

## **Consultative Document (2<sup>nd</sup>)**

# **Assessment Methodologies for Identifying Non-Bank Non-Insurer Global Systemically Important Financial Institutions**

## **Proposed High-Level Framework and Specific Methodologies**

**4 March 2015**



# Table of Contents

	<b>Page</b>
Introduction .....	1
1. Systemic risk and transmission mechanisms.....	4
2. High-level framework for identifying NBNI G-SIFIs .....	5
3. Operational framework for NBNI G-SIFI methodologies .....	10
4. Sector-specific methodologies (1): Finance companies .....	16
5. Sector-specific methodologies (2): Market intermediaries (Securities broker-dealers) .....	24
6. Sector-specific methodologies (3): Investment Funds .....	30
7. Sector-specific methodologies (4): Asset Managers .....	47
8. Guiding methodology for other NBNI financial entities.....	56
Attachment 1: Proposed indicators for assessing systemic importance of NBNI financial entities .....	58
Attachment 2: FSB NBNI G-SIFI assessment methodology procedural steps .....	59

## Introduction

At the Cannes Summit in November 2011, the G20 Leaders asked the Financial Stability Board (FSB), in consultation with the International Organization of Securities Commissions (IOSCO), to prepare methodologies to identify systemically important non-bank non-insurer (NBNI) financial entities. In response to the G20 request, the FSB tasked its Workstream on Other Shadow Banking Entities (WS3) to prepare, in consultation with IOSCO, proposed assessment methodologies for identifying NBNI global systemically important financial institutions (NBNI G-SIFIs), as part of its framework for reducing the systemic and moral hazard risks posed by SIFIs.<sup>1</sup>

The proposed methodologies for identifying NBNI G-SIFIs were published for public consultation in January 2014 (hereafter January 2014 Consultative Document).<sup>2</sup> The proposed methodologies comprised a high-level framework and an operational framework for identifying G-SIFIs that would apply across all NBNI financial entities, and detailed NBNI sector-specific methodologies for (i) finance companies; (ii) market intermediaries (securities broker-dealers); and (iii) investment funds (including hedge funds). These proposed methodologies aimed to identify NBNI financial institutions whose distress or disorderly failure, because of their size, complexity and systemic interconnectedness, would cause significant disruption to the wider financial system and economic activity at the global level or NBNI G-SIFIs in short.

While the proposed methodologies are intended to capture different types of systemic impact posed by a wide range of business models and risk profiles, they also maintained broad consistency with the existing assessment methodologies for global systemically important banks (G-SIBs) and insurers (G-SIIs).<sup>3</sup> At the same time, they also tried to overcome limitations in data availability, and the wide variety of business models in the NBNI space, by allowing a greater role for supervisory judgment in the assessment compared to the G-SIB and G-SII methodologies. The NBNI G-SIFI methodologies will thus rely on detailed analysis conducted primarily by national authorities, which is supplemented by home-host supervisory information-sharing and international coordination through the FSB process.

Consultative responses were received from more than 50 respondents, including trade associations, individual firms and individuals.<sup>4</sup> Most of the responses focused on the proposed methodology for investment funds where many respondents asked for a more thorough analysis of the systemic risks associated with asset management entities, including suggestions to focus more on “leverage” as the source of systemic risk associated with investment funds.

This document sets out, for a second public consultation, the proposed assessment methodologies for identifying NBNI G-SIFIs that the FSB, in consultation and close

---

<sup>1</sup> For details of the SIFI framework, see [http://www.financialstabilityboard.org/publications/r\\_101111a.pdf](http://www.financialstabilityboard.org/publications/r_101111a.pdf) and [http://www.financialstabilityboard.org/publications/r\\_130902.pdf](http://www.financialstabilityboard.org/publications/r_130902.pdf).

<sup>2</sup> [http://www.financialstabilityboard.org/wp-content/uploads/r\\_140108.pdf](http://www.financialstabilityboard.org/wp-content/uploads/r_140108.pdf)

<sup>3</sup> See <http://www.bis.org/publ/bcbs255.pdf> and <http://www.iaisweb.org/index.cfm?event=openFile&nodeId=34257>.

<sup>4</sup> All public responses are published on the FSB website ([http://www.financialstabilityboard.org/2014/04/r\\_140423/](http://www.financialstabilityboard.org/2014/04/r_140423/)).

coordination with IOSCO,<sup>5</sup> has been revising following the consideration of consultative responses. The revised methodologies extend the G-SIFI framework that currently covers banks and insurers to other financial institutions (possibly excluding certain types of NBNI financial entities as specified in Section 2.1),<sup>6</sup> and include: (a) near-final sector-specific methodologies for finance companies and market intermediaries; as well as (b) a revised proposal on sector-specific methodologies for asset management entities. The latter comprises a revised methodology for investment funds and a new proposed methodology for asset managers.

While this document proposes specific methodologies for the identification of NBNI G-SIFIs, it does not propose any specific entities for designation, nor any policy measures that would apply to NBNI G-SIFIs. As explained in a report to the G20 Leaders published in September 2013,<sup>7</sup> these steps will be taken in the following three phases:

- (i) Following the second public consultation period, the FSB, in consultation with IOSCO, will further revise the methodologies with the expectation that they will be completed by the end of 2015 (Phase 1).
- (ii) Once the assessment methodologies have been finalised, the FSB, in cooperation with IOSCO and other standard setting bodies (SSBs) where relevant, will begin work to develop within the FSB SIFI policy framework the incremental policy measures needed to address the systemic and moral hazard risks posed by NBNI G-SIFIs (Phase 2). The FSB and IOSCO believe any potential policy measures that would be applied to the identified NBNI G-SIFIs should be designed to target the risks and externalities associated with such entities.
- (iii) Following the development of incremental policy measures in Phase 2, the FSB and IOSCO will establish an International Oversight Group that will coordinate/oversee the actual assessment process conducted by its members in order to maintain international consistency in applying the NBNI G-SIFI methodologies, and begin the process for determining the list of NBNI G-SIFIs (Phase 3).

In developing the methodologies, the FSB based its work on the following principles:

- The overarching objective in developing the methodologies is to identify NBNI financial entities whose distress or disorderly failure, because of their size,

---

<sup>5</sup> Certain IOSCO member authorities may consider rule proposals or standards that relate to the substance of this report. These authorities provided information to IOSCO or otherwise participated in IOSCO's contribution to the preparation of this report, but their participation should not be viewed as an expression of a judgment by these authorities regarding their current or future regulatory proposals or of their rulemaking or standards implementation work. This report thus does not reflect a judgment by, or limit the choices of, these authorities with regard to their proposed or final versions of their rules or standards.

<sup>6</sup> NBNI G-SIFIs in this document also exclude financial market infrastructures (FMIs). Under the CPSS-IOSCO Principles for Financial Market Infrastructures (<http://www.bis.org/publ/cpss101.htm>), there is a presumption that all FMIs, as defined in the principles, are systemically important or critical, at least in the jurisdiction where they are located. However, authorities may treat particular FMIs as not systemically important if either they provide a comprehensive and clear rationale for that assessment, or disclose the criteria used to identify which FMIs are considered as systemically important and disclose which FMIs they regard as systemically important against these criteria.

<sup>7</sup> [http://www.financialstabilityboard.org/publications/r\\_130902.pdf](http://www.financialstabilityboard.org/publications/r_130902.pdf)

complexity and systemic interconnectedness, would cause significant disruption to the global financial system and economic activity across jurisdictions.<sup>8</sup>

- The general framework for the methodologies should be broadly consistent with methodologies for identifying G-SIBs and G-SIIs, i.e. an indicator-based measurement approach where multiple indicators are selected to reflect the different aspects of what generates negative externalities and makes the distress or disorderly failure of a financial entity critical for the stability of the financial system (i.e. “impact factors” such as size, interconnectedness, and complexity).

This document, first of all, explains how the financial distress or disorderly failure of an NBNI financial entity could be transmitted to other financial entities and markets, and thereby poses a threat to global financial stability (Section 1). It then sets out a high-level framework for identifying NBNI G-SIFIs and implementation approaches that will apply across all NBNI financial entities (Sections 2 and 3). This is followed by descriptions of detailed NBNI sector-specific methodologies (Sections 4-7) for (i) finance companies, (ii) market intermediaries (securities broker-dealers), (iii) investment funds (including hedge funds), and (iv) asset managers. The FSB led the development of (i), while the development of (ii), (iii) and (iv) was led by IOSCO. Finally, there is a guiding methodology for assessing the global systemic importance of other NBNI financial entities (or entity types) as a “backstop” to identify any potential G-SIFIs not captured by the above sector-specific NBNI G-SIFI methodologies (Section 8).

The FSB and IOSCO welcome comments on this document. Comments should be submitted by 29 May 2015 by email to [fsb@bis.org](mailto:fsb@bis.org) or by post (Secretariat of the Financial Stability Board, c/o Bank for International Settlements, CH-4002, Basel, Switzerland). All comments will be shared with IOSCO. They will be published on the FSB and IOSCO websites unless a commenter specifically requests confidential treatment.

---

<sup>8</sup> Therefore, the methodologies’ emphasis is on identifying indicators that point to systemic impact on failure, rather than an institution’s likelihood of failure.

## **1. Systemic risk and transmission mechanisms**

In considering how financial distress or disorderly failure of an NBNI financial entity could be transmitted to other financial firms and markets and potentially impact global financial stability, it is important to note that these entities have very diverse business models and risk profiles that in many respects are quite different from banks and insurers. This diversity in the business models and risk profiles, combined with the limitations in obtaining appropriate data/information for assessing systemic risks of NBNI financial entities in a global context (as explained in Section 2), makes it difficult to derive a comprehensive view that would capture every foreseeable transmission mechanism for any given NBNI financial entity.

There are three channels whereby financial distress of an NBNI financial entity is most likely to be transmitted to other financial firms and markets, and thereby pose a threat to global financial stability. These three channels are set out below.

### **1.1 Exposures / Counterparty channel**

The failure of an NBNI financial entity would affect its creditors, counterparties, investors, or other market participants through their exposures to the failing entity. As a result of the failing entity, effects may materialise in a cascading manner, leading to broader financial system instability if their exposures and linkages are significant.

### **1.2 Asset liquidation / Market channel**

This channel describes the indirect impact a failure of an NBNI financial entity could have on other market participants. If an entity has to liquidate its assets quickly, this may impact asset prices and thereby significantly disrupt trading or funding in key markets, potentially provoking losses for other firms with similar holdings. The potential for forced liquidations and market distortions may be amplified by the use of leverage by financial entities.

### **1.3 Critical function or service / Substitutability**

This channel describes the situation whereby an NBNI financial entity is no longer able or willing to provide a critical function or service that is relied upon by market participants or clients (e.g. borrowers) and for which there are no ready substitutes.

## 2. High-level framework for identifying NBNI G-SIFIs

### 2.1 Definition of NBNI financial entities

As stated in the Introduction, the NBNI G-SIFI methodologies have been developed to extend the G-SIFI framework that currently covers banks and insurers to other financial institutions.<sup>9</sup> Thus, NBNI G-SIFI methodologies include a high-level framework and an operational framework for identifying G-SIFIs that would apply across NBNI financial entities (as set out in this Section), as well as a “backstop” guiding methodology for assessing the global systemic importance of NBNI financial entities that are not covered by one of the sector-specific methodologies for (i) finance companies, (ii) market intermediaries, (iii) investment funds and (iv) asset managers (Section 8).

The FSB, in consultation with IOSCO, reviewed the need for refining the scope of NBNI G-SIFI methodologies based on the consultative responses received on the January 2014 Consultative Document. Based on this review, the FSB and IOSCO are considering excluding public financial institutions (e.g. multilateral development banks, national export-import banks),<sup>10</sup> sovereign wealth funds, and pension funds from the scope. The FSB and IOSCO are considering excluding public financial institutions and sovereign wealth funds from the scope as they are owned and fully guaranteed by a government. Regarding the proposed exclusion of pension funds, one rationale is that they pose low risk to global financial stability and the wider economy due to their long-term investment perspective. Pension funds are in general also covered indirectly through contractual relationships with asset managers<sup>11</sup> or use of investment funds. The FSB and IOSCO are inviting public views on the validity of such arguments and exclusion of these NBNI financial entities from the scope of NBNI G-SIFI methodologies on such grounds.

***Q2-1. In your view, is the exclusion of (i) public financial institutions, (ii) sovereign wealth funds or (iii) pension funds from the definition of NBNI financial entities appropriate? If so, please explain the rationale.***

***Q2-2. Please explain any potential systemic risks associated with failure or financial distress of (i) public financial institutions, (ii) sovereign wealth funds or (iii) pension funds that, in your view, warrant their inclusion in the definition of NBNI financial entities so that NBNI G-SIFI methodologies would apply.***

***Q2-3. Please explain any other NBNI financial entity types that should be excluded from the definition of NBNI financial entities so that NBNI G-SIFI methodologies would not apply and their rationale.***

---

<sup>9</sup> See footnote 6.

<sup>10</sup> “Public financial institutions” are defined as NBNI financial entities that are classified as “sovereigns”, “non-central government public sector entities” and “multilateral development banks” under the Basel II/III framework.

<sup>11</sup> For example, pension funds often set up separately managed accounts (SMAs) and ask asset managers to manage the assets in their SMAs based on the agreed mandate. If such SMAs and/or asset managers are appropriately captured by the sector-specific methodology for asset managers, pension funds may be said to be indirectly captured by such NBNI G-SIFI methodology.



## 2.2 Basic impact factors that apply across all NBNI financial entities

Unlike the methodologies for G-SIBs and G-SIIs developed by the Basel Committee on Banking Supervision (BCBS) and the International Association of Insurance Supervisors (IAIS),<sup>12</sup> respectively, methodologies for identifying NBNI G-SIFIs have to be applicable to a wide range of NBNI financial entities that often have very different legal forms, business models and risk profiles. This makes the task of the FSB particularly challenging in that the methodologies have to allow sufficient flexibility to capture different risks (or externalities) posed by entities in each type/sector appropriately while maintaining a certain degree of consistency across the entire NBNI financial space. The FSB attempts to overcome this challenge by establishing detailed indicators by each type/sector as well as introducing a basic set of impact factors to be applied to all NBNI financial entities in general (see Exhibit 1 for a schematic overview of the framework for identifying NBNI G-SIFIs).

The basic set of impact factors are listed below:

- (i) **Size**: The importance of a single entity for the stability of the financial system generally increases with the scale of financial activity that the entity undertakes.
- (ii) **Interconnectedness**: Systemic risk can arise through direct and indirect inter-linkages between entities within the financial system so that individual failure or distress can have repercussions throughout the financial system.
- (iii) **Substitutability**: The systemic importance of a single financial entity increases in cases where it is difficult for other entities in the system to provide the same or similar services in a particular business line or segment in the global market in the event of a failure.
- (iv) **Complexity**: The systemic impact of a financial entity's distress or failure is expected to be positively related to its overall complexity, i.e. its business, structural and operational complexity. That is, in principle, the more complex a financial entity, the more difficult, costly and time-consuming it will be to resolve the failing institution.
- (v) **Global activities (cross-jurisdictional activities)**: The global impact from a financial entity's distress or failure should vary in line with its share of cross-border assets and liabilities. The greater the global reach of a financial entity, the more widespread the spill-over effects from its failure.

These impact factors are broadly consistent with the impact factors used to identify G-SIBs and G-SIIs, and will be used as guidance to elaborate a set of indicators of global systemic importance for NBNI financial entities. The quantitative information derived from these indicators can be supplemented with qualitative information incorporated through supervisory judgement.

One of the key challenges in assessing the global systemic importance of NBNI financial entities is the difficulty in obtaining appropriate and consistent data/information. This stems in part from the fact that NBNI financial entities are primarily and traditionally regulated from a conduct of business (or investor/consumer protection) perspective. While many regulators are increasingly collecting data to facilitate assessments of financial stability risks, data

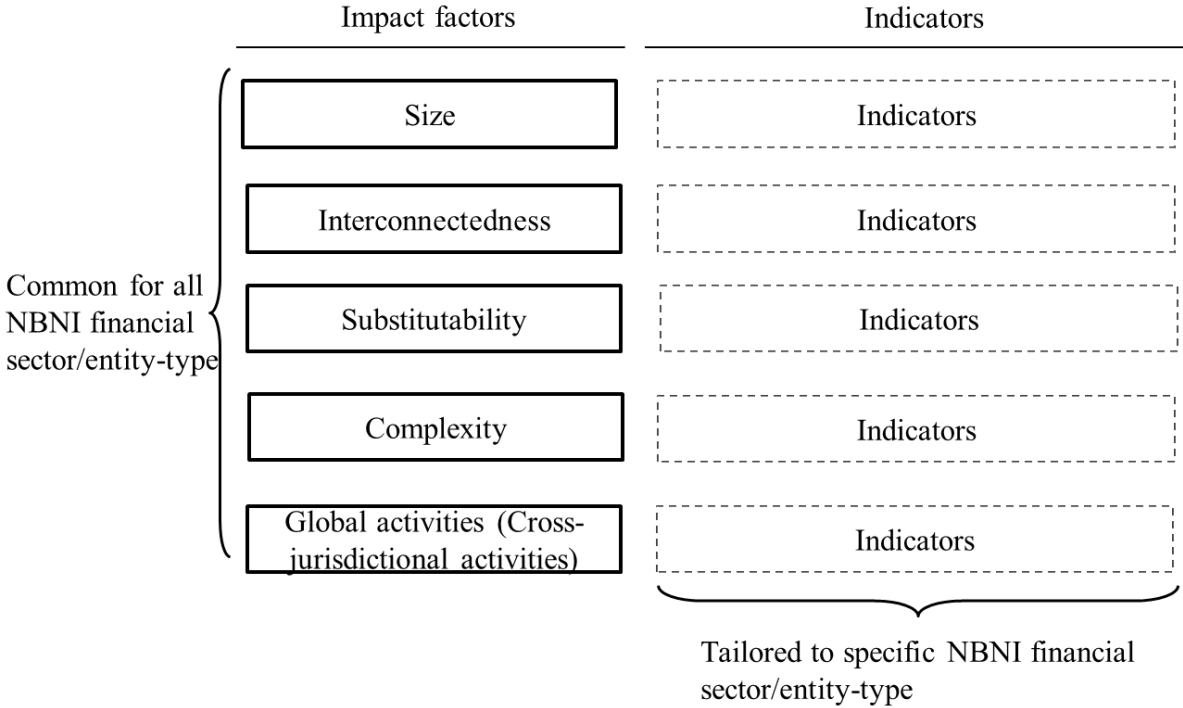
---

<sup>12</sup> See <http://www.bis.org/publ/bcbs255.pdf> and [http://www.iaisweb.org/view/element\\_href.cfm?src=1/19151.pdf](http://www.iaisweb.org/view/element_href.cfm?src=1/19151.pdf).

availability varies widely and is likely not to be consistent across jurisdictions. In addition, where regulators do have access to relevant information, much of the information may be subject to confidentiality regimes that prevent their use for global systemic risk assessment. In certain sectors, such as the private investment funds industry, data confidentiality protections tend to be more stringent than in other sectors.

To address these challenges, supervisory judgement likely needs to play a bigger role in methodologies for identifying NBNI G-SIFIs compared to the G-SIB or G-SII methodologies. The NBNI G-SIFI methodologies will rely on detailed analysis conducted primarily by national authorities, which is supplemented by home-host supervisory information-sharing and international coordination. The assessment by the home regulator will tend to use indicators more as guidance than as inputs to a common scale (i.e. rank-ordering). However, the implementation of such NBNI G-SIFI methodologies will be subject to international oversight to ensure consistent application and to avoid arbitrage across jurisdictions as well as sectors (the details of the international oversight process are explained in Section 3.3).

**Exhibit 1: Schematic overview of framework for identification of NBNI G-SIFIs**



**2.3 NBNI financial sector-specific methodologies**

The FSB has been consulting and coordinating closely with IOSCO in developing detailed methodologies for specific NBNI financial entity types, in addition to a general methodology (e.g. scope, materiality thresholds, and assessment process for operationalising the methodologies) as set out in the next section. Leveraging on the experience in selected jurisdictions, the FSB has been developing detailed sector-specific indicators for (i) finance companies. Similarly, IOSCO has been working on detailed sector-specific indicators for (ii)

market intermediaries (securities broker-dealers), (iii) investment funds and (iv) asset managers. While (i) and (ii) are now mostly finalised following consideration of responses received on the January 2014 Consultative Document, (iii) and (iv) will benefit from further refinement. The proposed indicators for the four sectors are summarised in Attachment 1.

These four NBNI financial entity types were chosen for their relatively large size in the non-bank financial space,<sup>13</sup> and given historical examples of financial distress or failures in these four sectors that had an impact (or potential impact) on the global financial system. That said, the choice of these four entity types should be seen as a first stage in the development of concrete indicators, and does not preclude further work to develop indicators for other entity types. The FSB has developed a generic guidance for authorities in assessing the global systemic importance of other NBNI financial entities (or entity types) in Section 8 until a need for a detailed sector-specific methodology arises.

For asset management entities, the FSB identified four possibilities for the scope of application and invited views from the public on the appropriate level in the January 2014 Consultative Document. These were: individual funds; family of funds;<sup>14</sup> asset managers on a stand-alone entity basis; and asset managers and their funds collectively.

As explained in details in Section 6, after considering the responses to the January 2014 Consultative Document, the FSB and IOSCO decided in favour of a more inclusive approach (i.e. a dual approach), which involves a comprehensive analysis of the impact of failure or distress that particular entities in the asset management industry could transmit to the global financial system by focusing on the two categories of actors involved in the asset management industry: (i) investment funds and (ii) asset managers.

This Consultative Document therefore proposes a methodology for identifying global systemically important individual investment funds (Section 6) and a separate methodology for identifying global systemically important individual asset managers (Section 7). The dual approach consists of: (i) a refined methodology for investment funds with an increased focus on leverage; and (ii) a separate methodology focused on activities that if conducted by a particular asset manager may have the potential to generate systemic risk and warrant consideration. Consistent with the other sector-specific NBNI G-SIFI methodologies, the overarching objective of the methodology regarding asset managers is to identify, on the basis of the activities they carry out, those whose distress or disorderly failure could cause significant disruption to the global financial system and economic activity across jurisdictions. The FSB and IOSCO invites views from the public on this new approach for asset management entities (see Section 6).

## **2.4 Review of NBNI G-SIFI methodologies**

Since the NBNI G-SIFI methodologies cover a wide range of business models, they will need to be reviewed and adjusted over time to reflect changes in the industry or market structures

---

<sup>13</sup> According to the FSB Global Shadow Banking Monitoring Report 2014, (i) finance companies, (ii) market intermediaries (broker-dealers) and (iii) investment funds comprise 70-80% of the total financial assets of all NBNI financial entities (as proxied by Other Financial Intermediaries) in 25 jurisdictions at the end of 2013. For details, see [http://www.financialstabilityboard.org/wp-content/uploads/r\\_141030.pdf](http://www.financialstabilityboard.org/wp-content/uploads/r_141030.pdf).

<sup>14</sup> Family of funds refers to a group of funds that follow the same or similar investment strategy that are managed by the same asset manager.

that have implications with respect to systemic risk, and to capture any progress in assessing systemic importance. This is especially relevant for NBNI financial entities with new sector-specific methodologies potentially needing to be developed depending on market evolution. A review of NBNI G-SIFI methodologies is also needed to ensure the overall consistency of all the detailed sector-specific methodologies.<sup>15</sup>

Based on such considerations, the FSB, in consultation with IOSCO and the relevant SSBs, will review the NBNI G-SIFI methodologies, both the general methodology applicable to all NBNI financial entities (i.e. high-level framework and operational framework) as well as the sector-specific methodologies, at least every three years in line with the similar review procedures included in the G-SIB and G-SII methodologies.

---

<sup>15</sup> In reviewing the overall consistency of all sector-specific NBNI G-SIFI methodologies, the FSB may also need to consider their broad consistency with G-SIB and G-SII methodologies.

### **3. Operational framework for NBNI G-SIFI methodologies**

#### **3.1 Scope of assessment**

As with assessing the global systemic importance of banks and insurers, the NBNI G-SIFI assessment methodologies aim to measure the impact that an NBNI financial entity's failure can have on the global financial system and wider economy, rather than the *probability* that a failure could occur. Thus, NBNI G-SIFI assessment methodologies should apply at the highest level of the firm that is a financial entity and on a globally-consolidated basis. This will capture systemic impact at the "global" level more adequately.

When NBNI financial entities are owned or controlled by banks and/or insurers<sup>16</sup>, NBNI G-SIFI assessment methodologies should be applied to financial entities that were not assessed by the G-SIB or G-SII methodologies for potential designation. In other words, NBNI financial subsidiaries of bank/insurance groups would be excluded from the scope of NBNI G-SIFI assessment if the parent entity has been assessed by the BCBS or the IAIS on a consolidated basis and the NBNI financial subsidiaries are captured in prudential consolidated regulation and supervision of the parent entity.<sup>17</sup> The reason for excluding such NBNI financial subsidiaries is that the impact of their failure on the global financial system is already assessed when the impact of its parent entity's failure was assessed on a global consolidated basis by the BCBS/IAIS as part of the G-SIB/G-SII methodologies.<sup>18</sup> However, investment funds managed by an asset manager subsidiary/affiliate of a banking group or insurer group will still have to be assessed by NBNI G-SIFI methodologies even if its parent entity was already assessed by G-SIB or G-SII methodology, as investment funds are usually not consolidated with the parent entity's financial statements.

#### **3.2 Materiality threshold for determining the assessment pool**

A materiality threshold will provide an initial filter of the NBNI financial universe and limit the pool of firms for which more detailed data will be collected and to which the relevant methodology will be applied. As in the case of the G-SIB/G-SII methodologies, such a threshold is relevant for reducing the size of the NBNI G-SIFI assessment pool to a practical and manageable number. It does not mean that NBNI financial entities that are above the threshold will be identified as G-SIFIs or factors other than the materiality threshold would not be considered in assessing their global systemic importance. Also, as in the case of G-SIBs and G-SIIs, national supervisory judgment could be used to add entities to the

---

<sup>16</sup> This includes financial holding companies for which prudential regulation for banks/insurers apply on a consolidated basis.

<sup>17</sup> The BCBS is currently reviewing the scope of consolidation for prudential regulatory purposes under its shadow banking work. It will develop guidance for public consultation by the end of 2015. For details, see <http://www.financialstabilityboard.org/wp-content/uploads/Progress-Report-on-Transforming-Shadow-Banking-into-Resilient-Market-Based-Financing.pdf>.

<sup>18</sup> The FSB and IOSCO recognise that the current list of G-SIBs is comprised of many banking groups that include market intermediaries that are significant players in the global financial system. Also, many NBNI financial entities that meet the definition of a market intermediary (as set out in Section 5.1) are subject to the Basel regulatory capital and liquidity framework (i.e. Basel III framework) and their parent is assessed by the G-SIB methodology for potential designation.

assessment pool even when they fall below the materiality threshold but are considered potentially globally systemic.

With these considerations in mind, the FSB is focusing on size (and leverage for asset management entities) to set the materiality thresholds for determining the assessment pools for NBNI G-SIFIs. Based on the analysis of NBNI financial entities and the responses received on the January 2014 Consultative Document, the FSB, in consultation with IOSCO, has set, or is considering setting, the following materiality thresholds. While the thresholds for finance companies and market intermediaries are now decided, the FSB and IOSCO are still considering the appropriate thresholds for investment funds (including for private funds) and asset managers, including the levels of such thresholds. Therefore, the views from the public on these proposed thresholds are invited (see Sections 6.3 and 7.3 for details).

- For finance companies and for market intermediaries (broker-dealers), the threshold is set at USD 100 billion in “balance sheet total assets” for determining the entities that will be assessed in detail by the relevant assessment methodology.
- For private funds (e.g. hedge funds, private equity), the proposed threshold has been set at USD 400 billion of gross notional exposures (GNE). The primary focus of this methodology is on highly leveraged funds, which is why all private funds which meet the USD 400 billion GNE test should be assessed further against the various indicators considered for other investment funds (i.e. traditional investment funds).
- For traditional investment funds, two options are being considered:
  - (i) Option 1: USD 30 billion in net asset value (NAV) and balance sheet financial leverage of 3 times NAV, with a size-only backstop of USD 100 billion net assets under management (AUM).
  - (ii) Option 2: USD 200 billion in gross AUM (GAUM) unless it can be demonstrated that the investment fund is not a dominant player in its markets (e.g. substitutability ratio<sup>19</sup> below 0.5% or fire sale ratio<sup>20</sup> below 5%).
- For asset managers, two options are being considered either exclusively or in combination:
  - (i) Option 1: A particular value (e.g. USD 100 billion) in “balance sheet total assets” for determining the entities that will be assessed in detail by the assessment methodology.
  - (ii) Option 2: A particular value (e.g. USD 1 trillion) in AUM for determining the entities that will be assessed in detail by the relevant assessment methodology.
- For other NBNI financial entities that are not assessed by G-SIB or G-SII methodologies, the threshold is set at USD 100 billion in “balance sheet total assets”.

---

<sup>19</sup> Substitutability ratio can be defined as the funds’ trading volume in relation to the daily trading volume of the underlying asset class (i.e. whether it is easily replaceable).

<sup>20</sup> Fire sale ratio can be defined as the extent to which the total net AUM of the fund could be easily absorbed, in a stressed market scenario, by the daily trading volume of the underlying asset class.

Leverage was added for investment funds and asset managers, as the FSB and IOSCO consider it to be an important potential source of risk for these entities based on the analysis of responses to the January 2014 Consultative Document.

In addition to “size”, the FSB and IOSCO also considered the possibility of setting additional materiality thresholds based on “global activities (cross-jurisdictional activities)”. However, since data regarding the international activities of NBNI financial entities are often not disclosed or reported to the relevant authorities, the FSB decided not to set additional materiality thresholds based on “global activity”.

### **3.3 Assessment process and outcome**

As stated earlier, one of the key challenges in assessing the global systemic importance of NBNI financial entities is the difficulty in obtaining appropriate data/information, especially quantitative data on a globally consolidated basis. In addition, data confidentiality with regard to certain NBNI financial entity types makes it difficult for some jurisdictions to share their data with other FSB member jurisdictions. Thus, compared to G-SIB or G-SII methodologies, authorities will need to rely more on supervisory judgement in assessing the global systemic importance of NBNI financial entities. Given this wider scope to apply supervisory judgement, it is crucial to establish an appropriate international oversight mechanism to ensure consistency in the application of methodologies across jurisdictions. This international oversight mechanism is also important in ensuring consistency *across* NBNI financial sectors as different sector-specific methodologies (or indicators) may apply.

Based on these considerations, the FSB, in consultation with IOSCO, believes that the following process should be established for assessing the global systemic importance of NBNI financial entities. The process is based on assessments conducted by national authorities coupled with an international oversight mechanism to ensure consistent application across jurisdictions. Under this process, the primary national authority (home authority) would conduct an in-depth assessment of the global systemic importance of the financial entities that meet the materiality threshold based on the applicable sector-specific methodologies. The home authorities should decide which sector-specific methodology to be applied, in a consistent manner, to differing NBNI financial entities in their jurisdiction. The sector-specific methodologies require the home authorities to conduct both qualitative and quantitative analyses using the indicators set out in Sections 4-7, including, where appropriate, cross-border supervisory information sharing and by application of supervisory judgment to determine whether the financial distress or the failure of the entity concerned would harm global financial stability. An international oversight group will be established to help ensure, through joint review, an internationally consistent application of methodologies and consensus on potential designation. The FSB and national authorities, drawing on relevant qualitative and quantitative indicators, together will determine the final list of G-SIFIs (See Attachment 2 for an overview of the assessment process).

- (i) ***Establishment of an international oversight group:*** The FSB and IOSCO will form an international oversight group on NBNI G-SIFI assessment (hereafter IOG) that will coordinate/oversee the actual assessment process conducted by its members in order to maintain international consistency in applying the NBNI G-SIFI methodologies agreed by the FSB and IOSCO. The IOG will initially be led by co-chairs nominated by the FSB and

IOSCO, and consist of representatives from FSB and IOSCO member jurisdictions, and other relevant SSBs, as well as the FSB and IOSCO Secretariat, and will report to the FSB Standing Committee on Supervisory and Regulatory Cooperation (SRC), and to the IOSCO Board for the NBNI financial entities within IOSCO's competence (i.e. methodologies for market intermediaries (securities broker-dealers), investment funds and asset managers).

Should the FSB decide to expand the scope to include other NBNI financial entity types, their competent international standard-setting bodies will be involved, where applicable, in the designation process in coordination with the FSB. The process below will be adjusted accordingly for the new NBNI G-SIFI methodologies.

- (ii) ***Compilation of reference (or "Stage 0") lists:*** The IOG will compile reference (or Stage 0) lists of the NBNI financial entities that are subject to the relevant NBNI G-SIFI sector-specific methodologies in FSB and IOSCO member jurisdictions that equal or exceed the materiality threshold(s) set by the methodologies,<sup>21</sup> broken down by type of NBNI financial entity. These initially include: (i) finance companies; (ii) market intermediaries (securities broker-dealers); (iii) investment funds; and (iv) asset managers.

These reference Stage 0 lists are to identify NBNI financial entities that would then be assessed in more detail by the relevant national authorities using the NBNI G-SIFI methodologies. The Stage 0 lists are used to obtain the overall picture of NBNI financial entities subject to the NBNI G-SIFI methodologies.

The compilation of Stage 0 lists should be based on the guidelines to be set by the FSB, in consultation with IOSCO and other relevant SSBs. The lists will be shared among the IOG members on a confidential basis for further detailed assessment.

In compiling the lists, a buffer may be set below the materiality thresholds for collecting additional names so as to prevent potential arbitrage or to capture errors that may occur around the thresholds. These lists should include any NBNI financial entity, even if it is owned by firms in other sectors such as banking and insurance. The lists should be based primarily on publicly available information<sup>22</sup> and the data should be globally consolidated or aggregated to ensure inclusion of entities that would only meet the materiality thresholds on a global basis.

- (iii) ***Assignment of NBNI financial entities to the appropriate jurisdictions for detailed assessment:*** The IOG will assign each financial entity on the Stage 0 lists to the jurisdiction that is the home of the financial entity (i.e. the jurisdiction where the entity is headquartered) for detailed assessment. If the jurisdiction is not an FSB member or a member of IOSCO or other relevant standard-setting bodies, the relevant authorities in that jurisdiction will be asked to participate in the designation process as if they were a member of these bodies. Each home jurisdiction will communicate to the IOG the name(s) of the relevant authority or authorities that will be engaged in the assessment process, where an authority is a regulator or other appropriate government agency with the authority to engage in the assessment process.

---

<sup>21</sup> See Section 3.2 for the details of materiality threshold(s).

<sup>22</sup> For certain type of NBNI financial entities such as hedge funds, other types of information may be used.



- (iv) ***Preliminary analysis of the NBNI financial entities:*** National authorities will compile preliminary (“Stage 1”) lists for each type of NBNI financial entities that meet the materiality thresholds in their jurisdictions. Such lists should also include any NBNI financial entities from the Stage 0 list that were assigned to each jurisdiction by the IOG in step (iii) above. In addition, national authorities may add other NBNI financial entities in their jurisdictions that are below the materiality thresholds but which they determine should still be added for more detailed assessment. National authorities will exclude NBNI financial entities that are outside the scope of NBNI G-SIFI designation (i.e. NBNI financial subsidiaries of financial entities already assessed by the G-SIB/G-SII methodologies).<sup>23</sup> National authorities will submit the Stage 1 lists to the IOG on a strictly confidential basis.<sup>24</sup>

National authorities will then collect data/information on the indicators set out in the NBNI G-SIFI sector-specific methodologies for each of the NBNI financial entities on the Stage 1 lists using all available sources, including public information, supervisory information, or, if possible, information obtained directly from the relevant NBNI financial entity (e.g. interviews). Based on the data/information collected, national authorities will conduct an analysis of the impact of failure or distress of the entity on the global financial system, and develop a “Narrative Assessment” discussing all the indicators, as well as the transmission mechanisms resulting from failure or material distress, according to the guidelines to be set by the FSB, in consultation with IOSCO and other relevant SSBs. Narrative Assessments are a critical element in this process as appropriate data/information on the relevant NBNI financial entity is often difficult to obtain or, for some jurisdictions, difficult to be shared with other jurisdictions due to data confidentiality issues, which is less of an issue for the G-SIB or G-SII methodologies.

To assess the indicators on a global basis, national authorities should work with other key host jurisdictions as necessary. National authorities will have the option of consulting with financial entities through industry-wide consultations or with them directly for information.

- (v) ***Cross-jurisdiction and cross-sector consistency check:*** National authorities will provide an initial Narrative Assessment and a recommendation on which NBNI financial entities should be identified as NBNI G-SIFIs to the IOG. Data should be included to support the assessments, as appropriate and as is legally feasible. All Narrative Assessments will be treated as strictly confidential, and may require IOG members to sign a confidentiality agreement. The IOG will discuss the assessments and recommendations, with a focus on consistency of implementation across jurisdictions. In particular, the IOG may seek comments from key host jurisdictions where the NBNI financial entity has significant operations. The IOG may also pose questions for additional analysis as appropriate. The IOG will convey its views to the relevant national authorities.
- (vi) ***Preliminary Determination:*** National authorities will consider the feedback from the IOG, conduct follow-up analyses where necessary, and reach a preliminary determination on the

---

<sup>23</sup> In addition, for market intermediaries, authorities should also consider the relative systemic importance of a firm to entities in their jurisdiction that also perform significant market intermediary functions and have been assessed under the G-SIB methodology.

<sup>24</sup> Such lists should include reasons for excluding entities in Stage 0 lists.

designation of NBNI financial entities in the Stage 1 list. National authorities will communicate the preliminary determination (including the reasons for non-designation should that be the case) and the final Narrative Assessment to the IOG, which in turn will compile the Narrative Assessments and other related information from all national authorities for discussion and review by the FSB SRC, and the IOSCO Board for NBNI financial entities within IOSCO's competence. Prior to its recommendations, the SRC may conduct a comparability analysis among a select supervisors group to ensure that the potential NBNI G-SIFI designees are comparable with the G-SIBs and G-SIIs as necessary. The results of this analysis will be shared with IOSCO and other relevant SSBs on a confidential basis.

- (vii) ***Final Determination:*** Under the SIFI Framework adopted by the FSB and endorsed by the G-20 Leaders in November 2010,<sup>25</sup> the FSB and the national authorities together will determine the final list of G-SIFIs. The FSB will release a single, combined alphabetical list of all the NBNI G-SIFIs. A summary of Narrative Assessments for each identified G-SIFI will also be published. The above process will be repeated annually and an NBNI G-SIFI list issued every year, along with the G-SIB and G-SII lists, on the FSB website.

---

<sup>25</sup> [http://www.financialstabilityboard.org/publications/r\\_101111a.pdf](http://www.financialstabilityboard.org/publications/r_101111a.pdf)

## 4. Sector-specific methodologies (1): Finance companies

### 4.1 Definition

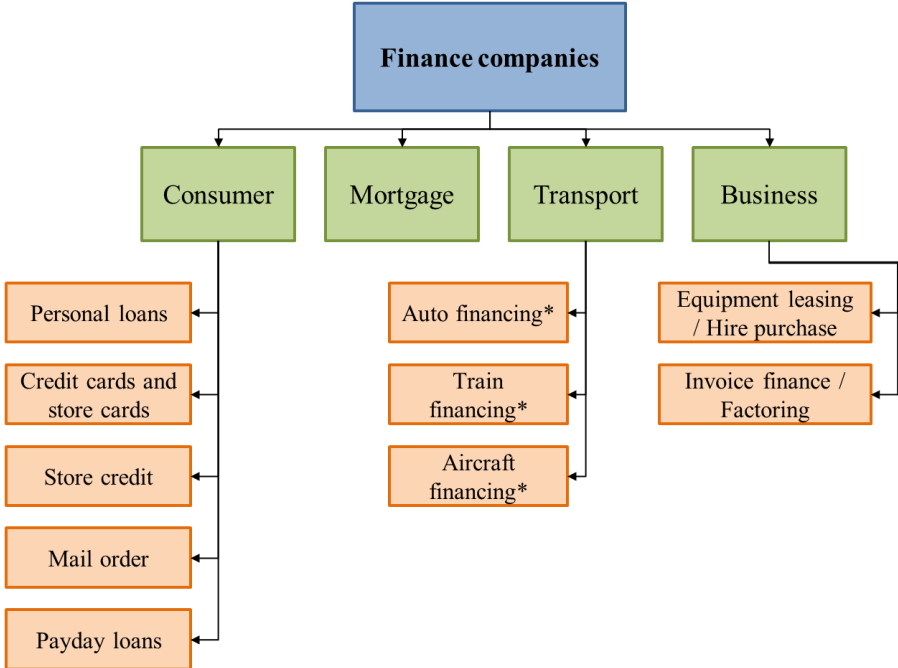
“Finance companies” are NBNI financial entities that provide finance to individuals and businesses. They mainly fund themselves using wholesale funding sources, including loans from banks, securitisation and commercial paper (CP).

Finance companies can broadly be split into four types:

- (i) *Subsidiaries or affiliates of banks* - These finance companies are often structured as a separate legal entity of a bank and do not usually take retail deposits.
- (ii) *Captive finance companies owned by manufacturers or distributors (hereafter captives) that finance sales of their parents’ products only* - Examples are finance companies owned by large car producers to finance sales of their cars.
- (iii) *Specialist providers (or monolines), who tend to finance only one particular type of asset* – For example, train and aircraft leasing companies or invoice finance providers.
- (iv) *Independents and captives operating in multiple financing markets* - Large finance companies that operate across multiple and diverse finance products, and often across multiple jurisdictions as well.

The types of financing provided by these finance companies can be split into four high-level categories – consumer; mortgage; transport; and business finance. Exhibit 2 provides some examples of financing products under each of these categories.

**Exhibit 2: Examples of financing products provided by finance companies**



\* Financing includes loans, leasing and hire purchases.

The regulation of finance companies varies significantly across jurisdictions. Some jurisdictions apply a level of prudential regulation to finance companies similar or equivalent to bank prudential regulation, whilst some jurisdictions regulate finance companies only from a conduct of business perspective. The regulation of finance companies may also vary within jurisdictions, depending on the legal structure of a finance company and/or the types of finance that they provide. For example, the Basel capital and liquidity framework (i.e. Basel III framework) would capture on a consolidated basis any bank-owned finance companies within its scope, while independent finance companies may only be regulated from a conduct of business perspective in some jurisdictions.

## **4.2 Systemic importance of finance companies**

In many jurisdictions, finance companies are important providers of credit to businesses and households. For example, finance companies provide invoice finance and equipment leasing to businesses. Finance companies also extend credit to households to allow them to purchase goods, such as through store credit or auto finance.

Finance companies often operate in highly competitive markets alongside other lenders, such as banks. While finance companies often operate with limited market share, some of the markets where finance companies operate may have relatively concentrated market structures (e.g. aircraft leasing). Concentration may be due to barriers to entry associated with specialised expertise, brand recognition, and economies of scope through marketing and cross-selling in multiple product areas. In certain cases, a sudden withdrawal of funding from finance companies in these markets (due to, for example, financial distress or bankruptcy) could be difficult to substitute quickly.

Finance companies' various business models are shaped by the range of customer segments served, the type of financing provided, funding sources, and the extent to which financing is linked to the sales of particular products. In this regard, the inherent riskiness of particular business models may differ across companies and jurisdictions. Risk analysis associated with these activities under normal business conditions may be insufficient to appropriately assess a firm's transmission of systemic risk during their distress or default. For example, captives tend to benefit from implicit or explicit financial support from their parent non-financial (industrial/manufacturing) company which is provided to finance the sales of parent company's products. However, during severe economic or market conditions, such captive finance companies' financial difficulties may in turn transmit stress to the industrial parent and its liability holders, and the likelihood of parent support may deteriorate.

Finance companies tend to fund themselves using wholesale funding sources, such as bank loans, unsecured debt, commercial paper (CP), asset-backed commercial paper (ABCP), and other securitised products. As such, finance companies' reliance on wholesale funding could make them particularly susceptible to funding problems in times of market stress, especially if they are highly leveraged or if their funding is relatively short-dated compared to the maturity of their assets. For instance, during the recent financial crisis, providers of wholesale funding, including banks and money market funds (MMFs), scaled back their provision of funding to some finance companies, impacting finance companies' ability to obtain funding. In turn, funding difficulties hampered finance companies' ability to lend to the real economy. As a

result, authorities in a number of jurisdictions extended solvency and liquidity support to them directly or indirectly.

Conversely, the failure or severe distress of a large finance company could potentially lead to losses for providers of funding, and even lead to severe disruptions in key wholesale funding markets where finance companies are active (e.g. the securitisation and CP markets). Counterparties may also have exposures to finance companies through derivative contracts.

In summary, some finance companies could be systemically important due to their significance in providing certain types of finance and the potential difficulty of substituting certain types of finance that they provide to the real economy (i.e. the critical function/substitutability channel). They may also pose a risk to the financial system due to their interconnections with other financial institutions and their issuance in key funding markets (i.e. the exposures/counterparty and asset liquidation/market channels).

### **4.3 Indicators for assessing systemic importance**

One of the key challenges in assessing the systemic importance of finance companies is the difficulty in obtaining appropriate data/information. The FSB WS3 conducted an international data collection exercise in early 2013, which involved its member jurisdictions providing data on their three largest finance companies. The objective of the exercise was to assess the degree of data availability on finance companies and to test the relevance/feasibility of the proposed systemic importance indicators. The results of the exercise were, however, mixed. Whilst some jurisdictions were able to provide detailed data on their finance companies, others were only able to provide very limited data. These data availability issues may have been due to a number of reasons, including:

- Some jurisdictions do not have regulatory regimes for finance companies (including regulatory reporting) in place;
- Some regulatory authorities do not collect the type of data that are needed for assessing systemic importance; and
- Some regulatory authorities are unable to share the data with the FSB and other authorities, often due to confidentiality concerns.

The FSB took into account these data availability issues as much as possible when selecting its proposed systemic importance indicators as explained below. Furthermore, it leveraged on some of the indicators developed by the BCBS for G-SIBs where they were also applicable to finance companies.

#### **4.3.1 Size**

##### ***Indicator 1-1: Total globally consolidated balance sheet assets***

This is a key indicator for determining systemic importance. In addition, it is proposed that this indicator be used to determine the assessment pool of finance companies subject to the methodology.

##### ***Indicator 1-2: Total globally consolidated off-balance sheet exposures***

National authorities should also consider off-balance sheet assets, including derivatives, when assessing the systemic risk posed by a finance company. More specifically, authorities may

consider (a) guarantees, credit lines and letters of credit, and (b) long and short positions in options, swaps, forwards and futures on rates, credit, foreign exchange, commodities, and equities.

### **4.3.2 Interconnectedness**

#### ***Indicator 2-1: Intra-financial system assets***

A finance company's systemic impact is likely to be positively related to its interconnectedness with other financial institutions and financial markets.

To enhance consistency and comparability with the assessment methodology for identifying G-SIBs,<sup>26</sup> the indicator for intra-financial system assets is calculated as the sum of following:

- Lending to financial institutions (including undrawn committed lines);
- Holdings of securities issued by other financial institutions;
- Net mark-to-market reverse repurchase agreements with other financial institutions;
- Net mark-to-market securities lending to financial institutions; and
- Net mark-to-market OTC derivatives with financial institutions.

It is recognised that some of these items may not be significant for finance companies. For example, finance companies may not be engaged significantly in lending to other financial institutions or in reverse repurchase agreements (reverse repos) and securities lending activities.

Also, national authorities should consider if, in addition to the sum, high levels of assets in any of these items, or concentrated exposures to particular entities through any of the items, warrant further qualitative assessment.

If some of these data items cannot be obtained, for example if only gross positions are available rather than net positions, jurisdictions should still seek to calculate a measure of intra-financial system assets but they should make a note of potential differences in their calculation of this indicator.

#### ***Indicator 2-2: Intra-financial system liabilities***

In line with the G-SIB methodology, this indicator is calculated as the sum of the following:

- Borrowings from financial institutions (including undrawn committed lines);
- All marketable securities issued by the finance company;
- Net mark-to-market repurchase agreements with other financial institutions;
- Net mark-to-market securities borrowing from financial institutions; and
- Net mark-to-market OTC derivatives with financial institutions.

In particular, derivatives liabilities, irrespective of the extent to which they are matched with derivative assets, may transmit contagion should the entity experience distress or disorderly failure.

---

<sup>26</sup> <http://www.bis.org/publ/bcbs255.pdf>

If some of these data items cannot be obtained, jurisdictions should still seek to calculate a measure of intra-financial system liabilities but they should make a note of potential differences in their calculation of this indicator.

***Indicator 2-3: Borrowings split by type***

While diversity of funding sources generally serves to reduce the probability of funding disruptions, a high level of interconnectedness with other financial institutions may however amplify stress emanating from the distress or default of a finance company. Granular data on a finance company's borrowings, split by type, can provide valuable insights into which funding markets they are active in and which financial institutions might be impacted by their failure. For example, if an entity has a significant amount of outstanding CP, this could mean that its failure could have negative repercussions for the CP market, which in turn could impact other financial institutions that issue in the CP market as well as investors in CP. Borrowing amounts should be provided for each of these categories:

- CP, including ABCP;
- Unsecured debt;
- Securitisation;
- Due to banks (of which: due to parent bank); and
- Other.

National authorities should also assess information on the maturity of these borrowings, with a particular focus on short-term borrowings, and the extent to which short-term liabilities are not matched by short-term assets.

Where data is available, national authorities may also consider the extent to which the finance company's borrowings represent a material exposure to counterparties in each of its key funding markets, as this may further contribute to the transmission of risk.

In assessing captives, national authorities should also consider the extent to which (a) explicit or implicit parent company guarantees exist, (b) the captive can actually rely on parent funding in the event of diminished market funding due to general market dislocation or company-specific (idiosyncratic) events, and (c) such events may cause financial strain on the parent that, in turn, may transmit stress to its lenders. In this regard, national authorities should consider the size and claims of the captive relative to the parent, as the larger the captive is relative to the parent, the less ability the parent may have to support the captive during prolonged funding disruption.

***Indicator 2-4: Leverage ratio***

Leverage can amplify the impact of a finance company's distress on other financial entities, both directly, by increasing the amount of exposure that other firms have to the finance company, and indirectly, by increasing the size of any asset liquidation that the company may be forced to undertake should it come under financial pressure. It should be calculated as: total shareholder equity divided by the sum of on-balance sheet assets and off-balance sheet exposures.

### **4.3.3 Substitutability**

***Indicator 3-1: Qualitative assessment of “substitutability”, which takes into account the firm’s market share in various financing markets and ease of substitutability by other provider(s) of funding***

The difficulty in finding quantitative indicators that adequately capture the substitutability of a finance company, suggests the use of a qualitative approach (i.e. qualitative assessment by the relevant authorities). The assessment should take into account the firm’s market share in various financing markets, broken down by type of finance (e.g. automobile finance, mortgages) and also by geographical area, where data is available. In some cases, the financing market under consideration might be specialised (e.g. aircraft leasing). The assessment should also consider how easy it would be for another finance provider, such as another finance company or a bank, to step into this market in the event that the firm fails. This should take into account barriers to entry, such as regulation and specialist expertise required. In addition, the assessment should consider substitutability in both benign and stressed credit environments, giving consideration to the amount of loans maturing in particular segments and available substitute lenders to meet borrowers’ continuing needs. In this regard, loans and relationships that may be transferred with ease to competing institutions during favourable economic conditions might experience obstacles (e.g. reduced credit availability, higher underwriting standards) in adverse conditions. Based on this assessment, authorities will make a qualitative judgement on the finance company’s substitutability at the global level.

### **4.3.4 Complexity**

***Indicator 4-1: OTC derivatives notional amount<sup>27</sup>***

The focus of this indicator is on the amount of OTC derivatives that are not cleared through a central counterparty. The greater the number of non-centrally cleared OTC derivative contracts a finance company enters into, the more complex a finance company’s activities. This is especially so in the context of resolution of firms in bankruptcy, as highlighted in the failure of Lehman Brothers. This indicator should capture notional values of all types of derivatives (i.e. sum of foreign exchange, interest rate, equity, commodities, credit derivatives). Authorities may use total notional value of all derivatives if the breakdown of OTC derivatives contracts and centrally-cleared derivatives contracts is not available.

***Indicator 4-2: Difficulty in resolving a firm***

In addition to the quantitative indicator above, a qualitative assessment of the resolvability of a firm can be considered to assess its complexity. The FSB’s *Key Attributes of Effective Resolution Regimes for Financial Institutions*<sup>28</sup> identifies four endogenous, firm-specific factors that can be used to assess the resolvability of a firm, including: (i) operational and legal complexity of the firm’s structure and operations; (ii) degree of internal

---

<sup>27</sup> In line with the G20 initiative on OTC derivatives reform, notable progress is being made with respect to OTC derivatives, including reporting of transactions to trade repositories, central clearing of standardised contracts, practices for sound risk management, capital and margin requirements, and other practices. For details, see [http://www.financialstabilityboard.org/wp-content/uploads/r\\_141107.pdf](http://www.financialstabilityboard.org/wp-content/uploads/r_141107.pdf).

<sup>28</sup> [http://www.financialstabilityboard.org/wp-content/uploads/r\\_141015.pdf](http://www.financialstabilityboard.org/wp-content/uploads/r_141015.pdf)



interconnectedness; (iii) membership in financial market infrastructures (FMIs); and (iv) quality of management information systems (MIS).<sup>29</sup> Such qualitative assessment should focus on the “difficulty” as the outcome is a mere proxy for the assessment of the complexity of a firm.

#### ***Indicator 4-3: Amount of less liquid assets***

This indicator focuses on the amount of assets priced on a recurring basis for which market-based prices are not readily available and models are relied upon to determine valuations.<sup>30</sup>

Level 3 assets are generally illiquid and complex to evaluate (i.e. their fair value cannot be determined using observable measures such as market prices or models). A finance company with a high level of illiquid assets could pose an increased risk of contagion through market channels, as its distress or failure could result in downward adjustments to similar classes of assets throughout the financial system.

National authorities may also consider the quantity of Level 2 assets categorised as trading or available for sale, with particular attention to asset classes deemed to be less liquid and more prone to sharp price fluctuations under stressed market conditions.<sup>31</sup> Authorities may refer to the Basel III Liquidity Coverage Ratio (LCR) methodology for further guidance on assessing asset liquidity. They may also assess the extent to which this form of complexity could contribute to the transmission of stress during adverse market conditions in which the firm experiences distress or default.

#### ***4.3.5 Global activities (Cross-jurisdictional activities)***

Global activities of a finance company are generally considered a source of diversification under normal conditions. However, these activities may create more difficulties when a finance company is experiencing distress or is failing, through transmitting risk in one jurisdiction to other or through making coordination of resolution difficult due to different resolution arrangements across jurisdictions.

#### ***Indicator 5-1: Size of cross-jurisdictional claims***

Cross-jurisdictional claims should be calculated in line with the BIS consolidated international banking statistics.<sup>32</sup> Claims include assets such as loans and holdings of securities.

#### ***Indicator 5-2: Size of cross-jurisdictional liabilities***

A firm would report its globally consolidated liabilities, excluding liabilities to entities in the home jurisdiction. The liabilities to be included would be based on the BIS locational international banking statistics definition of liabilities and would include borrowings and issues of debt securities.<sup>33</sup>

---

<sup>29</sup> Section 4, Appendix I-Annex 3 (Resolvability Assessments) of the FSB *Key Attributes*.

<sup>30</sup> This approach is based on the G-SIB indicators for complexity.

<sup>31</sup> OTC derivatives should be excluded when calculating this indicator, as they are captured in Indicator 4-1.

<sup>32</sup> For a full description of the data, definitions and coverage see <http://www.bis.org/statistics/consbankstatsguide.pdf>.

<sup>33</sup> For details, see [http://www.bis.org/statistics/bankstatsguide\\_repreqlc.pdf](http://www.bis.org/statistics/bankstatsguide_repreqlc.pdf)

***Indicator 5-3: Number of jurisdictions in which the finance company “conducts operations”***

If indicators 5-1 and 5-2 are not available, authorities can measure the finance company’s involvement in cross-jurisdictional activities by how many jurisdictions it and/or its subsidiaries are licensed, registered, or recognised by or reportable to the market regulator of the relevant jurisdiction.

***Indicator 5-4: Assets or revenues in foreign jurisdictions***

If indicators 5-1 and 5-2 are not available, authorities can also focus on segment information on the assets or revenues in foreign jurisdictions, where they are segregated by region or countries, as useful proxy information in understanding the significance of a finance company’s involvement in global activities. Authorities may give particular attention to a finance company’s foreign activities that appear large and more complex relative to its domestic market activities, and also relative to its peers’ activities in foreign jurisdictions.

## 5. Sector-specific methodologies (2): Market intermediaries (Securities broker-dealers)

### 5.1 Definition

“Market intermediaries” generally include NBNI financial entities that are in the business of managing individual portfolios, executing orders and dealing in, or distributing, securities. They may also include NBNI financial entities that engage in any of the following activities:

- Receiving and transmitting orders;
- Proprietary trading/dealing on own account;
- Securities underwriting;
- Providing funding to clients (e.g. margin loans, reverse repos); and
- Placing of financial instruments without a firm commitment basis.

As part of the assessment process, national authorities should clarify which type of NBNI financial entities will fall under the definition of market intermediaries for the purpose of identifying NBNI G-SIFIs in their jurisdiction and report it to the IOG.<sup>34</sup>

### 5.2 Systemic importance of market intermediaries

Regulation of market intermediaries is generally directed at identifying and mitigating risks to capital, client assets and public confidence. In particular, the insolvency of an intermediary may result in loss of client money, securities or trading opportunities, and may reduce confidence in the market in which the intermediary participates.

Although certain very large and internationally-active market intermediaries can in theory be systemically important, in general, market intermediaries present different risk profiles compared to banks and insurance companies because of the focus of securities regulators on protection of customer assets. Principle 30 of the *IOSCO Objectives and Principles of Securities Regulation* (hereafter IOSCO Principles) states that “there should be initial and on-going capital and other prudential requirements for market intermediaries that reflect the risks that the intermediaries undertake”.<sup>35</sup> In many jurisdictions, the capital requirements are designed to help ensure that customer assets are segregated and protected. In addition, under the IOSCO Principles, an intermediary should have sufficient liquid assets at all times in order to be able to wind down its operations in an orderly fashion, including transferring customer accounts to a solvent market intermediary.<sup>36</sup> In addition, IOSCO’s Principle 32

---

<sup>34</sup> There are different approaches across jurisdictions to the registration and/or licensing of entities that conduct these activities, and such entities may have different operational structures. This methodology is designed to focus on firms’ market intermediation activities rather than the provision of client advice or asset management services. For example, for the purpose of G-SIFI identification, entities that some jurisdictions consider as “portfolio managers” might more appropriately be assessed for systemic risk purposes under the methodology for asset management entities. Determinations of which methodology should be applied to a specific entity will be made on case-by-case basis by the home regulator in a consistent manner.

<sup>35</sup> <http://www.compliance-exchange.com/governance/library/ioscoprinciples2010.pdf>

<sup>36</sup> For example, in the US, Rule 15c3-1 (17 CFR 240.15c3-1) adopted by the Securities and Exchange Commission (SEC) establishes minimum capital requirements for US broker-dealers (the “Net Capital Rule”). The rule is based on concepts

states that “there should be a procedure for dealing with the failure of a market intermediary in order to minimize damage and loss to investors and contain systemic risk”.

Despite these protections, the failure of a market intermediary that has extensive exposures and liabilities in the financial system could have a destabilising impact on other systemically important counterparties, or on multiple counterparties in a cascading manner that could lead to broader financial system instability (the exposures/counterparty channel). Some market intermediaries may pose risks to the financial system through their intra-financial system activities (interconnections), and/or be impacted by risks arising from the activities of other related entities in its group.

The impact of the financial distress of a market intermediary may also flow through market channels. Market intermediaries are often significant lenders or borrowers in the financial system, and in times of stress, there is a potential for increased margin calls and/or fire sales in the broader market. For example, the failure of a market intermediary could seriously disrupt certain funding and/or derivatives markets, possibly leading to runs on other financial firms. In addition, while the focus of the methodology is on identifying the risks to the financial system, rather than on risks to investors, the failure of a systemically important intermediary resulting in large client losses could also result in a loss of investor confidence, also posing risks to the integrity and stability of financial systems.

**5.3 Indicators for assessing systemic importance**

In developing the criteria and indicators for assessing the systemic importance of market intermediaries, the indicators for identifying G-SIBs were considered and adapted to capture similar measures of systemic importance (negative externalities), but with a focus on characteristics relevant to the risks posed by NBNI financial entities performing market intermediary functions.

It is important to recognise that the current list of G-SIBs is comprised of many banking groups that include market intermediaries that are significant players in the global financial system.

The following indicators should be considered in the methodology for determining global systemically important market intermediaries.

**5.3.1 Size**

***Indicator 1-1: Total globally consolidated balance sheet assets***

As stated in Section 3.2, this is also a threshold indicator to be used to determine the assessment pool of market intermediaries subject to the methodology.<sup>37</sup>

---

of liquidity. Specifically, it requires broker-dealers to maintain sufficient liquid assets to be able to satisfy promptly all obligations to customers and other persons without the need for a judicial proceeding in the event the firm is unable to continue in business.

<sup>37</sup> For purposes of this methodology, the “global” size of an intermediary should be calculated as the sum of the consolidated balance sheet assets of registered broker-dealers or securities firms on a global basis. In other words, for broker-dealers or securities entities held by an NBNI financial holding company, consolidation of global balance sheet assets will include the holding company. However, if the broker-dealers/securities entities are held directly by a bank holding company or insurer holding company, the global balance sheet assets of all broker-dealers/securities entities will be consolidated not including the parent’s assets to avoid inflating the size calculation of the intermediary.

### ***Indicator 1-2: Total globally consolidated off-balance sheet exposures***

National authorities should consider off-balance sheet assets to the extent possible when assessing the systemic risk posed by the entity.

### ***Indicator 1-3: Client assets outstanding***

Client assets are another proxy for size. The more client assets held, the greater the potential impact on the market of the entity's distress or failure. National authorities may consider client assets in segregated accounts or pledged by the entity<sup>38</sup> or total client AUM. The assessment should focus on the impact of the entity's failure on the financial system through its client base and the potential for generalised market panic, rather than on the risk of harm to individual investors. In most cases, this indicator should be given less weight in the overall assessment than indicator 1-1. However, if a market intermediary's primary business is managing individual portfolios, this indicator should be given more weight.

### ***5.3.2 Interconnectedness***

As an initial matter, national authorities should calculate indicators 2-1 and 2-2 below. National authorities should then undertake further analysis by considering indicators 2-3 to 2-6, and exercising supervisory judgment to assess the interconnectedness and risks posed by the entity concerned. To the extent possible, quantitative information should be provided in the assessment of indicators 2-3 to 2-6 so as to facilitate international consistency.

#### ***Indicator 2-1: Intra-financial system assets***

A market intermediary's systemic impact is likely to be positively related to its interconnectedness with other financial institutions and financial markets. Consistent with the approach taken in the G-SIB methodology, this indicator is calculated as the sum of following:

- Lending to financial institutions (including undrawn committed lines);
- Holdings of securities issued by other financial institutions;
- Net mark-to-market reverse repurchase agreements with other financial institutions;
- Net mark-to-market securities lending to financial institutions; and
- Net mark-to-market OTC derivatives with financial institutions.

If some of these data items cannot be obtained, for example if only gross positions are available rather than net positions, jurisdictions should still seek to calculate a measure of intra-financial system assets but they should make a note of potential differences in their calculation of this indicator.

#### ***Indicator 2-2: Intra-financial system liabilities***

In line with the G-SIB methodology, this indicator is calculated as the sum of the following:

- Borrowings from financial institutions (including undrawn committed lines);
- All marketable securities issued by the market intermediary;

---

<sup>38</sup> Some jurisdictions allow an entity to use client funds for approved purposes, e.g. to pay margins on transactions to hedge exposures to clients.

- Net mark-to-market repurchase agreements with other financial institutions;
- Net mark-to-market securities borrowing from financial institutions; and
- Net mark-to-market OTC derivatives with financial institutions.

If some of these data items cannot be obtained, jurisdictions should still seek to calculate a measure of intra-financial system liabilities but they should make a note of potential differences in their calculation of this indicator.

***Indicator 2-3: Leverage ratio***

The greater a market intermediary's leverage, the greater the potential impact of its distress or failure on the financial system. Higher leverage would indicate that the impact of the firm's failure on the financial system could be significant and a deeper analysis of its leverage is warranted. The leverage ratio should be calculated as: total shareholder equity divided by the sum of on balance sheet assets and off-balance sheet exposures. For consistency, national authorities should consider off-balance sheet items as defined by the BCBS in the Basel III framework.<sup>39</sup> In analysing leverage, national authorities should also consider the quality of the underlying assets and the sources of funding (such as funding from corporates).

***Indicator 2-4: Short-term debt ratio***

A high level of short-term debt (i.e. due in less than one-year) could indicate that a market intermediary is experiencing funding difficulties, and its failure could have a significant impact on other financial institutions, particularly if its short-term funding is provided by other globally-active financial institutions.

The short-term debt ratio should be calculated as the ratio of debt with a maturity of less than one year to total consolidated assets. An entity with a short-term debt ratio of 10 per cent or more would indicate that the entity is highly reliant on other financial institutions for its operations and faces liquidity risk, warranting a deeper analysis of the firm's sources of funding. In analysing the sources of funding, national authorities should also consider (i) the concentration of counterparties that provide short-term funding to the intermediary and (ii) reliance on funding sources that are from G-SIBs or G-SIIs. In addition to the overall short-term debt ratio, authorities should also separately consider the ratio of open and overnight repos, with an emphasis on borrowing in the overnight market.

***Indicator 2-5: OTC derivatives assets and liabilities***

The extent and nature of intra-financial system obligations could exacerbate the effects of a market intermediary's distress or failure. OTC derivatives activities are an important source of interconnectedness for intermediaries. In the absence of central clearing, the more exposures an intermediary has in the derivative markets, the greater impact its failure could have on counterparties in the financial system. Where possible, national authorities should undertake a qualitative review of the risk posed by a firm's derivatives activity, including:

- counterparty concentration, especially concentration with other G-SIBs or G-SIIs;
- the fair market value of derivative contracts in a negative position ("negative mark to market");

---

<sup>39</sup> See Para.157-164 of the Basel III document (<http://www.bis.org/publ/bcbs189.pdf>).

- net notional versus gross notional derivative positions (a significant variance would suggest that the intermediary is taking principal risk with its capital); and
- collateral posted.

While availability of data on OTC derivatives activity remains limited in some jurisdictions, all FSB members have committed to implement reforms that should result in data being available when these methodologies are being finalised and implemented.

***Indicator 2-6: Amount of margin required at clearing houses or central counterparties***

Market intermediaries are likely to have a mix of proprietary and client positions (broker/dealer) or only client positions (broker). If positions are held longer than intra-day, clearing houses or central counterparties (CCPs) will require margin – both initial and variation, plus a contribution to the default fund. The amount of margin held by the firm at clearing houses/CCPs is a useful proxy (for market intermediaries) for both overall size of risk being taken and market interconnectedness.

**5.3.3 Substitutability**

***Indicator 3-1: Qualitative assessment of reliance of the market on the services of the intermediary (for a critical function<sup>40</sup> or service)***

In many jurisdictions, individual market intermediaries often assume key roles in one or more segments of the market. Such an intermediary could be essential to the financial markets and system of an individual jurisdiction or region, and the failure or distress of such a firm could potentially have a systemic impact on a global scale. In assessing such reliance of the market on an intermediary, its “back-office” services should also be considered.

***Indicator 3-2: Market share, measured by (i) trading as a percentage of daily market volume on domestic exchanges, and (ii) if available, global market transaction volume in securities (including equities, bonds and futures)***

The more a market intermediary provides services in the global market, the more likely its distress or failure would be disruptive to global economic activity. National authorities should try to ascertain the intermediary’s global market share and may need to consult with other regulators in other jurisdictions to evaluate this indicator. Furthermore, even if an intermediary has only a small global market share, it could be essential to the market of an individual jurisdiction and through contagion; the failure of such an entity could still have a systemic impact on a global scale.

**5.3.4 Complexity**

***Indicator 4-1: Structural complexity, measured by number of legal entities that are consolidated***

The indicator for “structural complexity” intends to capture the characteristics of an intermediary that could impact its resolvability. A larger number of legal entities can make it more difficult to separate functions or businesses for liquidation purposes, increasing the likelihood of a disruption in market services.

---

<sup>40</sup> For critical functions, see [http://www.financialstabilityboard.org/publications/r\\_130716a.pdf](http://www.financialstabilityboard.org/publications/r_130716a.pdf)

#### ***Indicator 4-2: Operational complexity, measured by less liquid assets***

This indicator focuses on the amount of assets priced on a recurring basis for which market-based prices are not readily available and models are relied upon to determine valuations.<sup>41</sup>

Level 3 assets are generally illiquid and complex to evaluate. A market intermediary with a high level of illiquid assets could pose an increased risk of contagion through market channels, as its distress or failure could result in downward adjustments to similar classes of assets throughout the financial system.

National authorities may also consider the quantity of Level 2 assets categorised as trading or available for sale, with particular attention to asset classes deemed to be less liquid and more prone to sharp price fluctuations under stressed market conditions. Authorities may refer to the Basel III LCR methodology for further guidance on assessing asset liquidity. They may also assess the extent to which this form of complexity could contribute to the transmission of stress during adverse market conditions in which the firm experiences distress or default.

#### ***5.3.5 Cross-jurisdictional activities (Global activity)***

##### ***Indicator 5-1: Number of jurisdictions in which the market intermediary and/or its affiliates “conduct operations”***

The market intermediary’s involvement in cross-jurisdictional activities can be measured by how many jurisdictions in which it and/or its affiliates are licensed, registered, or recognised by or reportable to the market regulator of the relevant jurisdiction. National authorities should also consider the extent of the activity in each jurisdiction. For example, marketing activities can require licensing, even if there is limited activity in the jurisdictions.

The extent of cross-jurisdictional activities is an essential factor in determining the global impact of the distress or failure of a particular institution. The more cross-border activities a firm engages in, the more likely its distress or failure will have a global impact.

##### ***Indicator 5-2: Cross-jurisdictional claims and liabilities***

The greater a market intermediary’s cross-jurisdictional claims and liabilities, the more likely its failure will have an international impact. When evaluating counterparty concentration, national authorities should also consider concentration by geographic region to assess the firm’s global footprint.

---

<sup>41</sup> This approach is based on the G-SIB indicators for complexity.



## 6. Sector-specific methodologies (3): Investment Funds

The January 2014 Consultative Document identified four possibilities for the scope of application for asset management entities and invited views from the public on the appropriate level of focus. These were: (i) individual funds; (ii) family of funds;<sup>42</sup> (iii) asset managers on a stand-alone entity basis; and (iv) asset managers and their funds collectively. However, since exposures are created at the fund level and data is available on an individual fund basis, the January 2014 Consultative Document included a detailed proposed methodology for investment funds, although it briefly discussed the three other possible levels of focus as well.

Responses to the January 2014 Consultative Document generally supported the focus only on investment funds. Nevertheless, in the context of assessing risks arising from asset management entities and their possible global impact on the market, the responses also emphasised the relevance of a focus on activities of asset managers (or asset management activities).

After considering the responses to the January 2014 Consultative Document, the FSB and IOSCO decided to favour a more inclusive approach (i.e. a dual approach), which involves a comprehensive analysis of the systemic risks that particular entities in the asset management industry could transmit to the global financial system by focusing on the two categories of actors involved in the asset management industry: (i) the investment funds and (ii) the asset managers (or investment advisers).

This Consultative Document therefore proposes a methodology for identifying global systemically important individual investment funds (in this Section) and a separate methodology for identifying global systemically important individual asset managers (in Section 7). The dual approach consists of: (i) a refined methodology for investment funds with an increased focus on leverage, taking into account the comments noting that higher leverage implies greater interconnectedness through borrowing; and (ii) a separate methodology focused on activities that if conducted by a particular asset manager may have the potential to generate systemic risk and warrant consideration. Consistent with the other sector-specific NBNI G-SIFI methodologies, the overarching objective of the methodology regarding asset managers is to identify, on the basis of the activities they carry out, those whose distress or disorderly failure could cause significant disruption to the global financial system and economic activity across jurisdictions.

The methodologies regarding investment funds on one hand, and asset managers on the other hand, are separately applied. This allows, for example, for one or several funds managed by an asset manager to be identified as NBNI G-SIFI(s), without their asset manager being identified as such. Similarly, an asset manager could be considered as an NBNI G-SIFI, even though the funds that it manages might not be.

However, these methodologies take into account the links existing between investment funds and asset managers. For example, the methodology regarding asset managers explores the risks arising from certain activities of these actors, including, but not limited to, certain risks

---

<sup>42</sup> Family of funds refers to a group of funds that follow the same or similar investment strategy that are managed by the same asset manager.

relating to managing investment funds. For certain categories of risks that may be generated at the asset manager’s level, investment funds might be the channel through which the distress of an asset manager may be transmitted to the financial markets. Therefore, detailed indicators designed to identify global systemically important asset managers may rely on data regarding investment funds.

The FSB and IOSCO recognise that there are a variety of policy tools available for addressing potential financial stability risks that could arise out of asset management activities and products including changes to industry-wide regulation and designation. The dual approach is not designed to focus on or to address potential financial stability risks that could be posed by the asset management entities as a whole or particular activities that are commonly conducted across the asset management sector. Instead, this Consultative Document focuses on activities of an individual entity to assess the potential impact to the financial system of the distress or failure of such entity for which designation may be the more appropriate tool. The focus is on activities or risks that are best addressed through a designation-based approach.

**6.1 Definition of investment funds**

Investment funds are collective investment schemes (CIS) that include authorised/registered open-end schemes as well as closed-end ones.<sup>43</sup> The methodology for assessing whether an individual investment fund is globally systemically important would therefore cover disparate fund categories, from public funds (including sub-categories thereof such as common mutual funds, money market funds (MMFs) and exchange-traded funds (ETFs)) to private funds (including hedge funds, private equity funds and venture capital funds).

For the purpose of a sector-specific methodology for investment funds, both open-end and closed-end funds, regardless of whether their units are traded on regulated or organised markets, are included within the definition of investment funds. It is recognised that the rules governing the legal form and structure of investment funds may vary across jurisdictions.

**6.2 Systemic importance of investment funds**

Investment funds play an important role in the financial system, channelling resources to securities markets and offering investors a means to achieve diversified exposure to investment opportunities. In this context, regulators seek to ensure that the assets of a fund are managed in the best interests of its investors and in accordance with the fund’s objectives and the regulations to which it is subject. Regulation also aims to promote and ensure a high level of compliance by entities involved in managing a fund’s operations not only from an investor protection perspective, but also, in recent years following the crisis, from a systemic perspective.

Despite these protections, the distress or forced liquidation of an investment fund that has extensive exposures and liabilities in the financial system or that provides a critical role in certain markets could have a destabilising impact on other market participants or counterparties in a cascading manner that could lead to broader financial system instability as described below.

---

<sup>43</sup> Open-ended funds redeem their units or shares whether on a continuous or periodic basis whereas closed ended funds generally trade on an exchange and may redeem their units or shares at the pre-determined date or period.

### **6.2.1 Exposures / Counterparty channel**

As described in Section 1.1, the exposure/counterparty channel involves the impact that the distress or liquidation of an investment fund could have on other market participants through their exposures to the distressed fund. Specifically, this channel describes the risks that investment funds may transmit to the global financial system when their distress or forced liquidation leads to losses at or other impairment to their counterparties, including banks or brokers that have extended them financing or have direct trading linkages to them. Consequently, losses on investments by a fund could, if exposures to such fund are significant and have not been adequately managed, generate heavy losses to counterparties and ultimately destabilise creditors who might be systemically important in their own right.

In general, when investment funds employ leverage to increase their returns, they enter into business relationships with other entities (i.e. counterparties). Such leverage can be acquired in a number of ways. For example, investment funds may acquire leverage through the borrowing of money or assets from other market participants such as banks or broker-dealers (which is commonly referred to as “balance-sheet leverage”). Another way investment funds may acquire leverage is through financial instruments such as options, futures, forwards, swaps and other types of derivatives (this form of leverage is commonly referred to as “synthetic leverage.”). They may also re-invest cash collateral pledged by their counterparties. The level of leverage of certain investment funds could, in times of stress, transmit distress to markets and/or counterparties. For instance, if an investment fund is unable to meet margin calls, it could create a shortfall for the investment fund’s counterparties, which may, in turn, create further distress in the financial system.

Responses to the January 2014 Consultative Document agreed that relationships between counterparties are an appropriate area of focus when considering the potential for risk transmission by a distressed investment fund. In this regard, most responses considered leverage as a potential source of risk to counterparties, and noted that, in practice, this channel is more likely to result in significant transmission of risk when an investment fund is substantially leveraged. Many responses also noted that because many public funds are limited in their ability to borrow or use leverage by regulation, counterparty risk may also be limited. On the other hand, private funds, which generally are not subject to regulatory leverage limits, have the potential to become highly leveraged or concentrated, and could give rise to such systemic risk. A report by the US Government Accountability Office (GAO) concluded that in the case of the highly leveraged hedge fund, Long-Term Capital Management, the fund was able “to establish leveraged trading positions of a size that posed potential systemic risk, primarily because the banks and securities and futures firms that were its creditors and counterparties failed to enforce their own risk management standards”<sup>44</sup>

The FSB and IOSCO understand that many public funds currently have legal and regulatory limitations on their ability to use leverage (either balance-sheet leverage or synthetic leverage).<sup>45</sup> Also, they recognise that OTC derivatives are increasingly moving to CCPs due

---

<sup>44</sup> United States General Accounting Office (1999) *Report to Congressional Requesters on Long-Term Capital Management*, pp. 29.

<sup>45</sup> For example, in EU, pursuant to article 51 of the UCITS Directive (2009/65/EC), UCITS are subject to restrictions in terms of leverage and global exposure limits. Pursuant to AIFMD (2011/61/EU), managers must report to competent authorities and investors on their leverage policy (Art 7 and 23). In the US, section 18(f) of the Investment Company Act

to recent regulatory reforms, which may help to reduce counterparty risk and by extension certain systemic risk. However, it is still possible for an investment fund to become highly leveraged through derivatives that are not centrally-cleared, particularly if margining practices for the non-centrally cleared derivatives are inadequate. Hence leverage constitutes a central component in the analysis of the counterparty channel, particularly for those funds that are not subject to any restrictions and may build up significant leverage positions (e.g. private funds).

### **6.2.2 Asset liquidation / Market channel**

This channel describes the impact of distress or liquidation of an investment fund on other market participants through asset sales that negatively impact market prices and, in turn, the market value of other participants' financial positions. This channel becomes more relevant in transmitting the impact of distress or liquidation of an investment fund when a market is experiencing stress and/or when a distressed or failing investment fund is a dominant investor in particular markets or asset classes.

In times of market stress, a forced liquidation occurs when an asset manager must sell assets of an investment fund it manages to meet redemptions or liabilities that can no longer be extended through market funding. With respect to open-end funds, investors could have an incentive to redeem before other investors to avoid sharing the costs associated with other investors' redemptions, particularly for funds investing in less-liquid asset classes.<sup>46</sup> If an individual fund is very large and a significant investor in a particular market segment, its abrupt asset sales could cause distortions in that market's liquidity and have negative effects to the extent that it could amplify distress to other market participants that hold these assets. Should various asset class price movements related to that market segment become highly correlated, which is more likely to occur during periods of market turbulence, contagion may spread across related asset classes and further depress market values, as illiquidity risk premia in those markets could be driven to sub-optimally high levels.<sup>47</sup>

In theory, several factors can contribute to or amplify forced asset sales: (i) the loss of investor confidence in a specific asset class as a result of the distress of one particular fund leading to "runs" on other funds presenting similar features or conducting a similar investment strategy; (ii) the distress of a highly leveraged investment fund attempting to meet margin requirements; (iii) a sudden large termination of securities loans that requires an investment fund that was a significant vehicle for cash collateral reinvestment from securities lending transactions to repay the cash collateral; and (iv) reputational risk caused by a fund manager's distress or liquidation, which may similarly be transmitted to market participants through forced asset sales if redemptions cannot be met in a timely manner. These various effects could potentially lead to self-reinforcing movements for other investment funds, their counterparties, and the wider market. Finally, the potential for forced liquidations and market distortions may be amplified by the use of leverage by funds, particularly in the event of a

---

of 1940 limits mutual funds' explicit leverage (which may only be obtained through bank borrowings) by requiring an asset coverage ratio of 300% (which generally limits leverage from bank debt to 33% of assets).

<sup>46</sup> For details, see for example Financial Stability Oversight Council (2014) *Notice Seeking Comment on Asset Management Products and Activities* (<http://www.treasury.gov/initiatives/fsoc/rulemaking/Documents/Notice%20Seeking%20Comment%20on%20Asset%20Management%20Products%20and%20Activities.pdf>).

<sup>47</sup> For details, see Andrew Haldane (2014) *The Age of Asset Management* (<http://www.bankofengland.co.uk/publications/Documents/speeches/2014/speech723.pdf>).

“run” on their financing. In sum, an individual investment fund could have the capacity under certain circumstances to exert downward pressure on the market prices of assets, if their sales are large relative to the market and trading volumes of the particular asset.

Responses to the January 2014 Consultative Document, however, generally disagreed with the relevance of asset liquidation/market channel for investment funds and argued that fire sales by investment funds do not pose a global systemic risk. Some of them referred to data analyses to illustrate that mutual fund flows in the aggregate are not directly correlated with large price movements.<sup>48</sup> One observation is that asset sales from redemptions are not likely to materially impact market prices under normal circumstances because sales of stocks and bonds by investment funds are generally small relative to the value of overall stock and bond market trading volume. Responses also noted that in some jurisdictions, investment funds can use liquidity management tools such as fees, gates or redemption limits to reduce redemption pressures in the event that broader market disruptions occur. However, given that such tools are infrequently used, their availability to mitigate potential systemic risk warrants further investigation, particularly in light of the continued increase in AUM of investment funds.

Certain studies have shown that concentrated selling by investment funds, particularly in less liquid markets (e.g. high yield corporate debt, emerging market debt), can result in significant pricing pressures that propagate market contagion.<sup>49</sup> An international survey of academic literature on investment funds and capital flow volatility in emerging markets noted that portfolio rebalancing mechanisms are important in explaining contagion patterns.<sup>50</sup> Also, a recent assessment by the International Monetary Fund (IMF) further explains that investor herding among global funds and a rising share of volatile bond fund flows can transmit instability to local emerging markets.<sup>51</sup> The abundant academic research on capital markets contagion, however, does not generally focus on individual investment funds, but rather the investment funds’ aggregate contribution to market movements. Therefore, the FSB and IOSCO, through this consultation, wish to explore particular situations where certain individual investment funds may play a significant role in a particular market segment and what impact that could have in the event of distress or forced liquidation, particularly during periods of broader market turbulence.

### **6.2.3 Critical function or services / Substitutability channel:**

The critical function and service/substitutability channel describes the impact of distress or liquidation of an investment fund that provides a function or service to the markets upon which market participants heavily rely. It is possible that a fund could attract significant

---

<sup>48</sup> See for example *ICI Long-Term Mutual Fund Flows Historical Data 2013* ([http://www.ici.org/info/flows\\_data\\_2013.xls](http://www.ici.org/info/flows_data_2013.xls)) regarding redemption activity, and *ICI 2013 Investment Company Fact Book: A Review of Trends and Activity in the Investment Company Industry* (<http://www.icifactbook.org/pdf.2013>) regarding total assets.

<sup>49</sup> See for example Raddatz, C. and S. Schmukler (2011) *On the International Transmission of Shock: Micro-evidence from Mutual Fund Portfolios*, NBER, August.

<sup>50</sup> Gaston Gelos (2011) *International Mutual Funds, Capital Flow Volatility, and Contagion-A Survey*, IMF Working Paper, April (<https://www.imf.org/external/pubs/ft/wp/2011/wp1192.pdf>). Research also offers evidence that correlated international fund performance is prone to negative feedback loops, see Broner, F., Gelos G., and C. Reinhart (2006) *When in Peril, Retrench: Testing the Portfolio Channel of Contagion*, *Journal of International Economics*, Vol. 69, pp. 203-230.

<sup>51</sup> IMF (2014). *Global Financial Stability Report*, Chapter 2, April (<http://www.imf.org/external/pubs/FT/GFSR/2014/01/index.htm>).

investment and present features that are, in combination, fairly unique and may potentially have very few immediate substitutes. For example, an investment fund may provide a highly tailored investment strategy, or may serve as a significant source of liquidity to particular asset classes, such as certain types of derivative contracts. The FSB and IOSCO are thus interested in exploring whether an individual investment fund can provide such a significant function or service to a particular market or market segment that its distress could affect global financial stability and, if so, what the particular circumstances would be to contribute to that role.

It should be noted that in the January 2014 Consultative Document, this transmission channel was not considered significant for investment funds in light of the generally high level of substitutability and was retained for finance companies and broker-dealers only. The responses received on the January 2014 Consultative Document noted that the investment fund industry is highly competitive with numerous substitutes existing for most investment fund strategies.

***Q6-1. Please explain any potential systemic risks associated with the financial distress or disorderly liquidation of an investment fund at the global level that are, in your view, not appropriately captured in the above description of each risk transmission channel? Are there elements that have not been adequately captured? Please explain for each of the relevant channels separately.***

***Q6-2. For the asset liquidation/market channel, to what extent is the potential for risk transmission heightened with respect to an individual fund that is a dominant player (e.g. its asset holdings or trading activities are significant relative to the market segment) in less liquid markets?***

***Q6-3. Under what conditions might the asset liquidation/market channel apply to an individual fund in ways that are distinct from industry-wide behaviours in contributing to broader market contagion?***

### **6.3 Materiality thresholds for investment funds**

In the January 2014 Consultative Document, the FSB and IOSCO decided to set the materiality threshold based on simple “size” metrics that are publicly available as follows:

- For investment funds, the threshold was set at USD 100 billion in net AUM.<sup>52</sup>
- In the case of hedge funds,<sup>53</sup> an alternative threshold was set at a value between USD 400-600 billion in Gross Notional Exposure (GNE).<sup>54</sup> In other words, hedge funds with either USD 100 billion (or more) in net AUM or a value set between USD 400-

---

<sup>52</sup> Net AUM represents the amount of investors’ “capital at risk”, that is the amount of capital investors could lose.

<sup>53</sup> Hedge funds are defined based on the definition used in the IOSCO Hedge Fund surveys. The following are the characteristics that in combination may indicate the presence of a hedge fund: (a) use of leverage; (b) performance fees based on unrealised gains; (c) complex strategies, which may include use of derivatives, short selling, high frequency trading and/or the search for absolute returns; and (d) tendency to invest in financial rather than physical assets.

<sup>54</sup> GNE is calculated as the absolute sum of all long and short positions, considering notional value (delta-adjusted when applicable) for derivatives. See Section 6.3.1 of the January 2014 Consultative Document for details.

600 billion (or more) in GNE would be subject to an assessment by national authorities.

The materiality threshold is designed to reduce the size of the pool of funds to be subject to further analysis and does not necessarily imply that funds in the pool are globally systemically important.

Based on analysis of the consultative responses, the FSB and IOSCO have decided to utilise “leverage” in the materiality threshold for investment funds (including hedge funds). This is due to the fact that “leverage” is considered a key driver for investment funds in posing risks to the global financial system.

The appropriate method to do so may depend on the category of funds involved and therefore varies between private funds and other funds (hereafter “traditional investment funds”).

- For private funds (e.g. hedge funds, private equity), the proposed threshold has been set at USD 400 billion of GNE. The primary focus of this methodology is on highly leveraged funds, which is why all private funds which meet the USD 400 billion GNE test will need to be assessed further against the various indicators as described in Section 6.4.
- For traditional investment funds, two options are being considered:
  - (i) Option 1: USD 30 billion in net asset value (NAV) and balance sheet financial leverage of 3 times NAV, with a size-only backstop of USD 100 billion net AUM.
  - (ii) Option 2: USD 200 billion in gross assets under management (GAUM) unless it can be demonstrated that the investment fund is not a dominant player in its markets (e.g. substitutability ratio<sup>55</sup> below 0.5% or fire sale ratio<sup>56</sup> below 5%).

The options for traditional investment funds presented above reflect the increased focus on leverage, in addition to size. Option 1 introduces a “leverage” metric as an initial filter but also maintains a “size” metric as a backstop to capture large, potentially unlevered, open-end funds for more detailed assessment as to whether they may affect the global financial system through fire sales of their assets, especially when they are relatively large players in certain market segments. Option 2 uses GAUM as an indicator that captures both “leverage” and “size” factors, so that very large unlevered funds may still be captured for detailed assessment. In addition, it tries to limit the focus on very large funds that may be dominant in the market segments in which they invest (i.e. dominant market player) by excluding those funds for which it can be demonstrated that their potential impact on the markets is negligible.<sup>57</sup> Details (e.g. definition of dominant market player) and practicality (e.g. data

---

<sup>55</sup> Substitutability ratio can be defined as the funds trading volume in relation to the daily trading volume of the underlying asset class (i.e. whether it is easily replaceable).

<sup>56</sup> Fire sale ratio can be defined as the extent to which the total net AUM of the fund could be easily absorbed, in a stressed market scenario, by the daily trading volume of the underlying asset class.

<sup>57</sup> Under this option, unlevered funds that are very large in absolute terms but are relatively small in the relevant market segment (such as major stock index tracking funds) may be excluded from detailed assessment.

availability) of this option will need to be assessed carefully, and the FSB and IOSCO are interested in views on this.

Based on the analysis of consultative responses as well as other qualitative and quantitative analyses, the FSB and IOSCO will set the thresholds for both private funds and traditional investment funds, including the levels of such thresholds.

***Q6-4. Is the proposed threshold defined for private funds appropriately calibrated? If not, please explain the possible alternative level (e.g. USD 200 billion of GNE) that could be adopted with clear rationale for adoption and quantitative data to back-up such proposed level?***

***Q6-5. In your view, which option for the proposed threshold applied to traditional investment funds is the most appropriate initial filter to capture the relevant funds for detailed assessment and why? Also, are they appropriately calibrated? Please provide evidence (data or studies) to support your argument. If you prefer Option 2, please provide a practical definition of a dominant market player that can be applied in a consistent manner.***

***Q6-6. In addition to the two options for traditional investment funds, the FSB and IOSCO also considered a simplified version of Option 2 using GAUM (e.g. USD 200 billion) with no dominant player filters. Please provide your views if any on this as a potential threshold with the rationale (especially compared to the proposed two options above).***

#### **6.4 Indicators for assessing systemic importance of investment funds**

Consistent with other sector-specific NBNI G-SIFI methodologies, the methodology designed to assess the global systemic importance of investment funds relies on five different impact factors: size, interconnectedness, complexity, substitutability and cross jurisdictional activities. Any other aspects that might seem relevant for the purpose of this methodology could also be taken into account by the relevant authorities.

The indicators as set out below for assessing the global systemic importance of investment funds have been augmented compared to the January 2014 Consultative Document so as to capture a wider range of activities that in aggregate may help assess their systemic importance. In this regard, the methodology seeks to use data currently available through existing regulatory reporting frameworks and public disclosure. The FSB and IOSCO recognise that in some jurisdictions, data pertaining to some of the metrics discussed below may not be available.

Proposed operational process for the implementation of the methodology, including the use of quantitative indicators to assess systemic importance, will require significant amounts of data: first, to construct the initial assessment pool (“Stage 0” lists) of eligible entities; and second, to utilise the indicators in the finalised methodology.

While there are a number of public sources, as well as data collected for supervisory and regulatory purposes from which certain data can be extracted, there are limitations that may render some of the indicators unworkable for certain entities. For example, although some data points (for example, net AUM) are publicly available, others (such as liquidity profiles



and GNE) are not publicly available or even reported to regulators across all jurisdictions. Generally, data may be available for several indicators with regard to hedge funds but not available for traditional funds. In addition, where regulators do have access to relevant information, much of the information may be subject to confidentiality regimes that prevent their use for global systemic risk assessment.

Within jurisdictions, some specific entity-level data is collected for supervisory and regulatory purposes, but the type of data captured, differs across jurisdictions as does the granularity (due, but not limited to, regulatory needs or legal restrictions). Additionally, there are legal impediments that inhibit the ability of regulators to share national-level data with each other, unless it is for enforcement actions. Constructing a comparable global level database from regulatory sources provides some challenging hurdles. Consequently, barriers to effectively calculating some indicators, as set out in the assessment methodology for investment funds exist. Going forward, this is an area where regulators may consider improving the reporting and consequently filling in some of the data gaps authorities currently face.

**6.4.1 Size**

As with assessing the global systemic importance of banks and insurers, and similarly the methodologies for finance companies and market intermediaries, size is only one of five impact factors in this methodology. In theory, the larger the size of a fund, the greater its potential impact on counterparties (counterparty channel), markets (market channel) and other market participants that may depend on it for critical functions (critical function / substitutability channel).

***Indicator 1-1: Net assets under management (AUM or NAV) for the fund***

Net AUM represents the AUM, net of any liabilities. It is considered the industry standard for measuring the size of a fund or the assets invested with a particular manager. For investment funds, it is more commonly referred to as “net asset value” (NAV). It represents investor equity in a fund. It is the traditional calculation for determining investor capital at risk, i.e. the amount of capital that would be lost if the fund was to cease operations.

Therefore, NAV represents the amount of money the investors in the investment fund may lose if the investment fund unexpectedly liquidates. It does not, however, appropriately measure the exposure of the investment fund to the wider financial system, if the investment fund employs balance-sheet leverage or derivatives-based leverage (also referred to as “synthetic leverage”: See Section 6.4.2 for details).

***Indicator 1-2: For hedge funds and where available, gross notional exposure (GNE) as an alternative indicator***<sup>58</sup>

Some funds, particularly hedge funds, are structured in a different way and may employ different strategies and techniques from other funds, size should be measured in an additional

---

<sup>58</sup> For investment funds other than hedge funds, GNE is generally deemed to be less relevant as a result of the strict leverage limitations imposed by existing regulations. Furthermore, unlike for hedge funds, use of derivatives is not intended to obtain (synthetic) leverage, but more commonly to hedge exposures and gain exposures to certain asset categories. For these funds, rules on counterparty exposures apply in tandem to limit these funds’ recourse to leverage or to any other source of external financing through a counterparty.

way compared to other investment funds. In particular, many hedge funds use leverage as an investment technique. Net AUM does not take into account leverage. As a result, the size of hedge funds could be better measured by using gross, rather than net, AUM, as gross AUM would include leverage. Gross AUM would be measured using the gross notional exposure (GNE) method.

GNE is calculated as the absolute sum of all long and short positions, considering the notional value (delta-adjusted<sup>59</sup> when applicable) for derivatives. GNE is a measure of market footprint and provides a picture of all the leverage that is employed by a fund to gain market exposure, i.e. balance sheet leverage (repos, prime broker financing, secured and unsecured lending) and synthetic leverage (exposure through derivatives, considering the resulting exposure to the underlying asset or reference). The main advantage of GNE is its simplicity and the fact that it cannot be gamed through risk mitigating techniques. It represents a gross view of the extent to which an investment fund has expanded its investments, whether through balance sheet leverage or through actively trading a derivatives book.

GNE does not directly represent the amount of money (or value) that a fund is at risk of losing. It is an indication of how broad an investment fund has expanded its reach and therefore its capacity to impact other financial entities in situations where the investment fund unexpectedly liquidates or is in distress. In other words, the larger the GNE, the larger the potential impact to the system.

GNE is available for a growing proportion of investment funds through recently adopted regulatory reporting frameworks such as Alternative Investment Fund Managers Directive (AIFMD) in the EU and Form PF in the US (private funds only), even if some discrepancies remain.

Although GNE is more conservative and less exposed to manipulation (and thus, more comparable), some responses to the January 2014 Consultative Document highlighted the possibility of adjusting the GNE measure so as to take into account risk mitigation aspects of investment portfolios of a fund (e.g. offsetting positions and hedging).<sup>60</sup> However, although an adjusted GNE may reflect better the actual risks posed by the investment portfolio of a fund, it may introduce complexity and model risk as risk mitigation techniques employed will vary considerably across funds. Also, data is not usually available as regulators do not have access to sufficiently granular data through regulatory reporting. Furthermore, risk mitigation techniques may not function as intended when the market is under stress depending on the details of such risk mitigation techniques.

#### **6.4.2 Interconnectedness**

The following indicators are designed to capture interconnectedness with counterparties including brokers and trading counterparties. The first indicator serves as a proxy for the overall level of leverage. The more interconnected a fund, or the greater the counterparties'

---

<sup>59</sup> The value of options and other similar non-linear derivatives instruments do not always move in line with their underlying asset. The metric that measures this relationship is called "delta", which is defined as the rate of change of a derivative's value with respect to changes in the underlying financial asset's value. An option with a low delta will have a lower weighting in the overall exposure calculation, while an option with a higher delta will have a higher weighting.

<sup>60</sup> For example, the calculation of the global exposure as defined in EU regulation through the so-called "commitment approach" allows adjustment of GNEs based on clearly-defined hedging and netting rules.

credit exposures are to that fund, the greater that fund's potential impact in case of default on counterparties (counterparty channel) and to the broader financial system. Interconnectedness could also be assessed in connection with the nature of investors of the funds.

***Indicator 2-1: Balance sheet financial leverage of the investment fund***

Leverage is a complex concept that can take several forms and will vary depending on the metrics used. Balance sheet financial leverage as traditionally measured attempts to address the additional exposure an investment fund has obtained through typical borrowings of cash or securities. It does not measure the exposure that results from the use of derivatives.

The leverage of an investment fund can be measured in several ways. It can reflect the nominal amount of leverage, expressed as the market value of total balance sheet assets or total borrowings.

***Indicator 2-2: Leverage ratio of the investment fund***

This indicator provides an alternative way to assess financial leverage of an investment fund. It could be expressed as “market value of total balance sheet assets /NAV” or “Total borrowings + NAV) / NAV”.

***Indicator 2-3: Ratio of Gross Notional Exposure (GNE) to the NAV for the investment fund***

The ratio of GNE to NAV (or GNE/NAV ratio) for a particular investment fund allows authorities to obtain a view of the extent to which an investment fund is making use of leverage to create its investment positions in the market. It does not recognise any offsetting positions or hedging characteristics, and therefore it will tend to be sensitive to derivatives-based strategies with high notional values and large trading activity (e.g. interest rate derivatives or foreign exchange instruments). As such, the purpose of this indicator is to obtain an understanding of the investment fund's market footprint and the extent to which its derivatives portfolio exceeds in size the NAV, which generally serves as collateral for the outstanding positions.

Portfolios with large derivatives positions will usually exhibit a ratio of GNE to NAV that is significantly larger than what financial leverage alone would show.

***Indicator 2-4: The ratio of collateral posted by the Investment Fund to its NAV***

This ratio attempts to approximate margin to equity ratio, and pertains to both probability of liquidation or material distress, as well as its impact.

It would first seek to measure the riskiness of an investment fund's situation based on the amount of assets it has used to cover for outstanding positions. Secondly, it would indicate the extent to which external counterparties have provided financing to the investment fund and are therefore potentially exposed.

***Indicator 2-5: Counterparty credit exposure to the investment fund***

This indicator aims at measuring the credit exposure of the financial system (i.e. counterparty financial institutions) to the investment fund, using total net current credit exposure as the basis of calculation. In other words, the indicator shows how much would be lost by the financial system if the fund liquidated immediately, considering all collateral posted and no external aggravating event that could magnify the losses or complicate collateral retrieval.

This indicator is, however, sometimes difficult to produce due to data availability and the complex nature of the calculations for credit exposure.

***Indicator 2-6: Intra-financial system liabilities to G-SIFIs***

The proposed indicator is measured as the total net current credit exposure of G-SIFIs to the investment fund. It is intended to capture an investment fund's interconnectedness with G-SIFIs. The larger the exposure to the distressed fund by counterparties, especially by G-SIFIs, the greater the potential impact of its liquidation to transmit systemic risk the financial system.

***Indicator 2-7: Nature of investors of the funds***

If available, the nature of investors invested in a fund could also be taken into account to assess whether this fund could transmit systemic risk to the global financial market, depending on their status and the size of their investment. Institutional investors who invest in such products could be considered within this context, especially if they have significant investments in such funds and are of systemic importance themselves (e.g. banks, insurance companies or major corporate entities). Operational difficulties at the level of the investment fund could spill-over to these "cornerstone-investors" and have systemic implications.

**6.4.3 Substitutability**

This impact factor aims at determining whether an investment fund's activity could easily be replicated or compensated for by other financial entities if it ceased to operate. Substitutability of the distressed fund is assessed from several perspectives, including the loss of trading activity, diminished liquidity in specific markets, trading activity or substitutable investment products.

The more substitutable a fund is on the basis of its strategy or in terms of trading volumes, the less of an impact it would have in case of distress or fund liquidation on markets (asset liquidation/market channel). Substitutability is therefore intended to capture the extent to which a particular fund occupies a specific position in its market that may not be easily and rapidly replaced by other funds. Although funds generally are highly substitutable products, there may be large funds that are considered dominant in particular asset classes or derivative products, and where substitutes may not be readily available. The proposed indicator aims at capturing investment funds that are investing in markets where liquidity is low, trading activity is low and substitutes are potentially scarce. If such an investment fund suddenly ceases, or significantly curtails its activities, these markets could be negatively affected.

In addition to indicators listed below, regulators may take into account other relevant criteria to assess the substitutability of funds.

***Indicator 3-1: Daily trading volume of certain asset classes of the fund compared to the overall daily trading volume of the same market segment***

The proposed indicator aims to measure how substitutable a fund's trading activity is in a given asset class or market segment. If an investment fund at a point in time is active in particular market segments, or the fund has a significant position in particular markets, the distress of this fund could lead to far-reaching and unintended consequences for other participants through impaired market liquidity or price impacts.

The proposed indicator is measured as the average daily trading activity (turnover) per asset class or instrument compared to the average daily trading volume of the overall market segment for the same asset class or instrument. The higher an investment fund's market share in the liquidity of a particular asset/instrument, the higher the potential systemic risk.

***Indicator 3-2: Fund holdings per certain asset classes compared to the overall daily trading volume of the same asset class***

This indicator seeks to calculate the potential impact of fire sales from the investment fund which will depend on the extent to which the assets held by the fund could be easily absorbed, in stressed market conditions, by the average daily trading volume of the underlying asset class.

The proposed indicator is measured as the holdings of the fund per asset class or instrument compared to the average daily trading volume of the same asset class or instrument. The higher an investment fund's holdings as a proportion of average daily trading volume, the greater the potential systemic risk transmission. To better understand the fund's ability to sell assets under fire sale conditions, national authorities may review the range of trading volumes to assess the extent to which trading volumes fall under adverse market conditions.

***Indicator 3-3: NAV of the fund compared to the size of the underlying market***

This proposed indicator aims at evaluating if an investment fund represents a particularly high proportion when compared to the size of the underlying market.

The higher the market share, the higher the potential systemic risk since other investment funds in the market may not have the capacity to take over or assume the transition of client assets. In the meantime, market liquidity and volumes will be impacted in various ways, depending on the market share and current liquidity conditions.

#### ***6.4.4 Complexity***

The complexity indicators below seek to measure the difficulty in liquidating or transitioning an investment fund to a new asset manager if it experiences severe distress or even faces unexpected liquidation. An investment fund that is complex could potentially compound financial distress in the system due to the difficulty in transitioning or winding up its positions or ensuring swift payments and dealing with eventual conflicts between creditors.

***Indicator 4-1: Non-centrally cleared derivatives trade volumes of the fund / Total trade volumes of the fund***

Funds that engage in a significant volume of non-centrally cleared derivatives in comparison to their total trading activity potentially could be exposed to higher counterparty risk. This indicator will help assess investment funds that make a particular sizeable use of non-centrally cleared derivatives instruments. These non-centrally cleared derivatives instruments tend to be bilaterally transacted or cleared, therefore potentially more complex to transition or unwind if need be. Even if regulatory initiatives will facilitate the central clearing of a growing share of all derivatives, there will always remain a portion of derivatives trading that requires sophisticated tailoring, rendering central clearing impractical.

***Indicator 4-2: Ratio (%) of collateral posted by counterparties that has been re-used by the fund***

In some cases, investment funds will receive collateral from their counterparties. If the investment fund invests the collateral received or pledges it to secure other positions, this could indicate a higher degree of complexity. Depending on the legal regime used (for example, title transfer or not), which will vary across jurisdictions, some investment funds may be involved in re-hypothecating pledged assets in a way or to an extent that could endanger their retrieval in case of a default. The larger the re-use proportion, the larger the potential risk posed in case of material distress since these assets may not be easily retrieved by the counterparties from the investment fund.

***Indicator 4-3: Proportion of an investment fund's portfolio using High-Frequency-Trading (HFT) strategies***

High frequency trading (HFT)<sup>61</sup> strategies can introduce market risk. Moreover, the interaction between automated execution programs and algorithmic trading strategies can quickly erode liquidity and result in disorderly markets.

The indicator assesses the extent to which investment funds make use of HFT strategies at an investment level. In other words, which investment funds delegate investment decisions to quantitative and algorithmic-based systems that generate orders at a high frequency or with very low latency.

The large number of trades or intra-day open positions, which is associated with HFT strategies, adds to the complexity of the funds, particularly with respect to the risk of operational errors of funds that command high market shares in specific fields or markets. It also may make it harder for others to substitute the fund's strategy and provision of liquidity to the markets in which it trades if the fund is in distress.

***Indicator 4-4: Investment fund liquidity profile***

Investment fund liquidity profile is measured as the ratio or the difference at various time intervals, between the liquidity of an investment fund (time needed to liquidate a given proportion of a fund's assets at reasonable prices) and the liquidity offered to investors (the proportion of capital investors in the fund that have the right to redeem given the contractual terms offered by the fund).

If an investment fund is unable to meet its obligations because it cannot liquidate its portfolio in a timely manner, it then becomes exposed to the risk of needing to suspend redemptions. In certain market conditions and if the investment fund is systemically significant, this event could generate further detriment to a broader set of financial actors or cause instability in the markets, due to, for example, a liquidity shock.

***Indicator 4-5: For leveraged funds, Ratio of unencumbered cash to gross notional exposure (GNE)***

Unencumbered cash and cash equivalents are the liquidity in an investment fund's portfolio that has not yet been pledged as cover for outstanding positions and therefore could be used to fund new positions or serve to meet collateral calls and other obligations. This indicator is

---

<sup>61</sup> HFT is a sub-set of general electronic trading.

particularly relevant for funds with investment strategies that involve highly leveraged positions or large derivatives portfolios. It will provide a useful view of the liquidity buffer an investment fund has access to and may be used to meet redemptions or margin calls in distressed or volatile markets. If the fund has a small amount of unencumbered cash, it might run out of assets to satisfy margin calls or to post collateral in the event of adverse market moves. It might need to sell assets under stressed conditions. Therefore, the lower the figure, the higher the potential systemic risk of the fund.

This indicator focuses on the overall GNE of an investment fund's portfolio since this is the most direct measure of all of an investment fund's positions, whether fully funded or derivatives-based. The smaller the buffer offered by unencumbered cash and cash equivalents to GNE, the higher the risk of the fund as adverse market moves can cause the fund to run out of assets to satisfy margin calls or to post collateral. As stated above, GNE does not take into account risk mitigating aspects of the investment portfolio and offsetting positions.

***Indicator 4-6: The ratio of unencumbered cash to the NAV of the investment fund***

Similar to the above indicator 4-5, this indicator aims at measuring some aspects of an investment fund's liquidity risk management relative to its ability to absorb loss.

In general, if an investment fund making use of a large derivatives portfolio (and thus a large GNE) or investments in illiquid assets does not maintain a sufficiently large liquidity buffer as a proportion of its NAV, adverse market conditions could result, for example, in a series of large margin calls that it may be unable to meet.

***Indicator 4-7: Amount of less liquid assets***

This indicator focuses on the amount of assets in the fund's portfolio that could not be sold and converted into cash in a prompt manner without a significant adverse price impact. An investment fund with a high level of illiquid assets could pose an increased risk of contagion through the market channel, as its distress or liquidation could result in downward price adjustments to similar classes of assets throughout the financial system.<sup>62</sup>

As part of this evaluation, authorities may also consider the amount of level 2 and level 3 assets in the fund's portfolio, if available. While the fair value categorisation of the fund's assets is an accounting measure that provides information on the level of market inputs into the pricing of the asset, and thus is not a measure of liquidity, it does provide some information on whether the asset trades in active markets and the extent to which the asset is difficult to value, which may have some effect on its liquidity.

**6.4.5 Cross-jurisdictional activities (Global activity)**

The greater the number of markets a fund invests in or has interaction with, the greater its global footprint and its importance for global financial stability. The proposed indicators set out below attempt to measure a fund's global activities and potential impact of its distress or forced liquidation may have on the global financial system. Where managers invest significant amounts of investors' funds in one or more foreign jurisdictions (indicator 5-1), or are authorised to market and sell shares of their funds within these (indicator 5-2), or have

---

<sup>62</sup> Authorities may also refer to the Basel III Liquidity Coverage Ratio (LCR) methodology for further guidance on assessing asset liquidity.

operations with counterparties based in different jurisdictions (indicator 5-3), the occurrence of a fund liquidation may create contagion that would transmit across borders via the market channel or counterparty channel. Such vulnerabilities may appear in particular when looking at master/feeder structures, where investors in one or multiple feeder funds may suffer losses as a result of the liquidation of the master fund in a different jurisdiction.

The global nature of an investment fund’s activities may also tend to complicate the resolution of the distressed investment fund due to legal disputes, potentially various law regimes at play or simply getting access to all interested parties. The main aim of this impact factor is to identify those investment funds with the broadest global footprint in terms of investments and commitments. Determining the global impact of the entity is an essential aspect of the methodology since the overall objective is to identify global systemically important financial institutions (NBNI G-SIFIs).

***Indicator 5-1: Number of jurisdictions in which a fund invests***

Funds that invest globally may have a larger global impact than funds that invest in the securities or other assets of only a few jurisdictions.

***Indicator 5-2: Number of jurisdictions in which the fund is sold / listed***

Funds that are sold or listed in many jurisdictions may have a larger global impact with respect to their operations than funds that are sold or listed in one or a few jurisdictions. Funds sold are likely to have more investors, across many more jurisdictions, thereby increasing the impact of their liquidation or distress.

***Indicator 5-3: Number of jurisdictions where the fund has counterparties***

Contract and bankruptcy laws can vary across jurisdictions. The higher the number of different jurisdictions faced by a fund through its counterparties, the potentially more complex the situation if the fund had to be liquidated. Counterparties should include entities with which the fund is contractually bound, for trading purposes, under deposit agreements, borrowing or derivative contracts.

This indicator measures the geographical diversity of the counterparties with which the investment fund is trading or has established trading agreements. The potential variations applied to the different law regimes under which trading and investing has taken place could complicate the fund’s resolution, which in turn could adversely affect the fund’s counterparties.

***Q6-7. Please explain any proposed revised indicators set out above that, in your view, are not appropriate for assessing the relevant impact factors and its reasoning.***

***Q6-8. What alternative indicators should be added and why would they be more appropriate? For example, do you see any benefits in adding price-based indicators? If so, please explain the rationale for inclusion and possible definitions of such indicators.***

***Q6-9. What are the practical difficulties (e.g. data availability, comparability) if any with collecting data related to these indicators? Please clarify which items, the practical problems, and possible proxies that could be collected or provided instead.***



*Q6-10. For “size”, should GNE be adjusted? If so, please explain how GNE should be adjusted and the practicality of such adjustment (e.g. data availability).*

*Q6-11. For “interconnectedness”, should financial leverage measured separately from synthetic leverage?*

## 7. Sector-specific methodologies (4): Asset Managers

### 7.1 Definition of asset managers

Asset managers (also referred to as investment advisers) are financial entities that generally manage client assets through individual accounts and/or investment funds. The core function of an asset manager is managing assets as an agent on behalf of others in accordance with a specified investment mandate, or the investment strategy defined in the prospectus for the investment fund that it manages. Asset managers must follow investment guidelines set out in the agreement with each client (or the investment strategy in the prospectus for investment funds), as the client assumes the risk of investing. Asset managers invest on behalf of a great diversity of clients: individuals, institutional investors, actively managed investment funds and passively managed investment funds (in which the asset manager tracks the return of an index and has limited discretion to make investment decisions on behalf of clients). Asset managers generally use third-party custodians to hold investor assets, as required by regulation or as a best practice.

The asset manager's discretion to invest assets is also subject to a number of regulatory, legal and contractual limits. These limits result from a variety of sources, such as an investment fund's governing documents or the contractual arrangements for a separately managed account (SMA),<sup>63</sup> securities laws, market conduct regulations, and corporate laws that create fiduciary duties to investors. In some cases (e.g. hedge funds), however, asset managers may also invest along with their clients into funds they manage to seed money in new funds or to co-invest (or share risks and returns) as part of their contractual arrangements with their clients.

Just as there are a variety of types of funds, from public funds (including MMFs and ETFs) to private funds (including hedge funds, private equity funds and venture capital), asset managers may follow varied investment strategies involving various securities, products and instruments.

Other activities that asset managers may be involved in include securities lending agent services (including provision of indemnification to securities lenders), provision of risk management platforms or pricing services to clients, and consulting/advisory services that rely on the asset managers' breadth of asset expertise. The FSB and IOSCO are interested in exploring the types of other activities and the extent to which various other activities may be relied upon by investors, financial institutions and corporations, and which are difficult to readily substitute.

When assessing how the impact of the failure or distress of a fund's asset manager may be transmitted to other financial entities and markets or designing a detailed methodology (or indicators) for assessing the systemic importance of an asset manager, it is important to consider the variety of business models of asset managers, not only their core investment funds' management activity (e.g. managing assets as an agent) but also their other activities that are set out above.

---

<sup>63</sup> A separately managed account is an account managed by the asset manager on behalf of a single client, according to the specified investment guidelines.

***Q7-1. Please describe any activities or services conducted by asset managers other than described above. In particular, please explain any other activities that, in your view, should be included in the scope.***

## **7.2 Systemic importance of asset managers**

As with investment funds and other NBNI financial entities, an asset manager that faces distress or forced failure could, in certain circumstances, potentially cause or amplify significant disruption to the global financial system and economic activity across jurisdictions through the three transmission channels set out in Section 1: (i) the exposures/counterparty channel; (ii) the asset liquidation/market channel; and (iii) the critical function or service/substitutability.

### ***7.2.1 Exposures / Counterparty channel***

As described in Section 1.1, the exposure/counterparty channel involves the impact that the distress or failure of an asset manager could have on other market participants through their exposures to the distressed asset manager. Specifically, this channel describes the risks that asset managers may transmit to the global financial system when their distress or failure leads to losses or other impairment to their counterparties, including banks or brokers that have extended them financing or have direct trading linkages to them. Consequently, a failure of an asset manager could, if exposures to such asset manager are significant and have not been adequately managed, generate losses to the asset manager's counterparties and ultimately destabilise creditors who might be systemically important in their own right.

To the extent that an asset manager acts not only as an agent, but also as a counterparty, then the failure or distress of the asset manager could also be transmitted to other market participants through this channel. The exposures in this channel might stem from the whole range of the asset manager's activities, including, but not limited to asset management. For example, some asset managers may invest their equity as seed money in new funds. Also, most securities lending transactions are facilitated by custodian banks, which establish and administer lending programs on behalf of institutional investors. Some asset managers, however, may also provide securities lending agent services that may include indemnification of securities lenders (which may be the asset manager's clients) against any loss incurred if the borrower fails to return the borrowed securities. The FSB and IOSCO are interested in exploring whether a particular asset manager engaging in counterparty behaviour to a significant degree could be a channel for an individual asset manager creating or amplifying systemic risk.

### ***7.2.2 Asset liquidation / Market channel***

The asset liquidation and market channel describes the indirect impact of distress or the forced liquidation of an asset manager on other market participants. Since the core function of an asset manager is managing assets as an agent on behalf of others in accordance with a specified investment mandate, asset managers tend to have small balance sheets and the forced liquidation of their own assets would not generally create market disruptions.

However, the distress or failure of an asset manager may still create or amplify potential market distress through its off-balance sheet activities (e.g. provision of indemnification and

guarantees) or through its reputational/operational risks. For example, if an asset manager experiences material distress caused by litigation, the departure of key individuals, or operational problems (such as inadequate or failed internal processes and systems), the assessment methodology may want to examine whether this could cause, for example, substantial redemptions from any investment funds that it manages and substantial transfers of SMAs that it advises in a way that could adversely affect the global financial system.

**7.2.3 Critical function or services / Substitutability channel:**

The critical function and service/substitutability channel describes the impact of distress or failure of an asset manager that provides a critical function or service to market participants or clients. As described above, asset managers primarily provide advice or portfolio management service to clients on an agency basis. This model makes their provision of this particular activity generally substitutable as there is considerable competition in the market place. For example, investors at any time may choose to move their assets to a different asset manager, to a different investment strategy or to a different investment fund. In addition, third-party custody arrangements facilitate the substitution of asset managers, depending on the circumstances. However, in the event of a stress or default of a manager, there could be delays or other obstacles in transferring its contracts to another asset manager. The FSB and IOSCO are interested in learning whether there are any potential risks associated with such a transfer. Responses to the January 2014 Consultative Document noted that certain characteristics of asset managers can make them highly substitutable. Several responses stated that many asset managers may enter and exit the market on behalf of clients regularly in an orderly manner without any global systemic impact and that clients (including investment funds) readily move assets from one manager to another. Further, responses noted that in many cases where investors change asset managers, assets may never move from an existing custodian, and there may be no immediate sales of assets in the market.

However, in certain situations, an asset manager might engage in specific activities, for which it has developed a specific skill, and which would make the manager’s business not easily transferable in the event of a default. Those activities could relate to funds’ management. For example, an asset manager might have acquired a unique expertise, and be acknowledged as such, with respect to a specific strategy (for example involving structured products) or on a given market (for example on commodities’ markets). It could also be the case for the other activities that the asset manager carries out. For example, if an asset manager was a significant pricing service provider, securities lending agent, or provider of certain systems used by market participants and critical to their activities, its distress or failure could leave the market without ready substitutes.

***Q7-2. Please explain any potential systemic risks associated with the financial distress or default of an asset manager at the global level that are, in your view, not appropriately captured in the above description of each risk transmission channel. Are there elements of the relevant channel that have not been adequately captured? Please explain for the relevant channel separately.***

***Q7-3. For the exposure/counterparty channel, to what extent does the assessment adequately describe the types of risks posed by asset managers’ activities, such as securities lending, distinct from individual funds? Are there other activities that warrant further assessment?***

*Q7-4. For the asset liquidation/market channel, to what extent and under what circumstances might reputational or operational risks of the asset manager impact the entity's individual funds, contributing to high redemptions? How might it impact the transfer of SMAs?*

*Q7-5. For the critical function/substitutability channel, are there any emerging activities that might be critical to a portion of financial clients that might in turn impair market functioning or risk management if no longer provided? Other than managing assets as an agent (i.e. core function), to what extent do asset managers engage in activities that may be relied upon by investors, financial institutions and corporations, and which are difficult to readily substitute?*

### **7.3 Materiality thresholds for asset managers**

Consistent with the other sector-specific NBNI G-SIFI methodologies and the G-SIB/G-SII methodologies, the proposed asset manager methodology will include a materiality threshold that provides an initial filter of the asset managers' universe to define the pool of firms for which more detailed data will be collected and to which the methodology will be applied.

The definition of the materiality threshold should rely on factors that are relevant for assessing how the risks generated at the asset managers' level could be transmitted to the broader financial system. It is especially relevant for the activities where the asset manager does not act as an agent, but for its own account. Nevertheless, certain risks generated at the asset managers' level might also be transmitted through the investment funds that it manages. In such a situation, the amount of AUM of the asset manager might also be relevant.

Based on this understanding, the FSB and IOSCO are considering two types of materiality thresholds for asset managers as described below. Based on the consultation findings, the appropriate level for the materiality threshold(s) is planned to be calibrated before completing the methodology.

- (i) *Balance sheet total assets* - An asset manager's consolidated balance sheet total assets gives a broadly comprehensive view of its activities. It presents data that are specific to the asset manager, and focusing on the risks generated by an individual asset manager.

Traditionally, asset managers are known to maintain low balance sheet assets since they manage their clients' assets rather than their own. For this reason, an asset manager with a large balance sheet could indicate the existence of potentially significant non-asset management activities. Therefore, the threshold of USD 100 billion in balance sheet total assets may be considered, which is in line with the thresholds for finance companies and market intermediaries.

However, given different corporate structures and accounting methodologies, it may be difficult to measure the activities of the asset manager (i.e. the calculation of the asset manager's balance sheet may not include the balance sheets of all of the asset manager's affiliates or its off-balance sheet or derivatives activities). Moreover, data regarding an asset manager's balance sheet assets is not as readily available as AUM (particularly for non-publicly listed asset managers).

- (ii) *Assets under management (AUM)* - This threshold would be based on AUM, for which publicly-available data is more readily available.

Asset managers that have higher amounts of AUM may have a greater potential systemic impact on the global markets in situations where the risks are transferred through the assets they manage. A higher amount of AUM may be of particular relevance when considering specific transmission channels, such as market channels (i.e. reputational risks) as stated in Section 7.2. However, for other transmission channels, given the agency model of asset managers, AUM may not always be the most effective threshold measure. Taking these factors into account, a threshold of USD 1 trillion, for example, in AUM may be considered.

***Q7-6. Please explain any practical difficulties in applying the above proposed thresholds for an initial filter of the asset manager universe and limiting the pool of asset managers for which more detailed data will be collected and to which the sector-specific methodology (set out in Section 7.4) will be applied.***

***Q7-7. Please provide alternative proposals, if any, for a more appropriate initial filter (with the rationale for adoption and quantitative data to back-up such proposals).***

#### **7.4 Indicators for assessing systemic importance of asset managers**

The proposed indicators as set out below for assessing the systemic importance of asset managers are designed to cover the analysis of the activities of particular asset managers with respect to their activities that may be related or distinct from the investment funds and accounts they manage, as well as the transmission channels through which their failure would impact the global financial system (as described in Sections 7.1 and 7.2). As with other sector-specific NBNI G-SIFI methodologies, the proposed indicators would rely on five different impact factors: size, interconnectedness, substitutability, complexity and cross-jurisdictional activities. By considering these proposed indicators, authorities would be able to identify an asset manager whose distress or disorderly failure could cause significant disruption to the global financial system and economic activity. The proposed indicators are not meant to be an exhaustive list, and the FSB and IOSCO are interested in hearing views on additional or alternative indicators that could be considered. Any other aspects that might seem relevant for assessing the global systemic importance of an asset manager could also be taken into account by authorities.

In order to define the appropriate indicators, an analysis of the five impact factors through the risks that could be generated at the asset managers' level and that have been identified in the transmission channels discussion is proposed. Those risks, generated at the level of the asset manager, arise from different sources. To comprehensively address the risks that some asset managers may transmit to the global financial system, the assessment methodology for asset managers focuses on the sources of risks arising from individual asset managers' activities, not industry wide practices, and looks beyond the risks covered by the sector-specific methodology for investment funds (set out in Section 6).

### 7.4.1 Size

#### ***Indicator 1-1: Net assets under management (Net AUM)***

Asset managers with higher amounts of AUM may have a greater potential impact on the global financial system. For example, such asset managers may have higher levels of interconnectedness with other financial entities due to trading activity on behalf of their clients. Such interconnectedness may become particularly relevant in terms of reputational (or operational) risks. Risks (or events) generated at the level of an asset manager could potentially trigger outflows from the funds it manages, and the transfer of SMAs<sup>64</sup> it manages, which may transmit risk to other market participants through the asset liquidation/market channel (see Section 7.2.2). Even if the risk is generated at the level of the asset manager involved, the assets that it manages (as funds or as SMAs) will be one of the channels through which the risks would be transmitted.<sup>65</sup>

Data regarding an asset manager's global AUM generally is readily available. In particular, AUM might be of particular relevance when considering specific transmission channels, such as market channels where damage to an asset manager's reputation may create substantial redemptions from investment funds that it manages and substantial transfers of SMAs that it advises. For other transmission channels, however, AUM may not be the most effective measure to assess the impact of failure or distress of an asset manager, especially if it is only involved in asset management activities (or core activity) and acts only as an agent.

Where possible, AUM should be calculated on a net and gross basis and also split according to assets managed in funds and SMAs.

#### ***Indicator 1-2: Balance sheet assets***

As stated in Section 7.3, an asset manager's consolidated balance sheet total assets gives a comprehensive view of its own activities apart from its fund management activities. As asset managers generally maintain low balance sheet assets (since they invest their client's assets), a significantly larger balance sheet than usual in terms of assets could indicate the existence of potentially significant activities other than asset management activities in a particular asset manager.

Given different corporate structures and accounting methodologies, however, it may be difficult to measure the activities of the asset manager (i.e. the calculation of the asset manager's balance sheet may not include the balance sheets of all of the asset manager's

---

<sup>64</sup> As the investors remain the full owner of the assets managed, SMAs generally will not present risks of widespread fire sales and redemption. However, SMAs might be one of the channels through which a distress at the level of an asset manager caused for example by reputational risk might spread to the wider financial system.

<sup>65</sup> The reputational risks analysis appears also closely related to the substitutability impact factor. For example, a reputational event of an asset manager may have a negative impact on the global financial system and may pose risks to financial stability if the assets managed by the asset manager play a critical role in particular market segments. It could also be the case if the investment funds managed by the particular asset manager constituted a material segment of one or more markets or if certain bespoke positions in SMAs could not be transferred to a new manager without being unwound and such an unwinding could have a material adverse effect on certain market segments. Therefore, assessing the impact of a potential reputational event of an asset manager would require, for example, a qualitative analysis of its establishment in one given market/activity (based on the number of years of experience, weight in the relevant market etc.). If the asset manager's reputation is based on its activity in one specific market, the comparison of the assets managed in that market and the size of the underlying market would be also critical.

affiliates or its off-balance sheet activities, to the extent they exist). Moreover, data regarding an asset manager's balance sheet assets is not as readily available as AUM.

#### **7.4.2 Interconnectedness**

The following indicators are designed to capture interconnectedness of an asset manager with other market participants. Even if interconnectedness seems particularly relevant for investment funds and SMAs, a more detailed analysis would need to be conducted to identify for a particular asset manager whether and how this factor would be relevant. Indicators should provide for situations where asset managers themselves could be considered as interconnected with other market participants, for example due to the activities they might have besides asset management and potentially for their own proprietary purposes (and not for the account of the funds or SMAs that they manage).

##### ***Indicator 2-1: Leverage ratio***

The greater an asset manager's leverage, the greater the potential impact of its distress or failure on the financial system. Higher leverage would indicate that the impact of the firm's failure on the financial system could be significant and a deeper analysis of its leverage is warranted. The leverage ratio should be calculated as: total shareholder equity divided by the sum of on balance sheet assets and off-balance sheet exposures.

##### ***Indicator 2-2: Guarantees and other off-balance sheet exposures***

Although most asset managers primarily focus on providing advice and portfolio management, an asset manager could take on significant off-balance sheet exposures for example in the form of guarantees or indemnifications to other market participants. If an asset manager guarantees the performance of investment funds that it manages or provides guarantees to other market participants to facilitate certain market activities, and such guarantees are of a nature or at a level that their non-performance could affect global financial stability, it could merit consideration. An asset manager may also act as an agent lender for securities lending transactions and in that role may provide indemnification against a borrower's failure to return lent securities. If the failure of the asset manager to make payments on this indemnification could affect global financial stability, it also merits consideration.

If such asset manager fails, it may impact the market participants who relied on such guarantees (i.e. counterparty), depending on the importance of such guarantees for the market as well as on the nature and degree of counterparty exposures it creates.

#### **7.4.3 Substitutability**

It is possible that an asset manager could provide services that market participants or its clients may not be able to easily obtain from other sources. For example, if an asset manager was a dominant pricing source for a particular type of asset or a prominent expert in a given market segment, failure of that asset manager (due to for example operational risk) could leave the market temporarily with no substitute or could result in difficulties associated with the transition to substitutes.

***Indicator 3-1: Substitutability, measured by a percentage of the asset manager's revenues as compared to the total revenues attributable to the relevant business***



This indicator seeks to identify circumstances where an asset manager is primarily engaged in a business other than fund management that is considered to be very difficult to substitute, and upon which other segments of the markets or financial institutions rely.

***Indicator 3-2: Market share, measured by a percentage of the asset manager's AUM in a particular strategy as compared to the total AUM invested in the same strategy for all managers***

The more an asset manager provides services in the global market for which it is a dominant player, the more likely its distress or failure would be disruptive to global economic activity. National authorities should try to ascertain the asset manager's global market share and may need to consult with regulators in other jurisdictions to evaluate this indicator. Furthermore, even if an intermediary has only a small global market share, it could be essential to the market of an individual jurisdiction and through contagion; the failure of such an entity could still have a systemic impact on a global scale.

#### ***7.4.4 Complexity***

***Indicator 4-1: Impact of the organisational structure***

A failure or distress of an asset manager may have impact on the global financial system through its subsidiaries and/or affiliates depending on its organisational structures. The FSB and IOSCO are thus interested in exploring the organisational structure of asset managers and the extent to which the distress of an asset manager may have spill-over effects to other activities performed by its subsidiaries and/or affiliates which could in turn amplify risks. It may be worth having a holistic view of asset management complexes to assess whether the existence of other activities could magnify effects of a distress or failure in the market.

In this context, the analysis of business models and legal structures of the asset managers and the links with affiliates would be relevant. Business models could include various businesses, such as broker-dealer, commodity pool operator or trading advisor, futures commission merchant, bank, trust company, municipal advisor, securities-based swap dealer, major securities-based swap participant. A greater number (or share in its total business) of other activities asset managers are involved in may suggest greater spill over effects which could amplify risks, or increased likelihood of a disruption in market services.

***Indicator 4-2: Difficulty in resolving a firm***

A qualitative assessment of the resolvability of a firm can be considered to assess its complexity. In the case of asset managers, a key element of resolvability is how easily contracts may be transferred to another asset manager. National authorities should also consider the possibility that a firm's client asset protection regime could impact its orderly resolution and ability to rapidly return or transfer client assets. Other factors that can be taken into account include operational complexity; degree of internal interconnectedness; and quality of management information systems.

Such assessment should focus on the "difficulty" as the outcome is a mere proxy for the assessment of the complexity of a firm.

#### **7.4.5 Cross-jurisdictional activities (global activity)**

##### ***Indicator 5-1: Number of jurisdictions in which an asset manager has a presence***

The extent of cross-jurisdictional activities is an essential factor in determining the global impact of the distress or failure of a particular institution. The more cross-border activities an asset manager engages in, the more likely its distress or failure will have a global impact.

The asset manager's involvement in cross-jurisdictional activities can be measured by how many jurisdictions in which it and/or its affiliates<sup>66</sup> are licensed, registered, or supervised by the regulator of the relevant jurisdiction. Alternatively, it can be measured by percentage of clients that are outside the jurisdiction where the asset manager's headquarter resides (i.e. home jurisdiction) or number of jurisdictions in which major counterparties are domiciled.

***Q7-8. Please explain any proposed indicators set out above that, in your view, are not appropriate for assessing the relevant impact factors and its reasoning. What alternative indicators should be added and why would they be more appropriate?***

***Q7-9. What are the practical difficulties (e.g. data availability, comparability) if any with collecting data related to these indicators? Please clarify which items, the practical problems, and possible proxies that could be collected or provided instead.***

***Q7-10. Which of the proposed indicators set out above, in your view, should be prioritised in assessing the systemic importance of an asset manager?***

---

<sup>66</sup> Affiliates can be subsidiaries of an asset manager, and/or entities and persons that market its products and interact with clients.

## **8. Guiding methodology for other NBNI financial entities**

As stated earlier in Section 2.2, specific sector methodologies developed for finance companies, market intermediaries, investment funds and asset managers should be seen as a first stage in the elaboration of concrete indicators, and does not preclude further work by the FSB, as well as IOSCO or other SSBs, to develop indicators for other entity types. The following is a guidance for authorities in assessing the global systemic importance of other NBNI financial entities (or entity types) until a need arises to develop a sector-specific methodology. To this end, the guiding methodology should be considered as a “backstop” to identify any potential G-SIFIs not captured by the sector-specific methodologies set out in Sections 4-7 above.

### **8.1 Definition<sup>67</sup>**

Other NBNI financial entities include any corporation, partnership or other legal entity structure that is primarily engaged in financial intermediation or in related auxiliary financial activities, and that is not explicitly assessed by sector-specific methodologies for finance companies, market intermediaries, investment funds or asset managers (as set out in Sections 4-7), or by the G-SIB/G-SII methodologies.<sup>68</sup>

Financial intermediation may be defined as an activity in which an institution raises funds by incurring liabilities on its own account for the purpose of channelling these funds to other entities by lending or otherwise acquiring financial assets. NBNI financial intermediaries include deposit-taking institutions other than banks, as well as finance companies, investment funds, and specialised vehicle companies. Financial auxiliaries are closely related to financial intermediation, but these activities are by their nature separate from intermediation activities. Activities that are auxiliary to intermediation may be performed, on a secondary basis, by traditional financial intermediaries or by separate, specialised financial auxiliaries that do not, as a main business activity, raise funds or extend credit on their own account.

### **8.2 Systemic importance of other NBNI entities**

Risk profiles, and any potential systemic importance, of other NBNI financial entities vary widely given the wide variety of entities included in this category. NBNI financial entities that rely on short-term wholesale funding markets could pose systemic risks to the global financial system assuming the entities are large in size, as other large financial entities may be exposed to these NBNI financial entities via direct equity investments or via lending and derivative transactions. Furthermore, certain NBNI financial entities may pose a risk to the financial system due to their role in performing a critical function where the entity also has substantial market share. Finally, there may be certain circumstances where an NBNI financial entity may pose a risk to the financial system due to fire sales of assets in times of market distress, assuming this entity to be extraordinary size relative to its served market.

---

<sup>67</sup> In developing the definition, the FSB has referred to the definitions in the IMF Monetary and Statistics Manual (<http://www.imf.org/external/pubs/ft/mfs/manual/>).

<sup>68</sup> As stated in footnote 6, NBNI financial entities in this document exclude FMIs and possibly certain types of NBNI financial entities as specified in Section 2.1.

### **8.3 Indicators for assessing systemic importance**

The criteria and indicators for assessing the systemic importance of other NBNI financial entities should be based on the same five impact factors as set in the high-level framework for identifying NBNI G-SIFIs (i.e. size, interconnectedness, substitutability, complexity and global activities). In many cases, these criteria and indicators are the same as those used in assessing the global systemic importance of finance companies and market intermediaries. However, additional indicators may need to be developed by the FSB, in consultation with the relevant international SSBs, in order to better assess certain other NBNI financial entity types should the need arise.

## Attachment 1: Proposed indicators for assessing systemic importance of NBNI financial entities

WS3 Methodologies (proposed indicators)				
Categories for Determining Systemic Importance	Finance Companies	Market Intermediaries (Securities Broker-Dealers)	Investment Funds	Asset Managers
	Materiality Criteria: \$100 billion in balance sheet total assets.	Materiality Criteria: \$100 billion in balance sheet total assets.	Materiality Criteria: Either \$30 bn in NAV and 3x leverage with size backstop of \$100 bn net AUM, or \$200 bn in GAUM unless not a dominant player. Private funds (e.g. hedge funds) have an alternative threshold at a value of \$400 billion in GNE.	Materiality Criteria: for consideration (e.g. asset manager balance sheets \$100 billion in balance sheet total assets, \$1 trillion total net AUM)
	Individual Indicators	Individual Indicators	Individual Indicators	Individual Indicators
Size	1. Total globally consolidated balance sheet assets, 2. Total globally consolidated off-balance sheet exposures	1. Total globally consolidated balance sheet assets, 2. Total globally consolidated off-balance sheet exposures, 3. Client assets outstanding	1. Net assets under management (AUM or NAV) for the fund, 2. For hedge funds and where available, gross notional exposure (GNE) as an alternative indicator	1. Net assets under management (AUM or NAV) for the fund, 2. Balance sheet assets
Interconnectedness	1. Intra-financial system assets, 2. Intra-financial system liabilities, 3. Borrowings split by type, 4. Leverage ratio	1. Intra-financial system assets, 2. Intra-financial system liabilities, 3. Leverage ratio, 4. Short-term debt ratio, 5. OTC derivatives assets and liabilities, 6. Amount of margin required at clearing houses or central counterparties	1. Balance sheet financial leverage of the investment fund, 2. Leverage ratio of the investment fund, 3. Ratio of Gross Notional Exposure (GNE) to the NAV for the investment fund, 4. The ratio of collateral posted by the Investment Fund to its NAV, 5. Counterparty credit exposure to the investment fund, 6. Intra-financial system liabilities to G-SIFIs, 7. Nature of investors of the funds	1. Leverage Ratio, 2. Guarantees and other off-balance sheet exposures
Substitutability	1. Qualitative assessment of "substitutability", which takes into account the firm's market share in various financing markets and ease of substitutability by other provider(s) of funding	1. Qualitative assessment of reliance of the market on the services of the intermediary (for a critical function or service), 2. Market share, measured by (i) trading as a percentage of daily market volume on domestic exchanges, and (ii) if available, global market transaction volume in securities (including equities, bonds and futures)	1. Daily trading volume of certain asset classes of the fund compared to the overall daily trading volume of the same market segment, 2. Fund holdings per certain asset classes compared to the overall daily trading volume of the same asset class, 3. NAV of the fund compared to the size of the underlying market	1. Substitutability, measured by a percentage of the asset manager's revenues as compared to the total revenues attributable to the relevant business, 2. Market share, measured by a percentage of the asset manager's AUM in a particular strategy as compared to the total AUM invested in the same strategy for all managers
Complexity	1. OTC derivatives notional amount, 2. Difficulty in resolving a firm	1. Structural complexity, measured by number of legal entities that are consolidated, 2. Operational complexity, measured by Level 3 assets	1. Non-centrally cleared derivatives trade volumes of the fund / Total trade volumes of the fund, 2. Ratio (%) of collateral posted by counterparties that has been re-used by the fund, 3. Proportion of an investment fund's portfolio using High-Frequency-Trading (HFT) strategies, 4. Investment fund liquidity profile, 5. For leveraged funds, Ratio of unencumbered cash to gross notional exposure (GNE), 6. The ratio of unencumbered cash to the NAV of the investment fund, 7. Amount of less liquid assets	1. Impact of the organisational structure 2. Difficulty in resolving a firm
Cross-jurisdictional presence	1. Size of cross-jurisdictional claims, 2. Size of cross-jurisdictional liabilities, 3. Number of jurisdictions in which the finance company conducts operations, 4. Assets or revenues in foreign jurisdictions	1. Number of jurisdictions in which the market intermediary and/or its affiliates conduct operations, 2. Cross-jurisdictional claims and liabilities	1. Number of jurisdictions in which a fund invests, 2. Number of jurisdictions in which the fund is sold / listed, 3. Number of jurisdictions where the fund has counterparties	1. Number of jurisdictions in which an asset manager has a presence

## Attachment 2: FSB NBNI G-SIFI assessment methodology procedural steps

