

São Paulo, 1 February 2019

Secretariat of the International Organization of Securities Commissions (IOSCO)

Via email: consultation-08-2018@iosco.org

Re: IOSCO Report: Leverage

Dear Sirs and Madams,

Please find enclosed to this letter a copy of the reply from the **Brazilian Financial and Capital Markets Association (ANBIMA)** to the Consultative Document “*IOSCO Report: Leverage*”. The Association appreciates the opportunity provided by the Board of IOSCO to comment publicly on the proposed framework for regulators to calculate and analyze the role of leverage in investment funds.

The document below starts with a brief presentation about the specific features of the local investment fund industry, approaching the relevant regulatory aspects and providing some data points concerning its use of leverage. These initial considerations subsidize the ensuing part of the document, in which we provide observations based on questions contained in the Consultation Report.

ANBIMA looks forward to continue contributing with initiatives from IOSCO in the context of Investment Management activities. We remain at your disposal to elaborate on the aspects presented in this document and advance discussions around the proposed harmonized approach.

Yours Sincerely,

José Carlos Doherty
ANBIMA Chief Executive Officer

São Paulo, 1 February 2019

Re: IOSCO Report: Leverage

Comments from the Brazilian Financial and Capital Markets Association (ANBIMA)

1. Introduction

The Brazilian Financial and Capital Markets Association (ANBIMA) welcomes the opportunity provided by the Board of the International Organization of Securities Commissions (IOSCO), to comment on the Consultation Report on Leverage. In this aspect, the Association commends the work undertaken by IOSCO in the preparation of this Report, including the approach adopted by Policy Committee 5 (C5), promoting the dialog with industry and regulatory stakeholders through the different stages of this work stream.

ANBIMA responded¹ to the Financial Stability Board's (FSB) Proposed Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities². As the FSB later finalized its Recommendations³, IOSCO started the initiatives to operationalize aspects around liquidity risk management and, as reflected in this consultation, leverage. In this period as well, the Association participated in discussions with C5 representatives, due to its role as a member of the IOSCO Affiliate Members Consultative Committee (AMCC).

The current Consultation Report on Leverage represents a relevant step in this global agenda. As such, the Association considered it was relevant to register its perspective, based on the experience of Brazil's markets. We expect this example will be pertinent for IOSCO consideration, given Brazil's position as an Emerging Economy with a large investment fund industry and sophisticated derivatives markets. In this regard, the following session provides an overview about Brazil's investment fund industry, its specific characteristics and use of leverage; based on these considerations, the third session presents remarks based on the questions posed in the Consultation Report.

2. Investment Funds and Leverage: the case of Brazil

This session will cover regulatory and practical aspects of the use of leverage by investment funds constituted in Brazil. While this part focuses specifically on the aspects related to leverage, readers interested in understanding more about concepts utilized in this session may refer to ANBIMA (2016)⁴.

2.1. Regulatory mandates

The Securities and Exchange Commission of Brazil (CVM) is the main regulator for the investment fund industry. The CVM was established according to Law n. 6.385, from 1976, with mandates concerning market development, market efficiency, investor protection and access to appropriate information (Law 6.385, art.

¹ ANBIMA (2016). Available at: <http://www.fsb.org/wp-content/uploads/Brazilian-Financial-and-Capital-Markets-Association-ANBIMA1.pdf>

² FSB (2016). Available at: <http://www.fsb.org/wp-content/uploads/FSB-Asset-Management-Consultative-Documents.pdf>.

4 and 8, I and II). Moreover, the Commission monitors Brazilian securities markets and sanctions offenders of federal securities laws⁵ (Idem, art. 8, III and V, and art. 11)⁶.

For the purposes of this assessment, one of the most relevant rules from CVM is **Instruction n. 558**, which lays out authorization, conduct, policies and disclosure requirements for asset managers and investment fund administrators. Therefore, legal or natural person exercising one of these activities must be registered at CVM and observe the requirements defined in this instruction. In addition, **Instruction n. 555** disciplines the constitution, administration, functioning and disclosure of information for investment funds. This rule covers a particularly extensive scope, as the classes of investment funds established according to its provisions (see table below) represent approximately 90% of Brazil’s investment fund industry.

Still, these are not the only rules that discipline aspects relating to asset management products and activities in Brazil. For example, different Instructions from CVM establish requirements for structured funds, such as **Credit Receivables Investment Funds (FIDC)**, **Real Estate Investment Funds (FII)**, **Private Equity Investment Funds (FIP)** and **Venture Capital Investment Funds (FIEE)**. The pension (PREVIC) and insurance (SUSEP) authorities also discipline requirements for investment funds directed to pension plans, including strict limits to leverage.

Table 1 – Illustrative classification of investment fund groups

Group	Class
Mutual funds (555)	Equity
	Fixed Income
	Foreign Exchange
	Multimarket funds
Structured funds (non-555)	Credit Receivables Investment Funds (FIDC)
	Real Estate Investment Funds (FII)
	Private Equity Investment Funds (FIP)
	Venture Capital Investment Funds (FIEE)
	National Film Industry Funding Funds (Funcine)

Source: Anbima

³ FSB (2017). *Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities*. Available at: <http://www.fsb.org/wp-content/uploads/FSB-Policy-Recommendations-on-Asset-Management-Structural-Vulnerabilities.pdf>.

⁴ See note 1. Pp. 5-13.

⁵ Offences to Brazilian securities laws can be prosecuted at administrative, civil and criminal spheres. According to current legislation, CVM is responsible for administrative proceedings.

⁶ CVM webpage “Legal Mandates of CVM”. Available at: http://www.cvm.gov.br/subportal_ingles/index.html (accessed 26/Dec/18).

In terms of activities, another relevant rule is **Instruction 539**, also from CVM, which disciplines suitability requirements and consolidates the definitions of accredited and professional investors⁷. For the current analysis, it is important to observe that distribution of certain classes of investment funds is restricted to these professional or qualified investors.

In this context, ANBIMA acts as the voluntary self-regulatory organization (SRO) for the investment fund industry (among other functions). The Association exercises the full range of self-regulatory activities – rulemaking, supervision and enforcement – based on contractual relationship with its members and others who choose to adhere to ANBIMA’s Codes of Best Practices. Considering only the activities subject to the **Code of Regulation and Best Practices on the Administration of Third-Party Resources**⁸, ANBIMA supervises more than 600 firms (composing more than 90% of this segment’s AuM).

In 2018, CVM and ANBIMA signed a Memorandum of Understanding, establishing the basis for the use, by the Commission, of the regulatory, supervisory and enforcement activities performed by the Association in regards to Brazil’s investment fund industry. The MoU establishes initially three lines of complementary action, regarding: (a) Authorization of securities portfolio administrators (both natural and legal persons); (b) Mark-to-market pricing of financial assets by fund administrators; (c) Distribution of investment fund quotas by securities market intermediaries. As of September 2018, the Association started reviewing applications for securities portfolio administrators for the purposes of both CVM and ANBIMA requirements.

2.2. Existing safeguards

Investment funds are constituted in Brazil as **condominiums** (either open or close-ended). One of the implications of this model is that General Assemblies have the authority to take most decisions related to the fund, such as replacing a fund’s service providers (e.g. the administrator, manager or custodian) and changing the fund’s statute or investment policy. Another implication of this concept of investment funds as condominiums is that shareholders are *not* subject to the principle of limited liability.

In this model, an important tenet is the **credit-taking prohibition**. In general, asset managers cannot take loans on behalf of the funds they manage⁹, which imposes a strict limit on balance sheet leverage. Moreover, securities lending and reverse repo transactions entered by investment funds must be processed by infrastructures authorized by a local regulator (equity lending operations, in particular, are registered, cleared and guaranteed by a facility operated by the domestic exchange).

Therefore, derivatives constitute one of the most important alternative for investment funds to generate leverage – although this activity is also **strictly regulated and often limited**.

⁷ Qualified and professional investors are mainly defined according to the total value of financial assets they own. For natural persons, the minimum threshold for a qualified investor is a financial asset holding of R\$ 1 million; the minimum threshold for professional investors is of R\$ 10 million. For a more precise definition of both qualified and professional investors, see CVM Instruction n. 539 arts. 9-A to 9-C.

⁸ This Code started producing effects from Jan. 2nd, 2019 (replacing the previous Codes for Investment Funds and for Wealth Management). The document is available, in Portuguese, at http://www.anbima.com.br/pt_br/autorregular/codigos/administracao-de-recursos-de-terceiros.htm

⁹ For mutual funds, see CVM Instruction 555, art. 89, II. For structured funds, see also CVM Instruction 472 (FII), art. 35, III; CVM Instruction 391 (FIP), art. 35; and CVM Instruction 356 (FIDC), art. 36, XI.

To substantiate this point, it is important to observe that structured funds (such as FII, FIP and FIDC) can **utilize derivatives only for the purposes of protecting** their portfolio (with different restrictions in each case; e.g. for FIDC, this use of derivatives is limited to *spot* positions)¹⁰. In addition, mutual funds constituted as one of the fixed income subclasses (i.e. short term, simple, external debt and referenced fixed income investment funds) can only enter into derivative operations for **hedging purposes**.

Complementarily, CVM requires 555-funds to inform, on the investment policies contained in their by-laws, whether they may realize operations in value exceeding their total net asset value (and to what extent)¹¹. For the key information document, CVM requests fund administrators to disclose whether derivatives are utilized only for hedging purposes; if not, then CVM requests information about fund managers to disclose the **maximum possible leverage – measured in terms of margin**¹².

The regulation applicable to **pension plans** also establishes limits to their invested funds' leverage. However, it is important to observe that the concepts utilized in these circumstances are not harmonized at a national level. In effect, the Resolutions of the National Monetary Council (CMN) that discipline the activity of these institutional investors establish that:

- For Open Complementary Pension Entities (EAPC), the limits are based on **exposure** (for the aggregated portfolio and for the individual **risk factors**)¹³.
- For Closed Complementary Pension Entities (EFPC), the limits are based on **required margin (and premia, for options)**¹⁴.

Lastly, it is important to observe that other regulatory aspects of the CVM regulation (and ANBIMA's requirements) are indirectly effective in mitigating fund leverage in Brazil.

A first example in this context are the **portfolio concentration limits**. CVM defines general **asset and issuer concentration limits** for 555-funds (e.g. the general rule limits the investment in securities issued by a single financial institution to 20% of a fund's NAV, 10% for a listed company and 5% for other private companies¹⁵). **Positions generated via derivatives and repurchase agreements must be taken in account** when calculating these portfolio limits. Nevertheless, aspects such as a fund's class and investor qualification may alter these limitations (e.g. funds distributed exclusively to professional investors do not need to observe said limits).

Second, asset managers must define **liquidity management policies** according to CVM regulation¹⁶ and subject to ANBIMA self-regulatory guidelines¹⁷ (including periodic stress testing, for both liabilities and

¹⁰ See CVM Instruction 472 (FII), art. 35, XII, (d); CVM Instruction 391 (FIP), art. 6, par. 1; and CVM Instruction 356 (FIDC), art. 40, par. 2, II.

¹¹ CVM Instruction 555, art. 44, sole paragraph, IV.

¹² Maximum leverage is defined as the maximum percentage of the funds' net asset value that could be deposited as margin, considering both effective margin, for secured positions, and potential margin, for unsecured positions (CVM Instruction n. 555, Annex 42).

¹³ CMN Resolution 4.444, art. 21.

¹⁴ CMN Resolution 4.661, art. 30.

¹⁵ CVM Instruction 555, art. 102.

¹⁶ CVM Instruction n. 555, art. 91.

¹⁷ ANBIMA Deliberation n. 67 – Guidelines for Liquidity Risk Management. Available, in Portuguese, at <http://portal.anbima.com.br/fundos-de-investimento/regulacao/codigo-de-fundos-de-investimento/Pages/codigo-e-documentos.aspx>.

assets). These policies help ensure that funds attain adequate balance between the portfolio liquidity, on one hand, and redemptions and margin calls, on the other hand, in a manner that considers derivatives and leverage-generating operations.

Moreover, the majority of derivatives operations are **exchange traded** and, therefore, are centrally cleared and subject to mandatory margin calls. The remaining operations are mainly negotiated in organized OTC markets and may also be subject to margin calls, depending on the agreed terms. In either case, all derivative operations are registered at the local trade repository.

2.3. Data

Another specific feature of Brazilian investment fund regulation relates to the existing reporting requirements. Prior to any sales effort, **all Brazilian investment funds must be registered at the CVM**, and are subject to **extensive reporting requirements**¹⁸. Some of these indicators reported by investments funds are directly or indirectly related to the funds' of leverage, and these are identified in the table below.

Table 2 - Examples of leverage-related data points reported by 555-funds

Data point	Reported	Observation
Balance-sheet information	Yes (cf. ICVM 555, art. 59, IV)	
Gross Leverage	Yes (Monthly report)	Includes information about (i) long-only exposures (ii) short exposures; and (iii) collateral. Data divided according to different risk factors.
Qualitative counterparty information	Yes (Monthly report)	Top 3 counterparties to which the fund is exposed, with regards to OTC derivatives operations.
Absolute VaR	Yes (Monthly report)	
Margin	Yes (Key Information Document)	Refers to total encumbered margins, for secured operations, plus potential margin, for unsecured operations.
Stress scenarios	Yes (Monthly report)	Investment funds must report the worst results from the scenarios elaborated by B3 (local CCP) and also by the fund's administrator
Sensitivity to risk factors	Yes (Monthly report)	

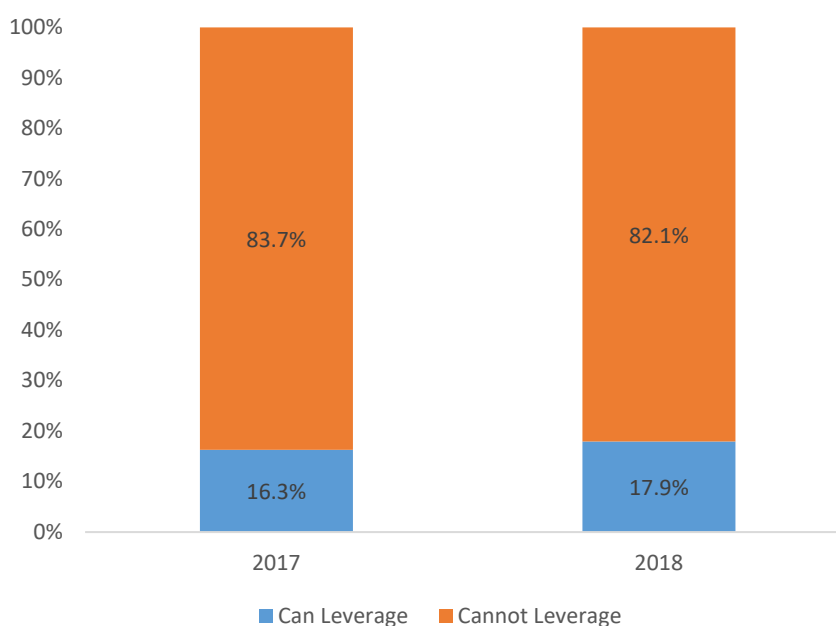
Source: Anbima (based on CVM Instruction 555).

¹⁸ Part of this information is later disclosed on the CVM website (<http://sistemas.cvm.gov.br/?fundosreg>), which contains a large database displaying information such as each fund's holdings, unit prices, net asset value, number of unit-holders, amounts of subscriptions and redemptions, as well as key information documents.

Apart from this data set, a particularly relevant information provided by investment funds is which vehicles have the mandate to generate leverage. As informed in the previous section, CVM regulation requires investment fund by-laws to disclose whether each vehicle can generate exposure exceeding total shareholders' assets. Moreover, certain fund classes may not enter into derivative operations in order to generate leverage.

According to these definitions, the graph below presents the information about the aggregate value of assets under management of investment funds that can leverage their portfolios *vis-à-vis* the assets under management of funds that may not leverage their portfolios (according to the definition presented in their mandates and the regulatory requirements). The results evidence that **more than 80%** of the assets under management of the industry is represented by funds that cannot realize operations exceeding their total net asset value.

Graph 1 - Aggregate AuM of funds whose mandates allow them to leverage their portfolios (2017 x 2018)¹⁹



Source: ANBIMA

Brazilian investment funds also have **individual accounts at central counterparties and trade repositories**, which provides local authorities to have additional, granular data streams about investment funds' positions in different markets. The resulting multivariate set of information, originated from both funds and infrastructures, allows domestic authorities to monitor the investment funds' use of leverage through a range of different metrics.

¹⁹ Considering the industry's total (i.e. mutual and structured funds).

One prominent example in this case is the study published by CVM's Research Department (ASA/CVM) in 2016²⁰, which utilized a range of data about (a) investment funds' use of leverage-inducing instruments (i.e. equity lending, reverse repos and derivatives) and (b) funds' exposure, considering the aggregate effects of the aforementioned instruments. In conclusion, this study found that **Brazil's investment funds industry registers, on average, low exposure to leverage-inducing operations**; however, a small number of identifiable vehicles (generally, exclusively-owned investment funds) registered outlier levels of exposure to these products (ASA/CVM, 2016, p. 61).

IMF (2018) obtained a similar finding, in a more recent assessment²¹. In this technical note, the international body observed that leverage is low on average for Brazil's investment fund industry, although pockets of higher leverage exist (p. 19). In order to substantiate this conclusion, the following data points were utilized (idem):

- **Exposure to securities lending** represents **0.5%** of industry NAV;
- **Exposure to reverse repos** represents **1.18%** of industry NAV;
- **Required margin** for derivative contracts represents **1.8%** of industry NAV;
- The **Gross Notional Exposure** of all derivative contracts is equivalent to **71%** of industry NAV.

With these observations, we conclude our introductory presentation of the most relevant aspects regarding the use of leverage in Brazil's investment fund industry, its regulatory safeguards and the data points available to the domestic authorities. The next session provides our comments to the questions posed by the Consultative Report, considering the aspects detailed above.

²⁰ ASA/CVM (2016). "Alavancagem em Fundos de Investimento".

Available, in Portuguese, at:

http://www.cvm.gov.br/export/sites/cvm/menu/acesso_informacao/serieshistoricas/estudos/anexos/Paper_Alavancagem_FINAL270716.pdf.

²¹ IMF (2018). "Brazil. Financial Sector Assessment Program. Technical note on fund management-regulation, supervision and systemic risk monitoring". *IMF Country Report No. 18/358*.

Available at: <https://www.imf.org/en/Publications/CR/Issues/2018/12/11/Brazil-Financial-Sector-Assessment-Program-Technical-Note-on-Fund-Management-Regulation-46449>

3. Comments regarding IOSCO Report: Leverage

The IOSCO Report on Leverage presents the Organization's proposal to respond to FSB Recommendation 10, via a two-step approach, while simultaneously placing in public consultation some of the questions necessary for the development of this method. Given the relevance of this assessment, the Association welcomes the opportunity to present below its considerations about this proposed approach.

In this regard, it is important to observe that ANBIMA maintains the positions presented in its response²² to the FSB Proposed Policy Recommendations²³. One corollary of this observation is that the Association opposes the definition of leverage as a function of market exposure (*cf.* IOSCO, 2018, p. 2); instead, it recognizes that leverage should be measured as a fund's **exposure to capital risk**. In this context, the recommended indicator for capital risk is a fund's **maximum potential loss in stress scenarios**. This metric is sufficiently straightforward to calculate (once the governance about the definition of scenarios is established) and is easier to comprehend, making it useful as well for the classification of products and disclosure to investors.

A second recommendation concerns the attention to **margin** (both posted, for secured operations, and potential, for unsecured operations), when elaborating a methodology to measure leverage. The relevance of this metric derives from the fact that its value acts as (i) a **proxy of risk** and (ii) a **mitigant** of the counterparty risk posed by the investment vehicle. Also importantly, the value of this collateral is, to a considerable extent, calculated according to methods developed by market infrastructures (for cleared operations) or to minimum regulatory requirements (for non-cleared operations). The downside to this observation is the fact that margin can be calculated according to a varied set of methods, making it less comparable across jurisdictions.

Having regards to these recommendations, as well as to the arguments provided in the previous session (mainly in respect to the robustness of the data set available for the domestic regulator), ANBIMA welcomes the two-step approach proposed by IOSCO, particularly for its flexibility. While promoting an increased standardization of exposure metrics, this method still **allows domestic authorities to have the necessary discretion over the risk-based metrics** they monitor, in a manner that is more adequate to the level of sophistication of their markets. In Brazil, a form of two-step approach is already adopted, but the local method is composed of the following processes: (i) the self-declaration of investment funds that can leverage their portfolios (and the limits, when applicable); and (ii) monitoring of margin (and additional risk-based measures, as applicable).

However, as explained in the following pages, the Association is of the view that each one of the metrics proposed by IOSCO for the step 1 (i.e. GNE, Adjusted GNE and NNE) has **relevant shortcomings**, making them insufficient in face of the objective to measure leverage within investment funds. The consultation report in part recognizes this issue and attempts to address it via the establishment of step 2 (which provides national authorities with the discretion to utilize risk-based metrics, in order to conclude their supervisory

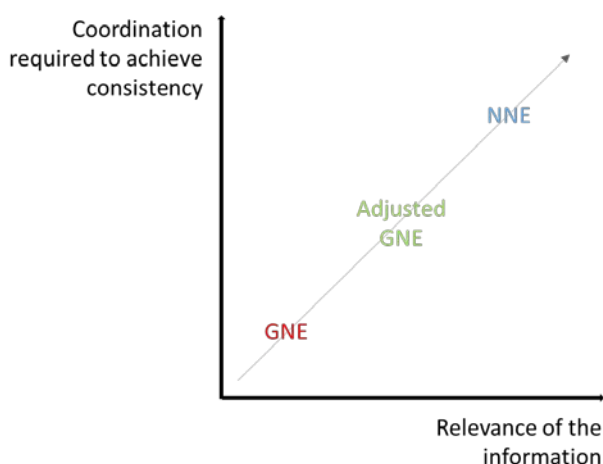
²² See footnote 2.

²³ See footnote 1.

assessments). But in a context broader than the current consultation, this observation indicates that such exposure metrics should be considered similarly inadequate for use in establishing **eventual regulatory limits to investment fund leverage**.

Another general remark regarding the two-step approach is that the metrics proposed for step 1 demand increasing levels of **coordination at international level**, in order to reach the expected objective of consistency. GNE is the more straightforward metric to adopt in a coordinated manner at international level, but the power of a test utilizing this metric is small. Comparatively, the use of adjusted GNE and NNE increases the capacity of regulators to remove from their sample the funds that do not pose systemic risk due to their leverage, but the consistent adoption of these two metrics requires coordination about an increasing number of parameters. The graph below provides a theoretical attempt to represent this relationship between the relevance of the information provided by the proposed exposure metrics and level of coordination required to achieve consistency about these same metrics.

Graph 2 – Exposure metrics: Required coordination vs. relevance of the information



Source: ANBIMA

Having concluded these general considerations, we register below some specific comments concerning the questions under consultation.

3.1. GNE (Questions 1 to 3)

ANBIMA broadly agrees with the description of the limitations of this metric (IOSCO, 2018, p. 6). In particular, the Association agrees that (a) does not quantify the risks associated with different types of derivatives; (b) does not account for netting and hedging; and (c) tends to overstate leverage. Moreover, the Association

disagrees with the notion that such metric avoids model risk. GNE does include model risk – although at a lower level than observed in other, more complex calculations.

There is merit in scoping out of step 1 assessment the funds that could not, by definition, pose systemic risk due to their use of leverage. In this perspective, investment funds whose mandates do not allow them to leverage their portfolios could be excluded from this evaluation. However, it is not clear if a test based on fund size should be utilized to scope out certain investment funds, since the assessment concerns the systemic risk posed by investment management *activities* – and not by the institutions.

For the purposes of the two-step framework, the main benefit of GNE is the relative simplicity to implement consistently at the international level. At national level, however, it is important to observe this benefit can be mitigated, as certain jurisdiction already have more appropriate data feeds at their disposal. Ultimately, the monitoring of leverage via GNE is problematic: the overestimation of economic exposure calculated this way implies that an **excessive number of investment funds could pass to the second step of the analysis**.

3.2. Adjusted GNE (Questions 4 to 7)

The Association also broadly agrees with the discussion concerning the information provided by the adjusted GNE and its limitations. In this regard, it is important to observe that this metric would still overstate economic exposure, although to a lesser extent than GNE; and this metric still does not account for netting or hedging (IOSCO, op. cit, p. 7). However, ANBIMA disagrees with the observation that adjusted GNE avoids model risk (in effect, it contains higher model risk than the standard GNE, due to the proposed adjustments).

The delta adjustment for options should indeed be considered in this assessment, since provides a more accurate representation of the exposure generated by these instruments. Moreover, it is a standard practice for market participants to calculate these deltas in their activity, making it relatively easier to implement. Contrarily, the volatility adjustment mentioned in question should not be considered as part of the step 1 assessment, because (i) the resulting metric would not represent underlying risk of the portfolio and (ii) would add significant model risk to this metric, with the inclusion of stochastic components to this stage of the evaluation.

Regarding the duration adjustment, it is important to observe that different domestic debt markets have different term structures. In Brazil, for example, the term structure of Brazil's markets evidences the relatively higher liquidity in shorter-term issuances, when compared to the US. If the expectation is that funds will calculate 10-year equivalents based on the reference 10-year bonds from their markets, then some **comparability challenges might arise due to the relatively lower liquidity and depth of such segments**, in certain economies.

The **one-year equivalent** for interest rate derivatives could be used to mitigate this issue, since this adjustment is easier to implement in a sufficiently standardized manner. It is important to observe that such modification would make the exposures to longer interest rate derivatives appear higher than they were, when compared to the unadjusted GNE or the 10-year-bond equivalent adjustment. Ultimately, what is

important to ensure, for the purposes of this paper, is that an eventual choice between the 10-year and the 1-year bonds (or other duration adjustments) can be adopted consistently across jurisdictions.

Nonetheless, utilizing the adjusted GNE in the step 1 assessment would still result in **false positives** (i.e. funds that are unlikely to pose systemic risks, but become subject to further analysis) and **false negatives** (i.e. funds that are likely to pose systemic risks, but do not become subject to further analysis). The example that is mentioned in the consultation, of a fund significantly exposed to embedded leverage products, is evidence to the latter.

ANBIMA **does not recommend additional adjustments to GNE in order to mitigate this issue**. Any such inclusions would increase the complexity of this initial step of the assessment, which is contrary to the objective of identifying a simple and standardized metric.

3.3. NNE (Questions 8 to 12)

In theory, the NNE could reduce the risk of identifying false positives in the first step of the assessment, when compared with the previous metrics. This is due to the NNE possibly contemplating the economic effects of netting and hedging, which the GNE and the adjusted GNE could not.

However, this requires the proper identification of netting and hedging assumptions – which is a significant challenge. Taking the example of the *netting arrangement with maturity bucketing* (IOSCO, op. cit., p. 24-25), one important challenge lies in identifying the correct maturity buckets and their parameters. Some markets have shorter term structures than others (as mentioned above). In these cases, a bucket with instruments that have maturities from 0 to 2 years **would encompass a relatively larger number of operations**. Moreover, depending on the chosen parameters, the transition of one asset between buckets (occasionally motivated by small changes in maturity, if this value is close to the limit of one bucket) can generate material impacts to the metric's final value.

Whichever netting and hedging conventions that are chosen will benefit certain investment strategies, in detriment of others. Depending on this calibration, it could be possible to increase the number of funds missed in this first step. Furthermore, given the varying level of development in each market, it could be difficult to determine a single standard that adequately contemplates the economic reality of these jurisdictions.

3.4. Additional aspects about GNE, Adjusted GNE and NNE (Questions 13 and 15)

There are varying perspectives whether cash and cash equivalents should be included in the calculation of market exposure. While there is benefit to standardizing this aspect, the most challenging process in this regard lies in establishing a **standardized definition of cash equivalent instruments**. This concept varies across different jurisdictions, based on the perception of risk of different issuers (e.g. central government) and products (e.g. money market funds).

Similarly, it would also be beneficial if **closed out positions with the same counterparty that result in no credit or market exposure** were excluded from the calculation of exposure metrics. Nevertheless, the challenge in this regard also lies in determining the standardized definitions for such closed-out positions, which generate no credit or market exposure.

3.5. Presentation of GNE, Adjusted GNE or NNE by asset class (Questions 16 to 18)

For the purposes of monitoring leverage, it is indeed necessary for exposure information to be reported in a manner that allows the differentiation between asset classes. Aggregating equity and interest rate exposures, for example, would provide little information for the monitoring authorities, as each one of these values represents different features.

This split between asset classes, however, does not need to be excessively granular. A classification would provide **sufficient information** if it simply included the three more general categories for derivatives: (i) equity, (ii) interest rate and (iii) exchange rates; plus a catchall category for (iv) “other exposures” (to be specified by each investment fund, as necessary). This structure allows enough flexibility, for the vehicles that are allowed by the regulatory schemes to register greater leverage, while also contemplating the fields that are the most necessary for regulatory monitoring.

In this context, an additional split between **derivative types would be less relevant** and it would include an additional layer of complexity to the required data feeds, which might not be necessary. Conversely, the identification of the most relevant counterparties to each fund constitutes a relevant information, since it can provide further awareness about the possible transmission channels of systemic risk originating from intermediaries and central counterparties.

3.6. Supplementary data points & Step 1 (Questions 19 to 21)

In general, the supplementary data points presented in the consultation report (p. 12) would be able to complement the information provided by step 1 metrics. In particular, the following two sets of metrics would be most relevant (i) posted margin; and (ii) effects of changes to risk factors (e.g. DV01). However, it is important to observe these are risk-based metrics and, as such, would be more adequately included in the second step of the assessment.

For this first step of the analysis, the most relevant data point that is not consulted upon and that IOSCO should consider is the information about a fund’s **investment mandate** (i.e. if it allows leverage; and to what extent, measured in a risk-based metric such as margin). This form of self-declaration about the investment fund’s policy is relevant for providing authorities’ with consistent information about the industry’s potential use of leverage.

3.7. Articulation of one or more step 1 metrics with supplementary data points (Questions 22 to 25)

As stated in the consultative report (p. 17), none of the metrics analyzed can alone provide an accurate measure of leverage of a given fund or group of funds. The exposure metrics identified in the document have relevant shortcomings (see previous sessions in this chapter), making them – whether alone or in a combination among themselves – insufficient for the purposes of identifying funds that need a risk assessment.

In practical terms, the main challenge associated with the collection of the data for each of these metrics would be the required **system changes**. These computational challenges would be relevant for investment firms as well as regulators, given that not all of the required data inputs and feeds would be available promptly. Moreover, it is important to observe that the introduction of new data feeds is often associated with challenges regarding data quality (e.g. due to insufficient standardization).

An alternative approach to that presented in the consultation would be a two-step approach *minus* the market exposure metrics. The first step of this alternative approach consists in the identification of funds whose mandates permit the use of leverage (and to what extent, defined according to risk-based metrics). The second step, in turn, consists in the monitoring of the investment fund industry through risk-based indicators, such as margin and maximum potential loss in stress scenarios. The main advantage of this method, when compared to the proposed two-step approach, is the increased reliance on risk-based measures vis-à-vis the use of tests built upon exposure indicators. Conversely, a disadvantage lies in the difficulty of applying it consistently in jurisdictions that do not require funds to provide structured information about the use of leverage in their investment mandates.

3.8. Analyzing funds in step 2 (Questions 26 and 27)

Step 2 of the proposed approach can indeed address the limitations inherent to step 1, since this stage of the analysis requires the use of *risk*-based analyses to identify leverage-related *risks*. Still, it is important to observe that the **effectiveness of the step 2 remains conditioned to the choice of metrics**.

For this assessment, ANBIMA recommends the use of (i) **margin** and (ii) **maximum potential loss in stress scenarios**.

As already mentioned, margin is a relevant metric for the purposes of leverage, because it represents both a proxy and a mitigant of the counterparty risk posed by the fund. While this metric is difficult to be applied in a consistent manner, since it can be calculated according to different methods, it provides information about the costs to liquidate secured positions, held by investment funds (at either normal or stressed market conditions). Therefore, this information must be considered for the purposes of assessing the potential systemic risk posed by the investment fund industry's activities.

The maximum potential loss in stress scenarios, in turn, provides the monitoring authorities with information about a fund's (or group of funds') **exposure to capital risk**. According to a method proposed by ANBIMA, these maximum potential losses can be estimated through simulations of stress scenarios, considering a fund's current and potential portfolios (determined according to their maximum risk limits). In these cases,

shocks are applied to a pre-determined set of risk factors (e.g. nominal interest rate, equity, exchange rate etc). The severity of these shocks are determined according to an assessment of the worst monthly variation registered in a specific period.

Apart from being straightforward to calculate and interpret, this metric has the benefit of differentiating the effects of derivative operations that effectively increase the fund exposure to capital risk of a fund, to those that do not, because it incorporates the effects of netting and hedging. This methodology also incorporates the effects derived from potential changes in exposures to derivatives through the assessment of stressed market conditions and distinguishes the effects of shocks to different risk factors.

4. Concluding remarks

In conclusion, ANBIMA reiterates its appreciation for the opportunity to provide comments about the Report on Leverage. The considerations presented in this document can be summarized as follows.

In the first part of this assessment, we provided information about the case of Brazil and how the current regulatory framework approaches the use of leverage by domestic funds. Afterwards, we provided aggregate figures about this topic and mentioned a couple of recent analyses, which utilized the existing data sets to conclude that leverage, on average, is low for Brazil's investment fund industry.

Following these initial remarks, we commented about the approach proposed in IOSCO's consultative report. In brief, ANBIMA opposes the utilized definition of leverage, as a function of market exposure; instead, we recognize that leverage should be measured as a fund's exposure to capital risk. In this context, ANBIMA recommends the use of the following metrics: maximum potential loss in stress scenarios and margin.

The Association is of the view that each one of the metrics proposed for step 1 have relevant shortcomings, making them insufficient in face of the objective to measure leverage within investment funds. In addition, it is relevant to observe that GNE, Adjusted GNE and NNE require increasing levels of coordination at international level, in order to reach the expected objective of consistency.

Lastly, the following topics summarize some of the more objective comments to the questions included in the consultation report:

- The monitoring of leverage via GNE is problematic, since the overestimation of economic exposure implies that an excessive number of investment funds could pass to the second step of the analysis;
- Adjusting GNE via 10-year equivalents can generate comparability challenges, due to the relatively lower liquidity and depth of the reference bonds' markets in certain jurisdictions;
- Depending on the calibration of the netting and hedging assumptions for the NNE metric, it is possible to increase the number of funds missed in the first step of the assessment;
- Information about a fund's investment mandate (i.e. if it allows leverage; and to what extent, measured in a risk-based metric such as margin) should be considered in step 1;
- Step 2 can address the limitations inherent to step 1, but this remains conditioned to the adequate choice of metrics utilized in the risk-based portion of the analysis.