

## Results of the Basel III monitoring exercise based on data as of 31 December 2011

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## Executive summary

After the finalisation of the new regulatory framework (referred to as “Basel III”) in December 2010<sup>1</sup>, its impact is monitored semi-annually by both the Basel Committee at a global level and the European Banking Authority (EBA) at the European level, using data provided by participating banks on a voluntary and confidential basis.

This report is the second publication of results of the Basel III monitoring exercise<sup>2</sup> and summarises the aggregate results using data as of 31 December 2011. A total of 156 banks submitted data for this exercise, consisting of 44 Group 1 banks and 112 Group 2 banks.<sup>3</sup> Member countries’ coverage of their banking system was very high for Group 1 banks, reaching 100% coverage for many jurisdictions (aggregate coverage in terms of Basel II risk-weighted assets: 92%), while for Group 2 banks it was lower with a larger variation across jurisdictions (aggregate coverage: 27%). Furthermore, Group 2 bank results are driven by a relatively small number of large but non-internationally active banks, ie the results presented in this report may not be as representative as it is the case for Group 1 banks.<sup>4</sup>

Since the new EU directive and regulation are not finalised yet, no EU specific rules are analysed in this report. Furthermore, the monitoring exercise is carried out assuming **full implementation of the Basel III framework**<sup>5</sup>, ie transitional arrangements such as the phase-in of deductions and grandfathering arrangements are **not** taken into account.<sup>6</sup> The results are compared with the respective current national implementation of the **Basel II.5 framework** which has been in force since year-end 2011.

In addition, it is important to note that the monitoring exercise is based on a static balance sheet assumption, ie capital elements are only included if the eligibility criteria have been fulfilled at the reporting date. Planned management actions to increase capital or decrease risk-weighted assets are not taken into account. This allows for identifying **effective** changes in banks’ capital base instead of identifying changes which are solely based on changes in underlying modelling assumptions. As a consequence, monitoring results are not comparable to industry estimates as the latter usually include assumptions on banks’ future profitability, planned capital and/or further management actions that mitigate the impact of Basel III. In addition, monitoring results are not comparable to the results of the “Comprehensive Quantitative Impact Study” (C-QIS), which assessed the impact of policy proposals published in 2009 that differed significantly from the final Basel III framework.

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<sup>1</sup> Basel Committee on Banking Supervision, *Basel III: A global framework for more resilient banks and the banking system*, December 2010 and revised June 2011; Basel Committee on Banking Supervision, *Basel III: International framework for liquidity risk measurement, standards and monitoring*, December 2010.

<sup>2</sup> The first public report was published in April 2012, based on data as of 30 June 2011. See European Banking Authority, *Results of the Basel III monitoring exercise as of 30 June 2011*, April 2012 (<http://www.eba.europa.eu/Publications/Quantitative-Impact-Study/Basel-III-monitoring-exercise.aspx>).

<sup>3</sup> Group 1 banks are those with Tier 1 capital in excess of €3 bn and internationally active. All other banks are categorised as Group 2 banks.

<sup>4</sup> There are 17 Group 2 banks that have Tier 1 capital in excess of €3 billion. These banks account for 59.0% of total Group 2 RWA (current definition of RWA).

<sup>5</sup> Except for the rules related to central counterparties and stressed effective expected positive exposure (EEPE). The impact of these rules will be included only in the next reports, given recent finalization of corresponding regulatory rules by the Basel Committee.

<sup>6</sup> Except for securitisation positions in the trading book that do not belong to the correlation trading portfolio as stated in Annex I, para 16a of Directive 2006/49/EC.

The actual capital and liquidity shortfalls related to the new requirements by the time Basel III is fully implemented will differ from those shown in this report as the banking sector reacts to the changing economic and regulatory environment.

The monitoring exercise provides an impact assessment of the following aspects:

- Changes to banks' capital ratios under Basel III, and estimates of any capital shortfalls. In addition, estimates of capital surcharges for global systemically important banks (G-SIBs) are included, where applicable;
- Changes to the definition of capital that result from the new capital standard, referred to as common equity Tier 1 (CET1), including modified rules on capital deductions, and changes to the eligibility criteria for Tier 1 and total capital;
- Changes in the calculation of risk-weighted assets (RWA) resulting from changes to the definition of capital and counterparty credit risk requirements;
- The capital conservation buffer;
- The leverage ratio; and
- Two liquidity standards – the liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR).

## Key results

In the following, the main results of the monitoring exercise are presented. Please note that whenever reference to the previous period is made, it is based on a consistent sample of banks.<sup>7</sup>

### *Impact on regulatory capital ratios and estimated capital shortfall*

Assuming full implementation of the Basel III framework as of 31 December 2011 (ie without taking into account transitional arrangements), the CET1 capital ratios of Group 1 banks would have declined from an average CET1 ratio of 10.3% to an average CET1 ratio of 6.9%. 88% of Group 1 banks would be at or above the 4.5% minimum while 49% would be at or above the 7.0% target level (ie including the capital conservation buffer). The CET1 capital shortfall for Group 1 banks is €8 bn at a minimum requirement of 4.5% and €199 bn at a target level of 7.0%. The latter shortfall also includes the additional regulatory surcharge for global systemically important banks (G-SIB), where applicable. As a point of reference, the sum of profits after tax prior to distributions across the Group 1 sample in the first and second half of 2011 was €82.8 bn.

Compared to the previous exercise (reporting date as of June 2011), monitoring results show an increase in Group 1 banks' CET1 ratio of 0.4 percentage points; the corresponding shortfall with respect to the 7% target level decreased by €32.3 bn or 14.0%. This change for Group 1 banks may partly reflect additional efforts to fulfil the requirements of the EU recapitalisation exercise.

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<sup>7</sup> A consistent sample of banks only includes those banks that reported necessary data at both the June 2011 and December 2011 reporting dates, to allow for period-to-period comparisons.

Group 1 banks' average Tier 1 and total capital ratio decline from 12.0% to 7.1% and from 14.2% to 8.0%, respectively. Capital shortfalls corresponding to the minimum ratios (excl. the capital conservation buffer) amount to €25 bn (Tier 1 capital) and €85 bn (total capital). Taking into account the capital conservation buffer and the surcharge for global systemically important banks, the Group 1 banks' capital shortfall rises to €312 bn (Tier 1 capital) and €434 bn (total capital).

For Group 2 banks, the average CET1 ratio declines from 10.6% to 7.2% under Basel III, where 92% of the banks would be at or above the 4.5% minimum and 76% would be at or above the 7.0% target level. The respective CET1 shortfall is approx. €10 bn at a minimum requirement of 4.5% and €26 bn at a target level of 7.0%. Compared to the previous period, the average CET1 ratio of Group 2 banks is nearly unchanged at 7.2%. The average Tier 1 and total capital ratios of Group 2 banks decline from 11.4% to 7.7% and from 14.1% to 9.6%, respectively.

#### *Main drivers of changes in banks' capital ratios*

For Group 1 banks, the overall impact on the CET1 ratio can be attributed in almost equal parts to changes in the definition of capital and to changes related to the calculation of risk-weighted assets: while CET1 declines by 20.5%, RWA increase by 18.4%, on average. For Group 2 banks, while the change in the definition of capital results in a decline in CET1 of 26.1%, the new rules on RWA affect Group 2 banks far less (+8.8%). Reductions in Group 1 and Group 2 banks' CET1 are mainly driven by goodwill (-14.8% and -10.7%, respectively), followed by deductions for holdings of capital of other financial companies (-3.6% and -7.6%, respectively).

As to the denominator of regulatory capital ratios, the main driver is the introduction of CVA capital charges which result in an average RWA increase of 9.3% for Group 1 and of 3.8% for Group 2 banks. In addition to CVA capital charges, the transition from Basel II 50/50 deductions to a 1250% risk weight treatment is the main contributor to the increase in Group 1 banks' RWA. As Group 2 banks are in general less affected by the revised counterparty credit risk rules due to their different business models, these banks show a much lower increase in overall RWA (+8.8%). However, even within this group, the RWA increase is driven by CVA capital charges, followed by changes related to the transition from Basel II 50/50 capital deductions to a 1250% risk weight treatment, and to the items that fall below the 10/15% thresholds.

#### *Leverage ratio*

Assuming full implementation of Basel III, Group 1 banks show an average Basel III Tier 1 leverage ratio (LR) of 2.9%, while Group 2 banks' leverage ratio is 3.3%. 51% of participating Group 1 and 70% Group 2 banks would meet the 3% target level as of December 2011. If a hypothetical current leverage ratio (ie based on the current Tier 1 capital definition) was already in place, Group 1 and Group 2 banks' LR would be 4.1% and 4.6%, respectively.

Compared to the previous period, monitoring results show almost no change in average leverage ratios (+0.2 percentage points for Group 1 while for Group 2 banks it remains nearly unchanged at 3.3%).

#### *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.

Based on the December 2010 rules text Group 1 banks have reported an average LCR of 72% while the average LCR for Group 2 banks is 91%. The aggregate Group 1 and Group 2 shortfall (ie the difference between high-quality liquid assets and net cash outflows) is at €1.17 trillion which represents 3.7% of the €31 trillion total assets of the total sample.

Group 1 banks reported an average NSFR of 93% (Group 2 banks: 94%). To fulfill the minimum standard of 100% on a total basis, they need additional stable funding of €1.4 trillion.

Compared to the previous period, monitoring results show improved liquidity ratios for both Group 1 and Group 2 banks with a substantial dispersion across banks and countries.

## Abbreviations

C-QIS	comprehensive quantitative impact study
CCPs	central counterparties
CCR	counterparty credit risk
CET1	common equity tier 1
CRD	capital requirements directive
CRR	capital requirements regulation
CVA	credit value adjustment
DTA	deferred tax assets
EBA	European Banking Authority
EEPE	effective expected positive exposure
GHOS	Group of Governors and Heads of Supervision
G-SIB	global systemically important banks
ISG	Impact Study Group
LCR	liquidity coverage ratio
LR	leverage ratio
MSR	mortgage servicing rights
NSFR	net stable funding ratio
OBS	off-balance sheet
PSE	public sector entities
RWA	risk-weighted assets

## 1 General remarks

In September 2010, the Group of Governors and Heads of Supervision (GHOS), the Basel Committee on Banking Supervision's oversight body, announced a substantial strengthening of existing capital requirements and fully endorsed the agreements reached on 26 July 2010.<sup>8</sup> Since the beginning of 2011, the impact of the new requirements related to these capital reforms and the new liquidity standards is monitored and evaluated by the Basel Committee on Banking Supervision on a semi-annual basis for its member jurisdictions. At European level, this analysis is conducted by the European Banking Authority (EBA), also based on the Basel III reform package as the CRR and CRD IV, together the European equivalent to the Basel III framework, have not yet been finalised.

This report is the second publication of the Basel III monitoring exercise<sup>9</sup> and presents the results of the latest monitoring exercise based on consolidated data of European banks as of 31 December 2011. It provides an impact assessment of the following aspects:

- Changes to banks' capital ratios under Basel III, and estimates of any capital shortfalls. In addition, estimates of capital surcharges for global systemically important banks (G-SIBs) are included, where applicable;
- Changes to the definition of capital that result in a new capital standard, referred to as common equity Tier 1 (CET1), a reallocation of regulatory adjustments to CET1 and changes to the eligibility criteria for Tier 1 and total capital,
- Changes in the calculation of risk-weighted assets due to changes to the definition of capital and counterparty credit risk requirements,
- The capital conservation buffer of 2.5%,
- The introduction of a leverage ratio and
- The introduction of two international liquidity standards – the Liquidity Coverage Ratio (LCR) and the Net Stable Funding Ratio (NSFR)

The related policy documents are:

- *Basel III: A global framework for more resilient banks and the banking system as well as the Committee's 13 January press release on loss absorbency at the point of non-viability;*<sup>10</sup>
- *International framework for liquidity risk measurement, standards and monitoring;*<sup>11</sup> and
- *Global systemically important banks: Assessment methodology and the additional loss absorbency requirement.*<sup>12</sup>

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<sup>8</sup> See 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](http://www.bis.org/press/p100912.htm)).

<sup>9</sup> The first public report was published in April 2012, based on data as of 30 June 2011. See European Banking Authority, *Results of the Basel III monitoring exercise as of 30 June 2011*, April 2012 (<http://www.eba.europa.eu/Publications/Quantitative-Impact-Study/Basel-III-monitoring-exercise.aspx>).

<sup>10</sup> Basel Committee on Banking Supervision, *Basel III: A global framework for more resilient banks and the banking system*, December 2010 and revised June 2011, and the Committee's 13 January 2011 press release on loss absorbency at the point of non-viability.

<sup>11</sup> Basel Committee on Banking Supervision, *Basel III: International framework for liquidity risk measurement, standards and monitoring*, December 2010.

## 1.1 Sample of participating banks

The report includes an analysis of data submitted by 44 Group 1 banks from 14 countries and 112 Group 2 banks from 17 countries. Table 1 shows the distribution of participation by jurisdiction. Group 1 banks are those that have Tier 1 capital in excess of €3 billion and are internationally active. All other banks are defined as Group 2 banks.

	Group 1	Group 2
Austria (AT)	2	6
Belgium (BE)	1	2
Denmark (DK)	1	3
Finland (FI)	0	14
France (FR)	5	5
Germany (DE)	8	25
Hungary (HU)	1	2
Ireland (IE)	3	1
Italy (IT)	2	11
Luxembourg (LU)	0	1
Malta (MT)	0	3
Netherlands (NL)	3	16
Norway (NO)	1	6
Poland (PL)	0	5
Portugal (PT)	3	3
Spain (ES)	2	4
Sweden (SE)	4	0
United Kingdom (GB)	8	5
<b>Total</b>	<b>44</b>	<b>112</b>

Coverage of the banking sector is high, reaching 100% of Group 1 banks in some countries (aggregate coverage in terms of Basel II risk-weighted assets: 92%). Coverage of Group 2 banks is lower and varies across countries (aggregate coverage: 25%). Group 2 results are driven by a relatively small number of banks sufficiently large to be classified as Group 1 banks, but that have been classified as Group 2 banks by their supervisor because they are not internationally active.

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 all sections, comparisons with previous periods are based on a consistent sample of banks, ie including only those banks that reported

<sup>12</sup> Basel Committee on Banking Supervision, *Globally systemically important banks: Assessment methodology and the additional loss absorbency requirement*, November 2011.



necessary data at both the June 2011 and December 2011 reporting dates, to allow for period-to-period comparisons.

## **1.2 Methodology**

### ***“Composite bank” weighting scheme***

Average amounts in this document have been calculated by creating a composite bank at a total sample level, which implies 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.

### ***Box plots illustrate the distribution of results***

To ensure data confidentiality, most charts show box plots which give an indication of the distribution of the results among participating banks. The box plots are defined as follows:

- Thick red line: Respective minimum capital requirement
- Dashed lines: Respective minima plus the capital conservation buffer (capital) or respective regulatory target level (leverage, liquidity)
- Thin red line: Median value (50% of the observations are below this value, 50% are above this value)
- “x”: Mean (weighted average)
- Blue box: 25<sup>th</sup> and 75<sup>th</sup> percentile values. A percentile is the value of a variable below which a certain percent of observations fall. For example, the 25<sup>th</sup> percentile is the value below which 25 percent of the observations are found.
- Black vertical lines (“whiskers”):  
The upper end point represents the 95<sup>th</sup> percentile value, the lower end point the 5<sup>th</sup> percentile value.

### 1.3 Interpretation of results

The impact assessment was carried out by comparing banks' capital positions under Basel III to the current regulatory framework Basel II.5 (including revised rules on market risk exposures) which has been implemented consistently in European countries end-December 2011. With the exception of transitional arrangements for non-correlation trading securitisation positions in the trading book,<sup>13</sup> results are calculated assuming **full implementation of Basel III**<sup>14</sup>, ie without considering transitional arrangements related to the phase-in of deductions and grandfathering arrangements. This implies that 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 total capital held by a bank as they do not give any recognition for non-qualifying instruments that are actually phased out over a 10 year horizon.

The treatment of deductions and non-qualifying capital instruments under the assumption of full implementation of Basel III also affects figures reported in the leverage ratio section. The potential underestimation of Tier 1 capital will become less of an issue as the implementation date of the **leverage ratio approaches**. In particular, in 2013, the capital amounts based on the capital requirements in place on the Basel III implementation 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 (for more detail see section 5).

In addition, it is important to note that the monitoring exercise is based on **static balance sheet assumptions**, ie capital elements are only included if the eligibility criteria have been fulfilled at the reporting date. Planned bank measures to increase capital or decrease risk-weighted assets are not taken into account. This allows for identifying **effective** changes in bank capital instead of identifying changes which are simply based on changes in underlying modelling assumptions. As a consequence, monitoring results are not comparable to industry estimates as the latter usually include assumptions on banks' future profitability, planned capital and/or management actions that mitigate the impact of Basel III. In addition, monitoring results are not comparable to prior C-QIS results, which assessed the impact of policy proposals published in 2009 that differed significantly from the final Basel III framework. As one example, the C-QIS did not consider the impact of capital surcharges for G-SIBs based on the initial list of G-SIBs announced by the Financial Stability Board in November 2011.<sup>15</sup>

To enable comparisons between the current regulatory regime (Basel II.5) and Basel III, common equity Tier 1 elements according to the current regulatory framework are defined as those elements of current Tier 1 capital which are not subject to a limit under the respective national implementation of Basel II.

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<sup>13</sup> 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.

<sup>14</sup> Except for the rules related to central counterparties and stressed effective expected positive exposure (EEPE). The impact of these rules will be included only in the next reports, given recent finalization of corresponding regulatory rules by the Basel Committee.

<sup>15</sup> See Basel Committee on Banking Supervision, *Global systemically important banks: assessment methodology and the additional loss absorbency requirement*, November 2011; Financial Stability Board, *Policy measures to address systemically important financial institutions*, 4 November 2011. The list of G-SIBs will be updated annually.

## **1.4 Data quality**

For this monitoring exercise, participating banks submitted comprehensive and detailed non-public data on a voluntary and best-efforts basis. 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 data of sufficient quality 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.

## **2 Overall impact on regulatory capital ratios and estimated capital shortfall**

### **2.1 Capital ratios**

One of the core intentions of the Basel III framework is to increase the resilience of the banking sector by strengthening both the quantity and quality of regulatory capital. Therefore, higher minimum requirements have to be met and stricter rules for the definition of capital and the calculation of risk weighted assets apply. As the Basel III monitoring exercise assumes full implementation of Basel III (without taking into account any transitional arrangements<sup>16</sup>), it compares capital ratios under current rules with capital ratios that banks would show if Basel III were already fully in force at the reporting date.

In this context, it is important to elaborate on the implications the assumption of full implementation of Basel III has on the monitoring results. The Basel III capital amounts reported in this exercise assume that all common equity deductions are fully phased in and all non-qualifying capital instruments are fully phased out. Thus, these amounts may underestimate the amount of Tier 1 capital and total capital under current rules held by banks as they do not give any recognition for non-qualifying instruments which are actually phased out over a 10 year horizon.

Table 2 shows the overall change in common equity Tier 1 (CET1), Tier 1 and total capital ratios if Basel III were fully implemented, as of 31 December 2011.

For Group 1 banks, the impact on the average CET1 ratio is a reduction from 10.3% to 6.9% (a decline of 3.4 percentage points) while the average Tier 1 and total capital ratio would decline from 12.0% to 7.1% and from 14.2% to 8.0% respectively. In general, Group 2 banks' average capital ratios are higher than for Group 1.

The reduction in CET1 ratios is driven both by a new definition of capital deductions (numerator) and by increases in risk-weighted assets (denominator). Banks engaged heavily in activities subject to counterparty credit risk tend to show the largest denominator effects as these activities attract substantially higher capital charges under the new framework.

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<sup>16</sup> For details on the transitional arrangements, see paragraph 94 and 95 of the Basel III framework

Table 2							
Average capital ratios by banking group, in percent							
	Number of banks	CET1		Tier 1		Total capital	
		Current	Basel III	Current	Basel III	Current	Basel III
Group 1	41	10.3	6.9	12.0	7.1	14.2	8.0
Group 2	111	10.6	7.2	11.4	7.7	14.1	9.6

For Group 1 banks, the aggregate impact on the CET1 ratio can be attributed in almost equal parts to changes in the definition of capital and to changes related to the calculation of risk-weighted assets: while CET1 declines by 20.5%, RWA increase by 18.4%, on average. For Group 2 banks, while the change in the definition of capital results in a decline in CET1 of 26.1%, the new rules on RWA affect Group 2 banks far less (+8.8%), which may be explained by the fact that these banks' business models are less reliant on exposures subject to counterparty credit risk (which is the main driver of the RWA increase under the Basel III framework).

The following chart gives an indication of the distribution of results among participating banks. It includes the respective regulatory minimum requirement (thick red line), the weighted average (depicted as "x") and the median (thin red line), ie the value separating the higher half of a sample from the lower half (that means that 50% of all observations are below this value, 50% are above). Dashed lines indicate the minima plus the capital conservation buffer. For further information on the methodology see section 1.2.

Chart 1

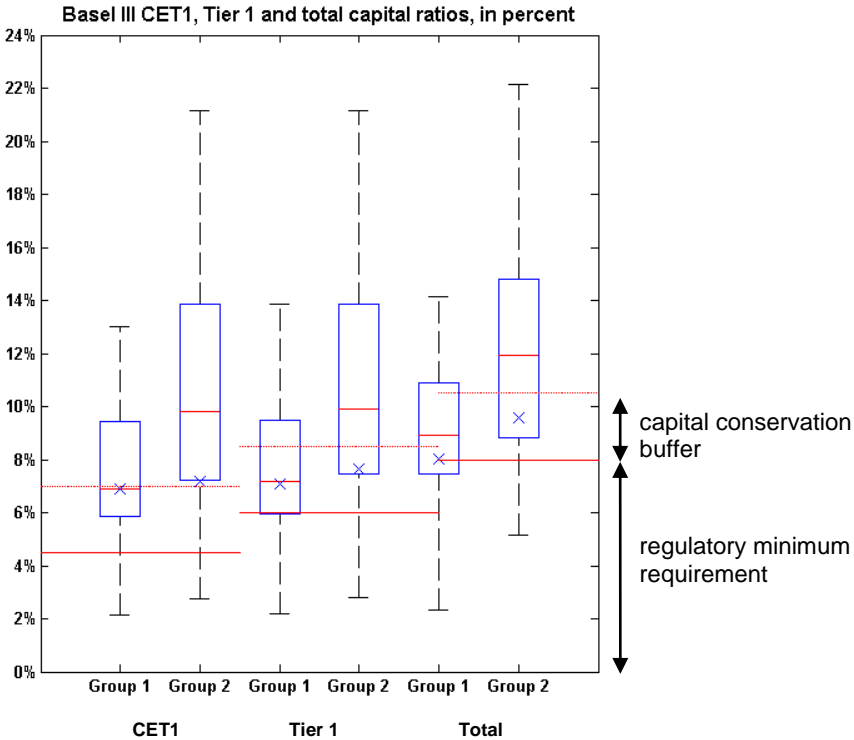
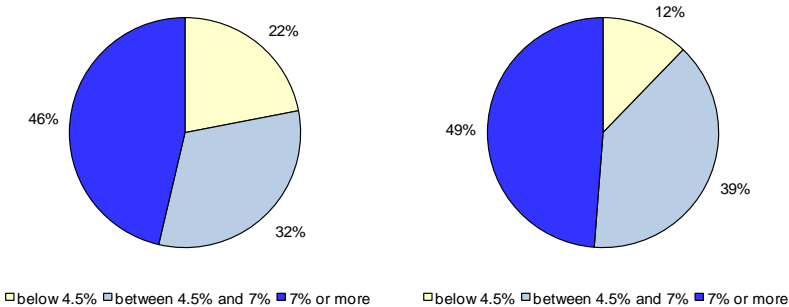


Chart 2 shows that out of the banks in the Group 1 sample, 88% show a CET1 ratio under Basel III that is at least equal to the 4.5% minimum capital requirement and 49% show a CET1 ratio above the 7.0% target ratio (ie, the minimum capital requirement plus the capital conservation buffer) as of end-December 2011. It also indicates since the last monitoring exercise (reporting date as of June 2011) there has already been a shift towards high-quality capital: the number of banks above the 4.5% minimum ratio increased by 10 percentage points since June 2011.

Chart 2

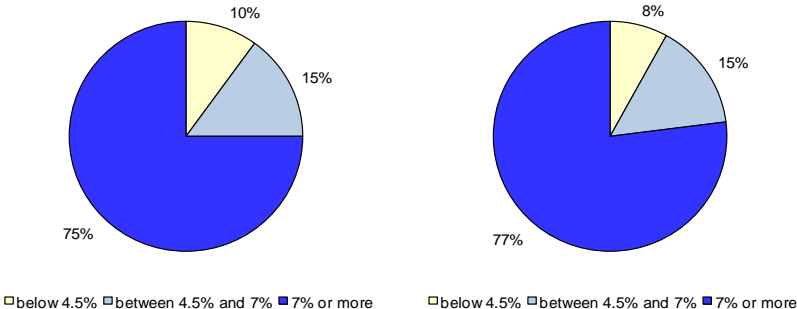
**Distribution of Basel III CET1 ratios, Group 1 banks H1 2011 (left) and H2 2011 (right)**



For Group 2 banks the change compared to June 2011 is less pronounced (+2 percentage points, see Chart 3). Of the banks in the Group 2 sample, 92% report a CET1 ratio equal to or higher than 4.5%; while 77% also achieve the target of 7.0%.

Chart 3

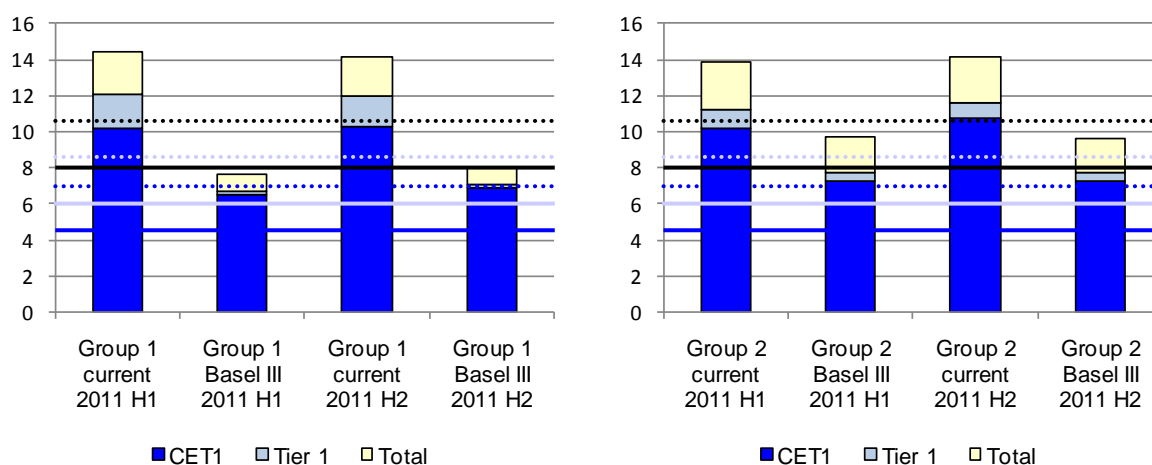
**Distribution of Basel III CET1 ratios, Group 2 banks H1 2011 (left) and H2 2011 (right)**



Compared to the previous exercise (reporting date as of June 2011) and based on a consistent sample of banks, results show an increase in the average Group 1 banks' CET1 ratio of 0.4 percentage points while for Group 2 banks, the ratio is unchanged at an aggregate level (see chart below).

Chart 4

**Comparison of average CET1, Tier 1 and total capital ratios with the previous period<sup>17</sup>**

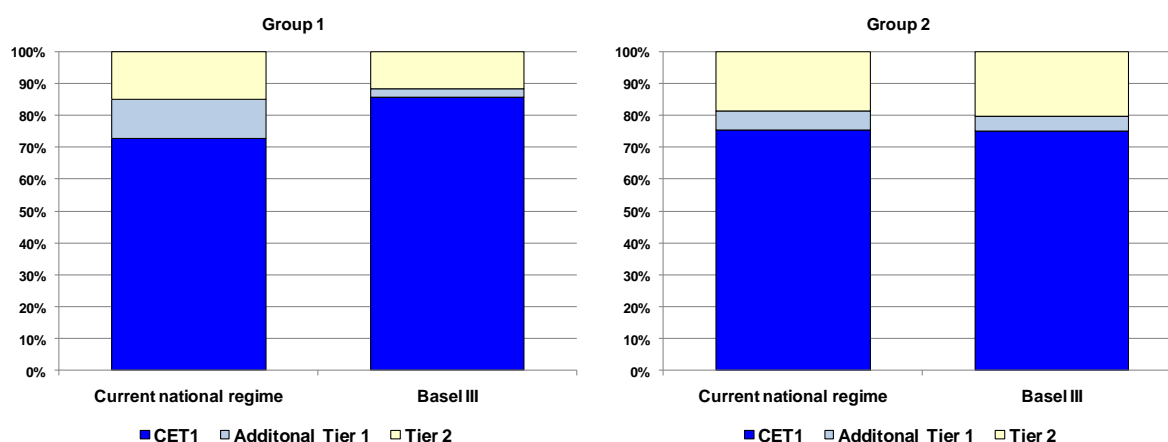


**2.2 Composition of capital**

Chart 5 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.

Chart 5

**Structure of regulatory capital under current national regime and Basel III**



For Group 1 banks, the share of Basel III CET1 to total capital is 85.7%. Additional Tier 1 and Tier 2 capital amount to 2.4% and 11.9% of the total capital of Group 1 banks, respectively. Of the Group 1 bank sample, 54% 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 75.0% with correspondingly higher shares of additional Tier 1 capital (4.8%) and Tier 2 capital (20.2%). Under the current national regime, the share of CET1 to total capital is lower at 72.4% for Group 1 banks and at 75.2% for Group 2 banks, with correspondingly higher shares of additional Tier 1 and Tier 2 capital.

<sup>17</sup> 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

Table 3 provides estimates of the additional 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 as of 31 December 2011. Please note that the shortfall figures are not comparable to those of the EBA recapitalisation exercise since the capital definitions and the calculation of the risk-weighted assets differ.

For Group 1 banks, the CET1 capital shortfall is €8 bn at a minimum requirement of 4.5% and €199 bn at a target level of 7.0%. With respect to the Tier 1 and total capital ratios, the capital shortfall comparing to the minimum ratios amount for €25 bn and €85 bn respectively. The capital surcharges for global systemically important banks (G-SIBs) are a binding constraint on 13 of the 14 G-SIBs included in this Basel III monitoring exercise.<sup>18</sup>

For Group 2 banks, the CET1 capital shortfall is €10 bn at a minimum requirement of 4.5% and €26 bn at a target level of 7.0%. The Tier 1 and total capital shortfall calculated relative to the 4.5% minimum amount for €14 and €18 bn, respectively.

Given these results, a significant effort by banks to fulfil the risk-based capital requirements is expected. However, it needs to be stressed that these shortfalls refer to target levels that would be in effect from 2019 and therefore banks have seven years to eliminate them. Importantly, many banks included in the CRD IV monitoring sample raised significant amounts of CET1 capital in the first half of 2012, in the course of the EU bank recapitalisation exercise.

	Group 1 banks	Group 2 banks
Number of banks	41	111
<b>Minimum</b>		
CET1 shortfall – 4.5%	7.7	10.3
Tier 1 shortfall – 6.0%	25.1	13.6
Total capital shortfall – 8.0%	84.7	17.7
<b>Minimum plus capital conservation buffer*</b>		
CET1 shortfall – 7.0%	198.6	25.6
Tier 1 shortfall – 8.5%	311.8	37.5
Total capital shortfall – 10.5%	433.5	45.4
* Including the capital surcharge for global systemically important banks (G-SIBs).		

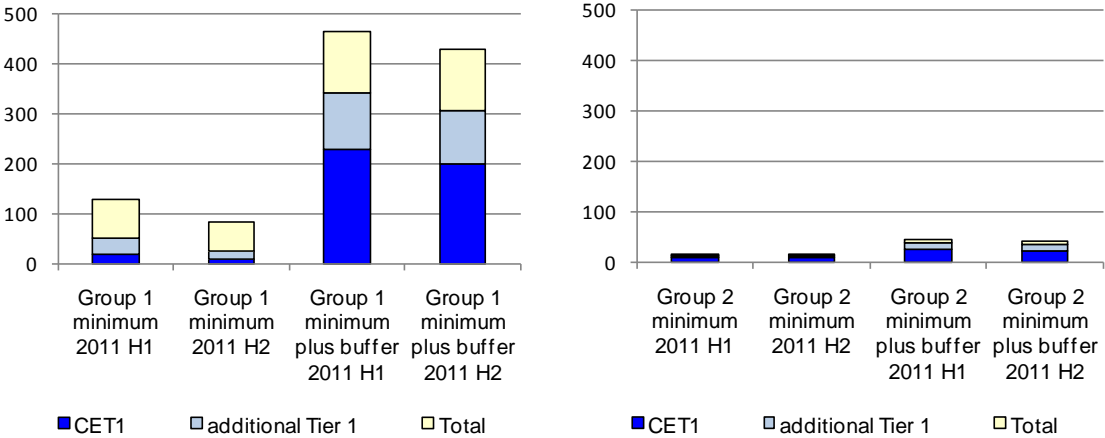
Compared to the previous period (reporting date as of June 2011) and based on a consistent sample of banks, the aggregate CET1 shortfall of Group 1 with respect to the 7% target level improved by €32.3 bn or 14.0% (see Chart 6).

<sup>18</sup> “Binding constraint” means in this context that the CET1 7.0% target level implies a higher capital shortfall for a G-SIB if the G-SIB surcharge is included than without considering this surcharge.

For Group 2 banks, the CET1 shortfall is nearly unchanged compared to June 2011; however, it is important to mention that the Group 2 bank sample is rather heterogeneous covering a broad range of business models.

Chart 6

**Estimated overall capital shortfall, Group 1 and Group 2 banks, in € billion**



**3 Impact of the new definition of capital on Common Equity Tier 1**

As noted above, reductions in capital ratios under the Basel III framework are attributed in part to capital deductions previously not applied at the common equity level of Tier 1 capital. Table 4 shows the impact of various deduction categories on the gross CET1 capital (ie, CET1 before applying deductions) of Group 1 and Group 2 banks.

	N	Goodwill	Intangibles	DTA*	Financials	MSRs	DTA above threshold	Excess above 15%**	Other***	Total
Group 1 banks	41	-14.8	-3.6	-3.5	-3.6	-	-1.5	-2.0	-5.8	-34.8
Group 2 banks	111	-10.7	-3.0	-1.0	-7.6	-	-2.3	-1.8	-4.8	-31.2

\* DTA refers to the deferred tax assets that are deducted in full under Basel III (ie it excludes DTAs that are related to temporary timing 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 DTA due to temporary 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 the aggregate, deductions reduce gross CET1 of Group 1 banks by 34.8% with goodwill being the most important driver, followed by holdings of capital of other financial companies. Deductions for defined benefit pension obligations and provisioning shortfalls relative to expected losses tend to be the largest contributors to other deductions across most countries. For Group 2 banks, average results are similar: CET1 deductions reduce gross CET1 by 31.2% due in particular to goodwill, and again followed by holdings of capital of other financial companies as the second most important driver. However, it should be noted that these results are driven by large Group 2 banks (defined as those with Tier 1 capital in excess of €3 billion). Without considering these banks, the overall decline of gross CET1 due to deductions would be 20.2%. Mortgage servicing rights related deductions have no impact, for both groups.

## 4 Changes in risk-weighted assets

Reductions in capital ratios under Basel III are also attributed to increases in risk-weighted assets as shown in Table 5 for the following two categories:

- **Definition of capital:** Here we distinguish three effects: 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 “other” includes the effect of lower risk-weighted assets for exposures that are currently included in risk-weighted assets but receive a deduction treatment under Basel III. The negative sign indicates that this effect reduces the RWA. This relief in RWA is mainly technical since it is compensated by deductions from capital. 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 correlation parameter against exposures to large financial institutions under the IRB approaches to credit risk. The effects of capital charges for exposures to central counterparties (CCPs) or any impact of incorporating stressed parameters for effective expected positive exposure (EEPE) are not included.

The changes regarding securitisation in the banking book and the trading book related changes shown in the previous report are not longer analysed due to the fact that these changes are already implemented on 31 December 2011.

### 4.1 Overall results

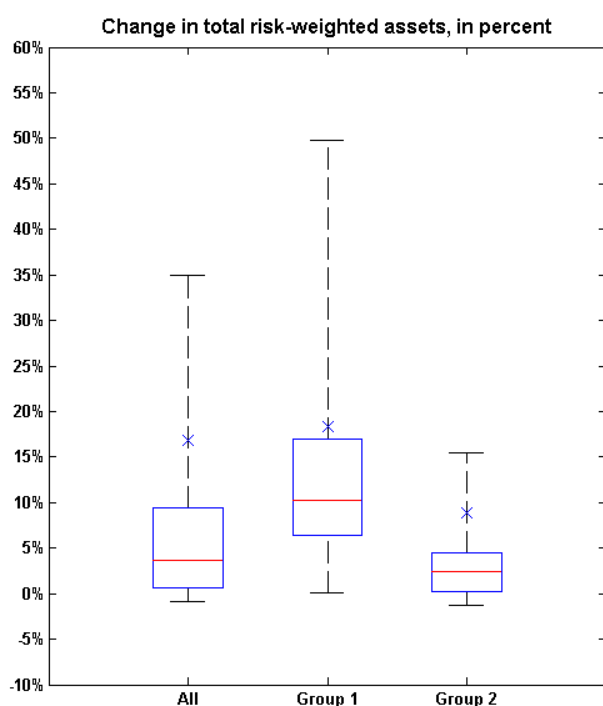
Risk-weighted assets for Group 1 banks increase overall by 18.4% which can be mainly attributed to higher risk-weighted assets for counterparty credit risk exposures (+10.7%), followed by changes due to the new RWA treatment of current Basel II 50/50 capital deductions (+5.3%). The main driver behind the capital charges for counterparty credit risk is the charge for credit valuation adjustments (CVA) while the higher asset correlation parameter results in an increase in overall risk-weighted assets of only 1.4%.

For Group 2 banks, aggregate RWA increase overall by 8.8%. The smaller increase relative to Group 1 banks is as expected since Group 2 banks tend to have less counterparty exposures. Therefore, for Group 2 banks, CCR capital charges increase RWA only by 4.1%. Moving Basel II 50/50 deductions to a 1250% risk weight treatment affects RWA by 2.8% and increases RWA attributable to items that fall below the 10/15% thresholds by 2.3%.

Table 5							
Changes in RWA by banking group, in percent							
	N	Total	Definition of capital			Counterparty credit risk	
			50/50	threshold	other	CVA	AVC
Group 1 banks	41	18.4	5.3	3.1	-0.8	9.3	1.4
Group 2 banks	111	8.8	2.8	2.3	-0.4	3.8	0.3

Chart 7 gives an indication of the distribution of the results across participating banks and illustrates that the dispersion is much higher within the Group 1 bank sample as compared to Group 2 banks.

Chart 7<sup>19</sup>



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

Credit valuation adjustment (CVA) risk capital charges lead to a 9.9% increase in total RWA for the subsample of 37 banks which provided the relevant data (9.3% for the full Group 1 sample). A smaller fraction of the total effect is attributable to the application of the standardised method rather than to the advanced method. The impact on Group 2 banks is not even half of the impact on Group 1 banks, adding up to an overall 4.5% increase in RWA over a subsample of 70 banks (3.8% for the full Group 2 sample), totally attributable to the standardised method. Further details are provided in Table 6.

<sup>19</sup> The median value is represented by the thin red horizontal line, the weighted average by "x" and the 75<sup>th</sup> and 25<sup>th</sup> percentile values are defined by the blue box. The upper and lower end points of the black vertical lines show the 95<sup>th</sup> and 5<sup>th</sup> percentile, respectively.

Table 6							
Changes in RWA for credit valuation adjustment (CVA), in percent							
	N	CVA vs credit RWA	Of which		CVA vs total RWA	Of which	
			Standardised method	Advanced method		Standardised method	Advanced method
Group 1 banks	37	11.9	5.4	6.5	9.9	4.5	5.4
Group 2 banks	70	5.1	5.1	-	4.5	4.5	-

## 5 Leverage Ratio

A simple, transparent, non-risk based leverage ratio has been introduced in the Basel III framework in order to act as a credible supplementary measure to the risk based capital requirements. It is intended to constrain the build-up of leverage in the banking sector and to complement the risk based capital requirements with a non-risk based “backstop” measure.

For the interpretation of the results of the leverage ratio section it is important to understand 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 of exposures to capital (ie 50 times) as opposed to a ratio (ie 2.0%). Therefore, a bank with a high level of leverage will have a **low** leverage ratio.

41 Group 1 and 111 Group 2 banks provided sufficient data to calculate the leverage ratio according to the Basel III framework.

To illustrate the impact of the new capital framework, a hypothetical ‘current leverage ratio’ is shown assuming the leverage ratio was already in place. This hypothetical ratio is based on the current definition of Tier 1 capital.

It is important to recognize that the monitoring results may underestimate the amount of capital that will actually be held by the bank over the next few years as the Basel III capital amounts reported in this monitoring exercise assume that all common equity deductions are fully phased in and all non-qualifying capital instruments are fully phased out. Thus, these amounts ceteris paribus underestimate the amount of Tier 1 capital and total capital under current rules held by banks as they do not give any recognition for non-qualifying instruments which are actually phased out over a nine year horizon. In this exercise, Common Equity Tier 1, Tier 1 capital and total capital could be very similar if all (or most) of the banks’ Additional Tier 1 and Tier 2 instruments are considered non-qualifying under Basel III. As the implementation date of the leverage ratio approaches, this will become less of an issue.

With respect to Group 1 banks, the average Basel III Tier 1 leverage ratio is 2.9% (compared to 2.7% in June 2011) while for Group 2 banks the leverage ratio is significantly higher at 3.3% (compared to 3.4% in June 2011). Assuming full implementation of Basel III at 31 December 2011, 51% of Group 1 banks would meet the calibration target of 3% for the leverage ratio while 73% would be at or above the 6% minimum requirement for the risk-based Tier 1 ratio. Regarding Group 2 banks, 70% show a leverage ratio at or above the target level while 86% reported Tier 1 ratios at or above the Tier 1 minimum requirement of 6%.

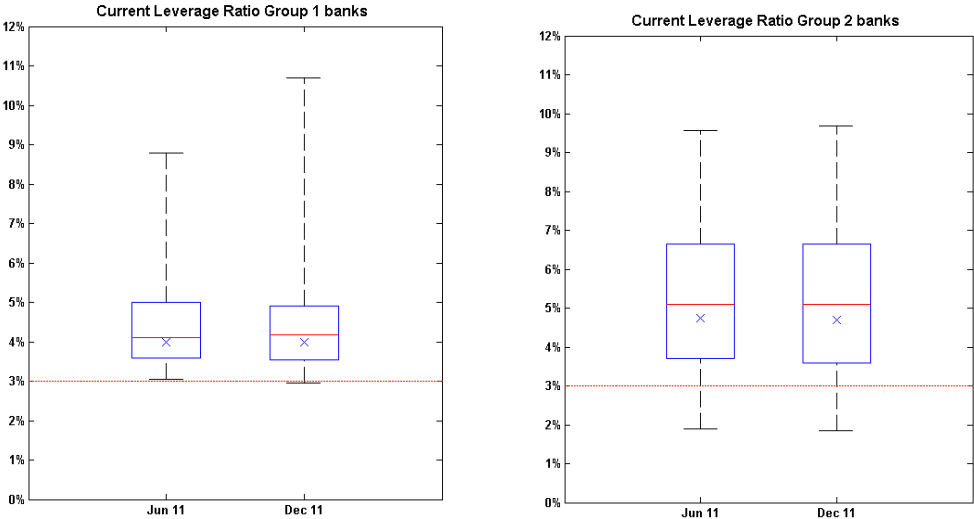
Using Tier 1 capital according to current rules in the numerator, the leverage ratio is 4.1% for Group 1 banks and 4.6% for Group 2 banks.

Comparing the average results for Group 1 and Group 2 banks, monitoring results indicate a positive correlation between bank size and the level of leverage, since the average LR is significantly lower for Group 1 banks.

Chart 8 and 9 give an indication of the distribution of the results across participating banks. The dashed red lines show the calibration target of 3% while the thin red lines represent the 50<sup>th</sup> percentile<sup>20</sup> (the “median”), ie the value separating the higher half of a sample from the lower half (it means that 50% of all observations fall below this value, 50% are above this value). The weighted average is shown as “x”. For further information on the methodology see section 1.2.

Chart 8<sup>21</sup>

**Current Leverage Ratio, in percent**



From Charts 8 and 9 it can be concluded that the average leverage ratio has improved slightly for Group 1 banks compared to the previous report, while the 5<sup>th</sup> and 95<sup>th</sup> percentiles remained almost unchanged in the case of the Basel III leverage ratio.

For Group 2 banks there are almost no changes compared to the previous report. Moreover, it should be noted that the dispersion of the leverage ratios is higher among Group 2 banks. This can be explained by the fact that the Group 2 sample is more heterogeneous since it consists of a larger number of banks covering a broad range of business models.

<sup>20</sup> A percentile is the value of a variable below which a certain percent of observations fall. For example, the 25<sup>th</sup> percentile is the value below which 25 percent of the observations may be found.

<sup>21</sup> The median value is represented by the thin red horizontal line, the weighted average by “x” and the 75<sup>th</sup> and 25<sup>th</sup> percentile values are defined by the blue box. The upper and lower end points of the black vertical lines show the 95<sup>th</sup> and 5<sup>th</sup> percentile, respectively. The dashed red line indicates the 3% target level.

Chart 9

### Basel III Leverage Ratio in percent

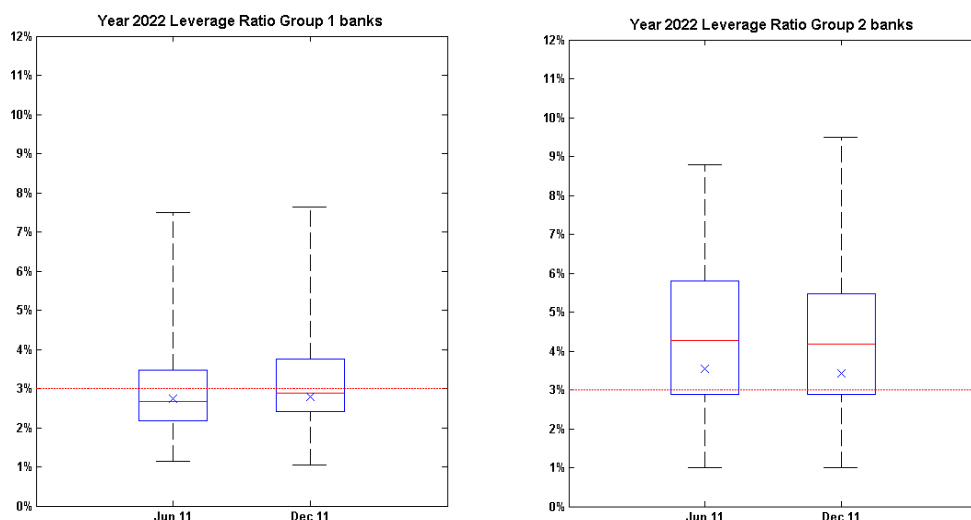


Table 7 shows the average Basel III leverage ratios and the capital shortfall under the assumption that banks already fulfill the risk-based capital requirements for the Tier 1 ratio of 6% and 8.5%, respectively. The shortfall is the additional amount of Tier 1 capital that banks would need to raise in order to meet the target level of 3% for the leverage ratio (ie after the risk-based minimum requirements have been met).

	Number of banks	Tier 1 solvency ratio of 6%		Tier 1 solvency ratio of 8.5%	
		Leverage Ratio	Shortfall in € bn	Leverage Ratio	Shortfall in € bn
Group 1 banks	41	3.0	90.7	3.6	20.7
Group 2 banks	111	3.7	15.8	4.2	13.9

Assuming that banks with a risk-based Tier 1 ratio below 6% would have raised capital to fulfill the minimum requirement of 6%, 44% of Group 1 banks and 24% of Group 2 banks would not meet the calibration target of 3% for the leverage ratio. The additional shortfall related to the leverage ratio requirement would be €90.7 bn (Group 1) and €15.8 bn (Group 2), respectively.

Assuming that banks with a risk-based Tier 1 ratio below 8.5% would have raised capital to meet the minimum requirement of 8.5%, 17% of Group 1 and 18% Group 2 banks would show a leverage ratio below the 3% target level. The additional shortfall would be €20.7 bn and €13.9 bn for Group 1 and Group 2 banks, respectively.

# 6 Liquidity

## 6.1 Liquidity Coverage Ratio

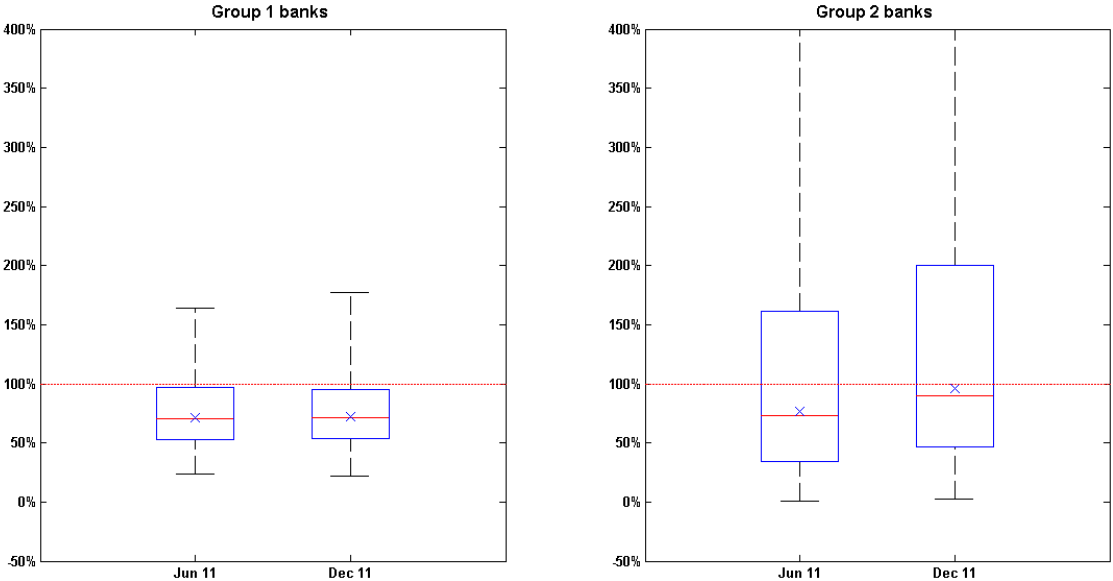
One of the new minimum standards is a 30-day liquidity coverage ratio (LCR) which is intended to promote short-term resilience to potential liquidity disruptions. The LCR has been designed to require banks to have sufficient high-quality liquid assets to withstand a stressed 30-day funding scenario specified 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 total outflows) that are expected to occur in a severe stress scenario.

155 Group 1 and Group 2 banks provided sufficient data in the end-2011 Basel III implementation monitoring exercise to calculate the LCR according to the Basel III liquidity framework. The average LCR is 72% for Group 1 banks and 91% for Group 2 banks. These aggregate numbers do not speak of the range of results across the banks.

Chart 10 below gives an indication of the distribution of bank results; the dashed red line indicates the 100% minimum ratio, the thin red horizontal lines indicate the median for the respective bank group while the mean value is shown as "x". 37% of Group 1 and Group 2 banks in the sample already meet or exceed the minimum LCR requirement and 45% have LCRs that are at or above 85%.

Chart 10<sup>22</sup>

Liquidity Coverage Ratio, in percent



<sup>22</sup> In the chart banks' LCRs have been capped at 400%. The median value is represented by the thin red horizontal line, the weighted average by "x" and the 75<sup>th</sup> and 25<sup>th</sup> percentile values are defined by the blue box. The upper and lower end points of the black vertical lines show the 95<sup>th</sup> and 5<sup>th</sup> percentile, respectively. The dashed red line indicates the 100% minimum ratio.

For the banks in the sample, monitoring results show a shortfall (ie the difference between high-quality liquid assets and net cash outflows) of €1.17 trillion (which represents 3.7% of the €31 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 minimum 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.

The key components of outflows and inflows are presented in Table 8. 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 shown, are less reliant on these types of activities.

Category	Group 1 banks	Group 2 banks
<b>Outflows to...</b>		
Unsecured retail and small business customers	1.7	1.7
Unsecured non-financial corporates	3.9	2.1
Unsecured sovereign, central bank, public sector entities (PSEs) and other counterparties	1.2	0.9
Unsecured financial institutions and other legal entities	5.2	3.3
Other unsecured wholesale funding incl. unsecured debt issuance	2.2	1.1
Secured funding and collateral swaps	1.9	1.0
Collateral, securitisations and own debt	0.5	0.4
Credit and liquidity facilities	2.1	0.6
Other contractual and contingent cash outflows including derivative payables	1.2	0.7
<b>Total outflows**</b>	<b>20.0</b>	<b>11.9</b>
<b>Inflows from...</b>		
Financial institutions	2.3	2.0
Retail and small business customers, non-financial corporates and other entities	1.6	1.2
Secured lending	1.5	0.4
Other cash inflows including derivative receivables	0.0	0.3
<b>Total inflows***</b>	<b>5.5</b>	<b>3.9</b>
<small>* As reported in the net stable funding ratio. ** Sums 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.</small>		

### **75% cap on total inflows**

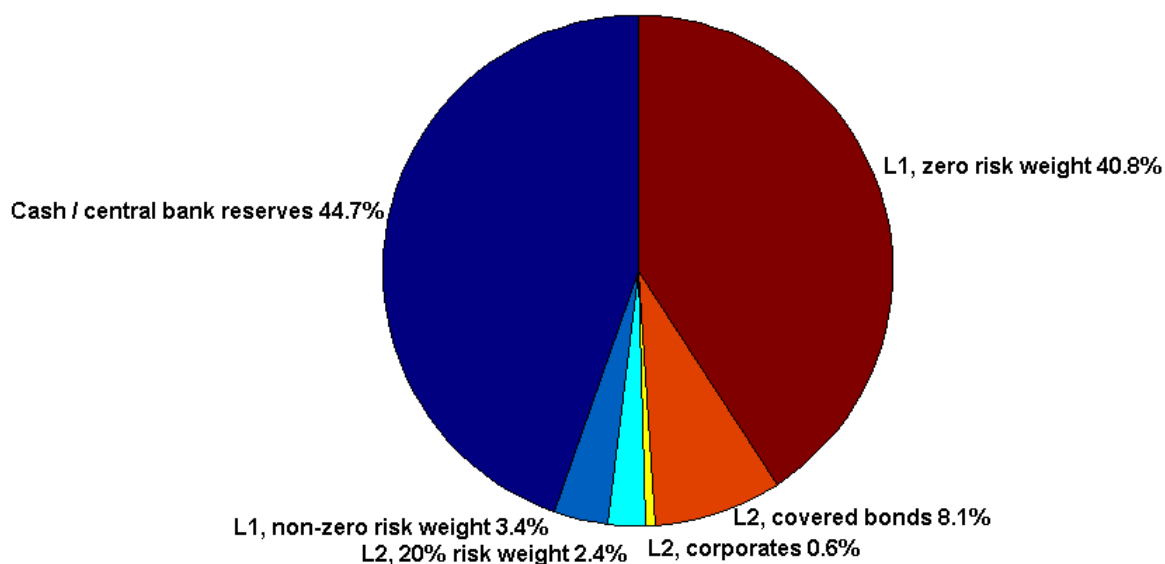
Two Group 1 and 17 Group 2 banks reported inflows that exceeded the cap. Of these, seven fail to meet the LCR, so the cap is binding on them.

### Composition of high-quality liquid assets

The composition of high-quality liquid assets currently held at banks is depicted in Chart 11. The majority of Group 1 and Group 2 banks' holdings, in aggregate, are comprised of Level 1 assets; however the sample, on the 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 significant portions of the qualifying pool, with the latter increasing its contribution to the overall composition to 44.7% as at the end of December 2011 from 30.1% as end of June 2011. Comparatively, within the Level 2 asset class, the majority of holdings is comprised of 20% risk-weighted securities issued or guaranteed by sovereigns, central banks or PSEs, and qualifying covered bonds.

Chart 11

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



### Cap on Level 2 assets

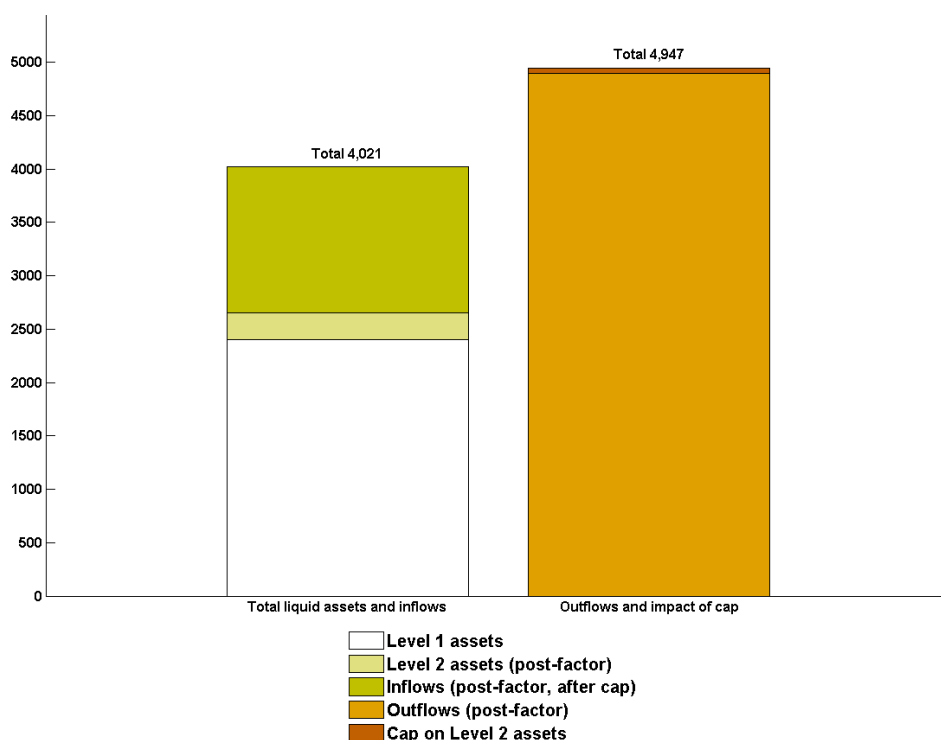
€53 billion of Level 2 liquid assets were excluded because reported Level 2 assets were in excess of the 40% cap. 24 banks currently reported assets excluded, of which 75.0% (11.6% of the total sample) had LCRs below 100%.

Chart 12 combines the above LCR components by comparing liquidity resources (buffer assets and inflows) to outflows. Note that the €926 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 €1.17 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.



Chart 12

**Comparison of buffer and inflows to outflows and cap (€ billions, all banks)**



**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 to provide incentives for banks to use stable sources to fund their activities.

155 Group 1 and Group 2 banks provided sufficient data in the mid-2011 Basel III implementation monitoring exercise to calculate the NSFR according to the Basel III liquidity framework. 40% of these banks already meet or exceed the minimum NSFR requirement, with 75% at an NSFR of 85% or higher.

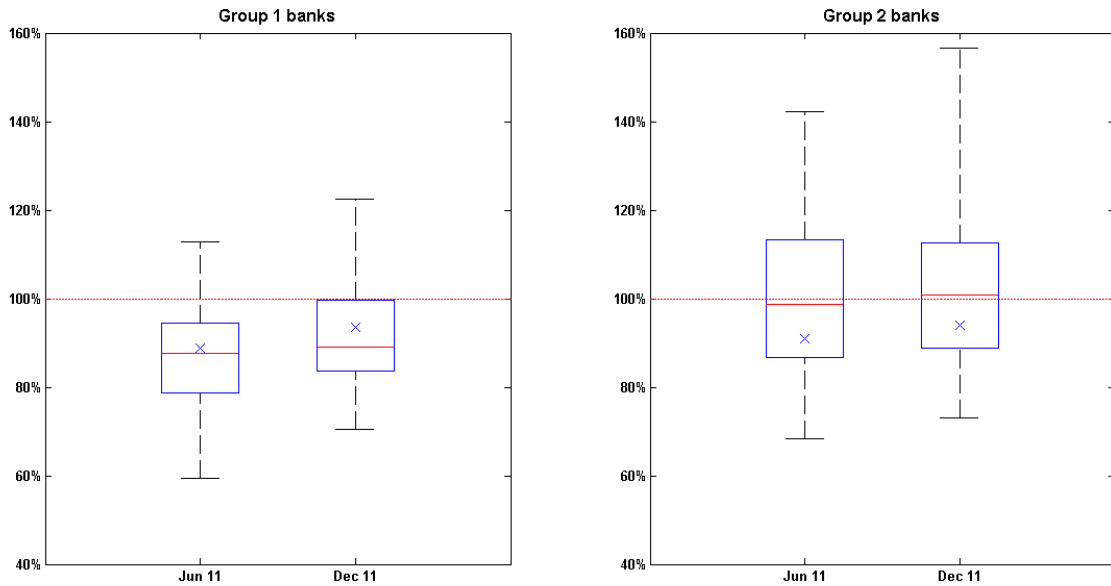
The average NSFR for each of the Group 1 bank and Group 2 samples is 93% and 94%, respectively. Chart 13 shows the distribution of results for Group 1 and Group 2 banks.

The results show that banks in the sample had a shortfall of stable funding<sup>23</sup> of €1.39 trillion at the end of December 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.

<sup>23</sup> 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.

Chart 13<sup>24</sup>

**Net Stable Funding Ratio, in percent**



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.

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<sup>24</sup> The median value is represented by the thin red horizontal line, the weighted average by "x" and the 75<sup>th</sup> and 25<sup>th</sup> percentile values are defined by the blue box. The upper and lower end points of the black vertical lines show the 95<sup>th</sup> and 5<sup>th</sup> percentile, respectively. The dashed red line indicates the 100% minimum ratio.