



# HFSB Response to Consultative Document “Proposed Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities”

The Hedge Fund Standards Board (HFSB) welcomes the FSB consultation on Proposed Policy Recommendations to Address Structural Vulnerabilities from Asset Management Activities. The HFSB has responded to past consultations on financial stability issues<sup>1</sup> and held financial stability workshops with central banks and securities regulators. The HFSB also actively contributes to the global debate on financial stability through its participation in IOSCO as an Affiliate Member.

## General observations

The HFSB agrees with the FSB assessment that the asset management sector<sup>2</sup> generally has been resilient and has not created financial stability concerns in recent periods of stress and heightened volatility and, furthermore, that the sector offers some important stabilising features to the global financial system. This assessment should not come as a surprise, given both the ability of funds (and fund investors) to absorb losses and the great diversity of types of funds (and risk management approaches).

Nonetheless, we agree that it is important that regulators understand activities in the capital markets through monitoring and analysis of those activities to detect any potential build-up of financial stability risks. The HFSB welcomes regulatory efforts to better use the extensive existing data that has been made available by the asset management sector in many jurisdictions in recent years. However, it is important to highlight that there are many participants in the capital markets outside the asset management sector, which are not currently incorporated in the FSB’s analysis. We believe that it is important that the FSB does not overlook these areas in its assessment.<sup>3</sup>

## Responses to the “general questions”

**Q1. Does this consultative document adequately identify the structural vulnerabilities associated with asset management activities that may pose risks to financial stability? Are there additional structural vulnerabilities associated with asset management activities that the FSB should**

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<sup>1</sup> See HFSB consultation responses here: <http://www.hfsb.org/regulatory-engagement/financial-stability/>

<sup>2</sup> Note: money market funds (MMFs) are excluded from the scope of the assessment in the consultative document.

<sup>3</sup> The size of total capital markets is estimated at ~US\$ 100 trillion, and the global mutual fund sector accounts for US\$ 30 billion. (Sources: [Hewitt ennisknupp Global Invested Capital Market \(2014\)](#), [Ernst & Young Global wealth and asset management industry outlook \(2014\)](#))

**address? If there are any, please identify them, as well as any potential recommendations for the FSB's consideration.**

Over recent years, policy makers around the globe have enacted a wide range of reforms of asset management and financial services regulation to address key lessons learned during the financial crisis. The measures include, among other things, direct manager supervision, improved investor disclosure, better valuation procedures, central clearing of OTC derivatives, regulatory reporting and more stringent capital requirements for banks. It is important to take these existing measures into account when determining whether additional measures are needed.

Separately, we would also like to highlight an important additional aspect. The introduction to the consultation paper highlights concerns in relation to **potential amplified downward re-pricing of assets / contagion effects**, which could arise in less liquid asset classes in situations where many investors simultaneously attempt to exit these asset classes. This "concept" of self-reinforcing downward spirals in markets has been mentioned in past consultation papers on financial stability ([including the FSB consultation on Assessment Methodologies for Identifying NBNI G SIFIS](#)).

Notwithstanding the above, the HFSB believes it is important to distinguish between market risk that investors face and systemic risk. A significant drop in prices for an asset, asset class or all assets (including situations where many investors seek to sell a particular asset) does not automatically mean that the market-based mechanisms of (i) price discovery, (ii) balancing of supply and demand and (iii) competition are not working. As seen in many past crises and shocks, markets ultimately find a new equilibrium price where buyers are prepared to enter the market (see "Brexit" case study below). Some investors might incur significant losses (see "dotcom bubble" case study below), while others might find opportunities to buy assets at significantly lower prices, in each case without necessarily any systemic concerns. Therefore, a clearer distinction is needed between such rare market risk events (which are bound to happen from time to time) and actual "systemic risk" events, with widespread disruption of the provision of financial services (bank closures etc.). We also need a better understanding of how and why a severe price shock to the capital markets potentially could translate into such a systemic crisis.

**Case study 1: "Brexit – suspension of redemptions in situations of liquidity distress"**

Seven major UK commercial property funds suspended redemptions following the "Brexit" vote in June 2016. The UK's decision to leave the EU has caused a combination of reduction of investment in the sector and a rush by some investors to redeem their investment, resulting in insufficient liquidity in the funds.<sup>4</sup> The illiquidity of the underlying investments prevents funds from quickly liquidating their portfolios. Temporary suspensions of redemptions have been enacted by these funds to manage the situation of liquidity distress in an orderly manner and to address specifically conflicts of interest between redeeming and non-redeeming investors, so as to ensure fair treatment of all investors in these funds.

At the same time, media reports suggested that investors (including sovereign wealth funds) started to line up to buy at the lower prices less than a month after the Brexit vote.<sup>5</sup>

Some of these commercial real estate funds have since resumed trading within 6 weeks following the Brexit vote.

<sup>4</sup> See press, e.g., FT (2 August 2016): „[Investors pull GBP 1.4bn from UK property funds in Brexit month: Outflows \(...\) eclipse 2008 levels \(...\)](#)”

<sup>5</sup> See Wall Street Journal (19 July 2016): "Investors go bargain-hunting for UK property after Brexit vote: (...) Norway's sovereign wealth fund announced it bought a retail office property in Oxford Street".

## Case study 2: “Dotcom bubble” (2000)

The burst of the dot-com bubble left many investors (including retail investors) and asset managers with significant losses. In total, the stock market crash of 2000-2002 caused the loss of USD 5 trillion in the market value of companies on NASDAQ alone.<sup>6</sup> Investors with the ability to absorb losses took the hit, banks remained unaffected since the bubble was not credit-financed, and there were no financial stability concerns. In contrast, the subprime crisis in 2008 not only hit investors/funds but directly affected bank balance sheets and endangered systemically relevant financial institutions.

Therefore, it would be helpful for the FSB to analyse in more detail such market shocks, and to establish more clearly how / whether securities regulators can distinguish between justified market price corrections and presumable “unjustified” amplified downward adjustment which might (or might not) create systemic concern.

It would be damaging if exaggerated fear of “downward market movements” introduced a regulatory bias against risk-taking (similar to the prudential regulatory approach for the banking sector), as well as a bias against (justified) market price corrections (e.g., regulators imposing suspensions of redemptions to prevent prices from falling). In effect this would amount to regulators taking sides, “erring” on the side of asset owners/redeeming investors opposed to prospective buyers.

In this context, it is also important to highlight that past attempts to stop or slow down (presumably damaging) downward price adjustments (e.g., via short-selling bans) did not help (and in fact have been counterproductive), delaying much needed liquidity coming into the market.<sup>7</sup>

**Q2. Do the proposed policy recommendations in the document adequately address the structural vulnerabilities identified? Are there alternative or additional approaches to risk mitigation (including existing regulatory or other mitigants) that the FSB should consider to address financial stability risks from structural vulnerabilities associated with asset management activities? If so, please describe them and explain how they address the risks. Are they likely to be adequate in stressed market conditions and, if so, how?**

The Hedge Fund Standards address potential systemic concerns through a multi-pronged approach, in line with some of the mitigants proposed in the Consultative Document. These can be summarised as follows:

- **Adequate investor disclosure** to enable well-informed investment decisions (including disclosure on liquidity risks, approach to handling of distress situations, etc.) [*ex ante, to prevent “nasty surprises”*]
- **Strong risk / liquidity risk management practices**, including stress testing [*ex ante, to minimise the likelihood of distress*]

<sup>6</sup> Market value of NASDAQ peaked at US-\$ 6.7 trillion (March 2000) and bottomed at US-\$ 1.6 billion (October 2002), source: Los Angeles Times, 16 July 2006 (<http://articles.latimes.com/2006/jul/16/business/finance/overheat16>)

<sup>7</sup> See HFSB consultation responses and analyses on “Short Selling” (<http://www.hfsb.org/regulatory-engagement/short-selling/>)

- **Adequate counterparty disclosures** to enable counterparties (e.g., banks) to manage their risks efficiently [*ex ante, to address concerns in relation to excessive risk-taking by banks vis-à-vis funds, which is the main potential transmission mechanism for systemic risk*]
- **Fair treatment of investors in situations of liquidity distress**, including the ability to slow down or suspend redemptions, with governance of such decisions by independent fund boards [*ex post, dealing with tail events to prevent runs on funds by investors for fear of being mistreated*]<sup>8</sup>

It is important to highlight that the approach taken in the Standards (and by many securities regulators around the globe) does **not** introduce a bias against risk-taking by asset managers.

An additional important feature in making the overall system more robust is to ensure that banks/counterparties do not take excessive risk vis-à-vis the asset management sectors (addressed via bank capital requirements, risk management practices, etc.). In its “Hedge Funds as a Counterparty Survey” the UK FSA analysed this as a potential transmission channel for systemic risk from asset management activity.<sup>9</sup> One interesting finding was that bank risk-taking vis-à-vis the hedge fund industry is only a very small proportion of bank risk capital.<sup>10</sup>

Importantly, the HFSB believes that systemic risk regulators can gain a better understanding of markets and asset management activity by standardising the various global data collection efforts, and we would be pleased to work with IOSCO and other regulators on developing a harmonised global template.

Finally, it is important to acknowledge that the objective should not be to create a “zero failure” regime for asset management but to ensure funds have robust risk management practices, banks do not take excessive risk vis-à-vis funds and negative externalities (e.g., in relation to handling of redemptions) are internalised. There has been significant improvement in all of these areas in recent years, including through the HFSB’s work, and it would be helpful if the FSB could identify any remaining gaps (and the criticality of those gaps) before determining whether any further measures are needed.

**Q3. In your view, are there any practical difficulties or unintended consequences that may be associated with implementing the proposed policy recommendations, either within a jurisdiction or across jurisdictions? If there are any, please identify the recommendation(s) and explain the challenges as well as potential ways to address the challenges and promote implementation within a jurisdiction or across jurisdictions.**

There are a number of issues and risks/pitfalls that FSB/IOSCO should take into account:

- Inconsistency, and lack of real coordination, in global data collection efforts (Form PF versus AIFMD Annex IV)<sup>11</sup>
- Narrow “asset management”-perspective, neglecting the role of other market participants (including direct investors, banks, central banks, governments etc.)

<sup>8</sup> The HFSB tackled this topic in 2009/2010: See the HFSB’S consultation on handling of redemptions, which provides a detailed assessment of the negative externalities that can arise, as well as how they can be internalised - <http://www.hfsb.org/standards/consultations/>

<sup>9</sup> <https://www.fca.org.uk/publication/data/hedge-fund-survey.pdf>

<sup>10</sup> FSA: Assessing the possible sources of systemic risk from hedge funds (February 2012)

<sup>11</sup> The Hedge Fund Law Report: A Practical Comparison of Reporting under AIFMD versus Form PF: [https://www.dechert.com/files/Uploads/Documents/A\\_Practical\\_Comparison\\_of\\_Reporting\\_Under\\_AIFMD\\_versus\\_Form\\_PF\\_10.31.14.pdf](https://www.dechert.com/files/Uploads/Documents/A_Practical_Comparison_of_Reporting_Under_AIFMD_versus_Form_PF_10.31.14.pdf)

- A focus on narrow, singular “risk” concepts (such as leverage measures, which may not always reflect actual risk)
- Mechanistic rear-view mirror approach to detecting systemic concerns instead of looking for the “unknown unknowns”, which requires a more creative approach to exploring and monitoring financial stability risks, taking account of behavioural economics, multi-agent modelling, etc. and which goes beyond collection and analysis of historic data
- Regulators inadvertently instilling a bias against risk-taking in asset management (which would be detrimental both to overall risk-taking by investors and to economic growth) [see response to Q1]
- Regulators starting to take detailed views on risks (“second guessing” the market), thereby creating an “official” view on presumable risk and resulting in interventions in the asset management sector. For example, securities regulators might actively intervene in the handling of redemptions by forcing suspension of redemptions in the hope of preventing market prices from falling further. Such action could result in regulators failing to ensure fair treatment of investors (this is analogous to short selling bans)

The HFSB would be very interested in assisting the FSB/IOSCO in addressing these concerns, including analysing existing regulatory measures and the extent to which such measures are capable of addressing the concerns highlighted in this Consultative Document, either as is or with modest amendments.

## Response to specific questions

### Section 2: Liquidity mismatch between fund investment assets and redemption terms and conditions for fund units

**Q4. In your view, is the scope of the proposed recommendations on open-ended fund liquidity mismatch appropriate? Should any additional types of funds be covered? Should the proposed recommendations be tailored in any way for ETFs?**

It is important that funds have adequate mitigation techniques to address stressed market scenarios. There is a diverse spectrum of liquidity profiles of funds, ranging from open-ended funds with daily redemptions of fund units (and very liquid underlying assets<sup>12</sup>) to institutional and private funds with weekly, monthly, quarterly or even longer redemption cycles and longer notice periods.

Hedge funds/private funds usually do not exhibit daily liquidity (and are not seen by institutional investors as a short term source of cash), and the redemption mechanics are structured as a function of the investment strategy and portfolio liquidity.

In addition to the pre-emptive (liquidity) risk management activities and the lower fund liquidity characteristics (weekly, monthly, quarterly etc. redemptions), additional tools to manage/mitigate situations of liquidity distress include, but are not limited to:

- Side pockets
- Gates
- Suspensions
- Restructuring etc.

Many of these techniques also are covered in the Hedge Fund Standards.

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<sup>12</sup> Many jurisdictions have limited the investment in illiquid assets to 10-15% of total assets.

Specific observations:

- **Recommendation 1 (regulatory reporting):** The HFSB supports efforts by the regulators to gain a better understanding of asset management activities through data collection. Regulators should make use of the existing data (e.g., Form PF, AIFM-D Annex 4) already provided by the industry. Regulators should also work towards harmonising these templates over time, and, as noted above, the HFSB would be pleased to help in any such efforts.
- **Recommendation 2 (investor disclosure):** Better investor disclosure of potential illiquidity risks helps investors manage and mitigate such risks. The Hedge Fund Standards include detailed guidance about such disclosure, including details of the circumstances in which normal redemption mechanics might not apply or may be suspended ([Standard 2.1](#)).
- **Recommendation 3 (liquidity management):** The HFSB has provided extensive guidance on the topic of liquidity risk management ([Standard 12](#)) and the handling of redemptions during liquidity distress ([Standard 2.1](#)). There is certainly no “one-size-fits-all” approach, and the techniques employed are a function of the investment strategy and liquidity characteristics of each fund. The FSB might find the HFSB Standards in this area helpful, particularly as they have been developed and agreed by *both* investors and hedge funds.
- **Recommendations 4 (widen the availability of liquidity risk management tools):** Again, the HFSB would like to encourage the FSB to review the HFSB’s work in this area ([Standard 2.1](#)). It is important to highlight that the measures to slow down the redemption process (such as gating and suspension of redemptions) should not be used to protect the manager (from going out of business) but only be used with the objective of ensuring fair treatment of investors (i.e., redeeming vs. non-redeeming investors). Decision-making for enacting such measures ideally should reside with the fund governing body/the fund. As above (Recommendation 3), there is certainly no “one-size-fits-all” approach, and the techniques employed are a function of the investment strategy and liquidity characteristics of each fund. For the reasons noted, the HFSB does not prescribe any particular measure.
- **Recommendation 5 (swing pricing etc.):** Different tools may be suitable in different contexts. In many instances (for example, funds with long lock-ups/private equity style structures), none of these tools may be required. Accordingly, the HFSB believes the review should not result in a *prescriptive* list of “tools” for all funds.
- **Recommendation 6 (stress testing):** The Hedge Fund Standards address stress testing in the area of liquidity risk management, and the FSB may find our work in this area interesting and helpful ([Standard 12](#)). The HFSB risk management framework also encourages firms to account for the impact of market risk stresses on the liquidity position of funds and to account for unexpected correlations.
- **Recommendation 7 (governance):** In the hedge fund industry (offshore funds), the fund governing body (i.e., the fund directors) is responsible for major decisions, including the use of “extraordinary liquidity risk management tools”. The HFSB has published a standardised board agenda to help improve the governance of funds (see [HFSB Toolbox](#)).
- **Recommendation 8 (Regulatory guidance/intervention):**

In its recent consultation exercise, the HFSB looked into providing more detailed guidance regarding specific approaches to dealing with different types of liquidity, including whether a more prescriptive “waterfall approach” should be introduced (e.g., see page 6 in the HFSB’s consultation on handling of redemptions in situations of liquidity distress, HFSB CP1/2009)<sup>13</sup>. However, the working group of investors and funds, as well as the Board of Trustees, concluded that this is not feasible, given the complexity of such situations and differing investor preferences. Therefore, a disclosure-based approach was chosen. Pursuant to this approach, managers must explain to their investors their approach, including circumstances in which normal redemption mechanics might not apply or may be suspended, as well as details of other relevant measures (including gating, side pocketing, restructuring etc.)<sup>14</sup>, leaving discretion to the fund governing body to determine the best course of action as a function of the specific circumstances.

The FSB Consultative Document suggests that securities regulators should be granted the right to direct the application of such tools in exceptional cases. However, it is unclear how securities regulators could have the detailed, fundamental knowledge necessary to make such complex decisions. These sorts of decisions require an intricate and in-depth knowledge of a fund’s underlying assets, redemption profile and many other specific characteristics, which could be very difficult for regulators to acquire. In fact, there is a risk of “broad brush” suspensions of redemptions applied to entire sectors by securities regulators, with insufficient regard to underlying circumstances; this clearly could be detrimental to investors.

During the recent “Brexit” suspensions of redemptions by UK commercial property funds, there was no evidence of reluctance by managers to enact such measures. In fact, fund investors have a very good grasp of the necessity and importance of such tools, hence, not enacting such measures by funds / fund directors / managers when it would be appropriate could be seen as even more damaging for a manager’s reputation (than gating or suspending redemptions).

- **Recommendation 9 (system-wide stress testing):**

Stress testing has been very useful to assess the capitalisation of the banking sector under stressed conditions.

- Banks are systemically relevant due to their important role in operating the payment system. Failure of banks has severe implications for financial activity and the economy at large.
- Banks can be fragile due to a) relatively high financial leverage b) the inability of bank deposits to absorb losses, and the c) the liquid nature of bank deposits. In addition, small variations in total bank assets can severely affect the capital position of banks, and concerns about the capitalisation of a bank can result in bank runs.
- Most banks’ risk profiles are relatively similar (mortgage, corporate and consumer loans), hence banks are exposed to similar risk factors/stresses (e.g. rise in defaults in an economic downturn).
- Therefore, stress testing can significantly enhance the understanding of the resilience of the banking sector to such stresses.

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<sup>13</sup> See CP1/2009: [http://www.hfsb.org/wp-content/uploads/2016/04/hedge\\_fund\\_redemptions.pdf](http://www.hfsb.org/wp-content/uploads/2016/04/hedge_fund_redemptions.pdf)

<sup>14</sup> See Standard 2.1 Exit Terms <http://www.hfsb.org/wp-content/uploads/2016/04/Hedge-Fund-Standards-as-at-November-2015.pdf>

The Hedge Fund Standards recommend stress testing in asset management at the individual fund level. Given the diversity of strategies, the individual characteristics of a particular portfolio needs to be taken into consideration in developing a suitable stress test to inform the funds' risk management.

In comparison to the stress testing of the banking sector, a number of key aspects need to be taken into consideration in asset management:

- Fund management activities are very diverse, and different types of strategies will be exposed to very different risk factors.
- Investment funds do not take deposits, and drops in the value of a fund's total assets are immediately reflected in the funds NAV (investors absorb the losses, opposed to the banks' depositors).
- Funds (including hedge funds) exhibit low or no financial leverage.
- Funds can introduce gating or suspension of redemptions in situations of liquidity distress to ensure fair treatment of investors to prevent runs.

Therefore, more clarity is needed about (1) the types of results systemic risk regulators are seeking to obtain from such stress tests, (2) how these tests are to be structured (stressing "liquidity" versus asset prices; investment strategy specific stresses, ...), (3) how non-asset management activities can be incorporated in the assessment and (4) how market dynamics (falling prices might attract new demand etc.) are accounted for.

It is clear that a lot of work (and additional data from beyond the asset management arena) is needed for these efforts to produce meaningful results.

**Q5. What liquidity risk management tools should be made available to funds? What tools most effectively promote consistency between investors' redemption behaviours and the liquidity profiles of funds? For example, could redemption fees be used for this purpose separate and apart from any impact they may have on first-mover advantage?**

Many of the liquidity risk management techniques described in the document are common practice in the hedge fund industry and are covered by the Hedge Fund Standards. Our response to question 4 above provides examples of some of these techniques. However, it is difficult to generalise which "tool" is most suitable, given the diverse liquidity characteristics of funds, as well as differing investor preferences.

Below are a few additional observations:

- Some investor respondents to the HFSB consultation on redemptions in 2009/2010 highlighted that tools such as "in specie redemptions" are not desirable (and too difficult for investors to handle).
- During these discussions on redemptions, there also were investor concerns about redemption fees being applicable irrespective of market conditions. Furthermore, one of the challenges with "redemption fees" in situations where underlying investments are illiquid is the setting of the fee at a "fair" level.
- The concept of "swing pricing" has been tested in some areas of asset management and may provide a mechanism to protect investors from the performance dilution effects resulting from transactions of other investors in markets that exhibit widened bid – ask spreads but

are not completely illiquid. However, enabling swing pricing requires changes to the overall fund infrastructure, involving service providers (such as transfer agents, administrators etc.), which would need to be addressed first and are beyond the scope of this Consultative Document.

- In all instances, it is important that all investors are treated fairly (incoming, redeeming and existing) and that the swing pricing or any redemption fees not become a “source of return” for existing investors, at the expense of incoming / redeeming investors.

These examples highlight that prescribing particular measures across all fund sectors might not be possible; however, providing more choice is certainly helpful.

**Q6. What characteristics or metrics are most appropriate to determine if an asset is illiquid and should be subject to guidance related to open-ended funds’ investment in illiquid assets? Please also explain the rationales.**

The HFSB has not developed any metrics to measure market liquidity. In general, in particular in OTC markets, liquidity is very difficult to measure (unless one actually trades to test it). In addition, not all “liquidity” is necessarily visible on trading platforms but comes to market once prices move.

However, there are several liquidity “proxies”:

- “Bid/ask”: simple “bid/ask” spreads indicate how much a trader can lose by buying an asset and selling it right away (not available for all markets)
- Market depth: number of units sold or bought at the current bid offer
- Market resilience: how long it takes for a price that has fallen due to a transaction to bounce back
- Simple accounting classifications: accounting level 1, 2, 3 classifications [ASC 820/IFRS 7]; however, such classifications merely establish a three-tiered hierarchy regarding the “observability of prices”, with Level 1 representing quoted prices (e.g., exchange listed), Level 2 where there is no public trading/matrix pricing) and Level 3 where pricing inputs are not observable. Furthermore, there are some drawbacks to relying on such classifications in light of the fact that this method does not account for actual traded volumes
- Market data vendors: these firms have developed more sophisticated liquidity metrics, which use current and historic bid/ask spreads, transaction volumes, current market conditions/volatility, participation rate and many other assumptions in order to “calculate” point estimates (e.g., time to liquidate (per volume), market impact (per volume), liquidity scores (combining different estimates), as well as probabilities of selling at a given price). The data and modelling requirements of these approaches are obviously significant given that they calculate liquidity on an individual instrument level.
- More pragmatic approaches: these include liquidity classification systems, which enhance the simple accounting classification and seek to better differentiate between different asset types, but they do not require on-going detailed transaction and market data, which is usually not readily observable / available.

A pragmatic approach to "liquidity measurement" is certainly needed, given the complexity involved in instrument level approaches.

In practice, however, it is most important to manage the asset liability mismatch in a specific fund, where in many instances, a lower level of precision is needed. For example, for a fund with quarterly liquidity and quarterly notice periods, it will not matter much from a risk management perspective if the time to liquidate a particular portfolio asset temporarily increases from one week to one month.

**Q7. Should all open-ended funds be expected to adhere to the recommendations and employ the same liquidity risk management tools, or should funds be allowed some discretion as to which ones they use? Please specify which measures and tools should be mandatory and which should be discretionary. Please explain the rationales.**

There is no singular “right” approach to managing liquidity risk, and different tools can deliver similar outcomes. In addition, there may be different investor preferences regarding the handling of such situations in different market segments (swing pricing vs. redemption fees; in specie redemptions vs. side pockets etc.). Accordingly, flexibility is needed in order to tailor a specific fund’s approach to its asset mix, redemption terms, investor preferences etc.

**Q8. Should authorities be able to direct the use of exceptional liquidity risk management tools in some circumstances? If so, please describe the types of circumstances when this would be appropriate and for which tools.**

As mentioned above (Q5), the handling of such decisions is best left with the asset manager / fund governing body who have the requisite detailed understanding of the current liquidity in the relevant markets, the fund’s redemption terms, incoming redemption/subsription requests, etc. By contrast, in most instances, securities regulators will not be best positioned to assess all these factors and take decisions in a timely fashion in relation to individual funds.

Furthermore, in situations where the regulators “direct” the use of an exceptional measure, there could be concerns about “fair treatment” (i.e., why a particular fund is gated by the regulators, while another one is not). This could result in regulators taking “broad brush” decisions regarding the suspension of redemptions of entire classes of funds, with no regard of the specific circumstances of an individual fund.

As seen during the recent “Brexit” suspensions of redemptions among UK commercial property funds, there was no indication of reluctance of managers to enact such measures. In fact, investors today fully understand that these tools are necessary and important, i.e. not enacting such measures, when appropriate, could be seen as even more damaging for a manager’s reputation.

### Section 3: Leverage within funds

**Q9. In developing leverage measures (Recommendation 10), are the principles listed above for IOSCO’s reference appropriate? Are there additional principles that should be considered?**

Various regulators (including ESMA, US SEC etc.) already have spent considerable resources to develop methodologies to calculate leverage in the asset management sector. The methodologies focus on very different aspects and exhibit limitations in adequately capturing (presumable) “systemic risk” build up. One of the key trade-offs between the various methodologies is between simplicity versus “accuracy”.

The FSB proposes now to develop “simple and consistent” measures, which take into account netting/hedging assumptions, enable “direct comparisons across funds at a global level” (Recommendation 10) and minimise model risk. The problem is that “simple” approaches are usually not very accurate, and more accurate approaches require more assumptions, making them more complex (and introducing model risk).

**Inputs required for more complex leverage measures**

- Assumptions about risk characteristics of different instruments/assets
- Assumptions about eligible hedges across different instruments/assets
- Methodologies to account for diversification in portfolios etc.

In addition, it is also important that systemic risk regulators assess how meaningful these various measures are for “systemic risk measurement purposes”. As seen in the past, overreliance on singular risk models and concepts (e.g., in the run up to the banking crisis with Basel II capital framework, VAR-modelling etc.) can create false comfort and in fact hide the build-up of risks.

Therefore, it is important to develop a more thorough understanding of the different approaches to leverage calculation, as well as the type of conclusions / analyses they allow. Our response to Q 12 provides a high level assessment of the benefits and limitations of different methods, while the table below provides a summary of the characteristics of different leverage measures.

**Characteristics of different leverage measures:**

Criteria	Financial leverage	Gross method (or GNE)	Commitment method	VAR method
<b>Risk based” or “exposure based”</b>	Exposure based, but... (see below)	Exposure based, but... (see below)	Exposure based, but ... (see below)	Risk based
<b>Accounts for off-balance sheet positions</b>	No	Yes	Yes	Yes
<b>Accounts for hedging/netting</b>	No	No	Yes	Yes
<b>Accounts for riskiness of underlying assets</b>	No	No	No	Yes
<b>Suitable for comparison within strategies /sectors</b>	Limited (if portfolios assets are similar and no off-balance sheet positions)	No (off balance sheet: does not distinguish between added risk vs. hedges, not an actual risk measure)	Yes (if risk characteristic of portfolio assets are similar)	Yes
<b>Suitable for risk comparison across strategies/ sectors</b>	No	No	No	Yes
<b>Can be aggregated (within sector)</b>	Yes	Yes (as a footprint measure, not risk measure)	Yes (but would not account for diversification across funds)	No
<b>Can be aggregated (across sectors)</b>	No	Yes (as a footprint measure, not risk measure)	No (unclear meaning, since it is neither a “footprint” such as gross leverage, nor risk)	No
...				

### **Key recommendations for the FSB and IOSCO:**

- The FSB should take account of existing work by securities regulators, as highlighted above, and assess the pros/cons and shortcomings of the various measures, before setting out to develop further measures.
- This can be supported by establishing more clearly the characteristics the leverage measure(s) should fulfil (in addition to the principles set out in the Consultative Document), e.g. *precision in measuring actual risk for comparability purposes* versus *ability to aggregate leverage across funds/sectors*.
- It is possible that the set of “leverage measures” will not produce simple and conclusive evidence for “mechanistic” regulatory interventions as suggested under Recommendation 11 (p.26).
- Where securities regulators set “overall leverage / risk limits”, the FSB should assess the (unintended) implications (e.g., triggering selling of assets in situations when limits are “hit”, while investors normally would be prepared to hold on to a particular position).

### **Q10. Should simple and consistent measure(s) of leverage in funds be developed before consideration of more risk-based measures, or would it be more appropriate to proceed in a different manner, e.g. should both types of measure be developed simultaneously?**

Both types of measures should be explored simultaneously in order to understand the pros and cons as per the analysis under question 9.

The FSB should also take into account that some investors employ different leverage formulae for different asset management strategies (Equities, FI, Credit, Convertible Bonds, Currency, ...) to obtain a more accurate perspective on actual financing risk. While this introduces more complexity it provides investors with a more accurate tool to monitor risk within strategy buckets (with similar underlying risk characteristics). More importantly, this is usually only one of many tools used to assess risk.

### **Q11. Are there any particular simple and consistent measures of leverage or risk-based measures that IOSCO should consider?**

As mentioned above, any new work in this area should be considered in the context of existing regulations. For each method, the FSB/IOSCO should clarify the limitations, the accuracy of measuring individual fund risk, the comparability of a particular measure (within strategy buckets) and across strategies, and the possibility for aggregation (see response to Question 9). New measures should be developed only where there is a clear gap/need and significant improvements can be achieved and taking into account the complexities and other points noted above.

We note that the AIFM-D Commitment Method seeks to address a number of the short-comings of both Financial Statement-based methods and Gross/GNE methods. While it is not a risk-based measure and has a number of shortcomings, the AIFM-D Commitment Method certainly provides a useful starting point.

### **Q12. What are the benefits and challenges associated with methodologies for measuring leverage that are currently in place in one or more jurisdictions?**

Different types of leverage measures exist, including financial Leverage measures (financial statement-based leverage, or balance sheet leverage) and risk-based leverage measures. Regulators have developed assessment methods such as the AIFM-D Commitment Method.

Below, we briefly elaborate on a number of these methods and assess the key issues when using them for financial stability risk assessment purposes.

## Financial Leverage measures

$$\text{Financial Leverage} = \text{Total assets} / \text{Equity (or NAV)}$$

Classic financial leverage<sup>15</sup> measures have been useful in comparing and aggregating the riskiness of banks, in particular when they have relatively homogenous and comparable balance sheets and the value of the assets (consumer loans, mortgages and corporate loans) are affected by similar underlying risk factors (such as loan default rates).

Financial leverage is also a useful tool in the financial analysis and comparison of companies within specific sectors (where the underlying company assets exhibit similar risk characteristics, e.g. airline with fleet of aircraft). It is less meaningful for “comparing risk” between different industry sectors, where the underlying risk characteristics of the assets are very different (e.g., airline company vs. real estate firm). Furthermore, financial leverage does not account for an entity’s “off balance sheet” exposures, which can increase, or reduce (hedge), risk.

**Conclusion: “Financial leverage” can be interpreted as an amplifier of volatility (“impact of the variation in the total exposure/total assets (e.g., bank loans) on the equity capital of the entity”).**

### **Key characteristics and limitations of financial statement-based leverage measures for investment funds:**

- These measures are not stand alone risk measures and can be interpreted as an amplifier of underlying volatility
- They do not take into account off balance sheet exposures
- They can be used for “risk comparison” purposes ***only*** if the characteristics of the respective underlying asset pools are comparable<sup>16</sup> (and there are no “off balance sheet risk positions”) They are not useful as comparative measures where the risk characteristics of the respective underlying asset pools are very different (e.g., a leveraged diversified AAA government bond portfolio versus a leveraged concentrated venture capital fund). In such instances, a measure which incorporates the risk of the underlying asset pool and leverage is needed (“risk-based leverage measure”) for meaningful comparison.
- Such measures provide more meaningful results when the underlying asset pool is relatively homogeneous in terms of sensitivity to underlying risk drivers (e.g., default rates of bank loans as a function of the state of the economy) and then can be used as a good proxy for the “fragility” of an entity against shocks (in comparison to similar sector peers)
- They only can be aggregated<sup>17</sup> in a meaningful manner across multiple entities if the underlying asset pools are homogeneous/comparable (e.g., adding all bank balance sheets together into a single aggregate balance sheet to measure the financial leverage of the

<sup>15</sup>Financial Leverage = Total Assets (Exposure) / Equity Capital (NAV); Financial Leverage is also referred to as “financial statement based leverage” or “balance sheet leverage”

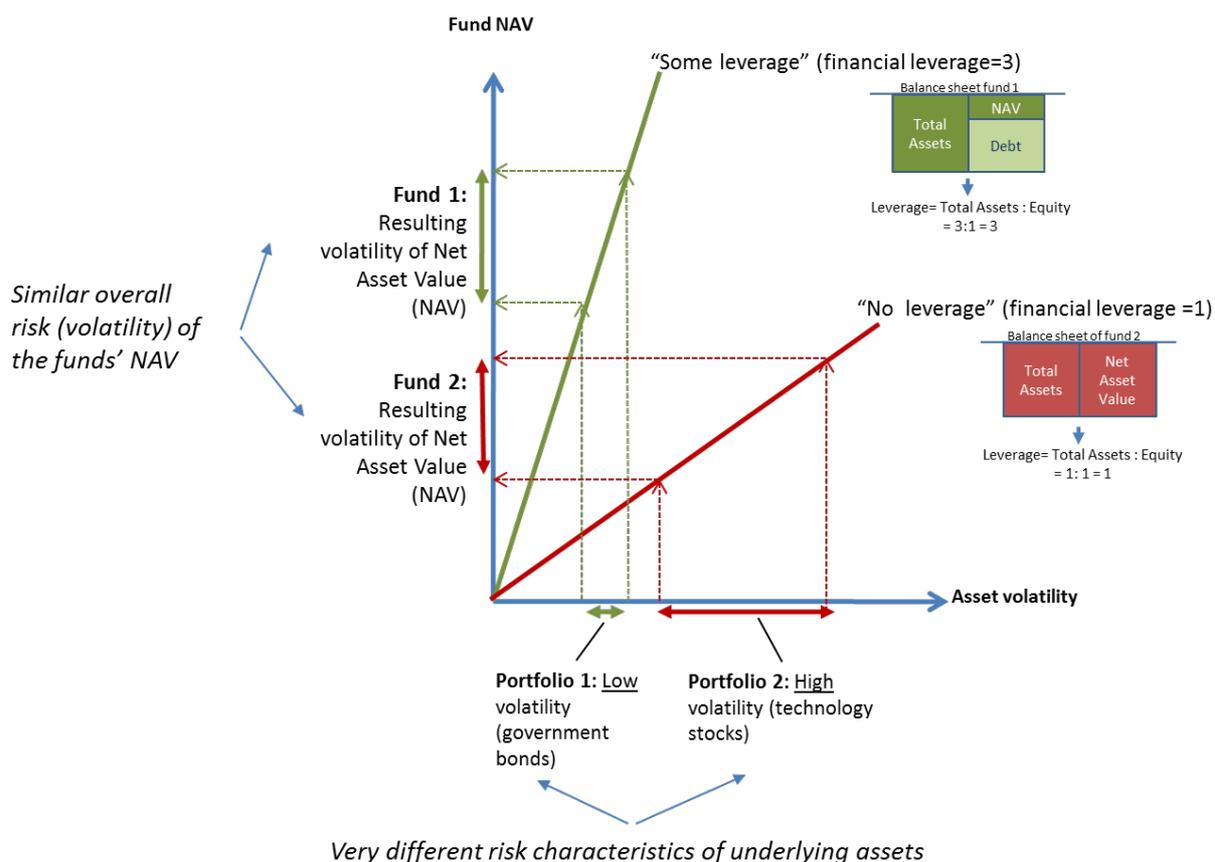
<sup>16</sup> E.g. comparing the balance sheets of two banks (with similar mortgage portfolios) or two companies in the same sector/with similar activities

<sup>17</sup> Equity (or NAV) weighted

entire banking sector). *The aggregate measure can be used to monitor the aggregate “riskiness” of the (banking) sector over time under the assumption that the type of underlying assets remains the same (Note: Basel has introduced “risk-based” measures (i.e. risk-weighted assets) precisely to overcome the shortcoming in financial statement-based measures of the lack of adjustment for the riskiness of underlying assets).*

### Illustration 1: Impact of financial leverage: “higher leverage does not imply higher risk”

*“A low risk portfolio with high leverage can be equally risky as a high risk portfolio with low leverage”*



In light of these characteristics and limitations, it is clear that financial leverage measures only would work in a meaningful way for a very small subset of investment funds:

- No, or limited use of, off balance sheet/synthetic leverage through derivatives
- Measuring aggregate leverage over time is only meaningful within individual fund categories where the underlying respective asset pools exhibit similar risk characteristics
- Time series of aggregate leverage across different fund sectors (with different risk and leverage characteristics) have very limited informative value<sup>18</sup>

<sup>18</sup> Changes in aggregate leverage might be caused by fluctuations in the relative size of different fund sectors.

**Therefore, in situations where the asset pools exhibit very different risk characteristics, have different levels of diversification and use derivatives to hedge and create exposures (as is the case in hedge funds), risk-based measures provide more meaningful insights.**

For further reference, the Hedge Fund Working Group (HFWG) Final Report<sup>19</sup> published in 2008 highlighted the shortcomings and limitations of classic (financial statement-based) leverage measures and has explored “risk-based leverage measures”, which incorporate the “riskiness” of underlying assets. While such risk based measures are more meaningful, they will require more assumptions and risk models (such as VAR), thereby introducing new complexities and model risk (see next section).

### Risk-based leverage measures

Leverage is not an independent source of risk; therefore, additional information on the underlying risk factors also is required (either separately or as part of a single measure). In the HFWG Final Report, a number of different measures were suggested:

- Portfolio volatility / equity
- VAR/ equity
- Stress loss / equity
- Other loss measure / equity

**All of these relate a risk measure to the fund’s capacity to absorb this risk (for example, the fund’s equity/NAV). The advantage of these measures is that they are more easily comparable between different types of funds; however, it should be noted that volatility and VAR-based measures are not additive and cannot be easily aggregated.**

Regulators have come up with additional leverage measures, some of which are risk-based, which are explained in the next section.

### Regulatory leverage methods

Regulators have come up with a number of different leverage measures, which seek to account for the shortcomings of financial statement-based leverage measures.

#### Illustration 2: Regulatory leverage measures

Gross methods:

- AIFMD Gross Method
- FSB/IOSCO Gross Method (for NBNI G-SIFI)

Commitment methods:

- AIFMD Commitment Method
- UCITS Commitment Approach

Other:

- VAR Method (UCITS)
- US 1940 Act methodology<sup>20</sup>

Separately, the Basel III methodology for banks provides an updated framework to limit “leverage build-up” in the banking system.

<sup>19</sup> Final Report, Appendix E: [http://www.hfsb.org/wp-content/uploads/2016/04/final\\_report.pdf](http://www.hfsb.org/wp-content/uploads/2016/04/final_report.pdf)

<sup>20</sup> 1940 Act limits funds use of “leverage”, limits issuance of “senior securities” and prohibits complex capital structures

## Gross leverage measures

Different approaches exist to calculate Gross Leverage, including the AIFM-D Gross method and the methodology developed in the FSB/IOSCO Consultation on NBNI G-SIFIS (Gross Notional Exposure [GNE]). The gross method adds all long and short exposures, including off-balance sheet positions, and divides by NAV:

$$\text{Gross Leverage}^{21} = \frac{\text{[Long + Short Exposures (incl. off-balance sheet activities)]}{\text{NAV}}$$

There have been a number of key challenges with the Gross Method:

- **Accounting for hedging of risk:** While the gross method seeks to account for derivative exposures, it does not take account of positions that do offset risks in the portfolio. *In simplistic terms, the method is not able to distinguish between a fund that has hedged all its exposures via derivatives versus a similar fund where all exposures are doubled up via derivatives.*
- **Accounting for different types of risk of underlying assets and derivatives:** The gross method does not account for the riskiness of the portfolio; for example:
  - The different underlying risk characteristics of fixed income instruments, FX positions, equities etc. are not accounted for.
  - Options, for example, which usually help to mitigate risk are accounted for at notional value, which can be a large multiple of the actual market value (at risk).

**Therefore, the informative value of the gross method is limited as far as “risk build up is concerned”.** It tends to overestimate risk in portfolios with low risk assets (diversified AAA government bonds) and significant amount of hedging activity, while it may underestimate the risk of a simple unlevered concentrated portfolio of high risk assets.

The UK FCA highlighted in its 2015 hedge fund survey<sup>22</sup> that gross notional exposure (GNE) “does not directly represent an amount of money (or value) that is at risk of being lost” but, instead, represents the gross size of positions taken in the market. The Survey also acknowledged “that hedge funds use risk management techniques to net out directional exposures”. Therefore, the UK FCA also refers to the “**market footprint**” in the context of GNE. Gross leverage can be aggregated across funds in order to calculate the total footprint of a fund category in the markets.

**In conclusion, gross leverage is not particularly useful in measuring risk but can be used as a measure of “market footprint” or interconnectedness.**

## Commitment methods

Commitment methods seek to address the shortcomings of the gross method by introducing frameworks to account for hedging activity (netting of certain exposures, duration adjustments etc.). While these approaches help to better account for actual risk, certain shortcomings remain, including room for interpretation and the risk of “over-netting” of exposures. As noted above, this is another example of the trade-off between “simplicity” versus “accuracy” and the need to determine **precisely** why a particular method is being proposed.

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<sup>21</sup> AIFM-D method

<sup>22</sup> FCA Hedge Fund Survey, 2015, p. 19: Definition of gross notional exposure and gross leverage  
<https://www.fca.org.uk/publication/data/hedge-fund-survey.pdf>

In contrast to the “true” risk-based methods illustrated above, the numerator of the commitment method is not a risk measure but an exposure measure; thus, it has some commonalities with a classic balance sheet type financial leverage measure but introduces quasi-exposures through derivatives, [and it accounts for hedges, which the other measures do not do].

Some of the limitations of the commitment method include:

- Not a stand-alone risk measure (underlying portfolio risk is not accounted for)
- Can be used for “risk comparison” purposes only if the characteristics of the respective underlying asset pools are comparable (funds within the same sector)
- Aggregation across different strategies / fund classes not meaningful

#### VAR metric

The VAR metric estimates the maximum expected loss under normal market conditions over a given period (e.g., 1 day) at a given level of confidence (95%, 99%).<sup>23</sup> VAR metrics are commonly used in liquid markets, and a VAR-based leverage measure will be able to capture the risk characteristics of underlying assets (diversification). However, VAR metrics also exhibit certain shortcomings, including:

- Dependence on historic data (simulation) or a set of correlation and distribution assumptions (var/covar matrix, normal distribution)
- Poor accuracy for non-linear/complex products
- Complex to calculate for large diversified portfolios

One of the benefits of VAR-based leverage measures (e.g. VAR / NAV) is that “risk” for different types of underlying asset pools can be directly compared. However, from a “systemic risk measurement perspective” one of the drawbacks of VAR-based leverage measures is that VAR is not an additive measure. Thus, the aggregate VAR (or VAR/NAV) for a sector or for all investment funds cannot be calculated easily from the VARs of the underlying funds.

The table provided in response to Q 9 provides an overview of the characteristics of different leverage measures in line with the analysis above, and is a useful starting point for further research regarding the precise information content and limitations of different measures.

#### **Q13. Do you have any views on how IOSCO’s collection of national/regional aggregated data on leverage across its member jurisdictions should be structured (e.g. scope, frequency)?**

The HFSB agrees that greater consistency is needed. IOSCO should review current data collection templates for available information that can be used to calculate the risk measures and map potential differences/gaps. The HFSB has a separate project underway to help with the harmonisation of risk reporting, and we will share the findings with IOSCO when the project is complete.

#### **Q14. Do the proposed policy recommendations on liquidity and leverage adequately address any interactions between leverage and liquidity risk? Should the policy recommendations be modified in any way to address these interactions? If so, in what ways should they be modified and why?**

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<sup>23</sup> For example: a 1-day VAR of US\$10 million at a 99% confidence level means that there is a 99% probability that the portfolio value will not fall by more than US\$ 10 million over a 1-day period (or that there is a 1% probability that the portfolio value will fall by more than US\$10 million).

HFSB agrees that there is a connection between leverage and liquidity. The policy recommendation, subject to the points raised above, does not need to be modified.

#### Operational risk and challenges in transferring investment mandate or client accounts

**Q15. The proposed recommendation to address the residual risks associated with operational risk and challenges in transferring investment mandates or client accounts would apply to asset managers that are large, complex, and/or provide critical services. Should the proposed recommendation apply more broadly (e.g. proportionally to all asset managers), or more narrowly as defined in Recommendation 13? If so, please explain the potential scope of application that you believe is appropriate and its rationales.**

The Consultative Document describes the challenges that could arise when transferring client accounts from one asset manager to another. It is important to highlight that there are different models in the hedge fund industry. In some (predominantly offshore) structures, the fund manager is one of the service providers of the fund, and, notwithstanding any contractual limitations, it can be replaced by another fund manager. At the same time, other service providers for the fund, including administrators, prime brokers, fund auditors, etc. can remain the same. While the new manager will have to build the managerial infrastructure to run the portfolio, the process around transfer of fund management to a new entity is often a lot easier than described in the document.

Finally, in contrast to bank deposits, client assets in the asset management sector are segregated from the fund manager's assets (and from the assets of other investors in other funds), removing the challenge of disentangling different claims against a very large asset pool.