agree that none of the metrics analysed can alone provide an accurate measure of leverage of a given fund or a group of funds? Would a combination of the suggested metrics or one of such metrics with supplementary data point suffice to meaningfully monitor leverage and identify funds that may need further risk assessment regardless of the market conditions? Please elaborate.

There is no singular all-encompassing leverage measure. It is only in conjunction with the more detailed risk assessment in step 2 that a more thorough understanding of risk for funds and groups of funds can be achieved.

Question 23: What are the challenges associated with the collection of data for each metric and/or of the supplementary data points suggested? Is the information readily available?

No comment.

Question 24: Are there other approaches, rather than the two-step framework and alternatives identified above, that respondents believe we should consider? If so, what are these approaches and what are their advantages and limitations?

No comment.

Question 25: Is there one or more step 1 metrics, or specific supplementary data points, or both, that may be effective in facilitating a cross-border regulatory dialogue if collected across jurisdictions? If so, which metrics and/or data points and why?

No comment.

Question 26: Do respondents believe that step 2 effectively reflects the inherent limitations in step 1 measures by recognising that, in step 2, regulators seeking to identify leverage-related risks may need to perform risk-based analyses that move beyond step 1 metrics? Why or why not?

The SBAI agrees with the two-step approach, where the more detailed risk-based analysis is undertaken in step 2. Based on the high-level guidance provided by IOSCO, national regulators should be given flexibility to undertake these risk-based analyses on the basis of existing reporting (Form PF, AIFM-D Annex IV, UCITS (Luxembourg)).

Question 27: What types of more tailored or bespoke analyses do respondents believe would be most effective in step 2? Are there analyses that respondents perform, or data points that respondents consider, as part of their leverage risk management that they believe regulators should consider as potential step 2 approaches? Which ones and why?

Step 2 analyses need to be tailored to the individual fund, depending on asset class (fixed income, equities, real estate, etc.), investment instrument used, etc.