

## **Consultative Document**

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

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

**8 January 2014**



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## 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 non-bank non-insurer global systemically important financial institutions (NBNI G-SIFIs). This task was reaffirmed at the G20 Summit in St Petersburg on 5-6 September 2013, when the G20 Leaders asked the FSB, in consultation with IOSCO and other standard-setting bodies, to develop for public consultation methodologies for identifying NBNI G-SIFIs by the end of 2013.<sup>1</sup>

Systemically important financial institutions (SIFIs) are 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 Seoul Summit in 2010, the G20 Leaders endorsed the FSB framework for reducing the systemic and moral hazard risks posed by SIFIs.<sup>2</sup>

The implementation of the SIFI framework requires, as a first step, the assessment of the systemic importance of financial institutions at a global level (or G-SIFIs). The framework recognises that SIFIs vary in their structures and activities, and that systemic importance and impact upon distress or failure can vary significantly across sectors. It requires that the FSB and national authorities, in consultation with the standard-setting bodies, and drawing on relevant indicators, determine which institutions will be designated as G-SIFIs. The assessment methodologies to identify G-SIFIs need to reflect the nature and degree of risks they pose to the global financial system. To date, assessment methodologies have been developed for global systemically important banks (G-SIBs) and insurers (G-SIIs).<sup>3</sup>

This document sets out, for public consultation, the proposed assessment methodologies for identifying NBNI G-SIFIs, extending the SIFI framework that currently covers banks and insurers to all other financial institutions.<sup>4</sup> This is challenging as the high-level framework and specific methodologies have to capture a wide range of business models and risk profiles, while maintaining broad consistency with the methodologies for banks and insurers.<sup>5</sup> Also, unlike banks and insurers, the NBNI financial entities generally face limitations in the data availability.

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<sup>1</sup> See Para.70 of the [G20 Leaders' Declaration](#).

<sup>2</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>3</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).

<sup>4</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.

<sup>5</sup> While systemic risks may arise in financial markets, products and instruments (see, for example, <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD347.pdf>), the proposed assessment methodologies are specifically designed to focus on the distress and failure of institutions and the mechanisms by which risks may be transmitted from entity to entity, in light of the G20 request.

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. In a report to the G20 Leaders published in September 2013, the FSB explained that these steps will be taken at a later stage.<sup>6</sup>

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

- (i) The overarching objective in developing the methodologies is to identify NBNI financial entities whose *distress or disorderly failure*, because of their size, complexity and systemic interconnectedness, *would cause significant disruption to the global financial system and economic activity across jurisdictions*.<sup>7</sup>
- (ii) 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 pose a threat to global financial stability (Section 1). It then sets out a high-level framework for identifying 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 financial sector-specific methodologies (Sections 4-6) for (i) finance companies, (ii) market intermediaries (securities broker-dealers), and (iii) investment funds (including hedge funds). The FSB led the development of (i), while the development of (ii) and (iii) was led by IOSCO. Finally, there is a guiding methodology for assessing the global systemic importance of all other NBNI financial entities (or entity types) as a “backstop” to identify any potential G-SIFIs not captured by the above NBNI G-SIFI methodologies (Section 7).

The FSB and IOSCO welcome comments on this document. Comments should be submitted by **7 April 2014** by email to [fsb@bis.org](mailto:fsb@bis.org) or post (Secretariat of the Financial Stability Board, c/o Bank for International Settlements, CH-4002, Basel, Switzerland). All comments will be shared with IOSCO and will be published on the FSB and IOSCO websites unless a commenter specifically requests confidential treatment.

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<sup>6</sup> The FSB, in cooperation with IOSCO and other standard-setting bodies where relevant, will begin work to develop within the SIFI framework the incremental policy measures needed to address the systemic risks posed by NBNI SIFIs, once the identification methodologies have been finalised and published. See [http://www.financialstabilityboard.org/publications/r\\_130902.pdf](http://www.financialstabilityboard.org/publications/r_130902.pdf).

<sup>7</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: (i) the exposures of creditors, counterparties, investors, and other market participants to the NBNI financial entity (exposures/counterparty channel); (ii) the liquidation of assets by the NBNI financial entity, which could trigger a decrease in asset prices and thereby could significantly disrupt trading or funding in key financial markets or cause significant losses or funding problems for other firms with similar holdings (asset liquidation/market channel); and (iii) the inability or unwillingness of the NBNI financial entity to provide a critical function or service relied upon by market participants or clients (e.g. borrowers) and for which there are no ready substitutes (critical function or service/substitutability).

### **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 and for which there are no ready substitutes.

***Consultative questions (Please provide any evidence supportive of your response, including studies or other documentation as necessary)***

***Q1-1. In your view, are the three transmission channels identified above most likely to be the ones transmitting financial distress of an NBNI financial entity to other financial firms and markets? Are there additional channels that need to be considered?***

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

### 2.1 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>8</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 (please refer to 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

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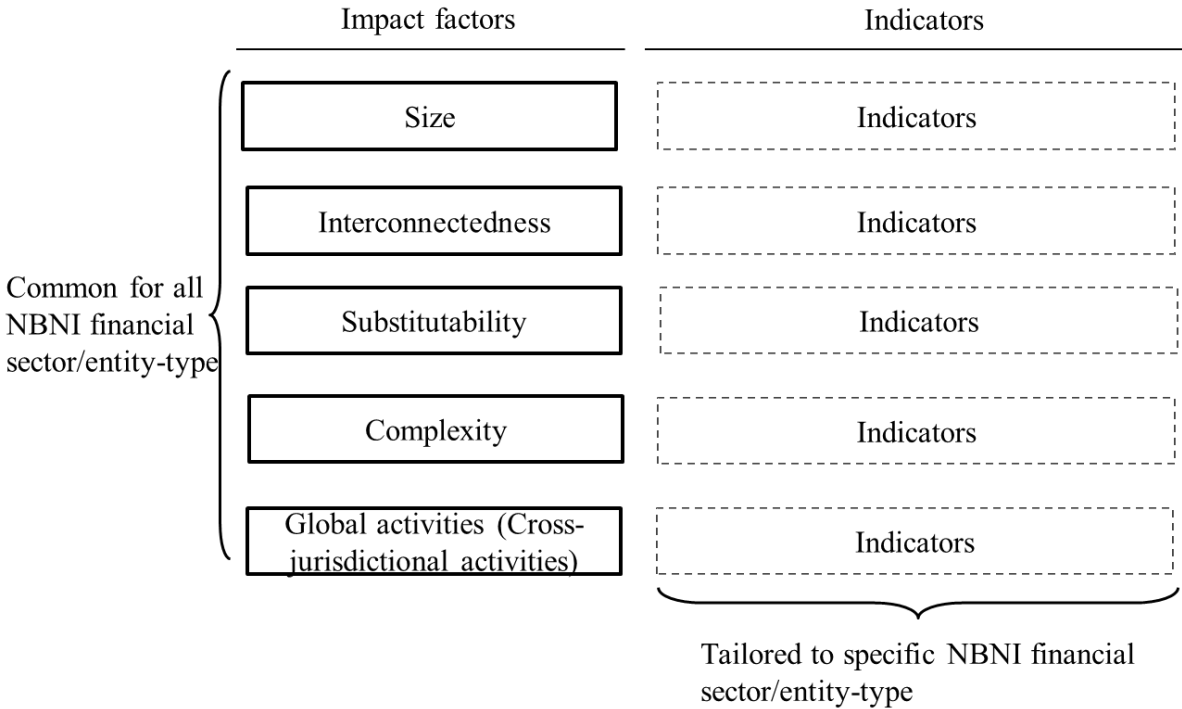
<sup>8</sup> See <http://www.bis.org/publ/bcbs255.pdf> and [http://www.iaisweb.org/view/element\\_href.cfm?src=1/19151.pdf](http://www.iaisweb.org/view/element_href.cfm?src=1/19151.pdf).



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 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**



**2.2 NBNI financial sector-specific methodologies**

The FSB, through its WS3, 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), and (iii) investment funds (collective investment schemes (CIS) and hedge funds). The proposed indicators for the three sectors are summarised in Attachment 1.

These three NBNI financial entity types were chosen for their relatively large size in the non-bank financial space,<sup>9</sup> and given historical examples of financial distress or failures in these three sectors that had an impact on the global financial system. That said, the choice of these three 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 guidance for authorities in assessing the global systemic importance of all other NBNI financial entities (or entity types) in Section 7 until such a need arises.

Considering (iii) investment funds above, the FSB has identified four possibilities for the scope of application. These are: (i) funds; (ii) family of funds;<sup>10</sup> (iii) asset managers on a stand-alone entity basis; and (iv) asset managers and their funds collectively. Since exposures are created at the fund level and data is available on an individual fund basis, the consultation methodology focuses on individual investment funds. In addition, the FSB will further consult and invite views from the public on the other three possibilities mentioned above (see Section 6).

The FSB, in consultation with IOSCO and other relevant standard-setting bodies, will ensure that the overall consistency of all the detailed methodologies will be sustained through its review of progress. Such a review is also important to avoid designation of an NBNI financial entity that does not truly raise systemic concerns, or alternatively, to avoid not identifying an entity as a G-SIFI when it should be identified as such.

***Q2-1. Does the high-level framework for identifying NBNI G-SIFIs (including the five basic impact factors) adequately capture how failure of NBNI financial entities could cause significant disruption to the wider financial system and economic activity? Are there any other impact factors that should be considered in addition to those currently proposed or should any of them be removed? If so, why?***

***Q2-2. Is the initial focus on (i) finance companies, (ii) market intermediaries, and (iii) investment funds in developing sector-specific methodologies appropriate? Are there other NBNI financial entity types that the FSB should focus on? If so, why?***

<sup>9</sup> According to the FSB Global Shadow Banking Monitoring Report 2013, (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 2012. For details, see [http://www.financialstabilityboard.org/publications/r\\_131114.pdf](http://www.financialstabilityboard.org/publications/r_131114.pdf).

<sup>10</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.

### **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 risk 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>11</sup>, NBNI G-SIFI assessment methodologies should be applied to 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 bank/insurer has been assessed by the BCBS and the IAIS on a consolidated basis and the NBNI financial subsidiaries are captured in prudential consolidated regulation and supervision of the parent bank/insurer.<sup>12</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 bank or insurer parent's failure was assessed on a global consolidated basis by the BCBS/IAIS as part of the G-SIB/G-SII methodologies. 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 bank or insurer was already assessed by G-SIB or G-SII methodology, as investment funds are usually not consolidated with the parent bank's or insurer's financial statements.

***Q3-1. Is the proposed scope of assessment outlined above appropriate for operationalising the high-level framework for identifying NBNI G-SIFIs? Are there any practical difficulties associated with the proposed scope of assessment?***

#### **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 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. That said, and as in the case of G-SIBs and G-SIIs, national supervisory judgment could also be used to add entities to the assessment pool even when they fall below the materiality threshold but are considered potentially globally systemic.

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<sup>11</sup> This includes financial holding companies for which prudential regulation for banks/insurers apply on a consolidated basis.

<sup>12</sup> The BCBS is currently reviewing the scope of consolidation for prudential regulatory purposes under its shadow banking work (WS1). It will prepare policy proposals in early 2014.

With these considerations in mind, the FSB is focusing on size to set the materiality thresholds for determining the assessment pools for NBNI G-SIFIs. Based on a preliminary analysis of NBNI financial entities based on size indicators, the FSB, in consultation with IOSCO, has decided to set the materiality threshold as follows:

- For finance companies and for market intermediaries (broker-dealers), the threshold is set at USD 100 billion (equivalent to around 75 billion euros) in “balance sheet total assets” for determining the firms that will be assessed in detail by the relevant assessment methodology.
- For investment funds, the threshold is set at USD 100 billion in net assets under management (AUM).<sup>13</sup> In the case of hedge funds, an alternative threshold will be set at a value between USD 400-600 billion in Gross Notional Exposure (GNE).<sup>14</sup> In other words, hedge funds with either USD 100 billion (or more) in net AUM or a value set between USD 400-600 billion (or more) in GNE would be subject to an assessment by national authorities.
- For other NBNI financial entities that are not assessed by G-SIB or G-SII methodologies, the threshold is set at USD 100 billion (equivalent to around 75 billion euros) in “balance sheet total assets”.

The materiality threshold figures are broadly consistent with the G-SIB and G-SII methodologies.

In addition to “size”, the FSB members 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 to set materiality thresholds based only on “size” and invite views from the public on the practicality of setting additional thresholds based on “global activity”.

***Q3-2. In your view, are the above proposed materiality thresholds (including the level) for the NBNI financial entity types appropriate for providing an initial filter of the NBNI financial universe and limiting the pool of firms for which more detailed data will be collected and to which the sector-specific methodology will be applied? If not, please provide alternative proposals for a more appropriate initial filter (with quantitative data to back-up such proposals).***

***Q3-3. Are there any practical difficulties in applying the materiality thresholds?***

***Q3-4. In your view, what is the appropriate threshold level, taking into account the range given above (USD 400-600 billion in GNE), for hedge funds? Please also provide reasons with data to back it up.***

***Q3-5. Do you think that it would be beneficial to set additional materiality thresholds based on “global activity”? If so, please explain the possible indicator and the level on which***

<sup>13</sup> Net AUM represents the amount of investors “capital at risk”, that is the amount of capital investors could lose.

<sup>14</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 for details.

***materiality thresholds should be set (with reasons for selecting such indicator, the level and any practical challenges).***

### **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 such understanding, the FSB, in consultation with IOSCO, believes that the following process should be established for assessing the global systemic importance of NBNI financial entities. It 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 sectoral methodologies. The sectoral methodologies require the home authorities to conduct both qualitative and quantitative analyses using the indicators set out in Sections 4-6, 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 and other relevant standard-setting bodies. 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 standard-setting bodies, 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) and investment funds).

Should the FSB Plenary decide to expand the scope to include other NBNI financial entity types, their competent international standard-setting bodies will be involved, as appropriate, 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” lists of the NBNI financial entities that are subject to the relevant NBNI G-SIFI methodologies in FSB and IOSCO member jurisdictions that equal or exceed the materiality threshold(s) set by the methodologies,<sup>15</sup> broken down by type of NBNI financial entity. These initially include: (i) finance companies; (ii) market intermediaries (securities broker-dealers); and (iii) investment funds.

These reference 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 reference lists are used to obtain the overall picture of NBNI financial entities subject to the NBNI G-SIFI methodologies.

Such compilation of reference lists should be based on the guidelines to be set by the FSB, in consultation with IOSCO and other relevant standard-setting bodies. 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 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 on publicly available information<sup>16</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 reference 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.
- (iv) ***Preliminary Analysis of the NBNI financial entities:*** National authorities will construct 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 the previous step (iii). In addition, national authorities may add other NBNI financial entities in their jurisdictions that are below the materiality thresholds but which they think

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<sup>15</sup> See Section 3.2 for the details of materiality threshold(s).

<sup>16</sup> For certain type of NBNI financial entities such as hedge funds, other types of information may be used.

should 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 banks/insurers already assessed by the G-SIB/G-SII methodologies). National authorities will submit the Stage 1 lists to the IOG on a strictly confidential basis.

National authorities will then collect data/information on the indicators set out in the NBNI G-SIFI 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 material 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 standard-setting bodies. 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 designated 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 guidelines to be developed). 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 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 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 standard-setting bodies 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>17</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. 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.

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<sup>17</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

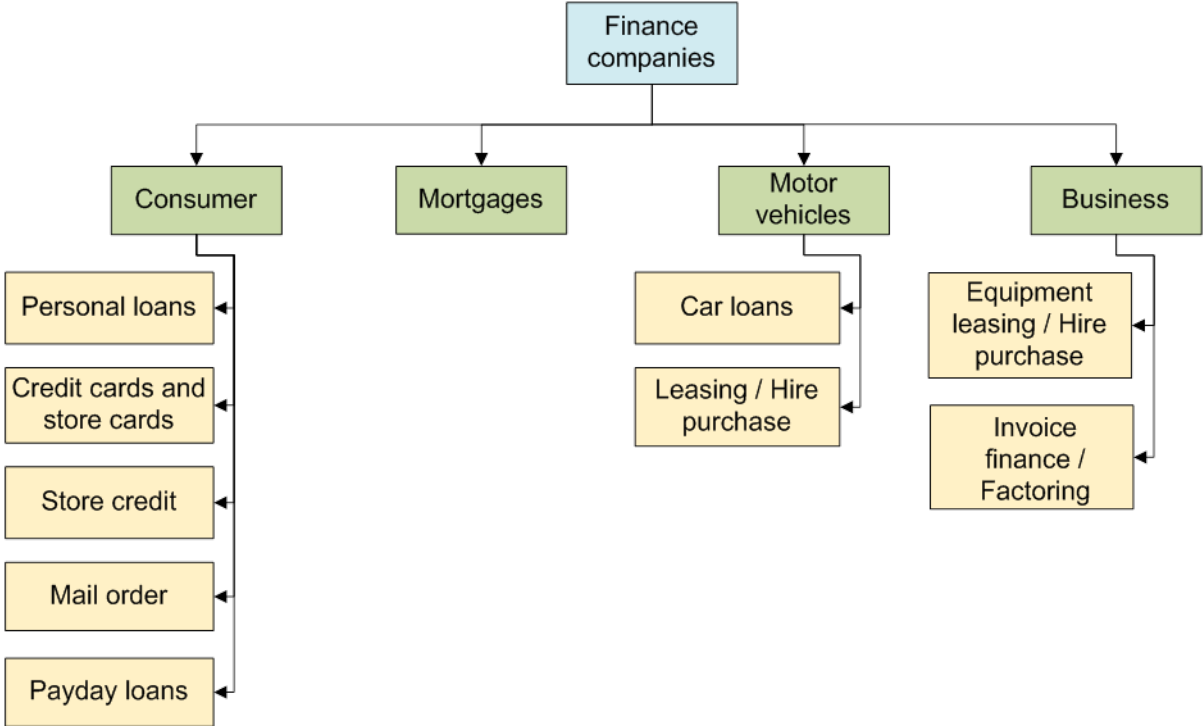
“Finance companies” are NBNI financial entities that provide finance to individuals and businesses. They mainly fund themselves using wholesale funding sources, including loans from banks, securitisation and commercial paper (CP).

Such finance companies include:

- (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) *Captives owned by manufacturers or distributors that finance sales of their parents’ products only* - For example, finance companies owned by large car producers to finance sales of their cars.
- (iii) *Specialist providers, 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 can be split into four high-level categories – consumer; mortgage; motor vehicle; 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**



The regulation of finance companies varies significantly across jurisdictions. Some jurisdictions apply a level of prudential regulation to finance companies similar to bank prudential regulation, whilst some jurisdictions only regulate finance companies 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 regulatory framework would capture, to an extent, any bank-owned finance companies, 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 the real economy. They are particularly significant in certain types of finance, such as invoice finance and car finance. Business and households often rely heavily on these sources of finance. For example, many businesses use invoice finance to manage cash flows. Some of the markets where finance companies operate have relatively concentrated market structures, which may be due to barriers to entry such as the specialist expertise required to operate in certain markets. Therefore, a sudden withdrawal of funding from finance companies in these markets (due for example to financial distress or bankruptcy) could be difficult to substitute quickly. Other potential lenders, such as banks, may take some time to develop sector knowledge and expertise.

Finance companies mainly fund themselves using wholesale funding sources, such as bank loans, unsecured debt, CP (including asset-backed commercial paper (ABCP)) and securitisation. If a finance company is a subsidiary of a bank or industrial corporate, it may also receive funding or benefit from explicit or implicit guarantees from the parent. Finance companies' reliance on wholesale funding could make them susceptible to funding problems in times of market stress, particularly 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 finance companies. This impacted finance companies' ability to obtain funding, and as a result authorities in a number of jurisdictions extended solvency and liquidity support to them directly or indirectly. In turn, these funding difficulties hampered finance companies' ability to lend to the real economy.

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 via 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 to the real economy that they provide (i.e. the critical function/substitutability channel). They may also present 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).

***Q4-1. In your view, does the proposed definition of finance companies provide a practical basis for applying the specific methodology (i.e. indicators) to assess the systemic importance of NBNI financial entities that fall under the definition?***

***Q4-2. Do you think that the above description of systemic importance of finance companies adequately captures potential systemic risks associated with their financial distress or disorderly failure at the global level?***

### **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 regulators should also consider off-balance sheet assets, including derivatives, to the extent possible when assessing the systemic risk posed by a finance company.

### **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. Consistent with the approach taken in the methodology for identifying global systemically important banks (G-SIBs) by the BCBS,<sup>18</sup> 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 BCBS 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.

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***

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

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<sup>18</sup> <http://www.bis.org/publ/bcbs255.pdf>

- Securitisation
- Due to banks (of which: due to parent bank)
- Other

National authorities should also provide information on the maturity of these borrowings, with a particular focus on short-term borrowings.

#### ***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***

Since it is difficult to find quantitative indicators that adequately capture the substitutability of a finance company, a qualitative approach (i.e. qualitative assessment by the relevant authorities) is suggested. 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 a specialised sector (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. 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***

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 above quantitative indicator, a qualitative assessment of the resolvability of a firm can be considered in assessing the complexity of a firm. The FSB's *Key Attributes of*

*Effective Resolution Regimes for Financial Institutions*<sup>19</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 firm’s structure and operations; (ii) degree of internal interconnectedness; (iii) membership of financial market infrastructures (FMIs); and (iv) quality of management information systems (MIS).<sup>20</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.

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

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

Cross-jurisdictional claims should be calculated in line with the BIS consolidated international banking statistics.<sup>21</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>22</sup>

##### ***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.

***Q4-3. Are the proposed indicators appropriate for assessing the relevant impact factors? For example, for consistency purposes the methodology uses “intra-financial system assets” and “intra-financial system liabilities” as defined in the G-SIB framework, but should it consider other indicators that are more tailored to a finance company’s business model and risk profile? Also, should the methodology focus not only on OTC derivative exposures but also centrally-cleared derivatives in assessing “interconnectedness” and “complexity”?***

<sup>19</sup> [http://www.financialstabilityboard.org/publications/r\\_111104cc.pdf](http://www.financialstabilityboard.org/publications/r_111104cc.pdf)

<sup>20</sup> Section 4, Annex II (Resolvability Assessments) of the FSB *Key Attributes*.

<sup>21</sup> For a full description of the data, definitions and coverage see <http://www.bis.org/statistics/consbankstatsguide.pdf>.

<sup>22</sup> For details, see [http://www.bis.org/statistics/bankstatsguide\\_repreqloc.pdf](http://www.bis.org/statistics/bankstatsguide_repreqloc.pdf)

*Q4-4. Are there additional indicators that should be considered for assessing the relevant impact factors? If so, please also explain the possible indicators and the reasons why they should be considered.*

*Q4-5. Would collecting or providing any of the information included in the indicators present any practical problems? If so, please clarify which items, the practical problems, and possible solutions including possible proxies that could be collected or provided instead.*

*Q4-6. Should certain indicators (or impact factors) be prioritised in assessing the systemic importance of finance companies? If so, please explain which indicator(s) and the reasons for prioritisation.*

## 5. Sector-specific methodologies (2): Market intermediaries (Securities broker-dealers)<sup>23</sup>

### 5.1 Definition

“Market intermediaries” generally include NBNI financial entities that are in the business of managing individual portfolios,<sup>24</sup> 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;
- Providing advice regarding the value of securities or the advisability of investing in, purchasing or selling securities;
- 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.

### 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>25</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

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<sup>23</sup> This section is based on a draft prepared by IOSCO.

<sup>24</sup> 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>25</sup> <http://www.compliance-exchange.com/governance/library/ioscoprinciples2010.pdf>



customer accounts to a solvent market intermediary.<sup>26</sup> In addition, IOSCO’s Principle 32 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.

- Q5-1. In your view, does the proposed definition of market intermediaries provide a practical basis for applying the specific methodology (i.e. indicators) to assess the systemic importance of NBNI financial entities that fall under the definition?*
- Q5-2. How should the sector-specific methodology account for firms that perform intermediary functions through registered broker-dealers or securities firms in some jurisdictions but through dually-licensed banking entities in other jurisdictions?*
- Q5-3. Do you think that the above description of systemic importance of market intermediaries adequately captures potential systemic risks associated with their financial distress or disorderly failures at the global level?*

**5.3 Indicators for assessing systemic importance**

In developing the criteria and indicators for assessing the systemic importance of market intermediaries, IOSCO considered the indicators for identifying G-SIBs and adapted them 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

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<sup>26</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 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.

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>27</sup>

#### ***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>28</sup> or total client assets under management. 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:

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<sup>27</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.

<sup>28</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.

- 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 BCBS 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;
- 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>29</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

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<sup>29</sup> See Para.157-164 of the Basel III document (<http://www.bis.org/publ/bcbs189.pdf>).

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”);
- 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>30</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.

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<sup>30</sup> For critical functions, see [http://www.financialstabilityboard.org/publications/r\\_130716a.pdf](http://www.financialstabilityboard.org/publications/r_130716a.pdf)

***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.

***Indicator 4-2: Operational complexity, measured by Level 3 assets***

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.

#### ***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. Conversely, a large, interconnected market intermediary with few substitutes in a particular jurisdiction might be systemically important to the jurisdiction, but if it does not engage in cross-jurisdictional activity, it should not be considered as a G-SIFI.

***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.

*Q5-4. Are the proposed indicators appropriate for assessing the relevant impact factors? In particular, are there more appropriate indicators for “substitutability” and “complexity” that should be considered? If so, please explain the indicator and the reasons why such measures are more appropriate.*

*Q5-5. Would collecting or providing any of the information included in the indicators present any practical problems? If so, please clarify which items, the practical problems, and possible solutions including possible proxies that could be collected or provided instead.*

*Q5-6. Are there additional indicators that should be considered for assessing the relevant impact factors (For example, should “number of clients” or “number of types of clients” also be considered for “size”)? If so, please also explain the possible indicators and the reasons why they should be considered.*

*Q5-7. Should certain indicators (or impact factors) be prioritised in assessing the systemic importance of market intermediaries? If so, please explain which indicator(s) and the reasons for prioritisation.*

*Q5-8. In your view, is there a need for more specific quantitative guidelines for any indicators that should be proposed? If so, please explain which indicator(s) and the possible appropriate quantitative guidelines.*

*Q5-9. In light of the G20 commitment to require all standardised OTC derivatives to be centrally-cleared, should the methodology include “amount of margin required at clearing houses or CCP” as an indicator for assessing “interconnectedness”? If not, please explain why.*

## 6. Sector-specific methodologies (3): Investment funds<sup>31</sup>

### 6.1 Definition

This sector-specific methodology is designed to cover “collective investment schemes (CIS)”, including authorised/registered open-end schemes that redeem their units or shares (whether on a continuous or periodic basis), as well as closed-end ones. By way of example, the methodology would therefore cover disparate fund categories, from common mutual funds (including sub-categories thereof such as money market funds (MMFs) and exchange-traded funds (ETFs)) to private funds (including hedge funds, private equity funds and venture capital). Further, while separately managed accounts (SMAs) are not CIS, these accounts represent a large segment of the asset management industry. More work is needed for authorities to assess any potential financial stability risks that these separately managed accounts may pose. The treatment and inclusion of such accounts is still under review.<sup>32</sup>

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 CIS. It is recognised that the rules governing the legal form and structure of CIS may vary across jurisdictions.

In addition, for the purposes of the second IOSCO hedge fund survey,<sup>33</sup> IOSCO has developed principles/guidelines for those CIS that should be considered as hedge funds (including meeting the criteria as defined in its local jurisdiction, or declaring itself as a “hedge fund” to its regulatory authority, or presenting a combination of specific characteristics).<sup>34</sup> IOSCO recognises that, under these principles/guidelines, what constitutes a hedge fund in one jurisdiction may not be the same as in another. As part of the assessment process, national authorities should clarify which type of NBNI financial entities will fall under the definition of hedge funds for the purpose of identifying NBNI G-SIFIs in their jurisdiction and report it to the IOG.<sup>35</sup>

### 6.2 Systemic importance of asset management entities

#### 6.2.1 Systemic risk transmission mechanisms

While the legal forms may vary, asset management entities as defined by investment funds play an important role, channelling resources to securities markets and offering investors

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<sup>31</sup> This section is based on a draft prepared by IOSCO.

<sup>32</sup> There are data limitations with regard to SMAs, as highlighted in the US Office of Financial Research report on *Asset Management and Financial Stability*, published in September 2013 ([http://www.treasury.gov/initiatives/ofr/research/Documents/OFR\\_AMFS\\_FINAL.pdf](http://www.treasury.gov/initiatives/ofr/research/Documents/OFR_AMFS_FINAL.pdf)).

<sup>33</sup> <http://www.iosco.org/library/pubdocs/pdf/IOSCOPD427.pdf>

<sup>34</sup> For details, please see the IOSCO (2009) Hedge Funds Oversight (<http://www.iosco.org/library/pubdocs/pdf/IOSCOPD293.pdf>).

<sup>35</sup> 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.

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 perspective, but also from a systemic perspective.

Concerning investment funds, the following two systemic risk transmission channels are applicable:

- (i) ***Exposures / Counterparty channel:*** Risks through this channel may occur when distress or failure of an investment fund leads to losses or other impairment incurred by banks, brokers and other counterparties (not including equity investors). This may occur if counterparties have extended financing to a fund or through direct trading linkages. Losses on investments by a fund could, if exposures 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.
- (ii) ***Asset liquidation / Market channel:*** This channel describes the indirect impact of distress or a failure of an investment fund on other market participants. For example, individual funds may be significant investors and/or providers of liquidity in some asset classes. In times of stress (when there might be an increase in correlations between asset classes), forced liquidation of positions by funds could cause temporary distortions in market liquidity and/or prices that cause indirect distress to other market participants. The potential for forced liquidations and market distortions may be amplified by the use of leverage by funds, particularly in the event of a "run" on their financing such as through redemptions or increased margin calls. Another example would be the loss of investor confidence in one 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 strategy.

The indicators described in the next section aim to cover all types of investment funds as defined above, taking into consideration the specificities of the asset management industry. The reason for this is the very different nature of funds' risk profiles when compared with those of other financial entities. Unlike banks, for instance, where capital is set aside to protect depositors and other creditors against the risk of losses, investment management is characterised by the fact that fund investors are knowingly exposed to the potential gains and losses of a fund's invested portfolio. As such and at least in theory, fund investors decide, based on full disclosure, to take on investment risks.

In addition, from a purely systemic perspective, funds contain a specific "shock absorber" feature that differentiates them from banks. In particular, fund investors absorb the negative effects that might be caused by the distress or even the default of a fund, thereby mitigating the eventual contagion effects in the broader financial system. As explained above, fund investors bear both upside rewards and downside risks from movements in the value of the underlying assets. Bank depositors, on the other hand, are not in the same position and generally neither benefit from a bank's profits (that goes to bank shareholders) nor do they bear the primary risk of a bank default. Whether funds are managed by an operator (usually investment advisers/managers) or are self-managed (i.e. managed by a board), the manager



acts as an “agent”, responsible for managing the fund’s assets on behalf of investors according to its investment objectives, strategy and time horizon.

### ***6.2.2 The rationale for the proposed focus on funds***

In many jurisdictions, other considerations further distinguish the risk profile of a fund from that of a fund manager. For the purposes of this consultation, the methodology is designed to focus on the fund level for the following reasons outlined below:

- Economic exposures are created at the fund level as they emanate from the underlying asset portfolio held by the fund. It is therefore the portfolio of assets that creates the respective exposures to the financial system.<sup>36</sup>
- A fund is typically organised as a corporation or business trust under national law, and, as such, is a separate legal entity from its manager. The assets of a fund are separated and distinct from those of the asset manager<sup>37</sup> and as a result, the assets of a fund are not available to claims by general creditors of the asset manager.
- There are also practical reasons for focusing on funds. Certain data (such as data collected through the SEC/CFTC Form PF/PQF in the US and the Alternative Investment Fund Managers Directive (AIFMD) transparency reporting requirements in the EU) is or will be available to supervisors in a per entity format.

For the purpose of the sector-specific methodology to identify NBNI G-SIFIs, there are also important aspects worth considering that may dampen the global systemic impact of a fund failure. For instance, depending on national regulation, asset managers may temporarily implement specific liquidity management tools such as swing pricing, anti-dilution levies, redemption gates, side-pockets, redemptions in kind or temporary suspensions. Moreover, funds close (and are launched) on a regular basis with negligible or no market impact. In other words, the investment fund industry is highly competitive with numerous substitutes existing for most investment fund strategies (funds are highly substitutable). A fund may close for a variety of reasons, for example not attracting sufficient investor interest or performing poorly over a given period, leading investors to gradually withdraw their money.<sup>38</sup> As a result, a manager (or a fund’s Board, depending on the jurisdiction) may choose among several options. For instance, it may choose to alter the underlying investment strategy, merge the fund’s assets with those of another similarly managed fund, arrange (with investors’ consent) for the assets to be managed by another manager on the basis of a new investment mandate, or orderly liquidate the assets and return investors’ their monies.

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<sup>36</sup> For example, any interconnectedness does not emanate from the manager’s balance sheet, but is the consequence of the manager’s activities in relation to the management of assets held in the portfolio. Also, second round effects on the financial system may occur due to a run on a fund. While there may be runs on other funds managed by the same manager, there is no run on the manager (the latter may happen within a “family of funds”).

<sup>37</sup> These assets are required to be held at a third-party custodian in jurisdictions such as the US and EU.

<sup>38</sup> According to relevant industry data for US mutual funds, for instance, from 2000 to 2012, on average 671 new funds were launched per year, compared to an average of 291 liquidations (and 296 mergers). Moreover, throughout the same period, mutual fund launches have outnumbered liquidations, except in 2009, when liquidations were more numerous by a very narrow margin. In addition, even when viewed in the aggregate, no mutual fund liquidations led to a systemic market impact throughout the observation period. Part of the explanation may be that many US investors hold mutual fund shares for retirement purposes. As such, these investors’ investment horizon could be long-term, whereby they would prefer to remain invested rather than cash-out during a market downturn.

Hedge funds also may close for similar reasons.<sup>39</sup> However, there is some concern that, in the case of a hedge fund that is highly leveraged, one can imagine a scenario in which an orderly wind-down or transfer of assets to a new manager could be more difficult, as described below. In addition, the potential global systemic impact of hedge funds in terms of their interconnectedness, size and behaviour may be increased by the lack of transparency and/or information asymmetry (between managers on the one side and markets/regulators/investors on the other). This may be of particular relevance during turbulent market conditions, if a fund or a group of funds in distress is forced to unwind positions that in turn could lead to a spiral of self-reinforcing movements for other funds (whose strategies may be identical or highly correlated - i.e. the so-called “crowded trade” phenomenon), their counterparties and prime brokers, and the wider market, possibly exacerbated by an increase in investor redemptions.<sup>40</sup> Such a disorderly contraction of segments of the market may well have wider ramifications. These attributes may contribute to the possibility of a hedge fund or a group of hedge funds to be potentially systemic from a global perspective.

### **6.2.3 Possible alternatives of focus for the methodology**

The FSB, in consultation with IOSCO, has determined that the methodology for funds could be potentially broadened based on the following additional possibilities and asks for views from the public on the appropriate level of focus:

- (i) **Family of funds** - In addition to individual funds, it may also be necessary to consider families/groups of funds following the same or similar investment strategy that are managed by the same asset manager. While any one of such funds may be too small to be considered systemically relevant under the proposed methodology, it may be necessary to consider such funds in the aggregate.<sup>41</sup>

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<sup>39</sup> Looking at estimated data for the global hedge fund industry, from 2000 to 2011, new launches averaged a total of approximately 1,075 per year, compared to an average of 578 closures. As for mutual funds in the US, only in 2008 did the number of hedge fund liquidations overtake the number of launches, although by a wider margin compared to the mutual funds above (an estimated number of 659 launches against some 1,471 liquidations). These few statistics are telling in that they allow one to conclude that liquidations and consequent closures of CIS entities, both in the mutual and hedge fund space, represent an ordinary phenomenon that results more from gradual changes in investor sentiment (with consequent outflows) than as a deterministic response to an external shock.

<sup>40</sup> The risks inherent to highly correlated trading strategies by a group of hedge funds operating in turbulent market conditions have been debated, and some believe proven, in the so-called the “Quant Crisis” of August 2007. Although it did not develop into a global financial crisis of systemic proportions, some believe it was a prelude to the events that unravelled the following year and good signal of global interconnectedness. According to a recent account, in the year leading up to the crisis, several “quantitative” hedge funds were implementing varying forms of market neutral and statistical arbitrage equity strategies, attracted by the positive returns in the period between 2004 and early 2007. These positions were for the vast part concentrated in large capitalisation equity securities. In parallel, these funds had also been pursuing less liquid credit-based strategies that had been underperforming for a number of years and that de facto collateralised the more liquid equity ones. Incremental losses due to the underperforming credit-based strategies led the “quants” to gradually sell-off positions in their most liquid strategies at hand, in attempts to reduce leverage and raise cash to meet rising redemption demands. These liquidations gathered momentum, forcing other similarly constructed portfolios to unwind and de-leverage. By the first week of August, the sell-off had spread beyond the U.S. equity market to international equity strategies, which some believe demonstrated its effect on a cross-section strategies by nature far removed from those suffering the initial losses. Some believed that the abnormal levels of volatility registered in the late weeks of July and early August only reinforced the sell-off by setting off risk triggers across firms only to generate further selling as institutions tried to de-leverage. See Rishi Narang (2013) *Inside the Back Box – The Simple Truth about Quantitative Trading*, Wiley Finance.

<sup>41</sup> In the future, it could be possible to “recalibrate” the methodology to assess the behaviour of groups of funds managed by the same manager, or across different management firms, with equivalent systemic characteristics and identify new indicators. Such work towards a more complex methodology may build on the experience gained in the actual application of the methodology currently developed. Therefore, the methodology is of an organic, adaptive nature.

- (ii) ***Asset managers on a stand-alone entity basis*** - Under this approach, the question of whether asset managers themselves may be of systemic importance would be analysed. For instance, it is the manager that is in a position potentially to create systemic exposure through the activities it performs as a firm, for example, risk management or securities lending and repo transactions. Additionally, asset managers are exposed to operational and reputational risks.
- (iii) ***Asset managers and their funds collectively*** - In addition to the stand-alone asset manager, it may be necessary for a complete analysis to examine the asset manager and all assets under its management, given that it is the asset manager that determines, for example, the investment strategy and risk management practices. Theoretically, reputational risk of an asset manager or one of the funds it manages may create runs both on the asset manager as well as on its funds.

Indeed, another possible approach to assessing systemic risk in the asset management sector could be to consider possible financial stability risks that could arise out of certain asset management-related activities. Under this approach, the methodologies would consider how particular activities or group of activities might pose systemic risks. The entity-based approach taken in this Consultative Document is designed to achieve consistency with other G-SIFI methodologies, which focus on certain core impact factors, among other things.

***Q6-1. In your view, does the proposed definition of investment funds provide a practical basis for applying the specific methodology (i.e. indicators) to assess the systemic importance of NBNI financial entities that fall under the definition?***

***Q6-2. Does the above description of systemic importance of asset management entities adequately capture potential systemic risks associated with their financial distress or disorderly failure at the global level?***

***Q6-3. Which of the following four levels of focus is appropriate for assessing the systemic importance of asset management entities: (i) individual investment funds; (ii) family of funds; (iii) asset managers on a stand-alone entity basis; and (iv) asset managers and their funds collectively? Please also explain the reasons why you think the chosen level of focus is more appropriate than others.***

***Q6-4. Should the methodology be designed to focus on whether particular activities or groups of activities pose systemic risks? If so, please explain the reason why and how such a methodology should be designed.***

## **6.3 Indicators for assessing systemic importance**

### **6.3.1 Size**

***Indicator 1-1: Net assets under management (AUM or NAV) for the fund<sup>42</sup>***

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<sup>42</sup> Net AUM represents the assets under management, 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”. 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.

In theory, the larger the size of a fund, the greater its potential impact on counterparties (counterparty channel) and markets (market channel). This is a key indicator for determining systemic importance and thus, it is proposed that this indicator is used to determine the assessment pool of investment funds subject to the methodology (see Section 3.2).

***Indicator 1-2: For hedge funds, gross notional exposure (GNE) as an alternative indicator***<sup>43</sup>

As 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 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, and therefore many hedge funds may not be captured by using the indicator. 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. In other words, hedge funds with either \$100 billion (or more) in net AUM or a value set between \$400-600 billion (or more) in GNE would be subject to an assessment by national authorities.

GNE is calculated as the absolute sum of all long and short positions, considering the notional value (delta-adjusted<sup>44</sup> when applicable) for derivatives. This measure provides a complete appreciation of all the leverage that is employed by a fund to gain market exposure, i.e. financial 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).

GNE does not directly represent an amount of money (or value) that is at risk of losing. It is a referential figure used to calculate profits and losses. But it still represents a fairer appreciation than NAV of the economic or market exposure (i.e. market footprint) of a fund's positions, looking through to the underlying asset or reference.

In this respect, national authorities should consider leverage by using its two components that are financial leverage (repo and securities lending, prime brokerage financing) and synthetic (derivatives exposure), where relevant.

### ***6.3.2 Interconnectedness***

The following indicators are designed to capture interconnectedness with market counterparties including brokerage 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' 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. Equally, the greater a fund's leverage, the greater its potential impact on counterparties that

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<sup>43</sup> For investment funds other than hedge funds, GNE is 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.

<sup>44</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.

have provided finance (counterparty channel) and on markets in the event of a disorderly and rapid de-leveraging (market channel).

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

Leverage ratio of an investment fund can be measured by “Gross AUM of the fund / NAV of the fund” or, in the case of hedge funds, “GNE of the fund / NAV of the fund”. The greater a fund’s leverage, the greater its potential impact on counterparties that have provided finance (counterparty channel) and on markets in the event of a disorderly and rapid de-leveraging (market channel).

***Indicator 2-2: Counterparty exposure ratio***

This indicator is defined as “total net counterparty credit exposure at the fund / Net AUM (NAV) at the fund”. Total net counterparty credit exposure at the fund is defined as “the total sum of all residual uncovered exposures that the fund positions represent for its counterparties, after considering valid netting agreements and collateral/margin posted by the fund to its counterparties”. Dividing this figure by NAV gives an indication of the potential losses a fund’s failure could immediately cause to its counterparties. The more interconnected a fund, or the greater the counterparties’ 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.

***Indicator 2-3: Intra-financial system liabilities***

Total net counterparty credit exposure at the fund in value, primarily with G-SIBs and G-SIIs. The larger the exposure of the fund to counterparties, especially with more systemically important financial entities, the greater the impact of its failure.

**6.3.3 Substitutability**

As noted earlier, most investment funds are generally substitutable in that investors have multiple (asset class) options for making their investment. However, some funds are highly specialised and invest in thinly traded markets. In order to assess the substitutability of these funds, the following indicators are proposed that focus on the fund’s (i) trading turnover related to a specific asset and (ii) its trading activity relative to its peers.

***Indicator 3-1: Turnover of the fund related to a specific asset / daily volume traded regarding the same asset***

The proposed indicator attempts to measure a fund’s substitutability by its turnover related to a specific asset, as measured by the fund’s percentage of daily trading volume with respect to that asset’s underlying market.

***Indicator 3-2: Total fund turnover vs. total turnover of funds in the same category/classification***

The higher the ratio of fund turnover to total turnover of funds in the same category, the higher the potential systemic risk of the fund.

***Indicator 3-3: Investment strategies (or asset classes) with less than 10 market players globally***

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 difficulties or collapse 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 financial entities. Although funds generally are highly substitutable products, as many similar products exist and compete in one market, there may be particular niche markets where a large fund invests heavily, either cornering or occupying a significant portion of the market, and where like substitutes may not be available.

Given that the assessment of a particular fund's substitutability requires in depth understanding of the fund's strategy, footprint in the relevant markets in which it operates and functioning of those markets, the ultimate judgment will likely have to depend on a case by case analysis by the national authorities of the fund's specific features. The proposed indicators above are nevertheless designed to assist national authorities in their assessment of this impact factor.

***6.3.4 Complexity***

***Indicator 4-1: OTC derivatives trade volumes at the fund / Total trade volumes at the fund***

Funds that engage in a significant volume of OTC derivatives in comparison to their total trading activity potentially could be exposed to higher counterparty risk.

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

A fund possessing a high percentage of collateral that it has re-hypothecated increases exposure risks for counterparties (i.e. counterparties that have posted collateral to the fund may not see their collateral returned if the fund does not honour its commitments).

***Indicator 4-3: Ratio (%) of NAV managed using high frequency trading strategies***

High frequency trading 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.

***Indicator 4-4: Weighted-average portfolio liquidity (in days) / Weighted average investor liquidity (in days)***

The weighted-average portfolio liquidity is the number of days it takes to liquidate a portfolio of investments. The weighted-average investor liquidity is the amount of time it takes for an investor to realise their investment. As such, the lower the ratio, the lower the potential risk of the fund as the fund is less exposed to liquidity risk and mismatch with investors' liquidity demands. The ratio calculation is of course state dependent. In other words, the ratio varies depending on whether the historical data used are based on normal market conditions or on stressed market conditions. If only the former is used, the ratio will understate risk.

***Indicator 4-5: Ratio of unencumbered cash to gross notional exposure (or gross AUM)***

The lower the figure, the higher the potential systemic 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.

The more complex a fund’s operations and strategy, the harder it is to unwind in an orderly manner (credit and market channels). A fund’s complexity is particularly difficult to measure given the challenges of the availability and consistency of data, among other things. Therefore, the above proposed indicators have focused on areas where data may be available, although further study is necessary to fully consider the appropriateness and availability of the data. These indicators attempt to measure a fund’s use of OTC derivatives, its use of high frequent trading strategies, and whether its liquidity profile aligns with those of its investors, for example by looking at the availability of unencumbered cash (or cash-like instruments) as a % of gross notional exposure that may be promptly sold to mitigate redemption pressures.

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

**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 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.

**Indicator 5-3: Counterparties established in different jurisdictions**

Contract and bankruptcy laws can vary across jurisdictions. The higher the number of different jurisdictions faced by a fund through its trading counterparties, the potentially more complex the situation if the fund had to be liquidated.

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 above attempt to measure a fund’s global activities. 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 operations with counterparties based in different jurisdictions (indicator 5-3), the occurrence of a fund failure 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 failure of the master fund in a different jurisdiction.

Determining the global impact of the entity is an essential aspect of the methodology since the overall objective is to identify globally systemic entities.

**Q6-5. Are the proposed indicators appropriate for assessing the relevant impact factors? If not, please provide alternative indicators and the reasons why such measures are more appropriate.**

**Q6-6. For “cross-jurisdictional activities”, should “the fund’s use of service providers in other jurisdictions (e.g. custody assets with service providers in jurisdictions other than where its primary regulator is based)” be used?**

*Q6-7. Is the definition of “net AUM” and “GNE” appropriate for assessing the “size” (indicators 1-1 and 1-2)?*

*Q6-8. Is the definition of “investment strategies” sufficiently clear for assessing the “substitutability” (indicator 3-3)?*

*Q6-9. Would collecting or providing any of the information included in the indicators present any practical problems? If so, please clarify which items, the practical problems, and possible proxies that could be collected or provided instead.*

*Q6-10. Are there additional indicators that should be considered for assessing the relevant impact factors? For example, should “the fund’s dominance in a particular strategy (as measured by its percentage of net AUM as compared to the total AUM)” also be considered for “substitutability”? Similarly, should “leverage” or “structure” of a fund also be considered for assessing “complexity”? Please explain the possible indicators and the reasons why they should be considered.*

*Q6-11. Should certain indicators (or impact factors) be prioritised in assessing the systemic importance of investment funds? If so, please explain which indicator(s) and the reasons for prioritisation.*



## **7. Guiding methodology for all other NBNI financial entities**

As stated earlier in Section 2.2, specific sector methodologies developed for finance companies, market intermediaries and investment funds should be seen as a first stage in the elaboration of concrete indicators, and does not preclude further work by the FSB to develop indicators for other entity types. The following is a guidance for authorities in assessing the global systemic importance of all other NBNI financial entities (or entity types) until such a need arises. 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 4-6 above.

### **7.1 Definition<sup>45</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, or investment funds (as set out in Sections 4-6), or by the G-SIB/G-SII methodologies.<sup>46</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.

### **7.2 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.

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<sup>45</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>46</sup> As stated in footnote 2, NBNI financial entities in this document exclude FMIs.

### **7.3 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 standard-setting bodies, in order to better assess certain other NBNI financial entity types should the need arise.

*Q7-1. In your view, does the approach set out in this section adequately identify as a “backstop” any potential G-SIFIs not captured by the sector-specific methodologies?*

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

Categories for Determining Systemic Importance	Finance Companies	Market Intermediaries (Securities Broker-Dealers)	Investment Funds
	Materiality Criteria: \$100 billion in balance sheet total assets.	Materiality Criteria: \$100 billion in balance sheet total assets.	Materiality Criteria: \$100 billion in net AUM for individual investment funds. Hedge funds have an alternative threshold at a value between \$400-\$600 billion in GNE.
	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, gross notional exposure (GNE) as an alternative indicator
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. Leverage ratio, 2. Counterparty exposure ratio, 3. Intra-financial system liabilities
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. Turnover of the fund related to a specific asset / daily volume traded regarding the same asset, 2. Total fund turnover vs. total turnover of funds in the same category/classification, 3. Investment strategies (or asset classes) with less than 10 market players globally
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. OTC derivatives trade volumes at the fund / Total trade volumes at the fund, 2. Ratio (%) of collateral posted by counterparties that has been re-hypothecated by the fund, 3. Ratio (%) of NAV managed using high frequency trading strategies, 4. Weighted-average portfolio liquidity (in days) / Weighted average investor liquidity (in days), 5. Ratio of unencumbered cash to gross notional exposure (or gross AUM)
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. Counterparties established in different jurisdictions

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

