



Use of Leverage in Investment Funds in Europe AMIC/EFAMA Joint Paper July 2017

The International Capital Market Association's (ICMA) Asset Management and Investors Council (AMIC) was established in March 2008 to represent the buy-side members of the ICMA membership. ICMA represents institutions active in the international capital market worldwide and has over 500 members located in 60 countries. ICMA's market conventions and standards have been the pillars of the international debt market for almost 50 years, providing the framework of rules governing market practice which facilitate the orderly functioning of the market.

EFAMA is the representative association for the European investment management industry. EFAMA represents through its 28 member associations and 62 corporate members close to EUR 23 trillion in assets under management of which EUR 14.1 trillion managed by 58,400 investment funds at end 2016. Just over 30,600 of these funds were UCITS (Undertakings for Collective Investments in Transferable Securities) funds, with the remaining 27,800 funds composed of AIFs (Alternative Investment Funds).

Executive Summary

The International Capital Market Association's (ICMA) Asset Management and Investors Council (AMIC) and the European Fund and Asset Management Association (EFAMA) have jointly decided to write this paper on the use of leverage in investment funds in Europe. The paper analyses how leverage is used, how the European legislative framework addresses leverage, and how the related risks are addressed from a technical perspective. In order to contribute to recent debates launched by regulators and supervisors, it also looks at the updates and improvements that could be proposed to ensure that the European regulation remains a cutting-edge framework at global level.

This is the second joint AMIC and EFAMA initiative on topical issues on investment funds, following the AMIC/EFAMA report on managing fund liquidity risk in Europe issued in April 2016¹. We have decided to address the issue of leverage as it forms a significant part of the international regulatory concern about systemic risk in investment funds. The European focus of AMIC and EFAMA members have led us to focus on European legislation and market practices.

This paper sets out how and why leverage is used in investment funds. We look at sources of leverage such as borrowings ("physical" leverage) and the use of derivatives ("synthetic" leverage). The paper then assesses the main technical tools used to measure leverage: the commitment method, the gross method, as well as a frequently used risk-based measure, the Value at Risk (VaR) method.

We examine the existing European regulation regarding the use of leverage, charting the specific requirements in both the UCITS and the AIFMD legislative frameworks, which shows that the EU has developed a regulatory framework that comprehensively and efficiently addresses leverage in investment funds. This EU framework offers the risk management and reporting requirements that regulators, fund managers and investors need.

The paper also addresses the contributions by regulatory authorities with regard to systemic risks related to the use of leverage. We chart how leverage risk is monitored by authorities and we look at some of the key topics currently discussed at the international level, such as counterparty risk – for a fund's counterparty – and market risks, although these risks are not directly associated with leverage.

Finally, we explore recommendations and proposals to improve monitoring and analysis of leverage risk:

- i. There is no single measure that can capture all the risks in nature, size and characteristics associated with a fund's underlying assets and strategies. A matrix of different measures is the only way to allow a meaningful representation of a fund's exposures. We believe the existing regulatory standards at the EU level can be the basis for developing leverage and risk measurements through such a matrix.
- ii. Further streamlining of global calculation methodologies for leverage and risk can be envisaged. For that, we recommend that regulators should use the existing EU framework as a reference point for a globally consistent regime – European regulators have been able to rely on this framework to assess levels of leverage in funds since the financial crisis and take appropriate supervisory action. The Net/Commitment Approach could become a "Standard Method", complemented where appropriate by the VaR Approach as an "Advanced Method", which, in combination with stress testing, can assess potential downside risks. The gross method can be an additional model to complement this matrix of methodologies only to the extent that it is used as a source of information related to the overall synthetic leverage footprint of a fund. Adjustments and updates of these methods, particularly by increasing the

¹ http://www.efama.org/Publications/EFAMA_AMIC_Report_Managing_Fund_Liquidity_Risk_Europe.pdf

instruments covered in the 2010 CESR Guidelines, based on the best practices at EU level, could be envisaged if properly justified.

- iii. We also believe that a key measure of progress for regulators in better assessing the overall risks related to funds in Europe and at global level would be to improve data sharing among them. This would allow identification and monitoring of key areas of risks for macro-prudential policy reasons. In that context, we would also see merits in streamlining reporting requirements at the EU level.

1. Use of leverage in investment funds

Before looking more closely at *how* funds use leverage, we would like to define *what* we mean by the word “leverage” for the purposes of this report.

Leverage is generally perceived as a technique aimed at managing the economic exposure of an investment fund by either borrowing cash/assets or by making use of derivatives. More precisely, leverage can be created by borrowing money or securities from counterparties (sometimes called “*financial leverage*”) or by using derivative instruments such as options, futures or swaps (sometimes called “*synthetic leverage*”).

The activities undertaken by funds which give rise to leverage aim to improve the efficient management of their portfolio or aim to optimise investment returns, through the borrowing of cash/assets or use of derivatives. For that reason, leveraged activities are often integral to an investment strategy, as they are used to improve asset allocation and portfolio diversification decisions.

In addition to the different regulatory provisions directly aimed at measuring leverage used in investment funds and assessing risks related to potential economic over-exposure of investment funds, there are other more holistic regulatory provisions addressing such risks. In particular, the use of financial derivative transactions is subject to significant regulation, mostly already finalised or soon to be implemented at worldwide level. These measures include mandatory central clearing of derivative contracts, mandatory exchange of margin for non-cleared derivative contracts, mandatory reporting to trade repositories, and recovery and resolution of CCPs.

As noted by the European Central Bank (ECB) in their occasional papers on shadow banking in the euro-area, “*compared to the traditional banking sector where assets are often more than 10-30 times the size of equity, leverage in the investment fund sector is low with total assets much less than twice the amount of equity*”². Similarly, the European Systemic Risk Board (ESRB)’s Shadow Banking Monitor 2016 shows that levels of leverage in investment funds are generally low - across the sector the average leverage ratio is 1.1³.

These conclusions from central banks and systemic risk authorities in Europe are not surprising, on the one hand because investment fund activities and risks are different from those of banks (e.g. no proprietary trading) and on the other hand because the EU regulatory framework sets a series of requirements to constrain the use of leverage in investment funds, which we will lay out in subsequent Sections.

Beyond the levels of leverage, ESRB stated in a July 2016 Paper on non-bank financial intermediation in Europe that, despite the low interest rate environment leading to search-for-yield-behaviour and, thus, leverage, evidence of this in investment funds “*remains scarce at this stage*”.⁴ Finally, the ESRB observed in the same report that “*Non-Bank financial institutions are generally less leveraged and less subject to maturity mismatch than banks. Completing credit intermediation through banks with market based finance can therefore be beneficial from the perspective of financial stability*”.⁵

² ECB Occasional Paper, Shadow Banking in the euro area: risks and vulnerabilities in the investment fund sector, June 2016 (page 26)

³ ESRB EU Shadow Banking Monitor 27 July 2016 (page 11)

⁴ ESRB, Assessing shadow banking-non-bank financial intermediation in Europe, No 10/ July 2016, point 3.2.1 Leverage (page 34)

⁵ ESRB, Macprudential policy beyond banking: an ESRB strategy paper, July 2016 (page 5)

1.1 Sources of Leverage

1.1.1 Borrowing of cash and/or assets

In the case of borrowing, leverage is created by borrowing cash and/or assets directly from a financial counterparty and reinvesting the borrowed amount in other assets. Borrowing appears as a liability in the balance sheet of the investment fund.

For the borrowing of cash there are stricter restrictions for some types of funds than for others. UCITS funds are strictly capped in the borrowed amounts and restricted to specific purposes (see Section 3.1 for more details). Similarly, many Alternative Investment Funds (AIFs) are also restricted in their borrowings due to their national regulations. Conversely, some AIFs (typically hedge funds), may borrow at higher levels to leverage the fund's investments.

When it comes to efficient portfolio management techniques, such as securities financing transactions (securities lending, repurchase agreements and reuse of collateral), managers usually enter into them to ensure the smooth running of their funds (e.g. borrowing an asset to prevent a settlement failure), as well as to generate additional returns for the fund. It should also be noted that engaging in securities financing transactions not only benefits the fund, but also can help to support market liquidity.

From an EU perspective, securities financing transactions are specifically regulated through the SFT Regulation⁶, which applies to all market participants and in ESMA Guidelines⁷ governing securities financing.

1.1.2 Derivatives

Funds may use derivatives for two main purposes: (1) to reduce risks by hedging a portfolio or (2) to gain investment exposure.

In the first case, as there are several inherent risks within a portfolio (exchange rate risk, interest rate risk, volatility risk, credit risk etc.), the manager may look to implement hedges and the use of derivatives is amongst the tools to reduce such risks on behalf of investors.

In the second case, derivatives can be part of the fund's investment strategy to gain exposure to certain assets with more flexibility and/or at a lower cost.

In many cases, the use of derivatives can help offset risks while also enhancing returns. Below we illustrate some examples of goals that funds pursue by using derivatives.

i. Managing interest rate risk and duration

Many funds use interest rate derivatives to adjust interest rate exposure, offset risks posed by interest rate volatility, or increase/decrease the duration of their portfolios. These derivatives target specific risks funds want to take and can reduce a portfolio's volatility. For example, a portfolio manager holding a portfolio of bonds may believe that interest rates will rise. To reduce volatility caused by the change, the portfolio manager may enter into interest rate swaps that pay the fund a floating rate of interest based on daily interest rates in exchange for a fixed rate of interest. Entering into this swap

⁶ Regulation (EU) 2015/2365 on transparency of securities financing transactions and of reuse

⁷ ESMA Guidelines on ETFs and other UCITS issues, as amended in August 2014

could ease the expected effect that the increase in interest rates would have on the price of bonds in the fund's portfolio.

Using derivatives to change the duration of a bond portfolio is significantly more cost effective and can be achieved far more quickly than selling and buying bonds with different durations.

ii. Reducing costs or managing portfolios efficiently

A fund can use derivatives to obtain exposure to the return of a broad-based stock or bond index, without having to purchase each of the stocks or bonds in the index individually. The derivative contract will normally cost substantially less than directly acquiring and holding the index constituents to achieve the return of the broad-based stock or bond index. For instance, portfolio managers use index-based CDS to gain exposure to a portfolio of bonds.

iii. Optimising a fund's exposure

A fund that receives varying amounts of daily cash subscriptions may use derivatives to gain exposure to a stock or bond market quickly while maintaining liquidity. Use of derivatives in this manner allows adjusting exposure in a way that gives further flexibility, is fully in line with investment objectives, and often reduces the market impact of the fund by allowing the fund to increase gradually its direct positions in stocks and bonds. For example, portfolio managers of actively-managed equity funds with inflows could buy S&P 500 futures on a temporary basis to gain immediate exposure to the equity market. This portfolio management tool allows a fund manager to time stock purchases and accumulate shares while minimising any adverse price impact caused from purchasing large blocks of shares. This strategy also minimises any dilutive effect on a fund's performance caused by holding excess cash instead of equities.

2. Existing methods to measure leverage and risk

2.1 Gross methods

Gross methods consist of measuring leverage as the ratio between the total absolute value of all long and short positions (including off-balance sheet activities) held by the fund and the fund's NAV. A gross method typically takes into account the notional value for derivatives, with delta adjustment when applicable.

Gross methods provide information on the total exposures of a fund and in that way can be seen as a "footprint" at the individual fund's level. Still, they do not measure the "riskiness" of the portfolio and they do not take into account netting and hedging effects, which means that they don't take into account positions that offset or mitigate risks in the portfolio.

2.2 Net/Commitment methods

Net methods consist in measuring leverage as a ratio between the net exposure of fund and its NAV. In contrast with the gross methods, there is a comprehensive set of rules that enables some netting and hedging (netting of certain exposures, cash compensation, duration adjustments etc.), in particular with regard to mitigating factors, with the aim of measuring the commitments of the entity.

These methods are a better starting point to measure economic leverage compared to the gross methods given their sensitivity to netting and hedging.

2.3 Value-at-Risk (VaR) metric

VaR is a measure of the market risk of a portfolio which estimates the maximum expected loss under normal market conditions over a specific time of period (maximum 20 days or minimum 1 year for historical holding) at a given level of confidence (that is usually 99% and cannot go below 95%). VaR can be absolute (maximum 20% of the NAV over a 20-day holding period and based on a 99% confidence level) or relative (which cannot exceed twice the VaR of a comparable reference portfolio or a derivative free benchmark).

As absolute VaR is focusing on the portfolio risks it is not per se a measure of leverage as such, but it has the advantage of reflecting in a more accurate way the risks to which a portfolio is exposed and for that reason its actual economic exposure. Relative VaR more closely captures the gearing effect of leverage, as does the net commitment approach. These methods are valuable and major methods to grasp economic exposures of funds.

VaR offers an estimation on the maximum loss to be expected within a specific period of time and with a defined level of confidence. It also allows for the different risk characteristics of the underlying assets to be taken into account. In that way, VaR is an important indicator of the economic leverage of a portfolio, in particular for those assets that have available and accurate historic pricing data and are liquid.

2.4 Stress tests and back tests

In order to tackle the exceptional situations which cannot necessarily be taken into account by the other methods, some jurisdictions require managers of investment funds to stress the robustness of their portfolios. In addition, some jurisdictions require periodic back testing of risk management

arrangements to assess the robustness and reliability of the models employed within the risk management function. We outline the European framework for stress and back testing in Section 3 below.

2.5 Non-investment fund methods: Exposure methods / the Basel III framework

Another set of measures is based on various exposures that can be used to measure leverage, but is specific to the banking sector. Such measures are accounting-exposure measures. They measure the accounting impact by focusing on total liabilities of balance sheet positions divided by equity.

An example of such an exposure method is the Basel III leverage ratio framework, introduced by the Basel Committee on Banking Supervision (BCBS) to create *“a simple, transparent, non-risk based leverage ratio to act as a credible supplementary measure to the risk-based capital requirements”*⁸. Basel III's leverage ratio is defined as the "capital measure" (the numerator) divided by the "exposure measure" (the denominator) and is expressed as a percentage. The capital measure is currently defined as Tier 1 capital and the minimum leverage ratio is 3%. A bank's total exposure measure is the sum of the following exposures: (a) on-balance sheet exposures; (b) derivative exposures; (c) securities financing transaction (SFT) exposures; and (d) off-balance sheet (OBS) items. The exposure measure for the leverage ratio should generally follow the accounting value, subject to the following:

- on-balance sheet, non-derivative exposures are included in the exposure measure net of specific provisions or accounting valuation adjustments (e.g. accounting credit valuation adjustments);
- netting of loans and deposits is not allowed.

For off-balance sheet derivative exposures, the Current Exposure Method (CEM) that applied until end of 2016 recognised legally enforceable netting arrangements and calculated derivative exposures as the replacement cost of the contract (based on the mark-to-market value) plus an add-on for potential future exposure. Since 1 January 2017 the off-balance exposures are measured under the new standardised approach (SA-CCR) that replaced CEM to deal with inefficiencies of the previous model, allowing further differentiation between margin and unmargined trades, measure of exposure at default for counterparty credit risk and further netting and hedging possibilities.

Most importantly, the Basel III framework is a very prescriptive model related to banks, since there is one single legal entity – the bank – which ultimately bears the risks. This is a key difference compared to fund managers, which differ from banks in many ways. In particular, fund managers act as agents for investors offering multiple and diversified investment strategies and asset classes at the level of each fund, making the scope of risks to which each fund is exposed to very diverse. For that reason, such a model is not appropriate in the case of investment funds.

⁸ <http://www.bis.org/publ/bcbs270.htm>

3 The existing EU regulatory framework

The use of leverage in investment funds in the EU is comprehensively regulated in the Alternative Investment Fund Managers Directive⁹, the UCITS Directive¹⁰, and in the CESR Guidelines on Risk Measurement and the Calculation of Global Exposure and Counterparty Risk for UCITS¹¹.

Prior to further analysing the relevant rules of the EU regulatory framework on the use and the measurement of leverage, we highlight that the AIFM and UCITS Directives also impose regulatory requirements and processes on sound and effective risk management which must be consistent with the risk profiles and rules of the funds which are managed. The methods of calculation of leverage or the portfolio risks in these pieces of EU legislation are: the gross method, the commitment method, and the VaR metrics.

3.1 The UCITS Directive: Leverage measures and risk-based approach for UCITS funds

3.1.1 *General provisions on leverage and the limitation in leveraged positions in the UCITS Directive*

The UCITS Directive allows borrowing up to 10% of the fund's NAV, under the condition this is not intended for investment purposes.¹² Therefore, in UCITS, leverage cannot be created through borrowing. The UCITS Directive states that *"the following shall not borrow:*

- (a) *An investment company*
- (b) *A management company or depositary [...]"*¹³

"By way of derogation [...], a Member State may authorise a UCITS to borrow:

- (a) *On a temporary basis and represents:*
 - in the case of an investment company no more than 10% of its assets,*
 - in the case of a common fund, no more than 10% of the value of the fund*
- (b) *to enable the acquisition of immovable property essential for the direct pursuit of its business and represents, in the case of an investment company, no more than 10% of its assets.*

*Where a UCITS is authorised to borrow under points (a) and (b), such borrowing shall not exceed 15% of its asset in total"*¹⁴.

In addition, there is significant guidance on calculating global exposure from the use of derivatives. The total global exposure given by derivatives used by the UCITS fund can never exceed the total net value of its portfolio: *"a UCITS shall ensure that its global exposure relating to derivatives instruments does not exceed the total net value of its portfolio"*¹⁵. The Level 2 Directive specifies that management companies must calculate *"at least on a daily basis"*¹⁶ the global exposure by using the most appropriate method between the commitment approach, the value at risk approach or other advanced risk methodologies *"taking into account the investment strategy pursued by the UCITS and*

⁹ Directive 2011/61/EU of the European Parliament and of the Council of 8 June 2011 on Alternative Investment Fund Managers and associated Level 2 legislation: Commission Delegated Regulation (EU) No 231/2013 of 19 December 2012 supplementing Directive 2011/61/EU (hereafter referred to as AIFM Directive)

¹⁰ Directive 2009/65/EC of the European Parliament and of the Council of 13 July 2009 on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities (UCITS) (hereafter referred to as the UCITS Directive)

¹¹ CESR Guidelines on Risk Measurement and the Calculation of Global Exposure and Counterparty Risk for UCITS CESR/10-788 28 July 2010 (hereafter referred to as the CESR Guidelines)

¹² UCITS Directive Article 83(2)

¹³ UCITS Directive Article 83(1)

¹⁴ UCITS Directive Article 83(2)

¹⁵ UCITS Directive Article 51(3)

¹⁶ Commission Directive 2010/43/EU Article 41 (2)

*the types and complexities of the financial derivative instruments used*¹⁷. Moreover, *“Where a UCITS employs techniques and instruments including repurchase agreements or securities lending transactions in order to generate additional leverage or exposure to market risk, Member States shall require management companies to take these transactions into consideration when calculating global exposure”*.¹⁸

Last, but not least, the CESR Guidelines on Risk Measurement and Calculation on Global Exposure and Counterparty Risks for UCITS – published following the financial crisis – contain even more concrete rules regarding the calculation of global exposure from the use of derivatives. Following the required approaches under the Level 2 Directive two measures are foreseen: the commitment method and VaR metrics. It is the responsibility of the UCITS to select one of the two as the appropriate methodology, under the supervision of its regulator. The selection should be based on the self-assessment by the UCITS manager of the risk profile resulting from the UCITS investment policy (including its use of financial derivative instruments).¹⁹

To conclude, the ESRB itself notes that *“the UCITS Directive includes specific limits on leverage. UCITS may borrow up to a limit of 10% of their net assets, and only on a temporary basis, for example for liquidity management purposes. Also, exposures related to derivatives and SFTs cannot exceed the total net value of the portfolio. This means that leverage from borrowing, derivatives and SFTs cannot exceed 2.1 times the UCITS Net Asset Value. Finally ESMA guidelines on ETFs and other UCITS prescribes that collateral collected in the course of OTC derivative and SFT transactions must be of high quality, liquid and that assets that exhibit high price volatility should not be accepted as collateral unless suitability conservative haircuts are in place.”*²⁰ Also, the Guidelines prohibit collateral reuse and limit strictly the items which may be used to “park” the cash collateral received.

3.1.2 The use of the commitment method for UCITS funds

The UCITS Level 2 legislation contains a basic description of a standard commitment approach for the calculation of the global exposure arising from derivatives use.

*“Where the commitment approach is used for the calculation of global exposure”, management companies must “convert each financial derivative instrument position into the market value of an equivalent position in the underlying asset of that derivative (standard commitment approach)”*²¹, but other commitment methods which are equivalent may be used.

Management companies are allowed to *“take account of netting and hedging arrangements when calculating global exposure, where these arrangements do not disregard obvious and material risks and result in a clear reduction in risk exposure”*²². Furthermore, *“where the use of financial derivative instruments does not generate incremental exposure for the UCITS, the underlying exposure need not be included in the commitment calculation”*²³. Also, *“where the commitment approach is used, temporary borrowing [...] need not be included in the global exposure calculation”*²⁴.

¹⁷ Commission Directive 2010/43/EU Article 41 (3)

¹⁸ Commission Directive 2010/43/EU Article 41(4)

¹⁹ CESR Guidelines on Risk Measurement and the Calculation of Global Exposure and Counterparty Risk for UCITS, July 2010 CESR/10-788 (pages 5-6)

²⁰ ESRB, the macroprudential use of margin and haircuts, February 2017 (page 51)

²¹ Commission Directive 2010/43/EU Article 42 (2)

²² Commission Directive 2010/43/EU Article 42 (3)

²³ Commission Directive 2010/43/EU Article 42 (4)

²⁴ Commission Directive 2010/43/EU Article 42 (5)

The CESR Guidelines contain significant amount of further details on:

- (a) how to convert each financial derivative instrument position into a market value of an equivalent position in the underlying asset;²⁵
- (b) the types of financial derivative instruments which may be excluded from the global exposure calculation²⁶; and
- (c) what kinds of netting and hedging arrangements are permitted.²⁷

3.1.3 *The use of VaR metrics for UCITS funds*

As mentioned in the previous section, VaR is a risk-based approach, which measures the maximum potential loss under normal market conditions, within a given period of time and within a certain level of confidence. It is one of the two ways a management company can measure global exposure, the other being the commitment method. The CESR Guidelines contain significant details about how VaR can be measured. Also, stress-tests and back-tests must be carried out as complementary safeguards.

General principles include the need to consider all positions of the UCITS portfolio and to set the maximum VaR limit according to its defined risk profile. The guidelines make clear, however, that the VaR approach is a risk-based measure of the maximum potential loss due to market risk rather than leverage *per se*.²⁸

For investment strategies, the market risks of which would not be captured adequately by the commitment method, the CESR Guidelines require UCITS management companies to use VaR, either as a Relative VaR or as an Absolute VaR approach. For both approaches, the VaR is calculated for all the positions of the UCITS portfolio.

The UCITS strategies suited to the relative VaR approach are those where a leverage free benchmark (a reference portfolio) can be defined for the UCITS, reflecting the investment strategy which the UCITS is pursuing.

In contrast, UCITS strategies investing in multi-asset classes and that do not define the investment target in relation to a benchmark, but rather as an absolute return target, are better suited to the Absolute VaR approach.²⁹

Under the Relative VaR approach, the global exposure of the UCITS is calculated by checking that the VaR of the UCITS' current portfolio is not greater than twice the VaR of the reference portfolio in order to ensure that the UCITS stays within the global leverage limits.³⁰

In contrast, the Absolute VaR limits the maximum VaR that a UCITS can have relative to its NAV and cannot be greater than 20% of its NAV.³¹

Since the VaR approach does not directly limit the level of leverage, CESR's Guidelines require that only UCITS using VaR approaches for the calculation of the global exposure should disclose the (expected) level of leverage in the prospectus and the annual report (Boxes 24 and 25 of the CESR Guidelines). However, the disclosed expected level of leverage is not intended to be an additional

²⁵ CESR Guidelines (pages 7-12)

²⁶ CESR Guidelines (pages 12-13)

²⁷ CESR Guidelines (pages 13-21)

²⁸ CESR Guidelines (page 22)

²⁹ CESR Guidelines (page 23)

³⁰ CESR Guidelines (page 24)

³¹ CESR Guidelines (pages 25-26)

exposure limit for the UCITS. The level of leverage may vary over time. Where the UCITS anticipates that expected levels of leverage may vary, then prospectus disclosure could reflect the maximum expected levels, e.g. *“Leverage is not expected to exceed...”* or the usually expected level of leverage together with the information on the possibility of higher leverage levels under certain circumstances (e.g. very low market volatility).

The leverage should be calculated as the sum of the notionals of the derivatives used.³² In the meantime, ESMA has clarified that this calculation should be conducted on a gross basis.³³

3.1.4 Stress and back tests

The UCITS Directive Article 40 (2) b) and c) requires asset managers to conduct, where appropriate, periodic back tests in order to review the validity of risk measurement arrangements, which include model-based forecasts and estimates, and periodic stress tests and scenario analysis to address risks arising from potential changes in market conditions that might adversely impact the UCITS.

3.2 The AIFM Directive: Leverage measures for Alternative Investment (non-UCITS) Funds

The AIFM Directive defines leverage as *“any method by which the AIFM increases the exposure of an AIF it manages whether through borrowing of cash or securities, or leverage embedded in derivative positions or by any other means”*.³⁴

The AIFM Directive clearly requires that there is a cap set on leverage and requires the managers of AIFs to abide by that: *“In order to ensure a proper assessment of the risks induced by the use of leverage by an AIFM with respect to the AIFs it manages, the AIFM should demonstrate that the leverage limits for each AIF it manages are reasonable and that it complies with those limits at all time.”*³⁵

Common rules for AIFs’ risk management prescribe that AIFMs must *“set a maximum level of leverage which they may employ on behalf of each AIF they manage as well as the extent of the right to reuse collateral or guarantee that could be granted under the leveraging arrangement, taking into account, inter alia: (a) the type of AIF; (b) the investment strategy of the AIF; (c) the sources of leverage of the AIF; (d) any other interlinkages or relevant relationships with other financial services institutions, which could pose systemic risk; (e) the need to limit the exposure to any single counterparty; (f) the extent to which the leverage is collateralised; (g) the asset-liability ratio; (h) the scale, nature and extent of the activity of the AIFM on the markets concerned.”*³⁶

These leverage limits are monitored and enforced by the relevant national securities authorities of the funds.

Leverage must be calculated using both the Gross (for the worst-off exposure of the AIF) and the Commitment (for the net exposure of the AIF) methods.

³² Box 25 paragraph 5 of the CESR Guidelines

³³ ESMA’s Q&A, Risk Measurement and Calculation of Global Exposure and Counterparty Risk for UCITS, Ref. ESMA/2013/1950, Question 2

³⁴ AIFM Directive Article 4(1)(v)

³⁵ AIFM Directive Recital 50

³⁶ AIFM Directive Article 15(4)

The gross method gives the overall exposure of the AIF, whereas the commitment methods recognises hedging and netting techniques used by the manager.

3.2.1 The gross method

Beyond the basic definition of leverage, the AIFMD Level 2 Delegated Regulation³⁷ specifies methodologies for gross and commitment methods of calculating leverage.

The gross method is defined as the exposure of the AIF calculated as *“the sum of the absolute values of all positions valued in accordance with [the AIFMD]”*. For the calculation of the gross method the AIFM must:

- (a) *“exclude the value of any cash and cash equivalents which are highly liquid investments;*
- (b) *convert derivative instruments into the equivalent position in their underlying assets;*
- (c) *exclude cash borrowings*
- (d) *include exposure resulting from the reinvestment of cash borrowings; and*
- (e) *include positions within repo or reverse repo agreements and securities lending or borrowing.*³⁸

3.2.2 The commitment method

The commitment method is defined as the exposure of the AIF calculated as *“the sum of the absolute values of all positions valued in accordance with [the AIFMD]”*³⁹ subject to several paragraphs that make up the bulk of how the commitment is measured.

For the calculation of the commitment exposure the AIFM must:

- (a) *“convert each derivative instrument position into an equivalent position in the underlying asset;*
- (b) *apply netting and hedging arrangements;*
- (c) *calculate exposure created through the reinvestment of borrowings where such reinvestment increases the exposure of the AIF; and*
- (d) *include other arrangements: namely convertible borrowings, repos, reverse repos, securities lending and securities borrowings.”*⁴⁰

Netting is defined as including *“combinations of trades on derivative instruments or security positions which refer to the same underlying asset, irrespective – in the case of derivative instruments – of the maturity date of the derivative instrument and where those trades on derivative instruments or security positions are concluded with the sole aim of eliminating the risks linked to positions taken through the other derivative instruments or security positions”*.⁴¹

A hedging arrangement is defined as including *“combinations of trades on derivative instruments or security positions which do not necessarily refer to the same underlying asset and where those trades on derivative instruments or security positions are concluded with the sole aim of offsetting risks linked to positions taken through the other derivative instruments or security positions”*.⁴²

³⁷ Commission Delegated Regulation (EU) No 231/2013 (Hereafter referred to as the AIFMD Delegated Regulation)

³⁸ AIFMD Delegated Regulation Article 7

³⁹ AIFMD Delegated Regulation Article 8(1)

⁴⁰ AIFMD Delegated Regulation Article 8(2)

⁴¹ AIFMD Delegated Regulation Article 8(3)(a)

⁴² AIFMD Delegated Regulation Article 8(3)(b)

Furthermore, “A derivative instrument shall not be converted into an equivalent position in the underlying asset if it has all the following characteristics:

- (a) it swaps the performance of financial assets held in the AIF’s portfolio for the performance of other financial assets;
- (b) it totally offsets the risks of the swapped assets held in the AIF’s portfolio so that the AIF’s performance does not depend on the performance of the swapped assets; and
- (c) it includes neither additional optional features, nor leverage clauses nor other additional risks as compared to a direct holding of the reference financial asset.”⁴³

“A derivative instrument shall not be converted into an equivalent position in the underlying asset when calculating the exposure [...] if it meets both of the following conditions:

- (a) the combined holding by the AIF of a derivative instrument relating to a financial asset and cash which is invested in cash equivalent [...] is equivalent to holding a long position in the given financial asset;
- (b) the derivative position shall not generate any incremental exposure and leverage or risk.”⁴⁴

Hedging positions can also only be taken into account if they fulfil several conditions: “Hedging arrangements shall be taken into account when calculating the exposure of the AIF only if they comply with all the following conditions:

- (a) the positions involved within the hedging relationship do not aim to generate a return and general and specific risks are offset;
- (b) there is a verifiable reduction of market risk at the level of the AIF;
- (c) the risks linked to the derivative instruments, general and specific, if any, are offset;
- (d) the hedging arrangements relate to the same asset class;
- (e) they are efficient in stressed market conditions.”⁴⁵

In addition to these hedging conditions, “derivative instruments used for currency hedging purposes and that do not add any incremental exposure, leverage or other risks shall not be included in the calculation.”⁴⁶

“ An AIFM shall net positions in any of the following cases:

- (a) between derivative instruments, provided that they refer to the same underlying asset, even if the maturity date of the derivative instruments is different;
- (b) between a derivative instrument whose underlying asset is a transferable security, money market instrument, or units in a collective investment undertaking, [...], and that same corresponding underlying asset.”⁴⁷

Finally, “AIFMs managing AIFs that, in accordance with their core investment policy, primarily invest in interest rate derivatives shall make use of specific duration netting rules in order to take into account the correlation between the maturity segments of the interest rate curve”⁴⁸ (which is set out separately).

⁴³ AIFMD Delegated Regulation Article 8(4)

⁴⁴ AIFMD Delegated Regulation Article 8(5)

⁴⁵ AIFMD Delegated Regulation Article 8(6)

⁴⁶ AIFMD Delegated Regulation Article 8(7)

⁴⁷ AIFMD Delegated Regulation Article 8(8)

⁴⁸ AIFMD Delegated Regulation Article 8(9)

3.2.3 Stress and back tests

In order to tackle the exceptional situations which cannot necessarily be taken into account by the other methods, in Europe the AIFM Directive requires managers of alternative investment funds to stress the robustness of all their portfolios. The AIFM Directive sets out requirements for managers to conduct periodic **stress tests** and scenario analysis at fund level to assess the vulnerability of the portfolio to extreme or unusual market events or conditions.

The Directive is not prescriptive on how these tests may be conducted - in order to avoid a systemic risk which would occur if all fund managers had to apply exactly the same details for their tests - but they would typically comprise of testing the portfolio against historical scenarios and market shocks, as well as against set movements in the underlying asset classes invested in by the AIF. In addition, the AIFM must conduct periodic back testing of its own risk management arrangements to assess the robustness and reliability of the models employed within the risk management function.⁴⁹

3.2.4 Reporting and disclosure requirements related to leverage

One of the original explicit objectives of the AIFM Directive was to tackle the systemic risk stemming from AIFs, following the 2007/2008 crisis and the relevant G20 decisions. Indeed, Recital 3 of the AIFM Directive states: *“Recent difficulties in financial markets have underlined that many AIFM strategies are vulnerable to some or several important risks in relation to investors, other market participants and markets. In order to provide comprehensive and common arrangements for supervision, it is necessary to establish a framework capable of addressing those risks taking into account the diverse range of investment strategies and techniques employed by AIFMs”*⁵⁰.

For that purpose, EU policy makers decided the Directive should require AIFMs to report fund activities, including leverage, to regulators and to investors⁵¹, with enhanced reporting to regulators when leverage is used *“on a substantial basis”*⁵².

- Leverage on a substantial basis

The definition of leverage used on a *“substantial basis”* is given in the Level 2 Regulation implementing the AIFM Directive. Specifically, the definition of using leverage on a substantial basis is *“when the exposure of an AIF is as calculated according to the commitment method [...] exceeds three times its net asset value”*.⁵³ Where the AIF exceeds this, it will have to comply with the additional reporting requirements.

To its regulator, *“an AIFM managing AIFs employing leverage on a substantial basis shall make available information about the overall level of leverage employed by each AIF it manages, a breakdown between leverage arising from borrowing of cash or securities and leverage embedded in financial derivatives and the extent to which the AIF’s assets have been reused under leveraging arrangements[...]. That information shall include the identity of the five largest sources of borrowed cash or securities [...] and the amounts of leverage received from each of those sources for each of those AIFs”*.

- Disclosures to investors

⁴⁹ AIFM Directive, Article 15(2)(b)

⁵⁰ AIFM Directive, Recital 3

⁵¹ AIFM Directive, Article 23

⁵² AIFM Directive, Article 24

⁵³ Delegated Regulation Article 111

With regard to regular disclosure to investors, AIFMs must, for each AIF they manage, disclose *“the types and sources of leverage permitted and the associated risks, any restrictions on the use of leverage and any collateral and asset reuse arrangements and the maximum level of leverage which AIFM are entitled to employ on behalf of the AIF”*.⁵⁴

Moreover, there is a specific requirement for AIFMs managing EU AIFs employing leverage to disclose to investors on a regular basis *“any changes to the maximum level of leverage which the AIFM may employ on behalf of the AIF as well as any right of the reuse of collateral or any guarantee granted under the leveraging arrangement”*⁵⁵ and *“the total amount of leverage employed by the AIF”*.⁵⁶

3.2.5 Leverage risk monitoring for systemic risk purposes

As recognised by IOSCO as early as 2013, *“the AIFMD provides a common framework on the macroprudential oversight of the sector allowing coordinated actions as necessary to ensure the proper functioning of financial markets”*⁵⁷.

Article 25 of the AIFM Directive contains specific rules for AIFMs managing leveraged AIFs: *“the competent authorities of the home Member State of the AIFM shall ensure that all [reported] information [...] is made available to competent authorities of other relevant Member States, ESMA and the ESRB.[...]They shall, without delay, also provide information [...] if an AIFM under their responsibility, or AIF managed by that AIFM could potentially constitute an important source of counterparty risk to a credit institution or other systemically relevant institutions in other Member States”*.⁵⁸

*“Member States shall ensure that the competent authorities [...] use the information [...] for the purposes of identifying the extent to which the use of leverage contributes to the build-up of systemic risk in the financial system, risks of disorderly markets or risks to the long-term growth of the economy.”*⁵⁹

Furthermore, *“the AIFM shall demonstrate that the leverage limits set for each AIF it manages are reasonable and that it complies with those limits at all times”*⁶⁰, showing that the leverage limits are monitored and enforced by the relevant regulator. Importantly, the regulator of the AIFM is empowered, to ensure the stability and integrity of the financial system, to limit the leverage that the AIFM is allowed to use: *“the competent authorities shall assess the risks that the use of leverage by an AIFM [...], and, where deemed necessary in order to ensure the stability and integrity of the financial system, [...] after having notified ESMA, the ESRB and the competent authorities of the relevant AIF, shall impose limits to the level of leverage that an AIFM are entitled to employ or other restrictions on the management of the AIF with respect to the AIFs under its management to limit the extent to which the use of leverage contributes to the build-up of systemic risk in the financial system or risks of disorderly markets.”*⁶¹

⁵⁴ AIFM Directive Article 23(1)(a)

⁵⁵ AIFM Directive Article 23(5)(a)

⁵⁶ AIFM Directive Article 23(5)(b)

⁵⁷ IOSCO, Report on the second hedge funds survey, October 2013 (page 9)

⁵⁸ AIFM Directive Article 25(2)

⁵⁹ AIFM Directive Article 25(1)

⁶⁰ AIFM Directive Article 25(3)

⁶¹ AIFM Directive Article 25(3) - the circumstances in which an AIFM can pose systemic risk are further defined in the Delegated Regulation Article 112

It is also important to note that in its latest report on shadow banking in Europe, the ESRB acknowledges the important progress made recently to improve the monitoring and risk assessment of synthetic leverage via collecting the information reported under the AIFM Directive and implementing data quality checks, as well as the progress that will be further achieved via EMIR and SFTR reporting requirements⁶². This data has the potential to be used by national authorities, ESMA and ESRB to monitor leverage of alternative investment funds. It also notes, however, that other reporting regimes, including for UCITS investment funds are more fragmented, as there is no common EU regulatory framework for direct reporting.

In addition to leverage risk, the AIFM Directive tackles counterparty risk, which we examine more closely in Section 4.2 below, including the Annex IV reporting requirements.

In Article 25 of the AIFM Directive already stated above, it is explicitly mentioned for AIFMs managing leveraged AIFs: *“[the competent authorities of the home Member State of the AIFM] shall, without delay, also provide information [...] if an AIFM under their responsibility, or AIF managed by that AIFM could potentially constitute an important source of counterparty risk to a credit institution or other systemically relevant institutions in other Member States”*.⁶³

More importantly, from the early stage of the design and ongoing management of each fund, AIFMs must report to the national competent authorities the counterparty risk related to it⁶⁴.

⁶² ESRB, EU Shadow Banking Monitor No 2 / May 2017, pages 33-35

⁶³ AIFM Directive Article 25(2)

⁶⁴ AIFM Directive Article 24 and Article 25

4 Fund leverage risk debate from the financial stability and systemic risk perspective

4.1 The search for consistent measures of leverage used in investment funds by the FSB and IOSCO

At global level, the Financial Stability Board (FSB) has issued Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities on 12 January 2017⁶⁵, an important part of the FSB's work on non-banks and non-insurers. The report sets out 14 policy recommendations to address structural vulnerabilities from asset management activities that could potentially present financial stability risks, including recommendations related to the use of leverage.

The FSB's report recognises that most investment funds are subject to regulatory limitations on traditional balance sheet leverage. Moreover, the FSB acknowledges that investment funds use leverage to try to create hedges against unwanted risks or to amplify gains, which is an integral part of the investment strategy and the efficient portfolio management.

On the concrete policy recommendations of the FSB, we particularly welcome the drop of the word "simple" in relation to the consistent measures of leverage in funds that IOSCO should identify and develop to facilitate more meaningful monitoring of leverage for financial stability purposes and enable direct comparisons across funds at a global scale. We think it is clear from the previous Sections that no simple measure can be used to capture the economic exposures in such a broad universe of fund vehicles and investment strategies. If such a simple measure would be a figure derived from the ratio of total exposure to the NAV, then it would often be meaningless for financial stability purposes as the absence of a common standard baseline would not allow comparability.

Therefore, for any measures to be consistent and reliable, they need to allow for a proper and more detailed analysis of the positions held by a fund and the risks they pose.

We also welcome that the FSB has embraced the idea of a set of measures rather than a single measure of leverage. In Section 3 we have tried to highlight the different challenges of calculating leverage across such a wide range of portfolios with different investment strategies and significantly different risks in size, nature and characteristics associated to their underlying assets. Each of the existing methods captures some of the risks and addresses some of those challenges (for instance as to netting and hedging), but fails to capture or address all of them.

This shows that there is no individual measure that can meet all objectives. In each case, the portfolio managers select the one allowed by regulation that best fits the concrete type of the fund and/or the investment strategy. We, therefore, believe that a matrix of different measures is the only feasible way to allow for a better representation of a fund's economic exposure and allow regulators to draw the right conclusions for financial stability purposes.

Moreover, regulators should focus on those funds identified after a first screening as the ones to be more closely looked upon from a systemic perspective. This can be both effective to identify risks and to avoid any unnecessary burden on the industry.

⁶⁵ FSB, Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities, January 2017

4.2 Addressing risks associated with leverage

The FSB Policy Recommendations in relation to leverage⁶⁶ refer to different risks to the global financial stability that can be created and/or amplified via the use of leverage by funds through direct or indirect channels. Among these the more extensively debated ones are the transmission of risks to the counterparties of a fund (counterparty channel) and the risks from adverse movements in asset prices generated by funds' deleveraging and forced asset sales (risks posed to the market participants).

We consider that both risks, even if in some cases they can be associated with the leverage used in funds, are not, as such, inherent to the use of leverage and therefore cannot be considered when measuring leverage. Instead, it would be more meaningful to have such risks considered in combination with leverage risks – among other risks – to allow some useful conclusions about the overall risk incurred at the level of the fund.

4.2.1 *Fund leverage risk and counterparty risk*

The existence of risk for the counterparties of a fund cannot meaningfully be embedded in the fund leverage calculation methodologies as the nature of such fund counterparty risk and fund leverage risk are different and separate.

Usually, counterparty risk, in terms of an investment fund, is understood as the exposure that the fund gains via a transaction with a counterparty. However, it is our understanding that, in the context of the latest regulatory debate at the international level, there is a discussion on a methodology that could embed another risk within the definition of fund leverage risk: the risk that the fund might generate for its counterparties. This would mean measuring leverage by judging the transaction from the opposite perspective, i.e. based on the exposure that the counterparty gains by transacting with the fund.

We would like to focus on some key concerns that derive from such an approach. If the aim is meant to assess the extent to which the failure of a fund can transmit financial distress to its counterparties, it would seem much more consistent to start from assessing the current interconnections of funds and their counterparties. In particular, the risk that a fund generates for its counterparties is not related to the proportion of leverage it takes. A leveraged fund may generate a low risk for its counterparty and conversely an unleveraged one may generate a significant risk for its counterparties – e.g. non-collateralised synthetic asset replication. The two risks are not linked, and they must be considered in the wider scope of all risks a fund generates, through an overall risk assessment matrix.

This assessment of the risk that the fund generates for its banking counterparties can already be done today via existing reporting requirements at the counterparties' level, in particular according to the Basel requirements related to the measurement of the counterparty exposures, banks already have to analyse counterparty risk as it is part of banks' counterparty risk management procedures

Furthermore, at the fund level in Europe, the AIFMD has an Annex IV reporting obligation which requires the reporting of the fund's top five counterparties. This requirement has also been included in the UCITS fund reports in some jurisdictions in the EU. Similarly, as shown below, in the US Form PF also requires the identification of the five counterparties to which the fund has the biggest exposure. Our view is that this level of reporting represents a more effective way of ascertaining where material counterparty risk may lie rather than attempting to aggregate counterparty risk within an overall leverage indicator.

⁶⁶ As part of the FSB, Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities, January 2017 (please see also Section 4.1)

We believe regulators should focus on reinforcing cooperation and sharing the reported data. Changing or adding ways to calculate leverage will not provide more meaningful information about the counterparties exposed to a fund or the extent of the interconnection that exists between a fund and its counterparties.

Below, we have laid out the EU counterparty risk reporting requirements. In the EU, AIFM Directive harmonises data reporting in Annex IV of the Delegated Regulation in a common template. UCITS funds report to national authorities using national reporting standards (we have taken Luxembourg as an example).

Regulatory Reporting Requirements regarding counterparty exposures

UCITS (national requirements by the CSSF – Luxembourg)	AIFMD Annex IV (EU)	Form PF (US)
<p><i>Section VI - Counterparty risk and collateral in relation to EPM techniques / OTC financial derivative instruments and traded derivatives (where appropriate)</i></p> <p>Positive net counterparty exposure at semester-end (<u>top 3 counterparties</u>)</p> <p>Negative net counterparty exposure at semester end (<u>top 3 counterparties</u>)</p>	<p><i>24(2)C, Item 159:</i></p> <p>Identify the <u>top 5 counterparties</u> to which the AIF has the greatest mark-to-market net counterparty exposure, measured as a % of the NAV of the AIF.</p> <p>Identify the <u>top five counterparties</u> that have the greatest mark-to-market net counterparty credit exposure to the AIF, measured as a percentage of the NAV of the AIF.</p>	<p><i>Question 22</i></p> <p>Identify the <u>five counterparties</u> to which the reporting fund has the greatest mark-to-market net counterparty credit exposure, measured as a percentage of the reporting fund’s net asset value.</p> <p><i>Question 23</i></p> <p>Identify the <u>five counterparties</u> that have the greatest mark-to-market net counterparty credit exposure to the reporting fund, measured in U.S. dollars.</p>
<p>These calculations <i>include</i> collateral.</p>	<p>These calculations <i>include</i> collateral and bonds/equity held that have been issued by the counterparty.</p>	<p>These calculations <i>exclude</i> collateral. However, Questions 43 and 45 request detailed information about collateral posted by Qualified Hedge Funds.</p>

Furthermore, if there were to be a new methodology to measure leverage in a fund in relation to its counterparty exposures that would take into account existing and potential risks, we would question the accuracy of such measures depending on the type of method used. For instance, the existing SA-CCR model used by credit institutions is clearly designed for balance sheet entities and its success is still to be determined. We would strongly oppose the application to investment funds of a model designed for banks, with potentially significant balance sheet risks such as proprietary trading activities, which is still in the process of being tested in live market conditions. Moreover, such an approach would be disproportionate for those investment funds at the EU level that do not represent a material risk to their counterparties.

Finally, we would like to underline that counterparty risk is currently already addressed in several pieces of EU legislation:

- The UCITS Directive: there are counterparty limit ratios (10%, 5%, etc.) and national regulators often require reporting of counterparty exposures (as seen in the example given in the table above);
- The AIFMD: counterparty limits must be set and counterparty exposures must be reported to ESMA and ESRB;
- Bank regulation (CRD IV/ CRR) has a large exposure regime and allows for knowing the risk incurred by banks in their transactions with counterparties.
- The Securities Financing Transactions (SFT) Regulation⁶⁷, which allows for capturing funds as counterparties (among others) for SFTs; and
- The European Market Infrastructure Regulation (EMIR)⁶⁸, which allows for capturing funds as counterparties (among others) in the case of all OTC derivatives.

4.2.2 Fund leverage risk and fire sale risk

For leveraged funds, the potential to spread risks to the market due to such funds' sensitivity to adverse asset price movements and consequent forced asset sales is a scenario that is debated at the FSB/IOSCO level. While we agree with the intention of regulators to understand the impact of a fund's deleveraging in stressed market conditions, we consider the discussion on fire sales to be based on a series of assumptions regarding potential spill-over effects that require more concrete evidence.

In particular, we strongly disagree that such assessment can be done via linking the measurement of leverage to the risk of fire sales. We think such an assessment must be done by understanding the redemption policy terms of the fund, the composition of investor profiles (each with their unique risk tolerance and investment horizon) and further liquidity management measures. This information can be obtained in most cases by regulators under the existing reporting requirements (e.g. AIFMD Annex IV reporting) related to the investment strategy of a fund, and the redemption rights and policies, among others.

Therefore, we believe that this risk can be assessed and measured in a proper context and with the appropriate tools and should not be directly linked to the assessment of leverage in a fund. We have laid out in Section 3 above the EU reporting requirements related to leverage. The EU reporting requirements related to liquidity risk management included in the AIFM and UCITS Directives, as well as the national fund liquidity management tools built by the fund industry and recognised by national regulators were laid out in the recent joint AMIC/EFAMA paper on Fund Liquidity, issued in April 2016⁶⁹.

4.3 Reporting of leverage

Concerning policy recommendations specifically related to the reporting of leverage – the aggregation of leverage data at the national level⁷⁰, and the tasking of IOSCO to address data gaps⁷¹ - there are three important comments to be made.

First, on the data that can improve direct comparison across funds levels, as recommended by the FSB, we consider that aggregating data for financial stability should only be considered to the extent

⁶⁷ REGULATION (EU) 2015/2365 on transparency of securities financing transactions and of reuse

⁶⁸ REGULATION (EU) No 648/2012 on OTC derivatives, central counterparties and trade repositories

⁶⁹ http://www.efama.org/Publications/EFAMA_AMIC_Report_Managing_Fund_Liquidity_Risk_Europe.pdf

⁷⁰ FSB, Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities, January 2017, Recommendation 11

⁷¹ FSB, Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities, January 2017, Recommendation 12

such aggregation is feasible and meaningful. The first and foremost objective of a leverage measure/method is to represent the true economic exposure of each fund and not to prevent funds making the right investment choices necessary to meet its individual investment objectives.

We would, therefore, consider it necessary to choose the right consistent measures based on a meaningful representation of leverage in a fund and not on the basis that it allows easy aggregation across funds and jurisdictions. Given the broad range of investment vehicles and investment strategies, any simple aggregation of data for all investment funds and jurisdictions irrespective of the different specificities of each fund category and risk portfolio cannot result in meaningful aggregations and consequently in helpful monitoring for financial stability purposes.

In other words, aggregation will not be feasible in a meaningful way across funds or even across jurisdictions – as the set of indicators may not be applied identically at a global scale. Indeed, in the AIFM Directive leverage monitoring is situated at the individual fund level, with full authority for the national supervisors to monitor the risk of default.

Still, that should not be considered as a barrier for national authorities to monitor risks with the objective of achieving financial stability and diminishing systemic risk – in this regard we note that at regional level and in particular in the EU, national competent authorities are already required to report risks related to the AIFMs they supervise to ESRB and to ESMA⁷². At the same time, not all funds are relevant from a systemic point of view. In fact, very few of them present characteristics that need a more detailed scrutiny (high leverage combined with less liquid positions and high AuM).

Second, we should not forget that – at least in Europe – the risk that investment funds represent for their counterparts is already addressed by reporting requirements to national regulators⁷³. In addition, such risk is also addressed by prudential requirements in other existing regulatory frameworks that apply in combination with the regulation on leverage.

Thirdly, AMIC/EFAMA would like to stress that the AIFM Directive contains reporting requirements both for individual funds, as well as for systemic risk purposes. As we have outlined above under section 3.2.5, the Directive foresees in addition to the standard periodic reporting requirements, and “for the effective monitoring of systemic risk”, the right for the national competent authorities to request additional information on a periodic basis, as well as *ad hoc*, in relation to one or more of their AIFs.⁷⁴ This information should be passed on to ESMA and be used for monitoring purposes, also with the power for ESMA to act upon them in exceptional circumstances and when necessary to ensure the stability and integrity of the financial sector.

Another relevant requirement in the context of financial stability is the ability of a national authority to impose limits to the use of leverage by an AIFM to the extent that the manager’s actions can contribute to the build-up of systemic risks in the financial system or risks creating disorderly markets⁷⁵. Such decisions should be notified to ESMA, the ESRB and the competent authority of the Member State in the jurisdiction of which the fund is registered. Finally, ESMA may also recommend action to the competent national authority, by informing the ESRB and the European Commission.

Although not specified in detail at the EU level, UCITS funds are also subject to national reporting requirements in jurisdictions they are domiciled in.

⁷² AIFMD, Article 25

⁷³ AIFMD, Article 25

⁷⁴ AIFMD, Article 24

⁷⁵ AIFMD, Article 25

To conclude, the provisions of Articles 24, 25 and Annex IV of the AIFM Directive as well as the UCITS national reporting requirements clearly show that the existing EU reporting requirements allow authorities at national and EU levels to collect data and monitor leverage limits that may pose significant leverage-related risk. We would suggest that enhanced cooperation should be put in place between (1) national authorities and ESMA/ESRB to fully implement the existing AIFMD provisions and (2) between EU authorities and IOSCO to increase understanding of leverage. Consideration could be given to implement measures like the AIFMD reporting requirements in non-European jurisdictions – in order to allow IOSCO to analyse the data at the global level.

One further possibility for IOSCO to consider when delivering its mandate under the FSB report to report on leverage could be to take as a starting point the approach already carried out currently in Europe by the ESRB and the ECB, and applied by ESMA in its Quarterly Risk Dash Board⁷⁶, i.e. monitoring leverage in terms of the evolution of investment funds' assets compared to their equity.

5. Recommendations to enhance consistent measuring and monitoring of leverage in investment funds

As presented in the previous sections, the EU has developed a comprehensive regulatory framework that offers a set of methods addressing in depth and efficiently several objectives related to leverage in investment funds. Therefore, we believe that the existing European regulatory framework can be an important reference for any future analysis regarding consistent methods to measure and monitor leverage done both at the FSB/IOSCO level and at the EU level.

We have set out four recommendations for improving global understanding and analysis of leverage.

5.1 Building on existing models and the EU regulatory framework

Due to the varied nature of global investment funds and investment strategies, a matrix of different leverage calculation measures and risk-based measures is the only feasible way for a true representation of a fund's economic exposure and for regulators to draw the right conclusions for financial stability purposes.

If needed, when identifying and/or developing consistent measures of leverage, regulators and legislators should rely on the best practices at national and international level and build upon successful existing frameworks.

As already explored in Sections 3 and 4, the current EU regulatory framework regarding leverage is comprehensive in its scope and details. Through the diverse market events that have taken place since the implementation of the AIFM and UCITS Directives, all the calculation methods related to leverage were proven of value. It has allowed regulators to ascertain that leverage levels remained relatively low and constant over time and that wider regulatory framework governing European investment funds has not led to potential systemic risk occurring in EU-domiciled investment funds since the crisis.

The EU model consists of a mix of methods that allows for a risk-based approach and at the same time for flexibility to cover the potential gaps and inefficiencies of any one model. To date, no other part of the world has developed such a comprehensive and tested framework.

Therefore, we consider that the EU regulatory framework can serve as the reference point for further developing a matrix of consistent leverage measures at the international level.

⁷⁶ ESMA Quarterly Risk Dashboard No 2 2017 R.28 page 9 – leverage measured as AuM/NAV

5.2 Hierarchy of leverage methodologies

The Net/Commitment method is one used in both UCITS and AIFM Directives and could be potentially considered a “*Standard Approach*” at the global level. At the same time, the VaR metric is an important alternative to the Net/Commitment method, where appropriate, to reflect portfolio risks. This could form an “*Advanced Method*”. Stress tests and back tests, taking into consideration stress scenarios and assessing potential losses, can be a way to efficiently deal with the potential downside risks and limitations attributed to VaR. There are currently EU regulatory requirements together with industry guidelines for such stress testing and back testing, which can become best practices at worldwide level, in particular for stress testing of the potential losses in a portfolio.

The gross notional exposure, currently foreseen both at the EU level and other regulatory frameworks at the international level, can be another complementing model to this matrix of methodologies, only to the extent that it is used as a source of information related to the overall synthetic leverage footprint of a fund.

Leverage calculation methods can be used by the regulators, combined with other information on risks related to leverage, to gain an overall view of systemic risks. For example, regulators could consider leverage alongside information on counterparty exposures and information on market liquidity for the relevant assets, in order to build an overall picture of potential systemic risks in investment funds.

5.3 Possible updates and adjustments in the harmonisation of the commitment approach

One of the key aspects of this EU regulatory framework is the helpful work carried out by the European securities authorities, first by the Committee of European Securities Regulators (CESR), subsequently replaced by its successor ESMA - and then complemented by the ESRB. The CESR Guidelines on Risk Measurement and the Calculation of Global Exposure and Counterparty Risk for UCITS are still a very helpful tool for EU fund managers in their practical management of leverage.

These CESR Guidelines ensure harmonisation both between Member States in the EU, as well as between EU-based fund managers – raising the overall standard of risk management related to the use of derivatives in UCITS funds.

Today, we think that one aspect of these CESR Guidelines could be improved: the conversion methodologies, depending on the types of derivatives, for the calculation of global exposure using the commitment approach. While the conversion methodologies are appropriate – and helpful – for the series of financial instruments already listed, we think that the list of derivatives is no longer exhaustive and should be complemented as the CESR Guidelines have not been updated since 2010.

Currently, several types of derivatives are missing among the Non-Standard (Exotic) Derivatives which are listed by CESR.

Consideration could be given also to harmonising the treatment of cash assets in UCITS and AIFs. Moreover, it could be helpful to harmonise the calculation method of the gross leverage for those UCITS using VaR approaches based on the gross method that applies for AIFs under AIFMD.

5.4 Data sharing

We support the ESRB in its task of analysing leverage data to value systemic risk occurrence in Europe. More broadly, we strongly support improved data sharing among regulators in order to enhance their leverage measurement both at the EU and the global scale. In the EU we suggest that the existing AIFM-related data sharing requirements as set out in Article 25 of the AIFM Directive should be actually fully implemented between national competent authorities, ESMA and the ESRB.

Based on the same type of data, we propose that this set of data sharing requirements be then extended at global level at a later stage.

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19 July 2017