Basel Committee on Banking Supervision



Basel III Monitoring Report

October 2018



BANK FOR INTERNATIONAL SETTLEMENTS

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Hig	hligh	nts of the	e Basel III monitoring exercise as of 31 December 2017	1			
Det	ailec	l results	of the Basel III monitoring exercise as of 31 December 2017	13			
1							
1.							
	1.2 Sample of participating banks						
	1.2	Motho		14 1 <i>1</i>			
	1.5	1 2 1	Aggregation	14			
		1.3.1	Aggregation	14 1c			
		1.5.2	Impact metrics	15 15			
	1 /	L.S.S		15			
	1.4	Interpre	etation of results	17			
2.	Rec	ulatory	capital, capital requirements, capital shortfalls and TLAC	18			
	2.1	Risk-based capital ratios					
		2.1.1	Initial Basel III standards				
		2.1.2	Final Basel III standards				
	2.2 Impact of the final Basel III framework on minimum required capital						
	2.3	2.3 Leverage ratio					
		2.3.1	Overall results				
		2.3.2	Impact on Basel III leverage ratio MRC due to the final standards	35			
	2.4	Combir	ned shortfall amounts	36			
		2.4.1	Shortfalls under the initial Basel III standards				
		2.4.2	Shortfalls under the final Basel III framework	37			
	2.5 Total loss-absorbing capacity requirements for G-SIBs						
		2.5.1	Initial Basel III framework				
		2.5.2	Final Basel III framework				
3.	Level and composition of regulatory capital						
	3.1 Level of capital						
	3.2 Profits, dividends and capital raised						
	3.3	Compo	sition of capital	44			

	3.4	4 Regulatory adjustments							
4.	Cor	nponents	and determinants of risk-based capital requirements	46					
	4.1	4.1 Share of different risk types in overall MRC under current rules							
	4.2	Credit risk							
		4.2.1	Share of credit risk exposure by asset classes under the current rules	48					
		4.2.2	Impact of revisions to the standardised and IRB approaches for credit risk on MRC	49					
		4.2.3	Standardised approach for credit risk	51					
		4.2.4	Internal ratings-based approach for credit risk	54					
		4.2.5	Distribution of exposure at default and risk-weighted assets across approaches	60					
		4.2.6	Impact of the revised securitisation framework	62					
	4.3	Market risk							
		4.3.1	Current market risk rules	68					
		4.3.2	Overall impact of the revised minimum capital requirements for market risk	71					
		4.3.3	Components of minimum capital requirements for market risk under current rules and the revised framework	72					
	4.4	Operatio	onal risk	73					
		4.4.1	Current operational risk rules	73					
		4.4.2	Final operational risk standards	75					
5.	Inte	eractions	between risk-based, output floor and leverage ratio capital requirements	76					
	ship between the Basel III leverage ratio and risk-based capital requirements under ased-in initial Basel III standards	76							
	5.2	Interacti the final	ons between risk-based, output floor and leverage ratio capital requirements under Basel III standards	79					
6.	Liqu	uidity		81					
	6.1 Liquidity Coverage Ratio								
	ble Funding Ratio	85							
	6.3	Liquidity	/ Coverage Ratio and Net Stable Funding Ratio shortfalls over time	88					

Annexes

Annex A: Basel III standards and phase-in arrangements	95
Annex B: Sample statistics and additional results	99
Annex C: Statistical Annex	105
Previous monitoring reports published by the Basel Committee	161

Conventions used in this report

billionthousand milliontrillionthousand billionlhs, rhsleft-hand scale, right-hand scale

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

Components may not sum to totals because of rounding.

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

All data, including for previous reporting dates, reflect revisions received up to 22 August 2018.

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Highlights of the Basel III monitoring exercise as of 31 December 2017

Fully phased-in final Basel III capital shortfalls more than 70% lower for large internationally active banks compared with end-2015

To assess the impact of the Basel III framework on banks, the Basel Committee on Banking Supervision monitors the effects and dynamics of the reforms. For this purpose, a semiannual monitoring framework has been set up on the risk-based capital ratio, the leverage ratio and the liquidity metrics using data collected by national supervisors on a representative sample of institutions in each country. For the first time, the report also captures the effects of the Committee's finalisation of the Basel III reforms.¹ This report summarises the aggregate results using data as of 31 December 2017.² The Committee believes that the information contained in the report will provide relevant stakeholders with a useful benchmark for analysis.

Information considered for this report was obtained by voluntary and confidential data submissions from individual banks and their national supervisors. Data were provided for a total of 206 banks, including 111 large internationally active ("Group 1") banks, among them all 30 G-SIBs, and 95 other ("Group 2") banks.³ Members' coverage of their banking sector is very high for Group 1 banks, reaching 100% coverage for some countries, while coverage is lower for Group 2 banks and varies by country.

In general, this report does not take into account any transitional arrangements such as phasein of deductions and grandfathering arrangements. Rather, the estimates presented generally assume full implementation of the Basel III requirements based on data as of 31 December 2017. No assumptions have been made about banks' profitability or behavioural responses, such as changes in bank capital or balance sheet composition, either since this date or in the future. Furthermore, the report does not reflect any additional capital requirements under Pillar 2 of the Basel II framework, any higher loss absorbency requirements for domestic systemically important banks, nor does it reflect any countercyclical capital buffer requirements.

¹ Basel Committee on Banking Supervision, *High-level summary of Basel III reforms*, December 2017, <u>www.bis.org/bcbs/publ/</u> <u>d424_hlsummary.pdf</u>; Basel Committee on Banking Supervision, *Basel III: Finalising post-crisis reforms*, December 2017, <u>www.bis.org/bcbs/publ/d424.htm</u>.

² A list of previous publications is included in the Annex.

³ Group 1 banks are those that have Tier 1 capital of more than €3 billion and are internationally active. All other banks are considered Group 2 banks. Not all banks provided data relating to all parts of the Basel III framework.

Overview of results

```
Table 1
```

	30 June 2017			31 December 2017		
	Group 1	Of which: G-SIBs	Group 2	Group 1	Of which: G-SIBs	Group 2
Fully phased-in initial Basel III framework						
CET1 ratio (%)	12.5	12.4	14.7	12.9	12.6	16.0
Target capital shortfalls (€ bn); ¹ of which:	0.0	0.0	0.2	0.0	0.0	1.1
CET1	0.0	0.0	0.0	0.0	0.0	0.0
Additional Tier 1	0.0	0.0	0.1	0.0	0.0	1.1
Tier 2	0.0	0.0	0.1	0.0	0.0	0.0
TLAC shortfall 2022 minimum (€ bn)	109.0	109.0		82.1	82.1	
Total accounting assets (€ bn)	66,685.8	43,526.7	4,788.8	64,039.7	41,407.9	4,256.0
Leverage ratio (%)	5.8	5.7	5.6	5.8	5.9	5.7
LCR (%)	134.0	130.8	174.9	133.0	129.0	180.0
NSFR (%)	116.9	119.3	117.6	116.0	118.0	118.5
Fully phased-in final Basel III framework (2027)						
Change in Tier MRC at the target level (%)				3.6	3.0	5.9
CET1 ratio (%)				12.2	12.0	12.6
Target capital shortfalls (€ bn); of which:				25.8	23.7	2.5
CET1				5.2	5.2	1.0
Additional Tier 1				7.3	6.3	0.8
Tier 2				13.3	12.2	0.7
TLAC shortfall 2022 minimum (€ bn)				143.6	143.6	
	1	2017 1 6 11	6.1.1			

See Table A.4 for the target level capital requirements. ¹ Uses the 2017 definition of the leverage ratio exposure measure.

Source: Basel Committee on Banking Supervision.

- Compared with the previous reporting period (June 2017) the average Common Equity Tier 1 (CET1) capital ratio under the fully phased-in initial Basel III framework has increased from 12.5% to 12.9% for Group 1 banks and from 14.7% to 16.0% for Group 2 banks.
- All Group 1 and Group 2 banks (including all 30 G-SIBs) would meet the CET1 minimum capital requirement of 4.5% and the CET1 target level of 7.0% (ie including the capital conservation buffer). This target also includes the G-SIB surcharge where applicable but does not include any countercyclical capital buffers.
- Applying the 2022 minimum TLAC requirements and the fully phased-in initial Basel III framework, eight of the 25 G-SIBs reporting total loss-absorbing capacity (TLAC) data have a combined shortfall of €82.1 billion, compared with €109.0 billion at the end of June 2017.
- Group 1 banks' average Liquidity Coverage Ratio (LCR) decreased by 1.0 percentage point to 133.0%, while the average Net Stable Funding Ratio (NSFR) decreased from 116.9% to 116.0%. For Group 2 banks, there was an increase for both LCR and NSFR.

Fully phased-in initial Basel III capital ratios continue to increase

Consistent sample of Group 1 banks



¹ The solid lines depict the relevant minimums, the dotted lines the minimums plus the capital conservation buffer. See Table A.4 for the relevant levels. ² Exchange rates as of 31 December 2017. ³ See Table B.1 for the composition of the regions.

Source: Basel Committee on Banking Supervision. See Table C.5, Table C.6 and Table C.7 for underlying data and sample size.

- The overall CET1 capital ratios for Group 1 banks have increased to 12.9% in December 2017 from 12.5% in June 2017. This is consistent with the long-term developments, as CET1 capital ratios continuously increased since 2011 from 7.2%. Overall Tier 1 and Total capital ratios have displayed similar increases over this same time period.
- Currently, the Tier 1 capital ratios are higher in Europe than in the Americas and the rest of the world region. However, when compared with data starting from 2011, this relationship used to be reversed before 2014.
- The percent increase in capital since June 2011 has tended to be lower in Europe than other regions, even though European banks raised more capital externally and their average risk-based capital ratios are higher than in any other region as of end-December 2017. Risk-weighted assets (RWA) have tended to fall for Group 1 banks in all regions over the second half of 2017.



No significant increase in Tier 1 MRC at the target level due to the final Basel III standards

Credit risk shows change in MRC due to revised standardised and IRB approaches, including securitisation. Operational risk figures may not show supervisor-imposed capital add-ons. Therefore, changes in MRC may be overestimated. Output floor results are net of the existing Basel I-based floor according to national implementation of the Basel II framework.

Source: Basel Committee on Banking Supervision. See also Table 4.

- For Group 1 banks, the Tier 1 minimum required capital (MRC) would increase by 3.6% following full phasing-in of the final Basel III standards. This increase is composed of a 4.8% increase for the risk-based components combined, driven by the positive contributions of output floor (1.8%), market risk (1.8%) and CVA (2.0%), as well as minor reductions in credit risk (-0.6%) and operational risk requirements (-0.1%). This increase is offset by a 1.2% reduction in leverage ratio Tier 1 MRC, which reflects the fact that the Basel III leverage ratio is becoming relatively less constraining for many banks in the sample in the presence of an output floor.
- The impact on MRC across regions is very heterogeneous for Group 1 banks with a moderate decrease shown in the Americas (-2.1%) and the rest of the world (-4.3%) and in contrast to this a strong increase in MRC for European banks (+20.2%).
- For Group 2 banks, the overall 5.9% increase in Tier 1 MRC is driven by an increase in the riskbased measure of 14.2% (mainly driven by credit risk (7.2% and the output floor (4.4%)) and the leverage ratio measures, partially offsetting this increase at -8.3%.
- Compared with the previous cumulative QIS (based on end-2015 data), the impact on MRC has increased from -0.5% to 1.7%, excluding the effect of market risk to make the two studies comparable. The differences are partially driven by a lower base of the output floor and more conservative assumptions for the implementation of the revised operational risk standards in some countries.

Fully phased-in Basel III leverage ratios¹ increase slightly in H2 2017

Consistent sample of Group 1 banks, exchange rates as of 31 December 2017



¹ Note that the data points for H1 2013 use an approximation for the initial definition of the Basel III leverage ratio exposure where gross instead of adjusted gross securities financing transaction values are used. Data points from H2 2017 onwards use the final definition of the leverage ratio.

Source: Basel Committee on Banking Supervision. See Table C.13 and Table C.14 for underlying data and sample size.

- For the full sample at the end-December 2017 reporting date, the average fully phased-in Basel III Tier 1 leverage ratios are 6.0% for Group 1 banks and for G-SIBs, and 5.2% for Group 2 banks. The reduction for Group 2 banks is driven by a change in the sample.
- For the consistent sample of banks, the average fully phased-in Basel III leverage ratio has increased from 5.8% in June 2017 to 5.9% in December 2017. This is consistent with the long-term developments, as the average leverage ratio continuously increased since June 2011 from 3.5%, driven by Tier 1 capital increases which more than offset an overall increase in the exposure measure.
- Two out of 72 Group 2 banks with an aggregate incremental shortfall of €1.1 billion would not meet a fully phased-in minimum Basel III Tier 1 leverage ratio of 3%, while all Group 1 banks meet the requirement.
- Leverage ratios are lower in Europe as compared to the Americas and the rest of the world, although the gap has narrowed slightly over time.

Combined capital shortfalls at the target level under the final Basel III standards more than 70% lower for Group 1 banks compared with end-2015



Fully phased-in final Basel III standards, sample and exchange rates as at the reporting dates Graph 4

- The capital shortfalls at the end-2017 reporting date are more than 70% lower for Group 1 banks than in the end-2015 cumulative QIS exercice. While the samples for the two reporting periods differ slightly, this did not have an impact on the shortfalls.
- Overall, G-SIBs are the main contributors to the capital shortfalls for Group 1 banks. As in the cumulative QIS, they account for all of the CET1 capital shortfall of Group 1 banks. Their contribution decreased to 86% for combined Tier 1 capital shortfall and increased to 92% for the Tier 2 capital shortfall.

Fully phased-in regulatory CET1 capital increased by 84.0% since 2011

Consistent sample of Group 1 banks, exchange rates as of 31 December 2017



¹ The dividend payout ratio is calculated as common share dividends divided by profits after tax by using a rolling 12 months window.

Source: Basel Committee on Banking Supervision. See Table C.21, Table C.24, Table C.25 and Table C.27 for underlying data and sample size. Table C.22, Table C.26 and Table C.28 provide an additional regional breakdown for Group 1 banks.

- From June 2011 to end-December 2017, the level of Group 1 banks' CET1 capital has increased by 84.0% from €1,994 billion to €3,670 billion. Since end-June 2017, Group 1 CET1 capital has increased by €79 billion (or 2.2%).
- At a regional level, while CET1 capital has more than doubled in the rest of the world since 2011, the increase in Europe and in the Americas was more limited at 55.4% and 73.7%, respectively.
- The rise in overall CET1 capital among Group 1 banks in the current reporting period is largely due to profits generated, with particularly large profits shown by non-G-SIBs and a noted decline in G-SIBs profits compared with the previous period.
- Group 1 banks' profits after tax have decreased marginally over the last six months and still reached a third historical peak of €199.3 billion over the second half of 2017. More than 54% of the profits after tax of Group 1 banks have been realised by G-SIBs.

Since 2011, European banks raised almost 60% of the CET1 capital raised by the Group 1 bank sample but only generated around 28% of the profits after tax



Consistent sample of Group 1 banks, exchange rates as of 31 December 2017

¹ The dividend payout ratio is calculated as common share dividends divided by profits after tax by using a rolling 12 months window.

Source: Basel Committee on Banking Supervision. See Table C.26 and Table C.28 for underlying data and sample size.

- Since 2011, annual profits after tax recorded have have always been higher in the Americas and the rest of the world than in Europe, however for the current period Europe is higher than the Americas.
- Overall, around 28% of the profits after tax have been generated by Group 1 banks in Europe, more than 22% in the Americas and more than 50% in the rest of the world.
- Conversely, almost 60% of the CET1 capital raised has been raised by Group 1 banks in Europe.

Analysis of share of MRC by asset class¹ according to current rules shows increase in operational risk MRC and decrease in credit risk MRC



Consistent sample of Group 1 banks

¹ The category "other" includes capital requirements for other assets; the current Basel I-based output floor; Pillar 1 capital requirements in member countries for risks not covered by the Basel framework; reconciliation differences; and additional capital requirements due to regulatory calculation differences and general provisions. The latter item can lead to negative capital requirements in cases where there is an excess in provisions which can be recognised in a bank's Tier 2 capital. Furthermore, for banks which apply the standardised approach, general provisions may to some extent be recognised as Tier 2 capital; consequently, MRC is reduced by this amount. The term "reconciliation differences" refers to the difference between MRC reported at the entire bank level and the sum of MRC reported for the individual portfolios. Exposures subject to partial use of the standardised approach for credit risk which cannot be assigned to a specific portfolio, as well as pastdue items under the standardised approach, are listed separately as "partial use".

Source: Basel Committee on Banking Supervision. See Table C.31 for underlying data and sample size.

- As of end-June 2017, overall credit risk continues to compose the dominant portion of overall minimum required capital (MRC), with this category on average comprising 65.2% of total MRC for Group 1 banks.⁴ However, the share of credit risk has declined significantly from 74.6% at the end of June 2011.
- Conversely, the share of operational risk MRC which increased sharply from 7.8% at the end of June 2011 to 16.4% currently. This increase is attributed in large part to the surge in the number and severity of operational risk events during and after the financial crisis, which are factored into the calculation of MRC for operational risk under the advanced measurement approach.
- Among the credit risk asset classes, the share of MRC for corporate exposures increased from 31.0% to 37.6%, while the share of MRC for securitisation exposures declined from 7.2% to 1.7%.

⁴ Here overall credit risk is defined as the sum of corporate, bank, retail, sovereign, partial-use, securitisations and related entities as illustrated in the graph.

All G-SIBs and more than 95% of Group 1 and Group 2 banks meet fully phasedin liquidity coverage ratio and net stable funding ratio¹



¹ The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the thin vertical lines show the range of the entire sample. In some cases, arrows at the top of the vertical line indicate banks with liquidity ratios outside the range shown in the graph. The dots represent weighted averages. ² The sample is capped at 400%, meaning that all banks with an LCR above 400% were set to 400%. The dots represent weighted averages. The horizontal lines represent the 80% minimum (2017, blue dashed line), the 90% minimum (2018, red dashed line) and the 100% minimum (2019, red solid line).

Source: Basel Committee on Banking Supervision. See Table C.76 for underlying data and sample size.

- The average LCR for Group 1 banks is 133.0% and for Group 2 banks 180.0% while at the end-of June 2017, it was 134.0% and 174.9%, respectively.
- The average NSFR is 116.0% for Group 1 banks and 118.5% for Group 2 banks at end-December 2017 compared with 116.9% and 117.6% respectively, at end-June 2017.
- Some 98.9% of Group 1 banks and all Group 2 banks in the sample already meet or exceed the final LCR minimum requirement of 100%. All Group 1 and Group 2 banks have LCRs that are at or above the 80% minimum requirement applicable since January 2017.
- Some 97.3% of Group 1 banks and 95.2% of Group 2 banks meet or exceed the 100% minimum NSFR requirement, with all Group 1 and Group 2 banks at an NSFR of 90% or higher as of end-December 2017.

LCR, NSFR and related shortfalls at a 100% minimum requirement continue to improve

Consistent sample of Group 1 banks¹

Graph 9



¹ As described in Section 3.2, the NSFR time series depicts data reflecting NSFR standard released in December 2010, January 2014 and October 2014. ² Exchange rates as at the reporting dates. ³ Exchange rates as of 31 December 2017.

Source: Basel Committee on Banking Supervision. See Table C.81, Table C.82, Table C.85 and Table C.88 for underlying data and sample size. Table C.83, Table C.86 and Table C.89 provide additional regional breakdowns for Group 1 banks.

- For a consistent sample of Group 1 banks, all banks comply with the 100% LCR minimum requirement. This compares to a shortfall of €0.1 billion related to the 100% LCR minimum requirement at end-June 2017.
- The aggregate NSFR shortfall was €2.7 billion for Group 1 banks and €0.9 billion for Group 2 banks at the end-December 2017 compared with €15.1 billion and €2.6 billion at end-June 2017.

LCRs by region gradually converge to a lesser degree for the Americas, NSFR remains lower in Europe and the Americas



¹ As described in the Section 6.2, the NSFR time series depicts data reflecting NSFR standard released in December 2010, January 2014 and October 2014.

Source: Basel Committee on Banking Supervision. See Table C.83 for underlying data and sample size.

- The weighted average LCR at end-December 2017 for Group 1 banks is in excess of 120% for each of the three regions.
- While Group 1 banks in Europe and the Americas had initially lower average LCRs compared with the rest of the world, the average LCRs in Europe and the rest of the world and, to a lesser degree, the Americas have tended to gradually converge. The regions with lower end-2012 average ratios saw important increases in particular between end-2012 and June 2014.
- The weighted average NSFR at end-December 2017 for Group 1 banks in each of the three regions is well in excess of 100%.
- The average NSFR for Group 1 banks in Europe and the Americas at between 110% and 112% as at end-December 2017 which is lower than in the rest of the world at 121.1%. NSFRs have improved in all regions since end-2012, with the exception of end-2017 for the rest of the world.

Detailed results of the Basel III monitoring exercise as of 31 December 2017

1. General remarks

At its 12 September 2010 meeting, the Group of Governors and Heads of Supervision (GHOS), the oversight body of the Basel Committee on Banking Supervision, announced a substantial strengthening of existing capital requirements and fully endorsed the agreements it had reached on 26 July 2010.¹ These capital reforms, together with the introduction of two international liquidity standards, responded to the core of the global financial reform agenda presented to the Seoul G20 Leaders summit in November 2010. Collectively, these reforms are referred to as "initial phase of Basel III reforms" or short "initial Basel III" in this report. On 7 December 2017, the GHOS finalised the Basel III reforms² with a number of revisions that seek to restore credibility in the calculation of risk-weighted assets (RWA) and capital ratios of banks (referred to as "final Basel III" in this report). The Committee monitors and evaluates the impact of these capital, leverage and liquidity requirements on a semiannual basis.³ This report summarises the results of the latest Basel III monitoring exercise using 31 December 2017 data.⁴

1.1 Scope of the monitoring exercise

All but one of the 27 Committee member countries participated in the Basel III monitoring exercise as of 31 December 2017. The estimates presented are based on data submitted by the participating banks and their national supervisors in reporting questionnaires and in accordance with the instructions prepared by the Committee.⁵ The questionnaire covered components of eligible capital, the calculation of all aspects of risk-weighted assets (RWA), the calculation of a leverage ratio and components of the liquidity metrics. Table A.3 in Annex A shows which standards are relevant for the relevant Basel III regime (initial Basel III,

- ² Basel Committee on Banking Supervision, *High-level summary of Basel III reforms*, December 2017, <u>www.bis.org/bcbs/publ/d424_hlsummary.pdf</u>; Basel Committee on Banking Supervision, *Basel III: Finalising post-crisis reforms*, December 2017, <u>www.bis.org/bcbs/publ/d424.htm</u>.
- ³ A list of previous publications is included in the Annex.
- ⁴ The data for Japan are as of the end of September 2017, as banks in that country report on a biannual basis as of the end of March and the end of September to correspond to the fiscal year-end period. Further, the data for Canada reflect a reporting date of 31 October 2017, which corresponds to Canadian banks' fiscal fourth quarter-end.
- ⁵ See Basel Committee on Banking Supervision, *Instructions for Basel III implementation monitoring*, March 2018, <u>www.bis.org/bcbs/qis/</u>.

¹ See the 26 July 2010 press release "The Group of Governors and Heads of Supervision reach broad agreement on Basel Committee capital and liquidity reform package", <u>www.bis.org/press/p100726.htm</u>, and the 12 September 2010 press release "Group of Governors and Heads of Supervision announces higher global minimum capital standards", <u>www.bis.org/press/ p100912.htm</u>.

transitional Basel III and the fully phased-in Basel III framework). Technically, the remaining difference between the transitional and the fully phased-in Basel III frameworks is the level of the output floor which is 50% in 2022 (transitional final Basel III framework) and 72.5% in 2027 (fully phased-in final Basel III framework).

The final data were submitted to the Secretariat of the Committee by 22 August 2018. The purpose of the exercise is to provide the Committee and the public with an ongoing assessment of the impact on participating banks of the capital and liquidity standards set out in the Basel standards.

1.2 Sample of participating banks

Data on the initial Basel III framework were provided for a total of 206 banks, including 111 Group 1 banks and 95 Group 2 banks.⁶ Group 1 banks are those that have Tier 1 capital of more than €3 billion and are internationally active. All other banks are considered Group 2 banks. Compared to the previous reporting date with 106 Group 1, 87 Group 2 banks and 193 banks overall, the samples increased somewhat. Nevertheless, the impact of the final Basel III framework could be assessed for only 124 banks, among which 72 Group 1 banks and 52 Group 2 banks.⁷

Banks were asked to provide data at the consolidated level as of 31 December 2017. Subsidiaries are not included in the analyses to avoid double-counting. For Group 1 banks, members' coverage of their banking sector was very high, reaching 100% coverage for some countries. Coverage for Group 2 banks was lower, and varied across countries.

For a number of banks data relating to some parts of the Basel III framework were unavailable. Accordingly, these banks are excluded from individual sections of the Basel III monitoring analysis due to incomplete data. In certain sections, data are based on a consistent sample of banks. This consistent sample represents only those banks that reported necessary data at the June 2011 (labelled "H1 2011") through December 2017 ("H2 2017") reporting dates, in order to make more meaningful period-to-period comparisons. The consistent sample differs for the various analyses; typically it includes around 84 Group 1 banks, of which 29 are G-SIBs, and around 43 Group 2 banks. The G-SIB in the time series analyses are among those banks which have been classified as G-SIBs as of November 2017, irrespective of whether they have also been classified as G-SIBs previously.

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

1.3 Methodology

1.3.1 Aggregation

Reported average amounts in this report have been calculated by creating a composite bank at a total sample level, which effectively means that the total sample averages are weighted. For example, the average common equity Tier 1 capital ratio is the sum of all banks' common equity Tier 1 (CET1) capital for the total sample divided by the sum of all banks' RWA for the total sample. Similarly, the average fully phased-in Basel III Tier 1 leverage ratio is the sum of all banks' fully phased-in Tier 1 capital for the total sample divided by the sum of all banks' Basel III banks' fully phased-in Tier 1 capital for the total sample divided by the sum of all banks' Basel III leverage ratio exposures for the total sample.

⁶ See Table B.1 in the Statistical Annex for details on the sample. Also note that this table shows banks for which data were provided for the specific topics and not necessarily data used in the analysis.

⁷ See Table B.2 in the Statistical Annex for details on the sample for the assessment of the final Basel III framework. Also note that while all these banks provided data on the final Basel III credit and operational risk standards, some of them were unable to provide data some other aspects of the final framework.

1.3.2 Impact metrics

Throughout the report, effects of the reforms are frequently shown in terms of: (i) changes in minimum required capital (MRC); (ii) impact on capital ratios; and (iii) estimated capital shortfalls. MRC and shortfalls can be computed based on banks' minimum and target requirement levels. While the *minimum* levels reflect a risk-based 4.5% CET1, a 6% Tier 1 and an 8% total capital requirement as well as a 3% requirement for the Basel III leverage ratio, the *target* level also accounts for the capital conservation buffer (ie resulting in a 7% CET1, an 8.5% Tier 1 and a 10.5% total capital requirement), as well as any applicable G-SIB surcharge (both for risk-based and Basel III leverage ratio frameworks). Under the final Basel III framework, the target capital requirements also include the G-SIB buffer on the leverage ratio. Consistent with previous reports, this report does not reflect any additional capital requirements under Pillar 2 of the Basel II framework, any higher loss absorbency requirements for domestic systemically important banks, nor does it reflect any countercyclical capital buffer requirements.

Reference points

Unless otherwise noted, the impact assessment was carried out by comparing banks' capital positions under fully phased-in initial Basel III to the transitional initial Basel III framework as implemented by the national supervisor (ie with phase-in arrangements). The fully phased-in initial Basel III results are calculated without considering transitional arrangements pertaining to the phase-in of deductions and grandfathering arrangements set out in the initial Basel III framework (see Box A). However, banks in some countries had difficulties providing fully phased-in Basel III capital amounts; in such cases, the capital amounts according to the fully phased-in *national implementation* of the Basel III framework were used instead.

Similarly, the assessment of the final Basel III framework compares the fully phased-in final Basel III framework with the fully phased-in initial Basel III framework as implemented by the national supervisor.

Box A

Phase-in provisions for risk-based capital requirements

The initial Basel III framework includes the following phase-in provisions for capital ratios:

- Regulatory adjustments (ie possibly stricter sets of deductions that apply under Basel III) were fully phased in by 1 January 2018;
- An additional 2.5% capital conservation buffer above the regulatory minimum capital ratios, which must be met with CET1 capital, will be phased in by 1 January 2019; and
- The additional loss absorbency requirement for G-SIBs, which ranges from 1.0% to 2.5%, will be fully phased in by 1 January 2019. It will be applied as an extension of the capital conservation buffer and must be met with CET1.

The final Basel III framework includes phase-in provisions for the output floor, which will start at 50% on 1 January 2022, rise in annual steps of 5% and be fully phased-in at the 72.5% level from 1 January 2027. Furthermore, the increase in RWA can be capped at 25% during the phase-in period at national discretion.

Table A.4 in Annex A includes a detailed overview of the Basel Committee's phase-in arrangements.

Minimum required capital

Because the suite of post-crisis reforms includes revisions to RWA, expected loss (EL) amounts and the Basel III leverage ratio framework, the analysis of the final Basel III framework mainly focuses on MRC as a

broad and integrated capital impact measure to aggregate the results. At the bank level, MRC is defined in this report as the sum of:

- the relevant target capital ratio level based on the Basel requirements times RWA, after consideration of all relevant floors;
- any capital effects from the treatment of EL amounts for credit risk and provisions at the relevant tier of capital;
- any capital effects from deductions which are an alternative to a 1,250% risk weighting treatment in certain national implementations of the Basel framework; and
- any incremental capital requirement (over and above the risk-based requirements including any floors) resulting from the Basel III leverage ratio.

This calculation is conducted for both the current *basis* and the *revised* regimes. Changes in MRC are hence calculated as follows:

$$\%\Delta MRC = \frac{MRC_{revised} - MRC_{basis}}{MRC_{basis}}$$

Therefore, this formula reflects, among other elements:

- changes to the calculation of RWA (at the portfolio or risk type level RWA before output floors);
- changes to capital resulting from changes in the calculation of EL amounts for credit risk and the treatment of provisions;
- changes resulting from the move from the national implementation of the transitional Basel Ibased floor (as collected through supervisory reported systems) to the aggregate output floor under the final Basel III framework; and
- changes to the definition of the Basel III leverage ratio exposure measure for all banks, and to its level for G-SIBs.

Capital ratios

The impact of the reforms is also expressed in terms of its impact on capital ratios reflecting changes due to the reforms in both the numerator (through any effects on the treatment of EL amounts and provisions) and the denominator (through changes in RWA).

Combined shortfall analysis

In addition, a combined shortfall analysis at the three tiers of the Basel III capital ratios is conducted at the target level. The combined net shortfall at any capital tier is calculated as the difference (where positive) between the total required capital (accounting for both the risk-based requirements and the Basel III leverage ratio) at a given capital tier and the actual capital of the same tier held, net of any shortfall stemming from higher capital tiers. The last term is included since any higher tier capital (eg CET1) raised to meet a specific higher tier capital shortfall (eg CET1 shortfall) can also be used to meet any possible specific shortfall of a lower tier capital (eg any *additional* Tier 1 shortfall caused by risk-based and/or Basel III leverage ratio Tier 1 capital requirements).

1.3.3 Presentation

To preserve confidentiality, some of the results shown in this report are presented using box plot charts. The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the thin vertical lines show the range of the entire sample unless noted otherwise. Finally, weighted averages are represented by dots.

1.4 Data quality

For this monitoring exercise, participating banks submitted comprehensive and detailed non-public data on a voluntary and best-efforts basis. As with the previous studies, national supervisors worked extensively with banks to ensure data quality, completeness, and consistency with the published reporting instructions. Also particular attention has been paid on the reconciliation of reported data with existing data from supervisory reporting systems. Banks are included in the various analyses below only to the extent that they were able to provide data of sufficient quality to complete the analyses.

1.5 Interpretation of results

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

- When comparing results to prior reports, sample differences as well as minor revisions to data from previous periods need to be taken into account. Sample differences also explain why results presented for the December 2017 reporting date may differ from the H2 2017 data point in graphs and tables showing the time series for the consistent sample of banks as described above.
- The actual impact of those new requirements which are covered in this analysis will almost certainly be less than shown in this report given the phased-in implementation of the standards and interim adjustments made by the banking sector to changing economic conditions and the regulatory environment. For example, the results do not consider bank profitability, changes in capital or portfolio composition, or other management responses to the policy changes since 31 December 2017 or in the future. For this reason, the results are not comparable to industry estimates, which tend to be based on forecasts and consider management actions to mitigate the impact, as well as incorporate estimates where information is not publicly available.
- Except for the results for the transitional initial Basel III framework, the Basel III capital amounts shown in this report assume that all common equity deductions are fully phased in and all nonqualifying capital instruments are fully phased out (ie it is assumed that none of these capital instruments will be replaced by eligible instruments). As such, these amounts underestimate the amount of Tier 1 capital and Tier 2 capital held by a bank as they do not give any recognition for non-qualifying instruments that will actually be phased out over five years.
- The treatment of deductions and non-qualifying capital instruments also affects figures reported in the section on the Basel III leverage ratio. The assumption that none of these capital instruments will be replaced by eligible instruments will become less of an issue as the implementation date of the Basel III leverage ratio nears.
- For banks that could not provide data on the impact of the revised standards for securitisation, CVA or market risk, it was assumed that the respective capital requirements would remain unchanged in the assessment of the overall impact. Such banks were however excluded from the analysis of the relavent policy topic.
- This report disregards any effects stemming from the upcoming changes in accounting frameworks which may influence capital requirements and eligible capital.

2. Regulatory capital, capital requirements, capital shortfalls and TLAC

Table 2 shows the aggregate capital ratios under the current (or transitional initial), fully phased-in initial, transitional final and fully phased-in final Basel III frameworks, as well as the related capital shortfalls. Details of capital ratios and capital shortfalls are provided in Section 2.1 and Section 2.2.

	Basel III capital ratios, in per cent				Combined risk-based capital and leverage ratio shortfalls at the target level, in billions of euros ²				
	Init	ial	Final		Initial		Final		
	Current Fully phased- in		Transitional	Fully phased- in	Current	Fully phased- in	Transitional	Fully phased- in	
Group 1 banks									
CET1 capital	13.0	12.9	12.6	12.2	0.0	0.0	0.0	5.2	
Tier 1 capital ³	14.4	14.2	13.7	13.3	0.0	0.0	0.1	7.3	
Total capital ⁴	16.9	16.1	15.7	15.2	0.0	0.0	7.6	13.3	
Sum					0.0	0.0	7.7	25.8	
Of which: G-SIBs									
CET1 capital	12.8	12.6	12.4	12.0	0.0	0.0	0.0	5.2	
Tier 1 capital ³	14.3	13.9	13.7	13.3	0.0	0.0	0.1	6.3	
Total capital ⁴	16.7	15.9	15.5	15.1	0.0	0.0	6.5	12.2	
Sum					0.0	0.0	6.6	23.7	
Group 2 banks									
CET1 capital	16.3	16.0	13.0	12.6	0.0	0.0	1.0	1.0	
Tier 1 capital ³	16.8	16.6	13.5	13.1	1.1	1.1	0.8	0.8	
Total capital ⁴	19.3	18.8	15.6	15.1	0.0	0.0	0.7	0.7	
Sum				1.1	1.1	2.5	2.5		

Aggregate capital ratios and (incremental) combined capital shortfalls at the target level¹ Table 2

¹ The target level includes the capital conservation buffer and the capital surcharges for 30 G-SIBs as applicable but does not include any countercyclical capital buffers. Samples for the initial and final Basel III frameworks are not consistent. ² The shortfall is calculated as the sum across individual banks where a shortfall is observed. The calculation includes all changes to RWA (eg definition of capital, counterparty credit risk, trading book and securitisation in the banking book). The Tier 1 and total capital shortfalls are incremental assuming that the higher-tier capital requirements are fully met. All columns use the 2017 definition of the leverage ratio exposure measure. ³ The shortfalls presented in the Tier 1 capital row are *additional* Tier 1 capital shortfalls. ⁴ The shortfalls presented in the total capital row are *Tier 2* capital shortfalls.

Source: Basel Committee on Banking Supervision.

CET1 capital ratios

In per cent

Table 3

	Initi	al Basel III st	andards	Final Basel III standards				
	Number of banks	Current	Fully phased-in	Number of banks	Transitional	Fully phased-in		
Group 1 banks	99	13.0	12.9	86	12.6	12.2		
Of which: Europe	35	14.2	13.7	31	11.6	11.0		
Of which: Americas	20	12.3	12.2	15	12.3	12.2		
Of which: RW	44	12.6	12.9	40	13.5	13.2		
Of which: G-SIBs	30	12.8	12.6	26	12.4	12.0		
Group 2 banks	81	16.3	16.0	60	13.0	12.6		
Source: Basel Committee on Banking Supervision								

2.1 Risk-based capital ratios

2.1.1 Initial Basel III standards

As compared with transitional CET1, the average CET1 capital ratio of Group 1 banks would have declined slightly from 13.0% to 12.9% as a result of the full implementation of the initial Basel III standards. For Group 2 banks, the average CET1 capital ratio declines from 16.3% under transitional initial rules to 16.0% as a result of the full phasing-in of initial Basel III (a reduction of 0.3 percentage points). Results continue to show significant variation across banks as shown in Graph 11 for the transitional Basel III rules and Graph 12 for the fully phased-in initial Basel III framework. The reduction in the average CET1 ratio for Group 2 banks is driven by the *full* application of the new definition of eligible capital instruments, deductions that were not previously applied at the common equity level of Tier 1 capital in most countries (numerator),⁸ and by increases in RWA (denominator). Since all countries in the sample have already implemented initial Basel III as of end-June 2015 the overall change in RWA is very limited and mainly due to different national phase-in plans.

Tier 1 capital ratios of Group 1 banks would on average decline 0.2 percentage points from 14.4% to 14.2%, and total capital ratios of this same group would decline on average by 0.8 percentage points from 16.9% to 16.1%. Group 2 banks show similar declines in Tier 1 capital ratios (from 16.8% to 16.6%) and total capital ratios (from 19.3% to 18.8%). The stronger decline of total capital ratios is caused by the phase-out of Tier 2 instruments which will no longer be eligible in 2022.

⁸ See also Table B.4 and Table B.5.



¹ The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the vertical lines generally show the range of the entire sample. In some cases, arrows at the top of the vertical line indicate banks with capital ratios outside the range shown in the graph. The dots represent weighted averages.

Source: Basel Committee on Banking Supervision. See Table C.1 for underlying data and sample size.



¹ The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the vertical lines generally show the range of the entire sample. In some cases, arrows at the top of the vertical line indicate banks with capital ratios outside the range shown in the graph. The dots represent weighted averages.

Source: Basel Committee on Banking Supervision. See Table C.2 for underlying data and sample size.

Graph 13 below shows the average capital ratios under transitional Basel III rules for a consistent sample of Group 1 and Group 2 banks for the periods end-June 2011 through end-December 2017. Transitional capital ratios had not changed greatly up to end-June 2017, however for the current period the ratios have increased by 0.6 percentage points and more than one percentage point for Group 1 and Group 2 banks, respectively. This is partially driven by some banks in the sample no longer being subject to the transitional Basel II floors, resulting in lower RWA.



Transitional initial Basel III CET1, Tier 1 and total capital ratios¹

Consistent sample of banks

¹ Before the implementation of the Basel III framework, results have been calculated on the basis of the relevant national regulatory frameworks in place at the reporting dates.

Source: Basel Committee on Banking Supervision. See Table C.3 for underlying data and sample size.

Graph 14 below shows the average capital ratios under transitional Basel III rules for a consistent sample of Group 1 banks for the periods end-June 2011 through end-December 2017 by region. All regions have shown substantial growth in capital ratios over this period. All ratios in Europe are at least 1.5 percentage points above those of the other two regions as of December 2017 while the Americas and the rest of the world are in line with each other.

Transitional initial Basel III CET1, Tier 1 and total capital ratios,¹ by region



¹ Before the implementation of the Basel III framework, results have been calculated on the basis of the relevant national regulatory frameworks in place at the reporting dates.

Source: Basel Committee on Banking Supervision. See Table C.4 for underlying data and sample size.

After full phasing in of Basel III (Graph 15), the CET1, Tier 1 and total capital ratios for this consistent sample of Group 1 banks improved by 0.4, 0.5 and 0.7 percentage points over the previous six months, respectively. For Group 2 banks, the improvement in risk-based capital ratios over the reporting period was 1.1, 1.2 and 1.5 percentage points, respectively. The general improvement in fully phased-in Basel III capital ratios for both groups is due to Basel III-eligible capital added and, to a lesser extent, lower levels of deductions that reduce CET1. Again, this is partially driven by some banks in the sample no longer being subject to the transitional Basel II floors, resulting in lower RWA.



Fully phased-in initial Basel III CET1, Tier 1 and total capital ratios

On a fully phased-in basis, Tier 1 capital ratios were more than two percentage points lower in Europe and the Americas than in the rest of the world region in 2011 (Graph 16). However, this relationship reversed starting around 2015. The evolution is similar for CET1 and total capital.

Over the previous six months, all tier levels of capital ratios for this consistent sample of Group 1 banks for Europe and the rest of the world improved. For the Americas the ratios remained constant with a slight decline of 0.1 percentage point for Tier 1 capital ratios. Europe on the other hand had elevated improvements in CET1 (0.4 percentage points), Tier 1 capital (0.5 percentage points) and total capital (0.5 percentage points). Finally, the rest of the world region had the most improvements in CET1 (0.6 percentage points), Tier 1 capital (0.8 percentage points) and total capital (1.2 percentage points).

Fully phased-in initial Basel III CET1, Tier 1 and total capital ratios,¹ by region

Consistent sample of Group 1 banks



¹ Before the implementation of the Basel III framework, results have been calculated on the basis of the relevant national regulatory frameworks in place at the reporting dates.

Source: Basel Committee on Banking Supervision. See Table C.6 for underlying data and sample size.

Group 1 banks saw Tier 1 capital increase and RWAs decrease in the second half of 2017. The Group 1 gains were concentrated amongst G-SIBs. On the other hand, Group 2 banks showed a smaller percent increase in Tier 1 capital and a sizeable decrease in RWAs (see Graph 17).

Fully phased-in initial Basel III Tier 1 capital ratios and changes in RWA and Tier 1 capital



The rise in Group 1 banks' Tier 1 capital was concentrated in banks located in the rest of the world region, while their RWAs declines were distributed across regions (see Graph 18). Compared with end-December 2015 when the cumulative QIS on the final Basel III framework was conducted, Tier 1 capital ratios increased for all regions. Europe experienced the biggest increase of 2.0 percentage points to 15.0%

due to the biggest decrease in RWAs of 5.0% since 2015 as well as an increase in Tier 1 capital of 10.4%. The Americas saw a moderate increase in the Tier 1 capital ratio of 1.3 percentage points to 13.9% as a result of an increase in Tier capital of 8.9% complemented by a decrease of 2.4% in RWAs. Finally, for the rest of the world, Tier 1 capital ratios increased only by 1.1 percentage points to 13.6% mainly because of the high increase in RWAs of 8.5% combined with an even higher increase in Tier 1 capital of 17.1%.

Fully phased-in initial Basel III Tier 1 capital ratios and changes in RWA and Tier 1 capital, by region



2.1.2 Final Basel III standards

On average fully phased-in initial Basel III CET1 capital ratio of Group 1 banks (Graph 12) compared to fully phased-in final Basel III CET1 capital ratio (Graph 20) would decline by 0.7 percentage points from 12.9% to 12.2%. GSIBs would see an equivalent decrease of 0.6 percentage points from 12.6% to 12.0%. The largest decrease however would be for Group 2 banks where the CET1 capital ratio declines by 3.4 percentage points from 16.0% to a low of 12.6%. There is also more dispersion in the ratios for Group 2 banks under final Basel III compared to initial Basel III standards.

Similar to CET1 capital ratios, Tier 1 capital ratios of Group 1 and Group 2 banks decline by 0.9 percentage points and 3.5 percentage points, respectively. Total capital ratios also decline for both groups with a more pronounced decline for Group 2 banks bringing the average much closer to the median of these banks.

As compared with transitional CET1, the average CET1 capital ratio of Group 1 banks would have declined from 12.6% to 12.2% as a result of the full implementation of the final Basel III standards (a reduction of 0.4 percentage points). For Group 2 banks, the average CET1 capital ratio declines from 13.0% under transitional standards to 12.6% as a result of the full phasing-in of Basel III (a reduction of 0.4 percentage points). Results continue to show significant variation across banks as shown in Graph 19 for the transitional final Basel III standards and Graph 20 for the fully phased-in Basel III framework.

Tier 1 capital ratios of Group 1 banks would on average decline 0.4 percentage points from 13.7% to 13.3%, and total capital ratios of this same group would decline on average by 0.5 percentage points from 15.7% to 15.2%. Group 2 banks show subdued declines in Tier 1 capital ratios (from 13.5% to 13.1%) and total capital ratios (from 15.6% to 15.1%). The starting low base for total capital ratios is caused by the phase-out of Tier 2 instruments which will no longer be eligible in 2022.



Transitional CET1, Tier 1 and total capital ratios under the final Basel III standards Graph 19

The solid horizontal line represents the relevant minimum requirement, the dotted horizontal line represents the relevant target (excluding any bank-specific G-SIB surcharges).

Source: Basel Committee on Banking Supervision. See also Table C.9.

Fully phased-in CET1, Tier 1 and total capital ratios under the final Basel III standards

CET1 capital Tier 1 capital Total capital Per cent Per cent Per cent 25 25 25 20 20 20 15 15 15 10 10 10 5 5 5 0 0 0 G-SIBs **G-SIBs** Group 1 Group 2 Group 1 Group 2 Group 1 G-SIBs Group 2

The solid horizontal line represents the relevant minimum requirement, the dotted horizontal line represents the relevant target (excluding any bank-specific G-SIB surcharges).

Source: Basel Committee on Banking Supervision. See also Table C.10.



Group 1 banks' average fully phased-in final Basel III Tier 1 capital ratio of 13.3% shown above is 0.8 percentage points higher than the fully phased-in CET1 ratio of 12.5% calculated for a similar sample of Group 1 banks in the cumulative QIS on end-December 2015 data. Comparing *initial* Basel III Tier 1 capital ratios at the end of 2017 to those at the time of the cumulative QIS exercise for a consistent sample of banks (see Graph 17), Group 1 banks have seen an increase of 1.6 percentage points to 14.2%. While the improvement in the *initial* Basel III ratios is mainly driven by an increase of Tier 1 capital of 12.9%, slightly offset by an increase in RWA over this two-year period of 1.7%, the lower increase in the *final* Basel III ratios.

2.2 Impact of the final Basel III framework on minimum required capital

On average, based on the previous cumulative QIS on end-December 2015 data, the total change in Tier 1 MRC at the target level was -0.5% for Group 1 banks, -1.4% for G-SIBs and +3.8% for Group 2 banks (see Graph 22). In contrast, assuming the same treatment of the revisions to the market risk framework as in the cumulative QIS, the current end-December 2017 data show increases of 1.7%, 1.2% and 5.3%, respectively. The differences are partially driven by a lower base of the output floor and more conservative assumptions for the implementation of the revised operational risk standards in some countries.

For the subset of banks for which the assumption that the internal loss multiplier would be set to one was no longer applied, operational risk contributed a -6.2% reduction to the total change in MRC in the cumulative QIS, while the contribution of the same banks in the current exercise is -0.3%. In contrast, for all other banks in the sample the operational risk contribution has only changed slightly from -0.8% to -0.1%.

Including the effects of market risk in the change in MRC results in a higher increase of 3.6%, 3.0% and 5.9%, respectively.

Graph 22 also shows the dispersion of changes in MRC across the Group 1 banks, G-SIBs and Group 2 banks in the sample. The change in MRC including market risk for the current period for 50% of the Group 1 banks is between -3.9% and 19.6%, with a median of 5.1%. The distribution for G-SIBs is wider with a higher median of 12.7%, while the median Group 2 bank shows a 3.2% increase with 50% of the banks in also a rather wide interval from -1.4% to a 12.6% increase in Tier 1 MRC.
Total change in Tier 1 MRC at the target level¹

Samples as at the reporting dates

Graph 22



 1 The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the vertical lines generally show the range of the entire sample. The dots represent weighted averages. 2 Disregarding the change resulting from the revisions to the market risk framework, similar to the methodology used in the cumulative QIS.

Source: Basel Committee on Banking Supervision. See also Table C.11 for details on the distribution.

The results are summarised in Table 4 and Graph 23 which include the following columns to provide an additional breakdown of the total change in MRC:

- *Total* shows overall changes in Tier 1 MRC, including the risk-based requirements (ie including output floors) and the Basel III leverage ratio.
- *Total: risk-based capital requirements* shows changes to the risk-based Tier 1 MRC (ie excluding the Basel III leverage ratio).
- *Credit risk* shows the change in Tier 1 MRC due to the revisions to the standardised and IRB approaches for credit risk, including the effect from migration of approaches.⁹
- *CVA* shows the change in Tier 1 MRC due to the revisions to the CVA framework.
- *Market risk* shows the change in Tier 1 MRC due to the revisions to the market risk framework.
- *Operational risk* shows the change in Tier 1 MRC due to the revisions to the operational risk standards.
- Output floor presents the change in the level of Tier 1 MRC due to the aggregate output floor when the total RWA fall below the threshold level of 72.5%. The impact is measured relative to the current national implementation of the Basel I-based transitional floor set out in the Basel II framework, as reported by member countries.
- Leverage ratio shows the change in Tier 1 MRC resulting from the changes to the Basel III leverage ratio framework. This captures the change in the definition of the Basel III leverage ratio exposure measure and the introduction of a G-SIB buffer on top of a 3% leverage ratio minimum which amounts to 50% of the surcharge on risk-based capital requirements. Note that increases to risk-based Tier 1 MRC and leverage ratio Tier 1 MRC do not add up, since the total MRC increases only to the extent the risk-based or leverage ratio requirement exceeds the other capital measure.

⁹ Migration of approaches refers to the application of a different approach for determining risk weights than the one currently used, as a consequence of the revisions which remove certain modelling approaches for selected (sub-)asset classes.

Therefore, the leverage ratio column is adjusted to capture this effect (which can be positive or negative, even where the leverage ratio Tier 1 MRC remains unchanged). This results in an overall incremental leverage ratio change in MRC which can be either positive or negative. This mechanism is described in the following box.

Box B

Aggregation of changes in risk-based and leverage ratio MRC

Example 1 shows an illustrative bank that is currently constrained 1 by the Basel III leverage ratio. This additional Tier 1 MRC currently imposed by the Basel III leverage ratio requirement is instead "charged" by the risk-based Tier 1 MRC under the revised framework with the total change indicated by ΔRB . This replacement effect is represented as a negative effect in leverage ratio Tier 1 MRC to avoid double-counting, as shown with the blue arrow (ΔLR) in the diagram. Example 2 shows an alternative case where the bank is still constrained by the Basel III leverage ratio effect after the reforms. In this case, the contribution of leverage ratio Tier 1 MRC is the net of (i) the additional leverage ratio Tier 1 MRC in the revised framework (Δ LR'); and (ii) the replacement effect captured by the risk-based Tier 1 MRC (ΔLR) , which may be positive or negative

① A requirement is called constraining if it imposes the largest amount of MRC among the requirements under consideration (here riskbased and leverage ratio). A requirement is binding on a bank if the resulting MRC are higher than a bank's corresponding actual Basel III capital amounts.



For Group 1 banks, the Tier 1 MRC would increase by 3.6% following full phasing-in of the final Basel III standards. This increase is composed of a 4.8% increase for the risk-based components combined, driven by the positive contributions of output floor (1.8%), market risk (1.8%) and CVA (2.0%), as well as minor reductions in credit risk (-0.6%) and operational risk requirements (-0.1%). This increase is offset by a 1.2% reduction in leverage ratio Tier 1 MRC, which reflects the fact that the Basel III leverage ratio is becoming relatively less constraining for many banks in the sample in the presence of an output floor.

The impact on MRC across regions is very heterogeneous for Group 1 banks with a moderate decrease shown in the Americas (-2.1 percentage points) and the rest of the world (-4.3) and in contrast to this a strong increase in MRC for European banks (+20.2%). The sample for the European banks is dominated by the European G-SIBs for which eight out of 12 banks exhibit an increase in MRC including market risk of above 20%. The largest impact for European banks stems from the output floor (+6.1 percentage points) followed by changes in the operational risk framework (+4.7). For banks in the Americas increases for credit risk, CVA and market risk are outweighed by MRC reductions in the output floor and operational risk. For banks in the rest of the world reductions in MRC for credit risk, operational risk and the leverage ratio are higher than the rises for CVA, market risk and the output floor.

For Group 2 banks, the overall 5.9% increase in Tier 1 MRC is driven by an increase in the riskbased measure of 14.2% (mainly driven by credit risk (7.2%) and the output floor (4.4%)) and the leverage ratio measures, partially offsetting this increase at -8.3%. The Group 1 and Group 2 bank samples are not directly comparable due to different business models and different regional distribution of the samples.

Changes in Tier 1 MRC at the target level due to the final Basel III

standards Table 4										
	Number	Т	otal	Risk-based requirements						
	of banks			Total	Of which:					Leverage
		With MR	Without MR		Credit risk ¹	CVA	Market risk	Op risk²	Output floor ³	ratio
Group 1 banks	72	3.6	1.7	4.8	-0.6	2.0	1.8	-0.1	1.8	-1.2
Of which: Europe	29	20.2	16.5	23.7	5.1	4.7	3.1	4.7	6.1	-3.6
Of which: AM	14	-2.1	-4.2	-2.0	0.8	1.3	2.3	-4.2	-2.2	0.0
Of which: RW	29	-4.3	-4.9	-3.9	-5.4	0.4	0.7	-1.0	1.4	-0.4
Of which: G-SIBs	26	3.0	1.2	3.1	-1.1	1.9	1.7	-0.7	1.4	-0.2
Group 2 banks	52	5.9	5.3	14.2	7.2	1.0	0.5	1.0	4.4	-8.3

 1 Change in MRC due to the revised standardised and IRB approaches, including securitisation. 2 Change in MRC due to revised operational risk framework. Figures may not show supervisor-imposed capital add-ons. Therefore, increases in MRC may be overstated and reductions may be understated. 3 Net of existing Basel I-based floor according to national implementation of the Basel II framework.

Source: Basel Committee on Banking Supervision.

Graph 23 displays the contributions of each MRC component relative to the current basis for Group 1 banks, G-SIBs and Group 2 banks, respectively. The orange (red) bars highlight the positive (negative) contributions induced by the different parts of the final Basel III framework, while the blue bar represents the total MRC impact for the concerned bank group. Graph 24 provides the regional breakdown for Group 1 banks.



Changes in Tier 1 MRC at the target level due to the final Basel III standards

Credit risk shows change in MRC due to revised standardised and IRB approaches, including securitisation. Operational risk figures may not show supervisor-imposed capital add-ons. Therefore, increases in MRC may be overstated and reductions may be understated. Output floor results are net of the existing Basel I-based floor according to national implementation of the Basel II framework.

Source: Basel Committee on Banking Supervision.

Changes in Tier 1 MRC at the target level due to the final Basel III standards

Group 1 banks



Credit risk shows change in MRC due to revised standardised and IRB approaches, including securitisation. Operational risk figures may not show supervisor-imposed capital add-ons. Therefore, increases in MRC may be overstated and reductions may be understated. Output floor results are net of the existing Basel I-based floor according to national implementation of the Basel II framework.

Source: Basel Committee on Banking Supervision.

Graph 23

2.3 Leverage ratio

2.3.1 Overall results

Key results

The results regarding the Basel III leverage ratios are provided using the two following measures of both Tier 1 capital in the numerator and Basel III leverage ratio exposure measure in the denominator:

- *numerator*: the numerator includes two alternative measures of Tier 1 capital:
 - *transitional initial Basel III Tier 1,* which is Tier 1 capital eligible under the national implementation of the Basel III framework in place in member countries at the reporting date, including any phase-in arrangements; and
 - *fully phased-in final Basel III Tier 1*, which is the fully phased-in Basel III definition of the leverage ratio without considering transitional arrangements set out in the in the Basel III framework.
- *denominator:* the Basel III leverage ratio exposure measure is also calculated on the same corresponding basis as the numerator above (unless otherwise stated).

Graph 25 presents summary statistics related to the distribution of Basel III leverage ratios based on transitional Basel III Tier 1 and fully phased-in Basel III capital for Group 1 banks, G-SIBs and Group 2 banks. The weighted average transitional Basel III leverage ratios would be 6.0% for Group 1 banks, 6.0% for G-SIBs, while it would amount to 5.7% for Group 2 banks. The weighted average fully phased-in Basel III leverage ratios are 5.8% for Group 1 banks, 5.9% for G-SIBs and 5.7% for Group 2 banks. Group 2 banks show a greater dispersion compared to Group 1 banks.

Under both the transitional and the fully phased-in Basel III leverage ratios, two banks in the sample would not meet the 3% ratio level, both being Group 2 banks, with an aggregate incremental shortfall of ≤ 1.1 billion.¹⁰

¹⁰ See also Table 2.

Basel III leverage ratio framework

Under the January 2014 Basel III leverage ratio framework, 1 the Basel III leverage ratio exposure measure (the denominator of the Basel III leverage ratio) includes:

- on-balance sheet assets, excluding securities financing transactions (SFTs) and derivatives;
- SFTs, with limited recognition of netting of cash receivables and cash payables with the same counterparty under . strict criteria;
- derivative exposures at replacement cost (net of cash variation margin meeting a set of strict eligibility criteria) plus an add-on for potential future exposure based on the current exposure method (CEM);
- written credit derivative exposures at their effective notional amount (net of negative changes in fair value that have been incorporated into the calculation of Tier 1 capital) reduced by the effective notional amount of purchased credit derivatives that meet offsetting criteria related to reference name, level of seniority and maturity;
- off-balance sheet exposures, obtained by multiplying notional amounts by the credit conversion factors in the standardised approach to credit risk, subject to a floor of 10%; and
- other exposures as specified in the Basel III leverage ratio framework.

D Basel Committee on Banking Supervision, Basel III leverage ratio framework and disclosure requirements, January 2014, www.bis.org/publ/bcbs270.htm. The Committee agreed revisions to the leverage ratio framework in December 2017, see Basel Committee on Banking Supervision, Basel III: Finalising post-crisis reforms, December 2017, www.bis.org/bcbs/publ/d424.htm.



Transitional initial and fully phased-in final Basel III Tier 1 leverage ratios¹

¹ The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the vertical lines generally show the range of the entire sample. Banks with Basel III leverage ratios above 12% are included in the calculation but are not shown in the graph. The dots represent weighted averages. The blue line is set at 3% (minimum leverage ratio level).

Source: Basel Committee on Banking Supervision. See Table C.12 for underlying data.

Graph 26 shows how the fully phased-in Basel III leverage ratios have evolved over time for a consistent sample of 66 Group 1 banks (including 28 G-SIBs) and 33 Group 2 banks, all of which provided leverage ratio data for all reporting dates from June 2011 to December 2017. For Group 1 banks the leverage ratio increased to 6.0% from 5.8% over the prior period, while a marginally smaller increase of 0.1 percentage point to 6.0% was noted for G-SIBs. Group 2 banks' leverage ratio also increased by 0.1 percentage point to 5.2%, as both the Tier 1 capital and exposure measure decreased marginally, after a large increase in Tier 1 capital of 9.4% that exceeded the increase in the exposure measure of 4.0% in the prior period.



Fully phased-in Basel III Tier 1 leverage ratios and component changes¹

Consistent sample of banks, exchange rates as of 31 December 2017

¹ Note that the data points for H1 2013 use an approximation for the initial definition of the Basel III leverage ratio exposure where gross instead of adjusted gross securities financing transaction values are used. Data points from H2 2017 onwards use the final definition of the leverage ratio to the extent data are available.

Source: Basel Committee on Banking Supervision. See Table C.13 for underlying data and sample size.

Graph 27 shows the same information as Graph 26 however only for a consistent sample of Group 1 banks and grouped by region. Overall the leverage ratio for all regions has been growing over the past six years. In Europe, leverage ratios started from a low base of 2.7% and increased to 5.3% at end-December 2017. In the Americas the leverage ratio increased from 4.1% to 6.3%, as of December 2017. For the rest of the world, the leverage ratio increased from 4.2% in 2011 to 6.3% as at end-December 2017. Over the last period, leverage ratios in Europe increased by 0.2%, in the Americas they remained constant and in the rest of the world they increased by 0.2%.

Graph 26

Fully phased-in Basel III Tier 1 leverage ratios and component changes,¹ by region

Consistent sample of Group 1 banks, exchange rates as of 31 December 2017





¹ Note that the data points for H1 2013 use an approximation for the initial definition of the Basel III leverage ratio exposure where gross instead of adjusted gross securities financing transaction values are used. Data points from H2 2017 onwards use the final definition of the leverage ratio to the extent data are available.

Source: Basel Committee on Banking Supervision. See Table C.14 for underlying data and sample size.

Graph 28 shows the evolution of the components of the risk-based capital and leverage ratios over time for a consistent sample of banks, ie banks that have consistently been providing the four data series for the period June 2011 to December 2017. The four components are Basel III Tier 1 capital, RWA and the leverage ratio exposure measure, all assuming full implementation of Basel III, as well as accounting total assets. For Group 1 banks, Tier 1 capital and accounting total assets steadily increased over the period. The leverage total exposures and RWAs decreased slightly in 2012 and then began to increase through the current period. For Group 2 banks, Tier 1 capital generally increased during the period with the peak in June 2017. RWA increased until 2012, and then declined after to the current period. Leverage total exposure and accounting total assets decreased until 2013, but since has increased through the current period.

Tier 1 capital, RWA, Basel III leverage ratio exposure and accounting total assets¹



Consistent sample of banks, exchange rates as of 31 December 2017

Graph 28

180

160

140

120

100

80

¹ Tier 1 capital, RWA and leverage ratio exposure assume full implementation of Basel III. Note that the data points for H1 2013 use an approximation for the initial definition of the Basel III leverage ratio exposure where gross instead of adjusted gross securities financing transaction values are used. Data points from H2 2017 onwards use the final definition of the leverage ratio to the extent data are available.

Leverage ratio exposure

Accounting total assets

Source: Basel Committee on Banking Supervision. See Table C.15 for underlying data and sample size.

2.3.2 Impact on Basel III leverage ratio MRC measure due to the final standards

Graph 29 assesses, for Group 1 banks, G-SIBs and Group 2 banks, the changes in leverage ratio MRC due to the revisions to the Basel III leverage ratio and changes to the exposure measure only. With respect to leverage ratio MRC, Group 1 banks saw an increase on average of 16.3%, G-SIBs saw an increase on average of 22.7%, and Group 2 banks saw a decrease on average of -0.8%. With respect to total exposure measure, Group 1 banks saw a decrease on average of -0.6%, G-SIBs realised a decrease on average of -0.2%, and Group 2 banks saw a decrease on average of -0.8%.



¹ The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the vertical lines generally show the range of the entire sample. The dots represent weighted averages. To the extent a bank could not provide a component under the 2017 exposure measure, the relevant component of the 2014 measure was used.

Source: Basel Committee on Banking Supervision. See also Table C.16 and Table C.17.

Tier 1 capital

Risk-weighted assets

2.4 Combined shortfall amounts

2.4.1 Shortfalls under the initial Basel III standards

Estimated combined capital shortfalls at the minimum level¹

This section shows the capital shortfalls for the Group 1 and Group 2 bank samples assuming full phasing in of the initial Basel III requirements based on data as of 31 December 2017 and disregarding transitional arrangements. The shortfalls presented are measured against different minimum capital ratio requirements (ie 4.5% CET1, 6.0% Tier 1 and 8.0% total capital) as well as against the target level, which includes the 2.5% capital conservation buffer and capital surcharges for 30 G-SIBs as applicable.

Graph 30 and Graph 31 below as well as Table 2 above provide estimates of the amount of capital that Group 1 and Group 2 banks would need based on data as of 31 December 2017 in addition to capital already held at the reporting date, in order to meet the minimum and target CET1, Tier 1 and total capital ratios under Basel III assuming fully phased-in requirements and deductions. Under these assumptions, there are no capital shortfalls for Group 1, however Group 2 banks would need an additional €1.1 billion of additional Tier 1 or higher-quality capital to meet minimum (Graph 30) and target (Graph 31) total capital requirements.

As indicated above, no assumptions have been made about bank profits or behavioural responses, such as changes in balance sheet composition that would serve to reduce the impact of capital shortfalls over time. As a point of reference, the aggregate sum of after-tax profits prior to distributions for the six-month period ending 31 December 2017 for Group 1 and Group 2 banks was €199.4 billion and €9 billion, respectively.



Source: Basel Committee on Banking Supervision. See Table C.18 for underlying data and sample size.



Source: Basel Committee on Banking Supervision. See Table C.19 for underlying data and sample size.

2.4.2 Shortfalls under the final Basel III framework

Estimated combined capital shortfalls at the target level¹

Graph 32 shows the capital shortfalls for the Group 1 and Group 2 bank samples assuming fully phasedin requirements according to the final Basel III standards. Results for the fully phased-in final Basel III standards as of end-December 2017 are compared with the results for the previous cumulative QIS report using data as of end-December 2015.¹¹

The capital shortfalls at the end-2017 reporting date are more than 70% lower for Group 1 banks than in the end-2015 cumulative QIS exercise. While the samples for the two reporting periods differ slightly, this did not have an impact on the shortfalls.

The main driver for the decrease in the capital shortfalls for the previously affacted banks is due to the supply side of capital. These banks raised over €58 billion in total capital over the period from end-2015 to end-2017. CET1 capital accounted for the majority, with also CET1 capital raised externally by these banks and the rest derived from profits over the period. On the demand side, these banks increased their MRC by only 1.5% or €5.7 billion compared with end-2015.

Overall, G-SIBs are the main contributors to the capital shortfalls for Group 1 banks. As in the cumulative QIS exercise, they account for all of the CET1 capital shortfall of Group 1 banks. Their contribution decreased to 86% for the combined Tier 1 capital shortfall and increased to 92% for the Tier 2 capital shortfall. For Group 1 banks, the Tier 2 capital requirements are the main driver of the shortfalls at end-2017.

On the contrary, an increase in capital shortfalls is reported for Group 2 banks under the final revisions to the Basel III standards, with high discrepancies across different categories of capital (+233%, +60% and +17% for CET1, additional Tier 1 and Tier 2 shortfalls respectively). For Group 2 banks, this is mainly driven by differences in the samples.

¹¹ Basel Committee on Banking Supervision, *Basel III Monitoring Report - Results of the cumulative quantitative impact study*, December 2017, <u>www.bis.org/bcbs/publ/d426.htm</u>.



2.5 Total loss-absorbing capacity requirements for G-SIBs

2.5.1 Initial Basel III framework

The Committee also collected data on additional total loss-absorbing capacity (TLAC) for G-SIBs, 25 of which participated in the exercise. Overall, applying the 2019 minimum requirements, three of the 25 G-SIBs in the sample have an incremental¹² TLAC shortfall. This is one fewer bank than at end-June 2017, when four of the sample G-SIBs had shortfalls. The shortfalls at end-2017 are up to 3.9% of each bank's RWA, totalling €22.7 billion (see Graph 33 for relative impact).

Applying the 2022 minimum requirements, eight of the 25 G-SIBs in the sample have an incremental shortfall of up to 8.2% of RWA, totalling €82.1 billion. Compared with end-June 2017, the number of banks with shortfalls and the aggregate shortfall has decreased slightly.

¹² The shortfall is incremental to any risk-based and leverage ratio shortfall discussed above.

Distribution of individual G-SIB's incremental TLAC surplus and shortfall across banks¹

Fully phased-in initial Basel III standards, pure TLAC implementation²

Graph 33



2.5.2 Final Basel III framework

The end-2017 Basel III monitoring exercise also captures, for the first time, the effects of the Committee's finalisation of the Basel III reforms in December 2017. The final Basel III reforms, based on end-2017 data, resulted in no significant increase in aggregate capital requirements. With regards to TLAC, the reforms increase the number of banks reporting a TLAC shortfall (five and 10 relative to the 2019 and 2022 requirements, compared to three and eight against the initial Basel III standards) and the aggregate shortfall (€37.2 billion and €143.6 billion relative to the 2019 and 2022 standards respectively). However, and highlighting the range of effects that the final Basel III reforms have on different banks, there is no significant difference with respect to the range of shortfalls expressed as a percentage of RWA shown in Graph 34; in fact, the greatest shortfall of 6.6% RWA (relative to the 2022 requirements) is lower on this measure than on the initial Basel III standards.



Distribution of individual G-SIB's incremental TLAC surplus and shortfall across banks¹

Fully phased-in final Basel III standards

3. Level and composition of regulatory capital

3.1 Level of capital

Graph 35 shows the development of the level of CET1 capital of banks in the consistent sample of banks assuming full implementation of Basel III for Group 1 banks, Group 2 banks as well as G-SIBs separately. From end-December 2016 to end-December 2017, the level of Group 1 banks' CET1 capital has increased by €191 billion (or 5.5%) to €3,670 billion.¹³ More than half of this increase, €114 billion, can be attributed to the G-SIBs in the Group 1 sample which collectively held €2,460 billion of CET1 capital at end-December 2017. Group 2 banks' CET1 is €152 billion, €12 billion higher than at end-December 2016.



Source: Basel Committee on Banking Supervision. See Table C.21 for underlying data and sample size. Table C.22 provides an additional regional breakdown for Group 1 banks.

The rise in overall CET1 capital among Group 1 banks appears largely due to profits generated, with particularly large profits shown by banks in the United States and China (combined accounting for more than 50% of all profits reported in Group 1). Furthermore, G-SIBs contributed more than half of the profits generated during H2 2017 for Group 1 banks.

Graph 36 shows the evolution in fully phased-in Basel III capital for a consistent sample of Group 1 banks over the past six years grouped by region. CET1 capital has grown for all regions with the rest of the world recording the highest growth of over 100% from 2011 and also has the highest current holdings of €1,652 billion compared to Europe at €1,133 billion and the Americas at €891 billion. Additional Tier 1 capital has been stable and flat until the first half of 2014 and thereafter it has grown for all regions, with the exception of Europe, where it dropped in the previous period but have recovered as at end-December 2017. However the additional Tier 1 holdings are relatively small compared to CET1 at only €119, €116 and €114 billion for Americas, Europe and the rest of the world, respectively. The highest growth in percentage terms was from the rest of the world, however from a low base of €6 billion. Tier 2 capital has been volatile for all regions with the Americas seeing a decrease between 2011 and 2014. Generally, Tier 2 capital grew for all regions since 2014 except in Europe over the past year to holdings of

¹³ The lower absolute amounts compared to the previous report are mainly driven by exchange rate movements.

€226, €140 and €205 billion for Europe, Americas and the rest of the world, respectively (for further details see Table C.22).



¹ The strong percentage increases in additional Tier 1 capital are driven by the low absolute levels in 2011, in particular for the rest of the world region.

Source: Basel Committee on Banking Supervision. See Table C.24 for underlying data and sample size.

3.2 Profits, dividends and capital raised

Graph 37 depicts the evolution of profits, dividends, CET1 capital raised and the dividend payout ratio over time. Here, no clear trend or distinctive feature can be identified for CET1 capital raised over time on a global level. Group 1 banks' profits after tax have increased to around €180–210 billion per half year since the second half of 2014. The dividend payout ratios for Group 1 banks compared to the average over the previous year, reaching 36.5%. In turn, the dividend payout ratio for Group 2 banks slightly decreased in the current period compared to the average value over the last year despite a significant increase in profits.

Profits, dividends, CET1 capital raised externally and dividend payout ratio¹

Consistent sample of banks, exchange rates as of 31 December 2017

Graph 37



¹ The dividend payout ratio is calculated as common share dividends divided by profits after tax by using a rolling 12 months window to improve comparability across countries with different dividend payment patterns.

Source: Basel Committee on Banking Supervision. See Table C.25 and Table C.27 for underlying data and sample size.

Graph 38 provides the regional breakdown for Group 1 banks. Since 2011, annual profits after tax have always been higher in the Americas and the rest of the world than in Europe, however for the current period Europe is higher than the Americas. Overall, around 28% of the profits have been generated by banks in Europe, more than 22% in the Americas and around 50% in the rest of the world. Conversely, almost 60% of the CET1 capital raised has been raised by banks in Europe.

Profits, dividends, CET1 capital raised externally and dividend payout ratio¹, by region



¹ The dividend payout ratio is calculated as common share dividends divided by profits after tax by using a rolling 12 months window to improve comparability across countries with different dividend payment patterns.

Source: Basel Committee on Banking Supervision. See Table C.26 and Table C.28 for underlying data and sample size.

Over the second half of 2017, 66 out of the 108 Group 1 banks in the sample raised capital, regarding CET1 the total amount equals €22.1 billion (see Table 5). Of this amount, almost 60% was raised by the G-SIBs in the sample. It is noticeable that Group 1 banks primarily raised Tier 2 capital (43.4%) and additional Tier 1 (34.2%) rather than CET1 (22.4%) which could indicate that banks are now focussing on the remaining, not yet fully phased in capital requirements such as the leverage ratio, TLAC and presumably the additional requirements stemming from Pillar 2 as for those regulations CET1 is not necessarily the exclusive form of eligible capital.

Capital raised during H2 2017

Full sample of banks, gross amounts, in billions of eurosTable 5							
	Number of banks	Number of banks that raised capital	CET1	Add. Tier 1	Tier 2		
Group 1 banks	108	66	22.1	33.7	42.7		
Of which: Americas	21	16	6.5	4.4	1.9		
Of which: Europe	37	22	11.4	9.6	6.3		
Of which: Rest of the world	50	28	4.2	19.8	34.5		
Of which: G-SIBs	30	28	13.0	21.0	32.6		
Group 2 banks	85	30	15.9	2.7	5.2		
Source: Basel Committee on Banking Supervision.							

Graph 39 depicts the evolution of capital raised over time for a consistent sample of banks. Here, no clear trend or distinctive feature can be identified for CET1 raised over time on global level. However, for additional Tier 1 and Tier 2 capital, the time series for Group 1 banks and G-SIBs show a significant and lasting increase in the amount of capital raised starting from the second half of 2013. Group 2 banks have raised the highest amount of Tier 2 capital since the second half of 2011.



Source: Basel Committee on Banking Supervision. See Table C.27 for underlying data and sample size. Table C.28 provides an additional regional breakdown for Group 1 banks.

3.3 Composition of capital

The graphs below show the composition of total capital under transitional Basel III rules (Graph 40) and after fully phased-in Basel III (Graph 41). As expected and as observed for previous reporting dates, CET1 capital is the predominant form of capital with an average share of around 80% for both banking groups. Under transitional rules, it is slightly lower with 76.9% for Group 1 banks. This difference is largely due to the disallowed eligibility of transitional Basel III additional Tier 1 or Tier 2 instruments for banks in many countries under Basel III (eg those that do not meet the requirements set out in the Committee's 13 January 2011 press release on loss absorbency at the point of non-viability).

It is noticeable that for Group 1 banks under the fully phased-in Basel III standards, the positive trend of increasing the share of CET1 capital which had been observed during the first years of the monitoring exercise reversed in 2014 (Graph 41). Since then a decline in the share of CET1 (from 85.8% at the beginning of 2014 to 80.0% as of December 2017) can be observed simultaneously with a slight increase of additional Tier 1 elements (3.6% in 2014 and 7.6% at the end of December 2017), suggesting that banks are shifting their focus from the risk-based capital requirements (which no longer cause a capital demand for most banks) to the leverage ratio requirement.

For Group 2 banks, a strong positive trend can be observed over time for the share of CET1 capital: it increases from 74.4% in 2011 to 83.1% in 2017 which corresponds to a cutback of Tier 2 elements in a similar magnitude (a reduction from 20.6% to 13.7%). Here, it has to be mentioned that Group 2 banks started from a different level as regards to Tier 2, with its share equalling 20.6% in H1 2011 (Group 1: 14.2%).



Structure of regulatory capital under transitional initial Basel III rules



Consistent sample of banks



With regard to the composition of Basel III CET1 capital itself, paid-in capital and retained earnings continue to comprise the overwhelming majority of CET1 outstanding. For Group 1 banks, paid-in capital and retained earnings make up more than 94% of outstanding CET1 on average. On average, Accumulated Other Comprehensive Income (AOCI) contributes 4.9% to Group 1 banks' CET1 capital.¹⁴ Meanwhile, CET1 from recognised subsidiaries continues to provide minimal support to Group 1 banks' outstanding CET1 balances in most countries. For Group 2 banks, the share of paid-in capital and retained earnings in total CET1 capital is somewhat lower at 83.6%, while the 16.0% share of AOCI is higher compared to Group 1 banks.

3.4 Regulatory adjustments

For the current period, regulatory adjustments reduce overall gross CET1 (ie CET1 before adjustments) for a consistent sample of Group 1 banks by 14.8% (see Table B.4). The largest driver of Group 1 bank CET1 adjustments continues to be goodwill (8.9%) followed by deductions for intangibles, combined deferred tax asset (DTA) and other deductions (2.4%, 1.3% and 1.5% respectively).

The impact of regulatory adjustments on Group 2 banks is somewhat lower, on average being at around 11.7% (see Table B.5). This result is driven by a limited number of large Group 2 banks. Without taking these banks into account the overall impact of CET1 deductions would decline considerably.

¹⁴ AOCI typically includes the following: unrealised gains and losses in available for sale securities; actuarial gains and losses in defined benefit plans; gains and losses on derivatives held as cash flow hedges; and gains and losses resulting from translating the financial statements of foreign subsidiaries.

4. Components and determinants of risk-based capital requirements

4.1 Share of different risk types in overall MRC under current rules

Graph 42 shows the share of different asset classes in overall minimum required capital (MRC) for a consistent sample of Group 1 banks.¹⁵

As of end-December 2017, credit risk continues to compose the dominant portion of overall MRC, with this category on average comprising 65.2% of total MRC for Group 1 banks. However, the share of credit risk has declined significantly from 74.6% at the end of June 2011, mainly driven by a reduction in MRC for related entities. Conversely, the share of operational risk MRC which increased from 7.8% at the end of June 2011 to 16.4% at end-December 2017. The share of market risk declined slightly from 6.2% to 5.3% while the share of "other" risk decreased somewhat from 10.3% to 10.0%. Among the credit risk asset classes, the share of MRC for corporate exposures increased from 31.0% to 37.6% while the share of MRC for securitisation exposures declined from 7.2% to 1.7%.

Share of MRC by asset class¹ according to current rules



Consistent sample of Group 1 banks

¹ The category "other" includes capital requirements for other assets; the current Basel I-based output floor; Pillar 1 capital requirements in member countries for risks not covered by the Basel framework; reconciliation differences; and additional capital requirements due to regulatory calculation differences and general provisions. The latter item can lead to negative capital requirements in cases where there is an excess in provisions which can be recognised in a bank's Tier 2 capital. Furthermore, for banks which apply the standardised approach, general provisions may to some extent be recognised as Tier 2 capital; consequently, MRC is reduced by this amount. The term "reconciliation differences" refers to the difference between MRC reported at the entire bank level and the sum of MRC reported for the individual portfolios. Exposures subject to partial use of the standardised approach for credit risk which cannot be assigned to a specific portfolio, as well as pastdue items under the standardised approach, are listed separately as "partial use".

Source: Basel Committee on Banking Supervision. See Table C.31 for underlying data and sample size.

Table 6 provides data on relative sizes of asset classes in terms of exposures as well as minimum required capital (MRC) for both Group 1 and Group 2 banks according to current rules at the reporting date. The sample differs considerably from the consistent sample used for the time series above, resulting in differences for the end-December 2017 reporting date.

¹⁵ MRC figures in this section are based on the total capital ratio, ie based on 8% of RWAs. Where applicable, the MRC reflect the effect of the 1.06 scaling factor applied to IRB credit RWA, and deductions assigned to the securitisation and related entities asset classes.

Additionally, the average risk weight¹⁶ suggests the relative riskiness of the different asset classes as measured by the current framework. Both the numerator (12.5 times MRC) and the denominator (exposure amounts) of this ratio include exposures under the IRB and standardised approaches for credit risk.¹⁷ Since a common exposure measure for credit, market and operational risk does not exist, the size in terms of exposure and the average risk weight are only defined for asset classes subject to a credit risk treatment.

Looking at Table 6 for Group 1 banks, it is observed that while the corporate, retail and sovereign asset classes comprise the overwhelming majority of exposures, their relative riskiness as measured by the average risk weight is rather low in comparison to other asset classes. In particular, for related entities and equity exposures the average risk weight is 277.7% and 183.4%, respectively. For Group 2 banks, corporate, retail and sovereign asset classes also comprise the overwhelming majority of exposures. However, compared to Group 1 banks, the share of the bank asset class is moderately higher. With regard to MRC per exposure, asset classes with higher relative riskiness for Group 2 banks include equity exposures (181.0%) and other assets (97.1%).

¹⁶ The average risk weight as definined in this table is 12.5 times the MRC per exposure, which was the measure shown in the related table of previous reports.

¹⁷ The asset classification is mainly based on the IRB approach. Exposures subject to partial use of the standardised approach for credit risk which cannot be assigned to a specific portfolio, as well as past-due items under the standardised approach, are listed separately in Table 6.

Average asset class/risk type size and average risk weight¹

In per cent

		Group 1		Group 2			
	Size exposure	Size MRC	Average risk weight	Size exposure	Size MRC	Average risk weight	
Credit risk; of which:	100.0	78.9	35.9	100.0	87.1	31.7	
Corporate	32.7	41.9	58.5	19.4	33.5	62.8	
Sovereign	22.1	2.6	5.4	27.5	3.8	5.0	
Bank	7.4	4.2	25.9	10.8	6.0	20.3	
Retail	25.1	15.8	28.7	30.2	21.4	25.8	
Equity	0.8	3.2	183.4	1.0	4.8	181.0	
Purchased receivables	0.2	0.1	33.7	0.0	0.0	95.7	
Securitisation	2.1	1.3	28.8	0.9	1.0	41.9	
Related entities	0.1	0.8	277.7	0.0	0.0	1.1	
Past-due items	0.1	0.2	113.7	0.8	2.3	110.3	
Other assets	5.4	5.4	45.2	1.4	3.9	97.1	
Failed trades and non- DVP transactions		0.0			0.0		
Not assigned ²	3.9	6.1	71.0	8.0	10.5	48.1	
Regulatory difference ⁴		-3.0			-0.2		
CVA		1.5			1.0		
Trading book CCR ³		0.1			0.0		
Market risk		3.8			2.2		
Other trading book		0.1			0.0		
Operational risk		13.6			9.0		
Floor adjustment		1.5			0.1		
Other ⁵		0.4			0.5		
Total	100.0	100.0	45.6	100.0	100.0	36.4	

¹ MRC figures in this table are based on the minimum total capital ratio (ie based on 8% of RWAs). ² The "not assigned" asset class only includes those exposures subject to partial use of the standardised approach which could not be assigned to one of the other asset classes. ³ Counterparty credit risk in the trading book. ⁴ Includes shortfall (positive) or excess (negative) of provisions over expected loss amounts for exposures subject to the IRB approach for credit risk as well as general provisions (negative) for exposures subject to the standardised approach for credit risk to the extent they are recognised in Tier 2 capital. ⁵ Includes the reconciliation asset class and other Pillar 1 capital requirements.

Source: Basel Committee on Banking Supervision

4.2 Credit risk

4.2.1 Share of credit risk exposure by asset classes under the current rules

Graph 43 shows the evolution of exposure for the six major asset classes for a consistent sample of 36 Group 1 banks. In general the share of sovereign exposures has increased steadily in recent years from 12.4% to 20.7% while partial use, bank and other credit exposures have declined.

Share of credit exposure



4.2.2 Impact of revisions to the standardised and IRB approaches for credit risk on MRC

Graph 44 shows the changes in terms of current Tier 1 MRC associated with exposures under the standardised and IRB approaches for credit risk due to the final Basel III framework. The left-hand panel shows the overall distribution of the impact, while the right-hand panel provides a breakdown by asset class.

On average, the impact is higher for Group 2 banks (+8.0%) than for Group 1 banks, for which the impacts on standardised approach and IRB exposures compensate each other resulting in a slight decrease in capital requirements of -1.1% for Group 1 banks and -1.8% for G-SIBs. On aggregate, the revised standards reduce capital requirements for exposures to corporates, while exposures to banks, real estate and equity/subordinated debts will be subject to higher requirements. These results are mainly driven by the removal of the advanced IRB approach for exposures to banks and the removal of all IRB approaches for equity exposures, and by the reduction of the supervisory LGD parameter for unsecured corporate exposures from 45% to 40% under the foundation IRB approach.

The right panel of Graph 44 breaks down the impact by asset class.¹⁸ For Group 1 banks, corporate exposures contribute -3.3% to the overall change, while the contributions of bank and equity exposures are positive at 1.6% and 0.8% respectively. For Group 2 banks, bank and equity/subordinated debt exposures contribute 3.3% each to the overall change in MRC. The contributions of real estate, corporate and retail asset classes account for a less significant 1.3%, 0.3% and -0.2% respectively.

The regional breakdown for Group 1 banks in Graph 45 highlights significant differences in impact by region, which however should be carefully considered given the variable and limited number of banks per region included in the sample.

¹⁸ The cumulative impact when summing over all asset classes is -1.4% for Group 1 and 8.2% Group 2 banks, which is slightly different from the overall impact reported above (-1.1% and 8.0% respectively). The reason is that shortfall/excess provisions are calculated only at the overall level, therefore shortfall/excess provisions are not reflected at the asset class level.



Changes in Tier 1 MRC for exposures subject to the standardised or IRB approaches for credit risk due to the final Basel III standards

¹ The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the vertical lines generally show the range of the entire sample. In some cases, arrows at the top of the vertical line indicate banks with changes outside the range shown in the graph. The dots represent weighted averages.

Source: Basel Committee on Banking Supervision. See also Table C.33 and Table C.34.

Changes in Tier 1 MRC for exposures subject to the standardised or IRB approaches for credit risk due to the final Basel III standards, by region



Graph 45



¹ The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the vertical lines generally show the range of the entire sample. In some cases, arrows at the top of the vertical line indicate banks with changes outside the range shown in the graph. The dots represent weighted averages.

Source: Basel Committee on Banking Supervision. See also Table C.35 and Table C.36.

4.2.3 Standardised approach for credit risk

Impact of the revisions on MRC

Graph 46 shows the changes in Tier 1 MRC due to the finalisation of the Basel III standards for credit risk exposures that are currently under the standardised approach. These data include exposures of banks subject to the standardised approach for credit risk as well as exposures of banks using the IRB approach for credit risk to the extent that they are subject to partial use provisions. It does not include exposures currently under the IRB approach which migrate to the standardised approach under the revised approach (eg IRB equity exposures). Note that changes in Tier 1 MRC are calculated as a percentage of current Tier 1 MRC associated with exposures currently under the standardised approach only.

The left hand side panel of the graph shows the overall distribution of the impact. In aggregate, the revised standardised approach for credit risk results in an increase in MRC of 6.3% for Group 1 banks and of 8.4% for Group 2 banks. The change in MRC for banks between the 25th and 95th percentiles of the distribution ranges from 1.1% to 36.8% for Group 1 banks, and from 2.5% to 47.4% for G-SIBs. The range for Group 2 banks is smaller, from 0.4% to 34.1%.

The right hand side panel provides a breakdown of the change of MRC by asset class. For Group 1 banks in the sample, the assets driving the overall change in MRC are banks and covered bonds (+4.2%) and corporates (+1.3%). MRC for sovereign, real estate and defaulted exposures are largely unchanged, while MRC for retail increases by 1.0%. For Group 2 banks, equity and subordinated debt exposures contribute 4.7% to the overall change in MRC. The contributions of real estate, and bank and covered bond to the total change of MRC are also relatively large, at 2.2% and 1.2% respectively. The changes in MRC for other asset classes are relatively smaller.



Changes in Tier 1 MRC for exposures subject to the standardised approach for credit risk due to the final Basel III standards

Data generally include banks subject to the standardised approach for credit risk and exposures subject to partial use of banks using the IRB approach for credit risk. ¹ The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the vertical lines generally show the range of the entire sample. In some cases, arrows at the top of the vertical line indicate banks with changes outside the range shown in the graph. The dots represent weighted averages.

Source: Basel Committee on Banking Supervision. See also Table C.37 and Table C.38.

Graph 47 replicates the analysis of Graph 46 but breaks down the results for Group 1 banks by geographical region. Overall, the revised standardised approach, on average, has a larger impact on the MRC of European banks (+7.6%) than on MRC of banks in the Americas (+5.8%) and the rest of the world (+5.6%). The change in MRC for banks between the 25th and 95th percentile of the distribution ranges from 3.5% to 37.3% for European banks, from -1.7% to 20.2% for banks in the Americas, and from 0.0% to 51.4% for the rest of the world.

Looking at individual asset classes, exposures to corporates are the largest contributor for Europe (+2.5%) while equity exposures are the largest contributor for the Americas (+3.5%). The change of MRC for the rest of the world is largely driven by exposures to banks and covered bonds (+7.3%), while their impact on Europe and the Americas is relatively smaller (+0.7% and -0.2% respectively). The MRC for exposures to equity and subordinated debt increases for Europe (+1.6%) and the Americas (+3.5%), but decreases for the rest of the world (-2.1%). Exposures to retail experience a slight increase in MRC in Europe (+1.8%) and the Americas (+2.1%), but are almost flat in the rest of the world (+0.2%). The new standards result in an increase in MRC for real estate exposures in Europe (+0.5%) and the rest of the world (+0.2%), and a decrease in MRC in the Americas (-1.5%).



Changes in Tier 1 MRC for exposures subject to the standardised approach for credit risk due to the final Basel III standards, by region

Data generally include banks subject to the standardised approach for credit risk and exposures subject to partial use of banks using the IRB approach for credit risk. ¹ The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the vertical lines generally show the range of the entire sample. In some cases, arrows at the top of the vertical line indicate banks with changes outside the range shown in the graph. The dots represent weighted averages.

Source: Basel Committee on Banking Supervision. See also Table C.39 and Table C.40.

Average risk weights

Graph 48 and Graph 49 provide additional detail on the current and revised average risk weights by asset class for Group 1 and Group 2 banks, respectively.

Overall, the average risk weight of Group 1 banks' exposures currently under the standardised approach increases from 39.1% to 41.4% (a 2.3 percentage point increase) when moving from the current to the revised framework. Focusing on individual asset classes for Group 1 banks, equity investments in funds show the largest absolute increase in standardised approach risk weights, from 172% to 211% (a 39

percentage point increase), followed by subordinated debt risk weights, which increase from 115% to 152% (a 37 percentage point increase). In relative terms, bank exposures appear the most affected, with average risk weights increasing from 25% to 44% (a 76% increase), followed by subordinated debt and land acquisition exposures (33% and 29% respectively). Equity exposures show the largest absolute decrease, from 316% to 287% (a 29 percentage point decrease), while standardised approach risk weights for covered bonds and general residential real estate exposures show the biggest relative decrease (18% and 11% respectively). The decrease shown by equity exposures is driven by a small number of countries which currently apply super-equivalent risk weights to equity exposures which are higher than the revised risk weights.



Standardised approach average risk weights under the current rules and the final Basel III standards, by asset class

Source: Basel Committee on Banking Supervision. See also Table C.41 which includes a breakdown for G-SIBs. Table C.42 provides an additional regional breakdown.

Looking at Group 2 banks, the overall average risk weight under the standardised approach is estimated to increase by 2.8 percentage points from 33.3% to 36.1% when comparing the current with the revised framework. In contrast with Group 1 banks, equity exposures show the largest absolute and one of the largest relative increases, moving from 156% to 258% (a 64.8% increase). Similarly to Group 1 banks, equity investments in funds and subordinated debt are amongst the asset classes with the largest absolute increase (89.5%), while the increase for bank exposures is relatively small at 16.1%, especially when compared to Group 1 banks. Corporate small and medium-sized enterprises and general residential real estate exposures show the largest decrease, both in absolute and relative terms, decreasing from 95% to 85% (a 11.2% decrease) and from 39% to 37% (a 5.6% decrease), respectively.



Standardised approach average risk weights under the current rules and the final Basel III standards, by asset class

4.2.4 Internal ratings-based approach for credit risk

Impact of the revisions on MRC

Graph 50 summarises the change in Tier 1 MRC due to the IRB revisions, for all credit risk exposures that are currently under the IRB approach, regardless of which approach they are subject to under the final Basel III standards (ie it includes equity exposures currently under the IRB approach, even if under the revised standards their MRC will be calculated using the standardised approach). The sample of banks included in this section differs from the sample of IRB banks in the previous sections. Moreover, changes in Tier 1 MRC in this section are calculated as a percentage of current Tier 1 MRC associated with exposures under the IRB approach only.

The left hand side panel of Graph 50 shows the overall distribution of the impact. In aggregate, the revisions to the IRB approach appear to result in a decrease in overall Tier 1 MRC for Group 1 banks (-4.1%) and G-SIBs (-4.6%), and an increase for Group 2 banks (+7.5%). The change in MRC for the banks between the 25th and 95th percentile of the distribution ranges from -10.6% to 17.0% for Group 1 banks and from -3.4% to 17.2% for G-SIBs. The range for Group 2 bank is much wider, from -5.2% to 40.3%.

The right hand side panel of Graph 50 breaks down the impact by asset class. The asset classes which experience the largest increases are banks (+0.6% for Group 1 banks, +5.9% for Group 2 banks) and other assets (+0.6% for Group 1 banks, +1.1% for Group 2 banks). The latter is mainly driven by equity exposures, whose RWA under the revised framework are calculated using the standardised approach.



Changes in Tier 1 MRC for exposures subject to the IRB approach for credit risk due to the final Basel III standards¹

¹ The change is calculated as a percentage of current Tier 1 MRC across all IRB exposures. ² The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the vertical lines show the range of the entire sample. The dots represent weighted averages. ³ "Others" include equity exposures, equity investments in funds and other assets.

Source: Basel Committee on Banking Supervision. See also Table C.43 and Table C.44

Graph 51 replicates the analysis of Graph 50 but breaks down the results by geographical region. Overall, the IRB revisions lead to an average increase in overall Tier 1 MRC for European banks (+5.0%) and banks in the Americas (+1.1%) but to a significant decrease for banks in the rest of the world (-10.8%). The impact is heterogeneous across banks: the change in MRC for the banks between the 25th and 95th percentile of the distribution ranges from -4.1% to 23.6% for Europe, from -3.7% to 11.6% for the Americas and from -14.0% to 16.6% for the rest of the world.

For European banks, exposures to banks and corporates are the main contributors to the overall increase in MRC (1.9% and 1.2% respectively). For American banks, the main drivers for the MRC change are the increase for exposures to banks (+0.4%) and to other assets, including equity exposures (+2.4%), and the decrease for exposures to retail residential mortgages (-0.8%). For the rest of the world, the decrease in MRC is mainly driven by exposures to corporate (-6.7%) and corporate SME (-3.8%). All the other asset classes have a rather smaller impact on MRC, with a small increase (+0.8%) for exposures to other assets, including include equity exposures.



Changes in Tier 1 MRC for exposures subject to the IRB approach for credit risk due to the final Basel III standards¹, by region

¹ The change is calculated as a percentage of current Tier 1 MRC across all IRB exposures. ² The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the vertical lines show the range of the entire sample. The dots represent weighted averages. ³ "Others" include equity exposures, equity investments in funds and other assets.

Source: Basel Committee on Banking Supervision. See also Table C.45 and Table C.46

Average risk weights

Graph 48 and Graph 49 provide additional detail on the current and revised average risk weights by asset class for Group 1 and Group 2 banks, respectively. Note that for equity exposures, the current amounts show the average risk weight for equity exposures currently under the IRB, and the revised amounts show their average risk weight under the revised framework, ie calculated using the revised standardised approach.

Overall, the average risk weight of Group 1 banks' exposures currently under the IRB decreases from 36.1% to 34.7%. Looking at individual asset classes, exposures to SME treated as corporate show the largest decrease, both in absolute and relative term, from 71% to 62% (a 12.3% decrease). Equity exposures show the largest increase, both in absolute and relative terms, from 187% to 243% (a 30.2% increase). This increase is due to the migration of equity exposures from the IRB to the standardised approach, which imposes a risk weight of 400% to speculative unlisted equity exposures and a risk weight of 250% to all other equity holdings.



IRB approach average risk weights under the current rules and the final Basel III standards, by asset class

Source: Basel Committee on Banking Supervision. See also Table C.47 which includes a G-SIB breakdown. Table C.48 provides an additional regional breakdown.

The overall average risk weight of Group 2 banks' exposures currently under the IRB increases from 25.4% to 27.5%. Looking at individual asset classes, eligible purchased receivables show the largest absolute decrease, from 96% to 86% (a 10 percentage point decrease), while financial institutions treated as corporates show the largest relative decrease, from 57% to 50% (a 12.7% decrease). Equity exposures show the largest absolute increase, from 218% to 251% (a 33 percentage point increase), while exposures to banks show the largest relative increase, from 14% to 44% (a 217.1% increase).



IRB approach average risk weights under the current rules and the final Basel III standards, by asset class

Risk parameters by IRB asset classes under current rules

This section presents IRB risk parameters for a sample of Group 1 banks only. Graph 54 and Graph 55 illustrate weighted average probability of default (PD) and loss-given-default (LGD) for Group 1 banks' exposures subject to the internal ratings-based (IRB) approaches respectively. For Group 1 banks, average PDs are generally highest for retail and corporate portfolios (1.37% and 0.92% respectively) while PDs for bank and sovereign portfolios are considerably lower (0.22% and 0.04%, respectively). Looking further, it is observed that average PDs and LGDs do not differ materially between portfolios primarily being measured using the foundation IRB and advanced IRB approaches.¹⁹ For corporate portfolios measured under the foundation IRB approach, PDs and LGDs are slightly higher relative to those measured under advanced IRB. For retail and bank portfolios the opposite is true, PDs and LGDs are moderately higher under the advanced IRB approach. Furthermore, sovereign PDs remain very low under either IRB approach, while average LGDs for sovereigns are generally higher under foundational IRB.

¹⁹ In general, the main approach to credit risk is determined by the approach utilised on the non-retail portfolios. Therefore, if a bank uses the foundation IRB approach for all non-retail portfolios and the IRB approach to retail for the retail portfolio, it is considered a "foundation IRB" bank.

Exposure-weighted average PD for non-defaulted exposures by main asset $\ensuremath{\mathsf{classes}}^1$

Group 1 IRB banks



¹ The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box The upper and lower end points of the vertical lines generally show the range of the entire sample. The dots represent weighted averages.

Source: Basel Committee on Banking Supervision. See Table C.49 for underlying data and sample size.

Exposure-weighted average LGD after credit risk mitigation for non-defaulted exposures by main asset classes¹

Group 1 IRB banks



¹ The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the vertical lines generally show the range of the entire sample. The dots represent weighted averages.

Source: Basel Committee on Banking Supervision. See Table C.50 for underlying data and sample size.

Graph 54

Exposure-weighted average risk weights for non-defaulted exposures by main asset classes¹

Group 1 IRB banks Graph 56 Corporate Sovereign Bank Retail Per cent Per cent Per cent Per cent 50 100 80 30 40 80 60 20 30 60 40 20 40 10 20 10 20 0 0 0 0 FTRR FIRB AIRB All IRB AIRR All IRB FTRR AIRB All IRB AIRB All IRB FIRB

¹ The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the vertical lines generally show the range of the entire sample. The dots represent weighted averages.

Source: Basel Committee on Banking Supervision. See Table C.51 for underlying data and sample size.

Exposure-weighted average risk parameter values for retail sub-asset classes





4.2.5 Distribution of exposure at default and risk-weighted assets across approaches

The left panel of Graph 58 shows the distribution of exposure at default (EAD) under different modelling and non-modelling approaches. For the purpose of this section, specialised lending refers to the EAD that would be subject to the supervisory slotting criteria approach. For Group 1 banks overall modelling according to the advanced IRB approach available to banks that currently stands at 56.3% of EAD would

be reduced by 12.6 percentage points to the level of 43.7% of EAD. Exposures migrating to the standardised approach which mainly concerns equity exposures are expected to represent only 1.0% of total current EAD, while exposures under the foundation IRB approach are expected to increase from 16.1% to 28.7% of total EAD. The use of the AIRB approach for Group 2 banks would be reduced by 2.8 percentage points from the current 49.5% of EAD to 46.7%. Exposures under the standardised approach would be 37.1% of total EAD, while exposures under the foundation IRB approach would represent 12.5% of total EAD.

The right panel of Graph 58 replicates the exercise for the distribution of RWA. For Group 1 banks, RWA under the advanced IRB approach would be reduced by 11.7 percentage points to 29.4%. RWA under the standardised approach for Group 1 banks would make up 32.4% of total RWA, while RWA under the foundation IRB approach would make up 34.9%. For Group 2 banks, RWA under the advanced IRB approach would be reduced by 5.2 percentage points to 30.4%. RWA under the standardised approach for Group 2 banks would make up 47.6% of total RWA, while RWA under the foundation IRB approach would make up 47.6% of total RWA, while RWA under the foundation IRB approach would make up 47.6% of total RWA, while RWA under the foundation IRB approach would make up 47.6% of total RWA, while RWA under the foundation IRB approach would make up 47.6% of total RWA, while RWA under the foundation IRB approach would make up 18.2%.





Distribution of EAD and RWA by approach under the current standard and the final Basel III standard, by region





Additional constraints to modelling will apply due to the introduction of risk parameter floors. The risk parameter floors introduce a 5 basis points PD floor,²⁰ which will be binding for some IRB exposures. Furthermore, some exposures subject to the advanced IRB approach will be bound by the risk parameter floors on LGD and EAD. These risk parameter floors together with the output floor further reduce the shares of EAD and RWA which are effectively subject to unconstrained modelling; these effects are however not shown in the graphs above.

4.2.6 Impact of the revised securitisation framework

General overview of the securitisation framework

This section explores the impact of the revised securitisation framework.²¹ The main changes of the revised framework in comparison to the current framework are:

- Harmonisation of the treatment of banks operating under the standardised or IRB approaches;
- Adjustment of the hierarchy of approaches in order to avoid the mechanistic reliance on external ratings;
- Inclusion of additional risk drivers and better recognition of existing risk drivers;
- Introduction of preferential risk weights for simple, transparent and comparable (STC) securitisations; and
- Complete recalibration of all available approaches and increase of the risk weight floor from currently 7% to 10% and 15% for STC exposures and for non-STC exposures, respectively.

²⁰ The PD floor will be 10 basis points for certain qualifying revolving retail (QRRE) exposures.

²¹ Basel Committee on Banking Supervision, *Revisions to the securitisation framework, amended to include the alternative capital treatment for "simple, transparent and comparable" securitisations*, July 2016, <u>www.bis.org/bcbs/publ/d374.htm</u>.
It should be highlighted that the impact of the STC short-term securitisation framework is not captured within this analysis.

The revised framework provides banks with three approaches to calculate RWAs. However, in terms of the application of the approaches a revised hierarchy has to be followed. In particular the three approaches have to be applied in the following sequence:

- Securitisation Internal-Ratings Based Approach (SEC-IRBA);
- Securitisation External-Ratings Based Approach (SEC-ERBA);²²
- Securitisation Standardised Approach (SEC-SA).

In addition banks that are allowed to use SEC-ERBA are allowed to use an additional approach, the Internal Assessment Approach (IAA) to calculate RWAs for unrated asset-backed commercial paper (ABCP) exposures (predominantly liquidity facilities or credit enhancements provided by reporting banks to ABCP conduits).

Data description

A total of 95 banks submitted data of sufficient quality for securitisation, including 71 Group 1 banks (23 G-SIBs) and 24 Group 2 banks. The Group 1 sample represents 92.5% of total securitisation exposures of all Group 1 banks while the Group 2 banks comprise 73.8% of total securitisation exposures of all participating Basel III monitoring banks. Total securitisation exposures and RWA across Group 1 banks were ≤ 1.4 trillion and ≤ 388.2 billion respectively, compared with ≤ 33.1 billion and ≤ 8.5 billion for Group 2 banks.

Even for banks included in the sample, differences in how they complete the Basel III monitoring worksheet could impact the comparability of the results. Two significant caveats are worthy of mention:

- Classification as STC or non-STC. Not all banks have performed STC classification for their securitisation exposures, possibly due to the effort required to assess the exposures against the STC criteria.²³ It is likely that some banks have applied a portfolio-wide classification, assigning either all or none of their exposures as STC-eligible. Table 7 shows that 63 banks (66%) reported no STC exposures and nine banks (9%) reported all exposures as STC-eligible. Under this assumption, the majority of banks which reported no STC exposures underestimate the actual amount of STC-eligible securitisation exposures and correspondingly, overestimate the capital increase under the revised securitisation framework. As jurisdictions implement the revised securitisation framework and incorporate the STC criteria, it can be expected that the share of STC-compliant securitisation exposures will increase.
- Allocation of exposures under the current and revised frameworks. Mapping exposures from the current risk-weighting approaches to the revised securitisation framework is not necessarily straightforward, depending on the approaches used by the banks and the composition of their securitisation portfolios. The current framework includes four ratings-based approach look-up tables and two approaches for non-rated exposures, while the revised framework introduced a new hierarchy with three different approaches (SEC-IRBA, SEC-ERBA and SEC-SA) in additon to the IAA. The Basel III monitoring exercise does not require banks to distinguish their exposures based on the current risk-weighting approach applied. Rather banks were asked to classify current exposures by the expected treatment under the revised securitisation framework and show the total current reported and prospective final framework RWAs for those exposures. While

²² National supervisors are provided with a national discretion to not implement the SEC-ERBA.

²³ To classify a securitisation exposure as STC, it must be analysed against a set of criteria that assess the risk of the underlying assets, the securitisation's structure, and risks associated with the securitisation's servicers and other agents with a fiduciary duty to the securitisation's investors.

banks were instructed to keep the exposures consistent across the current and revised frameworks, 23 banks showed different exposures amounts for at least one of their approaches line items.²⁴ In aggregate, the impact accounts for only 0.28% of total exposures which netted down to 0.07% of exposures when offsetting between positive and negative exposure allocations is considered. This difference are significantly lower than had been observed in prior collections, which is indicative of banks' increasing familiarity with the instructions.

It should be noted that the Committee published its final standard on the capital treatment for short-term "simple, transparent and comparable" securitisations in May 2018 for immediate adoption. While this release was too late for banks to model any impacts, it is expected that further reductions in risk weights for ABCP exposures will be seen in final standard estimates in subsequent data collections once banks are able to assess their ABCP-linked exposures against the 19 criteria for identifying STC short-term securitisations for applicable exposures.

Overview of securitisation exposures

Share of securitisation exposures by role

For banks reporting information related to their role in securitisation transactions, exposures arising from investor positions contribute 60% to the total exposure of ≤ 1.17 trillion.²⁵ The relative breakdown of a jurisdiction's overall exposure according to the role of the bank differs significantly across jurisdictions, given the heterogeneity among securitisation markets and the different strategies applied by banks.

Share of securitisation exposures by STC/non-STC

The revised securitisation framework distinguishes between STC and non-STC exposures, providing preferential capital treatment to STC exposures. Banks reported 13% of their exposures as STC-eligible (Table 7). However, at the individual bank level, the STC share ranges widely with 63% of banks reporting all of their exposures as non-STC and 15% of banks reported that more than half of their total securitisation exposures as STC-eligible. Possible reasons for this observation include banks making the choice to not classify their securitisation portfolios by STC eligibility and some jurisdictions not having implemented the revised securitisation framework excluding the STC element. As mentioned above, the numbers are, therefore, subject to a level of data uncertainty. Overall, it is reasonable to postulate that the amount of STC exposures has been underestimated.

Share of securitisation exposures by approach

The revised securitisation framework also introduced a new hierarchy of three approaches (SEC-IRBA, SEC-ERBA and SEC-SA) for calculating risk weights. Consistent with the prescribed hierarchy, most exposures (38%) are risk-weighted by SEC-IRBA, followed by SEC-SA (25%) and SEC-ERBA²⁶ (23%) (Graph 60).

However, the usage of approaches vary across jurisdictions. There is some correlation between the extent to which SEC-IRBA is used and the proportion of originated exposures. This results from the greater access to the SEC-IRBA's inputs (PDs and LGDs for the underlying exposures) that banks gain in the process of originating/underwriting loans, compared with the more remote and passive activity of investing in securitisations or even acting as an ABCP sponsor.

²⁴ Out of the 23 banks, 11 banks showed a total increase of exposures between the current and revised framework and 11 banks showed a decrease. The remaining bank reallocated a significant portion of exposures it currently risk-weights using SEC-ERBA to SEC-IRBA without impacting its total securitisation exposures.

²⁵ The bank could assume three different roles: (i) originator that securitises assets from its own balance sheet, (ii) sponsor which securitises assets from balance sheet of its client or (iii) investor which buys third-party transactions.

²⁶ Including the Internal Assessment Approach

Securitisation exposure amounts by approach



¹ The sample consists of 95 banks. ² Note that deducted exposures and exposures subject to a 1250% risk weight are comparatively small but non-zero.

Source: Basel Committee on Banking Supervision. See also Table 7.

Impact of the revised framework

The total RWA increases by €125.5 billion (41.9%) under the revised framework (Table 7). Directionally, this increase is within the expectations of the revised framework, reflecting the more conservative calibration for senior securitisation exposures, the introduction of the 15% risk weight floor and the necessary reclassification of some exposures resulting from the introduction of a new hierarchy of risk weighting approaches.

Breaking down the RWA increase shows increases to non-STC exposures dominate, comprising €121.6 billion (97%) of the total increase. Within non-STC exposures, the 174.2% increase in RWA for securitisation exposures risk-weighting using IAA is due those exposures currently subject to very low risk weights (11% on average) being transitioned to the revised framework that floors risk weight for non-STC exposures at 15% and more than doubles the risk weights for lowly rated short-term non-STC securitisation exposures. However, it is reasonable to expect that this increase in RWA will fall, with the introduction of the short-term STC standard²⁷ in May 2018, where STC classification carrying a 10% risk weight floor, would be made available for such exposures. STC exposures account for less than 4% of the expected increase in total RWA.

Within STC exposures, the increase of 75% under the SEC-ERBA for STC securitisation exposures is mainly driven by the general recalibration of the risk weights applicable from senior exposures with investment grade ratings which are now floored at 10% instead of 7%. STC exposures treated under SEC-SA show a reduction in RWA of €10.4 billion. It has to be noted that the numbers are skewed by one bank which accounted for 47% total exposures, 76% of the STC exposures that are weighted using SEC-IRBA and 50% of those that use SEC-SA. The reduction in RWA for this bank moving to the revised framework is also higher than the average. The increase in RWA for SEC-IRBA exposures if this bank had been excluded

²⁷ When applying SEC-IRBA for its holding of a note issued by an ABCP conduit that meets short-term STC capital criteria, a bank investor would use the note maturity as the input to the SEC-IRBA formula. The risk weight under the formulaic approaches would be determined by applying a 0.5 scalar to the "p"-parameter, with the "p" parameter floored at 0.3, and a risk weight floor of 10% for senior tranches and 15% for non-senior tranches.

would have been 84%, instead of 27%. For SEC-SA, the drop in RWA would have been only 6%, instead of 10%.

In the EU, banks have the option of deducting certain securitisation exposures from capital instead of adding the 1,250% weighted exposure to RWA. As long as the exposure is not related to a gain on sale, the deductions can be taken from both Tier 1 and Tier 2 capital on a 50/50 basis which is beneficial to both Common Equity Tier 1 and Tier 1 capital ratios. It is thus worth highlighting that for EU banks, when risk weighting the exposures that, according the national framework are currently deducted from Tier 1 capital, the result is a decrease in RWA of €700 million.

Total amounts and change of securitisations exposures and RWAs under the current national rules and the final standards

All banks ¹						Table /	
		Exposure			RWA		
	Current framework (€ bn)	Final standards (€ bn)	Change (%)	Current framework (€ bn)	Final standards (€ bn)	Change (%)	
Non-STC securitisations: SEC-IRBA	407.4	406.6	-0.2	77.3	121.9	57.7	
Non-STC securitisations: SEC-ERBA	243.6	243.6	0.0	43.9	87.5	99.4	
Non-STC securitisations: IAA	150.5	150.5	0.0	16.4	44.9	174.2	
Non-STC securitisations: SEC-SA	259.6	259.5	0.0	106.9	111.8	4.5	
Of which: resecuritisation	4.3	5.0	16.2	4.4	7.7	76.3	
Non-STC securitisations: total	1,061.1	1,060.2	-0.1	244.4	366.0	49.7	
STC securitisations: SEC-IRBA	59.0	59.3	0.5	16.1	20.5	27.1	
STC securitisations: SEC-ERBA	38.5	38.2	-1.0	4.3	7.6	74.6	
STC securitisations: SEC-SA	56.6	56.6	0.0	22.1	19.8	-10.4	
STC securitisations: total	154.1	154.0	0.0	42.6	47.9	12.5	
Others (1250% RW)	1.2	1.1	-7.7	12.4	11.0	-11.1	
Total	1,216.4	1,215.4	-0.1	299.4	424.9	41.9	
Deducted (EU only)	1.1	1.1	-1.0	13.7	13.0	-5.7	

¹ The sample consists of 95 banks. Under the EU national framework banks are allowed, in alternative to risk weight an exposure to 1250%, to deduct it from Tier 1 capital. According to the final standards these exposures cannot be deducted and will be risk weighted.

Source: Basel Committee on Banking Supervision.

Most jurisdictions expect to see RWA increases for their banks' securitisation exposures under the revised framework. These results are in line with the objective of the revised securitisation framework to increase excessively low risk weights on highly rated securitisation exposures and lowering risk weights on certain lower risk but low-rated securitisation exposures.

Jurisdictional level variation reflects differences in risk profiles of the participating banks. For example, for IRB banks with a portfolio of highly rated securitisation exposures the RWA will increase significantly due to the increase in the risk weight floor. Another example of changes impacting RWA relates to exposures risk weighted using the SEC-ERBA, where for a non-STC five year AAA-rated securitisation for which the risk weight will nearly triple from 7% to 20%. On the other hand, banks holding a securitisation portfolio of senior tranches of sub-investment grade exposure would see RWA decrease.

Graph 61 compares risk weightings under the current and revised frameworks for STC and non-STC exposures. Exposures subject to the SEC-SA show only slight differences, with risk weightings for STC exposures expected to drop while non-STC should see a similarly marginal increase. However, under the revised framework, relatively large increases in average risk weight can be observed for exposures treated

_ . . _

under both the SEC-IRBA and the SEC-ERBA. On an overall basis, the average risk weight increased from 26% to 36% under the revised framework.²⁸



Average risk weight by approach

¹ The sample consists of 95 banks. Total under non-STC securitisations includes deductions for EU and securitisations subject to a 1250% risk weight.

Source: Basel Committee on Banking Supervision. See also Table C.57.

Graph 62 compares the average risk weights between STC and non-STC exposures under the revised framework. In line with the calibration of the parameters, the total average risk weights for non STC exposures is six percentage points higher than for STC exposures. The exposures risk-weighted using the SEC-ERBA shows the greatest difference (16%) in average risk weights between STC and non-STC exposures. It should be noted that for exposures risk-weighted using the SEC-IRBA, the average risk weight for STC securitisations (35%) is higher than the average risk weight for non STC securitisations (30%). This is because of the limited amount of exposures that have been reported as STC and the high risk weights (eg 100%) reported for the exposures.

STC exposures under the SEC-SA, in contrast to all other exposures, show a decrease in the average risk weights (-4 percentage points). However, it should be noted that those exposures only contribute around 4% of the overall securitisation EAD. Therefore, the impact on the overall results is negligible.

Average risk weight, final standards



Overall, securitisation's contribution to aggregate MRC is expected to increase by 0.7% from 1.8% to 2.5%.

4.3 Market risk

4.3.1 Current market risk rules

The left panel of Graph 63 shows the distribution of the share of market risk MRC in total MRC under current market risk rules, ie usually the national implementation of the Basel 2.5 market risk framework. On average, the share of market risk MRC is 4.0% of total MRC for Group 1 banks and 2.2% of total MRC for Group 2 banks. However, there is significant dispersion across banks from zero to around 30% in both groups. The average share for Group 1 banks and G-SIBs is at a similar level as at end-June 2011. However, as can be seen in the right panel of Graph 63, Group 1 banks and in particular the G-SIBs among them experienced a significant peak at the end of 2011, and the share of market risk in total MRC has gradually decreased between then and the end of 2017.







¹ The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the vertical lines generally show the range of the entire sample. The dots represent weighted averages.

Source: Basel Committee on Banking Supervision. See Table C.58 and Table C.59 for underlying data and sample size.

Graph 64 below shows the time series of the share of the components of MRC for market risk in total MRC for market risk for Group 1 and Group 2 banks as well as for G-SIBs separately. The time series starts at the end-June 2015 reporting date and uses a consistent sample of banks. For Group 1 banks and in particular the G-SIBs among them, the internal models approach contributes around two thirds to overall market risk MRC. The share of value-at-risk (VaR) and stressed VaR has increased since June 2015 while the share of the incremental risk capital charge stayed at a similar level and the share of MRC for correlation trading portfolios has decreased. For Group 2 banks, the internal models approach is much less relevant at only around 21% of market risk MRC, and correlation trading portfolios are negligible. Almost 79% of Group 2 banks' market risk MRC have been calculated using the standardised approach.

Components of minimum capital requirements for market risk under the current rules



Consistent sample of banks, in per cent

Graph 64

Graph 65

Per cent

280 260

240

220

200

180

160

H2 2017

Graph 65 below shows the relation of the 10-day stressed VaR to the current 10-day 99% VaR under current market risk rules in the Group 1 sample using a consistent sample of Group 1 banks. The left panel shows the time series since end-2011 for a sample of 23 banks. Under this consistent sample, the ratio of stressed VaR to VaR has fluctuated around 200% with a peak at 247.9% in H1 2014 and another peak at 289.0% in H2 2016, since then it has decreased to 237.5%. The right panel shows the same ratio for a sample which includes 33 additional banks whose data are available since end-June 2015. For this larger sample, the ratio has continued to increase and reached its highest peak in H2 2017 at 259.5%.



220

200

180

160

H2 2015

H1 2016

H2 2016

Т

2017

H1 2017

2012

2013

2014

2015

2016

Source: Basel Committee on Banking Supervision. See Table C.63 for underlying data and sample size.

4.3.2 Overall impact of the revised minimum capital requirements for market risk

This section analyses the impact of the revised minimum capital requirements for market risk for the end-December 2017 reporting date. Please note that, while the revised market risk standard was published in January 2016, the Committee published in March 2018 a consultative document that sets out proposals for the revisions of the standard.²⁹

QIS data for market risk represent best efforts and are less robust than in other areas of the Basel III monitoring exercise owing to the large number of trading positions at individual banks that require, and will require, numerous manual adjustments until systems reflecting the revised minimum capital requirements for market risk are available. The caveats with regard to data quality apply to both internal models and the revised standardised approaches.

Furthermore, although participating banks were instructed to treat trading desks currently subject to internal models as trading desks eligible for the internal models approach (IMA), the data ultimately reported and included in this analysis may reflect some banks' judgement with regard to IMA eligibility for their trading desks. The ultimate determination of a bank's eligibility to use the IMA for specific trading desks will depend on both the bank's ability to model those trading desks and supervisory approval. Given that at the reporting date banks had not yet implemented the revised standard, they may have reported data based on the standardised approach for desks which will become subject to the IMA, or vice versa. Also, evidence from previous reforms to the market risk capital framework has shown that banks have progressively changed their overall trading book positions as a response to changes in capital requirements and the resulting impact has been lower than initial estimates.

A total of 97 banks from 24 countries, of which 79 Group 1 banks and 18 Group 2 banks, have provided data on the revised minimum requirements for market risk at the end-December 2017 reporting date (see Table B.3).

Graph 66 below shows the impact of the revised market risk standards in relation to the current minimum capital requirements for market risk. While the average impact on Group 1 and Group 2 banks relative to current *market risk* capital requirements is comparable, the outliers are far more extreme for Group 2 banks (with a maximum of a 469.5% increase). With regards to the relative impact on the current *overall* capital requirements, however, the revised standards result in an average increase of 2.9% for Group 1 banks and 1.3% for Group 2 banks. The maximum impact is 76.2% for Group 1 banks and 21.3% for Group 2 banks. Both results reflect the higher share of market risk capital requirements in overall capital requirements for Group 1 banks.

²⁹ Specifically, the revisions consulted upon in the 2018 consultative document are: (i) changes to the low correlation scenario specification; (ii) allowance for FX triangulation; (iii) application of a zero floor for curvature risk in the calculation of curvature risk capital requirements; (iv) application of consistent shocks on a risk factor "bucket" level for curvature risk calculations; and (v) revisions to risk weights under the sensitivities-based method.

Impact on MRC of the revised standards for minimum capital requirements for market risk¹

Relative to current market risk capital requirements Relative to current overall capital requirements Per cent Per cent 400 60 300 40 200 20 100 0 0 -20 -100 Group 1 banks Of which: G-SIBs Group 2 banks Group 1 banks Of which: G-SIBs Group 2 banks

¹ The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the thin vertical lines show the range of the entire sample. The dots represent weighted averages.

Source: Basel Committee on Banking Supervision. See also Table C.64.

4.3.3 Components of minimum capital requirements for market risk under current rules and the revised framework

Graph 67 below shows the share of market risk capital requirements attributable to the various approaches and risk components under the current rules and the revised standards. While for Group 1 banks, even more so for G-SIBs, the internal models approach is a key driver under the current rules (48.6% and 55.4%, respectively), Group 2 banks tend to have most of their minimum capital requirements computed under the standardised approach (81.5%). Other market risk capital requirements make up a negligible part of minimum capital requirements for market risk under the current rules.

Under the revised standards, the standardised approach makes up the biggest part for every bank group (40.3% for Group 1 banks, 74.3% for Group 2 banks) while the residual risk add-on represents a relatively minor contribution to the overall capital requirements of both bank groups. For Group 1 banks, the internally-modelled capital charge (15.9%), the default risk capital charge (24.5%) and non-modellable risk factors (18.0%) are other significant contributors to the overall capital requirements under the revised standards.

Graph 66



Breakdown of minimum capital requirements for market risk by approach and risk component under the current rules and the revised standard

Source: Basel Committee on Banking Supervision. See also Table C.65 and Table C.66.

4.4 Operational risk

4.4.1 Current operational risk rules

As depicted in Graph 68 below, MRC for operational risk has continuously increased in recent years until end-2016 and decreased slightly since. For Group 1 banks and G-SIBs, most of which use the Advanced Measurement Approaches (AMA) as the primary method for the calculation of operational risk capital, this increase is largely explained by the surge in the number and severity of operational risk events during and after the financial crisis, which are factored into the calculation of MRC for operational risk under the AMA. For Group 1 banks and G-SIBs, the share of MRC for operational risk under the AMA. For Group 1 banks and G-SIBs, the share of MRC for operational risk under the AMA has increased from 58.4% in 2011 to 67.1% in the latest reporting period, while the share of operational risk MRC as a percentage of total MRC is 13.7% for Group 1 banks and 15.4% for G-SIBs.

The increase in MRC for operational risk for Group 2 banks, most of which calculate operational risk capital requirements under the Framework's non-model-based approaches,³⁰ is largely explained by an increase in business volume, which is a factor captured by the financial statement-based components of the standardised approaches. For Group 2 banks, the share of operational risk MRC as a percentage of total MRC is 9.0%.

³⁰ Which comprise the Basic Indicator Approach (BIA) and the Standardised Approach (TSA), and its variant the Alternative Standardised Approach (ASA).

Total MRC for operational risk and share of approaches



¹ Some banks started reporting operational risk RWAs under the Basic Indicator Approach in 2013 and eventually migrated to the Standardised Approach in 2014.

Source: Basel Committee on Banking Supervision. See Table C.67 and Table C.68 for underlying data and sample size.

The dominance of indicator-based properties found in the standardised approaches for operational risk reflect the size of a bank rather than its risk exposure, which explains the limited variance of MRC for most Group 2 banks (see Graph 69). For Group 2 banks, the difference between the 25th and 75th quantile of the share of MRC for operational risk in total MRC is around 5 percentage points, while it is approximately 7 percentage points for Group 1 banks and 18 percentage points for G-SIBs. The outliers among Group 2 banks are mostly fee business-specialised banks in the sample where operational risk is virtually an exclusive risk, while outliers among Group 1 banks and G-SIBs are banks using AMA in which past loss events influence future operational risk exposure.



¹ The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the vertical lines generally show the range of the entire sample. The dots represent weighted averages. Source: Basel Committee on Banking Supervision. See Table C.69 and for underlying data and sample size.

4.4.2 Final operational risk standards

The objective of the design and calibration of the revised operational risk framework is to ensure stable capital requirements that are simple to estimate and comparable while remaining risk-sensitive. The revisions aim to accomplish this objective by replacing the existing set of approaches³¹ used for the estimation of operational risk capital requirements with the standardised approach (SA), which is comprised of a single non-model-based method that combines a financial statement proxy of operational risk exposure (termed the "business indicator" or BI), with bank-specific operational risk-related losses (termed the "internal loss multiplier" or ILM). The following analysis applies the standardised approach to estimate the changes in operational risk MRC and evaluates the impact of the final against the existing framework. It also takes into account two national discretions: (1) to set the internal loss multiplier equal to one and hence base capital requirements for operational risk solely on the business indicator component for all banks in a jurisdiction; and (2) to have Bucket 1 banks measure their ILM using their loss history, rather than apply ILM = 1 to all Bucket 1 banks.³²

According to Table 8, the final operational risk framework generates an aggregate decrease of operational risk MRC of approximately -1.5% for all Group 1 banks and a -4.8% decrease for G-SIBs as well as an increase of 6.4% for the Group 2 banks in the sample. It should be noted, however, that the results exclude current supervisory-imposed capital add-ons for Pillar 2 risk for certain banks in the sample which would otherwise cause the impact of the reforms to the operational risk framework on MRC to be lower compared to current MRC levels for the Group 1 bank sample. Given some of those additional Pillar 2 capital requirements may be removed or reduced, the size of the increases in MRC shown in Table 8 may be overstated and reductions may be understated.

In per cent Table 8						
	Change in Tier 1 MRC ¹	Number of banks migrating from AMA	Number of banks migrating from other approach			
Group 1 banks	-1.5	48	57			
Of which: Americas	-16.8	16	4			
Of which: Europe	35.5	16	20			
Of which: Rest of the world	-12.5	16	33			
Of which: G-SIBs	-4.8	21	9			
Group 2 banks	6.4	8	73			

Changes in operational risk capital requirements

¹ Figures may not show supervisor-imposed capital add-ons. Therefore, increases in MRC may be overstated and reductions may be understated.

Source: Basel Committee on Banking Supervision.

Graph 70 depicts the distribution of changes in operational risk capital requirements for Group 1 banks, G-SIBs and Group 2 banks that calculate operational risk capital requirements using the existing set of standardised and advanced approaches in the framework.

³¹ Comprised of the basic indicator approach (BIA), the standardised approach (TSA) and its variant the alternative standardised approach (ASA) along with the internal model-based advanced measurement approach (AMA).

³² This has been reflected in the calculation by setting the internal loss multiplier to one whenever national supervisory authorities have indicated that they will most likely apply the national discretion.



¹ Figures do not show supervisor-imposed capital add-ons. Therefore, increases in MRC may be overstated and reductions may be understated. The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the vertical lines generally show the range of the entire sample. In some cases, arrows at the top of the vertical line indicate banks with changes outside the range shown in the graph. The dots represent weighted averages. For the purpose of this graph, AMA banks are banks which currently calculate some part of their operational risk capital requirements using the AMA.

Source: Basel Committee on Banking Supervision. See also Table C.70.

5. Interactions between risk-based, output floor and leverage ratio capital requirements

5.1 Relationship between the Basel III leverage ratio and risk-based capital requirements under fully phased-in initial Basel III standards

Table 9 below shows the migration of banks from *bounded* to *non-bounded* after Tier 1 capital rising to meet the target Tier 1 risk-based capital ratio.³³ It shows in particular that 1.4% of the banks in the sample do not meet the minimum Basel III leverage ratio of 3%, even after increasing Tier 1 capital to meet the target risk-based Tier 1 capital requirements.

³³ That is, a Tier 1 minimum capital ratio of 6% plus a capital conservation buffer of 2.5% plus, where applicable, any G-SIB capital surcharges.

-					10010 5	
		Target Tier 1 ratio binding (<8.5% + G-SIB surcharge)?			Total after capital raising to meet	
		Yes	No	Total	target Tier 1 ratio	
Leverage ratio binding (<3%)	Yes	0.0	1.4	1.4	1.4	
	No	0.0	98.6	98.6	98.6	
	Total	0.0	100.0	100.0	100.0	
Source: Basel Committee on Banking Supervision.						

Share of banks meeting the fully phased-in initial Basel III leverage ratio before and after capital raising to meet the risk-based target Tier 1 ratio

Separate results for the Group 1 and Group 2 banks in the sample are included in Table B.6 and Table B.7 in Annex B, respectively.

Graph 71 below shows the interaction between the fully phased-in Basel III Tier 1 leverage ratios (horizontal axis) and the fully phased-in Basel III Tier 1 risk-weighted capital ratios (vertical axis). Ratios of Group 1 banks are marked with red dots and those of Group 2 banks with blue dots. The dashed horizontal line represents a Tier 1 target risk-based capital ratio of 8.5%,³⁴ whereas the dashed vertical line represents a Basel III Tier 1 leverage ratio of 3%.

The diagonal line represents points where an 8.5% fully phased-in Basel III Tier 1 target risk-based capital ratio results in the same amount of required fully phased-in Basel III Tier 1 capital as a fully phased-in Basel III Tier 1 leverage ratio of 3%. By construction, it also represents a multiple of $8.5\%/3\% \approx 2.83$ between RWA and the Basel III leverage ratio exposure measure. Therefore, for banks plotted above the diagonal line, the Basel III Tier 1 leverage ratio becomes the constraining requirement).³⁵ For banks plotted below the diagonal line, the target Tier 1 risk-based capital ratio requires more capital than the leverage ratio (ie the Tier 1 capital ratio remains the constraining requirement).

As shown in Graph 71, three Group 2 banks do not meet the minimum fully phased-in Basel III Tier 1 leverage ratio of 3% (plotted left of the vertical dashed line). All of these banks meet the Basel III Tier 1 target capital ratio of 8.5%. This graph also shows that the fully phased-in Basel III Tier 1 leverage ratio is constraining for 74 banks out of 137, including 43 Group 1 and 31 Group 2 banks (plotted above the diagonal line).

In per cent

Table 9

³⁴ Calculated as the sum of a 6.0% Tier 1 minimum capital ratio plus 2.5% capital conservation buffer.

³⁵ Note that the effect of the G-SIB surcharge is not taken into account here. As the G-SIB surcharges only apply to the risk-based requirement, the relevant proportion between RWA and total leverage ratio exposure that determines whether the Basel III leverage ratio is constraining or not and hence the slope of the diagonal line would be different by bank.





Graph 72 below shows the share of banks in a consistent sample *bound*³⁶ by the different regulatory capital constraints, the risk-based Tier 1 capital requirements at the minimum level, the risk-based Tier 1 capital requirements at the target level and the Basel III leverage ratio requirement. In June 2011, 22.7% of Group 1 banks were bound by both the risk-based Tier 1 minimum and leverage ratio requirement; since December 2013, all Group 1 banks meet these requirements. Another 31.8% of Group 1 banks were initially bound by the risk-based Tier 1 requirements at the target level but not the leverage ratio, and it took until the end of 2014 that all banks in the sample also meet these requirements. There have been no banks in the consistent sample which have only been bound by either the risk-based minimum requirement only or the leverage ratio requirement only. For the G-SIBs among those banks, the share of banks initially not meeting the risk-based Tier 1 capital minimum and leverage ratio requirements was slightly higher at 28.6%, and the share of banks not meeting the risk-based Tier 1 capital target requirement was even higher at 50.0%.

Among Group 2 banks, 15.2% were bound by both the risk-based Tier 1 minimum and leverage ratio requirement in June 2011; while all Group 2 banks met these requirements since June 2015. Another 3.0% of Group 2 banks were initially bound by the risk-based Tier 1 minimum capital requirement but not by the leverage ratio. 36.4% of Group 2 banks were initially bound by the risk-based Tier 1 requirements at the target level but not the leverage ratio, and none of Group 2 banks are bound by this requirement as at the end-December 2017. The banks which contribute to the additional leverage ratio-driven shortfall at the end-December 2017 reporting date are not included in this consistent time series.

³⁶ A bank is *bound* by the risk-based capital framework if it has a risk-based capital shortfall. A bank is *bound* by the leverage ratio framework if, on a standalone basis, it has a Basel III leverage ratio shortfall. Therefore, a bank can be bound by none, one or both of these frameworks. However, a bank is *constrained* by the leverage ratio if the Basel III leverage ratio requires more capital than the risk-based framework plus applicable G-SIB surcharges, so in general exactly one of the two measures is constraining.

Share of banks bound by the different constraints¹

Fully phased-in initial Basel III standards, consistent sample of banks Graph 72



¹ Note that the data points for H1 2013 use an approximation for the initial definition of the Basel III leverage ratio exposure where gross instead of adjusted gross securities financing transaction values are used. Data points from H2 2017 onwards use the final definition of the leverage ratio to the extent data are available.

Source: Basel Committee on Banking Supervision. See Table C.71, Table C.72 and Table C.73 for underlying data and sample size.

5.2 Interactions between risk-based, output floor and leverage ratio capital requirements under the final Basel III standards

This section discusses the interaction between risk-based, output floor and Basel III leverage ratio capital requirements, all including the G-SIB buffers as applicable. The purpose of this analysis is to gain deeper insight into which capital requirement component of the framework is constraining for the banks in the sample. The *constraining* requirement in this analysis refers to the requirement that imposes the largest amount of Tier 1 MRC among the three requirements mentioned above. Accordingly, the Tier 1 MRC for a bank is determined as the highest of the requirement under the risk-based framework, the requirement using the output floors and the requirement measured using the Basel III leverage ratio. Note that in contrast to the analyses presented in Section 2.1 and Section 2.2, the risk-based capital requirements here denote the risk-based capital framework *prior* to the application of any output floor.

Graph 73 shows which of the three parts is constraining under both the current standard and the final Basel III framework. For Group 2 banks, results are presented separately for IRB banks and banks only using the standardised approach for credit risk ("pure SA").³⁷

Under the current framework 37.1% of Group 1 banks are constrained by the Basel III leverage ratio while 12.9% are constrained by the transitional Basel I-based floor. With the introduction of the somewhat stricter and more consistent output floor under the revised framework, 30.0% of Group 1 banks will be constrained by the floor while 25.7% will be constrained by the Basel III leverage ratio. The share of Group 1 banks constrained by risk-based capital requirements before application of the respective output floor will decrease from 50.0% to 44.3%.

³⁷ Graph 73 does not distinguish between IRB and "pure SA" Group 1 banks as out of the 71 Group 1 banks in the sample only seven are "pure SA" banks.

For the subset of G-SIBs, the Basel III leverage ratio is currently constraining for a slightly smaller share of banks (30.8%) as compared to Group 1 banks as a whole while the transitional Basel I-based floor constrain a slightly larger share of banks (26.9%). The remaining 42.3% of G-SIBs are constrained by the risk-based measure before application of the output floors. Under the revised framework, 46.2% of G-SIBs will be constrained by the output floor while the Basel III leverage ratio will be constraining for 26.9% of the G-SIB. The remaining 26.9% of G-SIBs will be constrained by the risk-based capital requirements before application of the output floor.

Of the Group 2 IRB banks in the sample, 62.5% are currently constrained by the Basel III leverage ratio while 4.2% are constrained by the transitional Basel I-based floor. The share of Group 2 IRB banks constrained by risk-based capital requirements before application of the output floors under the current regime is 33.3% and somewhat lower than the share among Group 1 banks and G-SIBs. Under the revised regime, the share of Group 2 IRB banks constrained by the risk-based capital requirements before application of the output floor is 41.7% and is lower than for Group 1 banks and G-SIBs. The Basel III leverage ratio will be constraining on 45.8% of Group 2 IRB banks while the share of Group 2 banks constrained by the output floor will increase to 12.5%.

For the Group 2 banks only using the standardised approach for credit risk, risk-based capital requirements before application of the respective output floors are and remain constraining for 61.5% of the banks. The Basel III leverage ratio is and remains constraining for 38.5% of these banks. The output floor will not become constraining for any of these banks, reflecting the fact that the share of RWA from market risk or counterparty credit risk is low for banks using the standardised approach for credit risk.



Percentage of banks constrained by different parts of the framework

Source: Basel Committee on Banking Supervision. See also Table C.74.



Percentage of banks constrained by different parts of the framework, by region

Share of banks meeting the fully phased-in final Basel III target leverage ratio before and after capital raising to meet the risk-based final target Tier 1 ratio

In per cent					Table 10	
		Target Tier 1 r (<8.5% + G-SI	atio binding 3 surcharge)?		Total after capital raising to meet	
		Yes	No	Total ta	target Tier 1 ratio	
Leverage ratio	Yes	0.0	2.1	2.1	2.1	
binding (<3%+G- SIB add-on)?	No	0.0	97.9	97.9	97.9	
	Total	0.0	100.0	100.0	100.0	

Source: Basel Committee on Banking Supervision.

6. Liquidity

6.1 Liquidity Coverage Ratio

One of the two liquidity standards introduced by the Committee is the 30-day Liquidity Coverage Ratio (LCR), which promotes short-term resilience against potential liquidity disruptions. The LCR requires global banks to have sufficient high-quality liquid assets to withstand a stressed 30-day funding scenario specified by supervisors. The LCR numerator consists of a stock of unencumbered, high-quality liquid assets (HQLAs) that must be available to cover any net outflow, while the denominator comprises cash outflows minus cash inflows (subject to a cap at 75% of outflows) that are expected to occur in a severe stress scenario. The LCR was revised by the Committee in January 2013 and came into effect on 1 January

2015. The minimum requirement is set at 80% in 2017 and will continue to rise in equal annual steps of 10 percentage points to reach 100% in 2019.

Data provided by 156 banks (87 Group 1 and 69 Group 2) was of sufficient quality and coverage to be incorporated in the LCR analysis in this report. As of the reporting date, banks within the LCR sample had total assets of approximately €59.2 trillion.

The key takeaways from this iteration of the Basel III monitoring exercise concerning the aggregate analysis of the LCR are as follows:

- The weighted average LCR for Group 1 banks decreased by 1.5 percentage points from the previous period to 133.0%. The weighted average LCR for Group 2 banks increased by 5.1 percentage points to 180.0%.
- 98.9% of Group 1 banks and 100.0% of Group 2 banks in the sample reported an LCR that exceeded a minimum requirement of 100%, compared to 98.8% and 100.0% at end-June 2017. At end-December 2017, all banks reported an LCR over 80% (the applicable minimum requirement since January 2017).
- The aggregate LCR shortfall at a minimum requirement of 100% was €1.9 billion for Group 1 banks. This compares to a combined shortfall of €0.1 billion as of end-June 2017.

Banks reported a total of €10.8 trillion in eligible liquid asset holdings (post-haircut), and €71.0 billion in assets where reported amounts were in excess of the 40% cap on Level 2 assets or the 15% cap on Level 2B assets as operationalised in the January 2013 standard.



¹ The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the thin vertical lines show the range of the entire sample. The sample is capped at 400%, meaning that all banks with an LCR above 400% were set to 400%. The dots represent weighted averages. The horizontal lines represent the 80% minimum (2017, blue dashed line), the 90% minimum (2018, red dashed line) and the 100% minimum (2019, red solid line).

Source: Basel Committee on Banking Supervision. See Table C.76 for underlying data.

Basel III monitoring results show a shortfall (ie the difference between high-quality liquid assets and net cash outflows) at a 100% minimum requirement of ≤ 1.9 billion for Group 1 banks and no shortfall for Group 2 banks as of end-December 2017. This compares to a combined shortfall of ≤ 0.1 billion as of end-June 2017. This number is reflective only of the aggregate shortfall for banks that are below an LCR minimum requirement of 100% and does not reflect surplus liquid assets at banks above a 100% requirement. At the currently applicable minimum requirement of 80% the aggregate shortfall is zero for both Group 1 and Group 2 banks at end-December 2017, remaining the same as end-June 2017.

The key components of outflows and inflows are shown in Table 11. Group 1 banks show a notably larger percentage of total outflows, when compared with balance sheet liabilities, than Group 2

banks. This can be explained by the relatively greater contribution of wholesale funding activities and commitments (both activities subject to comparably higher outflow rates) within the Group 1 sample, whereas Group 2 banks, as a whole, are less reliant on these types of activities.

Les outhows and innows (post-factor) as a percentage of balance sheet						
liabilities			Table 11			
	Group 1 banks	Of which: G-SIBs	Group 2 banks			
Outflows to						
Retail deposits run-off	2.1	2.3	2.1			
Unsecured wholesale funding run-off	11.7	12.5	5.0			
Secured funding and collateral swaps	1.7	2.2	0.4			
Additional requirements run-off	4.2	4.7	2.1			
Other contingent funding obligations	1.4	1.5	1.9			
Total outflows ¹	21.1	23.1	11.4			
Inflows from						
Secured lending and collateral swaps	2.0	2.7	0.6			
Contractual inflows from fully performing loans	2.4	2.4	1.4			
Other cash inflows	2.2	2.4	1.2			
Total inflows ^{1.2}	6.6	7.5	3.1			

ICR outflows and inflows (nost-factor) as a percentage of balance sheet

¹ May contain rounding differences. ² 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.

Source: Basel Committee on Banking Supervision.

75% cap on total inflows

At end-December 2017, three Group 1 and four Group 2 banks are affected by cap on inflows.

Composition of high-quality liquid assets

The composition of high-quality liquid assets (measured after application of the LCR haircuts) currently held at banks is depicted in Graph 76. The majority of Group 1 and Group 2 banks' holdings, in aggregate, are comprised of Level 1 assets, however, the sample as a whole shows diversity in their holdings of eligible liquid assets. Level 1 assets which include 0% and non-0% risk-weighted securities issued or guaranteed by sovereigns, central banks and public sector entities, and cash and central bank reserves comprise the most significant portions of the qualifying pool for Group 1 banks (together accounting for 91.2% of all eligible liquid assets). Level 1 assets also represent a significant portion of eligible liquid assets for Group 2 banks as well (together accounting for 95.6% of total eligible liquid assets).

Composition of holdings of eligible liquid assets



Source: Basel Committee on Banking Supervision. See Table C.77 for underlying data and sample size.

Caps on Level 2B and Level 2 assets

Due to the cap on liquid assets overall €71.0 billion of liquid assets are excluded from high-quality liquid assets. In total, five banks are constrained. Three of these five banks are from one jurisdiction and account for €70.1 billion of excluded liquid assets.

Comparison of liquid assets and inflows to outflows and caps

Graph 77 combines the above LCR components by comparing liquidity resources (pool of high-quality liquid assets and inflows) to outflows. Note that the €2.52 trillion Group 1 gross surplus shown in the graph differs from the €1.9 billion gross shortfall at an LCR minimum requirement of 100% that is noted above, as it is assumed here that excess high-quality liquid assets at one bank can offset a liquidity shortfall at another. In practice the aggregate position in the industry is likely to lie somewhere between these two numbers depending on how efficiently banks redistribute liquidity around the system. Similarly, the gross surplus for Group 2 banks was €0.21 trillion compared to a €0.0 billion gross shortfall at an LCR minimum requirement of 100% as highlighted above.



Comparison of pool of high-quality liquid assets and inflows to outflows and caps Graph 77

6.2 Net Stable Funding Ratio

The second liquidity standard introduced by the Basel III reforms is the Net Stable Funding Ratio (NSFR), a longer-term structural ratio designed to reduce funding risk over a longer time horizon by requiring banks to fund their activities with sufficiently stable sources of funding in order to mitigate the risk of future funding stress.

For the NSFR, data provided by 193 banks (110 Group 1 and 83 Group 2 banks) was of sufficient quality and coverage to be incorporated in the analysis in this report.³⁸ As of the reporting date, these banks had total assets of approximately €67.9 trillion. By comparison, 182 banks were included in the end-June 2017 exercise and 187 banks were included in the end-December 2016 exercise.

The key takeaways from aggregate NSFR analysis results are as follows:

- The weighted average NSFR was 116.0% for Group 1 banks and 118.5% for Group 2 banks at end-December 2017 compared with 116.9% and 117.6% respectively, at end-June 2017.
- 97.3% of Group 1 banks and 95.2% of Group 2 banks reported a ratio that met or exceeded 100% as of end-December 2017, while all banks report a ratio at or above 90%.
- The aggregate NSFR shortfall which reflects 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 was €14.5 billion for Group 1 banks and €5.6 billion for Group 2 banks at the end-December 2017 compared with €23.3 billion and €4.4 billion at end-June 2016.
- Deposits from retail and small business customers (ie "stable" and "less stable" deposits, as defined in the LCR) accounted for a significant portion of stable funding for banks in the sample, representing just under half of total weighted available stable funding for both Group 1 banks (47.0%) and Group 2 banks (46.9%). To a lesser degree, banks in the sample utilised funding from

³⁸ Group 1 banks are those that have Tier 1 capital in excess of €3 billion, are well diversified, and are internationally active. All other banks are considered Group 2 banks.

financial counterparties, which represented roughly 14.5% of total weighted available stable funding for Group 1 banks and 25.0% for Group 2 banks.

• Loans with longer terms, including mortgages, represented 47.0% for Group 1 banks and 59.2% for Group 2 banks of the total weighted stable funding requirement. By comparison, HQLA securities represented less than 5% of the total weighted stable funding requirement at 4.8% for Group 1 banks and 3.3% for Group 2 banks.

Many banks in the sample do not incur a significant stable funding requirement associated with the current treatment for derivatives (ie encompassing net derivative asset exposure, RSF associated with gross derivative liabilities, initial margin and contributions to default funds of CCPs). On aggregate the RSF associated was 2.4%.



¹ The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the thin vertical lines show the range of the entire sample. The dots represent weighted averages. NSFRs above 200% are not shown in the graph. The red line is set at 100% (minimum NSFR level).

Source: Basel Committee on Banking Supervision. See Table C.76 for underlying data.

For the 110 Group 1 banks in the sample, the shortfall, as described above, is ≤ 14.5 billion at end-December 2017 compared with ≤ 23.3 billion at end-June 2017. For the 83 Group 2 banks in the sample, the shortfall, as described above, is ≤ 5.6 billion at end-December 2017 compared with ≤ 4.4 billion at end-June 2017. This number is reflective only 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.³⁹

Stable funding sources

Deposits from retail and small business customers (ie "stable" and "less stable" deposits, as defined in the LCR) accounted for a significant portion of stable funding for banks in the sample, representing just under half of total weighted available stable funding for both Group 1 banks (47.0%) and Group 2 banks (46.9%). To a lesser degree, banks in the sample utilised funding from financial counterparties, which represented roughly 14.5% of total weighted available stable funding for Group 1 banks and 25.0% for Group 2 banks.

³⁹ 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.



Funding requirements

The NSFR generally assumes short-dated (ie maturing in less than one year) and higher quality assets require a smaller proportion of stable funding relative to longer term and lower quality assets. Indeed, much of the stable funding requirement across all banks in the sample was the result of longer-term assets such as loans. Loans with longer terms, including mortgages, represented 52.1% for Group 1 banks and 63.0% for Group 2 banks of the total weighted stable funding requirement at 4.9% for Group 1 banks and 3.7% for Group 2 banks.



Source: Basel Committee on Banking Supervision. See Table C.80 for underlying data.

6.3 Liquidity Coverage Ratio and Net Stable Funding Ratio shortfalls over time

Graph 81 below displays the weighted average LCR, weighted average NSFR and shortfalls associated with each standard for a consistent sample of banks across reporting periods since end-December 2012.⁴⁰ Given the different samples of banks, results for the end-December 2016 and end-June 2017 periods in this section may differ from the ones in Sections 6.1 and 6.2.

Group 1 banks that have reported LCR data for each of the reporting periods since end-December 2012 generally show ratios in recent periods that have increased from ratios reported in earlier periods. The weighted average LCR for these banks was 133.8% at end-December 2017. The ratio was 133.7% and 132.4% at end-June 2017 and end-December 2016, respectively. Group 2 banks that have reported LCR data for each of the reporting periods since end-December 2012 show ratios that have trended lower for some periods. As of end-December 2017, the weighted average LCR of these banks is 161.5%. Additionally, the overall level of ratios for Group 2 banks remains higher than the level observed for Group 1 banks.

The graph also displays NSFRs since end-December 2012.⁴¹ The weighted average NSFR for Group 1 banks was 115.8% at end-December 2017, 116.7% at end-June 2017 and 115.4% at end-December 2016. The weighted average NSFR for Group 2 banks was 119.4% at end-December 2017, 117.9% at end-June 2017 and 115.5% at end-December 2016.

At end-December 2017 with the consistent sample, all Group 1 and Group 2 banks comply with the 100% LCR minimum requirement. This compares to a shortfall of €0.1 billion related to the 100% LCR minimum requirement at end-June 2017 which was only caused by Group 1 banks.

The aggregate shortfall for Group 1 that do not meet the 100% NSFR requirement has generally declined for each of the respective standards since end-June 2012. The aggregate shortfall at the 100% NSFR minimum requirement was $\notin 2.7$ billion for Group 1 banks and $\notin 0.9$ billion for Group 2 banks at end-December 2017. This compares to shortfalls of $\notin 15.1$ billion for Group 1 banks and $\notin 2.6$ billion for Group 2 banks at end-June 2017, shortfalls of $\notin 25.2$ billion and $\notin 16.1$ billion at end-December 2016 and $\notin 101.4$ billion at end-June 2016.

⁴⁰ Only those banks are included in this analysis that are reporting LCR and NSFR data for each reporting period since end-December 2012. LCR and NSFR samples are different.

⁴¹ Graph 7 depicts the NSFR as calculated under different versions of the NSFR framework (released in December 2010, January 2014 and October 2014, respectively). Calculations performed according to the final standard approved by the Committee in October 2014 start with the end-December 2014 reporting period. See Basel Committee on Banking Supervision, *Basel III: the net stable funding ratio*, October 2014, <u>www.bis.org/bcbs/publ/d295.htm</u>.

LCR, NSFR and related shortfalls at a 100% minimum requirement¹



Consistent sample of banks, exchange rates as at the reporting dates

Graph 81

¹ As described in the text, the NSFR time series depicts data reflecting NSFR standard released in December 2010, January 2014 and October 2014.

Source: Basel Committee on Banking Supervision. See Table C.81 and Table C.82 for underlying data and sample size.

Graph 82 displays the regional breakdown of the weighted average LCR and the weighted average NSFR⁴² for a consistent sample of Group 1 banks across reporting periods since end-December 2012. The weighted average LCR at end-December 2017 for each of the three regions was in excess of 120%. While Europe and the Americas had initially lower average LCRs compared with the rest of the world, the average LCRs of Europe and the rest of the world and, to a lesser degree, the Americas have tended to gradually converge. The regions with lower end-2012 average ratios saw important increases in particular between end-2012 and June 2014.

The weighted average NSFR at end-June 2017 for Group 1 banks in each of the three regions was well in excess of 100%. Europe and the Americas at 112.2% and 110.1% at end-December 2017 have lower average NSFRs compared with the rest of the world at 121.3%.

⁴² This graph depicts the NSFR as calculated under different versions of the NSFR framework (released in December 2010, January 2014 and October 2014, respectively). Calculations performed according to the final standard approved by the Committee in October 2014 start with the end-December 2014 reporting period.

LCR and NSFR by region



¹ As described in the text, the NSFR time series depicts data reflecting NSFR standard released in December 2010, January 2014 and October 2014.

Source: Basel Committee on Banking Supervision. See Table C.83 for underlying data and sample size.

Graph 83 displays the share of banks, in a consistent sample, that meet the 100% minimum LCR and NSFR requirements. The share of Group 1 banks meeting both requirements has increased from 70.8% at end-December 2012 to 100.0% at end-December 2017, while the share of Group 2 banks meeting both requirements increased from 75.0% to 95.0% during the same period. Since end-December 2016 all G-SIBs meet both the LCR and NSFR 100% minimum requirements. Since the end-2017 reporting date this also holds true for all other Group 1 banks in the consistent sample.

Share of banks meeting the LCR and NSFR requirements¹



¹ As described in the text, the NSFR time series depicts data reflecting NSFR standard released in December 2010, January 2014 and October 2014. Samples for LCR and NSFR may differ.

Source: Basel Committee on Banking Supervision. See Table C.84 for underlying data and sample size.

Graph 84 displays the weighted average LCR for a consistent sample of banks across reporting periods since end-December 2012, along with a breakdown of the period-to-period changes of the LCR into changes in HQLA and changes in net outflows. This decomposition shows that the increase in the weighted average LCR for Group 1 banks is mainly driven by continuous increases in HQLA, partially offset by increases in net outflows. For Group 2 banks, the changes in the weighted average LCR (increases as well as decreases compared with the relevant previous period) can also mainly be explained by higher volatility in HQLA, partially offset by changes in net outflows.



Graph 85 provides a breakdown by region of the results in Graph 84 for Group 1 banks. It displays the weighted average LCR for Group 1 banks located in each of the three regions. This graph also displays a decomposition of period-to-period LCR changes into changes in HQLA and net outflows. This decomposition indicates in each of the three regions, changes in HQLA have been a slightly more important driver of changes in the weighted LCR, although both sources of changes have played a significant role.

LCR and change in HQLA and net outflows, by region

Consistent sample of Group 1 banks, exchange rates as of 31 December 2017





Graph 86 compares the trend in liquidity resources (ie HQLA and inflows) to outflows for a consistent sample of banks reporting LCR data since end-December 2012. This comparison displays the extent to which liquidity resources (ie HQLA and inflows) offset outflows for these banks. The balance of HQLA and inflows has exceeded the balance of outflows for all periods since end-December 2012 for both Group 1 and Group 2 banks. This difference reached ≤ 2.23 trillion and ≤ 0.07 trillion for Group 1 and Group 2 banks, respectively, at end-December 2017.



Graph 87 depicts the percentage change in ASF and RSF over time. For all bank groups, there were significant positive changes in ASF of more than 10 percentage points for the end-December 2013 also reflecting the changes to the definition of the NSFR standard.

NSFR and change in ASF and RSF¹

Consistent sample of banks, exchange rates as of 31 December 2017



Graph 88



Source: Basel Committee on Banking Supervision. See Table C.88 for underlying data and sample size.

Graph 88 illustrates a regional breakdown of the evolution of the weighted average NSFR and changes in ASF and RSF for Group 1 banks over time. For all regions, figures in 2013 reflect changes to the definition of the NSFR standard. The main impact of the definitional changes was an increase in ASF for most banks.

NSFR and change in ASF and RSF,¹ by region

Consistent sample of Group 1 banks, exchange rates as of 31 December 2017



Source: Basel Committee on Banking Supervision. See Table C.89 for underlying data and sample size.

Annex A: Basel III standards and phase-in arrangements

Basel III phase-in arrangements

Shading indicates transition periods – all	Table A.1			
	2017	2018	As of 2019	
Leverage ratio	Parallel run until 1 Jan 2017 Disclosure started 1 Jan 2015	Migration to Pillar 1		
Minimum CET1 ratio	4.5%	4.5%	4.5%	
Capital conservation buffer	1.25%	1.875%	2.50%	
G-SIB surcharge	Phas	Phase-in		
Minimum common equity plus capital conservation buffer	5.75%	6.375%	7.0%	
Phase-in of deductions from CET1 (including amounts exceeding the limit for DTAs, MSRs and financials)	80%	100%	100%	
Minimum Tier 1 capital	6.0%	6.0%	6.0%	
Minimum total capital	8.0%	8.0%	8.0%	
Minimum total capital plus capital conservation buffer	9.25%	9.875%	10.5%	
Capital instruments that no longer qualify as Tier 1 capital or Tier 2 capital	Phased out over 10 year horizon beginning 2013			

Liquidity coverage ratio	80%	90%	100%
Net stable funding ratio		Introduce minimum standard	

Final Basel III phase-in arrangements

Shading indicates transition periods – all dates are as of 1 January.

Table A.2

5	,					
	2022	2023	2024	2025	2026	2027
Revisions to the standardised and internal ratings- based approaches to credit risk	Introduce					
Revised CVA and market risk frameworks	Introduce					
Revised operational risk framework	Introduce					
	50%	55%	60%	65%	70%	
Output floor	Incre	ease in RW at natio	/A subject onal discret	to 25% ca _l tion.	D	72.5%
Leverage ratio exposure measure and G-SIB surcharge	Introduce					

Definition o	f different Basel III regimes		Table A.3			
	Initial Basel III framework	Transitional final Basel III framework	Fully phased-in final Basel III framework			
Definition of capital	Basel III: A global framew <u>w</u> w	vork for more resilient banks and the banking system, ww.bis.org/publ/bcbs189.htm				
Credit risk	Basel III: A global framework for more resilient banks and the banking system, www.bis.org/publ/bcbs189.htm Capital requirements for bank exposures to central counterparties, www.bis.org/publ/bcbs227.htm	Basel III: Finalising post-crisis reforms, www.bis.org/bcbs/publ/d424.htm Capital requirements for bank exposures to central counterparties, <u>www.bis.org/publ/bcbs227.htm</u> Capital requirements for banks' equity investments in fun <u>www.bis.org/publ/bcbs266.htm</u>				
Operational risk	Basel II: International Convergence of Capital Measurement and Capital Standards: A Revised Framework, www.bis.org/publ/bcbs128.htm	Basel III: Finalising post-crisis reforms, www.bis.org/bcbs/publ/d424.htm				
Market risk	Revisions to the Basel II market risk framework, www.bis.org/publ/bcbs158.htm Guidelines for computing capital for incremental risk in the trading book, www.bis.org/publ/bcbs159.htm	Fundamental review of the trading book: A revised market ris framework, <u>www.bis.org/publ/bcbs265.htm</u>				
Counterparty credit risk	Basel III: A global framework for more resilient banks and the banking system, www.bis.org/publ/bcbs189.htm	The standardised approach for measuring counterparty credit risk exposures, <u>www.bis.org/publ/bcbs279.htm</u>				
CVA	Basel III: A global framework for more resilient banks and the banking system, www.bis.org/publ/bcbs189.htm	Basel III: Finalising post-crisis reforms, www.bis.org/bcbs/publ/d424.htm				
Securitisation	Basel III: A global framework for more resilient banks and the banking system, www.bis.org/publ/bcbs189.htm	Revisions to the securitisation framework, www.bis.org/bcbs/publ/d374.htm				
Floor	Basel II: International Convergence of Capital Measurement and Capital Standards: A Revised Framework, www.bis.org/publ/bcbs128.htm	Output floor of 50%, Basel III: Finalising post-crisis reforms, <u>www.bis.org/bcbs/publ/</u> <u>d424.htm</u>	Output floor of 72.5%, Basel III: Finalising post-crisis reforms, <u>www.bis.org/bcbs/publ/</u> <u>d424.htm</u>			
Leverage ratio	Basel III leverage ratio framework and disclosure requirements, www.bis.org/publ/bcbs270.htm	Basel III: Finalising www.bis.org/bc	post-crisis reforms, bs/publ/d424.htm			

Minimum and target risk-based capital and leverage ratio requirements

Table A.4								
	Fully implem	ented risk-based	requirement	Fully implemented leve	erage ratio requirement			
	Minimum	Target non- G-SIBs	Target G-SIBs	Minimum all banks and target non-G-SIBs	Target G-SIBs			
CET1 capital	4.5	7.0	8.0–9.5					
Tier 1 capital	6.0	8.5	9.5–11.0	3.0	3.5–4.25			
Total capital	8.0	10.5	11.5-13.0					

Fully phased-in final Basel III standards, in per cent

Table A.4
Number of banks for which initial Basel III data have been provided ¹ Table B.1												
		G	iroup 1	L banks				G	Group 2	2 banks		
	AII	RWA and capital	Leverage	LCR	NSFR	Securitisation	AII	RWA and capital	Leverage	LCR	NSFR	Securitisation
Argentina (AM)	0	0	0	0	0	0	2	2	0	0	2	0
Australia (RW)	4	4	0	4	4	1	1	1	0	1	1	0
Belgium (EU)	2	2	2	2	2	2	3	3	2	2	2	2
Brazil (AM)	2	2	2	2	2	0	0	0	0	0	0	0
Canada (AM)	6	6	6	6	6	6	2	2	2	2	2	2
China (RW)	6	6	5	5	6	0	0	0	0	0	0	0
France (EU)	5	5	5	5	5	5	2	2	2	2	2	2
Germany (EU)	7	7	7	7	7	7	33	33	32	33	32	7
India (RW)	10	8	0	0	10	4	0	0	0	0	0	0
Indonesia (RW)	0	0	0	0	0	0	4	4	1	0	2	1
Italy (EU)	2	2	2	2	2	2	10	10	10	10	10	7
Japan (RW)	16	16	16	16	16	15	3	3	3	3	3	2
Korea (RW)	6	6	0	0	6	6	2	2	0	0	2	2
Luxembourg (EU)	0	0	0	0	0	0	2	2	1	1	1	1
Mexico (AM)	1	1	0	0	1	1	6	6	0	0	6	6
Netherlands (EU)	4	4	4	4	4	3	6	6	6	6	6	1
Russia (EU)	1	1	0	1	1	1	0	0	0	0	0	0
Saudi Arabia (RW)	3	3	2	3	3	0	0	0	0	0	0	0
Singapore (RW)	3	3	3	3	3	3	0	0	0	0	0	0
South Africa (RW)	4	4	4	4	4	4	2	2	2	2	2	2
Spain (EU)	2	2	2	2	2	1	8	8	4	4	4	3
Sweden (EU)	4	4	4	4	4	2	4	4	3	3	2	1
Switzerland (EU)	2	2	2	2	2	2	0	0	0	0	0	0
Turkey (EU)	3	3	2	3	3	0	0	0	0	0	0	0
United Kingdom (EU)	5	5	5	5	5	4	5	5	4	4	4	3
United States (AM)	13	13	12	13	13	10	0	0	0	0	0	0
Total	111	109	85	93	111	79	95	95	72	73	83	42
Of which: G-SIBs	30						0					

Annex B: Sample statistics and additional results

¹ The regional grouping to which a country is assigned is included in brackets. AM denotes Americas, EU Europe and RW the rest of the world.

impact of the final Basel I	III framework ¹	Table B.2				
	Group 1 banks	Group 2 banks				
Belgium (EU)	2	2				
Brazil (AM)	2	0				
Canada (AM)	5	2				
China (RW)	5	0				
France (EU)	4	2				
Germany (EU)	7	18				
Italy (EU)	2	8				
Japan (RW)	15	3				
Luxembourg (EU)	0	1				
Netherlands (EU)	3	5				
Saudi Arabia (RW)	2	0				
Singapore (RW)	3	0				
South Africa (RW)	4	1				
Spain (EU)	2	4				
Sweden (EU)	3	3				
Switzerland (EU)	2	0				
United Kingdom (EU)	4	3				
United States (AM)	7	0				
Total	72	52				

Number of banks for which data have been included in the assessment of the impact of the final Basel III framework¹

¹ The regional grouping to which a country is assigned is included in brackets. AM denotes Americas, EU Europe and RW the rest of the world.

impact of the revised	market lisk name	ework		Table B.5
	Total	Group 1 banks	Of which: G-SIBs	Group 2 banks
Australia	3	2	0	1
Belgium	3	2	0	1
Brazil	5	5	0	0
Canada	5	5	1	0
China	5	5	4	0
France	6	5	3	1
Germany	9	5	1	4
India	7	7	0	0
Indonesia	2	0	0	2
Italy	5	2	1	3
Japan	9	9	3	0
Korea	8	6	0	2
Luxembourg	1	0	0	1
Mexico	1	1	0	0
Netherlands	2	2	1	0
Russia	1	1	0	0
Saudi Arabia	1	1	0	0
Singapore	3	3	0	0
South Africa	4	3	0	1
Spain	3	1	1	2
Sweden	2	2	1	0
Switzerland	2	2	2	0
United Kingdom	5	5	4	0
United States	5	5	5	0
Total	97	79	27	18
Source: Basel Committee on Bar	nking Supervision.			

Number of banks for which data have been provided for the analysis of the impact of the revised market risk framework

Table B.3

CET1 regulatory adjustments

Consistent sample of Group 1 banks, in per cent of CET1 capital prior to adjustments

Table B.4

	Number of banks	Goodwill	Intangibles	DTA ¹	Financials	DTA above threshold	Excess above 15% ²	Other ³	Total
H1 2011	91	-15.5	-3.7	-3.3	-2.9	-1.8	-2.1	-2.9	-32.2
H2 2011	91	-14.1	-3.6	-2.8	-1.9	-1.6	-1.6	-3.7	-29.3
H1 2012	91	-13.4	-3.4	-2.5	-1.7	-1.1	-1.3	-3.3	-26.8
H2 2012	91	-12.5	-3.1	-2.6	-2.4	-1.2	-1.1	-2.8	-25.7
H1 2013	91	-12.1	-2.9	-2.6	-2.4	-1.0	-0.9	-2.1	-24.0
H2 2013	91	-11.3	-2.7	-2.4	-1.4	-0.5	-0.4	-1.5	-20.2
H1 2014	91	-10.8	-2.6	-2.2	-1.3	-0.4	-0.2	-1.4	-19.0
H2 2014	91	-10.4	-2.5	-2.0	-1.0	-0.4	-0.2	-1.8	-18.3
H1 2015	91	-10.1	-2.4	-1.9	-0.8	-0.3	-0.1	-1.7	-17.4
H2 2015	91	-9.6	-2.3	-1.8	-0.7	-0.3	-0.1	-1.8	-16.9
H1 2016	91	-9.4	-2.3	-1.7	-0.7	-0.2	-0.1	-2.1	-16.9
H2 2016	91	-9.1	-2.3	-1.6	-0.8	-0.3	-0.1	-2.0	-16.2
H1 2017	91	-8.9	-2.3	-1.5	-0.8	-0.2	-0.1	-1.6	-15.4
H2 2017	91	-8.9	-2.4	-1.3	-0.7	-0.1	-0.1	-1.5	-14.8

¹ DTAs are the deferred tax assets that are deducted in full under Basel III (ie they exclude DTAs that are related to temporary differences, which are only deducted when they exceed a threshold). ² Excess above 15% pertains to significant investments in the common shares of unconsolidated financial institutions, mortgage servicing rights, and DTAs due to timing differences that do not separately exceed the 10% category thresholds but in the aggregate exceed the 15% basket threshold. ³ Other includes adjustments 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, mortgage servicing rights and deductions from additional Tier 1 capital to the extent they exceed a bank's additional Tier 1 capital.

CET1 regulatory adjustments

Consistent sample of Group 2 banks, in per cent of CET1 capital prior to adjustments

Table B.5

	Number of banks	Goodwill	Intangibles	DTA ¹	Financials	DTA above threshold	Excess above 15% ²	Other ³	Total
H1 2011	44	-15.2	-3.4	-0.4	-4.3	-4.4	-2.1	-4.2	-34.1
H2 2011	44	-10.1	-3.5	-0.5	-4.7	-2.7	-1.5	-3.8	-26.7
H1 2012	44	-8.4	-3.4	-0.3	-4.5	-2.4	-1.6	-4.4	-24.8
H2 2012	44	-7.2	-3.2	-0.2	-5.2	-2.0	-1.3	-4.5	-23.6
H1 2013	44	-6.9	-3.1	-0.3	-4.9	-1.5	-1.2	-5.1	-23.1
H2 2013	44	-4.8	-3.1	-0.4	-3.8	-0.6	-0.7	-5.1	-18.6
H1 2014	44	-4.0	-2.9	-0.4	-2.5	0.0	-0.6	-1.6	-12.1
H2 2014	44	-2.5	-3.1	-0.9	-2.9	-0.5	-0.6	-2.6	-13.0
H1 2015	44	-2.5	-2.7	-0.7	-2.9	-0.2	-0.6	-2.1	-11.7
H2 2015	44	-2.5	-2.7	-0.8	-2.7	-0.2	-0.2	-2.4	-11.5
H1 2016	44	-2.3	-2.7	-1.2	-2.2	0.0	-0.2	-2.0	-10.6
H2 2016	44	-2.3	-2.6	-1.3	-3.2	-0.1	-0.3	-2.1	-11.9
H1 2017	44	-2.2	-2.5	-1.6	-2.6	-0.1	-0.1	-2.0	-11.0
H2 2017	44	-2.2	-2.7	-1.9	-2.6	-0.1	-0.3	-2.0	-11.7

¹ DTAs are the deferred tax assets that are deducted in full under Basel III (ie they exclude DTAs that are related to temporary differences, which are only deducted when they exceed a threshold). ² Excess above 15% pertains to significant investments in the common shares of unconsolidated financial institutions, mortgage servicing rights and DTAs due to timing differences that do not separately exceed the 10% category thresholds but in the aggregate exceed the 15% basket threshold. ³ Other includes adjustments 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, mortgage servicing rights and deductions from additional Tier 1 capital to the extent they exceed a bank's additional Tier 1 capital.

Source: Basel Committee on Banking Supervision.

Share of banks meeting the fully phased-in initial Basel III leverage ratio before and after capital raising to meet the risk-based target Tier 1 ratio

Group 1 banks, in per cent

Table B.6

		ruising to meet
Yes No	Yes No Total	
Leverage ratio Yes 0.0 0.0	0.0	0.0
binding (<3%) No 0.0 100.0	100.0	100.0
Total 0.0 100.0	100.0	100.0

Share of banks meeting the fully phased-in initial Basel III leverage ratio before and after capital raising to meet the risk-based target Tier 1 ratio

Group 2 banks, i	n per cent				Table B.7
		Target Tier (<8.5% + G-	1 ratio binding SIB surcharge)?		Total after capital raising to meet
		Yes	No	Total	target Tier 1 ratio
Leverage ratio	Yes	0.0	3.1	3.1	3.1
binding (<3%)	No	0.0	96.9	96.9	96.9
	Total	0.0	100.0	100.0	100.0
Source: Basel Comp	nittoo on Bankin	Suponvision			

Transitional initial Basel III CET1, Tier 1 and total capital ratios

In per cent

Table C.1

	G	roup 1 banl	<s< td=""><td>Of</td><td>which: G-SI</td><td>Bs</td><td>G</td><td>roup 2 ban</td><td>ks</td></s<>	Of	which: G-SI	Bs	G	roup 2 ban	ks			
	CET1	Tier 1	Total	CET1	Tier 1	Total	CET1	Tier 1	Total			
Max	48.4	51.1	61.4	19.5	22.3	25.3	121.4	121.5	128.0			
75th percentile	15.4	16.8	20.3	14.3	16.6	20.6	20.6	21.4	22.3			
Median	13.5	14.8	17.1	13.0	14.9	17.6	15.4	15.4	17.0			
25th percentile	11.8	13.1	15.1	11.9	13.2	15.1	12.7	12.9	14.9			
Min	9.1	10.4	11.5	10.6	11.2	13.4	7.9	9.5	11.5			
Weighted average	13.0	14.4	16.9	12.8	14.3	16.7	16.3	16.8	19.3			
Source: Basel Committee	e on Banking	Supervision.										

Fully phased-in initial Basel III CET1, Tier 1 and total capital ratios

In per cent

	G	roup 1 banl	٢S	Of	which: G-SI	IBs	Group 2 banks				
	CET1	Tier 1	Total	CET1	Tier 1	Total	CET1	Tier 1	Total		
Max	48.6	51.1	52.6	19.5	21.7	24.6	121.4	121.5	128.0		
75th percentile	15.2	16.5	19.2	14.1	15.9	18.5	20.5	21.5	22.2		
Median	13.5	14.4	16.4	12.8	14.5	16.5	15.5	15.6	16.7		
25th percentile	11.8	13.1	14.8	11.7	13.2	15.0	12.3	12.8	14.5		
Min	9.0	10.3	11.4	10.3	11.2	12.7	7.8	9.0	11.0		
Weighted average	12.9	14.2	16.1	12.6	13.9	15.9	16.0	16.6	18.8		
Source: Basel Committee on Banking Supervision.											

Transitional initial Basel III CET1, Tier 1 and total capital ratios¹

Consistent sample of banks, in per cent

		Group	1 banks			Of whicl	h: G-SIBs		Group 2 banks			
	Number of banks	CET1	Tier 1	Total	Number of banks	CET1	Tier 1	Total	Number of banks	CET1	Tier 1	Total
H1 2011	84	10.0	11.3	14.0	29	9.7	11.1	13.7	43	10.6	11.7	15.2
H2 2011	84	10.2	11.4	14.0	29	9.9	11.3	13.9	43	11.0	12.0	15.4
H1 2012	84	10.7	11.9	14.3	29	10.5	11.9	14.2	43	11.5	12.2	15.8
H2 2012	84	11.3	12.3	14.9	29	11.1	12.4	14.9	43	11.1	11.7	15.3
H1 2013	84	10.9	11.9	14.5	29	10.9	11.9	14.4	43	11.6	12.2	16.0
H2 2013	84	11.3	12.3	14.9	29	11.4	12.4	14.9	43	12.2	12.7	16.5
H1 2014	84	11.3	12.1	14.7	29	11.1	12.0	14.5	43	12.1	12.6	16.0
H2 2014	84	11.7	12.6	15.2	29	11.5	12.6	15.1	43	12.1	12.7	15.7
H1 2015	84	11.9	12.9	15.4	29	11.8	12.9	15.4	43	12.8	13.3	16.1
H2 2015	84	12.2	13.3	15.9	29	12.1	13.4	15.9	43	12.9	13.5	16.0
H1 2016	84	12.2	13.3	15.8	29	12.0	13.4	15.7	43	13.1	13.7	16.3
H2 2016	84	12.5	13.7	16.2	29	12.5	13.8	16.2	43	13.6	14.2	16.6
H1 2017	84	12.6	13.9	16.3	29	12.5	13.9	16.1	43	14.0	14.6	17.1
H2 2017	84	12.9	14.3	16.8	29	12.8	14.3	16.6	43	15.3	15.9	18.8

¹ Before the implementation of the Basel III framework, results have been calculated on the basis of the relevant national regulatory frameworks in place at the reporting dates.

Source: Basel Committee on Banking Supervision.

Transitional initial Basel III CET1, Tier 1 and total capital ratios, by region¹

Consistent sample of Group 1 banks, in per cent

		Eur	оре			Ame	ricas		Rest of the world			
	Number of banks	CET1	Tier 1	Total	Number of banks	CET1	Tier 1	Total	Number of banks	CET1	Tier 1	Total
H1 2011	29	10.3	12.0	14.5	19	9.7	11.2	13.7	36	10.0	10.6	13.6
H2 2011	29	10.1	11.8	14.1	19	9.9	11.6	13.9	36	10.5	11.0	13.9
H1 2012	29	11.0	12.6	14.7	19	10.6	12.1	14.2	36	10.6	11.0	13.9
H2 2012	29	11.3	12.9	15.2	19	11.5	12.9	15.1	36	11.0	11.4	14.4
H1 2013	29	11.8	13.1	15.9	19	10.8	12.3	14.3	36	10.1	10.6	13.4
H2 2013	29	12.4	13.7	16.6	19	11.3	12.7	14.7	36	10.4	11.0	13.6
H1 2014	29	11.5	12.6	15.6	19	11.5	12.3	14.1	36	11.0	11.5	14.3
H2 2014	29	12.0	13.3	16.3	19	11.7	12.7	14.7	36	11.3	12.0	14.8
H1 2015	29	12.4	13.7	16.7	19	12.2	13.3	15.4	36	11.3	12.0	14.5
H2 2015	29	12.8	14.3	17.5	19	12.2	13.3	15.4	36	11.8	12.7	15.0
H1 2016	29	12.6	14.2	17.5	19	12.1	13.4	15.6	36	11.9	12.7	14.8
H2 2016	29	13.2	14.9	18.3	19	12.5	13.9	16.0	36	12.0	12.9	15.1
H1 2017	29	13.4	15.2	18.4	19	12.7	14.3	16.3	36	12.0	12.9	14.9
H2 2017	29	14.1	15.9	19.1	19	12.5	14.2	16.2	36	12.5	13.5	15.8

¹ Before the implementation of the Basel III framework, results have been calculated on the basis of the relevant national regulatory frameworks in place at the reporting dates.

Fully phased-in initial Basel III CET1, Tier 1 and total capital ratios

Consistent sample of banks, in per cent

		Group	1 banks			Of whicl	n: G-SIBs		Group 2 banks			
	Number of banks	CET1	Tier 1	Total	Number of banks	CET1	Tier 1	Total	Number of banks	CET1	Tier 1	Total
H1 2011	84	7.2	7.5	8.8	29	6.7	7.1	8.5	43	7.5	8.0	10.1
H2 2011	84	7.7	8.0	9.3	29	7.3	7.6	9.0	43	7.3	7.9	10.0
H1 2012	84	8.5	8.7	9.9	29	8.2	8.5	9.8	43	7.8	8.6	10.3
H2 2012	84	9.2	9.4	10.7	29	9.0	9.2	10.5	43	7.6	8.2	9.8
H1 2013	84	9.5	9.7	11.1	29	9.3	9.5	11.0	43	7.7	8.4	10.3
H2 2013	84	10.2	10.5	11.9	29	10.0	10.4	11.8	43	9.5	10.2	12.1
H1 2014	84	10.8	11.2	12.6	29	10.6	11.1	12.3	43	11.2	11.4	13.3
H2 2014	84	11.0	11.7	13.2	29	10.9	11.7	13.2	43	11.3	11.6	13.1
H1 2015	84	11.5	12.2	13.9	29	11.3	12.2	13.9	43	12.4	12.7	14.2
H2 2015	84	11.8	12.7	14.4	29	11.7	12.7	14.5	43	12.5	12.9	14.4
H1 2016	84	11.9	12.9	14.7	29	11.8	12.9	14.6	43	12.8	13.2	14.9
H2 2016	84	12.2	13.4	15.3	29	12.2	13.5	15.3	43	13.1	13.5	15.2
H1 2017	84	12.5	13.6	15.4	29	12.3	13.6	15.3	43	13.9	14.4	16.6
H2 2017	84	12.9	14.1	16.1	29	12.6	13.9	15.8	43	15.0	15.6	18.1
Source: Ba	sel Committe	ee on Ban	king Super	vision.								

Fully phased-in initial Basel III CET1, Tier 1 and total capital ratios, by region

Consistent sample of Group 1 banks, in per cent

		Eur	оре			Ame	ricas			Rest of t	he world	
	Number of banks	CET1	Tier 1	Total	Number of banks	CET1	Tier 1	Total	Number of banks	CET1	Tier 1	Total
H1 2011	29	6.5	6.7	7.7	19	6.1	6.8	9.2	36	9.0	9.0	9.7
H2 2011	29	6.8	7.0	7.9	19	7.1	7.7	10.1	36	9.3	9.4	10.2
H1 2012	29	7.8	7.9	8.9	19	7.9	8.4	10.6	36	9.8	9.9	10.6
H2 2012	29	8.3	8.5	9.7	19	8.5	9.1	11.1	36	10.5	10.6	11.3
H1 2013	29	9.2	9.3	11.0	19	8.8	9.5	11.3	36	10.2	10.2	11.0
H2 2013	29	10.2	10.4	12.3	19	9.7	10.4	12.1	36	10.5	10.6	11.4
H1 2014	29	10.8	11.3	13.4	19	10.0	11.0	12.4	36	11.2	11.3	12.0
H2 2014	29	11.2	11.8	13.9	19	10.4	11.5	13.1	36	11.3	11.6	12.7
H1 2015	29	11.5	12.2	14.7	19	11.2	12.6	14.2	36	11.6	12.0	13.1
H2 2015	29	12.0	12.9	15.6	19	11.2	12.6	14.3	36	12.0	12.5	13.7
H1 2016	29	12.1	13.1	15.9	19	11.5	13.1	14.9	36	12.0	12.6	13.7
H2 2016	29	12.8	14.3	17.4	19	11.8	13.4	15.3	36	12.1	12.8	13.9
H1 2017	29	13.2	14.5	17.3	19	12.3	14.0	15.9	36	12.1	12.8	14.0
H2 2017	29	13.6	15.0	17.8	19	12.3	13.9	15.9	36	12.7	13.6	15.2
Source: Basel Committee on Banking Supervision.												

Fully phased-in initial Basel III Tier 1 capital ratios and changes in RWA and Tier 1 capital

	Group 1 banks				Of which: G-SIBs				Group 2 banks			
			Cha	inge			Cha	ange			Ch	ange
	Number of banks	Tier 1 ratio	RWA	Tier 1 capital	Number of banks	Tier 1 ratio	RWA	Tier 1 capital	Number of banks	Tier 1 ratio	RWA	Tier 1 capital
H1 2011	84	7.5			29	7.1			43	8.0		
H2 2011	84	8.0	-1.5	5.2	29	7.6	-2.9	4.5	43	7.9	1.4	-0.2
H1 2012	84	8.7	-1.5	8.2	29	8.5	-2.3	8.9	43	8.6	-2.2	6.3
H2 2012	84	9.4	-2.0	5.2	29	9.2	-3.0	5.1	43	8.2	1.3	-3.4
H1 2013	84	9.7	1.7	5.2	29	9.5	1.4	4.9	43	8.4	-1.2	2.2
H2 2013	84	10.5	-0.4	7.5	29	10.4	-0.9	7.9	43	10.2	-3.4	16.6
H1 2014	84	11.2	0.4	7.5	29	11.1	0.7	7.6	43	11.4	-0.6	11.3
H2 2014	84	11.7	1.7	5.6	29	11.7	1.4	6.5	43	11.6	-1.9	-0.1
H1 2015	84	12.2	1.5	6.3	29	12.2	1.3	6.2	43	12.7	0.9	10.0
H2 2015	84	12.7	0.7	4.4	29	12.7	0.0	4.1	43	12.9	1.0	2.6
H1 2016	84	12.9	1.7	3.5	29	12.9	2.0	3.2	43	13.2	-0.7	2.0
H2 2016	84	13.4	-0.1	3.8	29	13.5	-1.4	3.0	43	13.5	-1.9	0.3
H1 2017	84	13.6	1.4	3.0	29	13.6	1.5	2.5	43	14.4	1.0	7.6
H2 2017	84	14.1	-0.9	2.7	29	13.9	0.1	2.4	43	15.6	-6.5	1.1

Consistent sample of banks, exchange rates as of 31 December 2017, in per cent

Table C.7

Fully phased-in initial Basel III Tier 1 capital ratios and changes in RWA and Tier 1 capital, by region

	Europe				Americas				Rest of the world			
			Cha	ange			Cha	ange			Cha	inge
	Number of banks	Tier 1 ratio	RWA	Tier 1 capital	Number of banks	Tier 1 ratio	RWA	Tier 1 capital	Number of banks	Tier 1 ratio	RWA	Tier 1 capital
H1 2011	29	6.7			19	6.8			36	9.0		
H2 2011	29	7.0	-1.3	2.8	19	7.7	-5.9	5.8	36	9.4	2.6	7.04
H1 2012	29	7.9	-5.0	8.3	19	8.4	-2.0	7.8	36	9.9	3.4	8.3
H2 2012	29	8.5	-5.5	0.6	19	9.1	-2.1	5.9	36	10.6	1.8	8.9
H1 2013	29	9.3	-3.5	6.2	19	9.5	-3.0	0.8	36	10.2	11.0	7.6
H2 2013	29	10.4	-3.8	7.9	19	10.4	-1.9	7.7	36	10.6	3.8	7.1
H1 2014	29	11.3	0.6	8.9	19	11.0	2.0	7.6	36	11.3	-0.9	6.4
H2 2014	29	11.8	-3.3	1.2	19	11.5	-0.1	5.0	36	11.6	7.3	9.9
H1 2015	29	12.2	0.3	3.9	19	12.6	-2.1	6.4	36	12.0	4.9	8.2
H2 2015	29	12.9	-3.7	1.7	19	12.6	2.9	3.2	36	12.5	2.5	7.3
H1 2016	29	13.1	0.8	2.3	19	13.1	0.8	4.7	36	12.6	2.9	3.5
H2 2016	29	14.3	-3.2	5.1	19	13.4	-1.3	1.4	36	12.8	2.6	4.3
H1 2017	29	14.5	-1.1	0.8	19	14.0	-0.3	3.7	36	12.8	3.9	4.1
H2 2017	29	15.0	-1.2	2.3	19	13.9	-0.7	-0.8	36	13.6	-0.9	5.2

Consistent sample of Group 1 banks, exchange rates as of 31 December 2017, in per cent

Table C.8

Source: Basel Committee on Banking Supervision.

Transitional CET1, Tier 1 and total capital ratios under the final Basel III standards

In per cent

Table C.9

	G	oun 1 han	ks	Of	which: G-S	IBc	Group 2 banks			
			Tatal		Tion 1	Tatal	CFT1	Tion 1	Tatal	
	CETI	Tier 1	Total	CETI	Tier 1	Total	CEII	Tier 1	Total	
Max	54.0	56.8	58.3	17.5	19.7	22.0	70.9	70.9	70.9	
95th percentile	21.8	22.4	24.9	16.0	19.5	21.5	27.1	31.9	34.3	
75th percentile	14.8	16.2	18.4	13.9	15.7	18.2	19.1	19.2	20.5	
Median	12.8	13.9	15.6	12.1	13.7	15.6	14.3	14.3	15.6	
25th percentile	11.3	12.2	13.8	11.1	12.2	13.8	11.0	11.1	12.9	
5th percentile	9.4	10.0	12.0	8.7	9.8	11.6	9.4	9.4	11.0	
Min	8.3	8.9	10.0	8.4	9.8	11.2	3.9	4.0	4.0	
Weighted average	12.6	13.7	15.7	12.4	13.7	15.5	13.0	13.5	15.6	

Fully phased-in CET1, Tier 1 and total capital ratios under the final Basel III standards

In per cent

	Group 1 banks			Of	which: G-S	SIBs	Group 2 banks				
	CET1	Tier 1	Total	CET1	Tier 1	Total	CET1	Tier 1	Total		
Max	54.0	56.8	58.3	15.6	18.6	20.1	70.9	70.9	70.9		
95th percentile	21.8	22.4	24.0	15.4	17.8	19.9	27.1	30.1	33.1		
75th percentile	13.9	15.1	17.2	13.4	15.6	17.8	15.9	16.5	19.7		
Median	12.3	13.4	15.1	12.0	13.6	15.5	13.4	13.6	15.4		
25th percentile	10.8	11.7	13.3	10.2	11.4	12.7	11.0	11.1	12.3		
5th percentile	8.7	9.8	11.0	8.3	9.6	10.9	9.4	9.4	11.0		
Min	7.1	7.2	10.0	8.1	8.9	10.6	3.9	4.0	4.0		
Weighted average	12.2	13.3	15.2	12.0	13.3	15.1	12.6	13.1	15.1		

Source: Basel Committee on Banking Supervision.

Total changes in Tier 1 MRC at the target level

In per cent

	(Group 1 bar	nks	0	f which: G-S	SIBs	(Group 2 bar	ıks
	CQIS result	Change in MRC	Change in MRC, no MR ¹	CQIS result	Change in MRC	Change in MRC, no MR ¹	CQIS result	Change in MRC	Change in MRC, no MR ¹
Max	52.2	52.0	40.3	43.4	52.0	40.3	36.7	53.3	53.3
95th percentile	38.0	32.4	31.0	38.8	42.2	38.5	15.8	23.2	22.4
75th percentile	12.9	19.6	17.7	17.0	23.6	21.5	4.7	12.6	11.9
Median	1.0	5.1	1.3	9.5	12.7	9.5	1.2	3.2	3.2
25th percentile	-7.5	-3.9	-7.1	-9.0	-4.0	-5.2	-0.3	-1.4	-1.4
5th percentile	-17.0	-15.1	-15.8	-22.3	-16.1	-16.1	-11.4	-10.4	-10.4
Min	-27.8	-33.1	-33.1	-27.8	-16.1	-16.3	-46.5	-57.7	-57.7
Weighted average	-0.5	3.6	1.7	-1.4	3.0	1.2	3.8	5.9	5.3

¹ Disregarding the change resulting from the revisions to the market risk framework, similar to the methodology used in the cumulative QIS.

Source: Basel Committee on Banking Supervision.

Table C.10

Transitional initial and fully phased-in final Basel III Tier 1 leverage ratios¹

In	per	cent
	P	

Table C.12

	Group 1	. banks	Of which	: G-SIBs	Group 2 banks		
	Transitional	Fully phased-in	Transitional	Fully phased-in	Transitional	Fully phased-in	
Max	16.4	16.9	8.1	8.1	23.9	24.0	
95th percentile	8.3	8.7	7.5	7.5	15.0	15.1	
75th percentile	7.0	6.8	6.6	6.4	7.2	6.9	
Median	5.9	5.9	5.8	5.6	5.6	5.5	
25th percentile	4.9	4.9	4.9	4.7	4.6	4.7	
5th percentile	3.9	3.8	4.1	3.9	3.4	3.5	
Min	3.4	3.0	4.1	3.8	1.7	1.7	
Weighted average	6.0	5.8	6.0	5.9	5.7	5.7	

¹ Group 1 includes 81 banks, G-SIB includes 30 banks and Group 2 includes 65 banks.

Source: Basel Committee on Banking Supervision.

Fully phased-in Basel III Tier 1 leverage ratios and component changes¹

Consistent sample of banks,² exchange rates as of 31 December 2017, in per cent

Table C.13

	Group 1 banks			Of	which: G-S	SIBs	Group 2 banks			
		Cł	nange		Cł	nange		Cł	nange	
	Leverage ratio	Tier 1 capital	Exposure measure	Leverage ratio	Tier 1 capital	Exposure measure	Leverage ratio	Tier 1 capital	Exposure measure	
H1 2011	3.5			3.5			3.0			
H2 2011	3.6	5.2	2.2	3.6	4.6	2.6	2.9	-2.1	1.9	
H1 2012	3.8	8.6	3.5	3.8	8.9	3.4	3.2	10.0	0.9	
H2 2012	3.8	5.1	4.5	3.8	5.2	4.8	2.9	-6.9	1.9	
H1 2013	4.0	4.7	-1.1	4.0	4.7	-0.4	3.1	1.3	-5.2	
H2 2013	4.5	7.9	-3.6	4.5	8.1	-4.2	3.9	21.7	-3.9	
H1 2014	4.7	6.8	2.1	4.7	6.9	1.7	4.4	14.1	1.2	
H2 2014	5.1	6.4	-0.5	5.1	6.6	-1.0	4.5	-2.1	-3.7	
H1 2015	5.3	6.2	2.1	5.3	6.3	1.9	4.9	11.2	2.1	
H2 2015	5.6	4.3	-1.6	5.6	4.3	-2.4	5.1	2.4	-0.8	
H1 2016	5.6	3.3	3.1	5.7	3.3	3.2	5.0	0.0	1.8	
H2 2016	5.8	3.4	-1.1	5.9	3.1	-1.8	4.9	-1.6	0.0	
H1 2017	5.8	2.9	3.6	5.9	2.6	3.9	5.2	8.8	3.3	
H2 2017	5.9	2.3	-0.2	6.0	2.2	0.0	5.3	-0.1	-1.9	

 1 Note that the data points for H1 2013 use an approximation for the initial definition of the Basel III leverage ratio exposure where gross instead of adjusted gross securities financing transaction values are used. Data points from H2 2017 onwards use the final definition of the leverage ratio. 2 Group 1 includes 66 banks, G-SIB includes 28 banks and Group 2 includes 33 banks.

Fully phased-in Basel III leverage ratios and component changes,¹ by region

		Europe			Americas		Rest of the world			
		Cł	nange		Ch	ange		Cł	nange	
	Leverage ratio	Tier 1 capital	Exposure measure	Leverage ratio	Tier 1 capital	Exposure measure	Leverage ratio	Tier 1 capital	Exposure measure	
H1 2011	2.7			4.1			4.2			
H2 2011	2.9	2.5	-2.5	4.0	5.9	8.8	4.3	7.5	3.6	
H1 2012	3.0	8.9	2.7	4.2	7.8	2.3	4.5	8.9	5.9	
H2 2012	2.9	0.3	4.6	4.2	5.9	6.8	4.8	9.2	2.2	
H1 2013	3.2	4.9	-4.1	4.2	0.7	0.2	5.0	8.1	2.1	
H2 2013	3.7	8.8	-6.9	4.8	7.7	-4.6	5.3	7.2	2.2	
H1 2014	4.0	7.2	0.5	5.1	7.6	0.3	5.3	5.7	5.8	
H2 2014	4.2	2.7	-2.7	5.4	4.9	-0.9	5.7	11.1	2.4	
H1 2015	4.4	4.0	-0.1	5.8	6.5	0.1	5.8	7.9	6.3	
H2 2015	4.7	2.5	-5.0	5.9	3.2	0.1	6.2	6.5	0.7	
H1 2016	4.6	2.0	3.5	6.1	4.6	1.8	6.1	3.4	3.6	
H2 2016	5.1	4.6	-4.6	6.2	1.4	-0.4	6.3	3.9	2.0	
H1 2017	5.0	0.8	1.8	6.3	3.7	2.5	6.1	3.9	6.0	
H2 2017	5.2	1.4	-2.6	6.3	-0.9	-0.3	6.3	5.4	2.1	

Consistent sample of Group 1 banks,² exchange rates as of 31 December 2017, in per cent

Table C.14

 1 Note that the data points for H1 2013 use an approximation for the initial definition of the Basel III leverage ratio exposure where gross instead of adjusted gross securities financing transaction values are used. Data points from H2 2017 onwards use the final definition of the leverage ratio. 2 Europe includes 23 banks, the Americas include 18 banks and the rest of the world includes 25 banks.

Tier 1 capital, RWA, Basel III leverage ratio exposure¹ and accounting total assets

	Group 1 banks				Of which: G-SIBs				Group 2 banks			
	Tier 1 capital	Risk-weighted assets	Leverage total exposure	Accounting total assets	Tier 1 capital	Risk-weighted assets	Leverage total exposure	Accounting total assets	Tier 1 capital	Risk-weighted assets	Leverage total exposure	Accounting total assets
H1 2011	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
H2 2011	105.2	97.9	102.2	102.1	104.6	97.1	102.6	102.1	97.9	101.2	101.9	102.8
H1 2012	114.2	96.0	105.8	105.9	113.9	95.0	106.1	105.6	107.7	99.6	102.8	102.7
H2 2012	120.1	94.0	110.6	105.5	119.8	92.8	111.3	105.2	100.3	100.8	104.8	104.1
H1 2013	125.8	95.4	109.4	106.8	125.4	94.2	110.9	106.4	101.6	98.5	99.3	102.0
H2 2013	135.7	94.7	105.5	105.1	135.6	93.5	106.2	104.5	123.6	93.4	95.5	98.7
H1 2014	144.9	94.7	107.7	109.1	145.0	93.8	108.0	108.2	141.1	92.7	96.6	99.4
H2 2014	154.2	96.2	107.1	111.6	154.6	95.2	106.9	110.6	138.1	88.9	93.1	97.9
H1 2015	163.8	97.7	109.4	113.9	164.3	96.4	108.9	112.8	153.7	89.3	95.0	98.9
H2 2015	170.8	98.2	107.6	112.6	171.4	96.5	106.3	110.6	157.4	88.8	94.2	97.7
H1 2016	176.5	99.9	111.0	118.2	177.1	98.4	109.7	116.6	157.4	87.7	95.9	99.8
H2 2016	182.4	99.2	109.8	116.7	182.6	97.2	107.7	114.6	154.9	84.9	95.9	98.7
H1 2017	187.6	100.8	113.7	119.6	187.4	98.7	111.9	117.4	168.5	86.3	99.1	101.2
H2 2017	191.9	101.0	113.5	120.5	191.6	98.9	111.9	118.2	168.3	83.5	97.2	100.1

Consistent sample of banks,² exchange rates as of 31 December 2017

Table C.15

¹ Tier 1 capital, RWA and leverage ratio exposure assume full implementation of Basel III. Note that the data points for H1 2013 use an approximation for the initial definition of the Basel III leverage ratio exposure where gross instead of adjusted gross securities financing transaction values are used. Data points from H2 2017 onwards use the final definition of the leverage ratio to the extent data are available. ² Group 1 includes 66 banks, G-SIB includes 28 banks and Group 2 includes 33 banks.

In per cent			Table C.16
	Group 1 banks	Of which: G-SIBs	Group 2 banks
Max	42.1	42.1	9.3
95th percentile	29.5	40.7	2.9
75th percentile	16.7	25.7	0.6
Median	1.3	18.1	0.0
25th percentile	-0.2	16.7	-0.3
5th percentile	-7.7	-0.2	-8.2
Min	-27.3	-3.3	-10.8
Weighted average	16.3	22.7	-0.8

Changes in leverage ratio MRC due to revisions in the final standards¹

¹ To the extent a bank could not provide a component under the 2017 exposure measure, the relevant component of the 2014 measure was used.

Source: Basel Committee on Banking Supervision.

Changes in leverage ratio MRC due to revisions to the exposure measure in the final standards $^{\rm 1}$

In per cent			Table C.17
	Group 1 banks	Of which: G-SIBs	Group 2 banks
Max	19.7	19.7	9.3
95th percentile	6.3	8.6	2.9
75th percentile	1.3	1.3	0.6
Median	0.0	0.0	0.0
25th percentile	-0.7	-0.7	-0.3
5th percentile	-11.2	-14.4	-8.2
Min	-27.3	-17.7	-10.8
Weighted average	-0.6	-0.2	-0.8

¹ To the extent a bank could not provide a component under the 2017 exposure measure, the relevant component of the 2014 measure was used.

Estimated combined capital shortfalls at the minimum level

Fully phased-in initial Basel III standards,	sample and	d exchange rates as at the reporting	J
dates, in billions euros			

Group 1 banks Of which: G-SIBs Group 2 banks Number of banks Number of banks Number of banks Add. Tier 1 Add. Tier 1 Add. Tier 1 Tier 2 \sim \sim CET1 CET1 CET1 Tier Tier H1 2011 103 38.8 226.8 46.3 30 31.7 178.2 23.8 101 8.6 17.6 3.4 H2 2011 103 11.9 196.5 39.1 30 7.6 152.1 27.8 99 7.6 16.6 3.3 H1 2012 102 11.2 4.8 16.0 4.0 3.7 173.4 17.1 30 0.1 138.4 96 H2 2012 102 2.2 180.9 12.8 30 0.0 152.3 8.1 107 11.4 16.4 6.5 H1 2013 103 7.6 12.4 16.2 7.5 3.3 111.8 11.4 30 0.0 96.3 110 H2 2013 103 0.1 39.8 3.0 30 0.0 31.8 0.0 105 2.0 7.2 3.7 H1 2014 97 0.0 7.0 0.0 4.7 0.0 102 29 0.0 0.1 3.3 3.1 H2 2014 99 0.0 3.1 1.1 30 0.0 2.7 0.0 93 0.0 4.3 2.0 H1 2015 101 0.0 0.0 0.0 30 0.0 0.0 0.0 97 0.0 4.3 0.3 H2 2015 101 0.0 0.2 0.0 0.0 0.0 30 0.0 0.0 0.0 94 1.5 H1 2016 101 0.0 0.0 0.0 30 0.0 0.0 0.0 95 0.0 2.9 0.0 H2 2016 100 0.0 0.0 0.0 29 0.0 0.0 0.0 84 0.0 2.0 0.0 H1 2017 98 0.0 0.0 0.0 29 0.0 0.0 0.0 80 0.0 1.9 0.0 H2 2017 80 0.0 0.0 0.0 30 0.0 0.0 0.0 66 0.0 1.1 0.0

Source: Basel Committee on Banking Supervision.

Estimated combined capital shortfalls at the target level

		Group	1 banks			Of which	n: G-SIBs			Group 2	2 banks			
	Number of banks	banks CET1 Add. Tier 1 Tier 2		Tier 2	Number of banks	CET1	Add. Tier 1	Tier 2	Number of banks	CET1	Add. Tier 1	Tier 2		
H1 2011	103	485.6	232.7	214.0	30	416.6	163.4	150.9	101	32.1	23.2	9.6		
H2 2011	103	384.1	240.9	220.7	30	334.1	176.8	161.8	99	21.2	23.9	7.5		
H1 2012	102	197.9	232.6	204.7	30	171.6	179.6	143.9	96	16.0	19.2	9.6		
H2 2012	102	115.0	225.5	147.2	30	97.5	178.9	98.3	107	25.2	17.9	11.9		
H1 2013	103	57.5	161.7	133.1	30	41.8	132.8	93.5	110	27.7	18.1	10.1		
H2 2013	103	15.1	72.7	89.7	30	11.8	61.8	63.9	105	9.2	11.7	7.0		
H1 2014	97	3.9	24.4	74.5	29	3.9	17.8	64.2	102	1.6	7.6	5.4		
H2 2014	99	0.7	13.5	39.5	30	0.0	5.0	29.6	93	1.5	7.4	5.3		
H1 2015	101	0.0	2.9	12.0	30	0.0	0.0	11.6	97	0.2	6.6	5.4		
H2 2015	101	0.0	3.3	4.2	30	0.0	0.0	1.8	94	0.2	2.3	4.4		
H1 2016	101	0.0	1.4	2.7	30	0.0	0.0	0.9	95	0.0	3.7	3.7		
H2 2016	100	0.0	0.0	0.3	29	0.0	0.0	0.0	84	0.0	3.1	1.2		
H1 2017	98	0.0	0.0	0.0	29	0.0	0.0	0.0	80	0.0	2.0	0.1		
H2 2017	80	0.0	0.0	0.0	30	0.0	0.0	0.0	66	0.0	1.1	0.0		

Fully phased-in initial Basel III standards, sample and exchange rates as at the reporting dates, in billions euros

Source: Basel Committee on Banking Supervision.

Combined capital shortfalls at the target level

Fully phased-in final Basel III standards, sample and exchange rates as at the reporting dates, in billions of euros

Table C.19

	Group 1 b	anks	Of which: (G-SIBs	Group 2 b	banks	
	Cumulative QIS (end-2015)	End-2017	Cumulative QIS (end-2015)	End-2017	Cumulative QIS (end-2015)	End-2017	
CET1	27.6	5.2	27.6	5.2	0.3	1.0	
Additional Tier 1	28.8	7.3	27.8	6.3	0.5	0.8	
Tier 2	34.3	13.3	30.3	12.2	0.6	0.7	
Source [,] Basel Commit	tee on Banking Superv	vision					

Level of capital after full phasing in of Basel III standards

Consistent sample of Group 1 banks,	, exchange rates	as of 31 Dece	mber 2017,	in billions of
euros				

		Group 1	banks			Of which	: G-SIBs			Group 2	banks	
	Number of banks	CET1	Add. Tier 1	Tier 2	Number of banks	CET1	Add. Tier 1	Tier 2	Number of banks	CET1	Add. Tier 1	Tier 2
H1 2011	91	1,994	81	355	30	1,352	69	269	45	87	6	24
H2 2011	91	2,110	73	352	30	1,428	58	253	45	86	7	24
H1 2012	91	2,296	67	317	30	1,565	54	231	45	89	9	20
H2 2012	91	2,425	61	330	30	1,652	47	236	45	88	7	19
H1 2013	91	2,548	63	360	30	1,732	48	265	45	89	8	21
H2 2013	91	2,725	79	371	30	1,856	63	253	45	105	8	21
H1 2014	91	2,889	123	369	30	1,966	97	232	45	123	3	20
H2 2014	91	3,017	166	420	30	2,062	138	284	45	122	3	16
H1 2015	91	3,180	207	461	30	2,167	171	317	45	135	3	16
H2 2015	91	3,294	243	492	30	2,235	198	340	45	138	4	17
H1 2016	91	3,391	270	511	30	2,301	214	337	45	140	4	18
H2 2016	91	3,479	321	539	30	2,346	247	357	45	140	5	18
H1 2017	91	3,591	321	528	30	2,412	245	343	45	151	5	24
H2 2017	91	3,670	348	571	30	2,460	261	375	45	152	6	25
Source: Basel	Committee	on Banking S	upervision.									

Level of capital after full phasing in of Basel III standards

		Eur	оре			Am	nericas			Rest of th	e world	
	Number of banks	CET1	Add. Tier 1	Tier 2	Number of banks	CET1	Add. Tier 1	Tier 2	Number of banks	CET1	Add. Tier 1	Tier 2
H1 2011	33	729	19	104	19	513	56	196	39	752	6	55
H2 2011	33	750	20	100	19	557	45	189	39	803	8	63
H1 2012	33	819	16	91	19	605	44	163	39	871	6	63
H2 2012	33	832	11	118	19	642	45	149	39	951	4	63
H1 2013	33	880	10	152	19	646	47	131	39	1,021	6	76
H2 2013	33	940	17	170	19	694	53	120	39	1,091	9	81
H1 2014	33	998	41	197	19	734	69	106	39	1,158	12	66
H2 2014	33	1,004	53	187	19	762	80	115	39	1,251	33	118
H1 2015	33	1,037	64	213	19	800	97	120	39	1,343	46	129
H2 2015	33	1,044	78	223	19	823	103	129	39	1,428	61	141
H1 2016	33	1,065	86	238	19	856	113	139	39	1,470	72	133
H2 2016	33	1,092	118	269	19	865	118	136	39	1,522	85	134
H1 2017	33	1,112	110	234	19	900	118	140	39	1,579	94	155
H2 2017	33	1,133	116	226	19	891	119	140	39	1,647	113	205
C												

Consistent sample of Group 1 banks, exchange rates as of 31 December 2017, in billions of euros

Table C.22

Evolution of fully phased-in Basel III capital

Consistent sample of banks, exchange rates as of 31 December 2017, June 2011 = 100

Table C.23

		Group	1 banks			Of which	n: G-SIBs		Group 2 banks				
	Number of banks	CET1	Add.Tier1	Tier 2	Number of banks	CET1	Add.Tier1	Tier 2	Number of banks	CET1	Add.Tier1	Tier 2	
H1 2011	91	100.0	100.0	100.0	30	100.0	100.0	100.0	45	100.0	100.0	100.0	
H2 2011	91	105.8	90.4	99.1	30	105.6	83.7	94.0	45	99.0	112.7	98.6	
H1 2012	91	115.1	82.2	89.4	30	115.8	78.0	85.7	45	103.1	149.5	81.2	
H2 2012	91	121.6	75.0	92.9	30	122.2	68.1	87.6	45	102.0	111.9	77.7	
H1 2013	91	127.8	77.7	101.5	30	128.1	69.3	98.6	45	102.7	135.1	86.9	
H2 2013	91	136.6	97.9	104.6	30	137.3	90.5	94.2	45	121.6	129.0	84.0	
H1 2014	91	144.9	151.4	104.1	30	145.5	140.1	86.1	45	142.3	42.9	82.6	
H2 2014	91	151.3	205.3	118.4	30	152.6	199.3	105.5	45	141.1	56.4	64.9	
H1 2015	91	159.4	255.5	130.1	30	160.3	246.0	117.8	45	155.6	55.9	66.1	
H2 2015	91	165.2	299.0	138.7	30	165.3	285.9	126.3	45	159.2	66.5	69.9	
H1 2016	91	170.0	333.4	144.0	30	170.2	307.9	125.2	45	162.1	73.4	75.1	
H2 2016	91	174.5	395.8	151.9	30	173.5	355.6	132.8	45	162.0	84.7	74.8	
H1 2017	91	180.1	396.3	149.0	30	178.4	353.0	127.5	45	174.6	86.1	98.3	
H2 2017	91	184.0	429.3	160.9	30	182.0	376.2	139.4	45	175.6	99.1	102.0	

Evolution of fully phased-in Basel III capital, by region

		Eu	rope			Am	ericas		Rest of the world					
	Number of banks	CET1	Add. Tier 1	Tier 2	Number of banks	CET1	Add. Tier 1	Tier 2	Number of banks	CET1	Add. Tier 1	Tier 2		
H1 2011	33	100.0	100.0	100.0	19	100.0	100.0	100.0	39	100.0	100.0	100.0		
H2 2011	33	102.8	104.5	96.3	19	108.6	80.7	96.2	39	106.8	138.1	115.0		
H1 2012	33	112.3	83.1	88.1	19	117.9	78.9	82.9	39	115.9	111.0	115.5		
H2 2012	33	114.1	56.3	113.6	19	125.1	81.0	75.7	39	126.5	79.0	115.8		
H1 2013	33	120.7	53.1	146.8	19	125.9	83.1	66.9	39	135.9	108.9	139.7		
H2 2013	33	128.9	90.4	164.2	19	135.2	93.8	61.0	39	145.2	164.5	148.4		
H1 2014	33	136.8	213.5	189.9	19	142.9	123.5	53.9	39	154.0	216.3	121.7		
H2 2014	33	137.6	274.3	179.6	19	148.6	142.8	58.8	39	166.5	588.9	216.5		
H1 2015	33	142.1	329.3	204.8	19	155.9	172.9	61.2	39	178.7	822.9	235.7		
H2 2015	33	143.1	405.2	214.7	19	160.3	183.5	65.5	39	190.0	1,082.0	257.3		
H1 2016	33	146.0	444.1	229.3	19	166.8	200.9	71.1	39	195.5	1,270.5	244.2		
H2 2016	33	149.7	612.0	259.3	19	168.5	209.8	69.2	39	202.5	1,502.8	244.8		
H1 2017	33	152.4	566.2	225.1	19	175.4	210.9	71.3	39	210.1	1,655.2	283.5		
H2 2017	33	155.3	599.5	217.7	19	173.5	212.9	71.1	39	219.0	1,995.2	375.7		

Consistent sample of Group 1 banks, exchange rates as of 31 December 2017, June 2011 = 100 Table C.24

Profits, dividends and dividend payout ratio¹

Consistent sample of banks, exchange rates as of 31 December 2017, in billions of euros

Table C.25

		Gro	oup 1 ba	nks			Of w	vhich: G-	SIBs		Group 2 banks					
	of banks	buebbivic er of banks outer tak er of banks outer tak er of (%) taken er tak viden d viden d viden d viden d viden d		dend It ratio %)	of banks	after tax	on share dend	Divic payou (%	lend t ratio %)	· of banks	after tax	on share dend	Divio payou (؟	dend It ratio %)		
	Number	Profit a	Commo divi	6m	12m	Number	Profit a	Commo divi	6m	12m	Number	Profit a	Commo divi	6m	12m	
H1 2011	92	139.6	57.0	40.9		29	86.5	40.4	46.7		43	5.0	1.1	21.2		
H2 2011	92	110.0	32.2	29.3	35.7	29	73.8	16.8	22.7	35.7	43	2.5	1.2	45.7	29.5	
H1 2012	92	133.8	58.5	43.7	37.2	29	85.0	39.8	46.8	35.6	43	3.5	1.0	28.3	35.6	
H2 2012	92	159.8	29.0	18.1	29.8	29	100.3	12.9	12.8	28.4	43	4.0	1.1	26.9	27.6	
H1 2013	92	167.1	75.7	45.3	32.0	29	107.7	52.6	48.8	31.5	43	3.6	1.0	29.4	28.1	
H2 2013	92	135.7	28.4	20.9	34.4	29	87.1	12.5	14.4	33.4	43	4.1	0.9	22.8	25.9	
H1 2014	92	149.7	84.5	56.5	39.6	29	89.1	61.8	69.4	42.2	43	5.3	1.4	26.8	25.1	
H2 2014	92	182.0	42.7	23.5	38.4	29	117.0	18.9	16.2	39.2	43	3.7	0.7	17.6	23.0	
H1 2015	92	208.2	87.0	41.8	33.2	29	140.5	59.5	42.4	30.5	43	6.6	1.9	28.4	24.5	
H2 2015	92	195.3	46.0	23.6	33.0	29	126.0	21.2	16.8	30.3	43	7.5	0.9	12.0	19.7	
H1 2016	92	181.3	89.3	49.3	35.9	29	123.7	62.4	50.5	33.5	43	4.2	2.3	54.2	27.1	
H2 2016	92	181.0	43.6	24.1	36.7	29	110.7	19.1	17.2	34.8	43	6.4	1.7	26.8	37.6	
H1 2017	92	208.8	97.1	46.5	36.1	29	135.3	64.1	47.4	33.8	43	6.9	2.6	37.4	32.3	
H2 2017	92	199.3	52.0	26.1	36.5	29	108.5	21.8	20.1	35.2	43	9.0	2.3	25.3	30.6	

¹ The dividend payout ratio is also calculated based on profits after tax and common share dividends for a full calendar year to improve comparability across countries with different dividend payment patterns.

Profits, dividends and dividend payout ratio¹, by region

Consistent sample of Group 1 banks, exchange rates as of 31 December 2017, in billions of euros

Table C.26

			Europ	e				America	5		Rest of the world					
	of banks	after tax	on share dend	Divid payout (%	end ratio	of banks	after tax	on share dend	Divic payou (%	lend t ratio %)	· of banks	after tax	on share dend	Divio payou (9	dend t ratio %)	
	Number	Profit a	Comme divi	6m	12m	Number	Profit a	Comme divi	6m	12m	Number	Profit a	Comme divi	6m	12m	
H1 2011	32	53.5	16.9	31.6		20	33.6	8.2	24.4		40	52.5	31.9	60.9		
H2 2011	32	8.2	5.5	67.1	36.3	20	40.5	8.8	21.6	22.9	40	61.3	18.0	29.3	43.9	
H1 2012	32	38.6	12.9	33.5	39.4	20	41.9	10.2	24.4	23.0	40	53.3	35.4	66.4	46.5	
H2 2012	32	10.5	7.2	68.2	40.9	20	43.3	11.3	26.1	25.3	40	106.0	10.5	9.9	28.8	
H1 2013	32	49.9	17.3	34.7	40.5	20	52.8	11.4	21.6	23.6	40	64.4	47.0	72.9	33.7	
H2 2013	32	0.2	4.9	2500.2	44.3	20	45.7	12.3	26.9	24.0	40	89.9	11.3	12.5	37.8	
H1 2014	32	39.4	22.3	56.7	68.7	20	42.5	12.8	30.2	28.5	40	67.8	49.4	72.9	38.5	
H2 2014	32	37.9	9.8	25.9	41.6	20	49.9	14.2	28.5	29.3	40	94.2	18.7	19.8	42.0	
H1 2015	32	56.1	17.8	31.7	29.3	20	62.5	14.8	23.7	25.8	40	89.6	54.4	60.7	39.8	
H2 2015	32	41.9	12.6	30.0	31.0	20	55.4	15.8	28.5	26.0	40	98.0	17.7	18.0	38.4	
H1 2016	32	46.1	24.5	53.2	42.2	20	55.0	15.6	28.3	28.4	40	80.2	49.2	61.4	37.5	
H2 2016	32	25.8	7.5	29.1	44.6	20	67.7	19.2	28.3	28.3	40	87.5	16.9	19.3	39.4	
H1 2017	32	57.8	29.6	51.1	44.3	20	65.4	17.6	26.9	27.6	40	85.6	50.0	58.4	38.7	
H2 2017	32	56.3	11.0	19.5	35.5	20	43.9	20.4	46.5	34.8	40	99.1	20.6	20.8	38.2	

¹ The dividend payout ratio is also calculated based on profits after tax and common share dividends for a full calendar year to improve comparability across countries with different dividend payment patterns.

Capital raised externally

Consistent sample of banks, exchange rates as of 31 December 2017, in billions of euros

	Group 1 banks				Of which: G-SIBs			Group 2 banks				
		Gloup I	Daliks		C	Ji which.	G-21D2			Group 2	Daliks	
	Number	CET1	Add.	Tier 2	Number	CET1	Add.	Tier 2	Number	CET1	Add.	Tier 2
	of banks		Tier 1		of banks		Tier 1		of banks		Tier 1	
H1 2011	92	35.9	4.7	12.4	29	12.8	1.6	7.0	43	3.1	1.5	2.5
H2 2011	92	27.2	5.1	5.2	29	9.9	3.6	1.1	43	3.2	0.0	3.2
H1 2012	92	27.9	3.2	10.4	29	18.4	1.0	3.0	43	1.4	1.5	0.3
H2 2012	92	29.0	6.3	13.3	29	14.2	3.7	7.7	43	1.8	0.0	2.0
H1 2013	92	25.1	8.4	12.7	29	12.7	5.2	11.1	43	0.6	0.0	1.9
H2 2013	92	29.9	21.5	30.1	29	12.1	16.9	17.8	43	1.0	0.8	0.2
H1 2014	92	32.7	41.1	46.2	29	17.6	29.7	14.9	43	2.8	1.3	1.3
H2 2014	92	19.1	46.1	51.3	29	5.3	42.3	35.8	43	3.5	0.7	0.5
H1 2015	92	20.1	41.6	46.0	29	11.1	33.7	33.9	43	1.6	0.0	1.5
H2 2015	92	20.6	31.0	49.6	29	9.4	25.1	30.6	43	0.6	0.6	1.3
H1 2016	92	12.1	26.8	44.0	29	9.5	16.1	21.9	43	0.4	0.6	1.1
H2 2016	92	23.2	24.7	32.0	29	17.7	11.3	19.2	43	2.4	0.4	1.9
H1 2017	92	16.4	19.4	26.1	29	9.9	11.8	14.8	43	0.7	0.6	2.5
H2 2017	92	21.9	33.0	42.3	29	13.0	21.0	32.6	43	1.7	1.0	4.0
Source: Bas	el Committee	e on Bank	ing Super	vision.								

Capital raised externally, by region

Consistent sample of Group 1 banks, exchange rates as of 31 December 2017, in billions of euros Table C.28

		Europe			Americas			Rest of the world				
	Number of banks	CET1	Add. Tier 1	Tier 2	Number of banks	CET1	Add. Tier 1	Tier 2	Number of banks	CET1	Add. Tier 1	Tier 2
H1 2011	32	21.1	1.4	9.2	20	11.2	3.2	3.3	40	3.5	0.0	0.0
H2 2011	32	13.9	3.4	1.1	20	5.4	1.6	3.1	40	7.9	0.1	1.0
H1 2012	32	20.9	0.0	3.3	20	5.5	3.2	5.8	40	1.6	0.0	1.3
H2 2012	32	14.8	1.3	6.4	20	3.8	3.7	6.9	40	10.4	1.3	0.0
H1 2013	32	14.5	0.0	8.7	20	6.0	6.0	4.0	40	4.5	2.4	0.0
H2 2013	32	21.0	11.0	20.4	20	3.9	7.2	8.2	40	5.1	3.3	1.5
H1 2014	32	24.3	25.5	24.7	20	5.7	13.2	2.1	40	2.7	2.4	19.5
H2 2014	32	7.2	14.8	11.8	20	3.4	9.9	16.3	40	8.6	21.3	23.2
H1 2015	32	7.1	14.1	26.3	20	4.1	15.2	13.2	40	8.9	12.2	6.5
H2 2015	32	9.2	9.7	22.1	20	2.7	5.7	11.7	40	8.7	15.6	15.8
H1 2016	32	4.2	8.9	21.4	20	6.6	9.0	13.0	40	1.3	8.9	9.6
H2 2016	32	17.1	7.5	12.8	20	3.9	3.5	7.9	40	2.2	13.8	11.4
H1 2017	32	10.6	10.1	14.0	20	4.4	1.7	7.4	40	1.4	7.6	4.6
H2 2017	32	11.4	9.6	6.2	20	6.2	4.4	1.9	40	4.2	19.1	34.2
Source: Bas	el Committee	on Bank	ing Super	vision.								

Basel III Monitoring Report October 2018

Structure of regulatory capital under transitional initial Basel III rules¹

Consistent sample of banks,² in per cent

Table C.29

	Group 1 banks			Of which: G-SIBs			Group 2 banks		
	CET1	Add. Tier 1	Tier 2	CET1	Add. Tier 1	Tier 2	CET1	Add. Tier 1	Tier 2
H1 2011	71.9	9.3	18.9	70.0	11.1	19.0	69.9	7.1	23.0
H2 2011	73.1	8.8	18.1	71.2	10.6	18.2	72.1	6.1	21.9
H1 2012	75.0	7.9	17.0	73.6	9.6	16.8	73.4	4.2	22.4
H2 2012	75.4	7.4	17.3	74.3	8.9	16.8	73.1	4.0	22.9
H1 2013	75.0	7.0	17.9	75.3	7.3	17.4	73.2	3.9	22.8
H2 2013	75.7	6.8	17.5	76.1	6.9	17.1	74.1	3.5	22.3
H1 2014	76.8	5.5	17.7	76.8	5.8	17.4	76.0	3.4	20.6
H2 2014	76.5	6.1	17.4	76.2	6.8	17.0	77.6	3.6	18.8
H1 2015	76.8	6.6	16.6	76.4	7.4	16.2	79.3	3.7	17.1
H2 2015	76.7	7.1	16.2	76.2	8.1	15.7	80.4	4.1	15.5
H1 2016	76.9	7.4	15.7	76.7	8.4	14.9	80.8	3.9	15.3
H2 2016	77.1	7.6	15.3	76.9	8.5	14.6	81.9	3.7	14.4
H1 2017	77.1	8.1	14.7	77.2	9.0	13.8	81.7	3.5	14.8
H2 2017	76.9	8.3	14.7	76.7	9.1	14.2	81.6	3.2	15.2

 1 Before the implementation of the Basel III framework, results have been calculated on the basis of the relevant national regulatory frameworks in place at the reporting dates. 2 Group 1 includes 92 banks, G-SIBs include 30 banks and Group 2 includes 58 banks.

Structure of regulatory capital under fully phased-in initial Basel III standards

Consistent sample of banks,¹ in per cent

Table C.30

	Group 1 banks			Of which: G-SIBs			Group 2 banks		
	CET1	Add. Tier 1	Tier 2	CET1	Add. Tier 1	Tier 2	CET1	Add. Tier 1	Tier 2
H1 2011	82.7	3.2	14.2	80.6	4.0	15.4	74.4	5.1	20.6
H2 2011	83.7	2.8	13.5	82.6	3.3	14.1	74.4	5.6	20.0
H1 2012	86.0	2.4	11.6	85.0	2.9	12.1	76.6	7.3	16.1
H2 2012	86.4	2.0	11.5	85.8	2.3	11.9	78.3	5.7	16.0
H1 2013	85.8	2.0	12.2	84.9	2.3	12.9	75.7	6.7	17.6
H2 2013	85.8	2.4	11.8	85.6	2.8	11.6	78.8	5.8	15.4
H1 2014	85.3	3.6	11.1	85.6	4.2	10.2	84.3	1.8	13.8
H2 2014	83.7	4.6	11.7	83.0	5.5	11.5	86.3	2.5	11.2
H1 2015	82.6	5.4	12.0	81.6	6.4	12.0	87.2	2.3	10.4
H2 2015	81.7	6.1	12.2	80.5	7.2	12.3	86.6	2.6	10.8
H1 2016	81.3	6.5	12.2	80.7	7.5	11.8	86.1	2.7	11.2
H2 2016	80.2	7.5	12.3	79.5	8.4	12.1	85.8	3.1	11.1
H1 2017	80.9	7.3	11.9	80.3	8.2	11.4	83.9	2.9	13.2
H2 2017	80.0	7.6	12.4	79.5	8.4	12.1	83.1	3.3	13.7

¹ Group 1 includes 92 banks, G-SIBs include 30 banks and Group 2 includes 58 banks.

Share of MRC by asset class¹

Group 1 banks, consistent sample of banks, in per cent of total MRC

Number of banks **Operational risk Related entities** Securitisation Total (June 2011=100) Market risk Corporate Partial use Sovereign CVA MRC Floors Bank Retail Other Total H1 2011 34 100.0 31.0 3.5 1.1 18.6 2.8 7.2 10.4 0.0 6.2 7.8 1.1 10.3 100.0 H2 2011 30.7 3.2 2.2 5.8 11.5 0.0 9.6 100.0 106.1 34 1.1 18.3 8.1 1.1 8.4 H1 2012 34 31.8 3.4 1.2 18.2 2.0 4.4 11.9 0.0 10.1 8.6 0.2 8.3 100.0 103.4 H2 2012 34 31.9 3.4 1.2 17.9 1.4 3.9 12.8 0.0 8.3 9.8 0.9 8.4 100.0 98.6 H1 2013 34 32.5 3.6 1.4 17.9 1.8 3.7 6.7 0.2 9.4 11.0 1.6 10.1 100.0 94.0 H2 2013 3.5 7.2 0.2 11.9 9.1 100.0 34 32.4 1.3 17.5 1.7 4.1 8.5 2.6 90.2 H1 2014 34 34.7 4.2 2.5 16.5 1.7 2.6 1.6 3.1 7.7 13.3 1.0 11.1 100.0 88.8 H2 2014 34 3.8 14.0 10.6 100.0 94.3 34.8 2.5 16.2 1.7 2.4 1.5 3.2 7.2 2.3 H1 2015 34 35.5 3.5 2.6 16.1 1.6 2.1 1.4 2.9 6.9 14.3 2.9 10.3 100.0 98.4 H2 2015 34 36.6 3.3 2.6 15.7 1.4 2.0 1.5 2.8 6.1 16.2 2.0 9.9 100.0 97.7 H1 2016 95.9 34 37.1 3.2 2.8 15.8 1.3 1.8 1.6 3.0 5.6 16.3 1.9 9.6 100.0 5.3 H2 2016 34 36.5 2.9 2.6 16.5 1.5 2.5 16.4 3.2 9.7 100.0 96.8 1.1 1.7 H1 2017 2.9 1.2 2.1 16.1 9.6 100.0 93.0 34 36.6 2.5 17.0 1.8 1.6 5.4 3.1 H2 2017 34 37.6 2.9 2.6 17.7 1.0 1.7 1.7 1.9 5.3 16.4 1.1 10.0 100.0 88.1

¹ The category "other" includes capital requirements for other assets; the current Basel I-based output floor; Pillar 1 capital requirements in member countries for risks not covered by the Basel framework; reconciliation differences; and additional capital requirements due to regulatory calculation differences and general provisions. The latter item can lead to negative capital requirements in cases where there is an excess in provisions which can be recognised in a bank's Tier 2 capital. Furthermore, for banks which apply the standardised approach, general provisions may to some extent be recognised as Tier 2 capital; consequently, MRC is reduced by this amount. The term "reconciliation differences" refers to the difference between MRC reported at the entire bank level and the sum of MRC reported for the individual portfolios.

Share of credit exposure

Consistent sample of Group 1 banks, in per cent of total exposure

	Number of banks	Corporate	Retail	Sovereign	Bank	Other credit	Partial use	Securitisation	Total	Total (June 2011=100)
H1 2011	36	27.8	27.6	12.4	10.7	12.9	4.9	3.6	100.0	100.0
H2 2011	36	28.2	27.4	13.5	9.8	13.3	4.4	3.5	100.0	104.9
H1 2012	36	28.3	27.6	14.3	9.7	12.7	4.2	3.3	100.0	106.9
H2 2012	36	28.5	28.3	14.9	9.2	11.4	4.6	3.1	100.0	102.1
H1 2013	36	28.5	28.0	15.4	9.0	11.7	4.5	2.9	100.0	101.5
H2 2013	36	28.7	28.7	15.9	8.7	10.8	4.5	2.7	100.0	97.3
H1 2014	36	30.2	28.3	17.9	8.8	10.2	2.0	2.7	100.0	101.1
H2 2014	36	30.3	27.9	18.3	8.4	10.5	1.9	2.6	100.0	107.0
H1 2015	36	30.7	27.8	18.3	8.1	10.5	1.9	2.7	100.0	113.7
H2 2015	36	31.1	28.1	18.8	7.5	10.1	1.6	2.8	100.0	112.9
H1 2016	36	30.8	27.8	19.3	7.1	10.2	2.0	2.8	100.0	114.0
H2 2016	36	30.6	28.4	19.6	6.7	9.9	1.9	2.8	100.0	115.0
H1 2017	36	30.3	28.9	20.7	6.7	8.7	1.9	2.7	100.0	112.6
H2 2017	36	30.5	29.6	20.7	6.5	8.1	1.8	2.8	100.0	110.3

Source: Basel Committee on Banking Supervision.

Changes in Tier 1 MRC for exposures subject to the standardised or IRB approaches for credit risk due to the final Basel III standards

In per cent			Table C.33					
	Group 1 banks	Of which: G-SIBs	Group 2 banks					
Max	65.7	26.7	653.3					
95th percentile	18.2	18.0	30.0					
75th percentile	7.2	9.9	12.6					
Median	1.3	4.1	3.4					
25th percentile	-7.6	-2.1	-0.4					
5th percentile	-14.2	-13.3	-9.6					
Min	-23.1	-15.0	-20.3					
Weighted average	-1.1	-1.8	8.0					
Source: Basel Committee on Banking Supervision.								

Changes in Tier 1 MRC for exposures subject to the standardised or IRB approaches for credit risk due to the final Basel III standards, by asset class

In per cent

	Group 1 banks	Of which: G-SIBs	Group 2 banks
Sovereign	0.0	0.0	0.1
Bank and covered bonds	1.6	2.0	3.3
Retail	-0.1	-0.4	-0.2
Real estate	-0.2	0.0	1.3
Defaulted	0.0	0.0	0.1
Corporate / financial institutions treated as corporate	-3.3	-4.1	0.3
Equity / subordinated debt / funds	0.8	1.0	3.3
Other assets / failed trades / eligible purchased receivables	-0.4	-0.6	0.0
Total	-1.1	-1.8	8.0

Changes in Tier 1 MRC for exposures subject to the standardised or IRB approaches for credit risk due to the final Basel III standards, by region

Group I banks, in per cen	Group	1	banks,	in	per	cen
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Table C.35

	Europe	Americas	Rest of the world
Max	24.4	17.0	65.7
95th percentile	22.7	15.9	21.1
75th percentile	8.5	7.9	3.4
Median	4.0	2.6	-2.6
25th percentile	-1.9	-1.7	-10.1
5th percentile	-11.6	-20.2	-14.4
Min	-16.8	-23.1	-18.5
Weighted average	5.5	1.8	-6.0

Changes in Tier 1 MRC for exposures subject to the standardised or IRB approaches for credit risk due to the final Basel III standards, by region

Group 1 banks, in per cent			Table C.36
	Europe	Americas	Rest of the world
Sovereign	0.0	0.0	0.0
Bank and covered bonds	1.2	0.3	2.4
Retail	1.0	-0.9	-0.4
Real estate	0.2	-1.4	0.0
Defaulted	0.1	0.0	0.0
Corporate / financial institutions treated as corporate	2.7	-0.4	-7.8
Equity / subordinated debt / funds	-0.1	2.7	0.6
Other assets / failed trades / eligible purchased receivables	-0.1	0.2	-0.7
Total	5.5	1.8	-6.0
Source: Basel Committee on Banking Supervis	sion.		

Changes in Tier 1 MRC for exposures subject to the standardised approach for credit risk due to the final Basel III standards¹

In per cent			Table C.37
	Group 1 banks	Of which: G-SIBs	Group 2 banks
Max	65.7	63.9	150.0
95th percentile	36.8	47.4	34.1
75th percentile	15.3	13.1	14.8
Median	4.8	5.1	5.6
25th percentile	1.1	2.5	0.4
5th percentile	-5.9	-0.7	-9.7
Min	-23.1	-1.0	-15.7
Weighted average	6.3	6.7	8.4

¹ These data include all banks' exposures currently subject to the standardised approach for credit risk, including the SA exposures of IRB banks using partial use. It does not include exposures currently under the IRB which migrate to the SA under the revised approach (eg IRB equity exposures). The change is calculated based on total current MRC for exposures currently under the SA.

Changes in Tier 1 MRC for exposures subject to the standardised approach for credit risk due to the final Basel III standards¹

	Group 1 banks	Of which: G-SIBs	Group 2 banks
Sovereign	0.1	0.1	0.3
Retail	1.0	0.5	-0.1
Defaulted	0.1	0.1	0.1
Corporate	1.3	1.5	-0.2
Bank and covered bonds	4.2	6.3	1.2
Equity / subordinated debt / funds	-0.2	-1.4	4.7
Other assets / failed trades	-0.2	-0.5	0.1
Real estate	0.1	0.1	2.2
Total	6.3	6.7	8.4

¹ These data include all banks' exposures currently subject to the standardised approach for credit risk, including the SA exposures of IRB banks using partial use. It does not include exposures currently under the IRB which migrate to the SA under the revised approach (eg IRB equity exposures). The change is calculated based on total current MRC for exposures currently under the SA. The negative change for equity exposures for Group 1 banks is driven by superequivalent treatment of equity in certain jurisdictions, which is assumed to not be carried over under the revised framework.

Source: Basel Committee on Banking Supervision.

Changes in Tier 1 MRC for exposures subject to the standardised approach for credit risk due to the final Basel III standards,¹ by region

Group 1 banks, in per cent

In per cent

Table C.39

Table C.38

	Europe	Americas	Rest of the world
Max	44.6	20.2	65.7
95th percentile	37.3	20.2	51.4
75th percentile	18.6	10.2	13.2
Median	8.3	1.3	3.5
25th percentile	3.5	-1.7	0.0
5th percentile	0.8	-23.1	-8.1
Min	-4.9	-23.1	-9.4
Weighted average	7.6	5.8	5.6

¹ These data include all banks' exposures currently subject to the standardised approach for credit risk, including the SA exposures of IRB banks using partial use. It does not include exposures currently under the IRB which migrate to the SA under the revised approach (eg IRB equity exposures).

Changes in Tier 1 MRC for exposures subject to the standardised approach for credit risk due to the final Basel III standards, by region

Group 1 banks, in per cent			Table C.40
	Europe	Americas	Rest of the world
Sovereign	0.2	0.0	0.0
Retail	1.8	2.1	0.2
Defaulted	0.1	0.0	0.1
Corporate	2.5	1.5	0.4
Bank and covered bonds	0.7	-0.2	7.3
Equity / subordinated debt / funds	1.6	3.5	-2.1
Other assets / failed trades	0.0	0.3	-0.5
Real estate	0.5	-1.5	0.2
Total	7.6	5.8	5.6
Source: Basel Committee on Banking Supervisi	on.		

Basel III Monitoring Report October 2018
Standardised approach risk weights under the current standard and the final Basel III standards

In per cent

-	Gr	oup 1 banks	5	Of	which: G-SI	Bs	Group 2 banks			
	Contrib. to total current RWA	Current	Final	Contrib. to total current RWA	Current	Final	Contrib. to total current RWA	Current	Final	
Sovereign	8.1	7.5	7.6	8.8	7.8	7.9	5.3	3.8	4.0	
Bank	5.4	24.9	43.9	6.4	27.6	55.1	8.4	27.3	31.7	
Covered bonds	0.0	16.5	13.5	0.0	14.2	11.2	0.6	10.8	11.7	
General corporate	39.7	94.9	96.9	41.4	94.3	96.7	21.2	90.9	89.8	
Corporate SME	4.4	91.3	86.1	3.6	90.3	85.8	5.7	95.4	84.7	
Specialised lending	0.7	98.6	104.4	0.1	100.1	102.7	2.6	91.4	103.2	
Equity	4.8	316.1	286.5	5.7	405.3	272.6	4.8	156.4	257.7	
Subordinated debt	0.4	114.6	152.2	0.5	112.4	159.6	0.5	89.9	149.8	
Equity investments in funds	0.3	172.4	211.4	0.1	210.1	334.1	1.5	93.2	176.6	
Retail	14.9	74.0	77.0	13.3	72.6	74.6	11.4	67.2	74.8	
Real estate (total)	6.9	55.0	55.9	5.1	48.6	49.0	20.4	48.1	50.5	
General residential real estate	4.1	46.4	41.8	3.1	40.7	37.5	11.7	39.1	36.9	
General commercial real estate	1.2	65.8	75.9	1.2	63.3	70.9	3.1	64.9	79.0	
Income producing residential real estate	0.1	41.9	44.0	0.1	42.1	41.1	2.8	60.9	63.5	
Income producing commercial real estate	0.5	83.7	88.2	0.2	90.6	91.4	1.4	79.9	113.1	
Land acquisition	0.9	97.6	125.0	0.5	97.6	125.6	1.4	96.1	133.8	
Failed trades	0.0	101.2	101.2	0.0	106.2	106.2	0.0			
Other assets	12.7	30.1	29.7	14.0	27.1	26.4	13.9	56.8	58.9	
Defaulted	1.7	107.5	112.7	1.0	109.1	116.4	3.7	99.2	101.3	
Total	100.0	39.1	41.4	100.0	37.4	39.8	100.0	33.3	36.1	
Source: Basel Committe	e on Banking	Supervision.								

Standardised approach risk weights under the current standard and the final Basel III standards, by region

Group 1 banks, in per cent

	Euro	оре	Ame	ricas	Rest of th	ne world
	Current	Final	Current	Final	Current	Final
Sovereign	6.8	7.1	3.1	3.1	8.4	8.4
Bank	15.8	21.0	32.7	28.7	27.1	51.6
Covered bonds	14.5	13.0			38.5	19.2
General corporate	97.0	99.5	90.6	92.9	94.7	96.4
Corporate SME	88.0	86.6	96.1	84.9	96.1	85.3
Specialised lending	101.3	106.0	84.4	103.5	94.4	100.6
Equity	211.1	257.9	212.8	391.4	572.2	300.6
Subordinated debt	144.6	182.2			110.8	148.3
Equity investments in funds	207.8	329.4	319.1	318.9	151.5	162.9
Retail	72.3	76.9	69.5	72.6	77.4	78.5
Real estate (total)	50.9	53.1	60.4	51.7	64.2	67.2
General residential real estate	45.5	41.7	47.0	33.3	48.9	47.6
General commercial real estate	58.3	70.7	100.0	110.0	95.6	93.5
Income producing residential real estate	40.5	42.0	65.3	74.4	34.6	122.5
Income producing commercial real estate	71.2	88.6	99.0	81.5	85.4	100.9
Land acquisition	100.9	137.7	78.4	113.3	100.3	118.4
Failed trades	106.1	106.1	100.7	100.7	91.0	91.0
Other assets	69.2	69.5	37.5	38.2	23.3	22.6
Defaulted	114.3	119.8	101.7	103.9	96.9	103.3
Total	43.6	46.3	47.3	49.1	35.5	37.6

Source: Basel Committee on Banking Supervision.

Changes in Tier 1 MRC for exposures subject to IRB approach for credit risk due to the final Basel III standards

In per cent

F			
	Group 1 banks	Of which: G-SIBs	Group 2 banks
Max	23.6	21.8	1,141.5
95th percentile	17.0	17.2	40.3
75th percentile	6.0	10.9	5.2
Median	0.2	3.3	-0.9
25th percentile	-10.6	-3.4	-5.2
5th percentile	-19.3	-19.9	-14.1
Min	-26.1	-22.4	-23.3
Weighted average	-4.1	-4.6	7.5
Source: Basel Committee on Ba	nking Supervision.		

Changes in Tier 1 MRC for exposures subject to IRB approach for credit risk due to the final Basel III standards

In per cent			Table C.44
	Group 1 banks	Of which: G-SIBs	Group 2 banks
Banks	0.6	0.5	5.9
Corporate	-3.2	-3.8	0.3
Corporate SME	-1.8	-2.1	0.2
Others	0.6	1.2	1.1
Retail	0.2	0.0	0.4
Retail res. mortgages	-0.6	-0.7	-0.8
Sovereigns	0.0	0.0	0.0
Specialised lending	-0.2	-0.1	0.6
Total	-4.1	-4.6	7.5

Source: Basel Committee on Banking Supervision.

Changes in Tier 1 MRC for exposures subject to IRB approach for credit risk due to the final Basel III standards, by region

In per cent			Table C.45
	Europe	Americas	Rest of the world
Max	1,141.5	11.6	21.8
95th percentile	23.6	11.6	16.6
75th percentile	7.6	4.2	2.3
Median	1.8	1.2	-8.6
25th percentile	-4.1	-3.7	-14.0
5th percentile	-13.9	-8.4	-23.1
Min	-19.3	-8.7	-26.1
Weighted average	5.0	1.1	-10.8
Source: Basel Committee on Bank	ing Supervision.		

Changes in Tier 1 MRC for exposures subject to IRB approach for credit risk due to the final Basel III standards, by region

In per cent			Table C.46
	Europe	Americas	Rest of the world
Banks	1.9	0.4	0.3
Corporate	1.2	-0.4	-6.7
Corporate SME	0.6	-0.2	-3.8
Others	-1.0	2.4	0.8
Retail	0.8	-0.5	0.1
Retail res. mortgages	-0.3	-0.8	-0.7
Sovereigns	-0.1	0.0	0.0
Specialised lending	1.1	-0.5	-0.7
Total	5.0	1.1	-10.8

IRB approach risk weights under the current and the final Basel III standards

In per cent

	G	roup 1 banl	ks	Of	which: G-SI	Bs	G	roup 2 banl	ĸs
	Contri bution to total RWA	Current	Final	Contri bution to total RWA	Current	Final	Contri bution to total RWA	Current	Final
Large and mid-market general corporates	40.8	54.9	51.2	43.8	56.3	52.2	27.9	55.3	55.2
Specialised lending	6.3	61.4	60.0	5.8	61.2	59.9	5.6	47.2	52.1
SME treated as corporate	14.1	70.6	61.9	13.5	78.8	67.4	15.0	41.0	41.4
Financial institutions treated as corporates	2.2	31.9	35.4	2.4	32.2	35.8	0.4	57.4	50.1
Sovereigns	2.5	4.4	4.4	2.9	5.1	5.1	1.5	7.8	7.4
Banks	4.1	23.7	25.3	3.8	27.1	30.6	3.2	14.0	44.4
Retail residential mortgages	10.9	20.0	18.8	11.3	23.6	22.2	19.9	11.0	10.5
Other retail	5.2	34.7	35.9	4.2	38.6	38.7	10.5	27.6	29.4
Qualifying revolving retail exposures	4.0	32.3	33.3	4.1	34.0	34.1	2.5	32.4	31.4
Equity	5.7	186.7	243.0	4.1	142.5	233.7	7.9	218.5	250.7
Equity investment in funds	0.7	162.3	177.2	0.4	151.4	169.7	1.3	350.6	341.3
Eligible purchased receivables	0.3	33.2	35.0	0.3	32.6	33.7	0.0	95.7	86.0
Failed trades and non-DVP transactions	0.0	186.5	180.3	0.0	190.9	184.8	0.0		
Other assets	3.2	58.5	53.8	3.2	55.6	48.8	4.3	20.9	20.8
Total	100.0	36.1	34.7	100.0	38.0	36.5	100.0	25.4	27.5
Source: Basel Committee on Ba	nking Supon	icion							

IRB approach risk weights under the current and the final Basel III standards, by region

Group 1 banks, in per cent

	Europe				Americas		Res	t of the wo	rld
	Contri bution to total RWA	Current	Final	Contri bution to total RWA	Current	Final	Contri bution to total RWA	Current	Final
Large and mid-market general corporates	36.7	47.2	48.4	35.9	46.6	47.2	44.5	63.6	54.9
Specialised lending	8.0	47.1	53.3	7.5	65.3	60.9	4.9	78.5	68.9
SME treated as corporate	10.0	43.7	46.4	4.2	76.2	72.8	20.5	81.2	67.1
Financial institutions treated as corporates	2.9	27.7	29.8	3.9	36.8	40.6	1.1	33.0	37.2
Sovereigns	2.9	5.2	5.1	6.5	7.5	7.6	0.5	1.3	1.3
Banks	6.1	20.9	24.6	4.2	28.3	29.2	2.9	23.9	26.2
Retail residential mortgages	12.7	12.5	12.2	11.9	25.5	23.8	9.9	25.7	23.9
Other retail	7.7	26.9	30.0	5.9	44.9	43.3	3.7	40.3	40.1
Qualifying revolving retail exposures	2.2	27.6	28.3	10.6	36.7	35.9	2.1	27.8	31.7
Equity	7.2	290.7	252.1	3.4	85.2	195.4	6.0	198.7	258.3
Equity investment in funds	0.0	338.7	377.2	0.5	88.7	127.8	1.2	198.2	199.0
Eligible purchased receivables	0.1	24.2	33.3	0.2	26.7	25.6	0.4	37.1	37.6
Failed trades and non-DVP transactions	0.0	77.8	77.8	0.1	195.6	189.5	0.0	90.9	87.2
Other assets	3.4	71.7	73.7	5.2	34.7	38.6	2.3	84.9	54.4
Total	100.0	27.8	28.9	100.0	31.8	32.4	100.0	45.1	40.7

Source: Basel Committee on Banking Supervision.

Exposure-weighted average PD for non-defaulted exposures by main asset classes

Group 1 IRB banks, in per cent

	Corporate			S	overeig	n		Bank			Retail	
	FIRB	AIRB	All	FIRB	AIRB	All	FIRB	AIRB	All	FIRB	AIRB	All
Number of banks	18	51	69	18	49	67	18	54	72	16	50	66
Max	1.86	2.65	2.65	0.22	0.56	0.56	0.63	1.04	1.04	2.30	8.94	8.94
95th percentile	1.66	1.81	1.80	0.17	0.18	0.18	0.30	0.65	0.65	1.77	5.72	4.95
75th percentile	1.30	1.28	1.28	0.04	0.09	0.08	0.20	0.30	0.26	1.26	1.65	1.51
Median	0.93	0.92	0.92	0.01	0.03	0.02	0.13	0.18	0.17	0.85	1.10	1.06
25th percentile	0.73	0.69	0.71	0.00	0.02	0.01	0.09	0.12	0.11	0.60	0.86	0.71
5th percentile	0.49	0.25	0.31	0.00	0.01	0.00	0.06	0.06	0.06	0.46	0.42	0.43
Min	0.38	0.17	0.17	0.00	0.00	0.00	0.05	0.03	0.03	0.45	0.30	0.30
Weighted average	0.95	0.91	0.92	0.03	0.04	0.04	0.21	0.22	0.22	1.30	1.38	1.37
Source: Basel Committee on Bar	nking Sup	ervision.										

Exposure-weighted average LGD for non-defaulted exposures by main asset classes

Group 1 IRB banks, in per cent

	Corporate			S	overeig	n		Bank			Retail	
	FIRB	AIRB	All	FIRB	AIRB	All	FIRB	AIRB	All	FIRB	AIRB	All
Number of banks	18	51	69	18	49	67	18	54	72	16	50	66
Max	43.4	51.2	51.2	49.1	50.6	50.6	43.4	63.8	63.8	50.8	74.0	74.0
95th percentile	43.4	43.7	43.4	45.6	45.7	45.8	43.4	59.6	57.0	45.3	69.7	67.3
75th percentile	42.7	37.4	41.6	45.0	36.9	44.9	39.1	43.5	42.6	40.7	41.8	41.5
Median	41.7	33.3	35.6	45.0	24.1	34.0	34.2	35.7	35.2	29.3	26.5	27.5
25th percentile	40.3	29.7	30.9	44.6	9.7	12.2	27.5	23.4	24.8	19.8	20.5	20.4
5th percentile	36.4	18.9	21.4	41.4	4.7	5.9	21.2	8.7	10.2	16.0	15.2	15.2
Min	34.2	0.3	0.3	39.6	0.3	0.3	18.9	0.4	0.4	15.0	13.2	13.2
Weighted average	41.2	33.5	34.2	44.2	29.0	30.0	33.6	31.5	31.8	22.2	36.0	34.8
Source: Basel Committee on Ba	nking Sup	ervision.										

Table C.50

Exposure-weighted average risk weights for non-defaulted exposures by main asset classes

Group 1 IRB banks, in per cent

	C	Corporate	2	Sovereign			Bank				Retail	
	FIRB	AIRB	All	FIRB	AIRB	All	FIRB	AIRB	All	FIRB	AIRB	All
Number of banks	18	51	69	18	49	67	18	54	72	16	50	66
Max	72.7	97.8	97.8	11.1	32.6	32.6	31.0	51.0	51.0	35.4	118.9	118.9
95th percentile	72.5	62.2	69.0	10.6	19.6	18.0	28.6	45.4	44.1	32.1	45.9	43.5
75th percentile	65.7	51.4	53.5	5.2	9.1	7.5	23.6	31.4	28.9	26.9	33.7	31.5
Median	54.9	44.8	47.2	3.2	2.7	2.7	20.4	24.7	22.5	18.1	19.9	19.6
25th percentile	47.2	41.2	42.0	2.1	1.4	1.5	16.5	17.7	17.7	14.9	16.9	16.7
5th percentile	40.9	25.8	28.8	1.1	0.6	0.7	13.6	6.8	7.4	14.2	10.1	11.2
Min	39.6	19.1	19.1	1.0	0.0	0.0	11.9	3.4	3.4	13.8	8.3	8.3
Weighted average	54.4	44.0	44.9	3.5	3.3	3.3	22.2	21.1	21.3	16.6	24.8	24.1
Source: Basel Committe	e on Bank	kina Super	vision.									

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Exposure-weighted average risk parameter values by sub-asset classes of retail exposures

Group 1 IRB banks, in per cen	t			Table C.52
	Number of banks	Average PD non-defaulted exposures	Share of defaulted exposures	Average LGD non-defaulted exposures
Retail residential mortgages	68	0.96	1.7	21.5
Other retail	66	2.23	2.4	43.8
Retail QRE	57	2.19	0.4	82.8

The results in this table include only banks from countries where data for defaulted exposures are available separately by retail sub-asset classes.

Source: Basel Committee on Banking Supervision.

Distribution of EAD by approach under the current standard and the final Basel III standards

In per cent

	Group 1 banks Current Final		Of which	: G-SIBs	Group 2 banks				
			Current	Final	Current	Final			
Advanced IRB	56.3	43.7	60.1	45.5	49.5	46.7			
Foundation IRB	16.1	28.7	11.8	26.4	8.8	12.5			
Other	2.4	1.5	2.6	1.6	3.9	3.4			
Standardised approach	24.8	25.8	25.4	26.3	37.4	37.1			
Slotting	0.3	0.3	0.2	0.2	0.4	0.3			
Source: Pasel Committee on Panking Supervision									

Source: Basel Committee on Banking Supervision.

Distribution of RWA by approach under the current standard and the final Basel III standards

In per cent

	Group 1 banks		Of which	: G-SIBs	Group 2 banks				
	Current Final		Current	Final	Current	Final			
Advanced IRB	41.1	29.4	43.4	29.6	35.6	30.4	-		
Foundation IRB	25.9	34.9	25.4	35.9	13.0	18.2			
Other	7.2	2.7	5.8	2.4	7.8	3.0			
Standardised approach	25.2	32.4	25.0	31.8	42.5	47.6			
Slotting	0.7	0.7	0.3	0.4	1.1	0.8			
Source: Rasel Committee on Banking Supervision									

Source: Basel Committee on Banking Supervision.

Distribution of EAD by approach under the current standard and the final Basel III standards, by region

In per cent

_	Europe		Amer	icas	Rest of the world				
	Current	Final	Current	Final	Current	Final			
Advanced IRB	64.1	48.7	89.0	70.4	35.5	28.7			
Foundation IRB	7.4	22.9	0.0	19.0	29.2	35.9			
Other	1.5	0.9	5.9	4.4	1.9	1.0			
Standardised approach	26.5	26.9	5.1	6.1	33.1	34.3			
Slotting	0.5	0.5	0.0	0.0	0.2	0.2			
Source: Basel Committee on Banking Supervision.									

Table C.55

Table C.54

Distribution of RWA by approach under the current standard and the final Basel III standards, by region

In per cent Table									
	Europe		Amer	ricas	Rest of the world				
	Current	Current Final		Final	Current	Final			
Advanced IRB	51.5	34.4	83.1	57.6	20.3	15.9			
Foundation IRB	7.1	24.3	0.0	23.4	45.0	44.8			
Other	7.2	2.1	8.5	5.7	6.9	2.0			
Standardised approach	32.9	37.8	8.4	13.3	27.4	36.8			
Slotting	1.3	1.3	0.0	0.0	0.5	0.5			
Source: Basel Committee on Banking Supervision.									

Average risk weight by approach

In per cent									
	IRBA	ERBA	IAA	SA	Total				
STC securitisations									
Current framework	27.3	11.3		39.0	27.6				
Final standard	34.6	19.9		35.0	31.1				
Non-STC securitisations									
Current framework	19.0	18.0	10.9	41.2	25.4				
Final standard	30.0	35.9	29.8	43.1	36.7				
Source: Basel Committee on Banking Supervision.									

Share of market risk MRC in total MRC

In per cent			Table C.58
	Group 1 banks	of which: G-SIBs	Group 2 banks
Max	29.8	20.4	30.7
95th percentile	13.0	13.3	10.7
75th percentile	5.2	7.8	2.2
Median	3.0	4.1	0.1
25th percentile	1.5	2.2	0.0
5th percentile	0.0	1.0	0.0
Min	0.0	0.7	0.0
Weighted average	4.0	4.2	2.2

¹ Group 1 includes 93 banks, G-SIB includes 30 banks and Group 2 includes 85 banks.

Consistent sample of Group 1 banks, in per cent

Basel III Monitoring Report October 2018

	Group 1 banks		Of which: G-	SIBs	Group 2 banks	
	Number of banks	Share	Number of banks	Share	Number of banks	Share
H1 2011	36	5.9	14	7.6	20	2.6
H2 2011	36	9.1	14	11.9	20	3.0
H1 2012	36	9.5	14	11.9	20	2.6
H2 2012	36	7.9	14	10.2	20	2.4
H1 2013	36	8.9	14	11.5	20	2.7
H2 2013	36	8.1	14	10.5	20	3.1
H1 2014	36	7.8	14	9.8	20	4.1
H2 2014	36	7.2	14	8.9	20	3.4
H1 2015	36	6.8	14	8.5	20	3.3
H2 2015	36	6.0	14	7.3	20	3.1
H1 2016	36	5.6	14	6.7	20	3.1
H2 2016	36	5.3	14	6.5	20	2.0
H1 2017	36	5.4	14	6.7	20	2.4
H2 2017	36	5.2	14	6.4	20	2.2
Source: Bas	sel Committee on Banking	Supervision.				

Share of market risk MRC in total MRC

Consistent sample of banks, in per cent

Components of	i minimum	capital	requi	irements	for mar	ket ri	sk unc	ler tl	ne
current rules									

						-				
	s	Stan	dard measu	irement met	hod	Internal	models app	oroach	bu	
	Number of ban	General position risk	Specific position risk	FX and commodity risk	Unassigned	VaR and stressed VaR	Incremental risk charge	Unassigned	Correlation tradi portfolios	Other and unassigned
H1 2015	109	5.9	7.5	7.5	0.7	48.8	10.5	1.6	15.1	2.3
H2 2015	109	6.5	7.0	7.6	0.8	50.9	9.4	1.7	13.1	2.9
H1 2016	109	7.0	6.8	8.6	0.8	53.2	9.5	1.4	9.7	2.9
H2 2016	109	6.3	7.0	9.1	0.6	54.1	8.7	2.1	9.3	2.8
H1 2017	109	5.0	8.5	8.1	0.7	54.3	9.4	1.5	9.6	2.9
H2 2017	109	4.7	8.7	7.0	1.8	56.1	8.9	1.7	8.4	2.6
Source: Bas	Source: Basel Committee on Banking Supervision.									

Table C.59

Table C.60

145

Components of minimum capital requirements for market risk under the current rules

Consistent sample of G-SIBs, in per cent

	ks	Stan	dard measu	rement met	hod	Internal	models ap	proach	bu	
	Number of ban	General position risk	Specific position risk	FX and commodity risk	Unassigned	VaR and stressed VaR	Incremental risk charge	Unassigned	Correlation tradi portfolios	Other and unassigned
H1 2015	30	3.3	6.2	3.6	0.3	52.6	10.9	2.2	17.9	3.0
H2 2015	30	3.8	5.8	4.4	0.4	54.1	9.8	2.3	15.8	3.6
H1 2016	30	3.4	5.9	4.9	0.4	57.3	10.0	2.0	12.2	4.0
H2 2016	30	3.1	6.1	5.2	0.2	58.4	9.0	2.4	11.7	3.8
H1 2017	30	2.6	7.7	3.6	0.2	58.2	9.8	2.0	11.9	4.0
H2 2017	30	2.8	7.5	3.4	1.1	59.4	9.9	2.0	10.4	3.6
Courses Bas	Source Paral Committee on Panking Supervision									

Source: Basel Committee on Banking Supervision.

Components of minimum capital requirements for market risk under the current rules

Consistent sample of Group 2 banks, in per cent

Table C.62

	•	•	•							
	ks	Stan	Standard measurement method				models app	oroach	bu	
	Number of ban	General position risk	Specific position risk	FX and commodity risk	Unassigned	VaR and stressed VaR	Incremental risk charge	Unassigned	Correlation tradi portfolios	Other and unassigned
H1 2015	74	35.8	17.6	19.7	7.6	16.6	2.4	0.0	0.2	0.0
H2 2015	74	32.2	19.0	10.8	21.6	13.9	2.2	0.0	0.2	0.0
H1 2016	74	31.5	21.4	12.4	21.9	10.8	1.8	0.0	0.3	0.0
H2 2016	74	21.1	20.0	15.6	20.1	21.6	1.3	0.0	0.3	0.0
H1 2017	74	17.7	20.6	15.2	20.1	24.7	1.4	0.0	0.3	0.0
H2 2017	74	19.3	24.7	10.8	23.6	19.4	1.6	0.0	0.6	0.0
Source: Bas	Source: Basel Committee on Banking Supervision.									

Stressed value-at-risk in relation to current value-at-risk

Consistent sample of banks,¹ in per cent

Table C.63

	Group	1 banks
	Banks reporting since end-2011	Banks reporting since June 2015
H2 2011	198.1	
H1 2012	170.7	
H2 2012	199.7	
H1 2013	191.2	
H2 2013	203.8	
H1 2014	247.9	
H2 2014	182.9	
H1 2015	214.9	197.2
H2 2015	193.7	172.0
H1 2016	211.9	215.9
H2 2016	288.0	247.4
H1 2017	245.5	239.4
H2 2017	237.5	259.5

¹ The consistent sample of banks reporting since end-2011 consists of 23 banks, while the consistent sample of banks reporting since June 2015 consists of 56 banks.

Source: Basel Committee on Banking Supervision.

Impact of revised minimum capital requirements for market risk

In per cent

Table C.64

	Change relati	ve to total current mar	ket risk MRC	Change relative to total current MRC			
	Group 1	Of which: G-SIBs	Group 2	Group 1	Of which: G-SIBs	Group 2	
Max	249.9	160.5	469.5	76.2	15.1	21.3	
95% percentile	183.2	145.0	320.3	12.0	12.4	12.6	
75th percentile	96.3	103.3	136.9	4.4	4.0	2.3	
Median	51.7	54.3	76.4	1.8	2.1	0.5	
25th percentile	8.9	21.8	44.2	0.2	0.8	0.3	
5th percentile	-40.6	-21.6	-31.8	-1.2	-0.6	-0.9	
Min	-64.3	-59.5	-78.9	-1.3	-1.3	-2.0	
Weighted average	65.4	60.2	63.0	2.9	2.6	1.3	
Source: Basel Committe	o on Banking Sun	onvision					

Breakdown of minimum capital requirements for market risk by approach under the current rules

In per cent

In per cent Table C.65										
	Group 1 banks		Of which:	G-SIBs	Group 2 banks					
	Number of banks	Mean	Number of banks	Mean	Number of banks	Mean				
Standardised approach	43	50.9	16	43.8	11	81.5				
Internal models approach	43	48.6	16	55.4	11	18.5				
Other	43	0.5	16	0.8	11	0.0				
Course: Recol Committee on Per										

Source: Basel Committee on Banking Supervision.

Breakdown of minimum capital requirements for market risk by risk component under the revised standards

In per cent

Table C.66

	Group 1 banks		Of which:	G-SIBs	Group 2 banks	
	Number of banks	Mean	Number of banks	Mean	Number of banks	Mean
Standardised approach	41	40.3	16	34.8	11	74.3
Residual risk add-on	41	1.3	16	1.8	11	1.1
Internally modelled capital charge	41	15.9	16	18.6	11	1.5
Non-modellable risk factors	41	18.0	16	15.6	11	0.1
Default risk charge	41	24.5	16	29.1	11	23.0

Total MRC for operational risk and share of approaches under the current rules

consistent			Tuble C.07		
	Total June 2011 = 100	Basic indicator approach	Standardised approach	Alternative standardised approach	Advanced measurement approach
H1 2011	100.0	2.9	36.7	2.0	58.4
H2 2011	110.6	2.7	35.7	1.9	59.7
H1 2012	114.4	3.5	33.1	1.9	61.5
H2 2012	121.1	3.4	31.1	1.7	63.9
H1 2013	151.1	18.9	23.9	0.9	56.3
H2 2013	159.2	19.4	22.0	0.8	57.9
H1 2014	173.0	1.9	35.5	0.9	61.8
H2 2014	194.5	2.4	35.9	1.7	60.0
H1 2015	211.3	1.9	35.1	0.7	62.3
H2 2015	226.8	2.0	32.7	0.5	64.8
H1 2016	226.9	2.0	30.3	2.2	65.6
H2 2016	234.9	2.1	27.3	3.0	67.5
H1 2017	225.5	3.4	27.2	2.4	67.0
H2 2017	216.5	2.3	28.1	2.5	67.1

Consistent sample of Group 1 banks,¹ in per cent

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Table C.67

¹ Group 1 includes 79 banks.

Total MRC for operational risk and share of approaches under the current rules

Consistent	onsistent sample of Group 2 banks ¹ , in per cent Table C.68									
	Total June 2011 = 100	Basic indicator approach	Standardised approach	Alternative standardised approach	Advanced measurement approach					
H1 2011	100.0	24.0	58.0	0.1	17.9					
H2 2011	98.0	24.7	54.0	0.1	21.3					
H1 2012	96.9	24.8	48.6	0.1	26.5					
H2 2012	102.7	21.8	50.9	0.2	27.1					
H1 2013	103.7	20.9	51.0	0.1	28.0					
H2 2013	98.4	16.6	57.1	0.2	26.1					
H1 2014	97.5	16.9	55.7	1.0	26.4					
H2 2014	100.4	18.1	55.7	0.2	25.9					
H1 2015	104.6	14.9	58.9	0.2	25.9					
H2 2015	103.9	13.1	60.4	0.2	26.3					
H1 2016	103.9	13.3	61.0	0.5	25.3					
H2 2016	104.5	13.0	61.1	0.3	25.6					
H1 2017	108.4	14.5	60.1	0.5	24.8					
H2 2017	110.6	12.4	61.4	0.5	25.7					

Consistent sample of Group 2 banks¹, in per cent

¹ Group 2 includes 36 banks.

Source: Basel Committee on Banking Supervision.

Distribution of share of MRC for operational risk in total MRC under the current rules¹

In per cent			Table C.69
	Group 1 banks	of which: G-SIBs	Group 2 banks
Max	44.6	44.6	96.9
95th percentile	29.4	37.6	28.9
75th percentile	14.6	26.7	11.2
Median	10.2	12.3	8.5
25th percentile	7.3	9.2	6.6
5th percentile	4.1	5.9	4.0
Min	2.5	5.1	1.8
Weighted average	13.7	15.4	9.0

¹ Group 1 includes 93 banks, G-SIB includes 30 banks and Group 2 includes 85 banks.

Changes in operational risk capital requirements¹

In per cent

Table C.70

	G	Group 1 banks			which: G-S	SIBs	Group 2 banks		
		Migration from			Migration from			Migration from	
	Total	AMA	Other	Total	AMA	Other	Total	AMA	Other
Max	249.5	126.6	249.5	117.9	94.1	117.9	190.1	92.5	190.1
75th percentile	24.0	24.3	24.0	26.6	24.0	48.0	34.0	44.1	28.2
Median	-4.7	1.2	-6.9	-5.1	-5.0	-5.1	0.0	28.3	0.0
25th percentile	-25.3	-14.8	-31.0	-21.4	-16.7	-30.0	-23.3	-18.2	-23.3
Min	-76.4	-76.4	-48.2	-44.5	-44.5	-34.0	-83.7	-83.7	-49.5
Weighted average	-1.5	-4.0	4.2	-4.8	-6.5	0.6	6.4	-13.8	14.4

¹ Figures do not show supervisor-imposed capital add-ons. Therefore, increases in MRC may be overstated and reductions may be understated. For the purpose of this table, AMA banks are banks which currently calculate some part of their operational risk capital requirements using the AMA.

Source: Basel Committee on Banking Supervision.

Share of banks bound by the different constraints¹

Fully phased-in initial Basel III standards, consistent sample of Group 1 banks

Table C.71

	Number of banks	Risk-based Tier 1 minimum and leverage	Risk-based Tier 1 minimum only	Risk-based Tier 1 target and leverage	Risk-based Tier 1 target only	Leverage ratio only	None
H1 2011	66	22.7	0.0	0.0	31.8	0.0	45.5
H2 2011	66	13.6	0.0	0.0	39.4	0.0	47.0
H1 2012	66	9.1	0.0	0.0	42.4	0.0	48.5
H2 2012	66	4.5	0.0	0.0	40.9	0.0	54.5
H1 2013	66	3.0	0.0	0.0	34.8	0.0	62.1
H2 2013	66	0.0	0.0	0.0	18.2	0.0	81.8
H1 2014	66	0.0	0.0	0.0	9.1	0.0	90.9
H2 2014	66	0.0	0.0	0.0	4.5	0.0	95.5
H1 2015	66	0.0	0.0	0.0	0.0	0.0	100.0
H2 2015	66	0.0	0.0	0.0	0.0	0.0	100.0
H1 2016	66	0.0	0.0	0.0	0.0	0.0	100.0
H2 2016	66	0.0	0.0	0.0	0.0	0.0	100.0
H1 2017	66	0.0	0.0	0.0	0.0	0.0	100.0
H2 2017	66	0.0	0.0	0.0	0.0	0.0	100.0

¹ Note that the data points for H1 2013 use an approximation for the initial definition of the Basel III leverage ratio exposure where gross instead of adjusted gross securities financing transaction values are used. Data points from H2 2017 onwards use the final definition of the leverage ratio to the extent data are available.

Share of banks bound by the different constraints¹

Fully phased-in initial Basel III standards, consistent sample of G-SIBs

Table C.72

	Number of banks	Risk-based Tier 1 minimum and leverage	Risk-based Tier 1 minimum only	Risk-based Tier 1 target and leverage	Risk-based Tier 1 target only	Leverage ratio only	None
H1 2011	28	28.6	0.0	0.0	50.0	0.0	21.4
H2 2011	28	17.9	0.0	0.0	57.1	0.0	25.0
H1 2012	28	14.3	0.0	0.0	60.7	0.0	25.0
H2 2012	28	7.1	0.0	0.0	64.3	0.0	28.6
H1 2013	28	3.6	0.0	0.0	53.6	0.0	42.9
H2 2013	28	0.0	0.0	0.0	32.1	0.0	67.9
H1 2014	28	0.0	0.0	0.0	14.3	0.0	85.7
H2 2014	28	0.0	0.0	0.0	7.1	0.0	92.9
H1 2015	28	0.0	0.0	0.0	0.0	0.0	100.0
H2 2015	28	0.0	0.0	0.0	0.0	0.0	100.0
H1 2016	28	0.0	0.0	0.0	0.0	0.0	100.0
H2 2016	28	0.0	0.0	0.0	0.0	0.0	100.0
H1 2017	28	0.0	0.0	0.0	0.0	0.0	100.0
H2 2017	28	0.0	0.0	0.0	0.0	0.0	100.0

¹ Note that the data points for H1 2013 use an approximation for the initial definition of the Basel III leverage ratio exposure where gross instead of adjusted gross securities financing transaction values are used. Data points from H2 2017 onwards use the final definition of the leverage ratio to the extent data are available.

Share of banks bound by the different constraints¹

	Number of banks	Risk-based Tier 1 minimum and leverage	Risk-based Tier 1 minimum only	Risk-based Tier 1 target and leverage	Risk-based Tier 1 target only	Leverage ratio only	None
H1 2011	33	15.2	3.0	0.0	36.4	0.0	45.5
H2 2011	33	18.2	3.0	0.0	27.3	0.0	51.5
H1 2012	33	12.1	3.0	0.0	33.3	0.0	51.5
H2 2012	33	15.2	3.0	0.0	21.2	0.0	60.6
H1 2013	33	15.2	3.0	0.0	21.2	0.0	60.6
H2 2013	33	12.1	3.0	0.0	15.2	0.0	69.7
H1 2014	33	3.0	0.0	0.0	18.2	0.0	78.8
H2 2014	33	3.0	0.0	0.0	15.2	0.0	81.8
H1 2015	33	0.0	0.0	0.0	9.1	0.0	90.9
H2 2015	33	0.0	0.0	0.0	9.1	0.0	90.9
H1 2016	33	0.0	0.0	0.0	9.1	0.0	90.9
H2 2016	33	0.0	0.0	0.0	6.1	0.0	93.9
H1 2017	33	0.0	0.0	0.0	3.0	0.0	97.0
H2 2017	33	0.0	0.0	0.0	0.0	0.0	100.0

Fully phased-in initial Basel III standards, consistent sample of Group 2 banks

Table C.73

¹ Note that the data points for H1 2013 use an approximation for the initial definition of the Basel III leverage ratio exposure where gross instead of adjusted gross securities financing transaction values are used. Data points from H2 2017 onwards use the final definition of the leverage ratio to the extent data are available.

Source: Basel Committee on Banking Supervision.

In per cent

Banks constrained by different parts of the framework¹

Table C.74

	Group 1 banks		Of which:	Of which: G-SIBs Group 2 banks IRB		Group 2 banks pure SA		
	Current	Final	Current	Final	Current	Final	Current	Final
Risk-based capital	50.0	44.3	42.3	46.2	33.3	41.7	61.5	61.5
Output floors	12.9	30.0	26.9	26.9	4.2	12.5	0.0	0.0
Leverage ratio	37.1	25.7	30.8	26.9	62.5	45.8	38.5	38.5

¹ Group 1 includes 70 banks, G-SIB includes 26 banks, Group 2 (IRB) includes 24 banks and Group 2 (SA only) includes 26 banks.

Banks constrained by different parts of the framework¹, by region

Group 1 banks, in per cent Table C.75									
	Europe		Amer	icas	Rest of the world				
	Current	Final	Current	Final	Current	Final			
Risk-based capital	37.0	25.9	28.6	50.0	72.4	58.6			
Output floors	0.0	40.7	50.0	21.4	6.9	24.1			
Leverage ratio	63.0	33.3	21.4	28.6	20.7	17.2			

¹ Europe includes 27 banks, the Americas include 14 banks and the rest of the world includes 29 banks.

Source: Basel Committee on Banking Supervision.

Liquidity coverage ratio and net stable funding ratio

In per cent						Table C.76	
		Liquidity coverage ra	atio	Net stable funding ratio			
	Group1	Of which: G-SIBs	Group 2	Group1	Of which: G-SIBs	Group 2	
Max	434.9	165.7	1,822.3	142.0	132.5	767.9	
75th percentile	152.7	139.7	267.1	121.5	123.1	132.0	
Median	132.7	128.3	174.9	113.3	113.5	120.1	
25th percentile	121.3	121.8	145.7	107.8	110.1	112.3	
Min	92.9	108.6	101.2	90.7	101.6	92.5	
Weighted average	133.0	129.0	180.0	116.0	118.0	118.5	

Source: Basel Committee on Banking Supervision.

Composition of holdings of eligible liquid assets

In per cent						Table C.77			
	Group 1 banks		Of whic	h: G-SIBs	Group 2 banks				
	Amount Weighted amount		Amount	Weighted amount	Amount	Weighted amount			
Level 1 cash and CB reserves	42.8	24.6	41.9	43.6	32.4	33.2			
Level 1 securities	38.0	66.6	35.4	37.2	61.3	62.4			
Level 2A	15.8	7.8	19.7	17.6	2.1	1.8			
Level 2B	3.4	1.0	2.9	1.6	4.2	2.5			
Total	100.0	100.0	100.0	100.0	100.0	100.0			
Source: Basel Committee on Banking Supervision.									

Comparison of pool of high-quality liquid assets and inflows to outflows and caps

In trillions of euros			Table C.78
	Group 1 banks	Of which: G-SIBs	Group 2 banks
Total liquid assets and inflows			
Level 1 assets	8.64	5.75	0.45
Level 2A assets (post-factor)	1.45	1.26	0.01
Level 2B assets (post-factor)	0.19	0.11	0.01
Inflows (post-factor, after cap)	3.57	2.61	0.10
Total	13.85	9.72	0.57
Outflows and impact of cap			
Outflows (post-factor)	11.36	8.07	0.36
Сар	-0.03	-0.07	0.00
Total	11.33	8.00	0.36
Source: Basel Committee on Banking Sup	pervision.		

Aggregate available stable funding (ASF) by counterparty

In trillions of euros

-

	Group 1	Group 1 banks		: G-SIBs	Group 2 banks					
	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted				
Capital	5.4	5.4	3.4	3.4	0.3	0.3				
Retail and small business	19.3	17.8	12.0	11.0	1.6	1.5				
Non-financial corporates	10.8	5.5	7.3	3.7	0.3	0.2				
Central banks	1.8	0.7	1.1	0.4	0.2	0.2				
Sovereigns/PSEs/MDBs/NDBs	2.7	1.6	1.7	1.0	0.2	0.1				
Financials (other legal entities)	15.2	5.5	8.9	3.0	1.3	0.8				
Other liabilities	5.9	1.4	3.9	0.8	0.4	0.2				
Total	61.1	37.9	38.3	23.3	4.3	3.2				
Source: Basel Committee on Banking Supervision.										

Aggregate required stable funding (RSF) by category

In trillions of euros

	Group 1	. banks	Of which	: G-SIBs	Group 2	2 banks
	Unweighted RSF	Weighted RSF	Unweighted RSF	Weighted RSF	Unweighted RSF	Weighted RSF
Cash and central banks reserves	7.3	0.0	5.1	0.0	0.3	0.0
Loans to financial institutions	6.7	2.1	4.5	1.3	0.4	0.2
HQLA	9.3	1.6	6.2	1.0	0.5	0.1
All residential mortgages	7.2	5.2	3.6	2.6	0.9	0.7
Loans, < 1 year	7.4	3.6	4.6	2.3	0.4	0.2
Other loans, > 1 year, risk weight < 35%	1.2	0.9	0.6	0.4	0.3	0.3
Loans, risk weights > 35%	12.8	10.9	7.7	6.5	0.8	0.7
Derivative	2.6	0.8	1.9	0.6	0.1	0.0
All other assets	8.7	7.2	5.5	4.7	0.7	0.6
Off balance sheet		0.5		0.3		0.0
Total	63.3	32.6	39.6	19.7	4.4	2.7
Source: Basel Committee on Bankir	ng Supervision.					

LCR and related shortfalls at a 100% minimum requirement

Consistent sample of banks, exchange rates as at the reporting dates

	Gro	up 1 banks	Of wh	ich: G-SIBs	Grou	ıp 2 banks					
	Ratio (%)	Shortfall (€ bn)	Ratio (%)	Shortfall (€ bn)	Ratio (%)	Shortfall (€ bn)					
H2 2012	122.2	367.8	128.2	141.4	164.2	1.9					
H1 2013	120.5	318.0	127.3	63.1	150.2	0.5					
H2 2013	123.1	245.3	129.3	27.1	152.9	0.2					
H1 2014	127.0	177.7	131.0	0.0	153.8	0.9					
H2 2014	128.2	43.2	127.3	0.0	150.2	0.2					
H1 2015	126.3	4.3	123.7	0.0	144.1	0.4					
H2 2015	126.8	23.0	122.6	0.0	158.4	0.0					
H1 2016	128.7	3.9	126.1	0.0	157.8	0.7					
H2 2016	132.4	4.1	128.5	0.0	150.2	1.4					
H1 2017	133.7	0.1	129.5	0.0	159.9	0.0					
H2 2017	133.8	0.0	129.5	0.0	161.5	0.0					
Source: Basel Committee on	Source: Basel Committee on Banking Supervision.										

NSFR and related shortfalls at a 100% minimum requirement

	Grou	p 1 banks	Of whi	ch: G-SIBs	Group 2 banks		
	Ratio (%)	Shortfall (€ bn)	Ratio (%)	Shortfall (€ bn)	Ratio (%)	Shortfall (€ bn)	
H2 2012	99.7	1,655.2	101.9	944.5	102.1	87.0	
H1 2013	99.8	1,620.0	103.0	876.3	103.1	80.6	
H2 2013	111.8	617.7	115.3	330.3	113.8	11.9	
H1 2014	111.3	463.7	114.5	248.3	113.3	17.8	
H2 2014	111.5	423.6	114.2	227.3	112.8	24.4	
H1 2015	111.7	321.1	114.5	187.6	114.6	14.8	
H2 2015	113.8	179.5	116.7	78.2	115.8	4.4	
H1 2016	113.8	101.4	116.7	27.3	115.9	6.5	
H2 2016	115.4	25.2	117.5	0.0	115.5	16.1	
H1 2017	116.7	15.1	119.5	0.0	117.9	2.6	
H2 2017	115.8	2.7	117.8	0.0	119.4	0.9	

Consistent sample of banks, exchange rates as at the reporting dates

Table C.82

Source: Basel Committee on Banking Supervision.

LCR and NSFR, by region

Consistent sample of Group 1 banks,1 in per cent

Table C.83

	Europe		Americas		Rest of the world		
	LCR	NSFR	LCR	NSFR	LCR	NSFR	
H2 2012	112.4	95.7	107.1	88.9	135.8	110.4	
H1 2013	107.8	96.8	111.4	89.4	130.9	108.4	
H2 2013	110.7	101.5	114.6	101.6	133.3	129.5	
H1 2014	126.0	102.3	121.5	102.9	130.7	125.3	
H2 2014	131.2	102.0	125.3	111.2	129.0	121.0	
H1 2015	130.7	104.1	118.7	110.4	129.1	119.6	
H2 2015	132.1	106.4	121.7	112.1	127.8	121.5	
H1 2016	136.9	107.1	125.7	109.5	127.8	121.9	
H2 2016	135.4	109.5	123.4	110.3	136.1	122.9	
H1 2017	136.6	111.8	128.3	110.3	135.4	123.7	
H2 2017	138.4	112.2	124.9	110.1	136.8	121.3	

¹ For LCR Europe includes 20 banks, the Americas include 16 banks and the rest of the world includes 32 banks. For NSFR Europe includes 32 banks, the Americas include 17 banks and the rest of the world includes 42 banks.

Share of banks meeting the LCR and NSFR requirements

	Group 1 banks			Ot	f-which: G-SI	Bs	Group 2 banks		
	LCR	NSFR	Both	LCR	NSFR	Both	LCR	NSFR	Both
H2 2012	75.0	44.0	70.8	84.2	46.2	61.1	76.2	62.2	75.0
H1 2013	77.9	41.8	66.2	89.5	50.0	55.6	90.5	68.9	90.0
H2 2013	79.4	72.5	78.5	89.5	57.7	61.1	95.2	91.1	100.0
H1 2014	86.8	76.9	83.1	100.0	69.2	72.2	90.5	88.9	95.0
H2 2014	92.6	80.2	81.5	100.0	80.8	88.9	95.2	86.7	90.0
H1 2015	95.6	82.4	87.7	100.0	84.6	88.9	95.2	88.9	95.0
H2 2015	91.2	82.4	84.6	100.0	84.6	88.9	95.2	93.3	90.0
H1 2016	95.6	84.6	89.2	100.0	88.5	94.4	95.2	91.1	85.0
H2 2016	94.1	95.6	92.3	100.0	100.0	100.0	95.2	88.9	80.0
H1 2017	98.5	93.4	93.8	100.0	100.0	100.0	100.0	95.6	90.0
H2 2017	100.0	98.9	100.0	100.0	100.0	100.0	100.0	97.8	95.0

Consistent sample of banks,¹ in per cent

¹ Group 1 includes 68 banks reporting LCR, 91 reporting NSFR and 65 for both ratios. G-SIB includes 19 banks reporting LCR, 26 reporting NSFR and 18 for both ratios. Group 2 includes 21 banks reporting LCR, 45 reporting NSFR and 20 for both ratios.

Source: Basel Committee on Banking Supervision.

LCR and change in HQLA and net outflows

Consistent sample of banks,¹ exchange rates as of 31 December 2017, in per cent

Table C.85

Table C.84

	Group 1 banks			Of-which: G-SIBs			Group 2 banks		
	Change				Change			Change	
	LCR	HQLA	Net outflows	LCR	HQLA	Net outflows	LCR	HQLA	Net outflows
H2 2012	122.2			128.2			164.2		
H1 2013	120.5	2.9	4.4	127.3	3.1	3.8	150.2	-3.0	6.1
H2 2013	123.1	5.4	3.2	129.3	5.7	4.1	152.9	-4.3	-5.9
H1 2014	127.0	7.1	3.8	131.0	7.2	5.8	153.8	6.4	5.8
H2 2014	128.2	5.1	4.1	127.3	2.5	5.5	150.2	-5.3	-3.1
H1 2015	126.3	5.7	7.3	123.7	3.7	6.8	144.1	1.4	5.7
H2 2015	126.8	2.1	1.7	122.6	0.2	1.0	158.4	6.7	-2.9
H1 2016	128.7	3.2	1.7	126.1	3.9	1.0	157.8	3.0	3.4
H2 2016	132.4	3.4	0.5	128.5	0.3	-1.5	150.2	-0.9	4.1
H1 2017	133.7	4.1	3.1	129.5	4.7	3.9	159.9	16.2	9.2
H2 2017	133.8	0.0	-0.1	129.5	0.8	0.8	161.5	0.7	-0.3

¹ Group 1 includes 68 banks, G-SIB includes 19 banks and Group 2 includes 21 banks.

LCR and change in HQLA and net outflows, by region

Consistent sample of banks,¹ exchange rates as of 31 December 2017, in per cent

Table C.86

	Europe			Americas			Rest of the world			
	Change				(Change		Change		
	LCR	HQLA	Net outflows	LCR	HQLA	Net outflows	LCR	HQLA	Net outflows	
H2 2012	111.8			107.1			135.7			
H1 2013	107.2	-3.9	0.2	111.4	7.3	3.1	130.9	3.1	7.0	
H2 2013	110.1	5.3	2.6	114.6	9.7	6.6	133.2	3.3	1.5	
H1 2014	125.5	5.6	-7.4	121.5	9.5	3.4	130.6	6.5	8.6	
H2 2014	130.7	0.9	-3.1	125.3	7.3	4.0	129.0	5.2	6.4	
H1 2015	130.2	9.2	9.7	118.7	-2.9	2.5	129.1	9.5	9.4	
H2 2015	131.8	5.4	4.1	121.7	-0.3	-2.7	127.8	2.3	3.4	
H1 2016	136.6	2.2	-1.4	125.7	0.4	-2.8	127.8	5.0	5.0	
H2 2016	135.4	5.9	6.9	123.4	1.9	3.8	136.1	3.7	-2.6	
H1 2017	136.6	2.8	1.9	128.3	2.4	-1.6	135.4	5.3	5.9	
H2 2017	138.4	-0.4	-1.7	124.9	0.3	3.0	136.8	0.0	-1.0	

¹ Europe includes 20 banks, the Americas include 16 banks and the rest of the world includes 32 banks.

Source: Basel Committee on Banking Supervision.

High-quality liquid assets and inflows versus outflows over time

Consistent sample of banks,¹ exchange rates as of 31 December 2017, in trillions of euros

Table C.87

	Group 1 b	banks	Of which: (G-SIBs	Group 2 banks		
	HQLA and inflows (post-factor and after-cap)	Outflows (post-factor)	HQLA and inflows (post-factor and after-cap)	Outflows (post-factor)	HQLA and inflows (post-factor and after-cap)	Outflows (post-factor)	
H2 2012	7.95	6.85	5.73	4.76	0.19	0.13	
H1 2013	8.35	7.29	5.99	5.02	0.18	0.13	
H2 2013	8.71	7.49	6.33	5.24	0.17	0.13	
H1 2014	9.53	8.04	6.82	5.60	0.19	0.13	
H2 2014	9.75	8.13	6.96	5.82	0.18	0.13	
H1 2015	10.17	8.55	7.15	6.10	0.18	0.14	
H2 2015	10.19	8.51	7.02	6.01	0.19	0.13	
H1 2016	10.91	9.08	7.60	6.42	0.20	0.14	
H2 2016	11.11	9.03	7.61	6.35	0.21	0.16	
H1 2017	12.08	9.78	8.32	6.95	0.22	0.15	
H2 2017	11.98	9.75	8.33	6.96	0.22	0.15	

¹ Group 1 includes 68 banks, G-SIBs include 19 banks and Group 2 includes 21 banks.

NSFR and change in ASF and RSF

Consistent sample of banks,¹ exchange rates as of 31 December 2017, in per cent

Table C.88

	Group 1 banks			Of which: G-SIBs			Group 2 banks		
	Change			Change			Change		
	NSFR	ASF	RSF	NSFR	ASF	RSF	NSFR	ASF	RSF
H2 2012	99.7			101.9			102.1		
H1 2013	99.8	2.6	2.5	103.0	3.4	2.3	103.1	-1.6	-2.5
H2 2013	111.8	14.7	2.4	115.3	15.9	3.5	113.8	10.2	-0.2
H1 2014	111.3	3.0	3.4	114.5	2.8	3.6	113.3	-0.5	-0.1
H2 2014	111.5	1.7	1.5	114.2	1.3	1.6	112.8	-5.3	-4.9
H1 2015	111.7	3.9	3.7	114.5	4.5	4.2	114.6	6.2	4.5
H2 2015	113.8	1.9	0.0	116.7	1.4	-0.5	115.8	1.1	0.1
H1 2016	113.8	1.8	1.8	116.7	2.0	2.0	115.9	0.9	0.9
H2 2016	115.4	2.6	1.2	117.5	2.3	1.6	115.5	-0.4	-0.2
H1 2017	116.7	3.2	2.1	119.5	3.6	1.8	117.9	4.1	2.0
H2 2017	115.8	1.2	2.0	117.8	1.1	2.6	119.4	0.2	-1.1

¹ Group 1 includes 91 banks, G-SIB includes 26 banks and Group 2 includes 45 banks.

Source: Basel Committee on Banking Supervision.

NSFR and change in ASF and RSF, by region

Consistent sample of Group 1 banks,¹ exchange rates as of 31 December 2017, in per cent

Table C.89

	Europe			Americas			Rest of the world		
	Change				C	hange		Change	
	NSFR	ASF	RSF	NSFR	ASF	RSF	NSFR	ASF	RSF
H2 2012	95.6			89.0			110.7		
H1 2013	96.8	-0.8	-1.9	89.6	0.3	-0.2	108.6	7.1	9.1
H2 2013	101.4	9.9	4.9	101.7	25.0	10.1	129.8	14.8	-3.9
H1 2014	102.2	0.7	-0.1	102.6	2.6	1.7	125.3	5.0	8.7
H2 2014	101.9	-0.3	-0.1	110.9	3.0	-4.7	120.8	2.8	6.7
H1 2015	104.0	3.7	1.6	110.2	2.0	2.7	119.7	5.0	6.0
H2 2015	106.2	0.4	-1.7	111.8	2.1	0.6	121.5	3.1	1.5
H1 2016	107.0	0.4	-0.3	109.3	1.6	3.9	122.0	3.1	2.6
H2 2016	109.5	2.0	-0.3	110.3	3.3	2.4	122.9	4.1	3.4
H1 2017	111.8	1.9	-0.2	110.3	1.9	2.0	123.7	4.3	3.6
H2 2017	112.2	1.2	0.8	110.1	1.2	1.4	121.3	2.3	4.4

¹ Europe includes 32 banks, the Americas include 17 banks and the rest of the world includes 42 banks.

Previous monitoring reports published by the Basel Committee

December 2010	<i>Results of the comprehensive quantitative impact study</i> , December 2010, <u>www.bis.org/publ/bcbs186.htm</u>						
April 2012	Results of the Basel III monitoring exercise as of 30 June 2011, www.bis.org/publ/bcbs217.htm						
September 2012	Results of the Basel III monitoring exercise as of 31 December 2011, www.bis.org/publ/bcbs231.htm						
March 2013	Results of the Basel III monitoring exercise as of 30 June 2012, www.bis.org/publ/bcbs243.htm						
September 2013	Basel III monitoring report, www.bis.org/publ/bcbs262.htm						
March 2014	Basel III monitoring report, www.bis.org/publ/bcbs278.htm						
September 2014	Basel III monitoring report, www.bis.org/publ/bcbs289.htm						
	Main findings of the trading book hypothetical portfolio exercise	Diana Iercosan, Derek Nesbitt and Arnaud Sandrin					
March 2015	Basel III monitoring report, www.bis.org/bcbs/publ/d312.htm						
	Analysis of the QIS for the fundamental review of the trading book						
September 2015	Basel III monitoring report, www.bis.org/bcbs/publ/d334.htm						
March 2016	Basel III monitoring report, www.bis.org/bcbs/publ/d354.htm						
	Comprehensive QIS on interest rate risk in the banking book	Ethan Goh, Kamil Pliszka and Davy Reinard					
September 2016	Basel III monitoring report, www.bis.org/bcbs/publ/d378.htm						
	Results of the quantitative impact study on the large exposures review clause	Marie-Céline Bard, Ken Taniguchi and Lynnette Withfield					
February 2017	Basel III monitoring report, www.bis.org/bcbs/publ/d397.htm						
	Impact of the revised minimum capital requirements for market risk	Scott Nagel					
	Results of the survey on the interaction of regulatory instruments	Diana Hancock and Doriana Ruffino					
September 2017	Basel III monitoring report, www.bis.org/bcbs/publ/d416.htm						
	Impact of the revised minimum capital requirements for market risk	Scott Nagel					
	Impact of the revised securitisation framework	Bernardo D'Alessandro, Thomas Morck and Emanuela Piani					
December 2017	Basel III monitoring report – Results of the cumulative quantitative impact study, <u>www.bis.org/bcbs/publ/d426.htm</u>						
March 2018	Basel III monitoring report, www.bis.org/bcbs/publ/d433.htm						
	Impact of the revised securitisation framework	Bernardo D'Alessandro, Thomas Morck and Emanuela Piani					