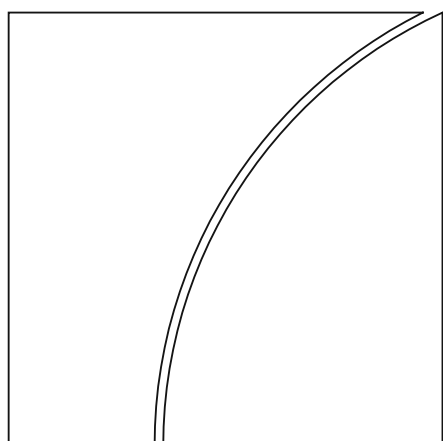


# Basel Committee on Banking Supervision



## TLAC Quantitative Impact Study Report

November 2015



BANK FOR INTERNATIONAL SETTLEMENTS

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## Conventions used in this report

billion    thousand million  
trillion    thousand billion

Group 1 banks are those that have Tier 1 capital of more than €3 billion and are internationally active. All other banks are considered Group 2 banks.

Components may not sum to totals because of rounding.

The term “country” as used in this publication also covers territorial entities that are not states as understood by international law and practice but for which data are separately and independently maintained.

All data reflect revisions received up to 23 September 2015 unless specified otherwise.

## Executive summary

On 10 November 2014, the Financial Stability Board (FSB) published, in consultation with the Basel Committee on Banking Supervision (BCBS), a consultative document on the total loss-absorbing capacity (TLAC) of global systemically important banks (G-SIBs) in resolution, including high-level principles and a detailed term sheet.<sup>1</sup> To finalise the TLAC standard in late 2015, comprehensive impact studies were conducted by the FSB, the BCBS and the Bank for International Settlements (BIS). Their results informed the final calibration of the TLAC requirements and the consultative document of TLAC holdings.<sup>2</sup>

The Basel Committee conducted the TLAC quantitative impact study (TLAC QIS) to analyse the impact of external TLAC requirements, including shortfall analyses, for each resolution entity of each G-SIB, internal TLAC requirements for material subsidiaries of each G-SIB, and holdings of TLAC instruments by G-SIBs and non-G-SIBs as part of its end-2014 Basel III monitoring exercise. The purpose of the shortfall analyses is to assess whether G-SIBs can meet the TLAC standard as set out in the consultative document published in November 2014.<sup>3</sup> The results included in this report use bank data as at year-end 2014 and regulatory capital instruments are reported on a Basel III fully loaded basis.<sup>4</sup>

The data set includes 30 G-SIBs<sup>5</sup> in the G-SIB sections (Sections 2, 3, 4 and 6), of which the primary sample size used is 29 G-SIBs due to insufficient data. G-SIBs headquartered in emerging market countries that are expected to be initially exempt from the TLAC standard are excluded from all charts but included in many data tables and descriptions in the main text. In the non-G-SIB section (Section 5), the data set includes 54 Group 1 banks and 80 Group 2 banks. These banks are included in some analyses but not all because not all banks provided complete data submissions.

The TLAC QIS tested four different cases: Case 1 is the term sheet criteria as set out in the consultative document; Case 2 is Case 1 plus certain additional criteria applied to Tier 2 capital instruments; Case 3 is the same as Case 1 except that the term sheet's subordination requirements are not applied; and Case 4 permits all long-term unsecured liabilities except those arising from certain classes, such as derivatives and deposits. Please read Section 1.3 Methodology for further information on the differences between the four cases.

## External TLAC

The consultation version of the term sheet proposed that G-SIBs be subject to a minimum external TLAC requirement of 16–20% of RWAs. It also proposed that minimum TLAC be at least twice the quantum of capital required to meet the Basel III leverage ratio (ie 6% where the Basel III leverage ratio is set at 3%). For the purpose of this report, findings are presented assuming calibrations at both ends of the range proposed for the TLAC risk-based ratio together with the leverage requirement (ie 16/6 and 20/6). For reference, the table on external TLAC shortfalls below also includes aggregate shortfalls for the 18% RWA or 6.75% leverage requirement that will apply from 1 January 2022 under the final TLAC standard.

<sup>1</sup> [www.financialstabilityboard.org/wp-content/uploads/TLAC-Condoc-6-Nov-2014-FINAL.pdf](http://www.financialstabilityboard.org/wp-content/uploads/TLAC-Condoc-6-Nov-2014-FINAL.pdf).

<sup>2</sup> See Basel Committee on Banking Supervision, *Consultative document TLAC Holdings*, November 2015.

<sup>3</sup> This report always refers to sections in the consultation version of the term sheet.

<sup>4</sup> Basel III contains a transitional period to allow banks to adjust to the new requirements. The QIS does not take the provisional arrangements into account and instead assumes full implementation in 2022.

<sup>5</sup> For a list of 30 G-SIBs as of November 2014, see [www.bis.org/bcbs/gsib/gsibs\\_as\\_of\\_2014.htm](http://www.bis.org/bcbs/gsib/gsibs_as_of_2014.htm).

The results show that instruments issued by G-SIBs that currently meet all the requirements of the TLAC term sheet are limited, with the exception of instruments that qualify as regulatory capital (and therefore also meet the criteria for TLAC).<sup>6</sup> Four G-SIBs including emerging market G-SIBs indicated that they currently have no non-regulatory capital instruments that count as TLAC.

- **External TLAC ratios** – In Case 1, the 26 G-SIBs, excluding emerging market G-SIBs, currently have an average external TLAC risk-based ratio of 14.1% of RWAs and 7.2% of the leverage exposure. When including near-eligible TLAC liabilities (Case 3), the ratios increase to 18.6% and 9.0%, respectively. Many G-SIBs have TLAC risk-based ratios below 16% minimum in Cases 1 to 3. When emerging market G-SIBs are included, the ratios fall in most cases (see parentheses below).

External TLAC ratios	Case 1	Case 2	Case 3	Case 4
External TLAC risk-based ratios	<b>14.1% (13.1%)</b>	13.9% (12.9%)	<b>18.6% (16.5%)</b>	24.3% (20.9%)
G-SIBs below 16% minimum	<b>20</b>	20	<b>11</b>	3
G-SIBs below 20% minimum	<b>23</b>	23	<b>14</b>	8
External TLAC leverage ratios	<b>7.2% (7.2%)</b>	7.1% (7.2%)	<b>9.0% (8.7%)</b>	11.3% (10.6%)
G-SIBs below 2×3% minimum	<b>12</b>	14	<b>5</b>	1

Note: ratios are calculated on a weighted average basis from a sample of 26 G-SIBs, excluding emerging market G-SIBs (see parentheses for figures including such G-SIBs). In addition, the external TLAC risk-based ratios have been reduced to take account of the amount of Common Equity Tier 1 (CET1) required to meet the combined buffers (capital conservation and G-SIB surcharge), which amounts to €723 billion for all 30 G-SIBs and €574 billion for all G-SIBs excluding emerging market G-SIBs. The same applies to the shortfall figures below.

- **External TLAC shortfalls** – The shortfalls are summarised below.<sup>7</sup> Under Case 1, the aggregate shortfalls, excluding emerging market G-SIBs,<sup>8</sup> are €498 billion, €755 billion and €949 billion for the 16/6 calibration, the 18/6.75 calibration and the 20/6 calibration, respectively. When including near-eligible TLAC (Case 3), the aggregate shortfalls decrease to €260 billion, €422 billion and €588 billion, respectively. Emerging market G-SIBs have a limited amount of TLAC liabilities in all cases (owing to a reliance on deposit funding), so that the shortfalls including them increase significantly.

External TLAC shortfall (RWA buffers considered)	Case 1	Case 2	Case 3	Case 4
16% RWA or 2×3% leverage	<b>€767bn</b>	€790bn	<b>€526bn</b>	€307bn
18% RWA or 6.75% leverage	<b>€1,110bn</b>	€1,130bn	<b>€773bn</b>	€457bn
20% RWA or 2×3% leverage	<b>€1,388bn</b>	€1,406bn	<b>€1,025bn</b>	€662bn
16% RWA or 2×3% leverage ex. emerging market G-SIBs	<b>€498bn</b>	€520bn	<b>€260bn</b>	€42bn
18% RWA or 6.75% leverage ex. emerging market G-SIBs	<b>€755bn</b>	€776bn	<b>€422bn</b>	€107bn
20% RWA or 2×3% leverage ex. emerging market G-SIBs	<b>€949bn</b>	€966bn	<b>€588bn</b>	€227bn
Impact of 2.5% exemption (see the next page) <sup>9</sup>	Up to €137bn			

Sample size: 30 G-SIBs in Case 1 and 29 G-SIBs in Cases 2 to 4 (one G-SIB excluded from Cases 2 to 4 due to insufficient data).

<sup>6</sup> Almost all regulatory capital recognised as TLAC is issued by resolution entities. Regulatory capital issued externally from subsidiaries that are non-resolution entities is less than 3% of total consolidated regulatory capital for all 30 G-SIBs. Thus, paragraphs 62 to 64 in the Basel III rules text limit the recognition of capital issued by subsidiaries in consolidated regulatory capital and TLAC. In addition, Tier 2 capital with a residual maturity of less than one year is negligible for all 30 G-SIBs because of the Basel III amortisation rules for Tier 2.

<sup>7</sup> The shortfalls are calculated as the larger of the RWAs requirement or the leverage requirement at each G-SIB level.

<sup>8</sup> As per the initial exemption from the Pillar I requirement of G-SIBs headquartered in emerging markets.

<sup>9</sup> Impacts are calculated only for those G-SIBs headquartered in countries in which these exemptions can apply.

- **2.5% exemptions** (subordination exemption and recognition of resolution funds)<sup>10</sup> – The above external TLAC risk-based ratios and shortfalls give no recognition of the 2.5% exemptions which will have the effect of increasing the ratios and reducing shortfalls for G-SIBs in countries making use of either of these exemptions. The exemptions contribute to only one G-SIB meeting the 16% minimum requirement in Case 1 with many G-SIBs continuing to have an external TLAC risk-based ratio below 16%. The exemptions may reduce shortfalls of the relevant G-SIBs by up to €137 billion in total in Cases 1 and 2. Cases 3 and 4 do not apply the subordination requirements, so the potential shortfall reduction from the subordination exemption is not relevant.
- **Maturity analysis** – Nine G-SIBs that have no shortfall in Case 3 but a shortfall in Case 1 (based on 16/6 calibration) would meet their TLAC requirements by replacing with eligible TLAC their near-TLAC debt liabilities (Case 3) that mature in the next five years. Similarly, the vast majority of the 17 G-SIBs that have no shortfall in Case 4 but a shortfall in Case 1 could meet their TLAC requirements if they are able to replace with eligible TLAC their Case 4 liabilities that mature in the next five years. Whether such replacement is possible will depend on market absorption capacities.
- **33% debt expectation**<sup>11</sup> – The term sheet includes a 33% debt expectation. Thus for the 16% RWA requirement, some supervisors may expect at least 5.28% RWAs to be in the form of debt instruments. Five of the 30 G-SIBs currently meet this expectation when considering instruments issued that currently qualify for TLAC (Case 1).

## Internal TLAC

The term sheet requires each material subsidiary of a resolution entity to maintain internal TLAC that is equivalent to 75% to 90% of the external TLAC minimum requirements that would apply if the subsidiary were a resolution entity. The findings below examine the same cases as tested in the external TLAC section with the exception of Case 2.

The number of **material subsidiaries** reported by the 30 G-SIBs ranges from zero to eight. Eight G-SIBs reported having no material subsidiaries. The main reasons behind the low numbers are as follows: (a) subsidiaries located in the same country as the resolution entity were not defined as material subsidiaries in the consultation version of the term sheet; and (b), as CMGs have yet to identify all material subsidiaries for each G-SIB, a number of subsidiaries that do not meet the quantitative thresholds of the term sheet but may otherwise be considered material by the CMG, were not included.

Most of the material subsidiaries reported already meet the lower internal TLAC requirements in all three cases. This is mainly driven by surplus capital, typically CET1, of material subsidiaries. When moving to a wider definition of instruments (Case 4), all but one of the reporting G-SIBs meets the higher threshold (ie 90% of 20% RWA). However, there is some variation in shortfalls across material subsidiaries located in different jurisdictions.

- **Internal TLAC ratios and shortfall** – As a result, the weighted average ratios of internal TLAC are generally higher than those of external TLAC and the aggregate shortfalls of internal TLAC are much smaller than those of external TLAC. Below is a summary table of the aggregate

<sup>10</sup> See Sections 8 and 13 in the consultation version of the term sheet. Under one of the exemptions to the subordination requirement provided in the term sheet, authorities may permit liabilities that rank *pari passu* with excluded liabilities but would otherwise qualify as TLAC to account for TLAC up to 2.5% RWA. Another provision in the term sheet provides an allowance of 2.5% RWA towards TLAC where credible ex-ante commitments (ie pre-funded industry contributions to a resolution fund) are in place to recapitalise a G-SIB in resolution.

<sup>11</sup> See Section 7 in the consultation version of the term sheet.

internal TLAC ratios and shortfalls. Please note that Case 2 in the external TLAC analysis was not tested for the internal TLAC, since it was deemed to be too granular for this analysis.

<b>Internal TLAC ratios</b> (weighted average)	Case 1	Case 3	Case 4
Internal TLAC risk-based ratios	17.5%	27.2%	47.9%
G-SIBs below 75% of 16% RWA	1	1	0
G-SIBs below 90% of 20% RWA	8	6	1
Internal TLAC leverage ratios	6.8%	10.5%	18.5%
G-SIBs below 75% of 2×3% leverage exposure	3	2	0
G-SIBs below 90% of 2×3% leverage exposure	5	3	1
<b>Internal TLAC shortfalls</b>	Case 1	Case 3	Case 4
75% of 16% RWA requirement	€7bn	€6bn	€0bn
90% of 20% RWA requirement	€54bn	€31bn	€2bn
75% of 2×3% leverage requirement	€6bn	€3bn	€0bn
90% of 2×3% leverage requirement	€19bn	€9bn	€2bn

Sample size: 14 G-SIBs excluding emerging market G-SIBs on a sub-consolidated basis.

## Holdings of TLAC within the system and deduction

The QIS has also gathered information on holdings of TLAC instruments by G-SIBs and non-G-SIBs. A sample of 134 non-G-SIBs across both large and small banks responded to this QIS.

- Holdings of TLAC** – In general terms, neither G-SIBs nor non-G-SIBs hold significant amounts of G-SIB-issued TLAC liabilities. This is partly because few instruments other than regulatory capital instruments currently meet the term sheet criteria. However, even when moving to the wider definitions to include senior unsecured instruments under Cases 3 and 4, the majority of G-SIBs do not currently hold significant amounts of each other's liabilities although there is considerable variation among different banks and different geographic regions, with some notable outliers. In the case of the widest definition (Case 4), G-SIBs' cross-holdings range from €0.2 billion to €31 billion and TLAC holdings by non-G-SIBs range from zero to €40 billion (compared to medians of €5.8 billion for G-SIBs and zero for non-G-SIBs).
- Threshold deduction of TLAC holdings from Tier 2** – Given the relatively low level of TLAC holdings, the impacts of the threshold deduction are small on average for G-SIBs and non-G-SIBs although there is variability among banks and the impacts could be material for some individual banks. Except for some banks, banks do not experience challenges in maintaining the 8% Basel III minimum total capital ratio even after applying the deduction.



## 1. Introduction

On 10 November 2014, the Financial Stability Board (FSB) published, in consultation with the Basel Committee on Banking Supervision (BCBS), a consultative document on the total loss-absorbing capacity (TLAC) of global systemically important banks (G-SIBs) in resolution, including high-level principles and a more detailed term sheet. To finalise the TLAC standard in late 2015, comprehensive impact studies were conducted by the FSB, the BCBS and the Bank for International Settlements (BIS). Their results informed the final calibration of the TLAC requirements.

The Basel Committee conducted the TLAC quantitative impact study (TLAC QIS), focusing on shortfall analyses, as part of its end-2014 Basel III monitoring exercise. The purpose of the TLAC QIS is to assess the ability of G-SIBs to meet the TLAC standard as set out in the consultative document. Moreover, the TLAC QIS contributed to the discussion about a prudential treatment of holdings of TLAC instruments.<sup>12</sup>

This report summarises the results of the TLAC QIS using end-2014 reporting data.<sup>13</sup>

### 1.1 Scope of the TLAC QIS

The TLAC QIS analysed the impact of external TLAC requirements for each resolution entity of each G-SIB, internal TLAC requirements for material subsidiaries of each G-SIB and holdings of TLAC instruments by G-SIBs and non-G-SIBs. The QIS also assessed the impact of the exemptions embedded within the consultation version of the TLAC term sheet. The results included in this report use bank data as at year-end 2014 and regulatory capital instruments are reported on a Basel III fully loaded basis.<sup>14</sup>

All countries supervising G-SIBs participated in the TLAC QIS and all but one of the 27 Committee member countries participated in part of the TLAC QIS, ie non-G-SIBs' holdings of TLAC analysis. The estimates presented are based on data submitted by the participating banks and their national supervisors in accordance with the instructions prepared by the Basel Committee in January 2015.<sup>15</sup> The final data were submitted to the Secretariat of the Basel Committee by 23 September 2015.

### 1.2 Sample of participating banks

All 30 G-SIBs according to the list of G-SIBs as of November 2014 were asked to complete templates regarding external TLAC, internal TLAC and holdings of TLAC instruments. Moreover, more than 200 Group 1 and Group 2 banks were asked to complete the template on holdings of TLAC instruments to gather information on the potential impact of a prudential treatment of TLAC holdings. Group 1 banks are those that have Tier 1 capital of more than €3 billion and are internationally active. All other banks are considered Group 2 banks.

<sup>12</sup> The TLAC term sheet provides in Section 18 (regulation of investors) as follows: in order to reduce the risk of contagion, G-SIBs must deduct from their own TLAC or regulatory capital exposures to eligible external TLAC liabilities issued by other G-SIBs in a manner generally parallel to the existing provisions in Basel 3 that require a bank to deduct from its own regulatory capital certain investments in the regulatory capital of other banks. The Basel Committee should further specify this provision, including a prudential treatment for non-G-SIBs.

<sup>13</sup> The data for Japan are as of the end of September 2014, as banks in that country report twice yearly, as of the end of March and the end of September, to correspond to the fiscal year-end period. Further, the data for Canada reflect a reporting date of 31 October 2014, which corresponds to Canadian banks' fiscal second quarter-end.

<sup>14</sup> Basel III contains a transitional period to allow banks to adjust to the new requirements. The QIS does not take the provisional arrangements into account and instead assumes full implementation as at 2022.

<sup>15</sup> See Basel Committee on Banking Supervision, *Instructions for Basel III implementation monitoring*, January 2015, [www.bis.org/bcbs/qis/](http://www.bis.org/bcbs/qis/).

The data set includes 30 G-SIBs in the G-SIB section, of which the primary sample size used is 29 G-SIBs due to insufficient data. G-SIBs headquartered in emerging market countries that are expected to be initially exempt from the TLAC standard are excluded from all charts but included in many data tables and descriptions in the main text. In the non-G-SIB section, the data set includes 54 Group 1 banks and 80 Group 2 banks. Not all banks provided data relating to all parts of the relevant worksheet. Accordingly, a small number of banks are excluded from individual sections due to incomplete data. In certain sections, data are based on a consistent sample of banks. This consistent sample represents only those banks that reported necessary data in order to make meaningful comparisons.

The Basel Committee appreciates the significant efforts contributed by both banks and national supervisors to this TLAC data collection.

### 1.3 Methodology – four different cases tested

The instructions asked for the templates to be completed for each resolution group. G-SIBs subject to a single point of entry (SPE) resolution strategy were asked to populate the templates on a consolidated basis. G-SIBs under a multiple point of entry (MPE) resolution strategy were asked to provide such data for each resolution group on a sub-consolidated basis.

The **External TLAC** worksheet collected data on four different cases in order to analyse the impact of different non-regulatory capital TLAC instruments.<sup>16</sup> Please note that all regulatory capital instruments are the same across the four cases and that non-regulatory capital instruments with a residual maturity of less than one year are generally excluded except in the TLAC holdings analysis.<sup>17</sup>

- **Case 1** includes instruments that meet all of the TLAC term sheet criteria, including *subordination*. It excludes senior unsecured debt that only qualifies as a result of the 2.5% exemptions to the subordination requirements and “credible ex ante commitments”.<sup>18</sup>

This case is intended to analyse current shortfalls to reflect the consultation version of the term sheet criteria (except the 2.5% exemptions) and shows the amount which banks need to fill. This case avoids uncertain future projections. Thus, the BCBS shortfall analysis and the separate economic impact analysis that the BIS carried out use this case as its main scenario.

- **Case 2** is the same as Case 1, but the instruments must also meet certain additional criteria that are currently required of Tier 2 instruments under Basel III.<sup>19</sup>

This case is designed to help assess the impact of requiring these additional features.

- **Case 3** is the same as Case 1 except that none of the subordination requirements in the term sheet are applied (ie it includes all senior unsecured debt issued by resolution entities meeting all the term sheet criteria, except subordination).

<sup>16</sup> See Basel Committee on Banking Supervision, *Instructions for Basel III implementation monitoring*, January 2015, [www.bis.org/bcbs/qis/](http://www.bis.org/bcbs/qis/).

<sup>17</sup> For the purposes of the QIS, the unamortised portion of Tier 2 instruments with a residual maturity of less than one year is included as eligible TLAC.

<sup>18</sup> The requirement for contractual, statutory or structural subordination is set out in the term sheet Section 13a, 13b and 13c respectively. The full exemption and the partial exemption (ie up to 2.5% of RWAs) to the subordination requirement are set out in the last two paragraphs of Section 13 of the term sheet. Section 8 covers the treatment of credible ex ante commitments.

<sup>19</sup> These additional criteria include that TLAC-eligible instruments must be paid in; not have a credit sensitive feature; not have a right of acceleration of the principal and interest outstanding in respect of the instrument outside liquidation; be calculated based on the effective maturity, ie the date of an incentive to redeem when it includes such an incentive.

This case is designed to help assess the impact of the subordination requirement. If G-SIBs replace ineligible TLAC included in Case 3 with eligible TLAC with limited migration or conversion costs, Case 3 might be considered an indication of future TLAC liabilities. However, all of the Case 3 senior debt might not be easily replaceable with TLAC,<sup>20</sup> especially in countries with a limited investor base.

- **Case 4** is the widest case. It includes all unsecured liabilities except those arising from derivatives, deposits and those not arising from contracts (eg tax liabilities). This means that Case 4 includes, for example, structured notes<sup>21</sup> and liabilities issued by entities other than resolution entities (which are not eligible as TLAC according to the term sheet).

Similar to Case 3, Case 4 might be an indication of future TLAC liabilities if it is possible to replace these liabilities with eligible TLAC. The wider set of instruments captured by Case 4 is likely to be more challenging to replace with TLAC than those captured by Case 3.

The **Internal TLAC** worksheet collected data on internal TLAC of material subsidiaries for both SPE and MPE G-SIBs. According to the consultation version of the term sheet, material subsidiaries are entities incorporated in countries other than the resolution entity's home country, meeting one of the criteria listed in Section 21 of the term sheet.<sup>22</sup> These criteria define a material subsidiary as one that:

- has more than 5% of the consolidated risk-weighted assets of the G-SIB group; or
- generates more than 5% of the consolidated revenue of the G-SIB group; or
- has a total leverage exposure larger than 5% of the G-SIB group's total leverage exposure measure; or
- has been identified by the firm's CMG as material to the exercise of the firm's critical functions.

Data on internal TLAC are divided into three cases to test the impact of different eligibility criteria. These cases are the same as those for the external TLAC except that the Case 2 was not tested for the internal TLAC.

The **TLAC holdings** analysis is designed to test policy options to reduce the risk of contagion. In order to analyse the impact of different non-regulatory capital instruments, the four different cases in the external TLAC worksheet were tested for G-SIBs. On the other hand, the TLAC holdings worksheet gathered data on non-G-SIB's holdings of TLAC on a consolidated basis and tested three cases in the same way as the internal TLAC, ie Case 2 was not tested. Each case includes the whole amount of instruments regardless of their residual maturity, ie including instruments with a residual maturity of less than one year.<sup>23</sup>

The **TLAC location** analysis is designed to test the amounts and pricing of unsecured liabilities issued in different markets. The worksheet is part of the costing analysis conducted by the FSB and the BIS as part of the comprehensive impact studies. The data collected include, for example, the total nominal amounts outstanding, the weighted average residual yield to maturity and the weighted

<sup>20</sup> For example, current investors may be restricted by investment mandates or internal policy restrictions on exposures to subordinated debt.

<sup>21</sup> For this QIS purpose, structured notes are defined as debt obligations that contain an embedded derivative component, with returns linked to an underlying security or index (public or bespoke, such as equities or bonds, fixed income rates or credit, FX, commodities etc). Structured notes do not include debt instruments that include call or put options only, ie the value of the instrument does not depend on any embedded derivative component.

<sup>22</sup> Under the consultation version of the term sheet, foreign subsidiaries could be considered material subsidiaries and domestic subsidiaries were not in the scope of material subsidiaries.

<sup>23</sup> TLAC liabilities in Case 1 do not include instruments ranking pari passu to excluded liabilities when they have an original maturity over one year, which the consultative document on TLAC holdings proposes to include in TLAC holdings when issued by G-SIBs in jurisdictions applying the TLAC term sheet exemptions to the subordination requirements.

average z-spread. Again, a menu approach with different categories of instruments is used to test different criteria.

## 1.4 Presentation of charts

The average amounts in this report have been calculated by creating a composite bank at a total sample level, which effectively means that the total sample averages are weighted. For example, the average external TLAC risk-based ratio is the sum of all banks' TLAC for the total sample divided by the sum of all banks' risk-weighted assets for the total sample. Similarly, the average external TLAC leverage ratio is the sum of all banks' TLAC for the total sample divided by the sum of all banks' Basel III leverage ratio exposures for the total sample.

To preserve confidentiality, many of the distributions shown in this report are presented using box plot charts. The middle line of the box plot depicts the median value, with 50% of the values falling in the range shown by the box, ie the outer lines of the box represent the 25th and 75th percentile, respectively. The upper and lower end points of the whisker, ie a thin vertical line, show the range of the entire sample, ie minimum and maximum.

## 1.5 Data quality

For this impact study, participating banks submitted detailed non-public data on a voluntary and best-efforts basis. As with other Basel III monitoring exercises, national supervisors worked extensively with banks to ensure data quality, completeness, and consistency with the published reporting instructions. Banks are included in the various analyses below only to the extent that they were able to provide data of sufficient quality to complete the analyses.

## 2. External TLAC

### 2.1 External TLAC ratios<sup>24</sup>

#### 2.1.1 External TLAC risk-based ratios

The consultation version of the TLAC term sheet stipulates that “The Pillar 1 common Minimum TLAC requirement will be 16% – 20% of the resolution group’s RWAs. This does not include any applicable capital buffers. Authorities may set additional Pillar 2 requirements above the common minimum.”

For the SPE and aggregated MPE resolution groups (ie the sum of the relevant data of each resolution entity of MPE G-SIBs, including inter-resolution group exposures),<sup>25</sup> the average external TLAC risk-based ratios, ie the ratio of external TLAC to risk-weighted assets (RWAs), are summarised below. The sample size is 26 G-SIBs excluding emerging market G-SIBs while parentheses indicate figures including emerging market G-SIBs. The 2.5% RWA exemption for certain countries are not considered unless specified otherwise, eg in Graph 3. Many G-SIBs would not meet 16% RWA minimum in Case 1 (term sheet criteria), and 11 G-SIBs still would not meet 16% RWA minimum in Case 3 (term sheet criteria except subordination criteria). The ratios decrease when emerging market G-SIBs are included.

SPE and aggregated MPE	Case 1	Case 2	Case 3	Case 4
Weighted average external TLAC risk-based ratios	14.1% (13.1%)	13.9% (12.9%)	18.6% (16.5%)	24.3% (20.9%)
G-SIBs below 16% minimum	20	20	11	3
G-SIBs above 16% minimum	6	6	15	23
G-SIBs above 20% minimum	3	3	12	18

Sample size: 26 G-SIBs excluding emerging market G-SIBs (see parentheses for figures including such G-SIBs).

Graph 1 shows the weighted average external TLAC risk-based ratio as well as its distribution in each case. Please note that an amount of CET1 required to meet the combined buffers (capital conservation and G-SIB surcharge) has been subtracted from the available CET1 before external TLAC risk-based ratios are calculated. In other words, the CET1 here does not include CET1 used to meet the buffers which account for €723 billion for all 30 G-SIBs and €574 billion for all G-SIBs excluding emerging market G-SIBs.<sup>26</sup> The amount of holdings of TLAC is deducted from their own Tier 2 capital subject to a threshold in line with the proposed treatment in the consultative document TLAC Holdings.<sup>27</sup>

In Cases 1 and 2, the average external TLAC risk-based ratio is around 14%, which does not meet the lowest of the range of the minimum TLAC RWA requirement. The main reason is that G-SIBs issue very limited amount of TLAC-eligible non-regulatory capital liabilities (TLAC liabilities) in Cases 1 and 2. The distribution of the ratios among 26 G-SIBs is relatively narrow in Cases 1 and 2.

<sup>24</sup> See Introduction for definitions of four cases.

<sup>25</sup> “Aggregated MPE resolution group” means the sum of the relevant data of each resolution entity of MPE G-SIBs. Please note that generally speaking, aggregated MPE data are different from group consolidated data, ie MPE as SPE (SPE simulation). The consultation version of the term sheet was not clear on the treatment of inter-resolution group exposures within the same G-SIB. Therefore, for the purpose of this QIS analysis, the aggregated MPE resolution group data does not deduct any inter-resolution group exposures and such investments are included in the calculation of RWAs and leverage ratio exposures.

<sup>26</sup> This approach also helps to maintain the anonymity of each G-SIB.

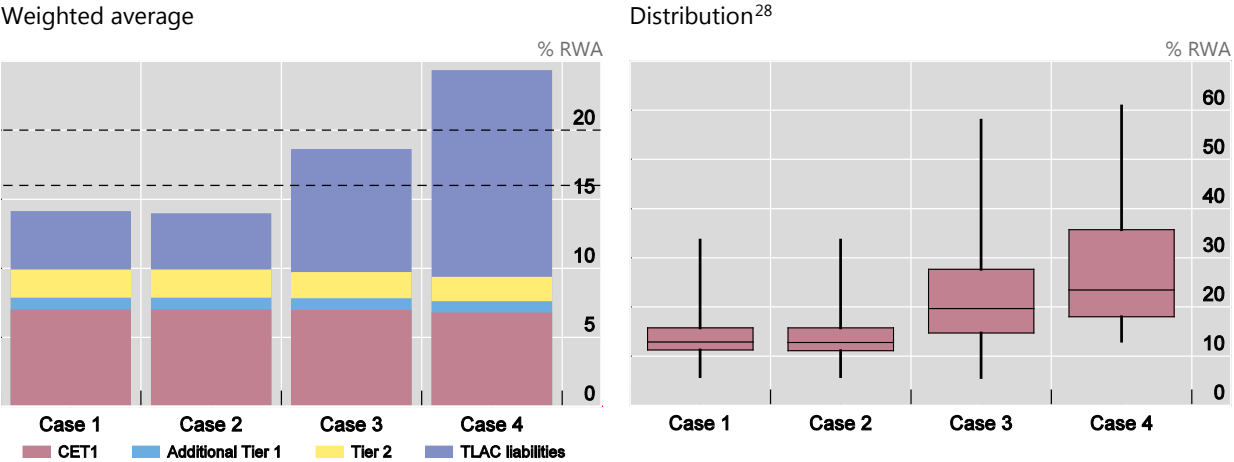
<sup>27</sup> See Basel Committee on Banking Supervision, *Consultative document TLAC Holdings*, November 2015.

The ratio increases to 18.6% in Case 3 and 24.3% in Case 4, which is well above the highest of the range of the minimum TLAC RWA requirement. The distribution of the ratios between the 25th and 75th percentile of 26 G-SIBs is the largest in Case 4, ie from 18.0% to 35.7%.

# External TLAC risk-based ratios<sup>1</sup>

SPE and aggregated MPE

Graph 1



<sup>1</sup> The CET1 here does not include CET1 used to meet buffers (ie, capital conservation buffer and G-SIB surcharge applicable to each G-SIB). In other words, CET1 needed to meet the buffers has been deducted from the reporting entity's CET1 to leave the amount available to meet the TLAC requirement.

Sample size: 26 G-SIBs

Source: Basel Committee on Banking Supervision.

The term sheet sets a **33% debt expectation** in that the external TLAC requirement should be met with at least 33% of (i) Tier 1 and Tier 2 capital instruments in the form of debt plus (ii) other eligible TLAC that is not regulatory capital. Namely, for the 16% RWA requirement, some supervisors may expect at least 5.28% RWAs to be in the form of debt instruments. Five of the 30 G-SIBs currently meet this expectation when considering instruments that currently qualify for TLAC (Case 1). Although two types of definition of debt, ie (a) instruments classified as liabilities in balance sheet and (b) instruments which are not shares, were tested, both definitions generated similar results.

<sup>28</sup> The median value is represented by a horizontal line, with 50% of the values falling in the range shown by the box, which means that the box shows the range between the 25th and 75th percentile. The upper and lower end points of the vertical lines generally show the range of the entire sample. The same applies to other boxplots in this report.

### 2.1.2 External TLAC leverage ratios

The consultation version of the term sheet says that “The Pillar 1 Minimum TLAC requirement must also be at least twice the quantum of capital required to meet the relevant Tier 1 leverage ratio requirement – that is, if the Basel III leverage ratio were set at 3% for G-SIBs, at least 6% of the Basel III leverage ratio denominator”. The weighted average external TLAC leverage ratios, ie the ratio of external TLAC to Basel III leverage ratio exposure measure, for 26 G-SIBs excluding emerging market G-SIBs in Cases 1 to 4 are shown below while parentheses indicate figures including emerging market G-SIBs. In Case 1, 12 G-SIBs would not meet the 2×3% leverage minimum, and in Case 3, five G-SIBs still would not meet the 2×3% leverage minimum.

SPE and aggregated MPE	Case 1	Case 2	Case 3	Case 4
Weighted average external TLAC leverage ratios	7.2% (7.2%)	7.1% (7.2%)	9.0% (8.7%)	11.3% (10.6%)
G-SIBs below 2×3% minimum	12	14	5	1
G-SIBs above 2×3% minimum	14	12	21	25

Sample size: 26 G-SIBs excluding emerging market G-SIBs (see parentheses for figures including such G-SIBs).

Graph 2 shows the weighted average external TLAC leverage ratio as well as its distribution in each case. In Cases 1 and 2, the ratio is over 7%, which is above the minimum TLAC requirement if the Basel III leverage ratio is set at 3%. The ratios range from around 4.5% at the 25th percentile to around 9.6% at the 75th percentile in Cases 1 and 2.

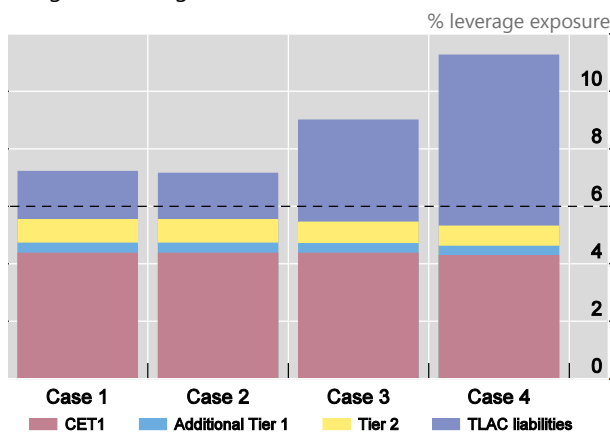
The ratio increases to 9% in Case 3 and well over 10% in Case 4. The distribution chart shows that the ratios of 26 G-SIBs are most widely spread in Case 3, ie from 2.9% to 17.0%.

#### External TLAC leverage ratios

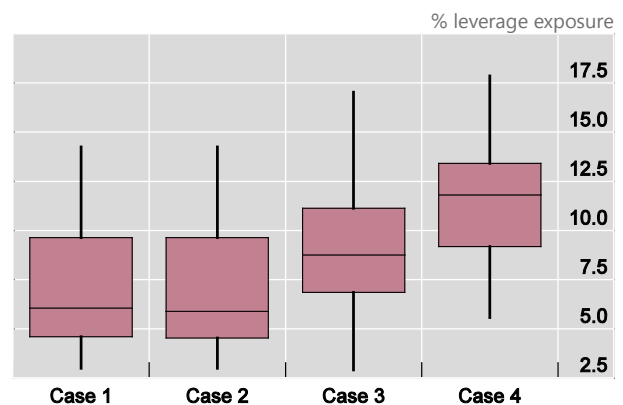
SPE and aggregated MPE

Graph 2

Weighted average



Distribution



Sample size = 26 G-SIBs

Source: Basel Committee on Banking Supervision.

### 2.1.3 Impact of Section 8 and the last paragraph of Section 13 exemptions

The consultation version of the TLAC term sheet sets out several specificities that may affect the G-SIBs in certain countries.<sup>29</sup> These specificities may allow banks in certain countries to count an amount equivalent to 2.5% RWAs towards the external TLAC risk-based ratios and leverage ratios in Case 1. Graph 3 shows the potential impact of these specificities. The sample consists only of G-SIBs headquartered in countries that could apply these specificities.<sup>30</sup> For this simulation analysis, the amount equivalent to 2.5% of resolution group's RWAs is added to the numerator of both types of TLAC ratios of all banks in these countries to obtain a measure of the potential impact.

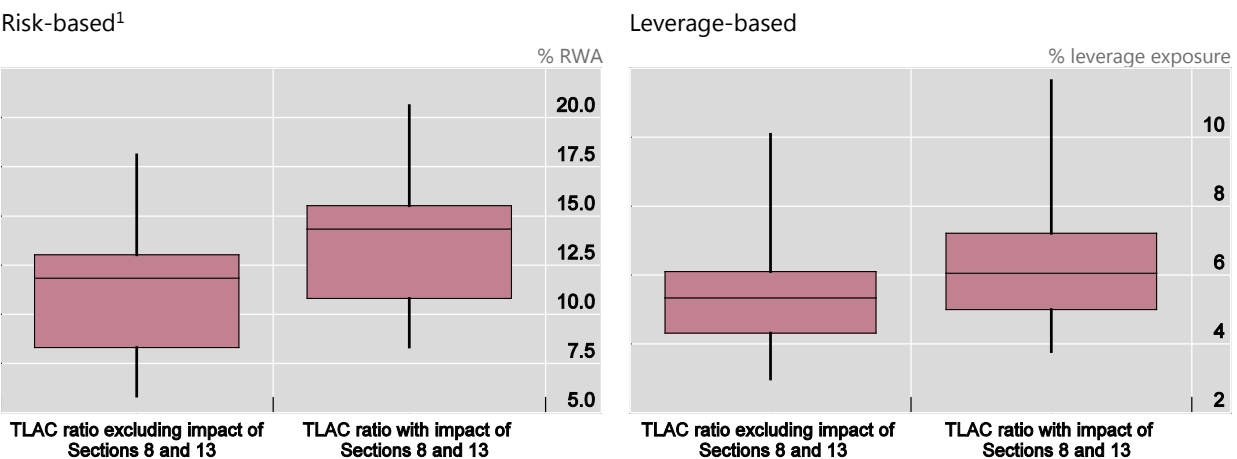
Graph 3 shows that the median external TLAC risk-based ratio is still below 16% even with the additional 2.5% RWAs. On the other hand, the median external TLAC leverage ratio increases by 0.7% due to the specificities, which makes the median ratio slightly over 6%.

The exemption to the subordination requirement set out in the last paragraph of Section 13 is not relevant for Cases 3 and 4 which do not require the subordination criterion. Case 2 shows similar outcomes to Case 1.

#### Impact of Section 8 and the last paragraph of Section 13 exemptions (Case 1)

External TLAC ratio with Sections 8 and 13 fully incorporated

Graph 3



<sup>1</sup> The CET1 for external TLAC risk-based ratios does not include CET1 used to meet buffers (ie, capital conservation buffer and G-SIB surcharge applicable to each G-SIB). This is the same treatment as in previous graphs.

Sample size: 17 G-SIBs

Source: Basel Committee on Banking Supervision.

<sup>29</sup> See Section 8 and the last paragraph of Section 13 in the consultation version of the term sheet.

<sup>30</sup> Graph 3 includes 17 G-SIBs in countries subject to the exemptions on the assumption that all of these banks will use Section 8 or the last paragraph of Section 13 exemptions and add the full amount equivalent to 2.5% of resolution group's RWAs.



## 2.2 External TLAC shortfalls

### 2.2.1 Description of two types of shortfalls

This section shows the distribution of TLAC shortfalls by case. The analysis is conducted for external TLAC requirements based on both RWAs (16% and 20%) and the leverage ratio exposure measure (2×3%). Below is a description of the shortfall calculation methodologies.<sup>31</sup>

- **Shortfall (no buffers considered, Graph 4):** Takes no account of the capital that G-SIBs will need to hold in respect of their regulatory buffer requirements, ie CET1 is not reduced by the amount of CET1 required to meet the combined buffers (capital conservation and G-SIB surcharge).
- **Shortfall (RWA buffers considered, Graph 5):** Takes account of the capital that G-SIBs will need to hold in respect of their regulatory buffer requirements, which the term sheet requires in addition to the 16% and 20% RWA TLAC requirements. This means that an amount of CET1 required to meet the combined buffers (capital conservation and G-SIB surcharge) has been subtracted from the available CET1 before the shortfall to the RWA-based TLAC requirement is calculated.

The shortfall calculated taking into account the RWA buffers is consistent with the Basel III buffer framework. Once G-SIBs fill the shortfalls, the G-SIBs meet the TLAC minimum requirements, the Basel III minima and the Basel III buffer requirements. Thus, this is a target shortfall that G-SIBs need to meet.

The shortfall of each MPE G-SIB on an aggregated resolution group basis is calculated as additive and is not netted out by surpluses of other resolution groups within the same G-SIB.

Likewise external TLAC ratios, the 2.5% exemptions are not considered to calculate shortfalls but the impact is separately explained in the aggregate data tables.

### 2.2.2 External TLAC shortfalls (no buffers considered)

Graph 4 shows the aggregated external TLAC shortfall (no buffers considered) for G-SIBs excluding emerging market G-SIBs. The G-SIBs always display higher shortfalls in Cases 1 or 2 for both RWA and leverage requirements, as compared to shortfalls reported in Cases 3 or 4.

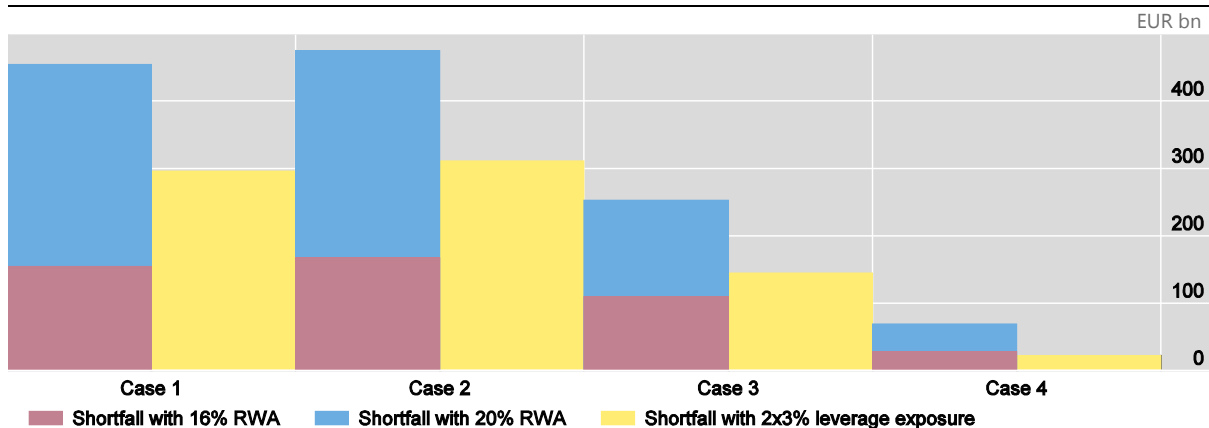
Cases 1 and 2 indicate that the 26 G-SIBs collectively have a shortfall that is greater than €450 billion at the 20% RWA requirement. Aggregate shortfalls under the 16% RWA requirement are more than €150 billion in both Cases 1 and 2. However, the 2×3% leverage requirement is binding for many G-SIBs when the 16% RWA requirement is applied, as aggregated leverage shortfalls are approximately €300 billion in Cases 1 and 2. In contrast, Case 3 – which includes senior non-regulatory capital liabilities that otherwise meet the TLAC term sheet criteria – shows significantly lower shortfalls, with the aggregated shortfall of around €250 billion under the 20% RWA requirement. In Case 4, which allows the largest amount of instruments to qualify, the vast majority of G-SIBs have no shortfalls.

<sup>31</sup> Under Basel III, banks can only use CET1 to meet the buffer requirements if it is not being used to meet the minimum risk-based requirements. There is no similar requirement in respect of the leverage ratio, ie in calculating the CET1 available to meet the buffers, banks do not need to exclude CET1 being used to meet the 3% leverage ratio. This report follows the same general approach as Basel III. However, for comparative purposes, the shortfall analysis also shows the impact without any application of the buffer requirements.

## External TLAC shortfall (no buffers considered)

SPE and aggregated MPE

Graph 4



Note: The blue legend (shortfall with 20% RWA) represents an additional shortfall on top of 16% RWA shortfall, ie the difference between 20% RWA shortfall and 16% RWA shortfall. Thus, the sum of the red and blue legends represents the total amount of 20% RWA shortfall.

Sample size: 26 G-SIBs

Source: Basel Committee on Banking Supervision.

Number of G-SIBs for which the binding factor is the RWA requirement (no buffers considered) or the leverage requirement	Case 1	Case 2	Case 3	Case 4
G-SIBs bound by RWA requirement (under 16% RWA or 2x3% leverage)	4	4	4	3
G-SIBs bound by leverage requirement (under 16% RWA or 2x3% leverage)	13	13	5	1
G-SIBs bound by RWA requirement (under 20% RWA or 2x3% leverage)	13	13	10	5
G-SIBs bound by leverage requirement (under 20% RWA or 2x3% leverage)	7	7	1	0

The following table summarises the aggregate shortfalls (no buffers considered) by case, including and excluding emerging market G-SIBs, and the potential impact of the 2.5% exemptions. The shortfalls are calculated as larger of the RWAs requirement or the 2x3% leverage requirement at each G-SIB level. Emerging market G-SIBs have limited amount of TLAC liabilities in all cases owing to their deposit funding, so the shortfalls including them increase significantly.

Shortfall (no buffers considered)	Case 1	Case 2	Case 3	Case 4
16% RWA or 2x3% leverage	€438bn	€453bn	€280bn	€150bn
20% RWA or 2x3% leverage	€786bn	€809bn	€541bn	€355bn
16% RWA or 2x3% leverage ex. emerging market G-SIBs	€317bn	€333bn	€162bn	€34bn
20% RWA or 2x3% leverage ex. emerging market G-SIBs	€495bn	€518bn	€254bn	€69bn
Impact of the 2.5% exemptions	Up to €137bn			

Sample size: 30 G-SIBs in Case 1 and 29 G-SIBs in Cases 2 to 4 (one G-SIB excluded from Cases 2 to 4 due to insufficient data).

Please note that the impact of the 2.5% exemptions is calculated based on the assumption that the 17 G-SIBs located in certain countries subject to the exemptions make use of the 2.5% exemptions, to the extent possible, to reduce their shortfalls as set out in Section 8 and the last paragraph of Section 13 of the term sheet. The amount is not shown for Cases 3 or 4 as the cases do not apply the subordination requirements of the term sheet and so the exemption is not relevant. It should be noted, however, that the shortfall in Cases 3 and 4 may be reduced by the allowance for resolution funds.

### 2.2.3 External TLAC shortfalls (RWA buffers considered)

Graph 5 shows G-SIBs' aggregated external TLAC shortfalls, which consider both the capital conservation buffer and the G-SIB surcharge on top of the 16% and 20% RWA requirements. This means that an amount of CET1 required to meet the combined buffers (capital conservation and G-SIB surcharge) has been subtracted from the available CET1 before the shortfall to the RWA-based TLAC requirement is calculated. In the case of the TLAC leverage shortfalls, depicted in yellow in Graph 5, CET1 used to meet buffers is not deducted before the calculation of the shortfalls to be consistent with the Basel III regime which does not currently include buffers on top of the leverage ratio.

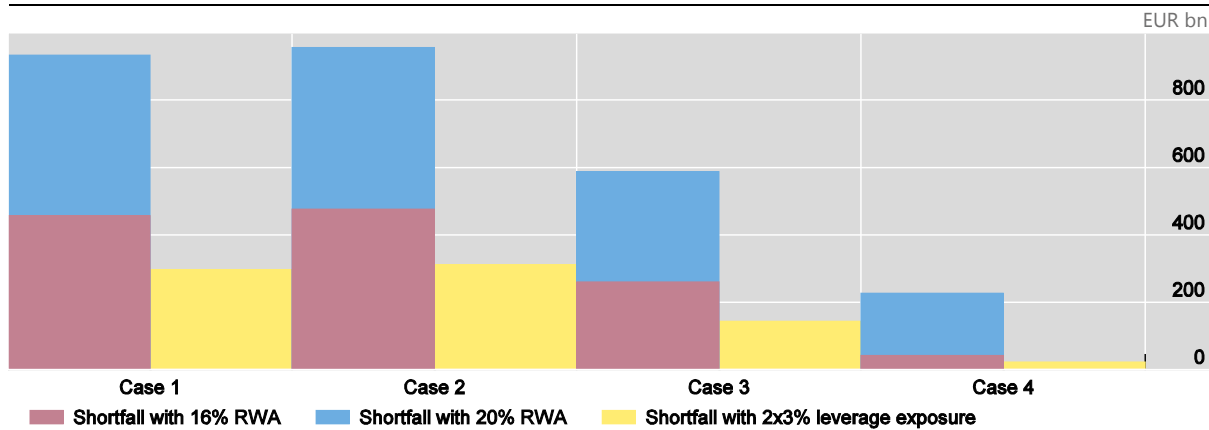
In Cases 1 and 2, all except three G-SIBs have shortfalls when the 20% RWA requirement is applied (each aggregate shortfall is around €950 billion). Only six G-SIBs are able to meet the 16% RWA requirement where aggregate shortfalls account for approximately €450 billion.

In Case 3, 16 G-SIBs face a shortfall at the 20% requirement where the aggregate shortfall amounts to around €600 billion. In Case 4, five G-SIBs have shortfalls under the minimum 16% RWA or 2×3% leverage requirements.

#### External TLAC shortfall (RWA buffers considered)

Buffers on the 16%/20% RWA requirements, SPE and aggregated MPE

Graph 5



Note: The blue legend (shortfall with 20% RWA) represents an additional shortfall on top of 16% RWA shortfall, ie the difference between 20% RWA shortfall and 16% RWA shortfall. Thus, the sum of the red and blue legends represents the total amount of 20% RWA shortfall.

Sample size: 26 G-SIBs

Source: Basel Committee on Banking Supervision.

Below are the binding factors of shortfall (RWA buffers considered) in each case. Broadly speaking, the RWA requirements are more binding than the leverage requirement.

Number of G-SIBs for which the binding factor is the RWA requirement (plus buffers) or the leverage requirement	Case 1	Case 2	Case 3	Case 4
G-SIBs bound by RWA requirement (under 16% RWA or 2×3% leverage)	16	16	13	5
G-SIBs bound by leverage requirement (under 16% RWA or 2×3% leverage)	6	6	0	0
G-SIBs bound by RWA requirement (under 20% RWA or 2×3% leverage)	20	20	16	10
G-SIBs bound by leverage requirement (under 20% RWA or 2×3% leverage)	3	3	0	0

The following table summarises the aggregate shortfalls (RWA buffers considered) by case, including and excluding emerging market G-SIBs, and the potential impact of the 2.5% exemptions. The shortfalls are calculated as larger of the RWAs requirement or the 2×3% leverage requirement at each G-SIB level.

<b>Shortfall (RWA buffers considered)</b>	Case 1	Case 2	Case 3	Case 4
16% RWA or 2×3% leverage	€767bn	€790bn	€526bn	€307bn
20% RWA or 2×3% leverage	€1,388bn	€1,406bn	€1,025bn	€662bn
16% RWA or 2×3% leverage ex. emerging market G-SIBs	€498bn	€520bn	€260bn	€42bn
20% RWA or 2×3% leverage ex. emerging market G-SIBs	€949bn	€966bn	€588bn	€227bn
Impact of 2.5% exemptions	Up to €137bn			

Sample size: 30 G-SIBs in Case 1 and 29 G-SIBs in Cases 2 to 4 (one G-SIB excluded from Cases 2 to 4 due to insufficient data).

## 2.3 Composition of external TLAC

Graph 6 shows that in Cases 1 and 2, the external TLAC is mainly composed of CET1. On average, CET1 represents 49% of the external TLAC. The remaining part of the external TLAC basically consists of Tier 2 instruments, which represents on average 14% of the external TLAC. In total for Cases 1 and 2, regulatory capital instruments represent on average around 70% of the external TLAC.

With regard to the location of issuance of regulatory capital, almost all regulatory capital recognised as TLAC is issued by resolution entities. The total amount of CET1 (minority interest), Additional Tier 1 (AT1) and Tier 2 issued externally from subsidiaries that are non-resolution entities is €66 billion for all 30 G-SIBs, which is less than 3% of total consolidated regulatory capital of €2,479 billion. Thus, paragraphs 62 to 64 in the Basel III rules text limit the recognition of capital issued by subsidiaries in consolidated regulatory capital and TLAC. In addition, Tier 2 capital with a residual maturity of less than one year is €5 billion for all 30 G-SIBs which is negligible. Thus, the Basel III amortisation rules of Tier 2 with a residual maturity of less than five years limit the recognition of this element in regulatory capital. All figures in this paragraph are based on the nominal amount, ie no regulatory adjustments.

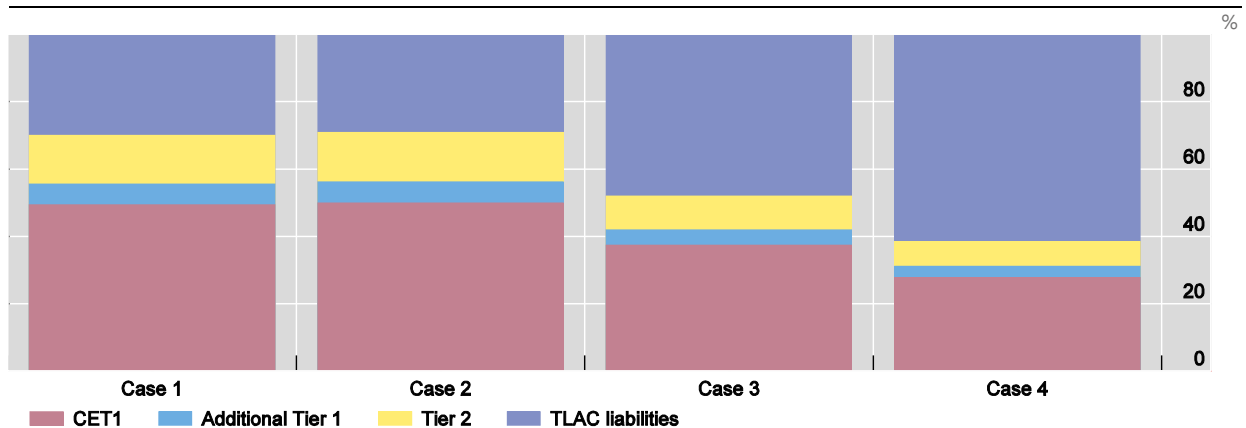
Case 3 includes all senior debt that meets all the term sheet criteria with the exception of the subordination requirement. The proportion of external TLAC that is composed of non-regulatory capital increases significantly compared to Cases 1 and 2 (around 30%). Non-regulatory capital instruments comprise on average 48% of G-SIBs' TLAC in Case 3.

The widest case, Case 4, includes structured notes and debt instruments issued by subsidiaries in addition to instruments included in Case 3. Non-regulatory capital instruments represent on average 62% of the external TLAC.

### Composition of external TLAC<sup>1</sup>

SPE and aggregated MPE

Graph 6



<sup>1</sup> The CET1 here does not include CET1 used to meet buffers (ie, capital conservation buffer and G-SIB surcharge applicable to each G-SIB).

Sample size: 26 G-SIBs

Source: Basel Committee on Banking Supervision.

Graph 7 represents the maturity structure of non-regulatory capital TLAC instruments, ie TLAC liabilities, in each case. G-SIBs without any TLAC liabilities in Case 1 are excluded from this analysis. Broadly speaking, TLAC liabilities with a residual maturity over one year, on average, have a similar maturity structure across all cases. This is because Cases 1 and 2 include large amounts of structurally subordinated debt which has shorter maturities than other types of subordinated debt.

In Case 1, on average, 44% of TLAC liabilities with a residual maturity over one year have a residual maturity over five years. Case 2 takes into account a more restrictive definition of maturity for instruments with incentives to redeem because Case 2 uses the effective maturity defined as the date of the incentive to redeem which is shorter than the contractual maturity in Case 1. This has the effect of reducing the residual maturity of TLAC-eligible liabilities. However, the portion of instruments having a residual maturity between one and five years in Case 2 (59%) is almost the same as that in Case 1 (56%).

Cases 3 and 4 include senior debt, which usually has a shorter maturity than subordinated debt. The amount of instruments with a residual maturity between one and five years in Case 3 increased compared with Case 1 while about 40% of Cases 3 and 4 TLAC liabilities still have a residual maturity over five years.

In addition, several G-SIBs have large volumes of short-term senior debt (with a residual maturity of less than one year). For example, in Case 3 the largest amount of senior short-term debt at a single G-SIB is nearly five times greater than the amount of its senior debt with a residual maturity of more than one year.

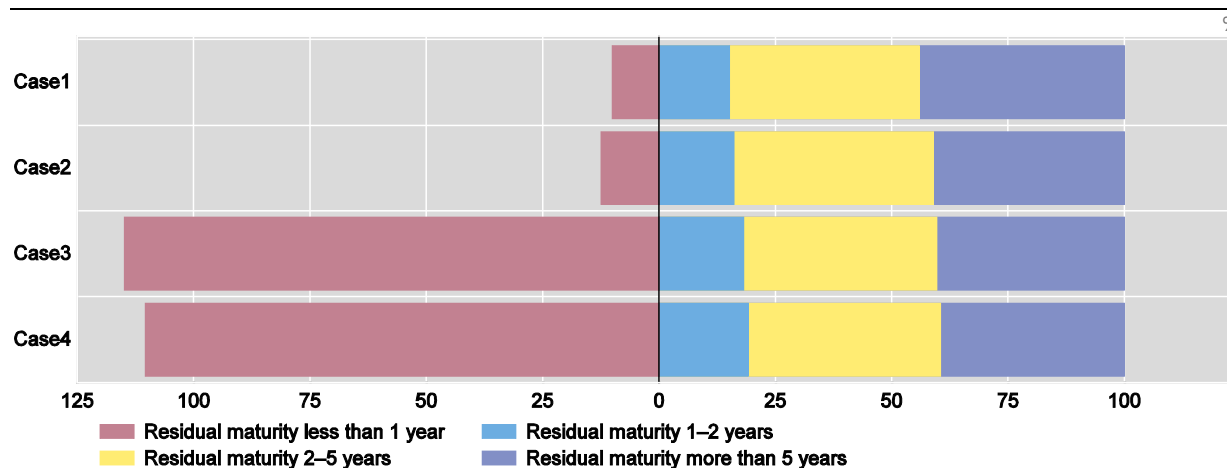
Comparing maturity information with the shortfall (RWA buffers considered), there are 22 G-SIBs, excluding emerging market G-SIBs, that have TLAC shortfalls in Case 1 (based on the larger of the 16% RWA shortfall or the 2×3% leverage shortfall). Of these, nine have no shortfall in Case 3. The analysis of the maturity structures of Case 3 liabilities shows that all these nine G-SIBs would meet their TLAC requirements if they are able to replace with eligible TLAC all of their Case 3 senior liabilities that mature in the next five years. Similarly, the vast majority of the 17 G-SIBs that have no shortfall in Case 4 but a shortfall in Case 1 could meet their TLAC requirements if they are able to replace with eligible TLAC their Case 4 liabilities that mature in the next five years. Whether such replacement is possible will depend on market absorption capacities.

There are five G-SIBs including emerging market G-SIBs that have shortfalls over €1 billion in Case 4. For these G-SIBs, even if they are able to replace with eligible TLAC all of their maturing Case 4 liabilities, they would still have a shortfall.

## External TLAC liabilities maturity structure composition

SPE and aggregated MPE

Graph 7



Sample size: 22 G-SIBs. The percentage figures in the x-axis are calculated as a proportion of TLAC liabilities with a residual maturity of over one year in each case.

Source: Basel Committee on Banking Supervision.

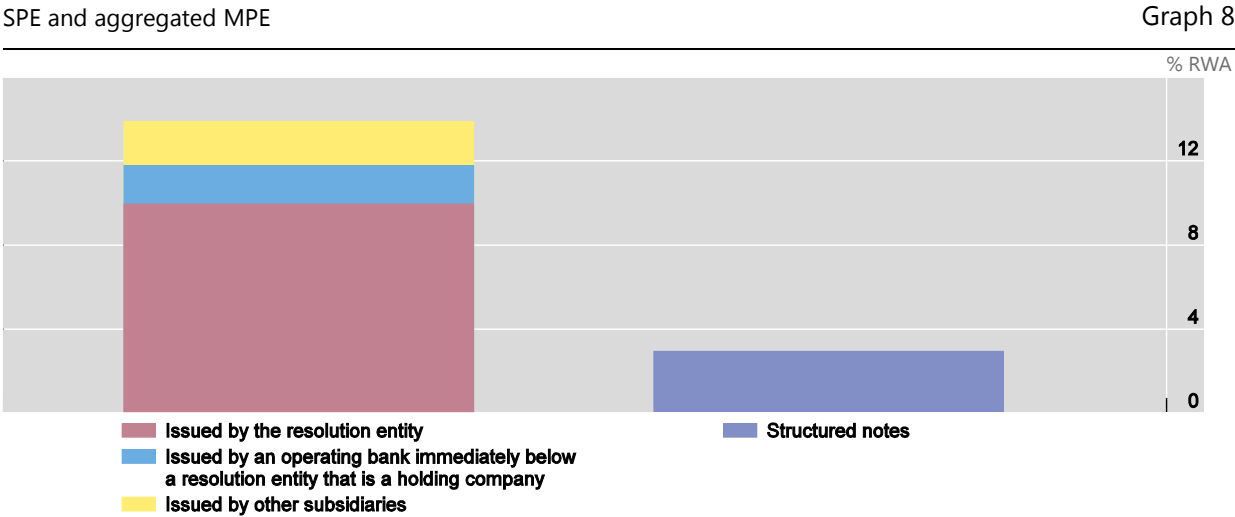
Graph 8 indicates the composition of Case 4 in terms of RWAs. Case 4 is composed of all TLAC-eligible liabilities, plus other long-term liabilities issued either by the resolution entity or by subsidiaries

(operating company below the holding company, or other subsidiaries). These other liabilities include structured notes<sup>32</sup> but exclude other kinds of derivatives and liabilities not arising through contract and deposits. Structured notes can either be issued by the resolution entity or by subsidiaries.

“Liabilities issued by an operating company immediately below a holding company” represent, on average, around 2% of the RWAs. This portion might be replaceable into TLAC-eligible liabilities if the liabilities are rolled over and issued by the holding company on maturity and the liabilities meet structural subordination criteria. “Liabilities issued by other subsidiaries” account for, on average, around 2% of the RWAs. “Structured notes” represent, on average, around 3% of the RWAs (either issued from the resolution entity or from subsidiaries).

Case 4 liabilities could be considered as an indication of the scale of TLAC-eligible liabilities that G-SIBs with non-operating holding company resolution entities might be able to issue in future. Considerations to be taken into account include the migration cost (eg cost associated with meeting the subordination criteria), the ease of re-issuance of debt from a different entity and a different form of debt (eg converting structured notes to vanilla notes). Investor demand for TLAC-eligible liabilities might also differ across countries depending on the final form of the issuance.

Composition of TLAC liabilities (Case 4)



Sample size: 24 G-SIBs. The right-hand bar is a subset of the left-hand bar, ie mutually exclusive.

Source: Basel Committee on Banking Supervision.

<sup>32</sup> See definition in footnote 21.

### 3. Internal TLAC

A key objective of the TLAC standard is to provide sufficient confidence to enable the orderly resolution of a G-SIB without disrupting the provision of critical services. In this regard, resolution entities should act as a source of loss-absorbing capacity for their subsidiaries. Sections 17–20 in the consultation version of the term sheet include an internal TLAC requirement for each material subsidiary not incorporated in the resolution entity's home country. Internal TLAC is designed to ensure the appropriate distribution of TLAC to material subsidiaries by G-SIB resolution entities, in order to facilitate cooperation between home and host authorities and implementation of cross-border resolution strategies that are feasible and credible.

The term sheet proposed that, subject to review in the QIS, the host authority of the material subsidiaries in consultation with the home authority will set the internal TLAC requirement in a range equivalent to 75–90% of the external TLAC requirement that would apply to the material subsidiaries on a sub-consolidated basis if it were a resolution entity. Unless otherwise agreed between home and relevant host authorities, the term sheet stated that this amount of internal TLAC must be pre-positioned on-balance sheet and should be sufficient at this level to facilitate effective cross-border resolution strategies. Thus, the shortfall is analysed for the minimum as well as the maximum possible calibration (75% of the 16% RWAs and 90% of the 20% RWAs; 75% and 90% of the 2×3% leverage exposure). Data on internal TLAC were divided into three cases to test the impact of different eligibility criteria. Case 2 was not tested for internal TLAC requirements.<sup>33</sup>

The internal TLAC worksheet collected data on internal TLAC of material subsidiaries for both SPE and MPE G-SIBs. The following analysis compares the calibrations of internal TLAC on a sub-consolidated basis and on a solo basis.<sup>34</sup> However, while not all G-SIBs provided data for all cases, many G-SIBs were not able to provide both sub-consolidated and solo RWAs and leverage exposure measures. Moreover, the data in the sample may or may not represent the characteristics of the true population of material subsidiaries since the number of reported material subsidiaries was relatively low.

#### 3.1 Material subsidiaries

The next table shows the distribution of the number of material subsidiaries for 30 G-SIBs. In general, the numbers were relatively low. While eight G-SIBs reported no material subsidiaries, 12 reported one or two subsidiaries, nine reported three or four subsidiaries and one reported eight subsidiaries.

	Zero material subsidiary	One material subsidiary	Two material subsidiaries	Three material subsidiaries	Four material subsidiaries	Eight material subsidiaries
Number of G-SIBs	8	7	5	6	3	1

Supervisors provided the following reasons behind the low numbers. First, material subsidiaries located in the same country as the resolution entity were not included per the term sheet's minimum criteria. Second, as CMGs have yet to identify all material subsidiaries for each G-SIB, a number of subsidiaries that do not meet the quantitative thresholds of the term sheet, but may otherwise be considered material by the CMG, were not included.<sup>35</sup> Third, for MPE G-SIBs, some of the subsidiaries which would qualify as material subsidiaries if they were SPE G-SIBs could be resolution entities of the

<sup>33</sup> See Introduction for definitions of three cases.

<sup>34</sup> The internal TLAC ratio on a sub-consolidated basis counts TLAC issued to the third parties by subsidiaries of a material subsidiary and includes RWAs of the subsidiaries while the ratio on a solo basis doesn't consider such TLAC and RWAs.

<sup>35</sup> It was instructed that if the CMG has not yet determined the scope of the material subsidiaries, then for the purpose of the QIS, the material subsidiaries should be based on the quantitative thresholds explained in Chapter 1.3.



MPE G-SIBs and thus not subject to an internal TLAC requirement. MPE G-SIBs reported over 20 resolution entities which reduced the number of material subsidiaries. Fourth, when responding to the QIS, G-SIBs considered only “regulated operating entities” that form part of the regulatory consolidated banking group (This group would exclude commercial entities and insurance companies in most countries).

## 3.2 Internal TLAC ratios

### 3.2.1 Internal TLAC risk-based ratios

This section shows internal TLAC risk-based ratios on a sub-consolidated as well as on a solo basis, excluding emerging market G-SIBs. Graph 9 shows the distribution of the ratios on a sub-consolidated basis.<sup>36</sup> The average internal TLAC risk-based ratios on a sub-consolidated basis are summarised below.

Sub-consolidated	Case 1	Case 3	Case 4
Weighted average internal TLAC risk-based ratios	17.5%	27.2%	47.9%
G-SIBs below 75% of 16% RWA	1	1	0
G-SIBs below 90% of 20% RWA	8	6	1

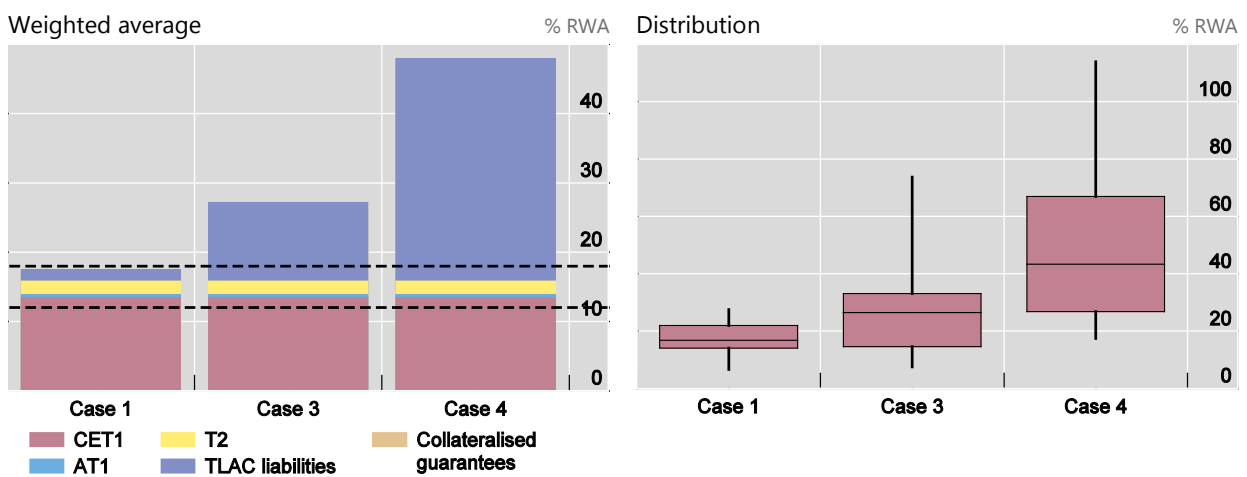
Sample size: 14 G-SIBs on a weighted average of subsidiaries basis.

In Case 1 the vast majority of G-SIBs that reported material subsidiaries satisfy the thresholds, largely due to CET1 which amounts to 13.5% of RWAs. Non-regulatory capital TLAC liabilities represent 1.7% of RWAs. On average, G-SIBs have internal TLAC of 17.5% of RWAs (max. 27.5%). In Case 3, when senior instruments are included, TLAC-eligible liabilities represent 11.4% of RWAs. As a result, the average internal TLAC ratio increases to 27.2%. Lastly, Case 4 illustrates that the share of TLAC liabilities increases to 32.1% of RWAs with an average internal TLAC ratio of 47.9%.

### Internal TLAC risk-based ratios

Sub-consolidated

Graph 9



Sample size: 14 G-SIBs

Source: Basel Committee on Banking Supervision.

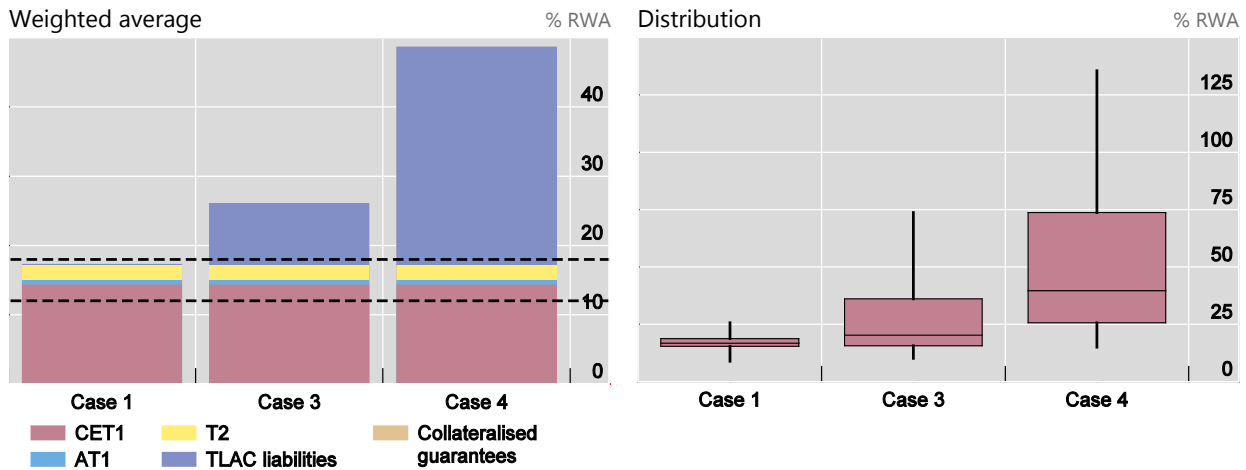
<sup>36</sup> The horizontal black dashed lines in Graph 9 and Graph 10 are lower and upper bounds for the minimum internal TLAC requirement, ie drawn at 18% (90% of 20% RWA) and 12% (75% of 16% RWA).

Graph 10 depicts the distribution of material subsidiaries on a solo basis. In Case 1, the vast majority of G-SIBs that reported material subsidiaries satisfy the thresholds, largely due to CET1, which amounts to 14.3% of RWAs. Non-regulatory capital TLAC liabilities represent 0.2% of RWAs. On average, G-SIBs have internal TLAC of 17.3%. In Case 3, when senior instruments are included, TLAC-eligible-liabilities represent 9.0% of RWAs. As a result, the average internal TLAC ratio increases to 26.0%. Lastly, Case 4 illustrates that the share of TLAC liabilities increases to 31.6% with an average internal TLAC ratio of 48.6%.

## Internal TLAC risk-based ratios

Solo

Graph 10



### 3.2.2 Internal TLAC leverage ratios

This section shows internal TLAC leverage ratios on a sub-consolidated as well as on a solo basis, excluding emerging market G-SIBs. Graph 11 shows the distribution of the ratios on a sub-consolidated basis.<sup>37</sup> The average internal TLAC leverage ratios on a sub-consolidated basis are summarised below.

Sub-consolidated	Case 1	Case 3	Case 4
Weighted average internal TLAC leverage ratios	6.8%	10.5%	18.5%
G-SIBs below 75% of 2×3% leverage exposure	3	2	0
G-SIBs below 90% of 2×3% leverage exposure	5	3	1

Sample size: 14 G-SIBs on a weighted average of subsidiaries basis.

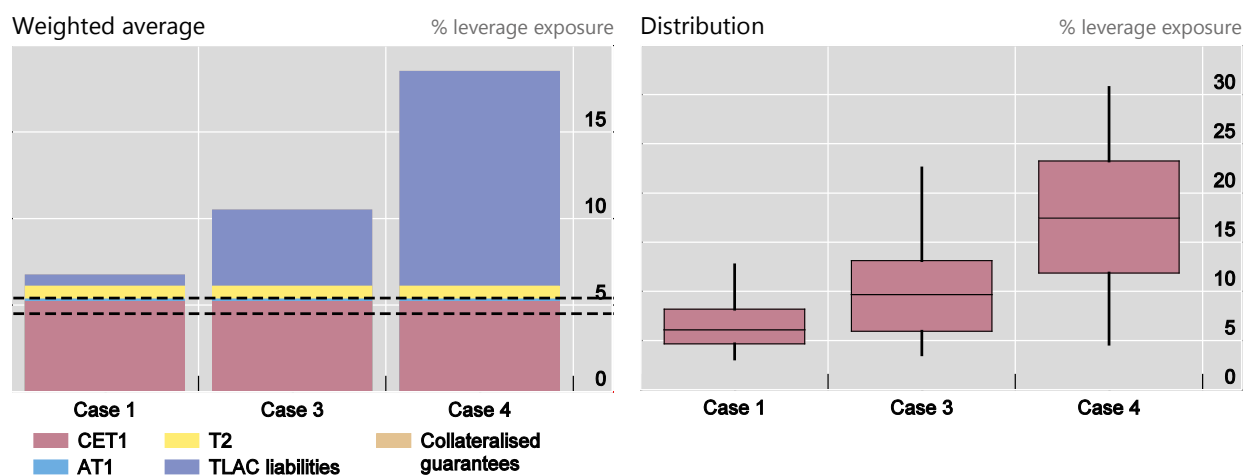
As shown in Graph 11, the results are generally in line with the internal TLAC risk-based ratios on a sub-consolidated basis. The average internal TLAC leverage ratio in Case 1 is 6.8% with a maximum of 12.7% and increases to 10.5% and 18.5% with a maximum of 22.5% and 30.7% in Cases 3 and 4, respectively.

<sup>37</sup> The horizontal black dashed lines in Graph 11 and Graph 12 are lower and upper bounds for the minimum internal TLAC requirement, ie drawn at 5.4% (90% of 2×3% leverage exposure) and 4.5% (75% of 2×3% leverage exposure).

## Internal TLAC leverage ratios

Sub-consolidated

Graph 11

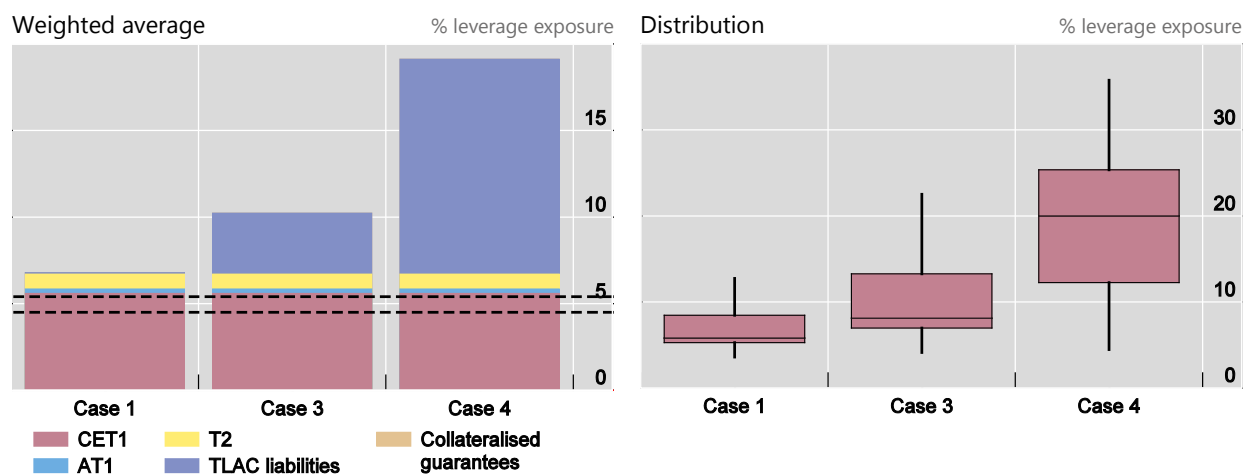


Graph 12 illustrates internal TLAC leverage ratios on a solo basis. The results are also in line with the internal TLAC risk-based ratios on a solo basis. The average internal TLAC ratio in Case 1 is 6.8% with a maximum of 12.8%, and increases to 10.2% and 19.1% with a maximum of 22.5% and 35.8% in Cases 3 and 4, respectively.

## Internal TLAC leverage ratios

Solo

Graph 12



### 3.3 Internal TLAC shortfalls

Graph 13 shows the internal TLAC shortfall based on RWAs on a sub-consolidated and solo basis for the 14 and 13 reporting G-SIBs, excluding emerging market G-SIBs. The red bars show the shortfall using the minimum range for the internal TLAC requirement (75% of the 16% requirement, ie 12% RWAs). The blue bars show the shortfall using the maximum range for the internal TLAC requirement (90% of the 20% requirement, ie 18% RWAs).

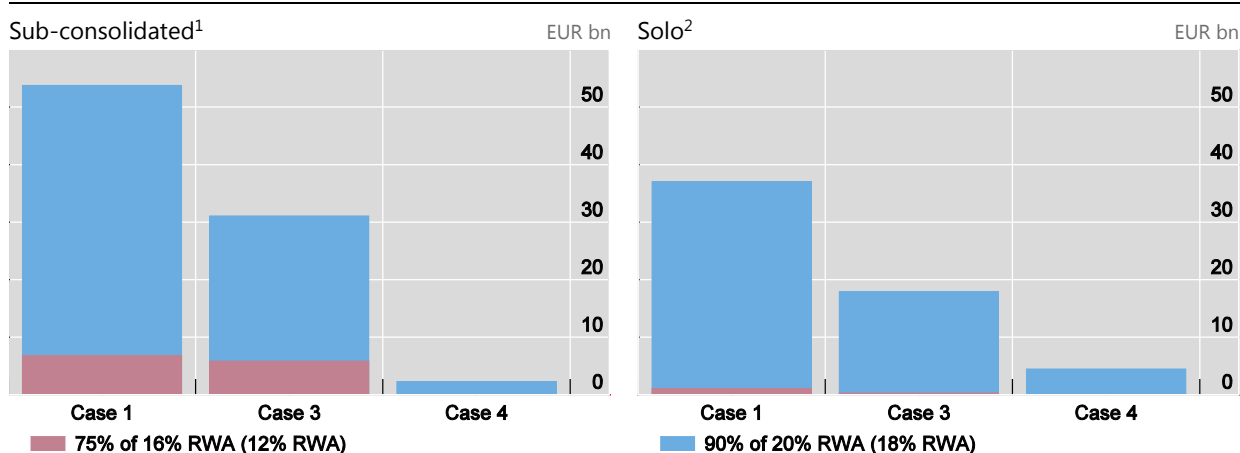
On a sub-consolidated basis in Case 1, the aggregate internal TLAC shortfalls are €6.8 billion at the minimum range and €53.7 billion at the maximum range. In Case 3, the shortfalls decrease to €5.8 billion at the minimum range and €31.1 billion at the maximum range. In Case 4, the shortfall is eliminated for all the reporting G-SIBs at the minimum range and decreases to €2.3 billion at the maximum range.

On a solo basis in Case 1, the aggregate internal TLAC shortfalls are €1.1 billion at the minimum range and €37.0 billion at the maximum range. In Case 3, the shortfalls decrease to €0.3 billion at the minimum range and €17.9 billion at the maximum range. In Case 4, the shortfall is eliminated for all the reporting G-SIBs at the minimum range and decreases to €4.5 billion at the maximum range.

#### Internal TLAC shortfall (risk-based ratio)

Sum of total sample

Graph 13



<sup>1</sup> Sample size: 14 G-SIBs    <sup>2</sup> Sample size: 13 G-SIBs

Source: Basel Committee on Banking Supervision.

Graph 14 shows the internal TLAC shortfalls based on the leverage exposure requirement. The red bars show the shortfall using the minimum range for the internal TLAC requirement (75% of the 2×3%, ie 4.5% leverage exposure). The blue bars show the shortfall using the maximum range for the internal TLAC requirement (90% of the 2×3% requirement, ie 5.4% leverage exposure).

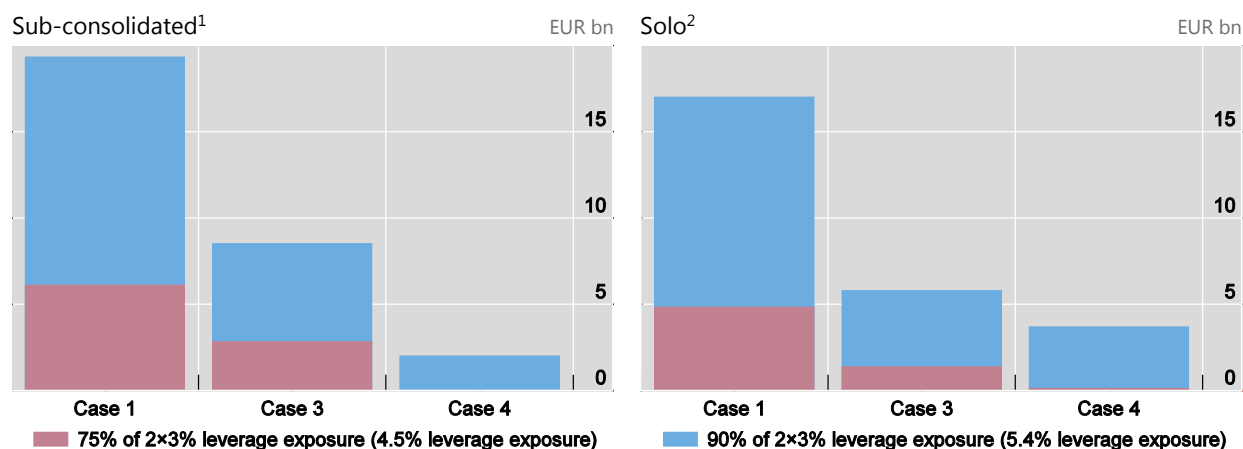
On a sub-consolidated basis in Case 1, the aggregate internal TLAC shortfalls are €6.1 billion at the minimum range and €19.3 billion at the maximum range. In Case 3, the shortfalls decrease to €2.8 billion at the minimum range and €8.5 billion at the maximum range. In Case 4, the shortfall is eliminated for all the reporting G-SIBs at the minimum range and is €2.0 billion at the maximum range.

On a solo basis in Case 1, the aggregate internal TLAC shortfalls are €4.8 billion at the minimum range and €17.0 billion at the maximum range. In case 3, the shortfalls decrease to €1.4 billion at the minimum range and €5.8 billion at the maximum range. In Case 4, the shortfalls are €0.1 billion at the minimum range and €3.7 billion at the maximum range.

## Internal TLAC shortfall (leverage ratio)

Sum of total sample

Graph 14



<sup>1</sup> Sample size: 14 G-SIBs    <sup>2</sup> Sample size: 13 G-SIBs

Source: Basel Committee on Banking Supervision.

## 3.4 Composition of Internal TLAC

Graph 15 shows the composition of internal TLAC as a percentage of total internal TLAC. The graphs suggest that the difference between sub-consolidated data and solo data is immaterial. In general, CET1 makes up the predominant form of internal TLAC (on average representing from 31% to 78% of total internal TLAC, depending on the cases). AT1 capital instruments represent between 1% and 3% of total internal TLAC. The average significance of Tier 2 capital decreases from 12% in Case 1 to 5% in Case 4. At the same time, the average share of TLAC liabilities increases from 8% in Case 1 to 39% in Case 3 and up to 63% in Case 4. No G-SIBs reported collateralised guarantees as a component of internal TLAC.

## Internal TLAC composition

Weighted average of total sample

Graph 15



<sup>1</sup> Sample size: 21 G-SIBs    <sup>2</sup> Sample size: 21 G-SIBs

Source: Basel Committee on Banking Supervision.

## 4. G-SIBs' holdings of TLAC and deduction

The consultation version of the TLAC term sheet provides in Section 18 (regulation of investors) as follows:

- In order to reduce the risk of contagion, G-SIBs must deduct from their own TLAC or regulatory capital exposures to eligible external TLAC liabilities issued by other G-SIBs in a manner generally parallel to the existing provisions in Basel III that require a bank to deduct from its own regulatory capital certain investments in the regulatory capital of other banks.
- The Basel Committee should further specify this provision, including a prudential treatment for non-G-SIBs.

For this purpose, the Basel Committee gathered data on G-SIBs' holdings of TLAC and tested the four cases in order to analyse the potential impacts of deductions. Each case includes the whole amount of instruments regardless of their residual maturity, ie including instruments with a residual maturity of less than one year. Emerging market G-SIBs are excluded from the sample.

The following chapters provide information on the notional amount of investments in other G-SIB's TLAC-eligible instruments (regulatory capital and liabilities), the proposed deduction of TLAC holdings from Tier 2 capital subject to a threshold as well as the impact of such deductions on the total capital ratios of G-SIBs.<sup>38</sup>

### 4.1 Investment in TLAC<sup>39</sup>

Graph 16 presents two panels. The left-hand panel shows the investments of G-SIBs in regulatory capital of financial sector entities and in TLAC-eligible liabilities of other G-SIBs, broken down by instrument types (CET1, AT1, Tier 2 and TLAC liabilities) in Cases 1 to 4. The right-hand panel provides further information on the distribution of such investments.

The G-SIBs' aggregated investments in CET1, AT1 and Tier 2 capital instruments amount to €63 billion, €4 billion and €19 billion, respectively in all cases. The scope of non-regulatory capital instruments which qualify as TLAC ("TLAC liabilities") is widened from Case 1<sup>40</sup> to 4 which is reflected in the eligible investments reported by banks: they increase from €7.4 billion and €6.3 billion in Cases 1 and 2 respectively to €54 billion in Case 3 and €118 billion in Case 4.

The right-hand panel shows the distribution of the investments in TLAC liabilities and regulatory capital. The whiskers give the range of investments, ie minimum and maximum investments, indicating a wide dispersion among G-SIBs, especially for the wider cases.

At the individual bank level, results in Cases 1 and 2 are very similar and investments range from €0.2 billion to €9 billion while the median lies at €3 billion. The median slightly rises to €5 billion in Case 3 and €6 billion in Case 4. At the same time the largest investments of a G-SIB amount to €17 billion in Case 3 and €31 billion in Case 4.

<sup>38</sup> The final decision on the regulatory treatment and the definition of TLAC holdings will be made by the Basel Committee following its public consultation process. See Basel Committee on Banking Supervision, *Consultative document TLAC Holdings*, November 2015.

<sup>39</sup> See Introduction for the definitions of the four cases.

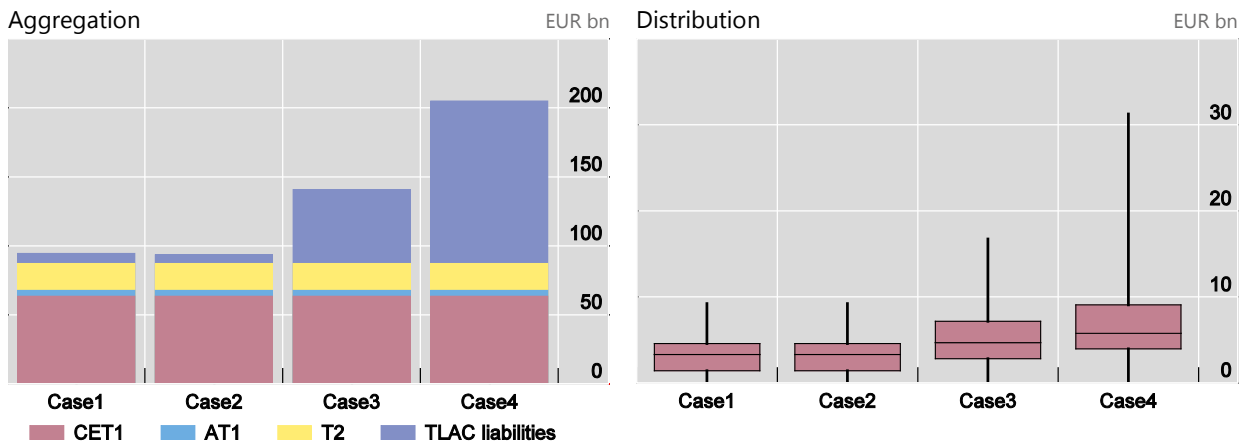
<sup>40</sup> TLAC liabilities in Case 1 do not include instruments ranking *pari passu* to excluded liabilities when they have an original maturity over one year, which the consultative document on TLAC holdings proposes to include in TLAC holdings when issued by G-SIBs in jurisdictions applying the TLAC term sheet exemptions to the subordination requirements.

The Basel Committee also collected information on the amounts of investments in TLAC issued by G-SIBs where the bank holds more than 10% of the issuing bank's CET1 or where the entity is an affiliate. Such investments are called "significant investments" under Basel III. Regarding TLAC liabilities, ie non-regulatory capital, there was only one G-SIB that reported "significant investments" in unsecured liabilities in all cases and the amount was small.

## Investment in TLAC (nominal amounts)

SPE and aggregated MPE resolution groups

Graph 16



Sample size: 26 G-SIBs

Source: Basel Committee on Banking Supervision.

## 4.2 Threshold deduction of TLAC holdings from Tier 2

Graph 17 shows the nominal amounts that should be deducted under the Basel Committee's proposal to treat holdings of TLAC liabilities the same way as holdings of Tier 2, and thus require them to be deducted from regulatory capital.<sup>41</sup> If a G-SIB does not have enough Tier 2 capital to absorb the deduction, the shortfall will be deducted from the next higher tier of capital. **The amount of deduction in these graphs excludes the amount of the existing Basel III deduction and thus reflects only the impacts of added TLAC liabilities.**

In Cases 1 and 2, only small numbers of G-SIBs need to deduct TLAC holdings beyond the threshold from regulatory capital. The required deductions from CET1 amount to about €2 billion and those from other regulatory capital amount to less than €1 billion.

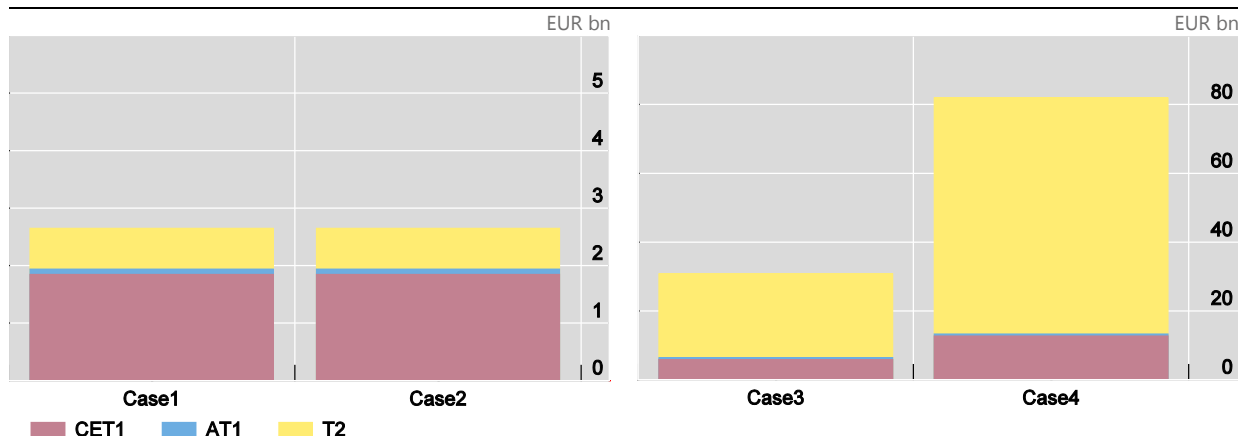
As Cases 3 and 4 widen the scope of eligible TLAC liabilities, this results in higher investments and, consequently, in higher deductions. The amounts to be deducted from Tier 2 capital in Cases 3 and 4 increase to €24 billion and €69 billion with deductions from CET1 of €6 billion and €13 billion, respectively. The composition of external TLAC of impacted G-SIBs concentrates on CET1, which indicates that these G-SIBs do not have enough Tier 2 and AT1 to absorb the deduction.

<sup>41</sup> The Basel Committee also considered extending the Basel III corresponding deduction approach to holdings of TLAC and conducted an impact analysis. This approach requires G-SIBs to deduct their investments in TLAC from their own TLAC liabilities. The impact analysis indicated that the nominal amount of deduction under this corresponding deduction approach was the same as that under the threshold deduction approach, so that the heights of the bars in Graph 17 and Graph 18 can read the same for the corresponding deduction approach while most of the deduction from Tier 2, ie the yellow segments in the graphs, turn into the deduction from the TLAC liabilities in the case of the corresponding deduction approach. This difference does not affect the external TLAC ratios but does affect the Basel III minima.

## Threshold deduction of TLAC holdings from Tier 2 (nominal amount)

Sum of SPE and aggregated MPE resolution groups

Graph 17



Sample size: 26 G-SIBs. If a G-SIB does not have enough regulatory capital to absorb the allocated deduction above, the shortfall will be deducted from the next higher tier of capital.

Source: Basel Committee on Banking Supervision.

To better gauge the significance of those deductions, Graph 18 presents the same information as a percentage of RWAs.

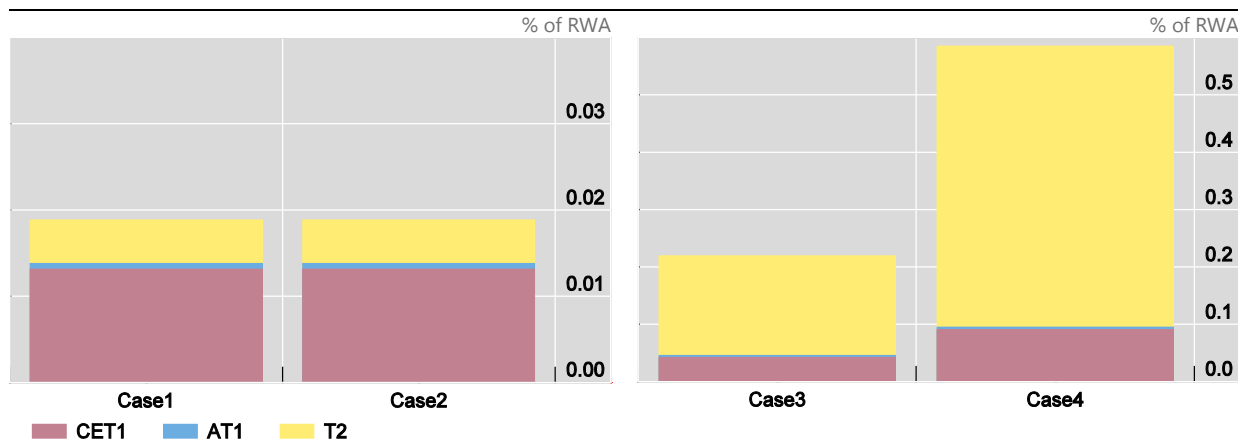
Relative deductions are minimal in Cases 1 and 2 amounting to less than 2 basis points of RWA on an aggregate basis. As seen in the previous graph, nominal deductions in Cases 3 and 4 are higher and amount to about 0.2% of RWA in Case 3 and about 0.6% of RWA in Case 4 where most of them are to be deducted from Tier 2 capital (0.17% and 0.49%, respectively).

At the individual bank level, in Cases 1 and 2, the highest impact is around 0.28% with only four G-SIBs having deduction. In Cases 3 and 4, the impact increases to over 3% for two G-SIBs and over 1% for two G-SIBs in Case 3 and for six G-SIBs in Case 4.

## Threshold deduction of TLAC holdings from Tier 2 (% RWAs)

Weighted average of SPE and aggregated MPE resolution groups

Graph 18



Sample size: 26 G-SIBs. If a G-SIB does not have enough regulatory capital to absorb the allocated deduction above, the shortfall will be deducted from the next higher tier of capital.

Source: Basel Committee on Banking Supervision.



Finally, Graph 19 presents the impact of deductions on the total capital ratio for 26 G-SIBs which reported TLAC holdings and the four cases under consideration. The left-hand panel shows the average total capital ratio before and after deductions as well as the impact of the deduction. The right-hand panel provides details on the distribution of the total capital ratios after deductions.

The weighted average total capital ratios after deductions in Cases 1 and 2 amount to nearly 14%. As can be seen from previous graphs in Cases 1 and 2, the impacts of deductions are negligible. In Cases 3 and 4 the average ratio decreases by 0.2% and 0.5% to 13.7% and 13.4%, respectively.

Looking at the distribution chart which depicts total capital ratios after deductions allows the following observations:

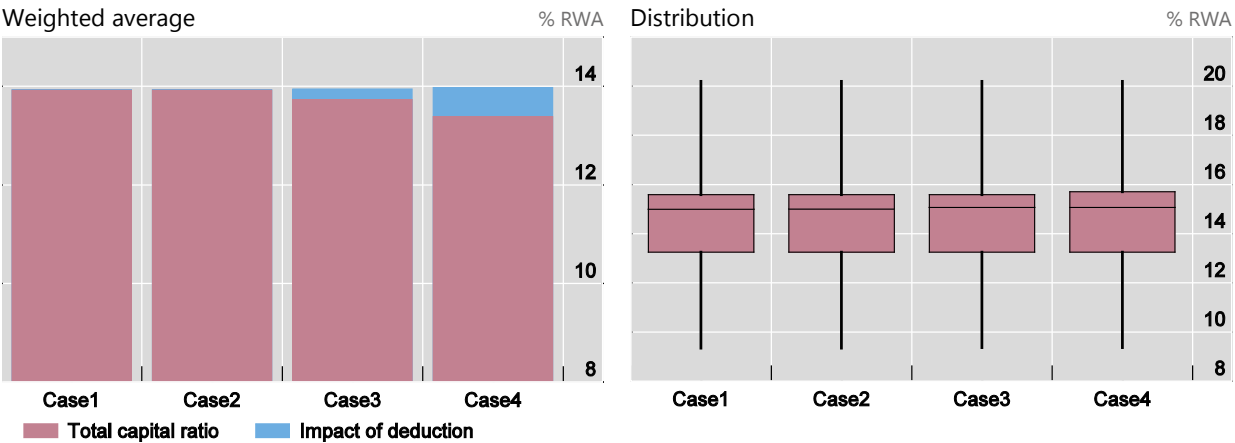
First, there is a relatively wide dispersion among ratios which range from around 9% to slightly more than 20%, with a median of 15.0% and the 25th and 75th percentiles of 13.3% and 15.6%, respectively. In any case, all G-SIBs meet the minimum total capital ratio of 8%.

Second, the distribution is quite stable across the four cases. Distribution parameters – including the lower bound of 9% – change only slightly. Taking into account the previous graph, it can be concluded that the vast majority of G-SIBs are not materially affected by deductions resulting from TLAC holdings, while the impact could be material for some individual G-SIBs.

Total capital ratios and impacts of deduction

SPE and aggregated MPE resolution groups, % of RWA

Graph 19



Sample size: 26 G-SIBs

Source: Basel Committee on Banking Supervision.

## 5. Non-G-SIBs' holdings of TLAC and deduction<sup>42</sup>

This chapter aims to show the impacts of different options for the prudential treatment of TLAC holdings for non-G-SIBs. In particular, it considers:<sup>43</sup>

- Threshold deduction of TLAC holdings from Tier 2
- Large exposure limits

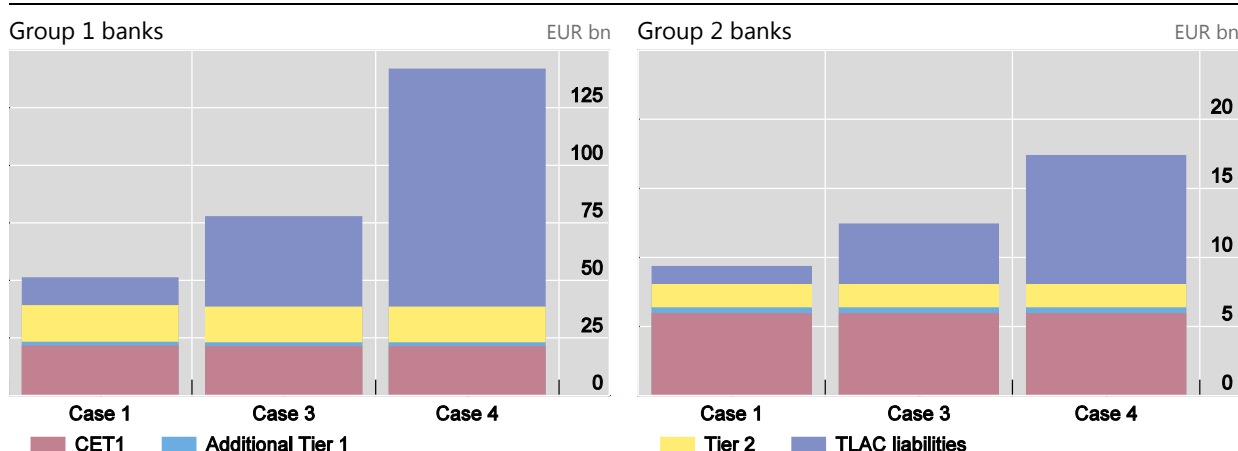
For this purpose, the Basel Committee gathered relevant data and tested three cases in order to analyse the potential impacts of different treatments for non-regulatory TLAC instruments for each approach. Case 2 was not tested for this analysis. Each case includes the whole amount of instruments regardless of their residual maturity, ie including instruments with a residual maturity of less than one year. Non-G-SIBs in countries exempted from the Pillar 1 TLAC requirements are included in this analysis.

### 5.1 Investment in TLAC<sup>44</sup>

Among the 54 Group 1 banks and 80 Group 2 banks filling in the worksheet, 18 Group 1 banks and 10 Group 2 banks have investments in "TLAC liabilities". Graph 20 shows that the aggregated investment in "TLAC liabilities" by Group 1 and 2 banks amounts to €14 billion, €44 billion and €113 billion in Cases 1<sup>45</sup> to 4, respectively, with around 90% of those investments made by Group 1 banks. In all cases, investments in regulatory capital remain equal. In general, Group 1 banks have higher investments in TLAC liabilities than Group 2 banks. The size of investments differs significantly across both groups.

Investment in TLAC (nominal amount)

Graph 20



Sample size: Group 1 banks: Case 1 = 53, Case 2 = Case 3 = 52; Group 2 banks: Case 1/2/3 = 80.

Source: Basel Committee on Banking Supervision.

<sup>42</sup> All data in this section reflect revisions received up to 16 July 2015.

<sup>43</sup> The Basel Committee also tested the application of risk weights of 150% and 250% for TLAC holdings and the results showed that banks are not materially affected by either. Therefore, no further information on this approach is provided in this report.

<sup>44</sup> In this section, the investment in TLAC includes (i) regulatory capital issued by G-SIBs and non-G-SIBs and (ii) TLAC liabilities issued by G-SIBs including "significant investment" in TLAC liabilities. The "significant investment" is very small.

<sup>45</sup> TLAC liabilities in Case 1 do not include instruments ranking pari passu to excluded liabilities when they have an original maturity over one year, which the consultative document on TLAC holdings proposes to include in TLAC holdings when issued by G-SIBs in jurisdictions applying the TLAC term sheet exemptions to the subordination requirements.

## 5.2 Threshold deduction of TLAC holdings from Tier 2

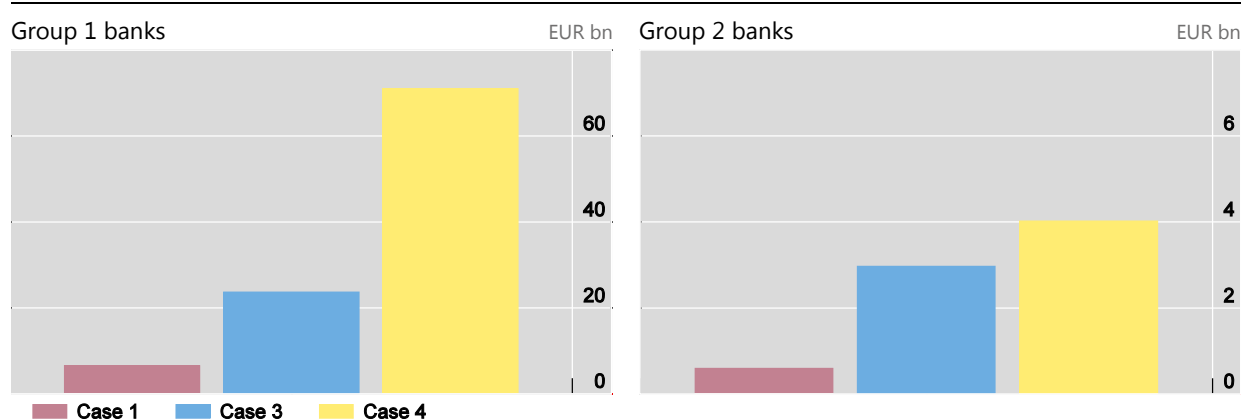
This section shows the impact of the threshold deduction. Three different cases are being analysed which gradually extend the scope of eligible instruments as explained above. Graph 21 shows deductions in Cases 1 to 4. **The amount of deduction in these graphs excludes the amount of the existing Basel III deduction and thus reflects only the impacts of added TLAC liabilities.**

Graph 21 therefore shows the total nominal amount to be deducted for Group 1 and 2 banks in each of the three cases and 14 Group 1 banks (of 43) and 16 Group 2 banks (of 73) reported deductions in at least one case.

The aggregated nominal deductions are €7 billion in Case 1, €24 billion in Case 3 and €71 billion in Case 4 for Group 1 banks and are less than €1 billion in Case 1, €3 billion in Case 3 and €4 billion in Case 4 for Group 2 banks.

Total amount of threshold deduction

Graph 21



Sample size: Group 1 banks: 43 banks; Group 2 banks: 73 banks.

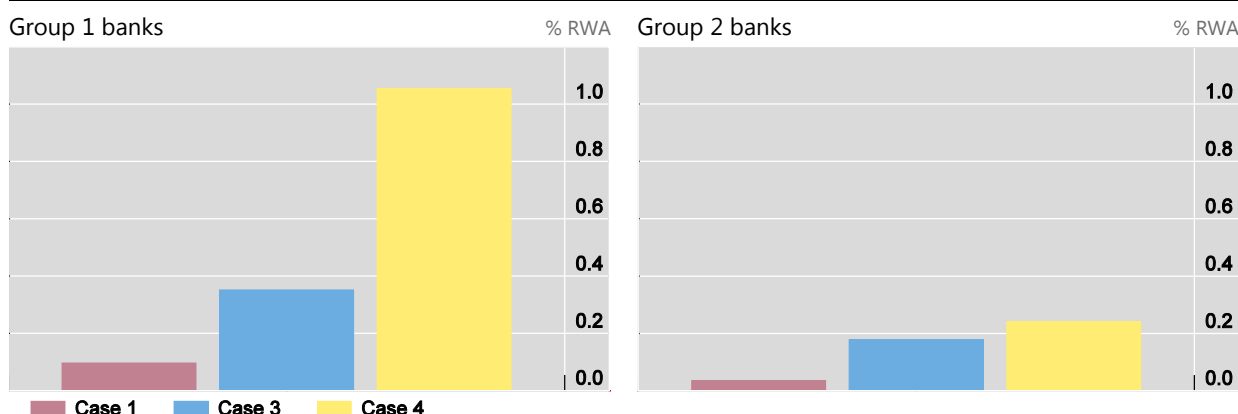
Source: Basel Committee on Banking Supervision.

Graph 22 shows deductions relative to RWAs. While a few Group 1 and 2 banks report deductions in Case 1, the majority in both groups do not have any deductions.

For Group 1 banks, the deductions in terms of RWAs range from almost zero in Case 1 to 1% in Case 4. Nevertheless, the impact for some individual banks is much higher than this average. For example, it reaches a maximum of 18% for one bank in Case 4. For Group 2 banks, the ratios are much lower than those of Group 1 banks, ranging from 4 basis points in Case 1 to 24 basis points in Case 4. But the impact for some banks significantly exceeds this average.

## Threshold deduction as a percentage of RWAs

Graph 22



Sample size: Group 1 banks: 43 banks; Group 2 banks: 72 banks.

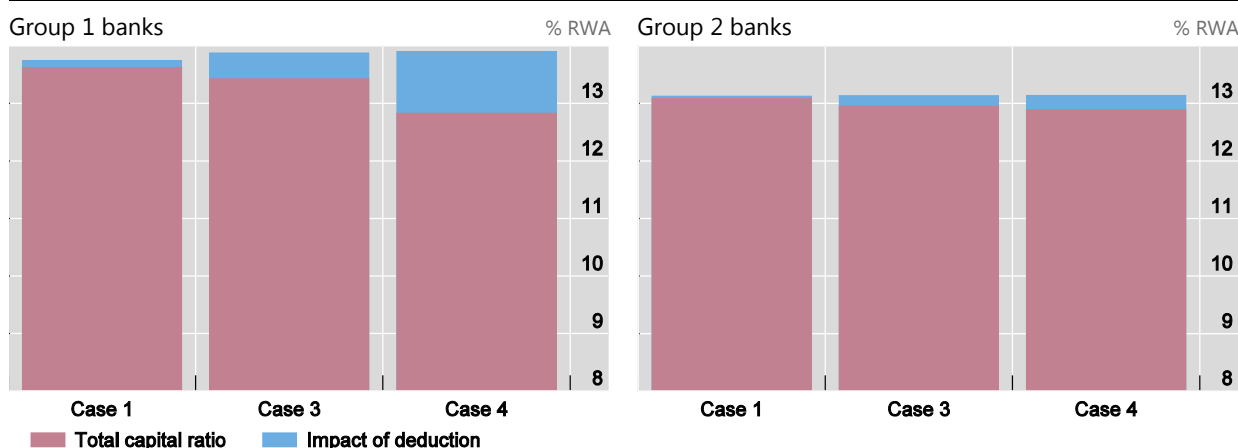
Source: Basel Committee on Banking Supervision.

Graph 23 shows the total capital ratios in Cases 1 to 4 for Group 1 and 2 banks before and after deductions of TLAC holdings. If a bank does not have enough Tier 2 to absorb the deductions, the shortfall is automatically deducted from the next higher tier of capital. As a result of a shortage of Tier 2 to absorb the required deductions, around one third of the Group 1 banks, ie 44 banks, have to deduct part of their TLAC liabilities from AT1 and almost half of the 44 banks have to deduct part of them from AT1 and CET1 in Case 4 – the CET1 ratio is reduced on average by 1 percent point. Also for some Group 2 banks, the amount of Tier 2 is not sufficient to absorb the deductions, so AT1 and CET1 are reduced.<sup>46</sup>

A few banks would not meet the minimum total capital ratio of 8% after deduction in each case.

## Total capital ratios and impacts of deduction

Graph 23



Sample size: Group 1: Case 1 = 44, Case 3 = 43, Case 4 = 44; Group 2: Case 1/3/4 = 72.

Source: Basel Committee on Banking Supervision.

<sup>46</sup> It should be noted that the deduction from CET1 is a consequence of the banks' capital composition consisting primarily of CET1, rather than the deductions being large, as can be seen in the graphs above. Thus, deductions of Tier 2 lead to reductions of CET1 in reality, as Tier 2 and AT1 are small, ie on average about 15% and no more than 5% of the total regulatory capital, respectively. Insufficient amounts of Tier 2 after deduction are therefore covered with CET1.

### 5.3 Exposures limit to aggregate exposures to TLAC instruments

The Basel Committee published in April 2014 its final standards for measuring and controlling large exposures. The standards set a general limit of 25% of Tier 1 of the bank with a single counterparty being a client or a group of connected clients, and a tighter 15% limit for G-SIBs regarding their exposures to other G-SIBs. This section analyses the effect of the option related to an additional limit to aggregate exposures to TLAC instruments.<sup>47</sup> Such an aggregate limit would not consider exposures to single counterparties but to all G-SIBs together.

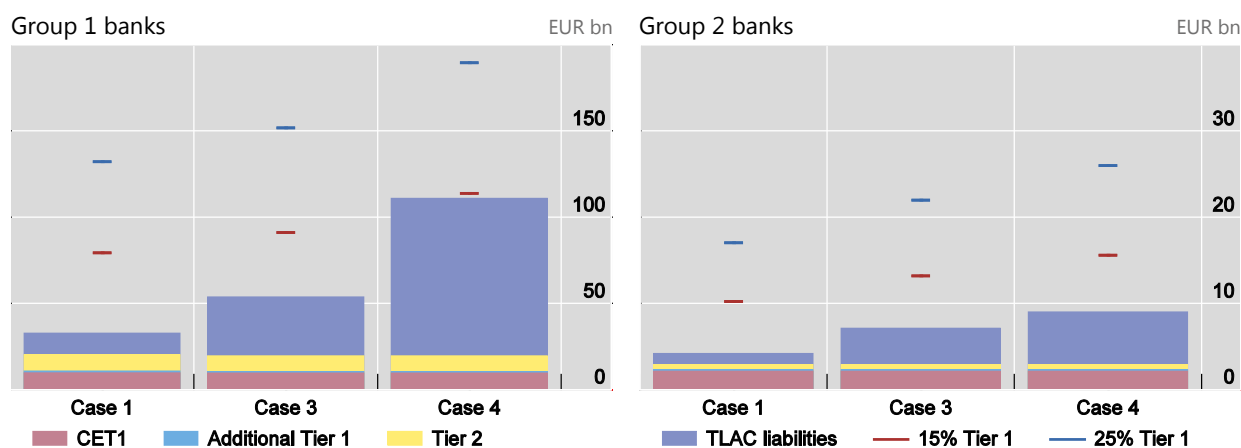
Graph 24 shows the nominal amounts of investments in each of the three cases analysed and whether or not they are close to the 15% Tier 1 limit or the 25% Tier 1 limit.<sup>48</sup>

Group 1 banks show a higher dispersion of their results than Group 2 banks. The sum of amounts of aggregate exposures is €33 billion in Case 1, €54 billion in Case 3 and €111 billion in Case 4, which is below the considered thresholds of 15% Tier 1. Group 2 banks reported low amounts of TLAC holding on aggregate, being far from the 15% Tier 1 limit. For both groups, there are limited instances across Case 1 to 4 where the 15% Tier 1 limit is reached by Group 1 or Group 2 banks, eg five banks in Case 1, 12 banks in Case 3 and 19 banks in Case 4. Thus, the 15% Tier 1 limit to aggregate exposures to TLAC instruments would not be binding for most banks.

The data reflect only exposures to TLAC instruments. Banks hold other exposures associated with the G-SIBs that are not included in the analysis. The exposures to G-SIBs could therefore be higher than the figures reported.<sup>49</sup>

Exposures to TLAC instruments

Graph 24



Sample size: Group 1: case 1 = 22, case 3 = 27, case 4 = 36; Group 2: case 1 = 19, case 3 = 23, case 4 = 29.

Source: Basel Committee on Banking Supervision.

<sup>47</sup> Please note that the large exposures regime is not intended to limit exposures which are deducted from regulatory capital. Therefore, the amount deducted as part of the existing Basel III deduction rule is subtracted from exposures to TLAC instruments in this section. It is also important to highlight that banks have reported all investments in regulatory capital issued by any banks (not only G-SIBs). Therefore, conclusions should be reached with caution, although data have been adjusted to take out as many investments in regulatory capital issued by non-G-SIBs as possible.

<sup>48</sup> The 15% Tier 1 and 25% Tier 1 limits change from case to case due to different sample sizes.

<sup>49</sup> Given the lack of QIS data on the large exposure standard, this report cannot cover all exposures.

## 6. TLAC liabilities by location of issuance

The location worksheet was developed to collect information on nominal amounts and pricing for different stacks of liabilities (excluding regulatory capital) issued in several locations. This information will serve as inputs in the exercise for estimating the cost for G-SIBs to meet TLAC requirements ("costing exercise") that is part of the FSB's impact assessment work. The following categories of instruments were used, which are similar but not identical to the cases used in the External TLAC worksheet:<sup>50, 51</sup>

- Category 1: TLAC-eligible liabilities (subordinated) issued by the resolution entity. This includes contractually as well as structurally subordinated instruments.
- Category 2(i): subordinated liabilities issued by subsidiaries other than the resolution entity (not TLAC-eligible).
- Category 2(ii): senior unsecured liabilities issued by subsidiaries other than the resolution entity (not TLAC-eligible).
- Category 3: senior unsecured liabilities issued by the resolution entity that are not subordinated (not TLAC-eligible).
- Category 4(i): other subordinated liabilities issued by the resolution entity (liabilities excluded in the TLAC Term Sheet besides deposits, tax liabilities and derivatives).
- Category 4(ii): other senior unsecured liabilities issued by the resolution entity (liabilities excluded in the TLAC Term Sheet besides deposits, tax liabilities and derivatives).
- Category 5: structured notes issued by the resolution entity.

Due to the sparseness of the data, Category 4(i), for which negligible amounts were reported, is not included in the graphs and Category 4(ii) is incorporated with Category 3 figures.

Graph 25, 26 and 27 depict the nominal amounts outstanding, weighted average z-spread and weighted average residual yield to maturity as of December 2014, broken down by location of issuance. All graphs consist of five blocks in total separated in two panels, the left-hand panel depicting different categories of liabilities issued by resolution entities and the right-hand panel depicting the same liabilities issued by subsidiaries other than the resolution entity.

For resolution entities, the following information is shown in the left-hand panel:

- the first block (subordinated TLAC-eligible) includes Category 1 liabilities;
- the second block (senior unsecured – not subordinated) is the combination of Category 3 and Category 4(ii);<sup>52</sup> and
- the third block (structured notes) represents Category 5 and includes structured notes issued by the resolution entity.

<sup>50</sup> All categories reflected in the graphs do not include liabilities with residual maturities of less than one year.

<sup>51</sup> The location data quality is mixed and any conclusions made from this section should be taken with caution. A large number of banks had difficulties in providing all data requested on the location worksheet. One bank provided no location data and has been excluded from all analysis in this section. Due to the mixed data quality, there may be inconsistencies between the numbers reported in this section and the other sections.

To maximise the data used for the report, all reported data were included in the graphs and tables whether or not the G-SIB had provided full information across all categories. For example, if a G-SIB only reported z-spread figures for one location, it will only be included in the z-spread graph for that location regardless of whether it has issued in other locations.

<sup>52</sup> Please note: Category 4(ii) liabilities are excluded liabilities because they include excluded liabilities listed in Section 12 of the TLAC Term Sheet (not because they are not subordinated).

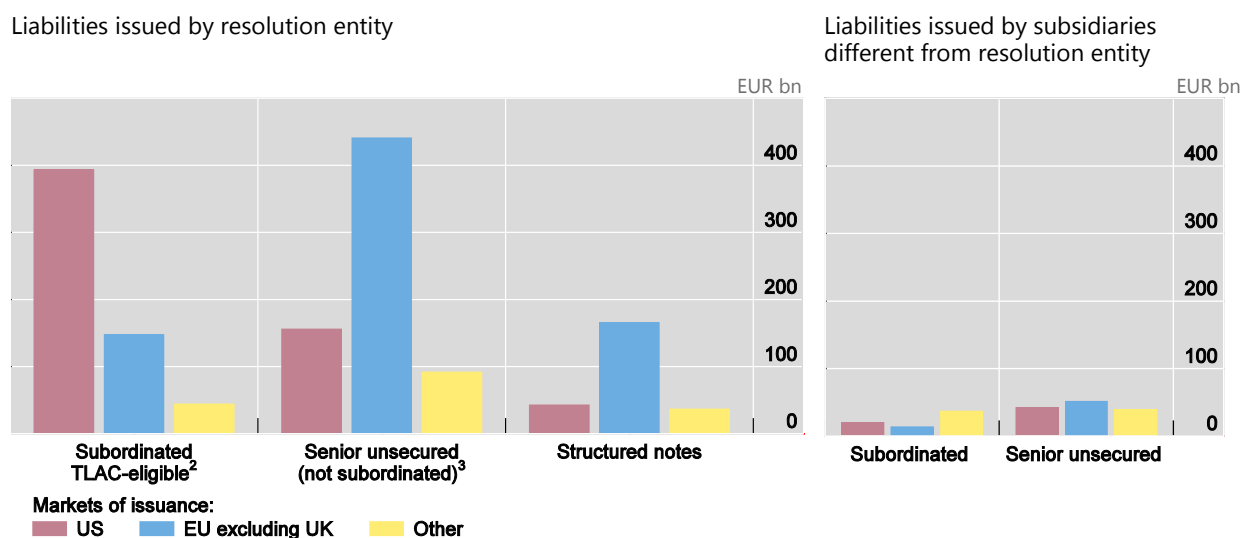
For liabilities issued by subsidiaries other than the resolution entity, the right-hand panel shows:

- the first block (subordinated) reflects Category 2(i); and
- the second block (senior unsecured) reflects Category 2(ii).

Graph 25 shows the nominal amount outstanding of subordinated TLAC-eligible liabilities, senior unsecured liabilities that are not subordinated, and structured notes issued by each resolution entity, with a breakdown by location of issuance. Due to the limited data provided, several markets of issuance were included under "Other".

Total G-SIBs liabilities by location of issuance<sup>1</sup>

Graph 25



<sup>1</sup> Sample size: 26 G-SIBs. <sup>2</sup> The eligibility for TLAC has been assessed according to the term sheet. <sup>3</sup> Includes Category 4(ii).

Source: Basel Committee on Banking Supervision.

Graph 26 depicts the weighted average z-spreads in basis points for selected instruments by location of issuance. The z-spread is the implied spread on top of the (risk-free) spot rate yield curve so that the sum of the discounted cash flows equals the current (observed) market price. Reported z-spreads for some liabilities had particularly notable dispersion. For instance, the weighted average z-spread for structured notes issued in one country was negative. Due to the small sampling for some of the countries, no breakdown is provided.

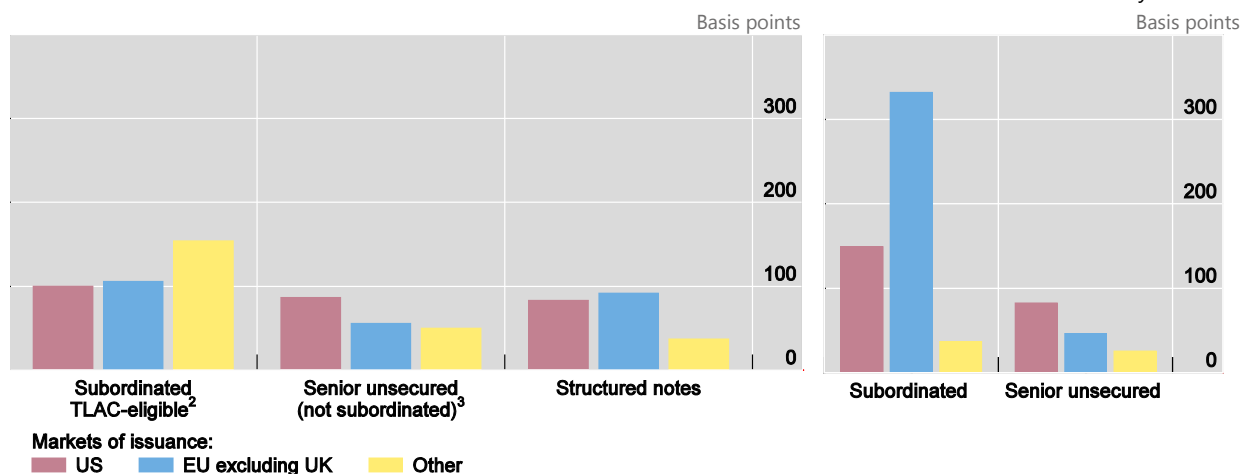
## Weighted average Z-spread<sup>1</sup>

Location of issuance

Graph 26

Liabilities issued by resolution entity

Liabilities issued by subsidiaries  
different from resolution entity



<sup>1</sup> Sample size: 25 G-SIBs. <sup>2</sup> The eligibility for TLAC has been assessed according to the term sheet. <sup>3</sup> Includes Category 4(ii).

Source: Basel Committee on Banking Supervision.

Graph 27 depicts the weighted average residual yield to maturity (YTM) in basis points for selected instruments by location of issuance. The YTM is the anticipated return on a bond if held from the reference date (ie end of 2014) until maturity. It is the implied discount rate that makes the present value of the discounted cash flows equal to the observed market price.

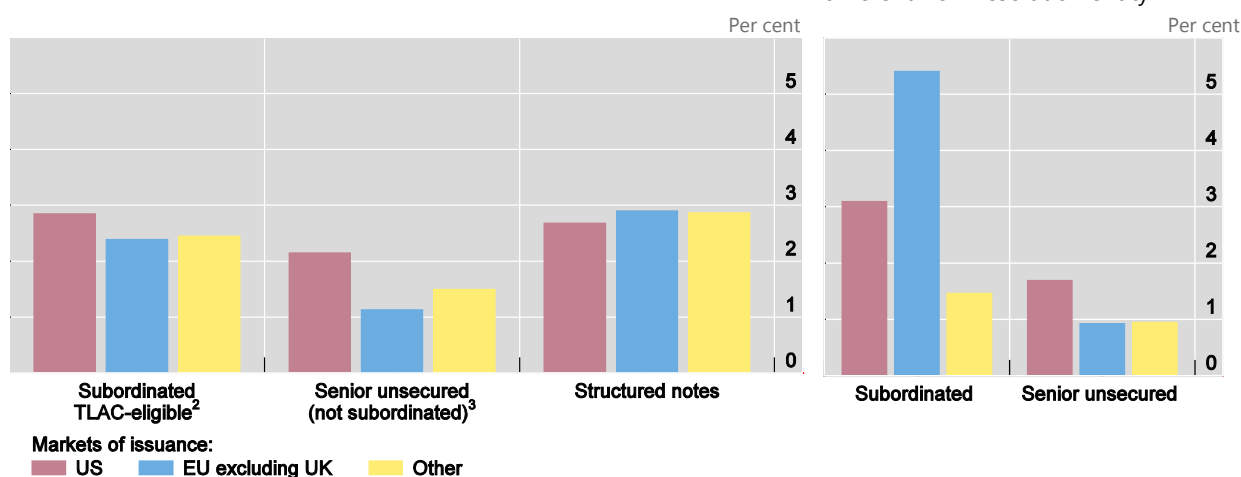
## Weighted average residual yield to maturity<sup>1</sup>

Location of issuance

Graph 27

Liabilities issued by resolution entity

Liabilities issued by subsidiaries  
different from resolution entity



<sup>1</sup> Sample size: 25 G-SIBs. <sup>2</sup> The eligibility for TLAC has been assessed according to the term sheet. <sup>3</sup> Includes Category 4(ii).

Source: Basel Committee on Banking Supervision.



## Members of the Basel Committee's QIS workstream on TLAC

Workstream lead	Mr Motohiro Hatanaka Mr Noel Reynolds Ms Ruth Doubleday	Bank for International Settlements Since May 2015 Until June 2015
France	Ms Delphine Dieudonné	French Prudential Supervision and Resolution Authority
Germany	Ms Sarah Heller	Deutsche Bundesbank
Japan	Mr Yuta Takanashi	Financial Services Agency
Spain	Ms Beatriz Domingo	Bank of Spain
United Kingdom	Ms Martina Matouskova	Bank of England
United States	Mr Sean M Healey Mr Ryan Billingsley	Board of Governors of the Federal Reserve System Federal Deposit Insurance Corporation
European Central Bank	Mr Ralph Spitzer	ECB Single Supervisory Mechanism
Secretariat	Mr Brett Anthony Carter	Bank for International Settlements

## Statistical Annex

### External TLAC risk-based ratios

Per cent of RWA, SPE and aggregated MPE, weighted average

Table A.1

	Case 1	Case 2	Case 3	Case 4
CET1	6.96	6.96	6.94	6.75
Additional Tier 1	0.87	0.87	0.85	0.83
Tier 2	2.04	2.04	1.88	1.76
TLAC liabilities	4.23	4.07	8.92	14.97

Sample size: 26 G-SIBs

Source: Basel Committee on Banking Supervision.

### External TLAC risk-based ratios

Per cent of RWA, SPE and aggregated MPE

Table A.2

	Case 1	Case 2	Case 3	Case 4
Max	33.61	33.61	57.95	60.91
75th percentile	15.74	15.74	27.64	35.70
Median	12.84	12.75	19.67	23.45
Mean	14.37	14.18	21.00	28.24
25th percentile	11.26	11.05	14.70	17.98
Min	5.84	5.84	5.63	13.04

Sample size: 26 G-SIBs

Source: Basel Committee on Banking Supervision.

Note: "Mean" indicates a simple average. The same applies to the other tables.

### External TLAC leverage ratios

Per cent of leverage exposure, SPE and aggregated MPE, weighted average

Table A.3

	Case 1	Case 2	Case 3	Case 4
CET1	4.38	4.38	4.37	4.29
Additional Tier 1	0.35	0.35	0.34	0.33
Tier 2	0.81	0.81	0.75	0.70
TLAC liabilities	1.68	1.61	3.54	5.94

Sample size: 26 G-SIBs

Source: Basel Committee on Banking Supervision.

## External TLAC leverage ratios

Per cent of leverage exposure, SPE and aggregated MPE

Table A.4

	Case 1	Case 2	Case 3	Case 4
Max	14.25	14.25	17.03	17.85
75th percentile	9.63	9.63	11.14	13.41
Median	6.05	5.89	8.75	11.81
Mean	7.08	7.01	9.23	11.56
25th percentile	4.59	4.53	6.85	9.19
Min	2.98	2.98	2.91	5.56

Sample size: 26 G-SIBs

Source: Basel Committee on Banking Supervision.

## Impact of Section 8 and Section 13 exemptions (Case 1)

TLAC risk-based ratio, SPE and aggregated MPE

Table A.5

	Excluding Section 8 and Section 13 exemptions	Including Section 8 and Section 13 exemptions
Max	18.11	20.61
75th percentile	13.02	15.52
Median	11.83	14.33
Mean	11.54	14.04
25th percentile	8.31	10.81
Min	5.84	8.34

Sample size: 17 G-SIBs

Source: Basel Committee on Banking Supervision.

## Impact of Section 8 and Section 13 exemptions (Case 1)

TLAC leverage ratio, SPE and aggregated MPE

Table A.6

	Excluding Section 8 and Section 13 exemptions	Including Section 8 and Section 13 exemptions
Max	10.09	11.65
75th percentile	6.09	7.21
Median	5.33	6.06
Mean	5.66	6.58
25th percentile	4.31	5.00
Min	2.98	3.78

Sample size: 17 G-SIBs

Source: Basel Committee on Banking Supervision.

## External TLAC shortfall (no buffers considered)

Nominal amount in billions of euros, SPE and aggregated MPE

Table A.7

	Case 1	Case 2	Case 3	Case 4
16% RWA requirement	154.37	167.30	109.66	28.08
20% RWA requirement	454.68	474.94	252.96	69.29
2x3% leverage exposure requirement	296.34	311.06	144.66	22.57

Sample size: 26 G-SIBs

Source: Basel Committee on Banking Supervision.

## External TLAC shortfall (RWA buffers considered)

Nominal amount in billions of euros, SPE and aggregated MPE

Table A.8

	Case 1	Case 2	Case 3	Case 4
16% RWA requirement	456.76	477.02	260.24	42.26
20% RWA requirement	933.54	956.11	588.45	226.75
2x3% leverage exposure requirement	296.34	311.06	144.66	22.57

Sample size: 26 G-SIBs

Source: Basel Committee on Banking Supervision.

## Composition of external TLAC

Per cent of external TLAC, SPE and aggregated MPE, weighted average

Table A.9

	Case 1	Case 2	Case 3	Case 4
CET1	49.37	49.94	37.33	27.74
Additional Tier 1	6.20	6.27	4.58	3.41
Tier 2	14.46	14.62	10.12	7.25
TLAC liabilities	29.97	29.16	47.98	61.59

Sample size: 26 G-SIBs

Source: Basel Committee on Banking Supervision.

## External TLAC liabilities maturity structure composition

Per cent of instruments with a residual maturity  $\geq 1$  year, SPE and aggregated MPE, weighted average

Table A.10

	Case 1	Case 2	Case 3	Case 4
Residual maturity less than 1 year	10.01	12.44	114.90	110.36
Residual maturity > 1 year to < 2 years	15.21	16.11	18.26	19.23
Residual maturity > 2 years to < 5 years	40.75	42.92	41.42	41.33
Residual maturity > 5 years	44.05	40.97	40.31	39.44

Sample size: 22 G-SIBs

Source: Basel Committee on Banking Supervision.

## Composition of TLAC liabilities (Case 4)

Per cent of RWA, SPE and aggregated MPE, weighted average

Table A.11

Issued by the resolution entity	9.94
Issued by an operating bank immediately below a resolution entity that is a holding company	1.84
Issued by other subsidiaries	2.11
Structured notes	2.93

Sample size: 24 G-SIBs

Source: Basel Committee on Banking Supervision.

## Internal TLAC risk-based ratios

Per cent of RWA, sub-consolidated, weighted average

Table A.12

	Case 1	Case 3	Case 4
CET1	13.45	13.45	13.45
Additional Tier 1	0.43	0.43	0.43
Tier 2	1.92	1.92	1.92
Collateralised guarantees	0.00	0.00	0.00
TLAC liabilities	1.68	11.36	32.13

Sample size: 14 G-SIBs

Source: Basel Committee on Banking Supervision.

### Internal TLAC risk-based ratios

Per cent of RWA, sub-consolidated

Table A.13

	Case 1	Case 3	Case 4
Max	27.46	73.74	113.87
75th percentile	21.98	33.02	66.96
Median	16.79	26.52	43.32
Mean	17.88	27.46	49.32
25th percentile	14.11	14.52	26.81
Min	6.60	7.53	17.43

Sample size: 14 G-SIBs

Source: Basel Committee on Banking Supervision.

### Internal TLAC risk-based ratios

Per cent of RWA, solo, weighted average

Table A.14

	Case 1	Case 3	Case 4
CET1	14.27	14.27	14.27
Additional Tier 1	0.62	0.62	0.62
Tier 2	2.18	2.18	2.18
Collateralised guarantees	0.00	0.00	0.00
TLAC liabilities	0.20	8.96	31.57

Sample size: 13 G-SIBs

Source: Basel Committee on Banking Supervision.

### Internal TLAC risk-based ratios

Per cent of RWA, solo

Table A.15

	Case 1	Case 3	Case 4
Max	25.67	73.74	135.55
75th percentile	18.76	36.15	73.74
Median	16.78	20.25	39.72
Mean	17.61	26.86	53.69
25th percentile	15.40	15.59	25.70
Min	8.88	10.13	15.05

Sample size: 13 G-SIBs

Source: Basel Committee on Banking Supervision.

### Internal TLAC leverage ratios

Per cent of leverage ratio exposure, sub-consolidated, weighted average

Table A.16

	Case 1	Case 3	Case 4
CET1	5.20	5.20	5.20
Additional Tier 1	0.17	0.17	0.17
Tier 2	0.74	0.74	0.74
Collateralised guarantees	0.00	0.00	0.00
TLAC liabilities	0.65	4.39	12.41

Sample size: 14 G-SIBs

Source: Basel Committee on Banking Supervision.

### Internal TLAC leverage ratios

Per cent of leverage ratio exposure, sub-consolidated

Table A.17

	Case 1	Case 3	Case 4
Max	12.69	22.54	30.73
75th percentile	8.18	13.12	23.27
Median	6.06	9.67	17.45
Mean	6.87	10.02	17.93
25th percentile	4.64	5.94	11.86
Min	3.11	3.55	4.62

Sample size: 14 G-SIBs

Source: Basel Committee on Banking Supervision.

### Internal TLAC leverage ratios

Per cent of leverage ratio exposure, solo, weighted average

Table A.18

	Case 1	Case 3	Case 4
CET1	5.61	5.61	5.61
Additional Tier 1	0.24	0.24	0.24
Tier 2	0.86	0.86	0.86
Collateralised guarantees	0.00	0.00	0.00
TLAC liabilities	0.08	3.52	12.41

Sample size: 13 G-SIBs

Source: Basel Committee on Banking Supervision.

## Internal TLAC leverage ratios

Per cent of leverage ratio exposure, solo

Table A.19

	Case 1	Case 3	Case 4
Max	12.76	22.54	35.76
75th percentile	8.45	13.27	25.38
Median	5.79	8.11	20.01
Mean	7.15	10.25	19.49
25th percentile	5.29	6.97	12.27
Min	3.62	4.13	4.46

Sample size: 13 G-SIBs

Source: Basel Committee on Banking Supervision.

## Internal TLAC shortfall (risk-based ratio)

Nominal amount in billions of euros

Table A.20

	Sub-consolidated <sup>1</sup>			Solo <sup>2</sup>		
	Case 1	Case 3	Case 4	Case 1	Case 3	Case 4
75% of 16% RWA (12% RWA)	6.76	5.84	0.00	1.11	0.33	0.00
90% of 20% RWA (18% RWA)	53.74	31.09	2.27	37.02	17.93	4.49

<sup>1</sup> Sample size: 14 G-SIBs    <sup>2</sup> Sample size: 13 G-SIBs

Source: Basel Committee on Banking Supervision.

## Internal TLAC shortfall (leverage ratio)

Nominal amount in billions of euros

Table A.21

	Sub-consolidated <sup>1</sup>			Solo <sup>2</sup>		
	Case 1	Case 3	Case 4	Case 1	Case 3	Case 4
75% of 2×3% leverage exposures (4.5% leverage exposures)	6.11	2.83	0.00	4.83	1.37	0.13
90% of 2×3% leverage exposures (5.4% leverage exposures)	19.34	8.52	2.00	17.01	5.79	3.69

<sup>1</sup> Sample size: 14 G-SIBs    <sup>2</sup> Sample size: 13 G-SIBs

Source: Basel Committee on Banking Supervision.



## Internal TLAC composition

Per cent of total TLAC, weighted average

Table A.22

	Sub-consolidated <sup>1</sup>			Solo <sup>2</sup>		
	Case 1	Case 3	Case 4	Case 1	Case 3	Case 4
CET1	77.91	51.69	31.34	77.91	51.69	31.34
Additional Tier 1	2.54	1.69	1.02	2.54	1.69	1.02
Tier 2	11.93	7.92	4.80	11.93	7.92	4.80
Collateralised guarantees	0.00	0.00	0.00	0.00	0.00	0.00
TLAC liabilities	7.61	38.71	62.84	7.61	38.71	62.84

<sup>1</sup> Sample size: 21 G-SIBs    <sup>2</sup> Sample size: 21 G-SIBs

Source: Basel Committee on Banking Supervision.

## Investment in TLAC (G-SIBs)

Nominal amount in billions of euros

Table A.23

	Case 1	Case 2	Case 3	Case 4
CET1	63.40	63.40	63.40	63.40
Additional Tier 1	4.27	4.27	4.27	4.27
Tier 2	19.48	19.48	19.48	19.48
TLAC liabilities	7.44	6.26	53.75	117.72

Sample size: 26 G-SIBs

Source: Basel Committee on Banking Supervision.

## Investment in TLAC (G-SIBs)

Nominal amount in billions of euros

Table A.24

	Case 1	Case 2	Case 3	Case 4
Max	9.23	9.23	16.73	31.26
75th percentile	4.58	4.58	7.15	9.07
Median	3.29	3.29	4.70	5.79
Mean	3.64	3.59	5.42	7.88
25th percentile	1.43	1.43	2.80	3.94
Min	0.18	0.18	0.18	0.18

Sample size: 26 G-SIBs

Source: Basel Committee on Banking Supervision.

## Threshold deduction of TLAC holdings from Tier 2 (G-SIBs)

Nominal amount in billions of euros

Table A.25

	Case 1	Case 2	Case 3	Case 4
CET1	1.85	1.85	5.89	12.72
Additional Tier 1	0.09	0.09	0.56	0.58
Tier 2	0.71	0.71	24.38	68.69

Sample size: 26 G-SIBs

Source: Basel Committee on Banking Supervision.

## Threshold deduction of TLAC holdings from Tier 2 (G-SIBs)

Per cent of RWA, weighted average

Table A.26

	Case 1	Case 2	Case 3	Case 4
CET1	0.01	0.01	0.04	0.09
Additional Tier 1	0.00	0.00	0.00	0.00
Tier 2	0.01	0.01	0.17	0.49

Sample size: 26 G-SIBs

Source: Basel Committee on Banking Supervision.

## Total capital ratios and impacts of deduction (G-SIBs)

Per cent of RWA, weighted average

Table A.27

	Case 1	Case 2	Case 3	Case 4
Impact of deduction	0.02	0.02	0.22	0.59
Total capital ratio	13.92	13.92	13.73	13.39

Sample size: 26 G-SIBs

Source: Basel Committee on Banking Supervision.

## Total capital ratios after deduction (G-SIBs)

Per cent of RWA

Table A.28

	Case 1	Case 2	Case 3	Case 4
Max	20.20	20.20	20.20	20.20
75th percentile	15.59	15.59	15.59	15.70
Median	14.99	15.00	15.07	15.07
Mean	14.52	14.52	14.54	14.57
25th percentile	13.25	13.25	13.25	13.25
Min	9.34	9.34	9.36	9.36

Sample size: 26 G-SIBs

Source: Basel Committee on Banking Supervision.

## Investment in TLAC (non-G-SIBs)

Nominal amount in billions of euros

Table A.29

	Group 1 banks			Group 2 banks		
	Case 1	Case 3	Case 4	Case 1	Case 3	Case 4
CET1	21.57	21.33	21.33	5.95	5.95	5.95
Additional Tier 1	1.54	1.54	1.54	0.39	0.39	0.39
Tier 2	15.90	15.52	15.52	1.68	1.68	1.68
TLAC liabilities	12.20	39.25	103.41	1.32	4.40	9.37

Sample size: Group 1 banks: Case 1 = 53, Case 2 = Case 3 = 52; Group 2 banks: Case 1/2/3 = 80

Source: Basel Committee on Banking Supervision.

## Total amount of threshold deduction in each case (non-G-SIBs)

Nominal amount in billions of euros

Table A.30

	Case 1	Case 3	Case 4
Group 1 banks	6.52	23.72	71.07
Group 2 banks	0.60	2.97	4.02

Sample size: Group 1 banks: 43 banks; Group 2 banks: 73 banks

Source: Basel Committee on Banking Supervision.

## Threshold deduction as a percentage of RWAs in each case (non-G-SIBs)

Per cent of RWA, weighted average

Table A.31

	Case 1	Case 3	Case 4
Group 1 banks	0.10	0.35	1.05
Group 2 banks	0.04	0.18	0.24

Sample size: Group 1 banks: 43 banks; Group 2 banks: 72 banks.

Source: Basel Committee on Banking Supervision.

## Total capital ratios and impacts of deduction

Per cent of RWA, weighted average

Table A.32

	Group 1 banks			Group 2 banks		
	Case 1	Case 3	Case 4	Case 1	Case 3	Case 4
Total capital ratio	13.63	13.43	12.83	13.09	12.96	12.89
Impact of deductions	0.12	0.45	1.07	0.04	0.18	0.25

Sample size: Group 1: Case 1 = 44, Case 3 = 43, Case 4 = 44; Group 2: Case 1/3/4 = 72

Source: Basel Committee on Banking Supervision.

## Exposures to TLAC instruments

Nominal amount in billions of euros

Table A.33

	Group 1 banks			Group 2 banks		
	Case 1	Case 3	Case 4	Case 1	Case 3	Case 4
CET1	9.79	9.55	9.55	2.12	2.12	2.12
Additional Tier 1	0.95	0.95	0.95	0.20	0.20	0.20
Tier 2	9.53	9.14	9.14	0.60	0.60	0.60
TLAC liabilities	12.48	34.14	91.39	1.29	4.22	6.10
15% Tier 1	79.32	91.00	113.74	10.23	13.19	15.60
25% Tier 1	132.20	151.67	189.56	17.05	21.99	26.00

Sample size: Group 1: case 1 = 22, case 3 = 27, case 4 = 36; Group 2: case 1 = 19, case 3 = 23, case 4 = 29

Source: Basel Committee on Banking Supervision.

## Geographical distribution of issuance of G-SIBs

Nominal amount in billions of euros, residual maturity  $\geq 1$  year

Table A.34

	Location of issuance		
	US	EU	Other
<i>Liabilities issued by resolution entity</i>			
Subordinated TLAC-eligible	393.14	147.39	44.45
Senior unsecured – not subordinated	155.91	440.52	91.93
Structured notes	42.68	165.19	36.83
<i>Liabilities issued by subsidiaries different from resolution entity</i>			
Subordinated	19.87	13.66	36.84
Senior unsecured	42.37	51.46	39.17

Sample size: 26 G-SIBs

Source: Basel Committee on Banking Supervision.

## Weighted average Z-spread

Basis points

Table A.35

	Location of issuance		
	US	EU	Other
<i>Liabilities issued by resolution entity</i>			
Subordinated TLAC-eligible	100.28	105.95	154.37
Senior unsecured – not subordinated	86.79	55.92	50.09
Structured notes	83.33	91.77	37.10
<i>Liabilities issued by subsidiaries different from resolution entity</i>			
Subordinated	149.17	332.25	37.09
Senior unsecured	82.76	46.55	25.69
Sample size: 25 G-SIBs			
Source: Basel Committee on Banking Supervision.			

## Weighted average YTM

Per cent

Table A.36

	Location of issuance		
	US	EU	Other
<i>Liabilities issued by resolution entity</i>			
Subordinated TLAC-eligible	2.85	2.39	2.45
Senior unsecured – not subordinated	2.15	1.13	1.50
Structured notes	2.68	2.91	2.86
<i>Liabilities issued by subsidiaries different from resolution entity</i>			
Subordinated	3.09	5.41	1.46
Senior unsecured	1.69	0.92	0.95
Sample size: 25 G-SIBs			
Source: Basel Committee on Banking Supervision.			