Basel Committee on Banking Supervision

Results of the Basel III monitoring exercise as of 31 December 2011

September 2012

A revised document has been issued in March 2013. http://www.bis.org/publ/bcbs243.htm
A revised document has been issued in March 2013. http://www.bis.org/publ/bcbs243.htm
A revised document has been issued in March 2013. http://www.bis.org/publ/bcbs243.htm
## Contents

Executive summary .................................................................................................................. 1

1. General remarks .................................................................................................................. 5
   1.1 Scope of the impact study .......................................................................................... 5
   1.2 Sample of participating banks .................................................................................. 6
   1.3 Methodology ............................................................................................................. 7
   1.4 Data quality .............................................................................................................. 8
   1.5 Interpretation of results ......................................................................................... 8

2. Capital shortfalls and overall changes in regulatory capital ratios ................................. 10
   2.1 Capital ratios ......................................................................................................... 10
   2.2 Composition of capital ........................................................................................... 13
   2.3 Capital shortfalls ................................................................................................... 14

3. Impact of the definition of capital on Common Equity Tier 1 capital .............................. 15

4. Changes in risk-weighted assets ...................................................................................... 17
   4.1 Overall results ........................................................................................................ 17
   4.2 Revisions to the Basel II market risk framework .................................................. 19
   4.3 Impact of the rules on counterparty credit risk (CVA only) ................................... 20

5. Findings regarding the leverage ratio ............................................................................ 21

6. Liquidity .......................................................................................................................... 23
   6.1 Liquidity coverage ratio ........................................................................................ 23
       75% cap on total inflows ......................................................................................... 25
       Composition of high-quality liquid assets ............................................................. 26
       Cap on Level 2 assets ............................................................................................ 26
   6.2 Net stable funding ratio ........................................................................................ 27
A revised document has been issued in March 2013. http://www.bis.org/publ/bcbs243.htm
Quantitative Impact Study Group of the
Basel Committee on Banking Supervision

Chairman: Mr Martin Birn,
Secretariat of the Basel Committee on Banking Supervision,
Bank for International Settlements, Basel

The representatives in *italics* are members of the analysis team and provided analytical support at the Secretariat.

Australia  Mr David Wong  
Australia Prudential Regulation Authority, Sydney

Belgium  Ms Claire Renoirte  
Banking, Finance and Insurance Commission, Brussels

Brazil  Mr Frederico Torres de Souza  
Banco Central do Brasil, Brasilia

Canada  Mr Brian Rumas  
Office of the Superintendent of Financial Institutions, Ottawa

China  Mr Miao Yufeng  
China Banking Regulatory Commission, Beijing

France  Ms Dominique Durant  
French Prudential Supervisory Authority, Paris

Mr Thomas Beretti

Germany  Ms Dorothee Holl  
Deutsche Bundesbank, Frankfurt

Mr Maximilian Dinse
Mr Daniel Foos
Mr Daniel Legran
Ms Melanie Sturm

Hong Kong SAR  Mr Andy Cheung  
Hong Kong Monetary Authority

India  Mr Rajnish Kumar  
Reserve Bank of India, Mumbai

Indonesia  Mr Imansyah  
Bank Indonesia, Jakarta

Italy  Mr Francesco Cannata  
Bank of Italy, Rome

Mr Luca Serafini

Japan  Mr Susumu Kobayashi  
Bank of Japan, Tokyo

Mr Motohiro Hatanaka
Ms Saori Suzuki

Ms Rie Asakura  
Financial Services Agency, Tokyo

Korea  Mr Suh Kang-hoon  
Financial Supervisory Service, Seoul

Luxembourg  Mr Pierrot Rasqué  
Surveillance Commission for the Financial Sector, Luxembourg

A revised document has been issued in March 2013. http://www.bis.org/publ/bcbs243.htm
<table>
<thead>
<tr>
<th>Country</th>
<th>Contact Person</th>
<th>Institution/Agency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands</td>
<td>Mr Ron Jongen</td>
<td>Nederland Bank, Amsterdam</td>
</tr>
<tr>
<td>Russia</td>
<td>Ms Anna Kartashova</td>
<td>Central Bank of the Russian Federation, Moscow</td>
</tr>
<tr>
<td>Saudi Arabia</td>
<td>Mr Syed Mehdi Hassan</td>
<td>Saudi Arabian Monetary Agency, Riyadh</td>
</tr>
<tr>
<td>Singapore</td>
<td>Ms Cindy Cin Yee Mok</td>
<td>Monetary Authority of Singapore</td>
</tr>
<tr>
<td>South Africa</td>
<td>Mr Jaco Vermeulen</td>
<td>South African Reserve Bank, Pretoria</td>
</tr>
<tr>
<td>Spain</td>
<td>Mr Adolfo Rodriguez</td>
<td>Bank of Spain, Madrid</td>
</tr>
<tr>
<td>Sweden</td>
<td>Mr Andreas Borneus</td>
<td>Finansinspektionen, Stockholm</td>
</tr>
<tr>
<td>Switzerland</td>
<td>Mr Uwe Steinhauser</td>
<td>Swiss Financial Market Supervisory Authority FINMA, Berne</td>
</tr>
<tr>
<td>Turkey</td>
<td>Mr Sadik Atalay</td>
<td>Banking Regulation and Supervision Agency, Ankara</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>Mr Tobias Neumann</td>
<td>Bank of England, London</td>
</tr>
<tr>
<td></td>
<td>Mr William Saunt</td>
<td>Financial Services Authority, London</td>
</tr>
<tr>
<td></td>
<td>Mr Damian Harland</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ms Meryl Roberts</td>
<td></td>
</tr>
<tr>
<td>United States</td>
<td>Mr Eric Kennedy</td>
<td>Board of Governors of the Federal Reserve System, Washington, DC</td>
</tr>
<tr>
<td></td>
<td>Mr David Emmel</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ms Eva Shi</td>
<td>Federal Reserve Bank of New York</td>
</tr>
<tr>
<td></td>
<td>Mr Phillip Weed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ms Andrea Plante</td>
<td>Federal Deposit Insurance Corporation, Washington, DC</td>
</tr>
<tr>
<td></td>
<td>Mr Steve Burton</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr Karl Reitz</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr Paul Vigil</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mr Roger Tufts</td>
<td>Office of the Comptroller of the Currency, Washington, DC</td>
</tr>
<tr>
<td>EU</td>
<td>Mr Kai Spitzer</td>
<td>European Commission, Brussels</td>
</tr>
<tr>
<td>Secretariat</td>
<td>Mr Keng Heng Tan</td>
<td>Secretariat of the Basel Committee on Banking Supervision, Bank for International Settlements, Basel</td>
</tr>
<tr>
<td></td>
<td>Mr Marcus Jellinghaus</td>
<td></td>
</tr>
</tbody>
</table>
Results of the Basel III monitoring exercise as of 31 December 2011

Executive summary

In 2010, the Basel Committee on Banking Supervision\(^1\) conducted a comprehensive quantitative impact study (C-QIS) using data as of 31 December 2009 to ascertain the impact on banks of the Basel III framework that was published in December 2010 and revised in June 2011.\(^2\) The Committee intends to continue monitoring the impact of the Basel III framework in order to gather full evidence on its dynamics.

For this purpose, a semi-annual monitoring framework has been set up on the risk-based capital ratio, the leverage ratio, and the liquidity metrics using data collected by national supervisors on a representative sample of institutions in each jurisdiction. This report is the second publication of results of the Basel III monitoring exercise\(^3\) and summarises the aggregate results using data as of 31 December 2011. The Committee believes that the information contained in the report will provide the relevant stakeholders with a useful benchmark for analysis.

Information considered for this report was obtained by data submissions of individual banks to their national supervisors on a voluntary and confidential basis. A total of 209 banks participated in the study, including 102 Group 1 banks and 107 Group 2 banks.\(^4\) Members' coverage of their banking sector is very high for Group 1 banks, reaching 100% coverage for some jurisdictions, while coverage is comparatively lower for Group 2 banks and varied across jurisdictions. The Committee appreciates the significant efforts contributed by both banks and national supervisors to this ongoing data collection exercise.

The report focuses on the following items:

- Changes to bank capital ratios under the new requirements, and estimates of any capital deficiencies relative to fully phased-in minimum and target capital

---

\(^1\) The Basel Committee on Banking Supervision consists of senior representatives of bank supervisory authorities and central banks from Argentina, Australia, Belgium, Brazil, Canada, China, France, Germany, Hong Kong SAR, India, Indonesia, Italy, Japan, Korea, Luxembourg, Mexico, the Netherlands, Russia, Saudi Arabia, Singapore, South Africa, Spain, Sweden, Switzerland, Turkey, the United Kingdom and the United States. It usually meets at the Bank for International Settlements (BIS) in Basel, Switzerland, where its permanent Secretariat is located.


\(^3\) The first public report was published in April 2012, based on data as of 30 June 2011. See Basel Committee on Banking Supervision, *Results of the Basel III monitoring exercise as of 30 June 2011*, April 2012 (http://www.bis.org/publ/bcbs217.pdf).

\(^4\) Group 1 banks are those that have Tier 1 capital in excess of €3 billion and are internationally active. All other banks are considered Group 2 banks.
requirements (to include capital charges for global systemically important banks – G-SIBs);
• Changes to the definition of capital that result from the new capital standard, referred to as common equity Tier 1 (CET1), including a reallocation of deductions to CET1, and changes to the eligibility criteria for Additional Tier 1 and Tier 2 capital;
• Increases in risk-weighted assets resulting from changes to the definition of capital, securitisation, trading book, and counterparty credit risk requirements;
• The Basel III leverage ratio; and
• Two Basel III liquidity standards – the liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR).

With the exception of the transitional arrangements for non-correlation trading securitisation positions in the trading book, this report does not take into account any transitional arrangements such as phase-in of deductions and grandfathering arrangements. Rather, the estimates presented assume full implementation of the final Basel III requirements based on data as of 31 December 2011. No assumptions have been made about banks' profitability or behavioural responses, such as changes in bank capital or balance sheet composition, since this date or in the future. For this reason, the results are not comparable to current industry estimates, which tend to be based on forecasts and consider management actions to mitigate the impact, and incorporate estimates where information is not publicly available. The results presented in this report are also not comparable to the C-QIS that was prepared using end-December 2009 data because that report evaluated the impact of policy questions that differ in certain key respects from the finalised Basel III framework. As one significant example, the C-QIS did not consider the impact of capital surcharges for global systemically important banks.

Key results

Capital shortfalls

Assuming full implementation of the Basel III requirements as of 31 December 2011, including changes to the definition of capital and risk-weighted assets, and ignoring phase-in arrangements, Group 1 banks would have an overall shortfall of €11.9 billion for the CET1 minimum capital requirement of 4.5%, which rises to €374.1 billion for a CET1 target level of 7.0% (ie including the capital conservation buffer); the latter shortfall also includes the G-SIB surcharge where applicable. As a point of reference, the sum of profits after tax prior to distributions across the same sample of Group 1 banks in 2011 was €356 billion.

Compared to the June 2011 exercise, the aggregate CET1 shortfall with respect to the 4.5% minimum for Group 1 banks has improved by €26.9 billion or 69.3%. At the CET1 target level of 7.0%, the aggregate CET1 shortfall for Group 1 banks has improved by €111.5 billion or 23.0%.

---

5 The new rules for counterparty credit risk are not fully accounted for in the report, as data for capital charges for exposures to central counterparties (CCPs) and stressed effective expected positive exposure (EEPE) have not been fully captured in reported results.

6 See Basel Committee on Banking Supervision, Results of the comprehensive quantitative impact study, 16 December 2010 (www.bis.org/publ/bcbs186.htm).
Under the same assumptions, the capital shortfall for Group 2 banks included in the Basel III monitoring sample is estimated at €7.6 billion for the CET1 minimum of 4.5% and €21.7 billion for a CET1 target level of 7.0%. The sum of Group 2 bank profits after tax prior to distributions in 2011 was €24 billion.

Further details on additional capital needs to meet the Basel III requirements are included in Section 2.

**Capital ratios**

The average CET1 ratio under the Basel III framework would decline from 10.4% to 7.7% for Group 1 banks and from 10.4% to 8.8% for Group 2 banks. The Tier 1 capital ratios of Group 1 banks would decline, on average from 11.7% to 8.0% and total capital ratios would decline from 14.2% to 9.2%. As with the CET1 ratios, the decline in other capital ratios is comparatively less pronounced for Group 2 banks; Tier 1 capital ratios would decline on average from 11.0% to 9.2% and total capital ratios would decline on average from 14.3% to 11.0%.

**Changes in risk-weighted assets**

As compared to current risk-weighted assets, total risk-weighted assets increase on average by 18.1% for Group 1 banks under the Basel III framework. This increase is driven largely by charges against counterparty credit risk, trading book exposures, and securitisation exposures (principally those risk-weighted at 1250% under the Basel III framework that were previously 50/50 deductions under Basel II). Banks that have significant exposures in these areas influence the average increase in risk-weighted assets heavily. As Group 2 banks are less affected by the revised counterparty credit risk and trading book rules, these banks experience a comparatively smaller increase in risk-weighted assets of only 7.5%. Even within this sample, higher risk-weighted assets are attributed largely to Group 2 banks with counterparty and securitisation exposures (i.e. those subject to a 1250% risk weighting). As discussed in Section 4.1, the increase in risk-weighted assets contains certain estimates pertaining to trading book exposures for banks that have already adopted the Basel 2.5 enhancements.

**Leverage ratio**

The average Basel III Tier 1 leverage ratio for all banks is 3.6%. The Basel III average for Group 1 banks is 3.5%, and the average for Group 2 banks is 4.2%.

**Liquidity standards**

Both liquidity standards are currently subject to an observation period which includes a review clause to address any unintended consequences prior to their respective implementation dates of 1 January 2015 for the LCR and 1 January 2018 for the NSFR. Basel III monitoring results for the end-December 2011 reporting period give an indication of the impact of the calibration of the standards based on the December 2010 rules text and highlight several key observations:

- A total of 102 Group 1 and 107 Group 2 banks participated in the liquidity monitoring exercise for the end-December 2011 reference period.
- The weighted average LCR for Group 1 banks is 91%, compared to 90% for 30 June 2011, while the weighted average LCR for Group 2 banks is 98%. The
aggregate LCR shortfall is €1.8 trillion which represents approximately 3% of the €61.4 trillion total assets of the aggregate sample.

- The weighted average NSFR is 98% for Group 1 banks and 95% for Group 2 banks, compared to 94% for each of the Group 1 and Group 2 samples as at 30 June 2011. The aggregate shortfall of required stable funding is €2.5 trillion.
1. General remarks

At its 12 September 2010 meeting, the Group of Governors and Heads of Supervision (GHOS), the Committee’s oversight body, announced a substantial strengthening of existing capital requirements and fully endorsed the agreements it reached on 26 July 2010. These capital reforms, together with the introduction of two international liquidity standards, delivered on the core of the global financial reform agenda presented to the Seoul G20 Leaders summit in November 2010. Subsequent to the initial comprehensive quantitative impact study published in December 2010, the Committee continues to monitor and evaluate the impact of these capital, leverage and liquidity requirements (collectively referred to as “Basel III”) on a semi-annual basis. The first public report was published in April 2012, based on data as of 30 June 2011. This report summarises results of the latest Basel III monitoring exercise using 31 December 2011 data.

1.1 Scope of the impact study

All but one of the 27 Committee member jurisdictions participated in the Basel III monitoring exercise as of 31 December 2011. The estimates presented are based on data submitted by the participating banks to their national supervisors in reporting questionnaires and in accordance with the instructions prepared by the Committee in February 2012. The questionnaire covered components of eligible capital, the calculation of risk-weighted assets (RWA), the calculation of a leverage ratio, and components of the liquidity metrics. The results were initially submitted to the Secretariat of the Committee in April 2012.

The purpose of the exercise is to provide the Committee with an ongoing assessment of the impact on participating banks of the capital and liquidity proposals set out in the following documents:

- *Revisions to the Basel II market risk framework* and *Guidelines for computing capital for incremental risk in the trading book*;
- *Enhancements to the Basel II framework* which include the revised risk weights for re-securitisations held in the banking book;

---

7 See the 26 July 2010 press release “The Group of Governors and Heads of Supervision reach broad agreement on Basel Committee capital and liquidity reform package” (www.bis.org/press/p100726.htm) and the 12 September 2010 press release “Group of Governors and Heads of Supervision announces higher global minimum capital standards” (www.bis.org/press/p100912.htm).


9 The data for Japan are as of the end of September 2011, as banks in that country report on a biannual basis 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 2011, which corresponds to Canadian banks’ fiscal fourth-quarter end.

10 See Basel Committee on Banking Supervision, *Instructions for Basel III implementation monitoring*, February 2012 (www.bis.org/bcbs/qis/index.htm).


• Basel III: A global framework for more resilient banks and the banking system as well as the Committee’s 13 January 2011 press release on loss absorbency at the point of non-viability;¹⁴
• International framework for liquidity risk measurement, standards and monitoring; and
• Global systemically important banks: Assessment methodology and the additional loss absorbency requirement.¹⁵

1.2 Sample of participating banks

A total of 209 banks participated in the study, including 102 Group 1 banks and 107 Group 2 banks. Group 1 banks are those that have Tier 1 capital in excess of €3 billion and are internationally active. All other banks are considered Group 2 banks. Banks were asked to provide data as of 31 December 2011 at the consolidated level.⁹ Subsidiaries are not included in the analyses to avoid double counting.

Table 1 shows the distribution of participation by jurisdiction. For Group 1 banks members’ coverage of their banking sector was very high reaching 100% coverage for some jurisdictions. Coverage for Group 2 banks was comparatively lower and varied across jurisdictions.

Not all banks provided data relating to all parts of the Basel III framework. Accordingly, a small number of banks are excluded from individual sections of the Basel III monitoring analysis 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 at both the June 2011 and December 2011 reporting dates, in order to make more meaningful period-to-period comparisons.

¹⁴  The Committee’s 13 January 2011 press release on loss absorbency at the point of non-viability is available at www.bis.org/press/p110113.htm.
¹⁵  Basel Committee on Banking Supervision, Global systemically important banks: Assessment methodology and the additional loss absorbency requirement, November 2011 (www.bis.org/publ/bcbs207.htm).
### Table 1

**Number of banks submitting data for the Basel III monitoring exercise**

<table>
<thead>
<tr>
<th>Jurisdiction</th>
<th>Group 1</th>
<th>Group 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia (AU)</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Belgium (BE)</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Brazil (BR)</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Canada (CA)</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>China (CN)</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>France (FR)</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Germany (DE)</td>
<td>8</td>
<td>25</td>
</tr>
<tr>
<td>Hong Kong (HK)</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>India (IN)</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Indonesia (ID)</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Italy (IT)</td>
<td>2</td>
<td>11</td>
</tr>
<tr>
<td>Japan (JP)</td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td>Korea (KR)</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Luxembourg (LU)</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Mexico (MX)</td>
<td>0</td>
<td>7</td>
</tr>
<tr>
<td>Netherlands (NE)</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td>Russia (RU)</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Saudi Arabia (SA)</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Singapore (SG)</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>South Africa (ZA)</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Spain (ES)</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Sweden (SE)</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Switzerland (CH)</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Turkey (TR)</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>United Kingdom (GB)</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>United States (US)</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>102</strong></td>
<td><strong>107</strong></td>
</tr>
</tbody>
</table>

1.3 **Methodology**

Unless otherwise noted, the impact assessment was carried out by comparing banks’ capital positions under Basel III to the current regulatory framework implemented by the national
supervisor.\(^{16}\) With the exception of transitional arrangements for non-correlation trading securitisation positions in the trading book,\(^{17}\) Basel III results are calculated without considering transitional arrangements pertaining to the phase-in of deductions and grandfathering arrangements.

Reported average amounts in this document 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 common equity Tier 1 capital ratio is the sum of all banks’ common equity Tier 1 capital for the total sample divided by the sum of all banks’ risk-weighted assets for the total sample. Similarly, the average Tier 1 leverage ratio is the sum of all banks’ Tier 1 capital for the total sample divided by the sum of all banks’ leverage ratio exposures for the total sample.

To maintain confidentiality, many of the results shown in this report are presented using box plots charts. These charts show the distribution of results as described by the median values (the thin red horizontal line) and the 75th and 25th percentile values (defined by the blue box). The upper and lower end points of the thin blue vertical lines show the values which are 1.5 times the range between the 25th and the 75th percentile above the 75th percentile or below the 25th percentile, respectively. This would correspond to approximately 99.3% coverage if the data were normally distributed. The red crosses indicate outliers.

To estimate the impact of implementing the Basel III framework on capital, comparisons are made between those elements of Tier 1 capital which are not subject to a limit under the national implementation of Basel I or Basel II, and CET1 under Basel III.

### 1.4 Data quality

For this monitoring exercise, participating banks submitted comprehensive and detailed non-public data on a voluntary and best-efforts basis. As with the previous studies, 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 that follow only to the extent they were able to provide sufficient quality data to complete the analyses.

For the liquidity elements, data quality has improved significantly throughout the iterations of the Basel III monitoring exercise, although it is still the case that some differences in banks’ reported liquidity risk positions could be attributed to differing interpretations of the rules, rather than underlying differences in risk. Most notably individual banks appear to be using different methodologies to identify operational wholesale deposits and exclusions of liquid assets due to failure to meet the operational requirements.

### 1.5 Interpretation of results

The following caveats apply to the interpretation of results shown in this report:

---

\(^{16}\) Although banks in the United States are currently subject to Basel I capital requirements, most submitted data for this exercise on a Basel II basis.

\(^{17}\) For non-correlation trading securitisations in the trading book, capital charges are calculated as the larger of the capital charge for net long or net short positions. After 31 December 2013, the charge for these positions will change to the sum of capital charges for net long and net short positions.
These results in this report and the prior Basel III monitoring report are not comparable to those shown in the C-QIS, which evaluated the impact of policy questions that differ in certain key aspects from the finalised Basel III framework. As one significant example, the C-QIS did not consider the impact of capital surcharges for G-SIBs.

When comparing results to prior reports, sample differences need to be taken into account, in particular for the Group 2 bank samples.

A number of countries represented in the sample adopted Basel 2.5 revisions pertaining to market risk exposures during 2011 (European countries and Singapore). Banks in other countries such as Australia, Canada, Hong Kong, Japan, Korea and South Africa are expected to begin reporting charges for market risk exposures under Basel 2.5 beginning with the next report. Therefore, while in the previous report “current” capital requirement reflected Basel 2.5 implementation only for Switzerland, “current” capital requirements in this report now include Basel 2.5 requirements in a significant number of countries.

The new rules for counterparty credit risk are not fully accounted for in the report, as banks have not been asked to provide data for capital charges for exposures to central counterparties (CCPs) and stressed effective expected positive exposure (EEPE).

The actual impact of the new requirements will likely be lower than shown in this report given the phased-in implementation of the rules and interim adjustments made by the banking sector to changing economic conditions and the regulatory environment. For example, the results do not consider bank profitability, changes in capital or portfolio composition, or other management responses to the policy changes since 31 December 2011 or in the future. For this reason, the results are not comparable to industry estimates, which tend to be based on forecasts and consider management actions to mitigate the impact, as well as incorporate estimates where information is not publicly available.

The Basel III capital amounts shown in this report assume that all common equity deductions are fully phased in and all non-qualifying capital instruments are fully phased out. As such, these amounts underestimate the amount of Tier 1 capital and Tier 2 capital held by a bank as they do not give any recognition for non-qualifying instruments that are actually phased out over nine years.

The treatment of deductions and non-qualifying capital instruments also affects figures reported in the leverage ratio section. The under-estimation of Tier 1 capital will become less of an issue as the implementation date of the leverage ratio nears. In particular, in 2013, the capital amounts based on the capital requirements in place on the Basel III monitoring reporting date will reflect the amount of non-qualifying capital instruments included in capital at that time. These amounts will therefore be more representative of the capital held by banks at the implementation date of the leverage ratio.
2. Capital shortfalls and overall changes in regulatory capital ratios

Table 2 shows the aggregate capital ratios under the current and Basel III frameworks and the capital shortfalls if Basel III were fully implemented, both for the definition of capital and the calculation of risk-weighted assets as of 31 December 2011.

<table>
<thead>
<tr>
<th></th>
<th>Fully implemented requirement, in per cent</th>
<th>Capital ratios, in per cent</th>
<th>Capital shortfalls, in € billions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Minimum</td>
<td>Minimum plus capital</td>
<td>Current</td>
</tr>
<tr>
<td>Group 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CET1</td>
<td>4.5</td>
<td>7.0</td>
<td>10.4</td>
</tr>
<tr>
<td>Tier 1</td>
<td>6.0</td>
<td>8.5</td>
<td>11.7</td>
</tr>
<tr>
<td>Total</td>
<td>8.0</td>
<td>10.5</td>
<td>14.2</td>
</tr>
<tr>
<td>Group 2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CET1</td>
<td>4.5</td>
<td>7.0</td>
<td>10.4</td>
</tr>
<tr>
<td>Tier 1</td>
<td>6.0</td>
<td>8.5</td>
<td>11.0</td>
</tr>
<tr>
<td>Total</td>
<td>8.0</td>
<td>10.5</td>
<td>14.3</td>
</tr>
</tbody>
</table>

The shortfall is calculated as the sum across individual banks where a shortfall is observed. The calculation includes all changes to risk-weighted assets (eg definition of capital, counterparty credit risk, trading book and securitisation in the banking book). The Tier 1 and total capital shortfalls are incremental assuming the higher tier capital requirements are fully met. * The shortfalls including the capital conservation buffer also include the capital surcharges for 27 initial G-SIBs as applicable.

2.1 Capital ratios

As compared to current CET1, the average CET1 capital ratio of Group 1 banks would have fallen by more than one-quarter from 10.4% to 7.7% (a decline of 2.7 percentage points) when Basel III deductions and risk-weighted assets are taken into account. The reduction in the CET1 capital ratio of Group 2 banks is smaller (from 10.4% to 8.8%), which indicates that the new framework has greater impact on larger banks. Results show significant variation across banks as shown in Chart 1.

The reduction in CET1 ratios is driven by the new definition of eligible capital, deductions that were not previously applied at the common equity level of Tier 1 capital in most jurisdictions (numerator), and by increases in risk-weighted assets (denominator). Banks engaged heavily in trading or counterparty credit activities tend to show the largest denominator effects as these activities attract substantively higher capital charges under the new framework.

Tier 1 capital ratios of Group 1 banks would on average decline 3.7 percentage points from 11.7% to 8.0%, and total capital ratios of this same group would decline on average by 5.0
percentage points from 14.2% to 9.2%. As with CET1, Group 2 banks show a more moderate decline in Tier 1 capital ratios from 11.0% to 9.2%, and a decline in total capital ratios from 14.3% to 11.0%.

Chart 1

Basel III CET1, Tier 1 and total capital ratios, in per cent

Chart 2 shows that out of the banks in the Group 1 sample, 95% show a CET1 ratio under Basel III that is at least equal to the 4.5% minimum capital requirement and 71% show a CET1 ratio above the 7.0% target ratio (i.e., the minimum capital requirement plus the capital conservation buffer). Of the banks in the Group 2 sample, 93% report a CET1 ratio equal to or higher than 4.5%; while 74% also achieve the target of 7.0%.

---

The median value is represented by the thin red horizontal line and the 75th and 25th percentile values are defined by the thick blue box. The upper and lower end points of the thin blue vertical lines show the values which are 1.5 times the range between the 25th and the 75th percentile above the 75th percentile or below the 25th percentile, respectively. The red crosses indicate outliers, while the thick red horizontal lines indicate the 4.5%, 6% and 8% minimum capital requirements (excluding the G-SIB surcharge) for CET1 capital, Tier 1 capital and total capital, respectively. Dashed lines indicate the minima plus the capital conservation buffer.
The Basel III framework includes the following phase-in provisions for capital ratios:

- For CET1, the highest form of loss absorbing capital, the minimum requirement will be raised to 4.5% and will be phased-in by 1 January 2015;
- For Tier 1 capital, the minimum requirement will be raised to 6.0% and will be phased-in by 1 January 2015;
- For total capital, the minimum requirement remains at 8.0%;
- Regulatory adjustments (i.e., possibly stricter sets of deductions that apply under Basel III) will be fully phased-in by 1 January 2018;
- An additional 2.5% capital conservation buffer above the regulatory minimum capital ratios, which must be met with CET1, will be phased-in by 1 January 2019; and
- The additional loss absorbency requirement for G-SIBs, which ranges from 1.0% to 2.5%, will be phased in by 1 January 2019. It will be applied as the extension of the capital conservation buffer and must be met with CET1.

The Annex includes a detailed overview of the Basel Committee’s phase-in arrangements.

Chart 3 shows the average capital ratios under the current regime and Basel III for Group 1 and Group 2 banks for the periods end-June 2011 (labelled “2011H1”) and end-December 2011 (“2011H2”). In comparison to the prior report, current capital ratios remained the same or improved only slightly for both Group 1 and Group 2 banks. However, the CET1, Tier 1 and total capital ratios for Group 1 banks under the Basel III framework improved by 0.6 percentage points each. For Group 2 banks, there were 0.5, 0.6 and 0.4 percentage point increases in CET1, Tier 1 and total capital ratios, respectively. The improvement in Basel III capital ratios is due in part to lower levels of deductions that reduce CET1.

A revised document has been issued in March 2013. http://www.bis.org/publ/bcbs243.htm
2.2 Composition of capital

Chart 4 shows the composition of total capital for Group 1 and Group 2 banks under the current national regime and after full implementation of Basel III.

For Group 1 banks, the share of Basel III CET1 to total capital is 83.5%. Additional Tier 1 and Tier 2 capital amount to 2.8% and 13.7% of the total capital of Group 1 banks, respectively. Of the Group 1 bank sample, 63% hold Basel III CET1 representing 90% or more of Basel III total capital. In the Group 2 sample, banks hold a somewhat lower share of CET1 at 79.9% with correspondingly higher shares of additional Tier 1 capital (3.2%) and Tier 2 capital (16.8%). Under the current national regime, the share of CET1 to total capital is lower at 72.9% for Group 1 banks and at 72.8% for Group 2 banks, with correspondingly higher shares of additional Tier 1 and Tier 2 capital.

---

19 Solid lines are minima, dashed lines minima plus the capital conservation buffer. The height of each bar shows the aggregated capital shortfall considering requirements for each tier (ie, CET1, Tier 1, and total) of capital.
2.3 Capital shortfalls

Chart 5 and Table 2 provide estimates of the amount of capital that Group 1 and Group 2 banks would need based on data as of 31 December 2011 in addition to capital already held at the reporting date, in order to meet the target CET1, Tier 1, and total capital ratios under Basel III assuming fully phased-in target requirements and deductions. Under these assumptions, the CET1 capital shortfall for Group 1 banks with respect to the 4.5% CET1 minimum requirement is €11.9 billion. The CET1 shortfall with respect to the 4.5% requirement for Group 2 banks, where coverage of the sector is considerably smaller, is estimated at €7.6 billion. For a CET1 target of 7.0% (ie the 4.5% CET1 minimum plus the 2.5% capital conservation buffer, plus any capital surcharge for Group 1 G-SIBs as applicable), Group 1 banks’ shortfall is €374.1 billion and Group 2 banks’ shortfall is €21.7 billion. The surcharges for G-SIBs are a binding constraint on 21 of the 27 G-SIBs included in this Basel III monitoring exercise. As a point of reference, the aggregate sum of after-tax profits prior to distributions for Group 1 and Group 2 banks in the same sample was €356 billion and €24 billion, respectively in 2011. Compared to the June 2011 exercise, the aggregate CET1 shortfall with respect to the 4.5% minimum for Group 1 banks has improved by €26.9 billion or 69.3% (see Chart 5). At the CET1 target level of 7.0%, the aggregate CET1 shortfall for Group 1 banks has improved by €111.5 billion or 23.0%.

Assuming the 4.5% CET1 minimum capital requirements were fully met (ie, there were no CET1 shortfalls), Group 1 banks would need an additional €32.5 billion of additional Tier 1 or CET1 capital to meet the minimum Tier 1 capital ratio requirement of 6.0%. Assuming banks already hold 7.0% CET1 capital, Group 1 banks would need an additional €219.3 billion of additional Tier 1 or CET1 capital to meet the Tier 1 capital target ratio of 8.5% (ie the 6.0% Tier 1 minimum plus the 2.5% CET1 capital conservation buffer), respectively. Group 2

---

20 The capital surcharge for each G-SIB is the same as that applied in the prior report.

21 This investigates whether a G-SIB has a higher capital shortfall at the CET1 7.0% target level if the G-SIB surcharge is also included.
banks would need an additional €2.1 billion and an additional €11.9 billion to meet these respective Tier 1 capital minimum and target ratio requirements.

Assuming CET1 and Tier 1 capital requirements were fully met (ie, there were no shortfalls in either CET1 or Tier 1 capital), Group 1 banks would need an additional €100.2 billion of Tier 2 or higher quality capital to meet the minimum total capital ratio requirement of 8.0% and an additional €224.3 billion of Tier 2 or higher quality capital to meet the total capital target ratio of 10.5% (ie the 8.0% Tier 1 minimum plus the 2.5% CET1 capital conservation buffer). Group 2 banks would need an additional €4.1 billion and an additional €8.6 billion to meet these respective total capital minimum and target ratio requirements.

As indicated above, no assumptions have been made about bank profits or behavioural responses, such as changes balance sheet composition, that will serve to ameliorate the impact of capital shortfalls over time.

Chart 5

Estimated overall capital shortfalls, participating Group 1 and Group 2 banks, in € billions

3. Impact of the definition of capital on Common Equity Tier 1 capital

As noted above, reductions in capital ratios under the Basel III framework are attributed in part to capital deductions not previously applied at the common equity level of Tier 1 capital in most jurisdictions. Table 3 shows the impact of various regulatory adjustment categories on the gross CET1 capital (ie, CET1 before adjustments) of Group 1 and Group 2 banks.

In the aggregate, regulatory adjustments reduce the gross CET1 of Group 1 banks under the Basel III framework by 29.0%. The largest driver of Group 1 bank deductions is goodwill.

---

22 The figures for the minimum plus the capital conservation buffer also include the capital surcharge for G-SIBs as applicable. Given the more significant changes to the sample of Group 2 banks since the previous reporting date, the shortfall of Group 2 banks has not been compared to the previous reporting date.
followed by combined deferred tax assets (DTAs) deductions, followed by combined deferred tax assets (DTAs) deductions,\textsuperscript{23} and intangibles other than mortgage servicing rights. These deductions reduce Group 1 bank gross CET1 by 14.0%, 4.3%, and 3.5%, respectively. The category described as other adjustments reduces Group 1 bank gross CET1 by 3.8% and pertain mainly to deductions for provision shortfalls relative to expected credit losses and deductions related to defined benefit pension fund schemes. Holdings of capital of other financial companies reduce the CET1 of Group 1 banks by 1.9%.\textsuperscript{24} The category “Excess above 15%” refers to the deduction of the amount by which the aggregate of the three items subject to the 10% limit for inclusion in CET1 capital\textsuperscript{25} exceeds 15% of a bank’s CET1, calculated after all deductions from CET1. These 15% threshold bucket deductions reduce Group 1 bank gross CET1 by 1.6%. Deductions for MSRs exceeding the 10% limit have no impact on Group 1 CET1 in the aggregate.

Table 3 also compares regulatory adjustments for Group 1 banks with the results of the previous period for those banks which participated in both exercises. Overall, deductions have been reduced by 2.6 percentage points, mainly driven by lower deductions for goodwill and financials.

Regulatory adjustments reduce the CET1 of Group 2 banks by 20.4%. Goodwill is the largest driver of deductions for Group 2 banks, followed by holdings of the capital of other financial companies, deductions for intangibles other than mortgage servicing rights, and combined DTAs deductions. These deductions reduce Group 2 bank CET1 by 7.5%, 2.3%, 2.3% and 1.9%, respectively. Other adjustments, which are driven significantly by deductions for provision shortfalls relative to expected credit losses, result in a 3.1% reduction in Group 2 bank gross CET1. Deductions for items in excess of the aggregate 15% threshold basket reduce Group 2 bank gross CET1 by 1.2%. Deductions for mortgage servicing rights above the 10% limit have no impact on Group 2 banks.

\textsuperscript{23} That is, both DTAs that are deducted in full under Basel III and DTAs that relate to temporary differences which are only deducted when they exceed the 10% limit.

\textsuperscript{24} These holdings include reciprocal cross-holdings in common equity as well as small investments and significant investments in the common equity of other financial institutions where these investments exceed the 10% individual limit.

\textsuperscript{25} Significant investments in the common shares of unconsolidated financial institutions, mortgage servicing rights (MSRs), and DTAs.
Table 3
CET1 regulatory adjustments as a percentage of CET1 capital prior to adjustments

<table>
<thead>
<tr>
<th>N</th>
<th>Goodwill</th>
<th>Intangibles</th>
<th>DTAs*</th>
<th>Financials</th>
<th>MSRs</th>
<th>DTAs above threshold</th>
<th>Excess above 15%**</th>
<th>Other***</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group 1 banks</td>
<td>101</td>
<td>−14.0</td>
<td>−3.5</td>
<td>−2.8</td>
<td>−1.9</td>
<td>0.0</td>
<td>−1.5</td>
<td>−1.6</td>
<td>−3.8</td>
</tr>
<tr>
<td>Change 2011H2 vs 2011H1****</td>
<td>100</td>
<td>+1.1</td>
<td>+0.1</td>
<td>+0.4</td>
<td>+1.1</td>
<td>+0.1</td>
<td>+0.5</td>
<td>−0.8</td>
<td>+2.6</td>
</tr>
<tr>
<td>Group 2 banks</td>
<td>107</td>
<td>−7.5</td>
<td>−2.3</td>
<td>−6.0</td>
<td>0.0</td>
<td>−1.3</td>
<td>−1.2</td>
<td>−3.1</td>
<td>−20.4</td>
</tr>
</tbody>
</table>

* DTA is the deferred tax assets that are deducted in full under Basel III (ie it excludes DTAs that are related to temporary differences, which are only deducted when they exceed a threshold). ** Excess above 15% pertains to significant investments in the common shares of unconsolidated financial institutions, mortgage servicing rights, and DTAs due to timing differences that do not separately exceed the 10% category thresholds but in the aggregate exceed the 15% basket threshold. *** Other includes deductions related to investment in own shares, shortfall of provisions to expected losses, cash flow hedge reserves, cumulative changes in fair value due to changes in own credit risk, net pension fund assets, securitisation gains on sale and deductions from Additional Tier 1 capital to the extent they exceed a bank’s Additional Tier 1 capital. **** In percentage points based on consistent sample of banks that submitted data for both the June 2011 and December 2011 exercises. A plus symbol indicates an improvement (smaller deduction relative to June 2011) while a negative symbol indicates a deterioration (increased deduction relative to June 2011).

4. Changes in risk-weighted assets

4.1 Overall results

Reductions in capital ratios under the Basel III framework are also attributed to increases in risk-weighted assets. Table 4 provides additional detail on the contributors to these increases, to include the following categories:

- **Definition of capital:** These columns measure the change in risk-weighted assets as a result of proposed changes to the definition of capital. The column heading “other” includes the effects of lower risk-weighted assets for exposures that are currently included in risk-weighted assets but receive a deduction treatment under Basel III. The column heading “50/50” measures the increase in risk-weighted assets applied to securitisation exposures currently deducted under the Basel II framework that are risk-weighted at 1250% under Basel III. The column heading “threshold” measures the increase in risk-weighted assets for exposures that fall below the 10% and 15% limits for CET1 deduction;

- **Counterparty credit risk (CCR):** This column measures the new capital charge for credit valuation adjustments (CVA risk) and the higher capital charge that results from applying a higher asset value correlation parameter against exposures to financial institutions under the IRB approaches to credit risk. Banks have not been asked to provide data on the risk-weighted asset effects of capital charges for exposures to central counterparties (CCPs) or on any impact of incorporating stressed parameters for effective expected positive exposure (EEPE);
• **Trading book:** As data from most countries already include the RWA impact of the Basel 2.5 market risk rules, the incremental impact for changes in market RWA shown in these tables has been estimated using the sum of the following elements relative to elements in place under Basel II: the proportion of internally modelled general and specific risk that is attributable to stress value-at-risk, the incremental risk capital charge (IRC), capital charges for the correlation trading portfolio, and capital charges under the standardised measurement method (SMM) for other securitisation exposures and nth-to-default credit derivatives.

• The effect of higher capital charges for re-securitisation exposures in the banking book and increased conversion factors for short-term liquidity facilities to off-balance sheet conduits are not considered in these tables given the data are no longer available for all countries. However, prior reports have shown the impact of these charges to be generally small for both Group 1 and Group 2 banks.

Risk-weighted assets for Group 1 banks increase overall by 18.1% for Group 1 banks. This increase is to a large extent attributed to higher risk-weighted assets for counterparty credit risk exposures, which result in an overall increase in total Group 1 bank risk-weighted assets of 7.9%. The predominant drivers behind this figure are capital charges for CVA risk and the higher asset value correlation parameter, which is included in the column labelled “CCR”. Trading book exposures and securitisation exposures currently subject to deduction under Basel II, also contribute significantly to higher risk-weighted assets at Group 1 banks at 4.9% and 4.2%, respectively.

<table>
<thead>
<tr>
<th>Table 4</th>
<th>Changes in RWA by banking group, in per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>Total*</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 1 banks</td>
<td>101</td>
</tr>
<tr>
<td>Group 2 banks</td>
<td>107</td>
</tr>
</tbody>
</table>

* Approximated full impact of Basel 2.5 as outlined in the text.

Risk-weighted assets of Group 2 banks increase overall by 7.5%. Banks in this group tend to have smaller counterparty credit risk and trading book exposures, which explains the lower increase risk-weighted assets for Group 2 banks as compared to Group 1 banks. Securitisation exposures currently subject to deduction, CCR exposures, and exposures that fall below the 10% and 15% CET1 eligibility limits are significant contributors to changes in risk-weighted assets for Group 2 banks.

---

26 In the prior report, the impact was calculated by the comparison of Basel II data and Basel 2.5 data, which was calculated as if Basel 2.5 had been effective, except for Switzerland where the revised market risk regime was already effective at the reporting date. When comparing this report and prior reports, this change in the methodology should be taken into account.

A revised document has been issued in March 2013. [http://www.bis.org/publ/bcbs243.htm](http://www.bis.org/publ/bcbs243.htm)
Changes in risk-weighted assets show significant variation across banks as shown in Chart 6. Again, these differences are explained in large part by the extent of banks’ counterparty credit risk and trading book exposures, which attract significantly higher capital charges under Basel III as compared to current rules.

Chart 6
Approximate change in total risk-weighted assets, in per cent

4.2 Revisions to the Basel II market risk framework

Table 5 shows further detail on the revised trading book capital charges for Group 1 banks. The figures have been computed using a different methodology than in the previous report. Whereas the prior report captured the impact of the revised Basel 2.5 market risk framework on overall capital charges as compared to Basel II, the new methodology used in this section focuses on the share of market risk capital charges to total capital requirements in order to analyse Basel II banks and Basel 2.5 banks on a comparable basis. The sample analysed

27 The median value is represented by the thin red horizontal line and the 75th and 25th percentile values are defined by the thick blue box. The upper and lower end points of the thin blue vertical lines show the values which are 1.5 times the range between the 25th and the 75th percentile above the 75th percentile or below the 25th percentile, respectively. Please note that the data in Chart 6 are based on percentile ranks while Table 4 is based on aggregate data.
here is smaller than the one in Table 4 as not all Group 1 banks provided data on market risk exposures.  

For this reduced sample of banks, trading book exposures amount to 8.5% of total capital requirements. The main components of this share are stressed value-at-risk (2.1%), the capital charge according to the standardised measurement method for market risk (column heading “SMM”) (1.9%), current value-at-risk and non-correlation trading securitisation exposures subject the standardised measurement method (column heading “SMM non-CTP”) at 1.1% each. The share of the incremental risk capital charge (IRC) is 0.9%. Less significant contributors to the risk-weighted assets for market risk are capital charges for correlation trading exposures.  

<table>
<thead>
<tr>
<th>Table 5</th>
<th>Share in market risk capital charges, Group 1 banks, in per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative to total capital requirements</td>
<td>82</td>
</tr>
<tr>
<td>Relative to market risk capital requirements</td>
<td>82</td>
</tr>
</tbody>
</table>

* Capital charge for exposures which are part of the correlation trading portfolio and subject to a capital charge according to the standardised measurement method. ** Capital charge according to the standardised measurement method for securitisation exposures and nth-to-default credit derivatives which do not qualify for the correlation trading portfolio.

Of the 16 banks reporting risk-weighted assets from a comprehensive risk model, five are bound by the floor based on the standardised measurement method.

4.3 Impact of the rules on counterparty credit risk (CVA only)

Credit valuation adjustment (CVA) risk capital charges lead to an 8.5% increase in total RWA for the subsample of 81 banks which provided the relevant data. A larger fraction of the total

---

28 Group 2 banks are not presented separately because the market risk requirements have a very minor influence on overall Group 2 bank risk-weighted assets. Some of these banks do not have any trading books at all and are therefore not subject to any related capital charges.

29 These capital charges consist of the comprehensive risk model for correlation trading exposures (including the floor, column heading “Correlation trading CRM”), and the standardised measurement method for correlation trading exposures not included in the model (column heading “Correlation trading SMM”).
effect is attributable to the application of the standardised method than to the advanced method. The impacts on Group 2 banks are smaller but still significant, adding up to an overall 3.6% increase in RWA over a subsample of 70 banks, totally attributable to the standardised method. Further detailed are provided in Table 6.

Table 6

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>CVA vs credit RWA</th>
<th>Of which</th>
<th>CVA vs total RWA</th>
<th>Of which</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Stand. method</td>
<td>Adv. method</td>
<td>Stand. method</td>
</tr>
<tr>
<td>Group 1 banks</td>
<td>81</td>
<td>10.2</td>
<td>5.3</td>
<td>4.8</td>
<td>8.5</td>
</tr>
<tr>
<td>Group 2 banks</td>
<td>70</td>
<td>4.0</td>
<td>4.0</td>
<td>0.0</td>
<td>3.6</td>
</tr>
</tbody>
</table>

5. **Findings regarding the leverage ratio**

The results regarding the leverage ratio are provided using two alternative measures of Tier 1 capital in the numerator:

- Basel III Tier 1, which is the fully phased-in Basel III definition of Tier 1 capital, and
- Current Tier 1, which is Tier 1 capital eligible under the Basel II agreement (the phase-in period of Basel III begins in 2013).

Total exposures of Group 1 banks according to the definition of the denominator in the leverage ratio were €64.5 trillion while total exposures for Group 2 banks were €5.7 trillion.

One important element in understanding the results of the leverage ratio section is the terminology used to describe a bank’s leverage. Generally, when a bank is referred to as having more leverage, or being more leveraged, this refers to a multiple (eg 33 times) as opposed to a ratio (eg 3%). Therefore, a bank with a high level of leverage will have a low leverage ratio.

Chart 7 presents leverage ratios based on Basel III Tier 1 and current Tier 1 capital. The chart provides this information for all banks, Group 1 banks, and Group 2 banks.
The weighted average current Tier 1 leverage ratio for all banks is 4.5%. For Group 1 banks, it is somewhat lower at 4.4% while it is 4.9% for Group 2 banks. The average Basel III Tier 1 leverage ratio for all banks is 3.6%. The Basel III average for Group 1 banks is 3.5%, and the average for Group 2 banks is 4.4%.

The analysis shows that Group 2 banks are generally less leveraged than Group 1 banks, and this difference increases under Basel III when the requirements are fully phased in. It is likely that a portion of this effect is due to the changes in the definition of capital, which, as seen in Section 2, are likely to affect Group 1 banks to a greater extent than Group 2 banks.

Under the current Tier 1 leverage ratio, 14 banks would not meet the 3% Tier 1 leverage ratio level, including four Group 1 banks and 10 Group 2 banks. Under the Basel III Tier 1 leverage ratio, 56 banks would not meet the 3% Tier 1 leverage ratio level, including 29 Group 1 banks and 27 Group 2 banks.

---

30 The median value is represented by the thin red horizontal line and the 75th and 25th percentile values are defined by the thick blue box. The upper and lower end points of the thin blue vertical lines show the values which are 1.5 times the range between the 25th and the 75th percentile above the 75th percentile or below the 25th percentile, respectively.
6. **Liquidity**

6.1 **Liquidity coverage ratio**

One of the two standards introduced by the Committee is a 30-day liquidity coverage ratio (LCR) which is intended to promote short-term resilience to potential liquidity disruptions. The LCR has been designed to require global banks to have sufficient high-quality liquid assets to withstand a stressed 30-day funding scenario specified by supervisors. The LCR numerator consists of a stock of unencumbered, high-quality liquid assets that must be available to cover any net outflow, while the denominator is comprised of cash outflows less cash inflows (subject to a cap at 75% of outflows) that are expected to occur in a severe stress scenario.

102 Group 1 and 107 Group 2 banks provided sufficient data in the 31 December 2011 Basel III monitoring exercise to calculate the LCR according to the Basel III liquidity framework. The weighted average LCR was 91% for Group 1 banks, compared to 90% for 30 June 2011, and 98% for Group 2 banks. These aggregate numbers do not speak to the range of results across the banks. Chart 8 below gives an indication of the distribution of bank results; the thick red line indicates the 100% minimum requirement, the thin red horizontal lines indicate the median for the respective bank group. 47% of the banks in the Basel III monitoring sample already meet or exceed the minimum LCR requirement, an increase from 45% at the end of June 2011, and 62% have LCRs that are at or above 75%.
For the banks in the sample, Basel III monitoring results show a shortfall (ie the difference between high-quality liquid assets and net cash outflows) of €1.8 trillion (which represents approximately 3% of the €61.4 trillion total assets of the aggregate sample) as of 31 December 2011, if banks were to make no changes whatsoever to their liquidity risk profile. This number is only reflective of the aggregate shortfall for banks that are below the 100% requirement and does not reflect surplus liquid assets at banks above the 100% requirement. Banks that are below the 100% required minimum have until 2015 to meet the standard by scaling back business activities which are most vulnerable to a significant short-term liquidity shock or by lengthening the term of their funding beyond 30 days. Banks may also increase their holdings of liquid assets.

31 In the chart banks’ LCRs have been capped at 400%. The median value is represented by the thin red horizontal line and the 75th and 25th percentile values are defined by the thick blue box. The upper and lower end points of the thin blue vertical lines show the values which are 1.5 times the range between the 25th and the 75th percentile above the 75th percentile or below the 25th percentile, respectively. The red crosses indicate outliers, while the thick red horizontal lines indicates 100% minimum ratio.
The key components of outflows and inflows are shown in Table 7. Group 1 banks show a notably larger percentage of total outflows, when compared to balance sheet liabilities, than Group 2 banks. This can be explained by the relatively greater contribution of wholesale funding activities and commitments within the Group 1 sample, whereas Group 2 banks, as a whole, are less reliant on these types of activities.

Table 7

<table>
<thead>
<tr>
<th>Category</th>
<th>Group 1 banks</th>
<th>Group 2 banks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outflows to…</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unsecured retail and small business customers</td>
<td>2.2%</td>
<td>2.3%</td>
</tr>
<tr>
<td>Unsecured non-financial corporates</td>
<td>5.1%</td>
<td>3.2%</td>
</tr>
<tr>
<td>Unsecured sovereign, central bank, public sector entities (PSEs) and multilateral development banks (MDBs)</td>
<td>1.1%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Unsecured financial institutions and other legal entities</td>
<td>5.4%</td>
<td>3.3%</td>
</tr>
<tr>
<td>Other unsecured wholesale funding incl. unsecured debt issuance</td>
<td>1.6%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Secured funding and collateral swaps</td>
<td>1.6%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Collateral, securitisations and own debt</td>
<td>0.9%</td>
<td>0.3%</td>
</tr>
<tr>
<td>Credit and liquidity facilities</td>
<td>2.4%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Other contractual and contingent cash outflows including derivative payables</td>
<td>1.3%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Total outflows**</td>
<td>21.5%</td>
<td>13.0%</td>
</tr>
<tr>
<td>Inflows from…</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financial institutions</td>
<td>2.3%</td>
<td>2.2%</td>
</tr>
<tr>
<td>Retail and small business customers, non-financial corporates and other entities</td>
<td>1.5%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Secured lending</td>
<td>1.8%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Other cash inflows including derivative receivables</td>
<td>0.1%</td>
<td>0.2%</td>
</tr>
<tr>
<td>Total inflows***</td>
<td>5.7%</td>
<td>4.4%</td>
</tr>
</tbody>
</table>

* As reported in the net stable funding ratio.  ** May contain rounding differences.  *** The 75% cap is only applied to the “total inflow” category, which leads the sum of the individual inflow categories for Group 2 banks to exceed the total inflow contribution on account of banks that report inflows that exceeded the cap.

75% cap on total inflows

As at 31 December 2011, no Group 1 and 16 Group 2 banks reported inflows that exceeded the cap, compared to 19 Group 2 banks as at 30 June 2011. Of the 16 Group 2 banks, three fail to meet the LCR, so the cap is binding on them. Of the banks impacted by the cap on inflows, 12 have inflows from other financial institutions that are in excess of the excluded portion of inflows.
**Composition of high-quality liquid assets**

The composition of high-quality liquid assets currently held at banks is depicted in Chart 9. The majority of Group 1 and Group 2 banks' holdings, in aggregate, are comprised of Level 1 assets; however the sample, on whole, shows diversity in their holdings of eligible liquid assets. Within Level 1 assets, 0% risk-weighted securities issued or guaranteed by sovereigns, central banks and PSEs, and cash and central bank reserves comprise the most significant portions of the qualifying pool, with the latter increasing its contribution to the overall composition to 31.4% as at the end of December 2011 from 27.6% as at the end of June 2011. Comparatively, within the Level 2 asset class, the majority of holdings are comprised of 20% risk-weighted securities issued or guaranteed by sovereigns, central banks or PSEs, and qualifying covered bonds.

![Chart 9](chart9.png)

**Composition of holdings of all eligible high-quality liquid assets (all banks)**

- Cash/central bank reserves: 31.4%
- L1, zero risk weight: 55.0%
- L1, non-zero risk weight: 2.5%
- L2, 20% risk weight: 6.7%
- L2, corporates: 2.0%
- L2, covered bonds: 2.4%

**Cap on Level 2 assets**

€117 billion of Level 2 liquid assets were excluded because reported Level 2 assets were in excess of the 40% cap as currently operationalised. 23 banks currently reported assets excluded, of which 16 (8% of the total sample) had LCRs below 100%. These results compare to €121 billion of Level 2 liquid assets excluded by 34 banks as at 30 June 2011, of which 24% (11% of the sample) had LCRs below 100%.

Chart 10 combines the above LCR components by comparing liquidity resources (buffer assets and inflows) to outflows. Note that the €710 billion difference between the amount of liquid assets and inflows and the amount of outflows and impact of the cap displayed in the chart is smaller than the €1.8 trillion gross shortfall noted above as it is assumed here that surpluses at one bank can offset shortfalls at other banks. In practice the aggregate shortfall in the industry is likely to lie somewhere between these two numbers depending on how efficiently banks redistribute liquidity around the system.
6.2 Net stable funding ratio

The second standard is the net stable funding ratio (NSFR), a longer-term structural ratio to address liquidity mismatches and provide incentives for banks to use stable sources to fund their activities.

102 Group 1 and 107 Group 2 banks provided sufficient data in the 31 December 2011 Basel III monitoring exercise to calculate the NSFR according to the Basel III liquidity framework. 51% of these banks already meet or exceed the minimum NSFR requirement, compared to 46% at the end of June 2011, with 92% at an NSFR of 75% or higher as at 31 December 2011.

The weighted average NSFR for the Group 1 bank sample is 98% while it is 95% for the Group 2 sample, compared to 94% for each of the Group 1 and Group 2 samples as at 30 June 2011. Chart 11 shows the distribution of results for Group 1 and Group 2 banks; the thick red line indicates the 100% minimum requirement, the thin red horizontal lines indicate the median for the respective bank group.
The results show that banks in the sample had a shortfall of stable funding\textsuperscript{33} of €2.5 trillion at the end of December 2011, a decrease from €2.8 trillion at the end of June 2011, if banks were to make no changes whatsoever to their funding structure. This number is only reflective of the aggregate shortfall for banks that are below the 100% NSFR requirement and does not reflect any surplus stable funding at banks above the 100% requirement. Banks that are below the 100% required minimum have until 2018 to meet the standard and can take a number of measures to do so, including by lengthening the term of their funding or reducing maturity mismatch.

It should be noted that the shortfalls in the LCR and the NSFR are not necessarily additive, as decreasing the shortfall in one standard may result in a similar decrease in the shortfall of the other standard, depending on the steps taken to decrease the shortfall.

\textsuperscript{32} The median value is represented by the thin red horizontal line and the 75th and 25th percentile values are defined by the thick blue box. The upper and lower end points of the thin blue vertical lines show the values which are 1.5 times the range between the 25th and the 75th percentile above the 75th percentile or below the 25th percentile, respectively. The red crosses indicate outliers, while the thick red horizontal lines indicates the 100% minimum ratio.

\textsuperscript{33} The shortfall in stable funding measures the difference between balance sheet positions after the application of available stable funding factors and the application of required stable funding factors for banks where the former is less than the latter.
## Annex

### Phase-in arrangements

(shading indicates transition periods – all dates are as of 1 January)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Leverage ratio</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Supervisory monitoring</td>
</tr>
<tr>
<td><strong>Minimum CET1 ratio</strong></td>
<td>3.5%</td>
<td>4.0%</td>
<td>4.5%</td>
<td>4.5%</td>
<td>4.5%</td>
<td>4.5%</td>
<td>4.5%</td>
<td>4.5%</td>
<td>4.5%</td>
</tr>
<tr>
<td><strong>Capital conservation buffer</strong></td>
<td>0.625%</td>
<td>1.25%</td>
<td>1.875%</td>
<td>2.50%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>G-SIB surcharge</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Phase-in 1.0%–2.5%</td>
</tr>
<tr>
<td><strong>Minimum common equity plus capital conservation buffer</strong></td>
<td>3.5%</td>
<td>4.0%</td>
<td>4.5%</td>
<td>5.125%</td>
<td>5.75%</td>
<td>6.375%</td>
<td>7.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Phase-in of deductions from CET1 (including amounts exceeding the limit for DTAs, MSRs and financials</strong></td>
<td>20%</td>
<td>40%</td>
<td>60%</td>
<td>80%</td>
<td>100%</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Minimum Tier 1 capital</strong></td>
<td>4.5%</td>
<td>5.5%</td>
<td>6.0%</td>
<td>6.0%</td>
<td>6.0%</td>
<td>6.0%</td>
<td>6.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Minimum total capital</strong></td>
<td>8.0%</td>
<td>8.0%</td>
<td>8.0%</td>
<td>8.0%</td>
<td>8.0%</td>
<td>8.0%</td>
<td>8.0%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Minimum total capital plus capital conservation buffer</strong></td>
<td>8.0%</td>
<td>8.0%</td>
<td>8.0%</td>
<td>8.625%</td>
<td>9.25%</td>
<td>9.875%</td>
<td>10.5%</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Capital instruments that no longer qualify as Tier 1 capital or Tier 2 capital</strong></td>
<td>Phased out over 10 year horizon beginning 2013</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| **Liquidity coverage ratio** |      |      |      |      |      |      |      |      | Observation period begins |
| **Net stable funding ratio** |      |      |      |      |      |      |      |      | Introduction minimum standard |

A revised document has been issued in March 2013. [http://www.bis.org/publ/bcbs243.htm](http://www.bis.org/publ/bcbs243.htm)