

# CRD IV – CRR/BASEL III MONITORING EXERCISE

RESULTS BASED ON DATA AS OF 30 JUNE 2015

2 MARCH 2016

**EBA**

EUROPEAN  
BANKING  
AUTHORITY

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# Abbreviations

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<b>ASF</b>	Available stable funding
<b>BCBS</b>	Basel Committee on Banking Supervision
<b>BIS</b>	Bank for International Settlements
<b>CET1</b>	Common equity tier 1
<b>CRD</b>	Capital requirements directive
<b>CRR</b>	Capital requirements regulation
<b>CVA</b>	Credit value adjustment
<b>EBA</b>	European Banking Authority
<b>EC</b>	European Commission
<b>EU</b>	European Union
<b>FSB</b>	Financial Stability Board
<b>G-SIB</b>	Global systemically important bank (term used by the BCBS – equivalent to the term ‘global systemically important institution’ (G-SII) used by the CRD)
<b>HQLA</b>	High-quality liquid assets
<b>LCR</b>	Liquidity coverage ratio
<b>LR</b>	Leverage ratio
<b>NCA</b>	National competent authority
<b>NSFR</b>	Net stable funding ratio
<b>RWA</b>	Risk-weighted assets
<b>RSF</b>	Required stable funding
<b>SREP</b>	Supervisory Review and Evaluation Process

## Executive summary

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Since the finalisation of the new global banking regulatory framework (Basel III) in December 2010<sup>1</sup>, its impact has been monitored semi-annually by the BCBS at the global level and by the EBA at the European level, using data provided by participating banks on a voluntary and confidential basis. The respective set of regulatory requirements in the EU comprises the CRD IV and the CRR, hereafter CRD IV – CRR, which applies as of 1 January 2014<sup>2</sup>. It is noteworthy that the current implementation of the CRD IV – CRR differs from the full implementation of the CRD IV – CRR due to a set of transitional arrangements.

Three parts of this report (risk-based and non-risk-based capital ratios and LCR) assess compliance with the EU framework, while one part (NSFR), in the absence of a finalised EU framework, monitors compliance with the Basel III standards. This report is the ninth publication of the monitoring exercise and summarises the results at the EU level using data as of 30 June 2015<sup>3</sup>. The sample of 297 banks, which submitted data for this exercise, comprises 49 Group 1 banks and 248 Group 2 banks<sup>4</sup>. EU Member States' coverage of their respective banking systems was notably high for Group 1 banks, reaching 100% coverage for many jurisdictions (aggregate coverage in terms of CRD IV – CRR RWA: 94.5%), while it was lower for Group 2 banks with more variation across jurisdictions (aggregate coverage: 36.6%).

### Capital requirements and shortfalls

Overall, the results of this analysis show a further improvement of European banks' capital positions. Assuming full implementation of the CRD IV – CRR (i.e. without taking into account transitional arrangements), the risk-based capital ratios for Group 1 and Group 2 banks stand at 11.6% and 12.5% for the CET1 ratio, 12.2% and 12.9% for the Tier 1 ratio and 14.8% and 14.5% for the total capital ratio respectively (consistent sample as of mid-2015). The average leverage ratios for the same sample of banks reach 4.2% (Group 1) and 5% (Group 2). On average, European

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<sup>1</sup> BCBS, 'Basel III: A global framework for more resilient banks and banking systems', December 2010 and revised June 2011; BCBS, 'Basel III: International framework for liquidity risk measurement, standards and monitoring', December 2010.

<sup>2</sup> Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012. Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC.

<sup>3</sup> Previous reports are available on the EBA's website (<http://www.eba.europa.eu/risk-analysis-and-data/quantitative-impact-study/basel-iii-monitoring-exercise>).

<sup>4</sup> Group 1 banks are banks with Tier 1 capital in excess of EUR 3 billion and internationally active. All other banks are categorised as Group 2 banks. This report has classified Group 2 banks into sub-samples: large Group 2 banks which have Tier 1 capital in excess of EUR 3 billion, medium-sized banks with Tier 1 capital below or equal to EUR 3 billion and above EUR 1.5 billion, and small banks having Tier 1 capital below or equal to EUR 1.5 billion. Among the Group 2 banks, there are 17 banks that have Tier 1 capital in excess of EUR 3 billion but are not internationally active.

banks largely fulfil the future regulatory capital requirements, while only a very small number of banks suffer from potential capital shortfalls. Those shortfall amounts constitute only a very minor fraction of the amounts observed at the beginning of the monitoring period (mid-2011), and the difference between current and full implementation capital ratios has been shrinking continuously. This monitoring exercise, for the first time, considers the leverage ratio as defined in EU legislation in the capital analysis section<sup>5</sup>. Conceptually, the (non-risk-based) leverage ratio has been developed to serve as a backstop against unduly low risk-adjusted capital levels and to prevent the excessive build-up of leverage, both over the financial cycle as well as across credit institutions. The analysis contained in this report indicates that the leverage ratio is indeed a binding regulatory constraint for a significant proportion of institutions in the sample. On average, Group 1 banks are more constrained by the leverage ratio requirement than Group 2 banks.

### Liquidity requirements and shortfalls

For the first time, calculations of the LCR in this report are based on the European Commission (the Commission) delegated Regulation (EU) 2015/61, which specifies the general requirement set out in Article 412(1) of the CRR<sup>6</sup>. As defined in Article 38 of this delegated regulation and in accordance with Article 460(2) of the CRR, the minimum requirement has been set at 60% from 1 October 2015 and will gradually increase to 100% in January 2018 (i.e. the EU regulation requires a minimum of 100% one year before the Basel standard). The NSFR is anticipated to be introduced on 1 January 2018 with a minimum requirement of 100%. Since the NSFR has not yet been finalised at the EU level, the NSFR calculations in this report are based on the revised Basel III NSFR framework, published in October 2014.<sup>7</sup>

With regard to the LCR, the average ratio for data as of the end of June 2015 is 121.2% and 156.7% for Group 1 and Group 2 banks respectively. In the total sample, 79% of the banks show an LCR ratio above 100%, while 91% of the banks have an LCR ratio above the 70% minimum requirement of January 2016. The overall shortfall in relation to the 100% threshold is EUR 32.6 billion. There has been an increase in banks' LCR over time, which can be attributed to structural adjustments (both an increase in HQLA and a decrease of net outflows), as well as to the recalibration of the LCR framework as published in January 2013. The change in the current period is also driven by the first application of the Commission delegated regulation, whereas the Basel III LCR framework has been used for the previous reporting dates.

With respect to the NSFR, Group 1 and Group 2 banks show an average ratio of 104% and 111% respectively, with an overall shortfall in stable funding of EUR 341 billion. About 77% of participating banks already meet the minimum NSFR requirement of 100%. Compared with

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<sup>5</sup> The EBA is currently analysing different aspects of the calibration and the impact of the leverage ratio as set out in Article 511(3) and (4) of the CRR. See also 'EBA: Report on impact of differences in leverage ratio definitions – Leverage ratio exposure measure under Basel III and the CRR' (2014). Available under <https://www.eba.europa.eu/documents/10180/534414/EBA+-+Leverage+ratio+analytical+report.pdf>

<sup>6</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L:2015:011:TOC>.

<sup>7</sup> <http://www.bis.org/bcbs/publ/d295.pdf>.

previous periods, there is a continuous increase in banks' NSFR, which is mainly driven by the increasing amount of ASF for both groups.

# 1. General remarks

## 1.1 Sample of participating banks

**Table 1: Number of banks which submitted data for this monitoring exercise<sup>8</sup>**

	Group 1	Group 2	Of which:			Total
			Large	Medium-sized	Small	
Austria	3	8	—	3	5	11
Belgium	4	12	—	1	11	16
Cyprus	—	4	—	—	4	4
Czech Republic	—	14	1	3	10	14
Denmark	2	13	4	3	6	15
France	5	12	2	—	10	17
Germany	8	99	11	9	79	107
Greece	4	—	—	—	—	4
Hungary	1	2	—	—	2	3
Ireland	4	9	1	3	5	13
Italy	2	27	7	8	12	29
Latvia	—	2	—	—	2	2
Lithuania	—	2	—	—	2	2
Luxembourg	—	3	—	2	1	3
Malta	—	4	—	—	4	4
Netherlands	3	9	—	2	7	12
Poland	—	5	1	—	4	5
Portugal	2	4	—	1	3	6
Spain	2	9	7	2	—	11
Sweden	4	2	—	—	2	6
United Kingdom	5	8	1	3	4	13
<b>Total</b>	<b>49</b>	<b>248</b>	<b>35</b>	<b>40</b>	<b>173</b>	<b>297</b>

<sup>8</sup> The number of banks which submitted data is higher than the number of banks included in the analysis of the various sections of the report due to the following reasons: (a) the banks which did not submit data on the respective topic or which submitted data of low quality were excluded from the relevant sections of the report; and (b) subsidiaries of banks which submitted data on a solo basis were also excluded from the analysis in order to avoid double counting.

Table 1 shows the participation by jurisdiction and group of banks. This report includes an analysis of data submitted by 297 banks residing in 21 EU Member States. This sample consists of 49 Group 1 banks from 14 countries, and 248 Group 2 banks from 20 countries<sup>9</sup>. Group 1 banks in this report are defined as banks with Tier 1 capital in excess of EUR 3 billion and which are internationally active. All other banks are classified as Group 2 banks. Coverage of the banking sector is high, reaching 100% of Group 1 banks in many countries (aggregate coverage in terms of CRD IV – CRR RWA: 94.5%). Coverage of Group 2 banks is lower and varies across countries (aggregate coverage: 36.6%).

For the purpose of a more differentiated analysis, Group 1 and Group 2 banks are further separated into sub-samples. G-SIBs<sup>10</sup> have been analysed separately under Group 1 banks. To analyse the driving forces behind aggregate Group 2 results in more detail, this report has classified Group 2 banks into three sub-samples: large Group 2 banks which have Tier 1 capital in excess of EUR 3 billion, medium-sized banks with Tier 1 capital below or equal to EUR 3 billion and above EUR 1.5 billion, and small banks having Tier 1 capital below or equal to EUR 1.5 billion. In total, 35 large, 40 medium-sized and 173 small Group 2 banks have participated in the current analysis.

Not all banks provided data relating to all sought parts of the reporting template of this monitoring exercise. Accordingly, a certain number of banks are excluded from individual sections of this monitoring analysis due to the provision of incomplete data. In each section, comparisons with previous periods are based on a consistent sample of banks — i.e. including only those banks which have consistently reported the relevant data for all sought reference dates, so as to allow for reference-date-to-reference-date comparisons and time series analyses within each section. Similarly, the analyses relating to the interactions and combined effects of various regulatory ratios have been based on consistent samples of banks to facilitate such an analytical approach.

## 1.2 Methodology

### ‘Composite bank’ weighting scheme

Average amounts in this analysis have been calculated by creating a composite bank at the relevant sample level — i.e. the relevant sample averages are implicitly weighted. For example, the average CET1 capital ratio is the sum of all banks’ CET1 capital included in the relevant sample divided by the sum of all banks’ RWA included in the relevant sample. Similarly, the average Tier 1 leverage ratio is the sum of all banks’ Tier 1 capital included in the relevant sample divided by the sum of all banks’ leverage ratio exposure measures included in the relevant sample. By choosing this weighting scheme, methodologically, the results of this analysis can implicitly be considered as more representative of the European banking sector as a whole than unweighted averages.

<sup>9</sup> For one Member State all participating banks are classified as Group 1 according to their size and activity.

<sup>10</sup> See also ‘BCBS: Global systemically important banks – Updated assessment methodology and the higher loss absorbency requirement’ (2013), ‘EBA: Final draft RTS on the methodology for the identification of global systemically important institutions’ (2014) and ‘FSB: 2015 update of list of G-SIBs’ (November 2015).

### Box plots illustrating the distribution of results

To present more detailed results while, at the same time, ensuring data confidentiality, some charts show box plots, which give an indication of the distribution of the results among participating banks. Those box plots are defined as follows:

Thick red line:	Respective minimum requirement
Dashed lines:	Respective minima plus the capital conservation buffer (capital)
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 per cent of observations fall. For example, the 25 <sup>th</sup> percentile is the value below which 25% 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

This quantitative impact study aims to monitor the convergence of the EU banks with the regulatory requirements under the assumption of the full implementation of CRD IV – CRR/Basel III.

The full implementation of the CRD IV – CRR package does not consider the transitional arrangements relating to the phase-in of deductions and to the grandfathering of capital instruments<sup>11</sup>. This implies that the CRD IV – CRR 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 regulatory capital held by banks, as they do not recognise the gradual phase-in of common equity deductions and the non-qualifying instruments that are actually phased out over multi-year time horizons.

For the calculation of results referred to as ‘current rules’, the report uses figures based on the current CRD IV – CRR framework (i.e. on the current state of implementation), being mindful of the fact that this framework is changing over time. This means that for the current reference date (June 2015), the figures under the current rules refer to the state of implementation of the CRD IV – CRR framework as of June 2015. Therefore, the difference between the fully phased-in results and the results under current rules in the risk-sensitive capital ratio and RWA analysis is solely due to the remaining transitional arrangements from June 2015 until the full implementation date.

<sup>11</sup> For details on the transitional arrangements, see, in particular, Part Ten of the CRR and, in addition, paragraphs 94 and 95 of the Basel III framework (‘Basel III – A global regulatory framework for more resilient banks and banking systems’).

The treatment of deductions and non-qualifying capital instruments under the assumption of full implementation of the CRD IV – CRR similarly affects the figures reported in the leverage ratio analysis. The potential underestimation of Tier 1 capital is becoming less of an issue as the implementation date for the leverage ratio approaches. In other words, in 2015, the capital amounts based on the CRD IV – CRR capital requirements in place on the reference date include the amount of non-qualifying capital instruments at that point in time.

It is important to note that this monitoring exercise is based on the assumption of a static balance sheet — i.e. capital elements are only included should they fulfil the eligibility criteria as of the reference date. Planned, but not implemented, bank measures to increase capital or decrease RWA are not taken into account. This allows the identification of effective changes in banks' capital rather than relying on anticipated changes based on underlying behavioural and modelling assumptions. As a consequence, these monitoring results are different from industry estimates, as the latter usually include assumptions on banks' future profitability, planned capital and/or management actions to mitigate the impact of the CRD IV – CRR framework.

## 1.4 Data quality

The banks participating in this monitoring exercise submitted comprehensive and detailed non-public confidential data on a best-effort voluntary basis. Supervisors have been working closely with banks to ensure the high quality, completeness and consistency of data with the reporting instructions. For each of the analyses below, banks are included in the sample only if they have provided data of sufficient quality to conduct the analysis in question.

For the risk-based capital ratio and RWA analyses, data from supervisory reporting systems have been used wherever possible to reduce recourse to banks. The sample of banks has been extended for the purpose of analytical work on the leverage ratio as defined in EU legislation. As some of the banks have reported the relevant information for the first time, data quality is expected to further improve.

In the liquidity part of this monitoring exercise, some banks may have reported their liquidity risk positions based on slightly different interpretations of the rules. Notably, individual banks appear to be using different methodologies to identify the operational wholesale deposits and to exclude liquid assets. However, data quality has improved significantly since the beginning of the monitoring exercise.

## 2. Capital requirements and shortfalls

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### 2.1 Capital ratios

One of the main objectives of the CRD IV – CRR/Basel III framework is to increase the resilience of the banking sector by strengthening both the quantity and quality of regulatory capital. For this purpose, the framework sets higher quantitative minimum requirements and stricter rules for the definition of capital and for the calculation of RWA. The regulatory capital requirements consist of risk-based (capital ratios in relation to RWA) and non-risk-based (leverage ratio) measures.

The risk-based ratios refer to the capital definitions of CET1, Tier 1 and total capital, decreasing in their degree of loss absorbency in relation to RWA. At the date of full implementation, the CRD IV – CRR/Basel III standard requires a regulatory CET1 ratio of 7% (minimum, plus a 2.5% conservation buffer), a Tier 1 ratio of 8.5% (including a CET1 conservation buffer) and a total capital ratio of 10.5% (including a CET1 conservation buffer). Figures related to capital shortfalls also reflect the bank-specific CET1 G-SIB buffer. Additional capital requirements which depend on macroprudential considerations (systemic risk and countercyclical buffers) or are based on supervisory judgement (Pillar II add-ons) are not included in the below analysis.

The non-risk-based capital requirement, the leverage ratio, is defined in terms of Tier 1 capital in relation to a comprehensive (on- and off-balance-sheet) exposure measure. The CRD IV – CRR/Basel III standard is preliminarily set at a 3% minimum requirement. For the first time, this monitoring exercise considers the leverage ratio as defined in EU legislation for the purpose of the capital analysis.

As this exercise envisages full implementation of CRD IV – CRR (without accounting for any transitional arrangements), for the most part, it compares banks' actual capital ratios with the capital ratios which banks would exhibit had the set of rules of the CRD IV package been fully implemented at the reference date. The results shown under 'current rules' are based on the state of regulatory implementation at the reference date. In this context, it is important to elaborate on the implications of full implementation of the CRD IV package on these monitoring results. These amounts may underestimate the amount of capital actually held by banks, as they do not offer any recognition of non-qualifying instruments to be phased out and of deductions to common equity phased in during the transitional period.

Table 2 shows the difference between banks' risk-based capital ratios and leverage ratios, calculated according to current rules as of 30 June 2015, and the levels that would result if the CRD IV – CRR requirements were already to be fully implemented.

For Group 1 banks, this full implementation would result in a reduction of the CET1 ratio from 12.7% under the current rules (i.e. taking into account the transitional arrangements applying in 2015) to 11.6%, while the average Tier 1 and total capital ratios would decline under the full

implementation regime from 13.7% to 12.2% and from 16.2% to 14.8% respectively. Regarding the leverage ratio, assuming implementation as defined in EU legislation at the reporting date, the average leverage ratio of Group 1 banks stands at 4.7%. Under full implementation of the CRD IV – CRR, the leverage ratio would decrease to 4.2%. Overall, the difference between Group 1 banks' capital ratios under the current state and under full implementation ranges between 100 basis points (bps) and 150 bps for the risk-sensitive measures and around 50 bps for the leverage ratio. Those differences appear smaller for G-SIBs, which, at the same time, exhibit lower capital ratios (risk-sensitive and leverage ratios) under current as well as assumed full CRD IV – CRR implementation.<sup>12</sup>

Under full implementation of the risk-sensitive capital requirements for banks, the CET1 ratio of Group 2 banks would, on average, drop from 13.6% to 12.5%, the Tier 1 ratio from 13.8% to 12.9%, and the total capital ratio from 15.5% to 14.5%. In total, for each of those risk-sensitive capital requirements, the difference between the current state and full implementation is approximately 100 bps for Group 2 banks. The leverage ratio of Group 2 banks would drop from 5.3% currently to 5.0% under full implementation. Overall, that difference appears to be smaller for the small banks within Group 2. Those small Group 2 banks, at the same time, exhibit higher risk-sensitive capital ratios under assumed full CRD IV – CRR implementation; however, on average, they exhibit lower leverage ratios.

Comparing Group 1 and Group 2 banks, the distance of current to regulatory capital requirements under full implementation appears larger for the former group, with the latter also being more capitalised (relative to RWA and according to leverage ratio) in terms of CET1 and Tier 1.

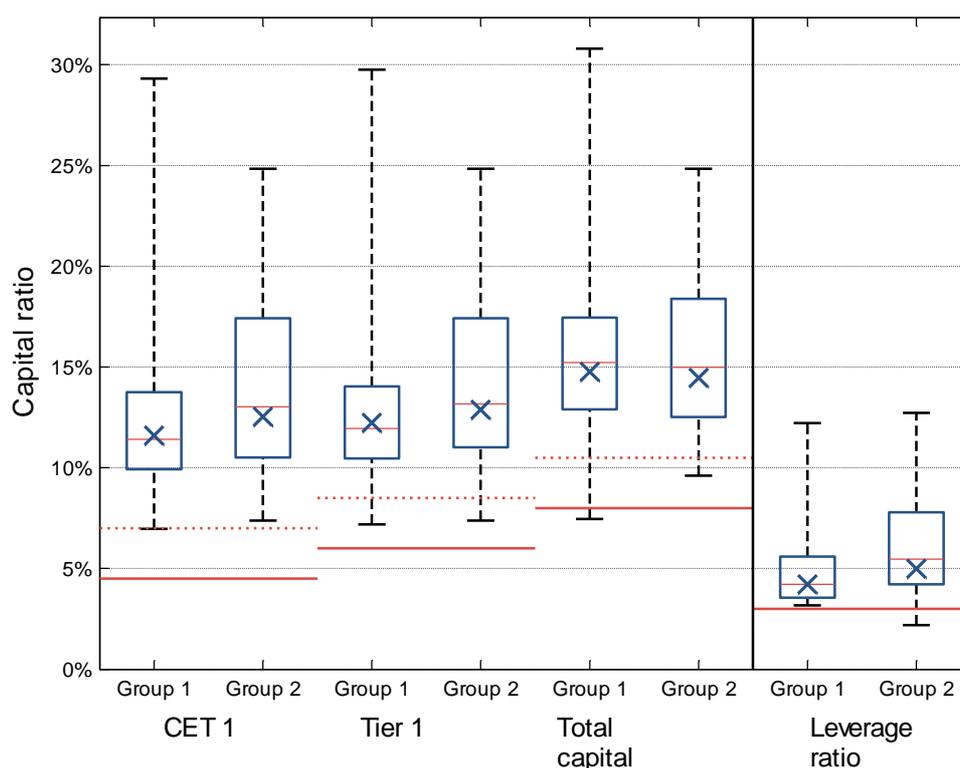
**Table 2: Comparison of risk-based capital ratios and leverage ratio under alternative states of implementation [in %]**

	Number of banks	CET1		Tier 1		Leverage Ratio		Total capital	
		Current	2024	Current	2024	Current	2024	Current	2024
<b>Group 1</b>	<b>36</b>	<b>12.7</b>	<b>11.6</b>	<b>13.7</b>	<b>12.2</b>	<b>4.7</b>	<b>4.2</b>	<b>16.2</b>	<b>14.8</b>
- G-SIBs	9	12.1	11.4	13.3	12.2	4.4	4.1	15.7	14.6
<b>Group 2</b>	<b>110</b>	<b>13.6</b>	<b>12.5</b>	<b>13.8</b>	<b>12.9</b>	<b>5.3</b>	<b>5.0</b>	<b>15.5</b>	<b>14.5</b>
- Large	22	13.5	12.3	13.6	12.7	5.5	5.2	15.4	14.4
- Medium-sized	20	13.6	12.7	14.0	13.0	5.3	5.0	15.5	14.1
- Small	68	14.0	13.6	14.4	13.7	4.3	4.1	16.2	15.1

<sup>12</sup> It is noteworthy in this context that G-SIBs are subject to additional capital requirements based on their systemic importance.

Figure 1 presents basic descriptive statistics<sup>13</sup> on risk-sensitive capital ratios and the leverage ratio for Group 1 and Group 2 banks. It shows that, for the large majority (approximated by 95<sup>th</sup> percentile) of banks, both Group 1 and Group 2 capital ratios are above the current regulatory minimum requirements with respect to risk-sensitive measures and the leverage ratio. When including the capital conservation buffer, almost all banks (both Group 1 and Group 2) fulfil the current CET1 requirements, and significantly more than half (interquartile range) of banks exhibit Tier 1 and total capital ratios above the minimum standard. The median and average values of current CET1 and Tier 1 ratios, as well as the leverage ratio are generally higher for Group 2 than for Group 1 banks. The results indicate a larger dispersion of extreme values (approximated by 5<sup>th</sup> and 95<sup>th</sup> percentile) for Group 1 than for Group 2 banks' capital ratios (with the exception of the leverage ratio), while, at the same time, being more concentrated (approximated by interquartile range) around the mean and median values of the distribution.

**Figure 1: Distribution of risk-based capital ratios and leverage ratio**



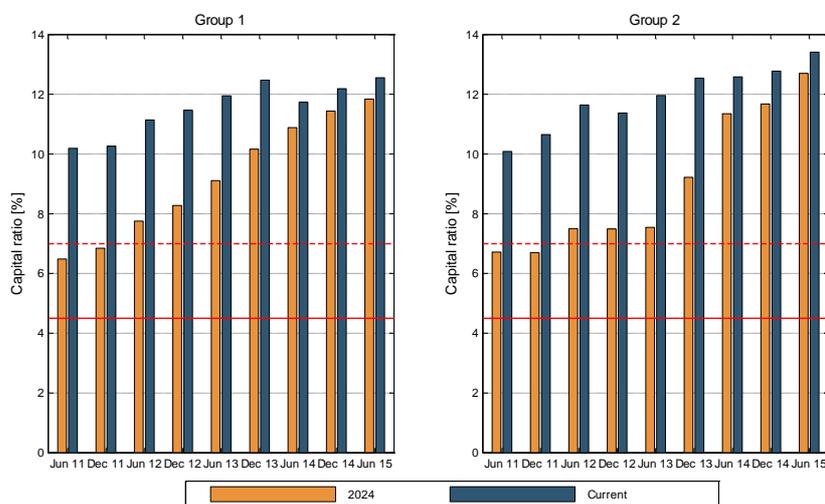
<sup>13</sup> For the methodology underlying the development of these box plots, please refer to section 1.2 of this report.

Figure 2 shows the trend in the current and the full implementation CET1 ratios for the period from June 2011 to June 2015 for the consistent sample — i.e. the banks which have consistently submitted data for all reference dates.

The CET1 ratio, according to the then applicable level of implementation for Group 1 banks, increased from just over 10% to around 12.5% during the period from mid-2011 to end 2013. After a temporary decrease to 11.7% in June 2014, it has returned to its previous level in June 2015. The reduction observed in June 2014 can be explained by the introduction of the CRD IV – CRR in January 2014, which, for the first time, was reflected in the monitoring exercise for reporting date June 2014. Nevertheless, the CET1 ratio for Group 1 banks under full implementation of the CRD IV – CRR package increased constantly over the observation period, with an overall cumulative CET1 increase since June 2011 of more than 500 bps.

Similarly, for Group 2 banks, the average CET1 capital ratios in accordance with fully implemented European regulatory requirements have increased steadily since June 2011 (cumulatively by around 600 bps). In June 2015, the full implementation CET1 capital ratio of Group 2 banks is slightly below 13%, while the respective current rules ratio is around 13.4%. As expected, the difference between CET1 ratios under the current state and the full implementation is markedly smaller in mid-2015 than at the beginning of the observation period for both groups of banks.

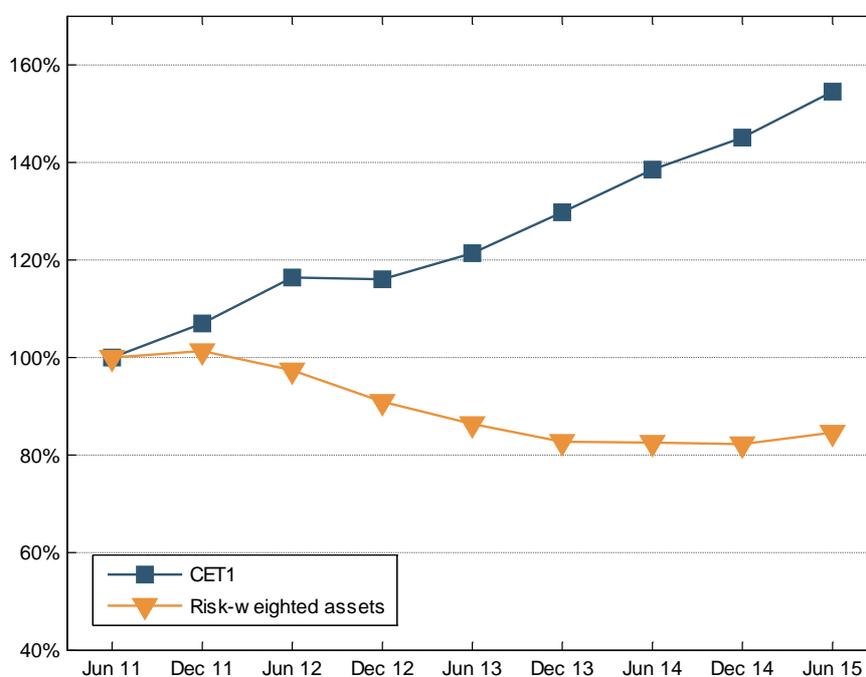
**Figure 2: Evolution of CET1 ratios over time**



The historical upward trend in the CET1 ratio under full implementation of the CRD IV – CRR for Group 1 banks is mainly explained by the increase in CET1 capital (by almost 60%) and, to a lesser extent, by the decrease in RWA (by nearly 20%, as shown in Figure 3). This trend has been observed relatively continuously since June 2011.

The continuous increase in full implementation CET1 capital over the observation period indicates that banks already try to meet market expectations well in advance of the legislative date for the full implementation of the CRD IV – CRR/Basel III framework.<sup>14</sup>

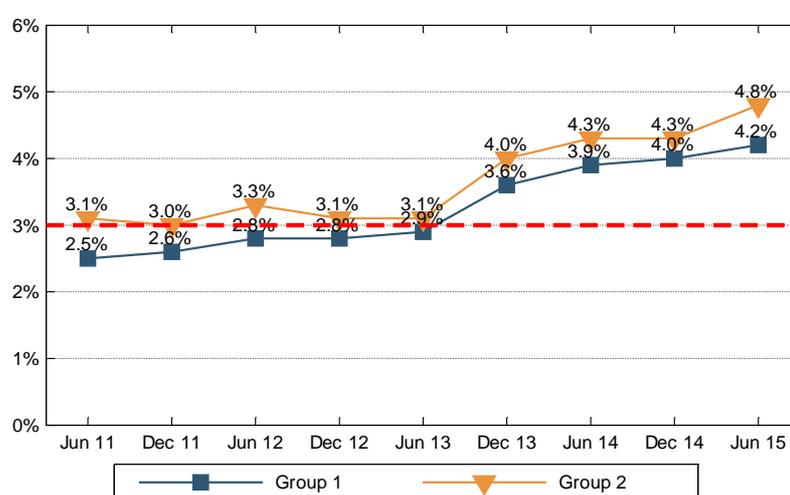
**Figure 3: Evolution of CET1 capital vs RWA over time (for Group 1 banks) under full implementation of CRD IV – CRR**



<sup>14</sup> The trend of improving capital positions of European banks is consistent with findings in the EBA's most recent reports on transparency, and risks and vulnerabilities of the European banking sector ('EBA: 2015 EU-wide transparency exercise' (November 2015) and 'EBA: Risk assessment of the European banking system' (December 2015)).

The increase in the level of capital is also generally reflected in the leverage ratio. Taking a consistent sample of banks, between June 2013 and December 2013, there was a significant increase in banks' leverage ratios (see Figure 4), which can be partially attributed to the recalibration of the leverage ratio exposure in January 2014 with the first application as of reporting date December 2013. However, it has to be noted that the data reflect the respective calculation methodology at each reference date. The increase also continued for the period from December 2013 to June 2015 for both groups of banks. Overall, on average, Group 1 and Group 2 banks showed leverage ratios very close to the target ratio (3%) up to mid-2013. Since then, they have increased their capital beyond the minimum requirement. Over the observation period, Group 2 banks have consistently exhibited higher average leverage ratios than Group 1 banks.

**Figure 4: Evolution of Leverage Ratio by bank group over time**



## 2.2 Capital shortfalls

Table 3 provides estimates of the additional amount of capital that Group 1 and Group 2 banks would need in order to meet the target risk-sensitive capital ratios (including the G-SIB buffer) and the leverage ratio under the CRD IV package. These estimates assume fully phased-in target requirements and deductions. In this analysis, the capital shortfall is calculated as the difference between capital requirements and eligible capital held at bank level, and represents the capital needs assuming that the capital requirements for successively higher quality capital layers have to be met.<sup>15</sup>

<sup>15</sup> Note that the total Tier 1 capital shortfall for a bank represents the maximum of the Tier 1 capital shortfall for risk-based Tier 1 capital ratio and the Tier 1 shortfall for the leverage ratio.

For Group 1 banks, the CET1 capital shortfall is zero when compared to the minimum requirement of 4.5% (not shown in the table) and EUR 0.7 billion when compared to the target level of 7.0%<sup>16</sup> – i.e. the minimum requirement plus the capital conservation buffer. The total shortfall of Tier 1 capital in order to meet both the risk-based capital ratio and the leverage ratio is EUR 2.1 billion for Group 1 banks, with the G-SIBs in the sample fully meeting the capital requirements. The total capital shortfall necessary to fulfil the risk-based requirements (7.0% CET1, 8.5% Tier 1 and 10.5% total capital) and the leverage ratio requirement (3% Tier 1 capital) is EUR 11 billion for Group 1 banks. For Group 1 banks, shortfalls arise from risk-based capital requirements, rather than from requirement based on the leverage ratio.

Group 2 banks have a CET1 shortfall of EUR 0.3 billion at the 7% level and the aggregate shortfall can be attributed to a few small and medium-sized banks in the Group 2 sample. To meet the target Tier 1 capital requirements (risk-based and based on leverage ratio), Group 2 banks would need EUR 5.6 billion, and EUR 6.7 billion to comply with the fully implemented total capital requirements. Those capital shortfalls are mostly in the balance sheets of small and medium-sized Group 2 banks, with the need for additional capital largely stemming from the leverage ratio requirement (EUR 4.5 billion additional Tier 1 capital for Group 2 banks). Overall, capital shortfalls for both groups of banks have reduced significantly since mid-2011 and banks on aggregate, as of June 2015, seem to be largely converging to the fully implemented capital requirements.<sup>17</sup>

**Table 3: Capital shortfall by bank group, including the capital conservation buffer and the G-SIB buffer where applicable [in EUR billion]**

	Number of banks	CET1	Tier 1			Total capital	
			Risk-based ratio	LR	To meet both	To meet all risk-based ratios	To meet all risk-based ratios and LR
<b>Group 1</b>	<b>36</b>	<b>0.7</b>	<b>2.1</b>	—	<b>2.1</b>	<b>11.0</b>	<b>11.0</b>
- G-SIBs	9	—	—	—	—	5.2	5.2
<b>Group 2</b>	<b>110</b>	<b>0.3</b>	<b>1.5</b>	<b>4.5</b>	<b>5.6</b>	<b>2.6</b>	<b>6.7</b>
- Large	22	—	—	0.3	0.3	0.0	0.3
- Medium-sized	20	0.1	0.8	0.9	1.7	1.6	2.5
- Small	68	0.2	0.7	3.3	3.6	0.9	3.9

<sup>16</sup> The calculation method applied in this report may overstate the actual shortfall for those banks affected by the 10% and 15% threshold deductions because the decline in deductions due to higher thresholds is not taken into account.

<sup>17</sup> Beyond the G-SIB buffer, this analysis, however, does not consider additional capital requirements, such as surcharges based on SREP decisions of NCAs or any other Pillar II or macroprudential motivated capital buffers.

This very significant reduction in capital shortfalls (compared to full implementation) can be analysed in more detail, as shown in Figure 5. Whereas at the beginning of the observation period (June 2011), banks (Group 1 and Group 2) lacked roughly EUR 500 billion of total capital — half of which was CET1 capital — shortfalls as of mid-2015 represent only a very minor fraction of that amount. While for Group 1 banks, that reduction in capital shortfalls has developed continuously over time, Group 2 banks reduced their capital shortfalls in the period from mid-2013 to mid-2014 by nearly 90% alone.<sup>18</sup>

**Figure 5: Evolution of capital shortfall by type of capital over time, including the capital conservation buffer and the G-SIB buffer where applicable**

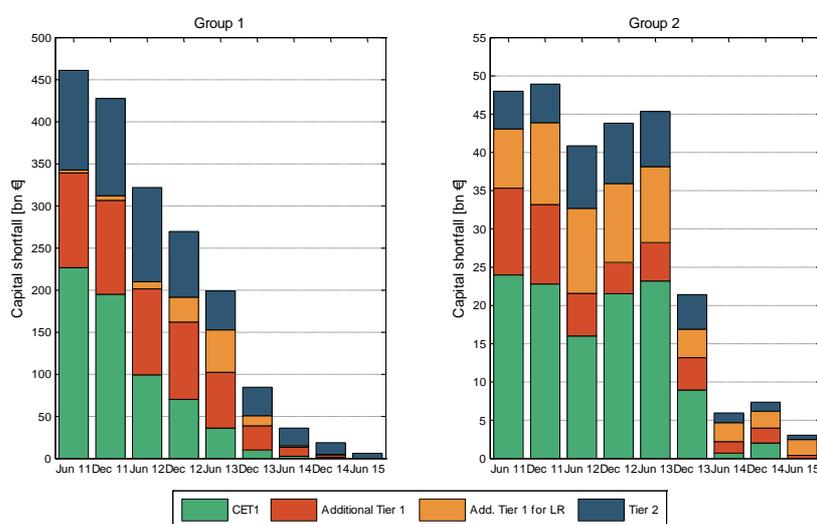


Table 4 presents a particular aspect of the interaction between the leverage ratio and the risk-based Tier 1 capital ratio requirements.<sup>19</sup> More concretely, it analyses which of the capital ratios (risk-based or leverage ratio represents the stricter requirement for banks. The leverage ratio, rather than the risk-sensitive Tier 1 capital ratio, is said to be a constraint for a bank if this bank requires more capital to meet the leverage ratio requirement than to meet the risk-sensitive Tier 1 capital requirement. Mathematically, it is deemed to be a constraint when 3% of the leverage ratio exposure measure exceeds the required Tier 1 capital ratio times the bank's RWA.

<sup>18</sup> Although the trend holds for most banks during that period, the decline is significantly influenced by one large bank.

<sup>19</sup> Please note that a common sample of banks (36 Group 1 and 110 Group 2 banks) which participated in the risk-based and the leverage ratio parts of this exercise has been used to carry out the interaction analysis shown in Table 4.

In June 2015, all Group 1 banks are compliant with the 3% minimum Tier 1 LR requirement, while only 10 Group 2 banks are non-compliant, eight of which are small institutions. They represent less than 10% of the common Group 2 sample, while their capital shortfall is limited to EUR 4.5 billion. Overall, however, the analysis indicates that, for the majority of banks, the leverage ratio is a strict constraint, beyond the risk-based capital requirements. On average, Group 1 banks are more frequently constrained by the leverage ratio requirement (77.8%; 88.9% for G-SIBs) than Group 2 banks (56.4%; 68.2% for the large ones). This remarkable binding power of the leverage ratio holds even when the capital conservation buffer (additional CET1 2.5%) is taken into account. While actual capital shortfall amounts are rather low, even under the more conservative one of the risk-based Tier 1 requirements (8.5%, including the conservation buffer), the leverage ratio effectively is a binding constraint for 38.9% of Group 1 banks (G-SIBs: 44.4%) and 32.7% of the Group 2 banks.

**Table 4: Degree of binding power of risk-based vs leverage Tier 1 capital requirements on banks**

	Tier 1 Leverage Ratio minimum requirement			Tier 1 risk-based minimum requirement			Tier 1 risk-based minimum requirement plus the conservation buffer and the G-SIB buffer where applicable		
	Number of LR non-compliant banks	Proportion of LR non-compliant banks [%]	LR capital shortfall	Proportion of banks constrained by LR [%]	Proportion of LR non-compliant banks meeting risk-based ratio [%]	LR capital shortfall <sup>20</sup>	Proportion of banks constrained by LR [%]	Proportion of LR non-compliant banks meeting risk-based ratio [%]	LR capital shortfall <sup>21</sup>
<b>Group 1</b>	—	—	—	<b>77.8</b>	—	—	<b>38.9</b>	—	—
- G-SIBs	—	—	—	88.9	—	—	44.4	—	—
<b>Group 2</b>	<b>10</b>	<b>9.1</b>	<b>4.5</b>	<b>56.4</b>	<b>9.1</b>	<b>4.5</b>	<b>32.7</b>	<b>9.1</b>	<b>4.1</b>
- Large	1	4.5	0.3	68.2	4.5	0.3	31.8	4.5	0.3
- Medium	1	5.0	0.9	45.0	5.0	0.9	30.0	5.0	0.9
- Small	8	11.8	3.3	55.9	11.8	3.3	33.8	11.8	2.9

<sup>20</sup> LR capital shortfall assuming banks already raised enough capital to fulfil the risk-based ratios.

<sup>21</sup> See above.

## 2.3 Impact of phase-in arrangements

At the current implementation stage of CRD IV – CRR, banks are still subject to transitional arrangements (the phase-in of deductions and capital buffers and the phase-out of capital elements). It is therefore reasonable to expect a decrease in the level of capital for both Group 1 and Group 2 banks under full implementation, mainly due to the reduction of eligible capital elements.

The aggregate CET1 capital of Group 1 banks shows a decrease of 6%, while Tier 1 and total capital decrease by 10% and 10.3% respectively (Table 5). For Group 2 banks, the relative percentage changes in CET1, Tier 1 and total capital are 4.6%, 4.3% and 5.0% respectively. These figures suggest that Group 1 banks are more constrained regarding CET1 capital than Group 2 banks, which exhibit a considerably lower decrease in Tier 1 and total capital.

The reduction observed in CET1 and Tier 1 capital for Group 2 banks is mainly driven by the relatively larger changes observed in large Group 2 banks. In addition, banks in different categories follow similar patterns, except large Group 2 banks, for which relative changes in CET1 capital and RWA are more significant.

**Table 5: Relative percentage change in capital by type and RWA [in %]**

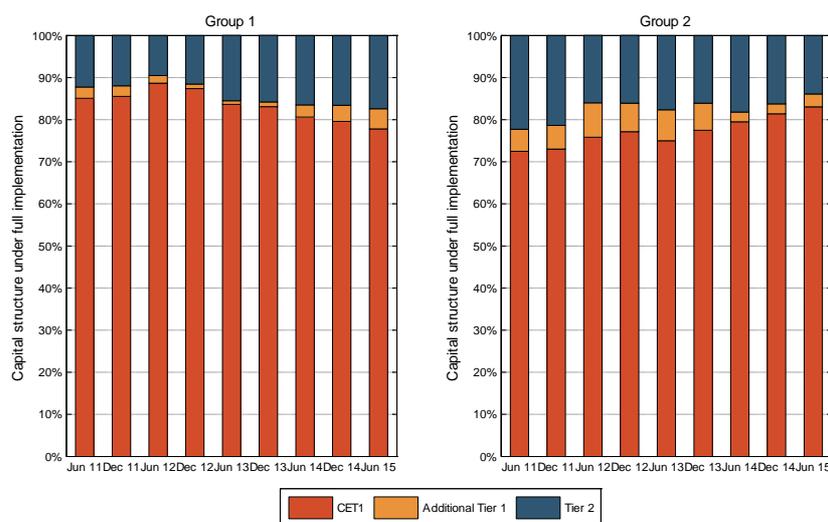
	Number of banks <sup>22</sup>	CET1	Tier 1	Total capital	RWA
<b>Group 1</b>	<b>45</b>	<b>-6.0</b>	<b>-10.0</b>	<b>-10.3</b>	<b>0.1</b>
- G-SIBs	13	-3.2	-8.8	-10.2	0.1
<b>Group 2</b>	<b>188</b>	<b>-4.6</b>	<b>-4.3</b>	<b>-5.0</b>	<b>0.5</b>
- Large	29	-5.9	-4.7	-4.7	0.6
- Medium-sized	28	-2.7	-4.0	-5.6	0.5
- Small	131	-1.9	-3.3	-5.6	0.2

<sup>22</sup> Several banks have submitted data on capital and RWA, but have not reported data on the EU leverage ratio exposure measure. As Table 5 only refers to data on capital and RWA, the number of banks included is higher than in other tables contained in this chapter.

## 2.4 Composition of capital

Figure 6 shows the composition of total capital for Group 1 and Group 2 banks under the assumption of full implementation. Time series analysis based on a consistent sample shows that the share of CET1 capital under full implementation has been decreasing for most Group 1 banks and for Group 1 banks on average since June 2011. In contrast, the average share for Group 2 banks has been increasing since June 2013. However, for Group 1 banks, this is due to the increased accumulation of additional Tier 1 and Tier 2 capital (both capital types have more than doubled since June 2011) compared to the accumulation of CET1 capital (around 50% since June 2011). As of June 2015, Group 1 banks' figures indicate that the share of fully implemented CET1 to total capital is about 78%. Additional Tier 1 and Tier 2 capital amount to about 5% and 17% of the total capital of Group 1 banks respectively. Group 2 banks hold a slightly higher share of CET1 capital under the assumption of the full implementation of CRD IV – CRR. This share amounts to approximately 83% of total capital, while the shares of additional Tier 1 capital (3%) and Tier 2 capital (14%) are correspondingly lower.

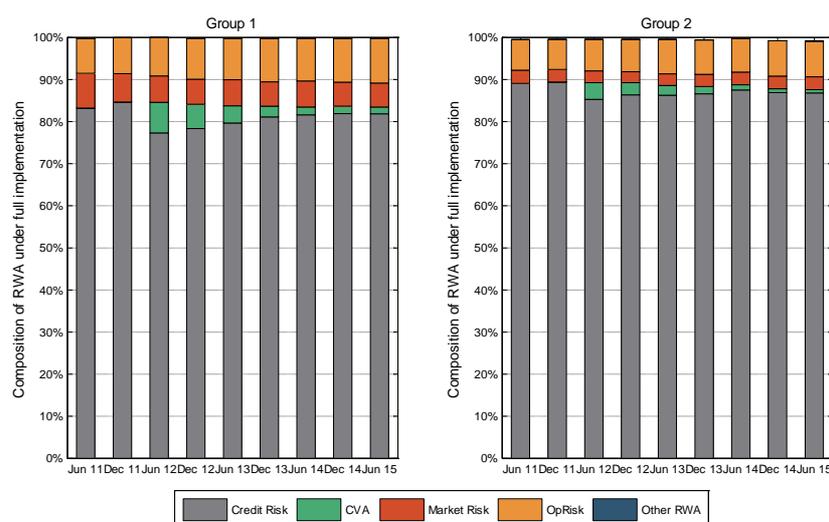
**Figure 6: Evolution of capital structure over time**



## 2.5 Composition of risk-weighted assets

After having analysed the different types of regulatory capital — i.e. the numerator of capital ratios — this sub-section deals with the RWA (i.e. the denominator of the risk-sensitive capital ratios). Figure 7 shows that, under the fully phased-in CRD IV package, credit risk is the major component of RWA for both Group 1 and Group 2 banks. The share of credit risk in RWA is more than 80% for Group 1 banks and nearly 90% for Group 2 banks. After a drop mid-2012, the share of credit risk has increased again to previous levels for both groups of banks. The operational risk exhibits the second highest share in RWA for both groups of banks (around 10%). The share of RWA for the market risk category is roughly twice as high for Group 1 than for Group 2 banks. The declining share of RWA for credit value adjustment (CVA) over time suggests that the new regulatory framework has had a direct impact on banks' behaviour. Figure 7 also indicates that the introduction of the CVA capital charge resulted in portfolio adjustments and the cutting down of CVA positions, which contributed to the reduction in total RWA.<sup>23</sup>

**Figure 7: Evolution of the composition of RWA by risk category over time**

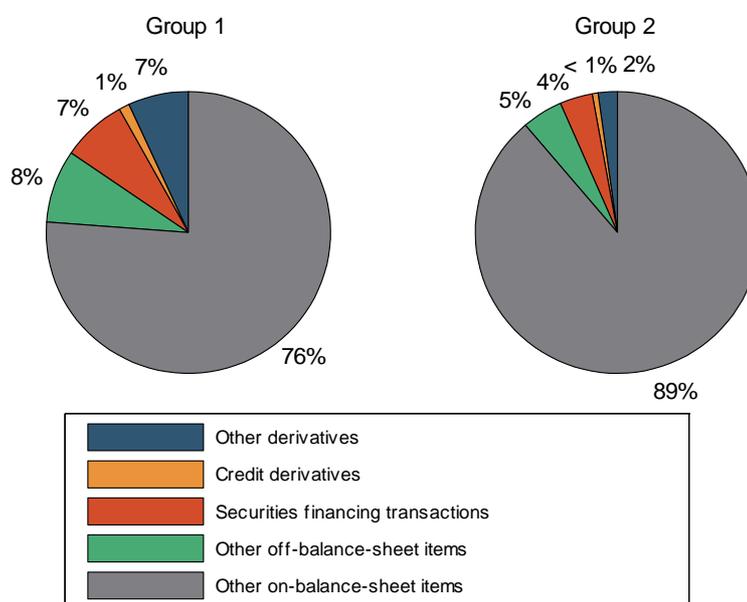


<sup>23</sup> The order and scale of magnitude for different risk categories observed in this monitoring exercise are very consistent with the results of previous transparency exercises and supervisory disclosures for the European banking sector. See also the EBA's aggregate statistics on the European banking sector, available under <http://www.eba.europa.eu/supervisory-convergence/supervisory-disclosure/aggregate-statistical-data>.

## 2.6 Composition of the leverage ratio exposure measure

This sub-section looks at the exposure measure as defined for the purpose of the leverage ratio, being the denominator of that ratio. Figure 8 shows the composition of the leverage ratio exposure measure by asset category. For both groups of banks, ‘other on-balance-sheet items’ are the main component of exposures. For Group 2 banks whose exposures are characterised by a more traditional bank business model, the ‘other on-balance-sheet items’ represent 89% of the leverage ratio exposure measure, while for Group 1 banks, the exposures relating to derivatives, securities financing transactions (SFT) and off-balance-sheet items represent nearly one quarter of their exposures. It should be noted that the calculation of derivative exposure is currently under review by the BCBS. According to footnote 5 of the Basel III LR framework, alternative approaches to the Current Exposure Method (CEM) are taken into account. The Standardised Approach for measuring Counterparty Credit Risk (SA-CCR), which will replace the CEM in the risk-based framework in January 2017, is under review for the purpose of the leverage ratio and is expected to have more impact on Group 1 banks than on Group 2 banks.<sup>24</sup> In addition, the BCBS<sup>25</sup> and the EBA<sup>26</sup> are in the process of monitoring whether the design and calibration of a minimum Tier 1 leverage ratio of 3% are appropriate for different types of business models over a full credit cycle.

**Figure 8: Composition of the leverage ratio exposure measure by asset category**



<sup>24</sup> The final calibration of the leverage ratio is envisaged to be completed by 2017. With regard to those envisaged reviews, see also page 7 of the Basel III leverage ratio framework: <http://www.bis.org/publ/bcbs270.pdf>.

<sup>25</sup> The most recent research conducted at the BIS concludes that there is considerable room to raise leverage ratio requirements above the original level of 3%, in particular for G-SIBs (in *BIS: Quarterly Review* (Dec 2015)).

<sup>26</sup> See also ‘EC: Call for advice to the EBA for the purposes of the Net Stable Funding Requirements and the Leverage Ratio’ (2015).

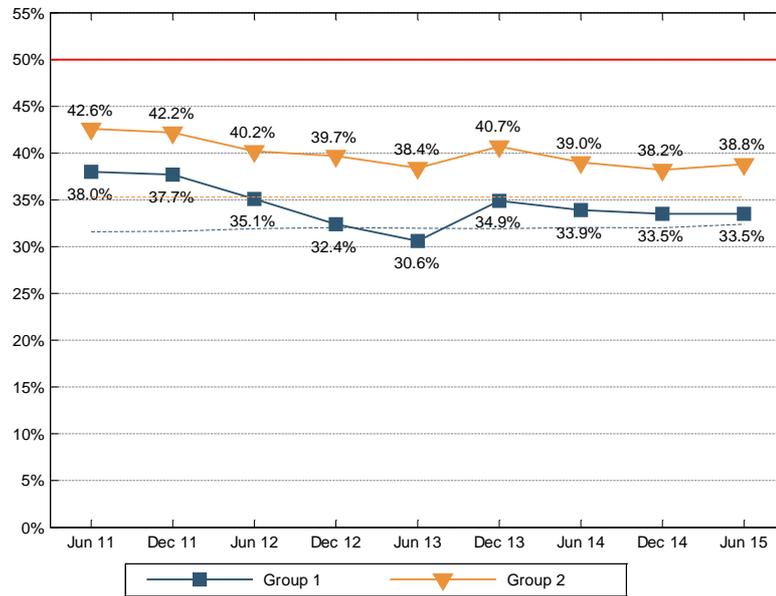
The development and implementation of a leverage ratio is not intended to reduce any of the positive prudential effects of risk-based capital requirements<sup>27</sup>. Therefore, the interaction of the leverage ratio with risk-based capital ratios is monitored. Figure 9 illustrates the development of the relationship of fully phased-in RWA to the leverage ratio exposure measure by bank group. If the quotient is below the dotted blue line (for Group 1 banks) or the yellow line (for Group 2 banks)<sup>28</sup>, this implies that the leverage ratio, rather than the risk-based Tier 1 capital ratio of 8.5% (minimum requirement plus the capital conservation buffer), would be (on average) a binding constraint. In case the quotient is above the dotted line, this implies that the risk-based Tier 1 capital ratio, rather than the leverage ratio would be (on average) the binding constraint. This quotient has been mostly decreasing for the period from June 2011 to June 2013, which was caused by a decrease of RWA coupled with an increase of exposure (in that sense, banks, on average, followed a de-risking rather than a de-leveraging strategy). In December 2013, compared to June 2013, an increase of 230 bps for Group 1 and 430 bps for Group 2 banks was observed. This change was caused by a decrease in the leverage ratio exposure measure, partially driven by the recalibration of the exposure definition. For the current reference date (June 2015), the ratio of RWA over the leverage ratio exposure measure has remained unchanged for Group 1 banks and increased by 60 bps for Group 2 banks compared to the previous reference date. The figures indicate that, on average, banks are more constrained by the risk-based Tier 1 than by the leverage ratio requirement, which is particularly true for Group 2 banks. This result, however, does not contradict the finding above (see Table 4) that the leverage ratio is a binding constraint for a significant proportion of banks in the sample.

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<sup>27</sup> For an argument about the benefits of the leverage ratio as a capital backstop over the financial cycle and across banks, see also 'BCBS: The regulatory framework – Balancing risk-sensitivity, simplicity and comparability' (Working Paper, July 2013) and 'BIS: The Leverage Ratio over the cycle' (Working Paper No 471, November 2014).

<sup>28</sup> This is calculated as the quotient between the leverage ratio requirement (3%) and the risk-based Tier capital ratio requirement (8.5%, plus the G-SIB buffer where applicable). The red line shows the equivalent RWA vs the LR exposure threshold for a Tier 1 ratio of 6% (so without the capital conservation buffer).

**Figure 9: Evolution of the relation of RWA to the leverage ratio exposure measure over time**



## 3. Liquidity requirements and shortfalls

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### 3.1 Liquidity Coverage Ratio

Another minimum standard of the CRD IV – CRR package is contained in the provision on the 30-day LCR, which is intended to promote short-term resilience to potential liquidity disruptions. The LCR requires banks to have a sufficient level of HQLA to withstand a stressed funding scenario of 30 days. In this regard, the LCR defines the minimum stock of unencumbered HQLA that must be available to cover the net cash outflows expected to occur in a severe stress scenario.

For the first time, the LCR calculations in this report are based on the Commission delegated Regulation (EU) 2015/61, which specifies the general requirement set out in Article 412(1) of the CRR<sup>29</sup>. As defined in Article 38 of this delegated regulation and in accordance with Article 460(2) of the CRR, the minimum requirement has been set at 60% from 1 October 2015 and will gradually increase to 100% in January 2018 — i.e. the EU regulation requires a minimum of 100% one year before the Basel standard.

Similar to the Basel III LCR framework and consistent with Part Six of the CRR, the Commission delegated regulation differentiates between assets of extremely high liquidity and credit quality (or Level 1 assets), and assets of high liquidity and credit quality (or Level 2 assets), with the latter being further divided into Level 2A and Level 2B assets. However, the Commission delegated regulation also contains some specifics related to the definition of liquid assets by:

- Modifying the requirements for instruments already captured as HQLA under Basel III and upgrading the liquidity quality of extremely high-quality covered bonds;
- Increasing the range of instruments that are not already captured under Basel III (e.g. promotional banks' assets, certain asset backed securities, etc.); and
- Modifying the composition of the liquidity buffer by adding a new cap on liquid assets (i.e. a minimum of 30% of the overall liquidity buffer has to be held in Level 1 assets, excluding extremely high-quality covered bonds).<sup>30</sup>

By these derogations, the Commission has largely considered the recommendations made by the EBA in its report of the appropriate uniform definitions of extremely HQLA and HQLA, and on operational requirements for liquid assets under Article 509(3) and (5) of the CRR.<sup>31</sup>

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<sup>29</sup> <http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L:2015:011:TOC>.

<sup>30</sup> See the 'Second report on impact assessment for liquidity measures under Article 509(1) of the CRR' for more details: <https://www.eba.europa.eu/documents/10180/950548/2014+LCR+IA+report.pdf>.

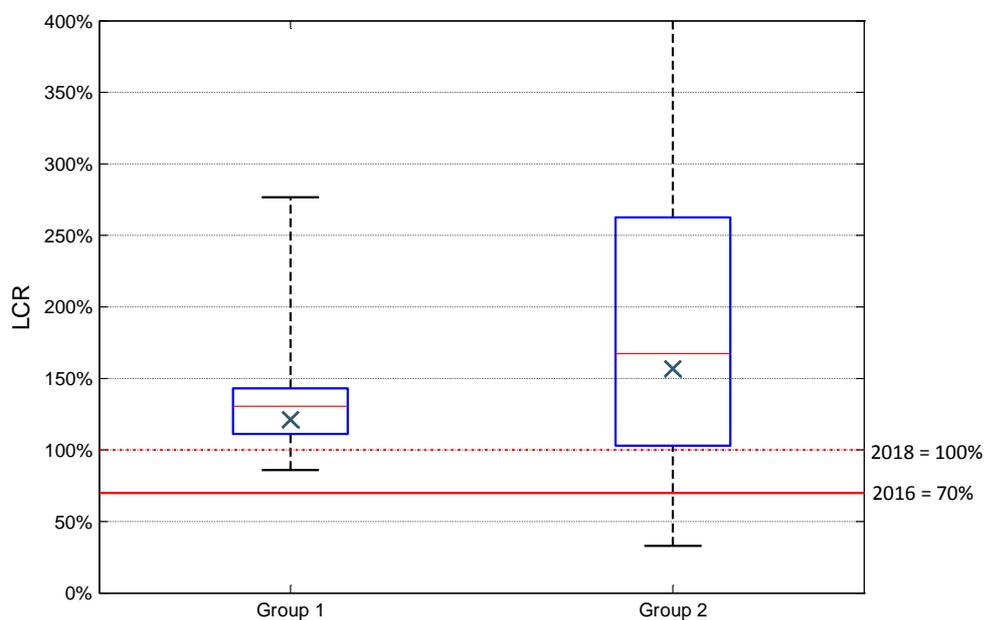
<sup>31</sup> <https://www.eba.europa.eu/documents/10180/16145/EBA+BS+2013+413+Report+on+definition+of+HQLA.pdf>.

As already defined under Basel III, cash outflows and inflows are calculated by multiplying the outstanding balances of various categories or types of assets and liabilities, as well as off-balance-sheet commitments by the rates at which they are expected to run-off or be drawn down. However, the Commission delegated regulation includes some EU-specific derogations, such as higher outflow rates for retail deposits based on a simplified set of criteria (including depositor residence, depositor currency and distribution channel) or the partial or full exemption of certain inflows from the 75% cap on inflows, subject to the prior approval of the competent authority as provided in Article 33 of this regulation.

#### *LCR and shortfall in liquid assets*

Figure 10 provides an overview of the distribution of the LCR by bank group. As of June 2015, Group 1 banks exhibit a weighted average LCR of 121.2%, while Group 2 banks' LCR is 156.7%. All Group 1 banks already meet the 70% requirement of January 2016, and the vast majority of these banks also already meet the 100% requirement — i.e. 31 out of 36 banks. Regarding Group 2 banks, 87 out of 114 banks have an LCR above 100%, while 13 Group 2 banks have to improve their liquidity positions in order to reach the minimum requirement of 70%.

**Figure 10: Distribution of LCR by bank group**



In Table 6, the LCR and the shortfall for the different minimum ratios (as defined in Article 38 of the Commission delegated regulation) are illustrated. The total LCR shortfall with regard to a minimum ratio of 100% is EUR 32.6 billion, of which EUR 25.2 billion corresponds to Group 1 and EUR 7.5 billion to Group 2. The total shortfall represents 9.2% of total HQLA (EUR 356 billion) and 1.0% of total assets (EUR 3.4 trillion) of all non-compliant banks. In order to comply with the minimum requirement of 70% in January 2016, 13 Group 2 banks need an additional amount of EUR 1.8 billion in liquid assets. The shortfall considered here is the sum of the differences between the net outflows and the stock of HQLA for all banks with an LCR that falls below the threshold of 70% or 100% respectively, not reflecting the surplus arising from those banks which already meet the minimum requirement. Therefore, the reported shortfall amount represents a conservative proxy of banks' actual shortfall, as it does not include any assumptions on the reallocation of liquidity between individual banks or within the system as such.

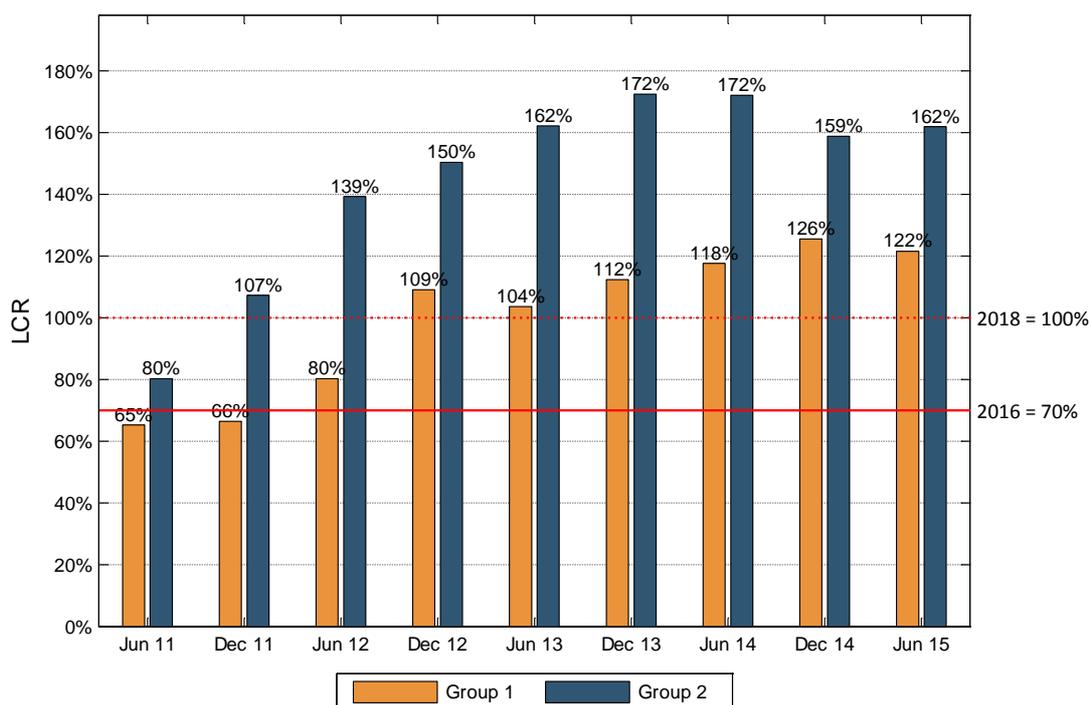
**Table 6: LCR and shortfall for different minimum requirements according to Article 38 of the Commission delegated Regulation (EU) No 2015/61**

	Number of banks	LCR (in %)	LCR shortfall (in EUR billion) at a minimum of:		
			70% (2016)	80% (2017)	100% (2018)
<b>Group 1</b>	<b>36</b>	<b>121.2</b>	—	<b>2.5</b>	<b>25.2</b>
- G-SIBs	9	118.1	—	—	9.4
<b>Group 2</b>	<b>114</b>	<b>156.7</b>	<b>1.8</b>	<b>2.8</b>	<b>7.5</b>
- Large	23	158.0	—	—	1.5
- Medium-sized	19	169.9	—	—	0.6
- Small	72	144.0	1.8	2.8	5.4

### Evolution of the LCR over time

When analysing the evolution of the LCR over time, it should be noted that figures for previous periods are based on Basel III definitions — i.e. apart from structural changes, part of the change can also be attributed to differences between Basel III and the Commission delegated regulation. The EBA's analysis has shown that, on average and for the majority of banks, the difference between the ratios under the two legal frameworks is small<sup>32</sup>. It is only for some specialised credit institutions that the impact of the implementation of the LCR according to the Commission delegated regulation may be more pronounced. Some changes in the LCR between June and December 2012 are also driven by the recalibration of the Basel III LCR framework, published in January 2013. Nevertheless, banks have, on average, put significant effort into increasing their LCR both by increasing their liquidity buffer, as well as by decreasing their net cash outflows. Since June 2011, Group 1 and Group 2 banks have, on average, increased the LCR by approximately 60 (Group 1) and 80 (Group 2) percentage points (Figure 11).

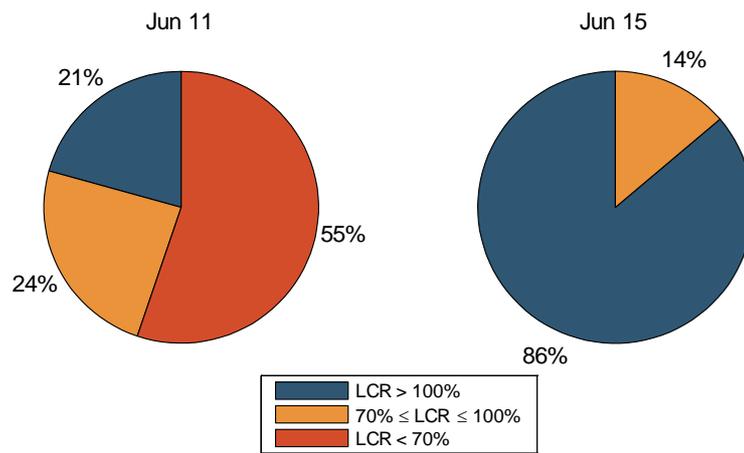
**Figure 11: Evolution of LCR by bank group**



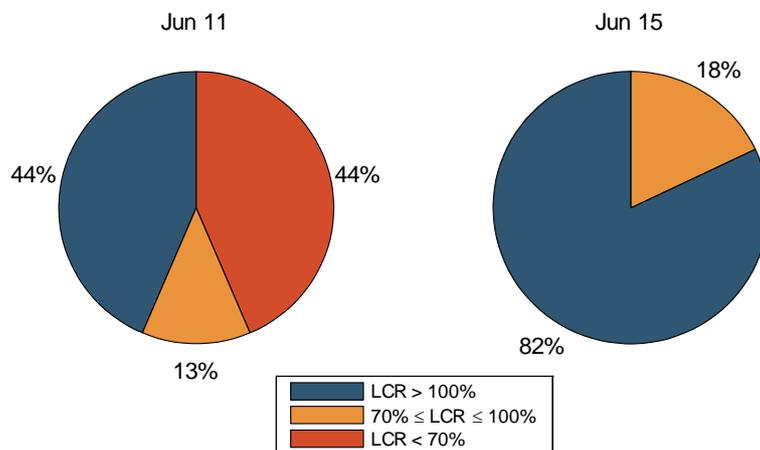
<sup>32</sup> See Chapter 6 of the 'Second report on impact assessment for liquidity measures under Article 509(1) of the CRR': <https://www.eba.europa.eu/documents/10180/950548/2014+LCR+IA+report.pdf>.

The positive trend in the evolution of the LCR is also reflected in the increase in the share of banks with an LCR above 100%, compared to the first data point (Figure 12 and Figure 13). As of 30 June 2011, only 21% of Group 1 and 44% of Group 2 banks met the LCR minimum requirement of 100%. In contrast to that, more than 80% report an LCR above 100% in June 2015.

**Figure 12: Distribution of LCR, Group 1 banks**



**Figure 13: Distribution of LCR, Group 2 banks**



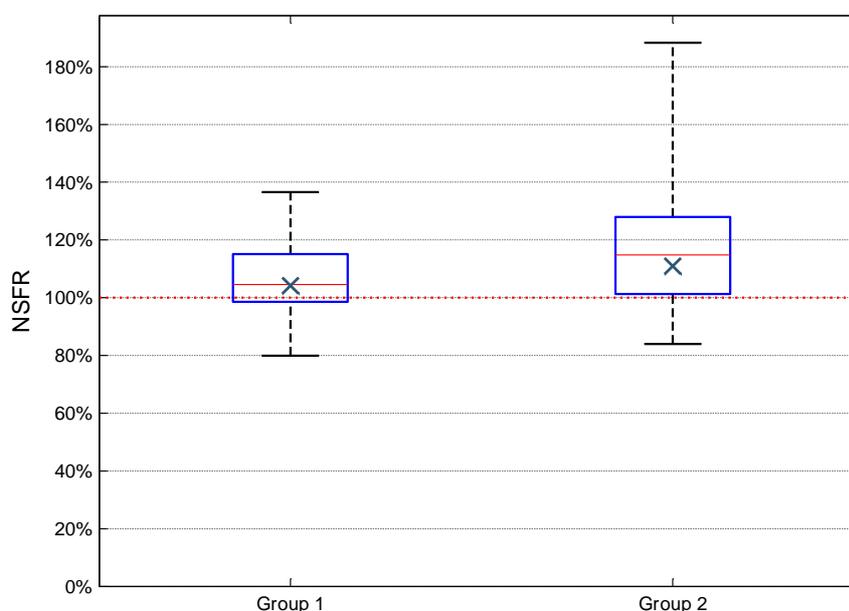
## 3.2 Net Stable Funding Ratio

The second liquidity standard is the NSFR, a longer-term structural ratio which addresses liquidity mismatches and provides incentives for banks to use stable sources to fund their activities. The NSFR is defined as the amount of ASF relative to the amount of RSF. This ratio should be equal to or higher than 100%. The ASF is defined as the portion of capital and liabilities expected to be reliable over the time horizon considered by the NSFR, which extends to one year. The amount of RSF is a function of liquidity characteristics and residual maturities of the various assets held by that institution, as well as those of its off-balance-sheet exposures. At the EU level, the NSFR has not been finalised yet. According to Article 510(3) of the CRR, the Commission is expected to submit a legislative proposal to the European Parliament and the Council by 31 December 2016 on how to ensure that institutions use stable sources of funding<sup>33</sup>. Therefore, the following results are based on the final Basel III NSFR framework as published in October 2014.<sup>34</sup>

### *NSFR and shortfall in stable funding*

Figure 14 provides an overview of the distribution of the NSFR by bank group. As of June 2015, the average NSFR for Group 1 and Group 2 banks is 104% and 111% respectively. Approximately 70% of Group 1 and 79% of Group 2 banks already fulfil the minimum NSFR requirement of 100%.

**Figure 14: Distribution of NSFR by bank group**



<sup>33</sup> The proposal will also be based on the EBA report on the Net Stable Funding Requirements published in December 2015, available under <https://www.eba.europa.eu/documents/10180/983359/EBA-Op-2015-22+NSFR+Report.pdf>.

<sup>34</sup> <http://www.bis.org/bcbs/publ/d295.pdf>.

Overall, banks in the sample are in need of an additional stable funding of EUR 341 billion as of June 2015 (Table 7). The need for stable funding is approximately 8.7% of total ASF (EUR 3.9 trillion) and 3.9% of total assets (EUR 8.7 trillion) of all non-compliant banks participating in the NSFR-related part of this exercise. The need for stable funding is estimated by aggregating only the positive differences between RSF and ASF (RSF minus ASF) — i.e. the deficit in the stable funding of banks whose NSFR is below the 100% requirement — and does not account for any surplus of stable funding observed in banks with a NSFR above the 100% requirement. Banks which are below the 100% minimum requirement still have the possibility of taking a number of measures between now and 2018 to meet the NSFR standard (e.g. lengthening their funding term or decreasing maturity mismatches in their balance sheet).

It should also 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.

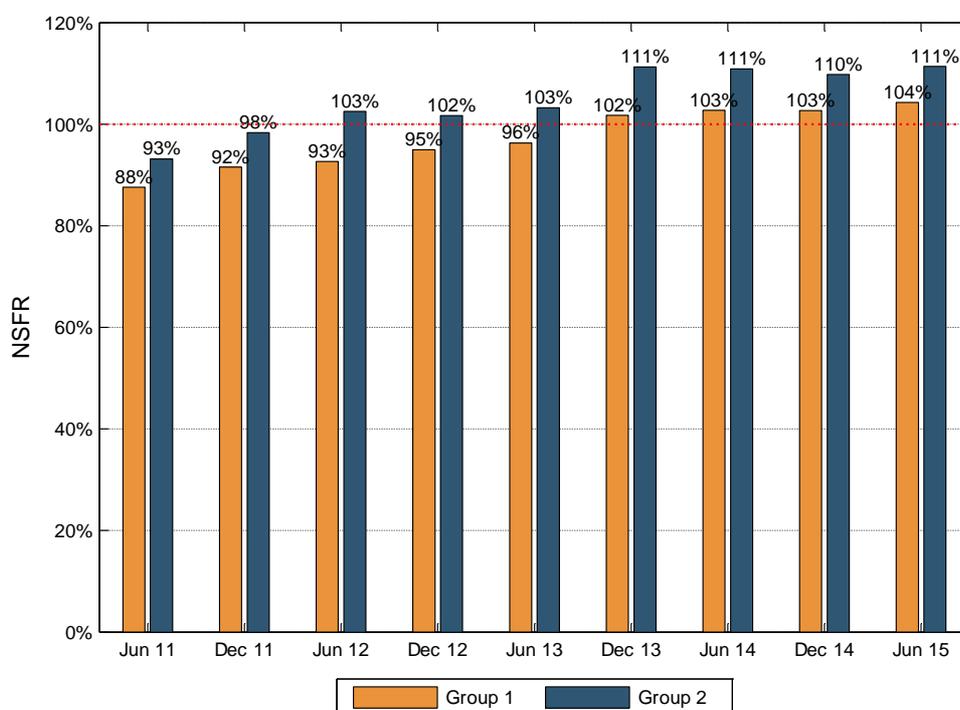
**Table 7: NSFR and shortfall in stable funding**

	<b>Number of banks</b>	<b>NSFR (in %)</b>	<b>NSFR shortfall (in EUR billion)</b>
<b>Group 1</b>	<b>40</b>	<b>104.2</b>	<b>289.8</b>
- G-SIBs	12	103.0	187.6
<b>Group 2</b>	<b>167</b>	<b>110.9</b>	<b>51.0</b>
- Large	25	109.2	22.5
- Medium-sized	25	115.1	9.0
- Small	117	112.0	19.5

### *Evolution of the NSFR over time*

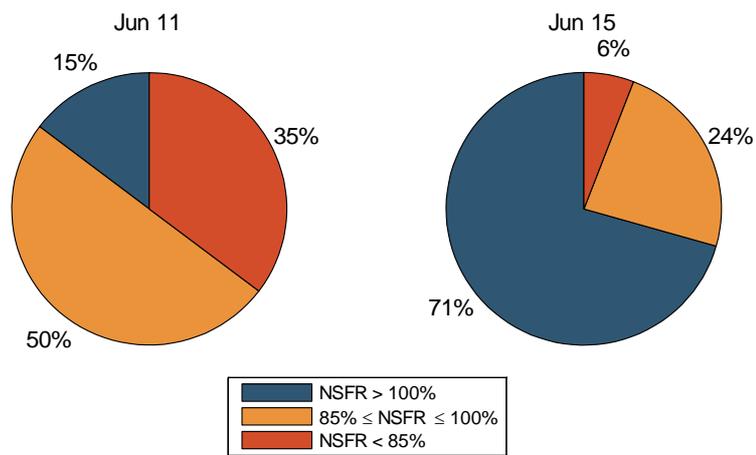
Figure 15 illustrates the development of the NSFR over time using a consistent sample of banks. The findings show that the average NSFR for Group 1 and Group 2 banks increased by 16 percentage points and 18 percentage points respectively. The significant increase in banks' NSFR in December 2013 may also be driven by the revisions made by the BCBS, which were considered for the first time in December 2013. The NSFR figures in December 2014 remained almost the same for both Group 1 and Group 2 banks. The overall positive trend is also reflected in the reduction of the shortfall of stable funding needed to meet the 100% ratio, which (compared to June 2011) has reduced by 78% for Group 1 banks and by 91% for Group 2 banks.

**Figure 15: Evolution of NSFR by bank group**

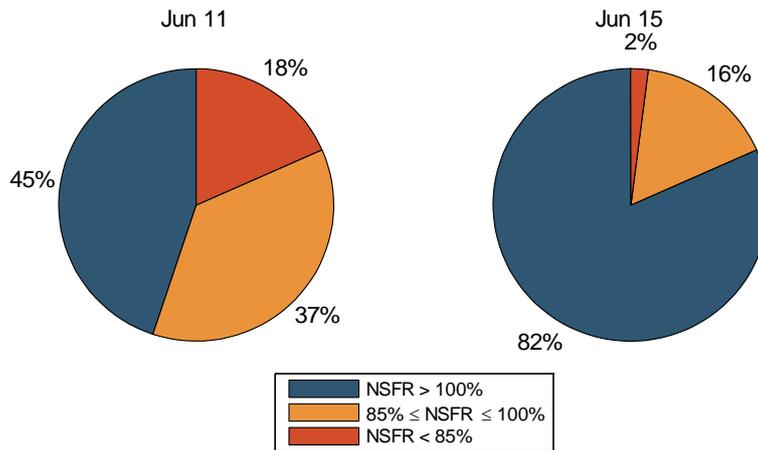


For conceptual reasons, the NSFR is less volatile than the LCR and cannot be adjusted easily in a short period of time. Therefore, a special focus will be placed on those banks with a ratio below 85%.<sup>35</sup> As shown in Figure 16 and Figure 17, the share of banks with an NSFR below this threshold has decreased significantly since the beginning of this exercise, with only 6% of Group 1 banks and 2% of Group 2 banks reporting an NSFR below 85% as of June 2015.

**Figure 16: Distribution of NSFR, Group 1 banks**



**Figure 17: Distribution of NSFR, Group 2 banks**



<sup>35</sup> It should be noted that the threshold of 85% was arbitrarily chosen based on the distribution of the NSFR in previous monitoring exercises, and does not relate to any provisions in the CRR.



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