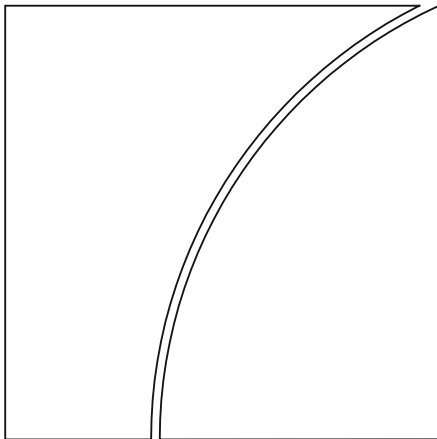


# Basel Committee on Banking Supervision



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

July 2018



**BANK FOR INTERNATIONAL SETTLEMENTS**

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ISBN 978-92-9259-182-3 (online)

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

## Preface

This document updates and replaces the July 2013 publication *Global systemically important banks: updated assessment methodology and the higher loss absorbency requirement*.

When the global systemically important banks (G-SIB) framework was first published, the Basel Committee on Banking Supervision agreed to review the framework every three years. The review is intended to provide the Committee with the opportunity to enhance the framework, as needed. The Committee published a consultative document<sup>1</sup> in March 2017 for comments by 30 June 2017. Building on member jurisdictions' experience and the feedback received during the public consultation, the Committee is reconfirming the fundamental structure of the G-SIB framework. There is general recognition that the G-SIB framework is meeting its primary objective of requiring systemically important banks to hold higher capital buffers and providing incentives for G-SIBs to reduce their systemic importance. The decision to maintain the core elements of the G-SIB framework will further contribute to the stability of the regulatory environment following the recent finalisation of the post-crisis reforms.

Against this background, the Committee agreed to the following enhancements to the G-SIB framework:

- Amendments to the definition of cross-jurisdictional indicators (harmonisation with the definition of BIS consolidated statistics);<sup>2</sup>
- Introduction of a trading volume indicator and modification of the weights in the substitutability category;
- Extension of the scope of consolidation to insurance subsidiaries;
- Revisions to the disclosure requirements;
- Further guidance on bucket migration and associated higher loss absorbency (HLA) surcharge when a G-SIB moves to a lower bucket; and
- Transitional schedule for the implementation of these enhancements to the G-SIB framework.

The Committee also reconfirmed the importance of the three-year review cycle wherein possible revisions could be considered. The Committee will complete the next review of the G-SIB framework by 2021. In the next review, the Committee will pay particular attention to alternative methodologies for the substitutability category, so as to allow the cap to be removed at that time.

## 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

<sup>1</sup> The consultative document can be found at [www.bis.org/bcbs/publ/d402.pdf](http://www.bis.org/bcbs/publ/d402.pdf).

<sup>2</sup> 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. The template and reporting instructions can be found at [www.bis.org/bcbs/gsib/](http://www.bis.org/bcbs/gsib/).

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 Committee 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.<sup>3</sup> 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 have a particular impact on 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 G-SIB 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 issue 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
- 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

<sup>3</sup> See Basel Committee on Banking Supervision, *Basel III: Finalising post-crisis reforms*, December 2017, [www.bis.org/bcbs/publ/d424.htm](http://www.bis.org/bcbs/publ/d424.htm); *Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools*, January 2013, [www.bis.org/publ/bcbs238.htm](http://www.bis.org/publ/bcbs238.htm); *Basel III: A global regulatory framework for more resilient banks and banking systems*, December 2010, [www.bis.org/publ/bcbs189.htm](http://www.bis.org/publ/bcbs189.htm); *Basel III: International framework for liquidity risk measurement, standards and monitoring*, December 2010, [www.bis.org/publ/bcbs188.htm](http://www.bis.org/publ/bcbs188.htm); *Enhancements to the Basel II framework*, July 2009, [www.bis.org/publ/bcbs157.htm](http://www.bis.org/publ/bcbs157.htm); and *Revisions to the Basel II market risk framework*, July 2009, [www.bis.org/publ/bcbs158.htm](http://www.bis.org/publ/bcbs158.htm).

coordination. However, even with improved resolution capacity, the failure of the largest and most complex international banks continues to pose disproportionate risks to the global economy.<sup>4</sup>

7. This document sets out the revised measures developed by the Committee on the assessment methodology for global systemic importance, the HLA requirements for G-SIBs, the transitional arrangements by which they will be implemented, and the data that banks above a certain size must publicly disclose. Similar to the July 2013 G-SIB framework, this framework is also in accordance with the FSB document *Reducing the moral hazard posed by systemically important financial institutions – FSB Recommendations and Time Lines*,<sup>5</sup> which was endorsed by G20 Leaders in November 2010.

8. The G-SIB framework 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.<sup>6</sup> These policies serve to reduce the impact of a G-SIB's failure and 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 following section outlines the methodology for determining a bank's global systemic importance. Section III presents the HLA requirements for G-SIBs, and Section IV sets out the capital instruments that can be used to meet the HLA requirements. The interaction of the capital surcharge with other elements of the Basel III framework is outlined in Section V, and Section VI discusses transitional arrangements.

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

10. The Committee developed the G-SIB methodology in line with the FSB Recommendations to set an assessment methodology comprising both quantitative and qualitative indicators to assess the systemic importance of G-SIFIs (paragraph 48).<sup>7</sup> This section sets out the revised assessment methodology developed by the Committee.

11. The Committee has developed a methodology for assessing the systemic importance of G-SIBs. The methodology relies 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. The advantage of the multiple indicator-based measurement approach is that it encompasses many dimensions of systemic importance, is relatively simple and is more

<sup>4</sup> See Financial Stability Board, *Thematic Review on Resolution Regimes – Peer Review Report*, April 2013, [www.financialstabilityboard.org/publications/r\\_130411a.pdf](http://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.

<sup>5</sup> 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](http://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).

<sup>6</sup> See Financial Stability Board, *Key attributes of effective resolution regimes for financial institutions*, November 2011, [www.financialstabilityboard.org/publications/r\\_111104cc.pdf](http://www.financialstabilityboard.org/publications/r_111104cc.pdf).

<sup>7</sup> 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, will determine by mid-2011 those institutions to which the FSB G-SIFI recommendations will initially apply" (paragraph 43).

robust than currently available model-based measurement approaches and methodologies that rely on only a small set of indicators or market variables.

12. 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).

13. No approach perfectly measures 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

14. 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.

15. 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.<sup>8</sup> Since this assessment methodology aims to identify global SIBs that are subject to internationally harmonised HLA 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 included, 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.

16. The methodology gives an equal weight of 20% to each of the five categories of systemic importance (size, cross-jurisdictional activity, interconnectedness, substitutability/financial institution infrastructure and complexity). With the exception of the size category, the Committee has identified multiple indicators in each of the categories. Where multiple indicators apply, each indicator is equally weighted within its category, except for the substitutability 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). In the substitutability category, two indicators are weighted 6.67% (assets under custody and payment activity), while underwritten transactions in debt and equity markets and the new trading volume indicator each weigh 3.33%. This split reflects the complementary role of the trading volume indicator, which is to capture potential disruptions in the provision of liquidity in the secondary market for some exposures, while the underwriting indicator captures liquidity in the primary market.

17. 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.<sup>9</sup> 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

<sup>8</sup> See IMF-BIS-FSB, *Guidance to assess the systemic importance of financial institutions, markets and instruments: initial considerations* (October 2009) ([www.financialstabilityboard.org/publications/r\\_091107c.pdf](http://www.financialstabilityboard.org/publications/r_091107c.pdf)).

<sup>9</sup> See Section II.B for a description of how the sample of banks is determined.



up 3% of the sample total), its score is expressed as 300 basis points. Each category score for each bank is determined by taking a weighted average of the indicator scores in that category, using the weights presented in Table 1. 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 the sample, is 10,000 basis points (ie 100%).<sup>10</sup>

18. In 2013, the Committee 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 decided to apply a cap to the substitutability category by limiting the maximum score to 500 basis points.

19. The Committee also found that neither the G-SIB nor the global systemically important insurers (G-SII) frameworks formally captured insurance subsidiaries of banking groups. Furthermore, some jurisdictions include insurance subsidiaries in their regulatory scope of consolidation whilst others do not, which may create an inconsistency in the systemic assessment of banking groups across jurisdictions. Against this background, the Committee has decided to include insurance activities for the following indicators: total exposures, intra-financial system assets, intra-financial system liabilities, securities outstanding, notional amount of OTC derivatives and level 3 assets in the size, interconnectedness and complexity categories.

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	3.33%
	Trading volume	3.33%
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%

\* Extended scope of consolidation to include insurance activities.

20. The next section briefly describes each of the 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.<sup>11</sup>

<sup>10</sup> 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.

<sup>11</sup> The template and reporting instructions can be found at [www.bis.org/bcbs/gsib/](http://www.bis.org/bcbs/gsib/).

## 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, including exposures arising from insurance subsidiaries.

## 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. All three indicators include insurance subsidiaries.

## 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 a 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. Four indicators are used to measure substitutability/financial institution infrastructure: (i) assets under custody; (ii) payments activity; (iii) underwritten transactions in debt and equity markets; and (iv) trading volume.

## 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 is, the greater the costs and time needed to resolve the bank. Three indicators are used to measure complexity: (i) notional amount of OTC derivatives; (ii) level 3 assets; and (iii) trading and available-for-sale securities. The first two indicators include insurance subsidiaries.

## 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 are then used to calculate banks' scores. Banks fulfilling any of the following criteria are 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, including exposures arising from insurance subsidiaries.
- Banks that were designated as G-SIBs in the previous year (unless supervisors agree that there is a compelling reason to exclude them).
- Banks that have been added to the sample by national supervisors using supervisory judgment (subject to certain criteria).

These banks are 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<sup>12</sup> set by the Committee are 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 is exercised according to the principles set out in Section II.D.

28. Each year, the Committee runs the assessment and, if necessary, reallocates G-SIBs into different categories of systemic importance based on their scores. G-SIBs are allocated into equally sized buckets based on their scores of systemic importance, with varying levels of HLA requirements applied to the different buckets as set out in Section III.A. The cutoff score and bucket thresholds have been fixed and disclosed since November 2013.

29. It should be noted that the number of G-SIBs, and their bucket allocation, evolves 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, 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 five buckets, and will have incremental HLA requirements, as set out in Section III. A, to provide incentives for banks to avoid becoming more systemically important.

### 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.

<sup>12</sup> The current cutoff score is set at 130 basis points.

- Views on the quality of the policy/resolution framework within a jurisdiction should not play a role in this G-SIB identification process.<sup>13</sup>
- 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.<sup>14</sup>

## 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 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<sup>15</sup> and supervisory commentary for all banks in the sample.
- (ii) Mechanical application of the indicator-based measurement approach and corresponding bucketing.
- (iii) Relevant authorities<sup>16</sup> 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.

<sup>13</sup> 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.

<sup>14</sup> The website is [www.bis.org/bcbs/gsib/](http://www.bis.org/bcbs/gsib/).

<sup>15</sup> The data collection can start in the second quarter and be finalised in third quarter each year, subject to consultation with national supervisors.

<sup>16</sup> Relevant authorities mainly refer to home and host 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 HLA requirement would be scrutinised and would require a stronger justification than those resulting in a higher HLA requirement. The reverse would apply to proposals originating from other authorities: those recommending a higher HLA 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 list of G-SIBs is not fixed. Banks can migrate in and out of G-SIB status, and between categories of systemic importance, over time. For example, as emerging market economies continue to become more prominent in the global economy, the number of banks identified as G-SIBs from these countries 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 allows 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 denominators used to calculate banks' scores for each indicator (ie the aggregate value of each indicator across the sample of banks), as well as the G-SIB indicators of all banks, are disclosed by the Committee and updated annually. The bank scores are also updated annually based on the most recently collected data. Therefore, all sample banks are monitored on an ongoing basis.

39. The methodology, including the indicator-based measurement approach itself and the cutoff/threshold scores, are 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 the next review, the Committee will pay particular attention to alternative methodologies for the substitutability category, so as to allow the cap to be removed at that time. The Committee will also pay particular attention to branches. As regards the structural changes in regional arrangements – in particular in the European Banking Union – they will be reviewed independently from the three-year review cycle as actual changes are made. In addition, the size of the sample of banks will be reviewed every three years.

40. 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 are 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 disclose relevant data and has set out disclosure requirements in Section II.F. The Committee discloses the values of the cutoff scores, the threshold scores for buckets, the denominators used to normalise the indicator values and the G-SIB indicators of all banks so that banks, regulators and market participants can understand how actions banks take could affect their systemic importance score and thereby the applicable magnitude of the HLA requirement.

## F. Disclosure requirements

42. For each financial year-end, all banks with a leverage ratio exposure measure, including exposures arising from insurance subsidiaries, that exceeds EUR 200 billion (using the exchange rate applicable at the financial year-end) should be required by national authorities to make publicly available the 13 indicators used in the assessment methodology. Banks should note in their disclosures that those figures are subject to revision and restatement. The EUR 200 billion threshold has been set with the objective of ensuring that at least 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 owing to supervisory judgment 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. Banks should also be required by national authorities to publicly disclose if the data used to calculate the G-SIB scores differ from the figures previously disclosed. To the extent that a revision to the data is required, banks should disclose the accurate figures in the financial quarter immediately following the finalisation of the Committee's G-SIB score calculation.

44. Although disclosure of the 13 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.<sup>17, 18</sup>

45. Disclosures required by this document must follow Pillar 3 requirements and timelines.<sup>19</sup>

## 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 were calibrated using end-2012 data such that the magnitude of the HLA requirement for the highest populated bucket is 2.5% of risk-weighted assets, with an initially empty top bucket of 3.5% of risk-weighted assets. The magnitude of the HLA requirement for the lowest bucket is 1.0% of risk-weighted assets. The HLA 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 HLA requirement for each bucket is as follows.

<sup>17</sup> The template and reporting instructions can be found at: [www.bis.org/bcbs/gsib/](http://www.bis.org/bcbs/gsib/).

<sup>18</sup> Disclosure requirements will be reviewed every three years together with the review of the methodology, as described in paragraph 39.

<sup>19</sup> See Basel Committee on Banking Supervision, *Pillar 3 requirements – consolidated and enhanced framework*, March 2017, [www.bis.org/bcbs/publ/d400.pdf](http://www.bis.org/bcbs/publ/d400.pdf).

Bucketing approach			Table 2
Bucket	Score range*	Higher loss absorbency requirement (Common Equity Tier 1 as a percentage of risk-weighted assets)	
5	530–629	3.5%	
4	430–529	2.5%	
3	330–429	2.0%	
2	230–329	1.5%	
1	130–229	1.0%	

\* All score ranges are equal in size.

47. As noted in Section II.C., although the bucket thresholds are set 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 HLA 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 HLA requirement of 4.5% etc).

48. The Committee emphasises that the HLA 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. When designing the initial framework, the Committee and the FSB requested that the Macroeconomic Assessment Group (MAG), which assessed the macroeconomic impact of the Basel III reforms,<sup>20</sup> undertake an assessment of the impact of the G-SIFI recommendations. The final report was published in October 2011.<sup>21</sup>

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

<sup>20</sup> 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](http://www.bis.org/publ/othp12.htm).

<sup>21</sup> 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](http://www.bis.org/publ/bcbs202.htm).

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 HLA 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.<sup>22</sup> 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),<sup>23</sup> 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 could have an impact on the results.

#### IV. Instruments to meet the higher loss absorbency requirement

53. The aim of the HLA requirement, as set out in the report endorsed by the G20 at its Seoul Summit in November 2010, is to ensure that a higher share of G-SIFIs' balance sheets is 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 HLA requirement with Common Equity Tier 1 capital only.

#### V. Interaction with other elements of the Basel III framework

##### A. Group treatment

54. 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 applies the HLA 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.

<sup>22</sup> 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.

<sup>23</sup> See Basel Committee on Banking Supervision, *An assessment of the long-term economic impact of stronger capital and liquidity requirements*, August 2010, [www.bis.org/publ/bcb173.htm](http://www.bis.org/publ/bcb173.htm).



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

55. National supervisors have implemented the HLA 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).

56. If a G-SIB breaches the HLA requirement, it is 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 is subject to the limitations on dividend payout defined by the conservation buffer bands, and to other arrangements as required by the supervisor.

57. If a G-SIB progresses to a bucket requiring an HLA requirement, it is required to meet the additional requirement within a time frame of 12 months. After this grace period, if the bank does not meet the HLA requirement, the capital retention mechanism for the expanded capital conservation buffer is applied. If, on the other hand, the G-SIB score falls, resulting in a lower HLA requirement, the bank should be immediately released from its previous HLA requirement. In these circumstances, national authorities may exert discretion and require a bank to delay the release of HLA requirements.

## C. Interaction with Pillar 2

58. The HLA 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 HLA 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.

59. In some jurisdictions, Pillar 2 may need to adapt to accommodate the existence of the HLA 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 HLA requirement. However, Pillar 2 normally captures other risks that are not directly related to these externalities of G-SIBs (eg interest rate and concentration risks), so capital meeting the HLA requirement should not be permitted to be simultaneously used to meet Pillar 2 requirement that relate to these other risks.

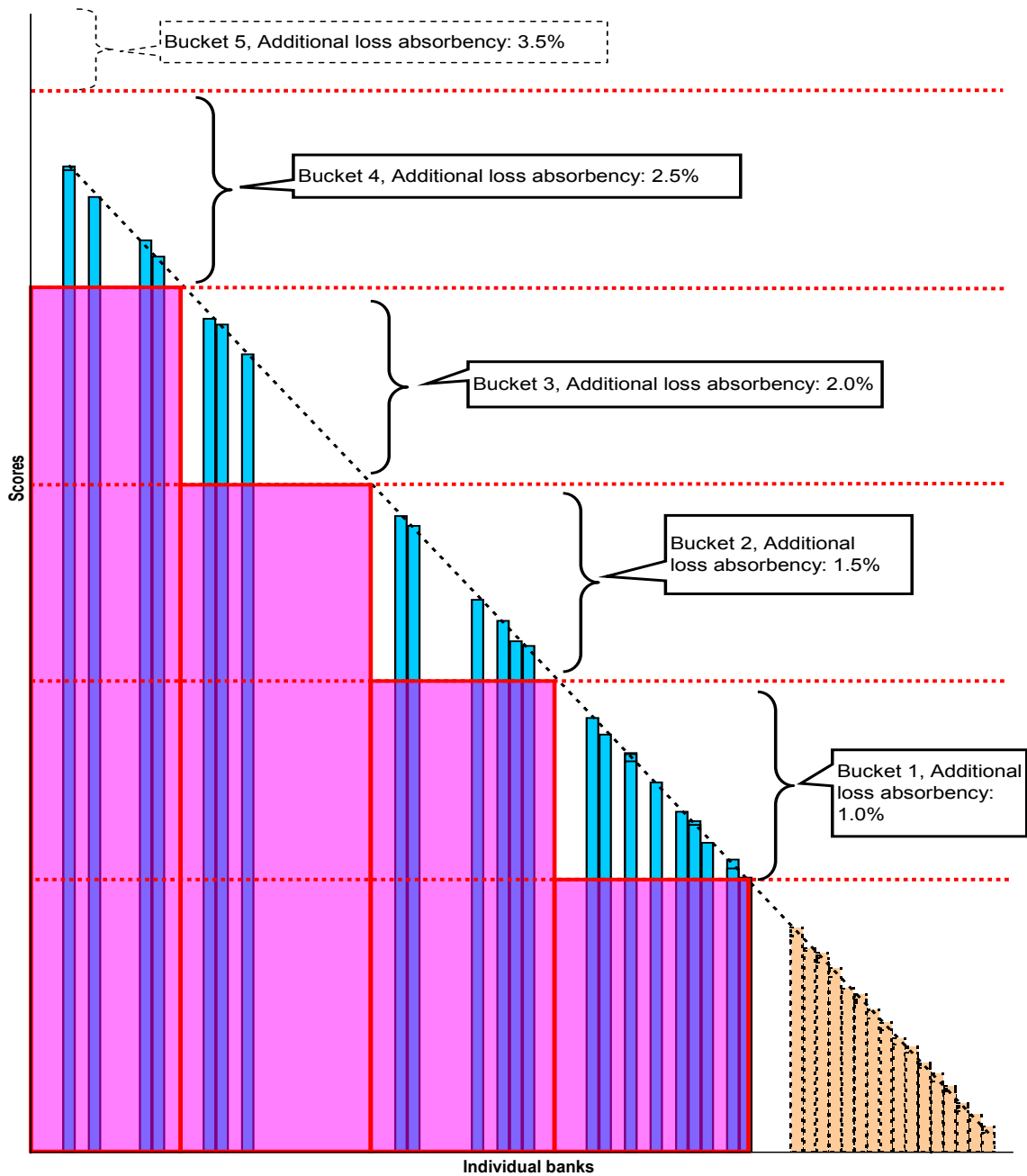
## VI. Transitional arrangements

60. The Committee is introducing transitional arrangements to implement these 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.

61. In order to allow banks to maintain a certain degree of consistency with the 2013 G-SIB assessment methodology and to provide national authorities with the time to implement the changes in their respective regulatory frameworks, the revised assessment methodology will take effect in 2021 (based on end-2020 data), and the resulting HLA requirement would be applied in January 2023. The operational timetable for the G-SIB regime until the next review of the methodology due in 2021 is set out in Annex 3.

## Annex 1

Illustrative distribution of the scores of G-SIBs and their allocation to buckets<sup>24</sup>



Source: BCBS, 2013.

<sup>24</sup> 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 HLA 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 an HLA requirement generally in the range of 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 HLA 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 the HLA 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 HLA 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 HLA 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 HLA 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 HLA estimates to various assumptions.

The central estimates for the maximum HLA produced by the expected impact approach assume that banks fail when their risk-based capital ratio falls to 4.5%, that 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.<sup>25</sup> 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 HLA 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 HLA 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 HLA 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 HLA 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 capital falls in the range of 9% (no permanent effects) to 13% (moderate permanent 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 an HLA requirement of around 3.5% ( $(13 / 1.23) - 7$ ).<sup>26</sup> The 1.23 factor is a rough

<sup>25</sup> See Basel Committee on Banking Supervision, *Calibrating regulatory minimum capital requirements and capital buffers: a top-down approach*, October 2010, [www.bis.org/publ/bcbs180.htm](http://www.bis.org/publ/bcbs180.htm).

<sup>26</sup> Assuming no permanent effects, this could decrease to around 1% in case G-SIBs satisfy both capital and liquidity (NSFR and LCR) requirements.

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 HLA 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 HLA 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 HLA requirement implied from such a funding cost analysis produces a wide range of results. The magnitude of HLA 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 HLA 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 HLA.

## Annex 3

### G-SIB framework – operational timetable

The table below sets out the operational timetable for the G-SIB framework and the application of the HLA requirement, until the point of the next review of the methodology, due in 2021. The revised assessment methodology will apply from 2021, based on end-2020 data. The corresponding HLA requirements based on the revised methodology will apply from 1 January 2023.

	Timetable for implementation	
2018	Jan:	HLA requirement applied to banks designated as G-SIBs in Nov 2016
	Mar:	Collection of end-2017 data
	Nov:	Publish updated list of G-SIBs to be subject to HLA requirement from 1 Jan 2020, and updated denominators and G-SIB indicators of all banks
2019	Jan:	HLA requirement applied to banks designated as G-SIBs in Nov 2017
	Mar:	Collection of end-2018 data
	Nov:	Publish updated list of G-SIBs to be subject to HLA requirement from 1 Jan 2021, and updated denominators and G-SIB indicators of all banks
2020	Jan:	HLA requirement applied to banks designated as G-SIBs in Nov 2018
	Mar:	Collection of end-2019 data
	Nov:	Publish updated list of G-SIBs to be subject to HLA requirement from 1 Jan 2022, and updated denominators and G-SIB indicators of all banks
2021	Jan:	HLA requirement applied to banks designated as G-SIBs published in Nov 2019
	Mar:	Collection of end-2020 data according to the revised methodology published in July 2018
	Nov:	Publish updated list of G-SIBs to be subject to HLA requirement from 1 Jan 2023, and updated denominators and G-SIB indicators of all banks according to the revised methodology Complete next methodology review and announce changes