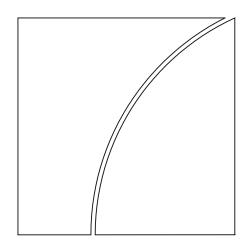# Basel Committee on Banking Supervision

Global systemically important banks: updated assessment methodology and the higher loss absorbency requirement

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BANK FOR INTERNATIONAL SETTLEMENTS

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Contents

Global systemically important banks: updated assessment methodology and the higher loss absorbency requirement

Preface

This document updates and replaces the November 2011 publication *Global systemically important banks: assessment methodology and the additional loss absorbency requirement*. Below is a summary of the main changes relative to that publication. These changes reflect the lessons learnt from applying the assessment methodology using data submitted by banks in respect of their positions as at the financial year-ends 2009 to 2011. The changes also include the addition of the disclosures that banks are required to make to ensure that the assessment methodology operates on the basis of publicly available information.

- *Methodology for determining the sample of banks.* The methodology for determining the sample of banks used to calculate banks' scores under the assessment methodology has been added and is set out in Section II.B.

- *Indicator definitions.* The following modifications have been made to the indicators used in the assessment methodology:

  o The Wholesale Funding Ratio, which was one of the three indicators in the interconnectedness category in the November 2011 publication, has been replaced with a Securities Outstanding indicator. This change was previously highlighted in paragraphs 16 and 17 of the cover note to the November 2011 publication.[1]

  o The trading and available-for-sale indicator will exclude assets that are eligible to be classified as high-quality liquid assets (HQLA) for the purpose of the Basel III Liquidity Coverage Ratio (LCR). This change reflects the aim of the indicator to identify only those assets that may suffer a fire sale discount if sold during a period of severe market stress.

- *Cap on the substitutability category.* The application of the scoring methodology to three years of data supplied by the sample banks has revealed that the substitutability category had a greater impact on the assessment of systemic importance than was intended. Therefore, a cap will be applied to the substitutability category score (see paragraph 19).

- *Publication of template and reporting instructions.* The template and reporting instructions that are being used to collect the indicator data from banks have been published. These documents provide additional clarity on the precise definitions of the 12 indicators used in the assessment methodology and the list of ancillary indicators used to inform the supervisory judgment aspects of the framework.

- *Process for normalising banks' scores changed.* The November 2011 publication normalised the scores of banks in a way that resulted in a maximum possible score of 5 (the score a bank would have if it were the only bank in the sample). To make the normalisation process more intuitive, the maximum possible score is now 10,000 basis points, ie 100% (ignoring the impact of the cap on the substitutability category).

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[1] www.bis.org/publ/bcbs207cn.pdf.

- *Consequences of the empty bucket becoming populated.* The November 2011 publication describes an empty bucket, above the four populated buckets, with a higher loss absorbency requirement of 3.5% of risk-weighted assets to provide an incentive against banks further increasing their systemic importance. Paragraph 47 adds a description of the process for creating new buckets should the empty bucket become populated.

- *Fixing the cutoff score and bucket thresholds.* The timing of the publication of the cutoff score and bucket thresholds has been brought forward by one year (from November 2014 to November 2013) and will be based on end-2012 data supplied by banks. The end-2012 denominators used to calculate banks' scores (ie the aggregates of each of the 12 indicators across the sample of banks) will also be published in November 2013. This will allow banks to calculate their scores and see their positions within the buckets prior to higher loss absorbency requirements coming into effect based on end-2013 data. See Annex 3 for an overview of the timing of the G-SIB assessment methodology.

- *Frequency of updating the denominators.* The Committee originally intended to fix the denominators used to calculate banks' scores until the completion of the first three-year review of the G-SIB methodology. The intention was to provide an absolute measure that banks could target to reduce their scores (ie the measure of their systemic impact). However, the Committee found that it is not practicable to adequately neutralise the impact of exchange rate movements under a regime of fixed denominators. Furthermore, updating the denominators only after 3 years risks creating "cliff effects", where banks experience large changes in their scores simply as a result of the denominator being updated. As a consequence, the Committee has decided that the denominators used to calculate banks' scores will be updated on an annual basis.

- *Disclosure requirements.* Reporting guidance has been added that will require all banks with an overall size exceeding EUR 200 billion (as measured by the Basel III leverage ratio measure of exposure), as well as bank that have been classified as a G-SIB in the previous year, to make publicly available the 12 indicators used in the assessment methodology.

In addition to the above, various other minor changes have been made to streamline and improve the clarity of the document.

In due course the Committee will issue further guidance on the periodic review of the methodology (see paragraphs 38 and 39).

I.   Introduction

1.   During the financial crisis that started in 2007, the failure or impairment of a number of large, globally active financial institutions sent shocks through the financial system, which, in turn, harmed the real economy. Supervisors and other relevant authorities had limited options to prevent problems affecting individual firms from spreading and thereby undermining financial stability. As a consequence, public sector intervention to restore financial stability during the crisis was conducted on a massive scale. Both the financial and economic costs of these interventions and the associated increase in moral hazard mean that additional measures need to be put in place to reduce the likelihood and severity of problems that emanate from the failure of global systemically important financial institutions (G-SIFIs).

2.   In response to the crisis, the Basel Committee on Banking Supervision has adopted a series of reforms to improve the resilience of banks and banking systems. They include increasing the required

quality and quantity of capital in the banking system, improving risk coverage, introducing a leverage ratio to serve as a backstop to the risk-based regime, and introducing capital conservation and countercyclical buffers as well as a global standard for liquidity risk.[2] The capital adequacy measures are applied to all internationally active banks to ensure that each bank maintains an appropriate level of capital relative to its own exposures. A number of the policy measures will have a particular impact on global systemically important banks (G-SIBs), given that their business models have generally placed greater emphasis on trading and capital markets-related activities, which are most affected by the enhanced risk coverage of the capital framework. These policy measures are significant, but they are not sufficient to address the negative externalities posed by G-SIBs or to protect the system from the wider spillover risks of G-SIBs. The rationale for adopting additional policy measures for G-SIBs is based on the cross-border negative externalities created by systemically important banks, which current regulatory policies do not fully address.

3.   The negative externalities associated with institutions that are perceived as not being allowed to fail due to their size, interconnectedness, complexity, lack of substitutability or global scope are well recognised. In maximising their private benefits, individual financial institutions may rationally choose outcomes that, on a system-wide level, are suboptimal because they do not take into account these externalities. Moreover, the moral hazard costs associated with implicit guarantees derived from the perceived expectation of government support may amplify risk-taking, reduce market discipline and create competitive distortions, and further increase the probability of distress in the future. As a result, the costs associated with moral hazard add to any direct costs of support that may be borne by taxpayers.

4.   In addition, given the potential cross-border repercussions of a problem in any of the G-SIBs on the financial institutions in many countries and on the global economy at large, this is not uniquely a problem for national authorities, and therefore requires a global minimum agreement.

5.   Because there is no single solution to the externalities posed by G-SIBs, the official community is addressing the issues through a multipronged approach. The broad aim of the policies is to:

- reduce the probability of failure of G-SIBs by increasing their going-concern loss absorbency; and

- reduce the extent or impact of failure of G-SIBs, by improving global recovery and resolution frameworks.

6.   The measures adopted by the Committee in this document address the first objective of requiring additional going-concern loss absorbency for G-SIBs, thereby reducing the probability of failure. These are critical and necessary measures. They complement those adopted by the Financial Stability Board (FSB) to establish robust national recovery and resolution regimes and to improve cross-border harmonisation and coordination. However, even with improved resolution capacity, the failure of

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[2] See Basel Committee, *Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools* (January 2013) at www.bis.org/publ/bcbs238.htm; *Basel III: A global regulatory framework for more resilient banks and banking systems* (December 2010) at www.bis.org/publ/bcbs189.htm; *Basel III: International framework for liquidity risk measurement, standards and monitoring* at www.bis.org/publ/bcbs188.htm; *Enhancements to the Basel II framework* (July 2009) at www.bis.org/publ/bcbs157.htm; and *Revisions to the Basel II market risk framework* (July 2009) at www.bis.org/publ/bcbs158.htm.

the largest and most complex international banks will continue to pose disproportionate risks to the global economy.[3]

7. This document sets out the measures developed by the Committee on the assessment methodology for global systemic importance, the higher loss absorbency requirements for G-SIBs, the arrangements by which they will be phased in, and the data that banks above a certain size must publicly disclose. This delivers on a request by the FSB as set out in its document *Reducing the moral hazard posed by systemically important financial institutions – FSB Recommendations and Time Lines,*[4] which was endorsed by G20 Leaders in November 2010.

8. The work of the Committee forms part of a broader effort by the FSB to reduce the moral hazard of G-SIFIs. Additional measures by the FSB on recovery and resolution address the second broad objective, which is to reduce the impact of failure of a G-SIB.[5] These policies will serve to reduce the impact of a G-SIB's failure and will also help level the playing field by reducing too-big-to-fail (TBTF) competitive advantages in funding markets. These policies have been developed in close coordination with the Committee, and were published by the FSB concurrently with the November 2011 version of this document.

9. The FSB is in the process of extending the framework to cover a wider group of SIFIs, including financial market infrastructures, insurance companies and other non-bank financial institutions that are not part of a banking group structure.

10. The following section outlines the methodology for determining a bank's global systemic importance. Section III presents the higher loss absorbency requirements for G-SIBs, and Section IV sets out the capital instruments that can be used to meet the higher loss absorbency requirements. The interaction of the capital surcharge with other elements of the Basel III framework is outlined in Section V, and Section VI discusses phase-in arrangements.

II.   Methodology for assessing the systemic importance of G-SIBs

11. The FSB Recommendations call on the Committee to develop an assessment methodology comprising both quantitative and qualitative indicators to assess the systemic importance of G-SIFIs (paragraph 48). The Recommendations also state that "the FSB and national authorities, in consultation with the BCBS, CGFS, CPSS, IOSCO and IAIS, drawing on relevant qualitative and quantitative indicators,

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[3]   See Financial Stability Board, *Thematic Review on Resolution Regimes* – Peer Review Report (April 2013) at https://www.financialstabilityboard.org/publications/r_130411a.pdf for the progress being made in the establishment of robust national resolution and recovery regimes and in cross-border harmonisation and coordination.

[4]   See Financial Stability Board, *Reducing the moral hazard posed by systemically important financial institutions, FSB Recommendations and Time Lines* (20 October 2010) at www.financialstabilityboard.org/publications/r_101111a.pdf. The FSB Recommendations asked the Committee to develop an assessment methodology comprising both quantitative and qualitative indicators to assess the systemic importance of G-SIFIs (paragraph 48). The Recommendations also asked the Committee to complete by mid-2011 a study of the magnitude of the higher loss absorbency requirement for G-SIFIs, along with an assessment of the extent of going-concern loss absorbency which could be provided by the various proposed instruments (paragraph 9). The Committee is also currently considering proposals such as large exposure restrictions and liquidity measures which are referred to as "other prudential measures" in the FSB Recommendations and Time Lines (paragraph 49).

[5]   See Financial Stability Board, *Key attributes of effective resolution regimes for financial institutions* (November 2011) at http://www.financialstabilityboard.org/publications/r_111104cc.pdf .

will determine by mid-2011 those institutions to which the FSB G-SIFI recommendations will initially apply" (paragraph 43). This section sets out the assessment methodology developed by the Committee.

12. The Committee has developed a methodology for assessing the systemic importance of G-SIBs. The methodology is based on an **indicator-based measurement approach**. The selected indicators are chosen to reflect the different aspects of what generates negative externalities and makes a bank critical for the stability of the financial system.[6] The advantage of the multiple indicator-based measurement approach is that it encompasses many dimensions of systemic importance, is relatively simple and is more robust than currently available model-based measurement approaches and methodologies that rely on only a small set of indicators or market variables.

13. Given the focus of the framework on cross-border spillovers and negative global externalities that arise from the failure of a globally active bank, the reference system for assessing systemic impact is the global economy. Consequently, systemic importance is assessed based on data that relate to the consolidated group (ie the unit of analysis is the consolidated group).

14. No approach will perfectly measure global systemic importance across all banks. Banks vary widely in their structures and activities, and therefore in the nature and degree of risks they pose to the international financial system. Hence, the quantitative indicator-based approach can be supplemented with qualitative information that is incorporated through a framework for supervisory judgment. The supervisory judgment process, however, is only meant to override the results of the indicator-based measurement approach in exceptional, egregious cases and is subject to international peer review to ensure consistency in its application.

A.   Indicator-based measurement approach

15. The Committee is of the view that global systemic importance should be measured in terms of the impact that a bank's failure can have on the global financial system and wider economy, rather than the risk that a failure could occur. This can be thought of as a global, system-wide, loss-given-default (LGD) concept rather than a probability of default (PD) concept.

16. The selected indicators reflect the **size** of banks, their **interconnectedness**, the lack of readily available **substitutes or financial institution infrastructure** for the services they provide, **their global (cross-jurisdictional) activity** and their **complexity**. The size, interconnectedness and substitutability/financial institution infrastructure categories are in line with the IMF/BIS/FSB report submitted to the G20 Finance Ministers and central bank Governors in October 2009.[7] Since this assessment methodology aims to identify global SIBs that will be subject to internationally harmonised higher loss absorbency requirements, the Committee is of the view that it is also appropriate to include a category that measures the degree of global (cross-jurisdictional) activity. A measure of complexity is also added, since G-SIBs with greater complexity are likely to be more difficult to resolve and therefore cause significantly greater disruption to the wider financial system and economic activity.

17. The methodology gives an equal weight of 20% to each of the five categories of systemic importance, which are: size, cross-jurisdictional activity, interconnectedness, substitutability/financial

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[6]   Another option would be to develop a model-based approach which uses quantitative models to estimate individual banks' contributions to systemic risk. However, models for measuring systemic importance of banks are at a very early stage of development and concerns remain about the robustness of the results. The models may not capture all the ways that a bank is systemically important (both quantitative and qualitative).

[7]   See IMF/BIS/FSB report on *Guidance to assess the systemic importance of financial institutions, markets and instruments: initial considerations* (October 2009) (www.financialstabilityboard.org/publications/r_091107c.pdf)

institution infrastructure and complexity. With the exception of the size category, the Committee has identified multiple indicators in each of the categories, with each indicator equally weighted within its category. That is, where there are two indicators in a category, each indicator is given a 10% overall weight; where there are three, the indicators are each weighted 6.67% (ie 20/3).

18.   For each bank, the score for a particular indicator is calculated by dividing the individual bank amount (expressed in EUR) by the aggregate amount for the indicator summed across all banks in the sample.[8] This amount is then multiplied by 10,000 to express the indicator score in terms of basis points. For example, if a bank's size divided by the total size of all banks in the sample is 0.03 (ie the bank makes up 3% of the sample total) its score will be expressed as 300 basis points. Each category score for each bank is determined by taking a simple average of the indicator scores in that category. The overall score for each bank is then calculated by taking a simple average of its five category scores. The maximum total score, ie the score that a bank would have if it were the only bank in sample, is 10,000 basis points (ie 100%).[9]

19.   The Committee has analysed the application of the scoring methodology described above to three years of data supplied by banks. It has found that, relative to the other categories that make up the G-SIB framework, the substitutability category has a greater impact on the assessment of systemic importance than the Committee intended for banks that are dominant in the provision of payment, underwriting and asset custody services. Therefore, the Committee has decided to apply a cap to the substitutability category score. The cap will be fixed and disclosed during 2013, at the same time as the cutoff score and bucket thresholds (see Section VI).[10]

Indicator-based measurement approach		Table 1
Category (and weighting)	Individual indicator	Indicator weighting
Cross-jurisdictional activity (20%)	Cross-jurisdictional claims	10%
	Cross-jurisdictional liabilities	10%
Size (20%)	Total exposures as defined for use in the Basel III leverage ratio	20%
Interconnectedness (20%)	Intra-financial system assets	6.67%
	Intra-financial system liabilities	6.67%
	Securities outstanding	6.67%
Substitutability/financial institution infrastructure (20%)	Assets under custody	6.67%
	Payments activity	6.67%
	Underwritten transactions in debt and equity markets	6.67%
Complexity (20%)	Notional amount of over-the-counter (OTC) derivatives	6.67%
	Level 3 assets	6.67%
	Trading and available-for-sale securities	6.67%

[8]   See Section II.B for a description of how the sample of banks is determined.

[9]   This ignores the impact of the cap on the substitutability category. The impact of the cap is such that the actual maximum score if there were only one bank in the sample is 8,000 basis points plus one fifth of the maximum substitutability score.

[10]   The cap will be reconsidered as part of the first three-year-review. Revisions to the methodology may allow it to be removed at that time.

20.   The next section briefly describes each of five categories used in the assessment methodology. The precise definitions of the indicators can be found in the reporting template and instructions that the sample banks use to supply their indicator data to the Committee's data hub.[11]

1.   Cross-jurisdictional activity

21.   Given the focus on G-SIBs, the objective of this indicator is to capture banks' global footprint. Two indicators in this category measure the importance of the bank's activities outside its home (headquarter) jurisdiction relative to overall activity of other banks in the sample: (i) cross-jurisdictional claims; and (ii) cross-jurisdictional liabilities. The idea is that the international impact of a bank's distress or failure would vary in line with its share of cross-jurisdictional assets and liabilities. The greater a bank's global reach, the more difficult it is to coordinate its resolution and the more widespread the spillover effects from its failure.

2.   Size

22.   A bank's distress or failure is more likely to damage the global economy or financial markets if its activities comprise a large share of global activity. The larger the bank, the more difficult it is for its activities to be quickly replaced by other banks and therefore the greater the chance that its distress or failure would cause disruption to the financial markets in which it operates. The distress or failure of a large bank is also more likely to damage confidence in the financial system as a whole. Size is therefore a key measure of systemic importance. One indicator is used to measure size: the measure of total exposures used in the Basel III leverage ratio.

3.   Interconnectedness

23.   Financial distress at one institution can materially increase the likelihood of distress at other institutions given the network of contractual obligations in which these firms operate. A bank's systemic impact is likely to be positively related to its interconnectedness vis-à-vis other financial institutions. Three indicators are used to measure interconnectedness: (i) intra-financial system assets; (ii) intra-financial system liabilities; and (iii) securities outstanding.

4.   Substitutability/financial institution infrastructure

24.   The systemic impact of a bank's distress or failure is expected to be negatively related to its degree of substitutability as both a market participant and client service provider, ie it is expected to be positively related to the extent to which the bank provides financial institution infrastructure. For example, the greater a bank's role in a particular business line, or as a service provider in underlying market infrastructure (eg payment systems), the larger the disruption will likely be following its failure, in terms of both service gaps and reduced flow of market and infrastructure liquidity. At the same time, the cost to the failed bank's customers in having to seek the same service from another institution is likely to be higher for a failed bank with relatively greater market share in providing the service. Three indicators are used to measure substitutability/financial institution infrastructure: (i) assets under custody; (ii) payments activity; and (iii) underwritten transactions in debt and equity markets.

5.   Complexity

25.   The systemic impact of a bank's distress or failure is expected to be positively related to its overall complexity – that is, its business, structural and operational complexity. The more complex a bank

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is, the greater are the costs and time needed to resolve the bank. Three indictors are used to measure complexity: (i) notional amount of over-the-counter (OTC) derivatives; (ii) Level 3 assets; and (iii) trading and available-for-sale securities.

B.   Sample of banks

26.   The indicator-based measurement approach uses a large sample of banks as its proxy for the global banking sector. Data supplied by this sample of banks is then used to calculate banks' scores. Banks fulfilling any of the following criteria will be included in the sample:

- Banks that the Committee identifies as the 75 largest global banks, based on the financial year-end Basel III leverage ratio exposure measure.

- Banks that were designated as G-SIBs in the previous year (unless supervisors agree that there is compelling reason to exclude them).

- Banks that have been added to the sample by national supervisors using supervisory judgment (subject to certain criteria). [12]

These banks will be required to submit the full set of data used in the assessment methodology to their supervisors.

C.   Bucketing approach

27.   Banks that have a score produced by the indicator-based measurement approach that exceeds a cutoff level set by the Committee will be classified as G-SIBs. Supervisory judgment may also be used to add banks with scores below the cutoff to the list of G-SIBs. This judgment will be exercised according to the principles set out in Section II.D. Based on the scores produced using the end-2011 data supplied by the sample banks, the tentative cutoff point set by the Committee and use of supervisory judgment, 28 banks were classified as G-SIBs which as of November 2012. [13]

28.   Each year, the Committee will run the assessment again and, if necessary, reallocate G-SIBs into different categories of systemic importance based on their scores. G-SIBs will be initially allocated into four equally sized buckets based on their scores of systemic importance, with varying levels of higher loss absorbency requirements applied to the different buckets as set out in Section III.A. The cutoff score and bucket thresholds will be fixed and disclosed based on end-2012 data supplied by the sample banks.

29.   It should be noted that the number of G-SIBs, and their bucket allocations, will evolve over time as banks change their behaviour in response to the incentives of the G-SIB framework as well as other aspects of Basel III and country-specific regulations. Moreover, after the bucket thresholds have been fixed, if a bank's score increases such that it exceeds the top threshold of the fourth bucket, new buckets will be added to accommodate the bank. New buckets will be equal in size in terms of scores to each of the initial four populated buckets, and will have incremental higher loss absorbency requirements, as set out in Section III. A, to provide incentives for banks to avoid becoming more systemically important.

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[12]   The Committee will consider the criteria for adding banks to the sample by supervisory judgement. It will also consider whether the data supplied by such banks should be included in the calculation of the denominators used to calculate banks' scores, or whether the denominators should be based solely on the data supplied by the largest 75 global banks plus banks designated as G-SIBs in the previous year.

[13]   www.financialstabilityboard.org/publications/r_121031ac.pdf.

D.   Supervisory judgment

1.   Criteria for judgment

30.   As stated earlier, supervisory judgment can support the results derived from the indicator-based measurement approach of the assessment methodology. The Committee has developed four principles for supervisory judgment:

- The bar for judgmental adjustment to the scores should be high: in particular, judgment should only be used to override the indicator-based measurement approach in exceptional cases. Those cases are expected to be rare.

- The process should focus on factors pertaining to a bank's global systemic impact, ie the *impact* of the bank's distress/failure and not the *probability* of distress/failure (ie the riskiness) of the bank.

- Views on the quality of the policy/resolution framework within a jurisdiction should not play a role in this G-SIB identification process.[14]

- The judgmental overlay should comprise well documented and verifiable quantitative as well as qualitative information.

2.   Ancillary indicators

31.   The Committee has identified a number of ancillary indicators relating to specific aspects of the systemic importance of an institution that may not be captured by the indicator-based measurement approach alone. These indicators can be used to support the judgment overlay.

32.   The ancillary indicators are set out in the reporting template and related instructions, which are available on the Committee's website.[15]

3.   Qualitative judgment

33.   Supervisory judgment can also be based on qualitative information. This is intended to capture information that cannot be easily quantified in the form of an indicator, for example, a major restructuring of a bank's operation. Qualitative judgments should also be thoroughly explained and supported by verifiable arguments.

4.   Process for incorporating the supervisory judgment

34.   The supervisory judgmental overlay can be incorporated using the following sequential steps to the score produced by the indicator-based measurement approach:

(i)   Collection of the data[16] and supervisory commentary for all banks in the sample of banks.

(ii)   Mechanical application of the indicator-based measurement approach and corresponding bucketing.

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[14]   However, this is not meant to preclude any other actions that the Committee, the FSB or national supervisors may wish to take for G-SIFIs to address the quality of the policy/resolution framework. For example, national supervisors could impose higher capital surcharges beyond the higher loss absorbency requirements for G-SIBs that do not have an effective and credible recovery and resolution plan.

[15]   www.bis.org/bcbs/gsib/.

[16]   The data collection can start in the second quarter and be finalised in third quarter each year, subject to consultation with national supervisors.

(iii)   Relevant authorities[17] propose adjustments to the score of individual banks on the basis of an agreed process.

(iv)   The Committee develops recommendations for the FSB.

(v)   The FSB and national authorities, in consultation with the BCBS, make final decisions.

35.   The supervisory judgment input to the results of the indicator-based measurement approach should be conducted in an effective and transparent way and ensure that the final outcome is consistent with the views of the Committee as a group. Challenges to the results of the indicator-based measurement approach should only be made if they involve a material impact in the treatment of a specific bank (eg resulting in a different loss absorbency requirement). To limit the risk that resources are used ineffectively, when the authority is not the bank's home supervisor it would be required to take into account the views of the bank's home and major host supervisors. These could be, for instance, the members of the institution's college of supervisors.

36.   In addition to the materiality and consultation requirements, proposals to challenge the indicator-based measurement approach will be subject to the following modalities. Proposals originating from the home supervisor that result in a lower loss absorbency requirement would be scrutinised and would require a stronger justification than those resulting in a higher loss absorbency requirement. The reverse would apply to proposals originating from other authorities: those recommending a higher loss absorbency requirement would be subject to higher standards of proof and documentation. The rationale for this asymmetric treatment follows the general principle that the Committee is setting minimum standards.

E.   Periodic review and refinement

37.   The assessment methodology provides a framework for periodically reviewing institutions' G-SIB status. That is, banks have incentives to change their risk profile and business models in ways that reduce their systemic spillover effects. The Committee does not intend to develop a fixed list of G-SIBs. By developing criteria as discussed above, banks can migrate in and out of G-SIB status, and between categories of systemic importance, over time. For example, as emerging market countries continue to become more prominent in the global economy, the number of banks from these countries to be identified as G-SIBs might increase. There should be transparency to both the designated institutions and the markets about the criteria used to identify G-SIBs, and therefore the steps that can be taken to reduce the impact on the system. This will allow market discipline to play an important role in reinforcing the goals of global financial stability.

38.   The indicator-based measurement approach supported by supervisory judgment set out above provides a framework for periodically reviewing the G-SIB status of a given bank. The cutoff score and bucket thresholds will be fixed and disclosed during 2013 based on end-2012 data. The denominators used to calculate banks' scores for each indicator (ie the aggregate value of each indicator across the sample of banks) will be disclosed by the Committee during 2013 based on end-2012 data and updated annually. The bank scores will also be updated annually based on the most recently collected data. Therefore, all sample banks will be monitored on an ongoing basis.

39.   The methodology, including the indicator-based measurement approach itself and the cutoff/threshold scores, will be reviewed every three years in order to capture developments in the banking sector and any progress in methods and approaches for measuring systemic importance. In

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[17]   Relevant authorities mainly refer to home and host supervisors.

future reviews, particular attention will be paid to branches. As regards the structural changes in regional arrangements – in particular, the European Union – they will be reviewed as actual changes are made. In addition, the size of the sample of banks will be reviewed every three years.

40. At the time of this publication, the Committee has collected and analysed data from sample banks relating to three year-ends (2009–11). The data quality has improved considerably over this period. The Committee will continue to monitor data quality through its annual collection of the indicator data and will issue any further guidance that may be necessary to ensure consistency of data across the sample banks.

41. The Committee expects national jurisdictions to prepare a framework in which banks will be able to provide high-quality data for the indicators. The Committee has also established a data hub with appropriate controls and governance mechanisms to collect, analyse and store data at the BIS in a safe and secure manner. In order to ensure the transparency of the methodology, the Committee expects banks to disclose relevant data and has set out disclosure requirements in Section II.F below. The Committee will disclose the values of the cutoff score, the threshold scores for buckets and the denominators used to normalise the indicator values so banks, regulators and market participants can understand how actions that banks take could affect their systemic importance score and thereby the applicable magnitude of the higher loss absorbency requirement.

F.   Disclosure requirements

42. For financial year-ends on or around[18] 31 December 2013, and for each subsequent financial year-end, all banks with a leverage ratio exposure measure exceeding EUR 200 billion (using the exchange rate applicable at the financial year-end) should be required by national authorities to ensure that the 12 indicators used in the assessment methodology are made publicly available. The EUR 200 billion threshold has been set with the objective of ensuring that the 75 largest banks in the world are subject to the public disclosure requirements, as these are the banks that are automatically included in the sample used to calculate banks' scores. Banks below this threshold that have been added to the sample by supervisory judgement or as a result of being classified as a G-SIB in the previous year would also be required to comply with the disclosure requirements.

43. Although publication of the 12 indicators is the minimum requirement, national authorities may also wish to require that banks disclose the full breakdown of the indicators as set out in the template that sample banks use to report their data to the Committee's data hub.[19, 20]

44. In general, the disclosed indicators, which will be used to calculate banks' scores, should relate to banks' financial year-ends.[21] Therefore, in order to give the Committee sufficient time to calculate banks' scores based on public data and allow for the subsequent incorporation of supervisory judgment, banks should make the required disclosure no later than four months after the financial year-end – and, in any case, no later than end-July.

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[18]   That is, any financial year-end that falls in the period 1 July 2013–30 June 2014.

[19]   The template and reporting instructions can be found at: www.bis.org/bcbs/gsib/.

[20]   Disclosure requirements will be reviewed every three years together with the review of the methodology, as described in paragraph 39.

[21]   National authorities may allow banks whose financial year ends on 30 June to report indicator values based on their position as at 31 December (ie interim rather than financial year-end data).

45.   Disclosures required by this document must either be included in banks' published financial statements or, at a minimum, these statements must provide a direct link to the completed disclosures on their websites or on publicly available regulatory reports.

III.   The magnitude of the higher loss absorbency requirement and its impact

A.   The magnitude of the higher loss absorbency requirement

46.   Based on policy judgment informed by the various empirical analysis set out in Annex 2, the cutoff score and bucket thresholds will be calibrated using end-2012 data such that the magnitude of the higher loss absorbency requirement for the highest populated bucket will be 2.5% of risk-weighted assets, with an initially empty top bucket of 3.5% of risk-weighted assets. The magnitude of the higher loss absorbency requirement for the lowest bucket will be 1.0% of risk-weighted assets. The higher loss absorbency requirement is to be met with Common Equity Tier 1 capital as defined by the Basel III framework. Based on the bucketing approach set out in Section II.C, the magnitude of the higher loss absorbency requirement for each bucket will be as follows.

Bucketing approach		Table 2
Bucket	Score range*	Higher loss absorbency requirement (common equity as a percentage of risk-weighted assets)
5	D–E	3.5%
4	C–D	2.5%
3	B–C	2.0%
2	A–B	1.5%
1	Cutoff point–A	1.0%

* All score ranges are equal in size. Scores equal to one of the boundaries are assigned to the higher bucket.

47.   As noted in Section II.C., although the bucket thresholds will be set initially such that bucket 5 is empty, if this bucket should become populated in the future, a new bucket will be added to maintain incentives for banks to avoid becoming more systemically important. Each new bucket will be equal in size (in terms of scores) to each of the initially populated buckets and the minimum higher loss absorbency requirement for the new buckets will increase in increments of 1% of risk-weighted assets (eg if bucket 5 should become populated, bucket 6 would be created with a minimum higher loss absorbency requirement of 4.5% etc).

48.   The Committee emphasises that the higher loss absorbency requirement set out above is the minimum level. If national jurisdictions wish to impose a higher requirement to their banks, they are free to do so.

B.   Impact of requiring higher loss absorbency for G-SIBs

49.   The Committee and the FSB requested that the Macroeconomic Assessment Group (MAG), which assessed the macroeconomic impact of the Basel III reforms,[22] undertake an assessment of the impact of the G-SIFI recommendations. The final report was published in October 2011.[23]

50.   The MAG focused on the role of G-SIBs in providing credit to the non-financial private sector, and their broader role in the financial system as proxied by their share of financial system assets. The methodology used by the MAG draws on the generated paths for the GDP impact of higher capital ratios on *all* internationally active banks that were the basis of the MAG's December 2010 assessment. The 2010 MAG report described the impact on growth per percentage point of additional bank capital in a representative national financial system. When implementation was over an eight-year horizon, the report concluded that annual growth would slow by approximately 2 basis points per year on average. If implementation took place over four years, the equivalent number would be 4 basis points on average. These figures correspond to peak GDP impacts of 0.17% and 0.19% of GDP, respectively. In both cases, the estimates show recovery to the baseline over a two- to three-year period following the end of the transition.

51.   In order to provide an estimate of the scale of the likely impact of requiring a subset of institutions to hold additional capital, the MAG collected information on the importance of the G-SIBs in lending and total assets for each national financial system. For the 15 major economies represented on the MAG, the share of lending to the non-financial private sector by the top 30 G-SIBs (ranked using the current application of the Committee's methodology) ranges from about 4% to about 75%. The share of total banking-system assets is in the 9–77% range. The unweighted mean of these G-SIB shares is 31% in the case of non-financial private lending and 38% for assets, while the GDP-weighted means are 40% for non-financial private lending and 52% for assets.

52.   Combining this information about G-SIB shares with that from the 2010 MAG study yields a provisional estimate of the impact of higher loss absorbency requirements on G-SIBs. Using the range of G-SIB lending shares given above, a 1 percentage point increase in capital applied to G-SIBs would dampen growth by an additional 0.7 basis points per year for an eight-year implementation period. For a four-year implementation period, the impact is 1.1 basis points per year on average over the transition.[24] In both cases, growth is forecast to accelerate above its trend level for several quarters after the point of peak impact is reached, as it recovers towards its baseline. Meanwhile, drawing on the findings of the Committee's long-term assessment of the economic costs and benefits associated with increasing regulatory capital requirements (known as the LEI report),[25] the MAG estimates that the G-SIB framework should provide an annual benefit of about 40–50 basis points of GDP, reflecting the reduced probability of a systemic financial crisis. However the MAG also discusses in a qualitative way other factors that

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[22]   See Macroeconomic Assessment Group, *Assessing the macroeconomic impact of the transition to stronger capital and liquidity requirements – final report*, Bank for International Settlements, December 2010, www.bis.org/publ/othp12.htm.

[23]   See Macroeconomic Assessment Group, *Assessment of the macroeconomic impact of higher loss absorbency for globally systemically important banks*, Bank for International Settlements, October 2011, www.bis.org/publ/bcbs202.htm.

[24]   As with the estimates of the overall impact of increased bank capital in the original MAG report, there are a number of reasons that these estimates could be too large or too small. For example, should other banks increase their lending to partly compensate for lower G-SIB lending, then this approach will tend to overestimate the impact. Alternatively, if G-SIBs are market leaders and set the terms of lending for the whole economy, with other banks simply following their lead, then the method might underestimate the impact.

[25]   See Basel Committee, *An assessment of the long-term economic impact of stronger capital and liquidity requirements,* August 2010, www.bis.org/publ/bcbs173.htm.

could have an impact on the results. More experience with the G-SIB framework will be needed in order to gain a better understanding of the nature and magnitude of such factors.

IV.   Instruments to meet the higher loss absorbency requirement

53.   The aim of the higher loss absorbency requirement, as set out in the report endorsed by the G20 at its Seoul Summit in November 2010, is to ensure that G-SIFIs have a higher share of their balance sheets funded by instruments which increase the resilience of the institution as a going-concern. Taking into account this going-concern objective, the Committee concluded that G-SIBs be required to meet their higher loss absorbency requirement with Common Equity Tier 1 capital only.

54.   The Group of Governors and Heads of Supervision and the Committee will continue to review contingent capital, and support the use of contingent capital to meet higher national loss absorbency requirements than the global requirement, as high-trigger contingent capital[26] could help absorb losses on a going-concern basis.

V.   Interaction with other elements of the Basel III framework

A.   Group treatment

55.   The assessment of the systemic importance of G-SIBs is made using data that relate to the consolidated group. To be consistent with this approach, the Committee will apply the higher loss absorbency requirement to the consolidated group. However, as with the minimum requirement and the capital conservation and countercyclical buffers, application at the consolidated level does not rule out the option for the host jurisdictions of subsidiaries of the group also to apply the requirement at the individual legal entity or consolidated level within their jurisdiction.

B.   Interaction with the capital buffers and consequences of breaching the higher loss absorbency requirement

56.   National supervisors will implement the higher loss absorbency requirement through an extension of the capital conservation buffer, maintaining the division of the buffer into four bands of equal size (as described in paragraph 147 of the Basel III text).

57.   If a G-SIB breaches the higher loss absorbency requirement, it will be required to agree a capital remediation plan to return to compliance over a time frame to be established by the supervisor. Until it has completed that plan and returned to compliance, it will be subject to the limitations on dividend payout defined by the conservation buffer bands, and to other arrangements as required by the supervisor.

58.   If a G-SIB progresses to a bucket requiring a higher loss absorbency requirement, it will be required to meet the additional requirement within a time frame of 12 months. After this grace period, if

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[26]   High-trigger contingent capital refers instruments that are designed to convert into common equity whilst the bank remains a going-concern (ie in advance of the point of non-viability).

the bank does not meet the higher loss absorbency requirement, the capital retention mechanism for the expanded capital conservation buffer will be applied.

C.   Interaction with Pillar 2

59.   The higher loss absorbency requirement for G-SIBs incorporates elements of both Pillar 1 and Pillar 2. The indicator-based measurement approach, the pre-specified requirements for banks within each bucket and the fixed consequences of not meeting the requirement can be considered close to Pillar 1. However, the use of supervisory judgment to finalise the allocation of individual banks to buckets can be considered close to Pillar 2. Irrespective of whether the higher loss absorbency requirement is considered to be a Pillar 1 or a Pillar 2 approach, it is essentially a requirement that sits on top of the capital buffers and minimum capital requirement, with a predetermined set of consequences for banks that do not meet the requirement.

60.   In some jurisdictions, Pillar 2 may need to adapt to accommodate the existence of the higher loss absorbency requirements for G-SIBs. Specifically, it would make sense for authorities to ensure that a bank's Pillar 2 requirements do not require capital to be held twice for issues related to the externalities associated with distress or failure of G-SIBs if they are captured by the higher loss absorbency requirement. However, Pillar 2 will normally capture other risks that are not directly related to these externalities of G-SIBs (eg interest rate and concentration risks), so capital meeting the higher loss absorbency requirement should not be permitted to be simultaneously used to meet Pillar 2 requirement that relate to these other risks.

VI.   Phase-in arrangements

61.   The Committee is introducing transitional arrangements to implement the new standards that help ensure that the banking sector can meet the higher capital standards through reasonable earnings retention and capital-raising, while still supporting lending to the economy.
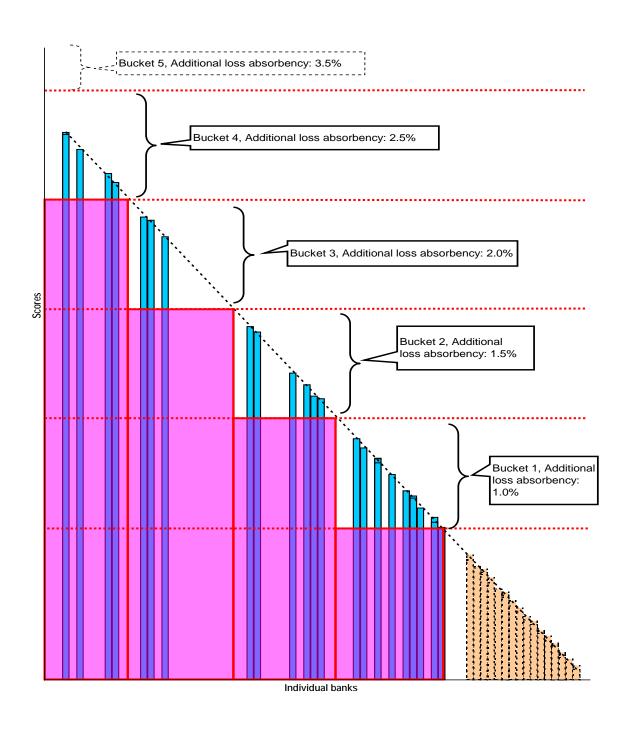
62.   The higher loss absorbency requirement will be phased in in parallel with the capital conservation and countercyclical buffers, ie between 1 January 2016 and year-end 2018, becoming fully effective on 1 January 2019. The cutoff score and the threshold scores for buckets will be fixed and disclosed by November 2013 based on end-2012 data. The denominators used to calculate banks' scores (ie the aggregate values of the 12 indicators across the sample of banks) will initially be disclosed by November 2013 based on end-2012 data and will then be updated and disclosed annually.[27] The first three year review will be concluded and published by November 2017. The operational timetable for the G-SIB regime until the point of the first review of the methodology due in 2017 is set out in Annex 3.

63.   To enable its timely implementation on 1 January 2016, national jurisdictions will implement official regulations/legislations by 1 January 2014 that establish the reporting and disclosure requirements necessary to ensure the indicator-based measurement approach can be applied during 2014 based on publicly available end-2013 data.

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[27]   The higher loss absorbency requirement in January 2016 will also be based on end-2013 data.

Annex 1

Illustrative distribution of the scores of G-SIBs and their allocation to buckets[28]

Bucket 5, Additional loss absorbency: 3.5%

Bucket 4, Additional loss absorbency: 2.5%

Bucket 3, Additional loss absorbency: 2.0%

Bucket 2, Additional loss absorbency: 1.5%

Bucket 1, Additional loss absorbency: 1.0%

Scores

Individual banks

[28]   Since some banks have the same scores, the number of blue bars does not add up to the total number of G-SIBs and does not include the banks added through supervisory judgment.

Annex 2

Empirical analysis to assess the maximum magnitude of the higher loss absorbency requirement

The empirical analysis undertaken or reviewed by the Committee in support of the assessment of the magnitude of the higher loss absorbency requirement includes: (i) an expected impact approach calibrated using return on risk-weighted assets (RORWA) data and a Merton model (using equity price data); (ii) comparing the long-run economic costs and benefits of higher capital requirements; and (iii) assessing funding subsidies for G-SIBs implied from market data. The quantitative models produced a higher loss absorbency requirement generally in the range of around 1–8% of risk-weighted assets, in terms of Common Equity Tier 1 equivalent, with a central tendency of around 2–4%.

It is important to note that there is no single correct approach that is reliable enough to inform the assessment of the magnitude of the higher loss absorbency requirement, and that the empirical analysis should be seen as providing input to inform policy judgments. All the approaches suffer from data gaps, and the results are sensitive to assumptions made. Therefore, the method adopted by the Committee is to generate information using a range of modelling approaches, and to examine the sensitivity of the results to various assumptions. This approach is similar to that taken by the Committee for calibrating Basel III capital requirements.

The estimates of the magnitude of higher loss absorbency requirement based on the expected impact approach, assessment of the long-term economic impact and too-big-to-fall (TBTF) subsidies are based on imperfect models and involve numerous assumptions and judgments. The resulting estimates should therefore be supplemented with appropriate judgment.

The Committee took into consideration, for example, the fact that the Basel II framework was calibrated at a 99.9% solvency standard. It could well be argued that, although the minimum standard may be appropriate for banks in general, the Committee should target a higher solvency standard for SIBs. A magnitude of higher loss absorbency above the minimum can be seen as equivalent to choosing a higher solvency standard for G-SIBs.

1. Expected impact approach

The rationale underlying the expected impact approach is that the expected impact of failure of SIBs and non-SIBs should be the same. Given that the failure of a SIB will have a greater economic impact than that of a non-SIB, the probability of failure of a SIB will need to be lower than that of a non-SIB in order for the expected impact to be equal across the two groups. In particular, if policymakers judge that the impact on the system of the failure of a SIB is x times greater than the failure of a non-SIB, capital of the SIB will need to be increased so that the SIB is x times safer than the non-SIB (ie its probability of default is $1/x$ of that of the non-SIB). A plausible definition for a non-SIB could be a bank whose failure does not pose negative externalities on the system that the supervisor cannot accept. Reducing the expected impact of SIBs so that it is equal to that of non-SIBs is thus consistent with the objective of reducing negative externalities in SIBs. However, this approach assumes that policymakers are risk-neutral. If they are risk-averse, the expected impact approach would underestimate the higher loss absorbency required. On the other hand, the approach does not incorporate any economic costs associated with higher capital requirements for SIBs.

In order to assess the magnitude of higher loss absorbency using the expected impact approach, it is necessary to determine the relative systemic importance of SIBs and a non-SIB reference

bank, the probability of default of this reference bank, the capital ratio at which banks are assumed to fail, and the relationship between regulatory capital ratios and probabilities of default. The Committee has used various modelling techniques and judgment to determine the required inputs, and has also examined the sensitivity of the magnitude of higher loss absorbency estimates to various assumptions.

The central estimates for the maximum higher loss absorbency produced by the expected impact approach assume that banks fail when their risk-based capital ratio falls to 4.5%, the reference non-SIB holds capital of 7% (minimum plus conservation buffer), and that the failure of the highest-scoring SIB will have an impact on society three to five times greater than that of the reference non-SIB. The Committee has used two methodologies to determine the relationship between regulatory capital ratios and the probability of a bank's default. One approach uses the historical distribution of the return on risk-weighted assets (RORWA), which is one of the methodologies also used by the Committee to calibrate the Basel III minimum and conservation buffer.[29] The second approach uses a Merton model, which is based on equity return data, and has been widely used in the development of Basel II and internally by banks and commercial providers of credit risk models.

Using the expected impact approach, the maximum higher loss absorbency ranges from just under 2% to just over 2.5% if the RORWA distribution is used, and from around 5% to around 8% if the Merton model is used. The results are sensitive to the assumptions used in the analysis, and to the estimate of relative systemic importance of the most systemic bank and the reference non-systemic impact. Increasing the relative systemic impact of SIBs from a factor of 3 to a factor of 5 leads to an increase in the higher loss absorbency of 0.8 percentage points. One way to consider the relative systemic impact is to assume that (i) the bank just below the cutoff point is the reference bank; and (ii) the measure of systemic importance (the "score" measured according to the assessment methodology set out in Section II) is a proxy (at least in relative terms) of systemic impact. The magnitude estimates are also systematically higher when using the Merton model to determine the relationship between regulatory capital ratios and the probability of default, than they are using the distribution of RORWA.

Qualitative assessments can also be applied to the empirical results to help inform policy judgments. For example, if policymakers are prepared to tolerate the negative externalities posed by banks that are not in the top 29 global banks, a magnitude of higher loss absorbency at the lower end of the expected impact approaches would be appropriate. If not, then a higher magnitude of loss absorbency would be appropriate. Similarly, if policymakers place more weight on historical accounting loss experience, then more weight should be given to the expected impact approach using the RORWA analysis than to that using the Merton model, which is based on equity return data and does not take into account liquidity when estimating the probability of default.

2. Long-term economic impact

The Committee's long-term assessment of the economic costs and benefits associated with increasing regulatory capital requirements (known as the LEI report) can also be used to infer a calibration range. Although the LEI report did not distinguish between G-SIBs and non-G-SIBs, and was not designed to determine with precision an optimal capital ratio, the analysis of costs and benefits can be used as a guide to the assessment of the magnitude of the higher loss absorbency requirement. Using Basel II capital requirements, depending on the assumptions made with respect to the costs of crises, which it could be argued are larger when G-SIBs in particular fail, net benefits are maximised when the level of Common Equity Tier 1 falls in the range of 9% (no permanent effects) to 13% (moderate permanent

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[29] See Basel Committee, *Calibrating regulatory minimum capital requirements and capital buffers: a top-down approach*, October 2010, www.bis.org/publ/bcbs180.htm.

effects), where the latter is the central case in the LEI analysis. Translating the central case figure to a Basel III equivalent using a 1.23 factor leads to a higher loss absorbency requirement of around 3.5% ((13 / 1.23) − 7).[30] The 1.23 factor is a rough approximation based on the average increase in risk-weighted assets associated with the enhancements to risk coverage in Basel III relative to Basel II.

With respect to supervisory judgment, if policymakers believe that banking crises that involve the distress of G-SIBs are likely to be more costly than other crises, then greater weight should be given to the assessment estimates where crises have permanent effects on output, which would mean a magnitude higher than the 3.5% indicated above. Moreover, to the extent that non-G-SIBs are able to offset the impact of higher capital requirements applied to G-SIBs, the long-run economic costs will be lower and net economic benefits will be higher.

3.   Too-big-to-fail funding subsidies

A third approach to estimate the magnitude of the higher loss absorbency requirement for G-SIBs is to estimate the additional capital that a bank considered by the market as too big to fail would need to hold to offset any reduction in funding costs that it enjoys by virtue of being seen as too big to fail. The magnitude of the higher loss absorbency requirement for a too-big-to-fail bank would be the increase in the amount of equity in a bank's capital structure (and a reduction in the amount of debt of the same amount) such that its funding costs would equal what they would have been if the subsidy were absent.

The magnitude of the higher loss absorbency requirement implied from such a funding cost analysis produces a wide range of results. The magnitude of higher loss absorbency that would eliminate a subsidy is very sensitive to the assumptions about the estimate of the funding subsidy, the cost of equity relative to debt, and the proportion of liabilities that are ratings-sensitive. Combined with the sensitivity of the higher loss absorbency estimates to assumptions and caveats, this suggests that this approach could only be used at best as a cross-check on other judgments about the value of higher loss absorbency.

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[30]   Assuming no permanent effects, this could decrease to around 1% in case G-SIBs satisfy both capital and liquidity (NSFR and LCR) requirements.

Annex 3

G-SIB framework – operational timetable

The table below sets out the operational timetable for the G-SIB regime and the application of the higher loss absorbency (HLA) requirement, until the point of the first review of the methodology, due in 2017.

		Timetable for implementation
2013	Mar:	Collection of end-2012 data
	Nov:	Publish updated draft list of G-SIBs
		Publish cutoff scores, bucket sizes and denominators
2014	Jan:	Implementation of national reporting and disclosure requirements
	Mar:	Collection of end-2013 data
	Nov:	Publish updated list of G-SIBs to be subject to HLA requirement from 1 Jan 2016, and updated denominators
2015	Mar:	Collection of end-2014 data
	Nov:	Publish updated list of G-SIBs to be subject to HLA requirement from 1 Jan 2017, and updated denominators
2016	Jan:	HLA requirement applied to banks designated as G-SIBs published in Nov 2014
	Mar:	Collection of end-2015 data
	Nov:	Publish updated list of G-SIBs to be subject to HLA requirement from 1 Jan 2018, and updated denominators
2017	Jan:	HLA requirement applied to banks designated as G-SIBs published in Nov 2015
	Mar:	Collection of 2016 data
	Nov:	Complete first methodology review and announce changes
		Publish updated list of G-SIBs to be subject to HLA requirement from 1 Jan 2019, and updated denominators