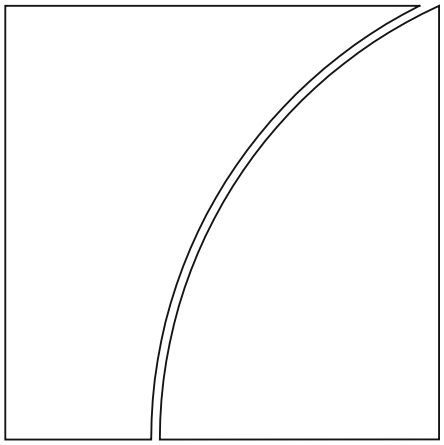
Basel Committee
on Banking Supervision



Basel III
Monitoring Report

October 2019

BANK FOR INTERNATIONAL SETTLEMENTS

Queries regarding this document should be addressed to the Secretariat of the Basel Committee on Banking Supervision (e-mail: qis@bis.org).

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Basel III Monitoring Report

September 2019

Special feature

Annexes

Conventions used in this report

billion thousand million
trillion thousand billion
lhs, rhs left-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 1 August 2019.

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Highlights of the Basel III monitoring exercise as of 31 December 2018

Changes in minimum required capital from fully phased-in final Basel III remain stable for large internationally active banks compared with end-2017, including the recently recalibrated market risk standards

Liquidity ratios remain stable compared with end-June 2018

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. Since the end-2017 reporting date, the report also captures the effects of the Committee's finalisation of the Basel III reforms.[1] For the first time, it also reflects the finalisation of the market risk framework published in January 2019.[2] This report summarises the aggregate results using data as of 31 December 2018.[3] Furthermore, this report includes a special feature on counterparty credit risk and credit valuation adjustment risk. 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 included for a total of 181 banks, including 105 large internationally active ("Group 1") banks, among them all 29 G-SIBs, and 76 other ("Group 2") banks.[4] 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 phase-in 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 2018. 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

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

2 Basel Committee on Banking Supervision, *Minimum capital requirements for market risk*, January 2019 (rev February 2019), www.bis.org/bcbs/publ/d457.htm.

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

4 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.

requirements for domestic systemically important banks, nor does it reflect any countercyclical capital buffer requirements.

Overview of results

Table 1

	30 June 2018			31 December 2018		
	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 (%)	12.7	12.5	15.5	12.7	12.6	15.4
Target capital shortfalls (€ bn);[1] of which:	0.0	0.0	2.0	1.9	0.0	1.3
CET1	0.0	0.0	0.0	0.2	0.0	0.0
Additional Tier 1	0.0	0.0	1.9	1.7	0.0	1.1
Tier 2	0.0	0.0	0.1	0.0	0.0	0.0
TLAC shortfall 2022 minimum (€ bn)	68.0	68.0		32.6	32.6	
Total accounting assets (€ bn)	64,959	43,677	4,434	64,271	43,849	4,064
Leverage ratio (%)	5.8	5.8	5.4	6.0	6.0	5.3
LCR (%)	135.1	132.0	180.2	136.2	134.0	177.2
NSFR (%)	116.0	117.1	119.2	116.3	117.8	120.0
Fully phased-in final Basel III framework (2027)						
Change in Tier 1 MRC at the target level (%)	5.3	5.7	9.0	3.0	3.3	8.0
CET1 ratio (%)	11.7	11.6	13.0	12.2	12.1	13.0
Target capital shortfalls (€ bn); of which:	30.1	29.3	6.0	23.5	21.6	3.8
CET1	7.0	7.0	2.2	5.8	4.8	1.8
Additional Tier 1	10.6	10.3	2.3	10.1	9.2	1.1
Tier 2	12.6	12.0	1.4	7.6	7.6	0.9
TLAC shortfall 2022 minimum (€ bn)	108.8	108.8		78.0	78.0	

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

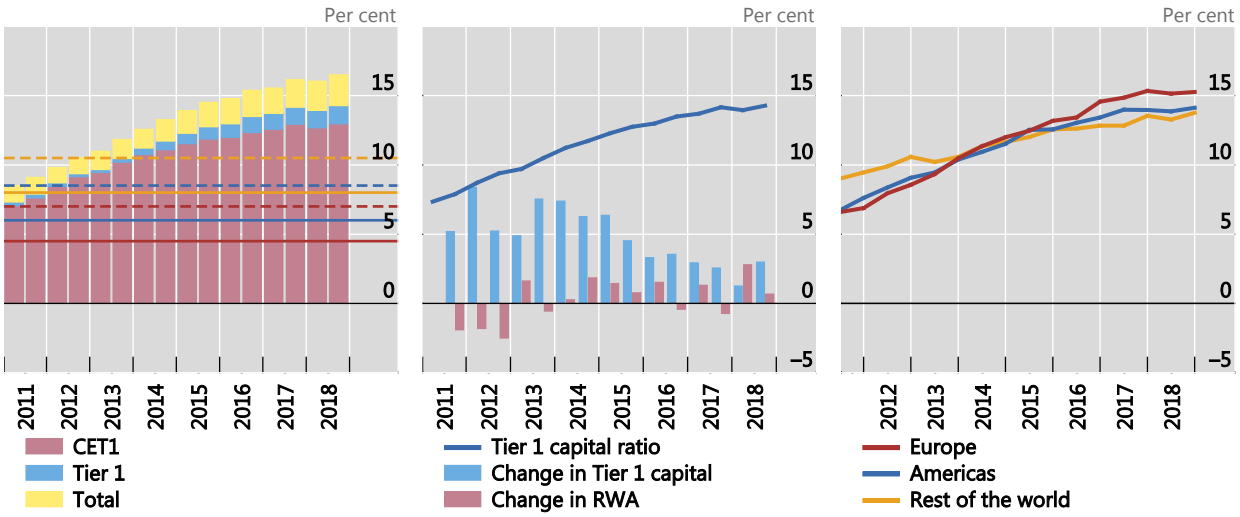
Source: Basel Committee on Banking Supervision.

- Compared with the previous reporting period (end-June 2018) the average Common Equity Tier 1 (CET1) capital ratio under the fully phased-in initial Basel III framework has remained stable at 12.7% for Group 1 banks and decreased from 15.5% to 15.4% for Group 2 banks.
- One bank in the Group 1 sample is below the 7.0% target CET1 ratio under fully phased-in initial Basel III. All banks in the Group 2 sample show CET1 ratios above the 7.0% target ratio under fully phased-in initial Basel III. This target includes the capital conservation buffer, 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, two of the 24 G-SIBs reporting total loss-absorbing capacity (TLAC) data have a combined shortfall of €32.6 billion, compared with €68.0 billion at the end of June 2018. Considering the fully phased-in final Basel III framework, six banks report a shortfall of €78.0 billion which is a decrease from €108.8 billion at the end of June 2018.
- Group 1 banks' average Liquidity Coverage Ratio (LCR) increased by 1.1 percentage points to 136.2%, while the average Net Stable Funding Ratio (NSFR) increased only slightly from 116.0% to 116.3%. For Group 2 banks, there was a small decrease for the LCR and a small increase for the NSFR.

Fully phased-in initial Basel III capital ratios increase slightly

Consistent sample of Group 1 banks — Graph 1

CET1, Tier 1 and total capital ratios[1] | Determinants of changes[2] | Tier 1 ratios by region[3]



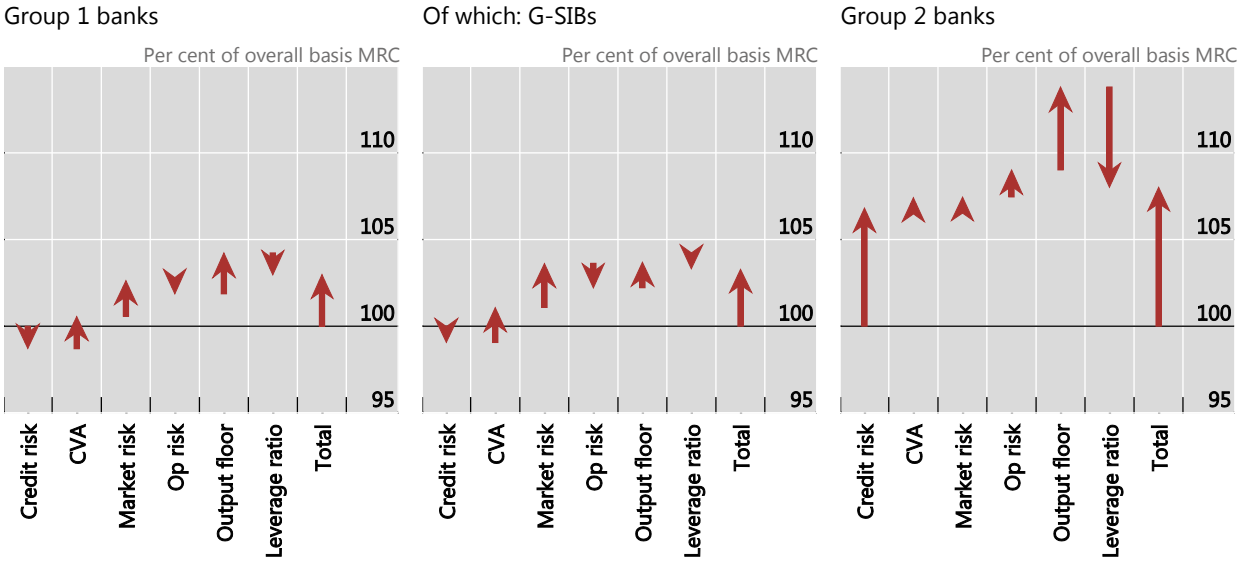
[1] The solid lines depict the relevant minimums, the dotted lines the minimums plus the capital conservation buffer. See Table A.4 for the relevant levels. [2] Exchange rates as of 31 December 2018. [3] See Table B.1 for the composition of the regions.

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 in the consistent sample have increased to 13.0% in December 2018 from 12.7% in June 2018. Overall Tier 1 and total capital ratios 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.
- Capital ratios have remained relatively constant in Europe. In the Americas and the rest of the world, most of the capital ratios saw increases, with the largest improvement coming from the rest of the world.

Lower increase in Tier 1 MRC at the target level for Group 1 banks due to the final Basel III standards compared to end-June 2018

Graph 2



Credit risk shows the change in MRC due to revised standardised and internal ratings-based 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.

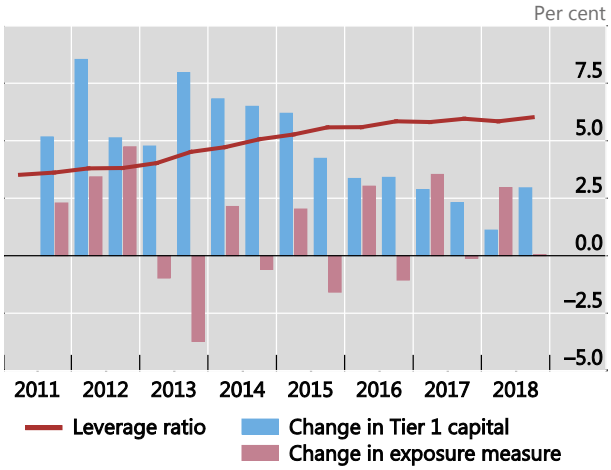
Source: Basel Committee on Banking Supervision. See also Table 4.

- For Group 1 banks, the Tier 1 minimum required capital (MRC) would increase by 3.0% following full phasing-in of the final Basel III standards. This increase is composed of a 4.2% increase for the risk-based components combined, driven by the positive contributions of output floor (2.4%), market risk (2.1%) and CVA (1.9%), as well as reductions in credit risk (-1.3%) and operational risk requirements (-0.8%). This increase is offset by a -1.3% 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. For the first time, this reflects the finalisation of the market risk framework published in January 2019.
- The impact on MRC across regions is very heterogeneous for Group 1 banks with a small decrease shown in the Americas (-0.4%), a moderate decrease in the rest of the world (-5.4%) and in contrast to this a strong increase in MRC for European banks (+18.6%).
- For Group 2 banks, the overall 8.0% increase in Tier 1 MRC is driven by an increase in the risk-based measure of 13.8%, mainly driven by credit risk (6.8%) and the output floor (4.8%). The change in Tier 1 MRC for the leverage ratio is partially offsetting this increase at -5.8%.
- The average impact of the final Basel III framework on Group 1 banks has decreased by more than two percentage points when compared to end-June 2018 and is now lower than at the end-2017 reporting date. On average, at end-June 2018, the total change in Tier 1 MRC at the target level was higher at 5.3% for Group 1 banks, 5.7% for G-SIBs and 9.0% for Group 2 banks. This is largely driven by a lower market risk impact following the application of the recalibrated 2019 standard. At end-December 2017, the total change in Tier 1 MRC at the target level was 3.6% for Group 1 banks, 3.0% for G-SIBs and 5.9% for Group 2 banks.
- By excluding the revisions to the market risk framework as in the cumulative QIS at end-December 2015, the current end-December 2018 data show increases in Tier 1 MRC of 0.9%, 0.7% and 8.0% for Group 1 banks, G-SIBs and Group 2 banks, respectively. These increases remain almost unchanged compared to end-June 2018.

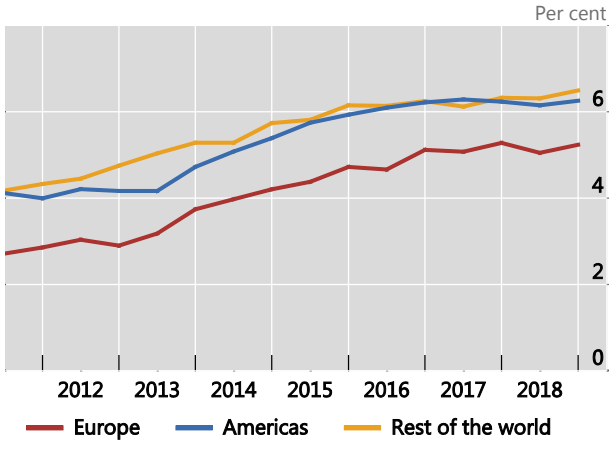
Fully phased-in Basel III leverage ratios[1] increase slightly for large banks in H2 2018

Consistent sample of Group 1 banks, exchange rates as of 31 December 2018 Graph 3

Leverage ratios and their determinants



Leverage ratios by region



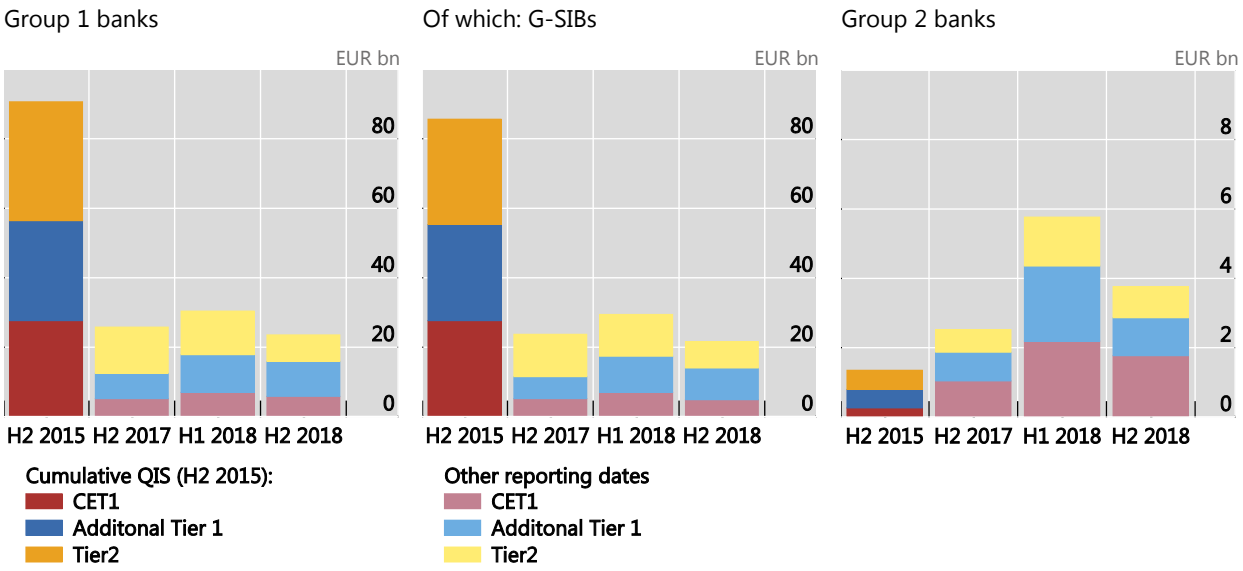
[1] Data points from H1 2011 to H2 2012 use the original definition of the leverage ratio. Data points from H1 2013 to H1 2017 use the definition of the leverage ratio set out in the 2014 version of the framework. Note that the data points for H1 2013 use an approximation for the initial definition of 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 and Table C.15 for underlying data and sample size.

- For the full sample at the end-December 2018 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 5.3% for Group 2 banks.
- For the consistent sample of banks, the average fully phased-in Basel III leverage ratio has increased from 5.8% in June 2018 to 6.0% in December 2018. Until the end of 2017, the average leverage ratio had continuously increased from 3.5% in June 2011, driven by Tier 1 capital increases which had more than offset an overall increase in the exposure measure.
- One out of 95 Group1 banks and two out of 67 Group 2 banks with aggregate incremental shortfalls of €1.2 billion and €1.1 billion, respectively, would not meet a fully phased-in minimum Basel III Tier 1 leverage ratio of 3%.
- Leverage ratios are lower in Europe as compared to the Americas and the rest of the world.

Combined capital shortfalls at the target level under the final Basel III standards lower compared with end-June 2018[1]

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



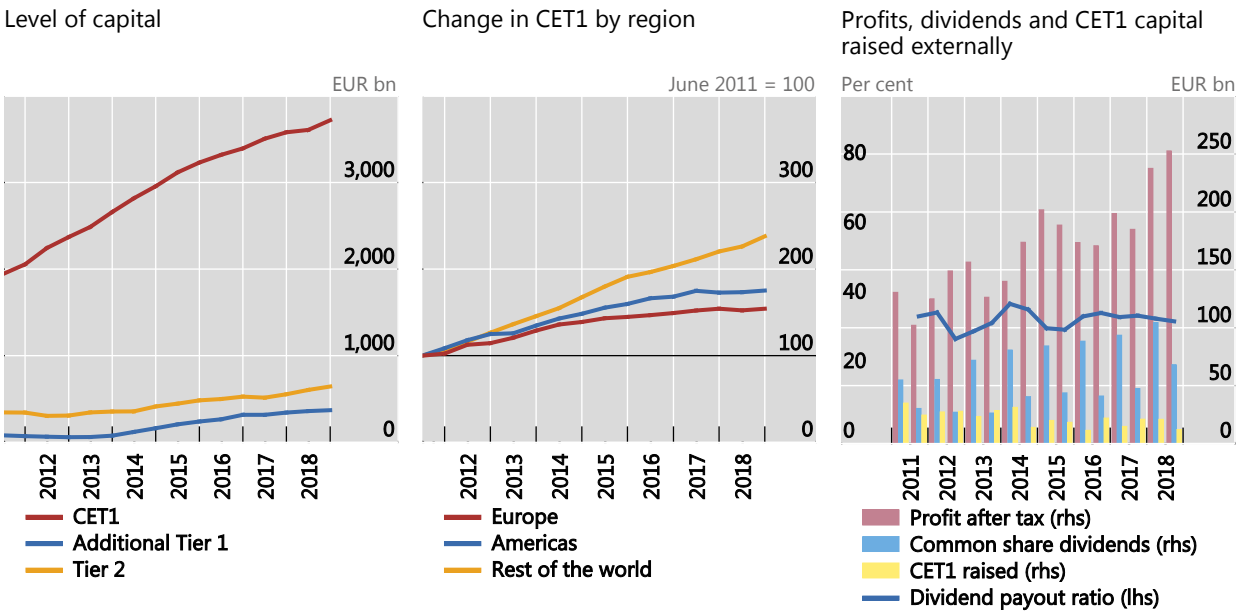
[1] Results for H2 2015 are based on the Committee's cumulative Quantitative Impact Study and are not fully comparable from a methodological point of view, in particular since all changes from the revised market risk framework were already added to MRC under the current rules such that they were not reflected in the *change* in MRC.

Source: Basel Committee on Banking Supervision. See also Table C.22.

- The total capital shortfalls for Group 1 banks at the end-December 2018 reporting date are the lowest experienced so far. The decrease over the last six months is partly driven by an increase in total capital and by the recalibrated standards for market risk.
- Overall, more than 90% of the capital shortfalls for Group 1 banks are generated by G-SIBs at end-December 2018.
- For Group 2 banks, the amount of shortfalls has also decreased for CET1, additional Tier 1 and Tier 2 capital. The variations are also driven by differences in the samples. Compared to end-June 2018, the number of Group 2 banks included in the analysis has declined from 68 to 63.

Fully phased-in regulatory CET1 capital increased by 91.3% since 2011

Consistent sample of Group 1 banks, exchange rates as of 31 December 2018 Graph 5



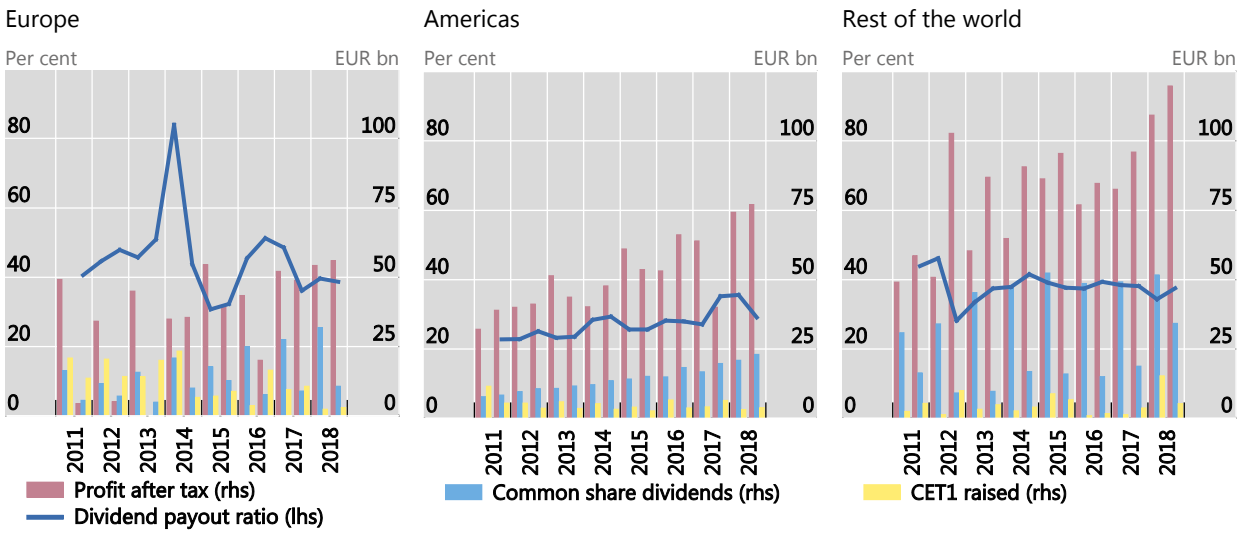
[1] The dividend payout ratio is calculated as common share dividends divided by profits after tax by using a rolling 12 months window.

Source: Basel Committee on Banking Supervision. See Table C.23, Table C.26, Table C.27 and Table C.29 for underlying data and sample size. Table C.24, Table C.28 and Table C.30 provide an additional regional breakdown for Group 1 banks.

- From June 2011 to end-December 2018, the level of Group 1 banks' CET1 capital has increased by 91.3% from €1,945 billion to €3,720 billion. Since end-June 2018, Group 1 CET1 capital has increased by €110 billion (or 3.0%).
- 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 54.2% and 75.3%, respectively.
- The rise in overall CET1 capital among Group 1 banks in the current reporting period is largely due to profits, primarily generated by the G-SIBs.
- Group 1 banks' profits after tax continue to increase over the last six months and reached a new historical peak of €252.9 billion over the second half of 2018. More than 70% of the profits after tax of Group 1 banks have been realised by G-SIBs.

Profits trend upwards in the Americas and the rest of the world as banks continue to raise CET1 capital

Consistent sample of Group 1 banks, exchange rates as of 31 December 2018 Graph 6



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

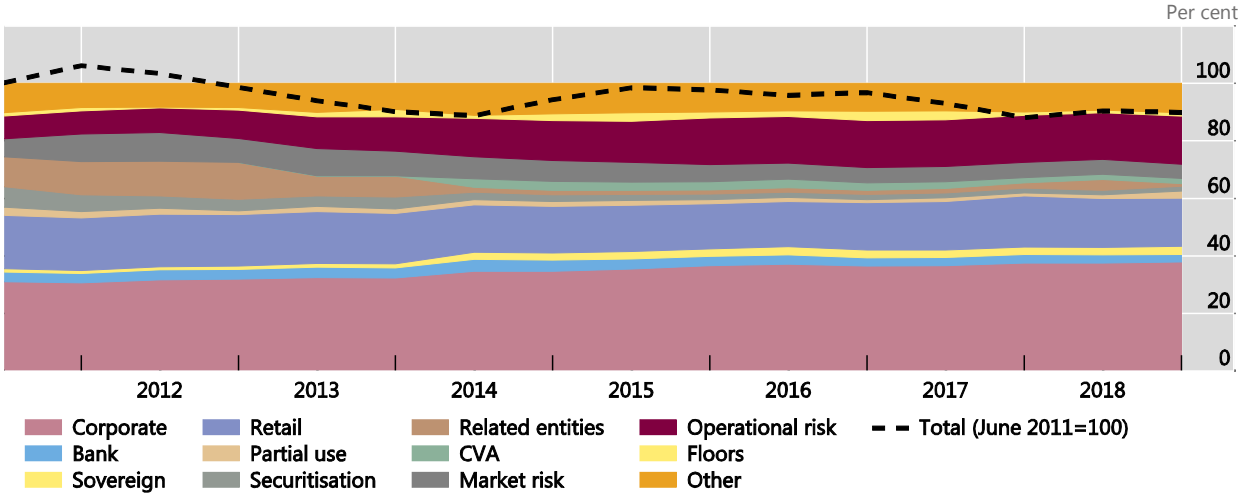
Source: Basel Committee on Banking Supervision. See Table C.28 and Table C.30 for underlying data and sample size.

- Since 2011, annual profits after tax recorded have always been higher in the Americas and the rest of the world than in Europe. The rest of the world is the highest in aggregate.
- The share of profits of European banks tends to be two to three percentage points lower than their share in Tier 1 capital or RWA (see also Table B.2). Conversely, the share of profits of banks in the Americas and the rest of the world tends to be in line with or higher than their share in Tier 1 capital or RWA.
- Over the last six months, the highest annual dividend payout ratios were realised by the banks in Europe (38.7%), followed by banks in the rest of the world region (37.5%) and finally in the Americas (29.1%).
- Around 55.3% of the CET1 capital raised since 2011 has been raised by Group 1 banks in Europe, while the banks in the Americas and the rest of the world represented 22.5% and 22.2%, respectively, of the CET1 capital raised globally.

Analysis of share of MRC by asset class[1] according to current rules shows increase in operational risk MRC and decrease in credit risk MRC

Consistent sample of Group 1 banks

Graph 7



[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 past-due items under the standardised approach, are listed separately as "partial use".

Source: Basel Committee on Banking Supervision. See Table C.33 for underlying data and sample size.

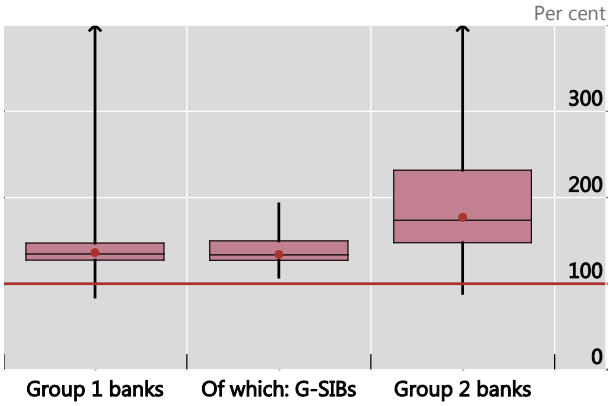
- As of end-December 2018, overall credit risk continues to compose the dominant portion of overall minimum required capital (MRC), with this category on average comprising 65.2% of total MRC for Group 1 banks.[5] However, the share of credit risk has declined significantly from 74.6% at the end of June 2011.
- Conversely, the share of operational risk MRC increased sharply from 7.8% at the end of June 2011 to 16.2% at the end of 2015 and is roughly stable since. 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 37.9% between June 2011 and December 2018, while the share of MRC for securitisation exposures declined from 7.2% to 1.7%.

[5] 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.

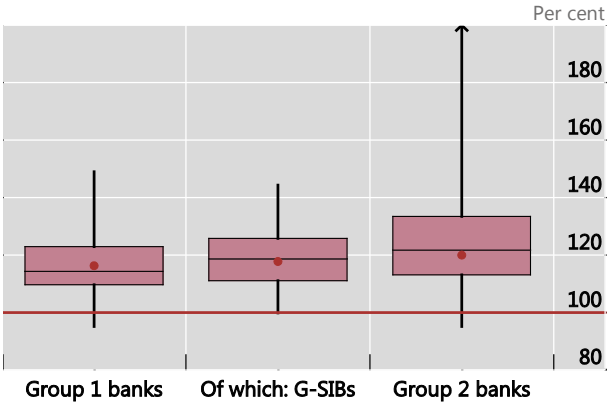
Almost all banks meet the fully phased-in liquidity coverage ratio (LCR) and the net stable funding ratio (NSFR)[1]

Overall distribution — Graph 8

Liquidity coverage ratio[2]



Net stable funding ratio



[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 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 line represents the 100% minimum (applicable from 1 January 2019).

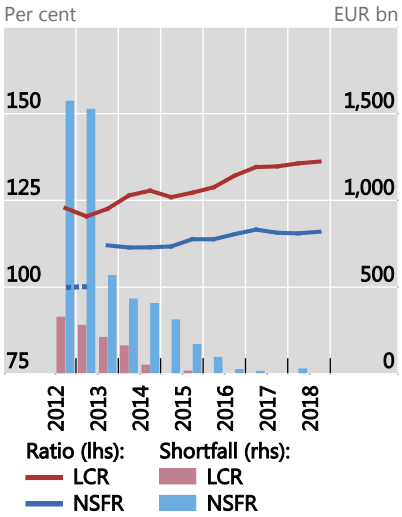
Source: Basel Committee on Banking Supervision. See Table C.76 for underlying data and sample size.

- The average LCR for Group 1 banks is 136.2% and for Group 2 banks 177.2% while at the end of June 2018, it was 135.1% and 180.2%, respectively. However, the decline for Group 2 banks is due to a change in the sample of banks; the sample of Group 2 banks providing data for the end-December 2018 reporting date had an LCR of 170.2% six months earlier.
- The average NSFR is 116.3% for Group 1 banks and 120.0% for Group 2 banks at end-December 2018 compared with 116.0% and 119.2% respectively, at end-June 2018.
- All but one Group 1 bank and all but one Group 2 bank in the full sample of banks at the end-December 2018 reporting date meet or exceed the final LCR minimum requirement of 100%.
- Some 94.2% of Group 1 banks and 94.7% 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 2018.

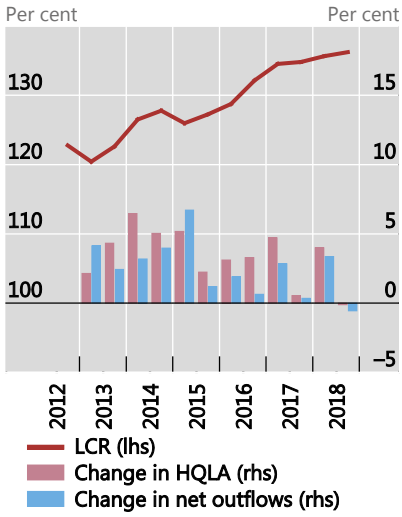
LCRs and NSFRs tend to stabilise while NSFR shortfall decreases

Consistent sample of Group 1 banks[1] Graph 9

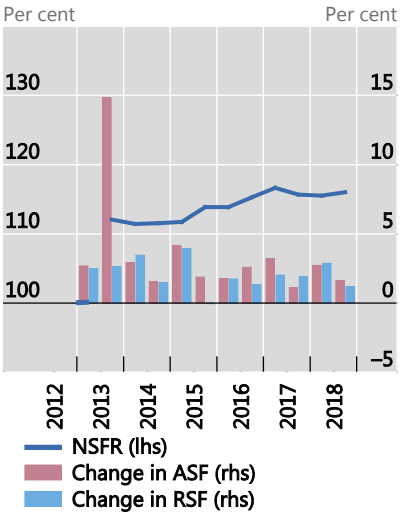
LCR, NSFR and related shortfalls[2]



LCR and change in its determinants[3]



NSFR and change in its determinants[3]



[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 2018.

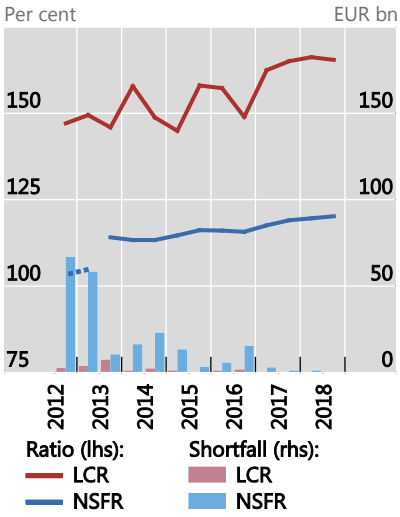
Source: Basel Committee on Banking Supervision. See Table C.82, Table C.83, Table C.86 and Table C.90 for underlying data and sample size. Table C.84, Table C.87 and Table C.91 provide additional regional breakdowns for Group 1 banks.

- For a consistent sample of Group 1 banks, all banks continue to comply with the 100% LCR minimum requirement at end-December 2018.
- The aggregate NSFR shortfall was €3.7 billion for a consistent sample of Group 1 banks, compared with €28.9 billion at end-June 2018. The average NSFR for the same sample of banks increased by 0.5 percentage points to 116.0%.

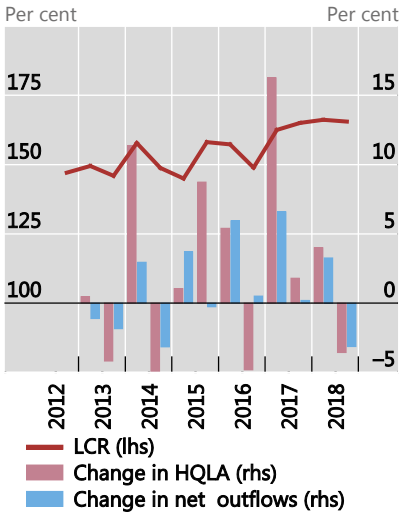
LCRs and NSFRs tend to stabilise while NSFR shortfall decreases

Consistent sample of Group 2 banks[1] Graph 10

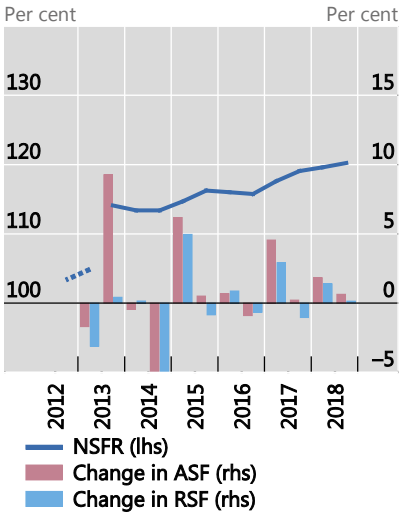
LCR, NSFR and related shortfalls[2]



LCR and change in its determinants[3]



NSFR and change in its determinants[3]



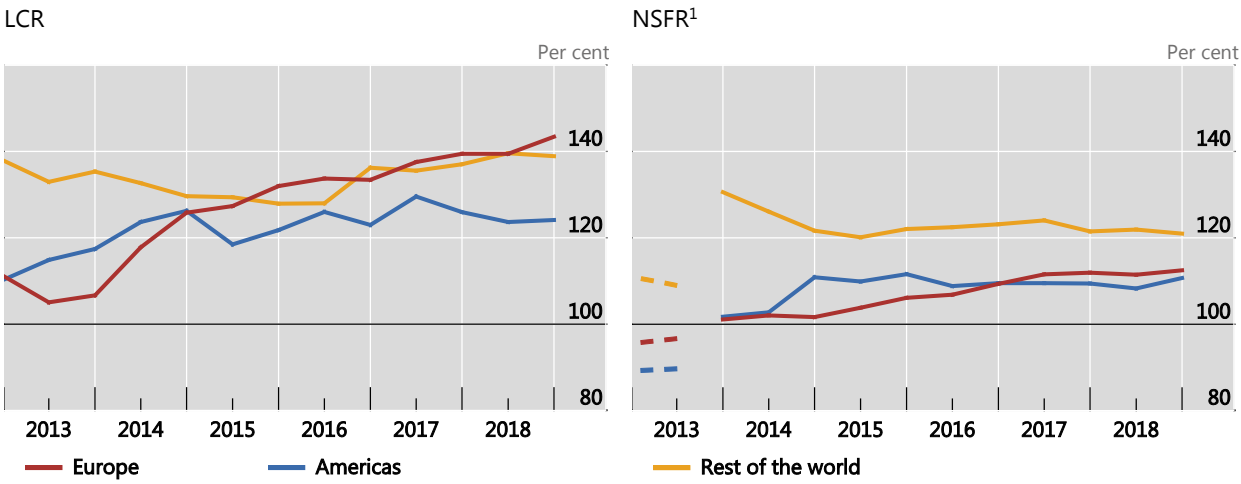
[1] As described in Section 3.2, the NSFR time series depicts data reflecting NSFR standard released in December 2010, January 2014 and October 2014. [2] Exchange rates as at the reporting dates. [3] Exchange rates as of 31 December 2018.

Source: Basel Committee on Banking Supervision. See Table C.82, Table C.83, Table C.86 and Table C.90 for underlying data and sample size.

- For a consistent sample of Group 2 banks, the LCR shortfall increased slightly from zero to €0.1 billion over the second half of 2018.
- The aggregate NSFR shortfall was €0.1 billion for a consistent sample of Group 2 banks, compared with €0.8 billion at end-June 2018. The average NSFR for the same sample of banks increased by 0.6 percentage points to 120.2%.

LCRs remains lower in the Americas, NSFR remains lower in Europe and the Americas

Consistent sample of Group 1 banks — Graph 11



[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.84 for underlying data and sample size.

- The weighted average LCR at end-December 2018 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 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 2018 for Group 1 banks in each of the three regions was well in excess of 100%. Europe and the Americas at 112.4% and 110.7% at end-December 2018 have lower average NSFRs compared with the rest of the world at 121.0%.

Detailed results of the Basel III monitoring exercise as of 31 December 2018

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 reforms[2] 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 2018 data.[4]

1.1 Scope of the monitoring exercise

All but one of the 27 Committee member countries and Finland participated in the Basel III monitoring exercise as of 31 December 2018. 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 RWA, the calculation of a leverage ratio and components of the liquidity

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", www.bis.org/press/p100726.htm, and the 12 September 2010 press release "Group of Governors and Heads of Supervision announces higher global minimum capital standards", www.bis.org/press/p100912.htm.

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

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

4 The data for Japan are as of the end of September 2018, 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 2018, which corresponds to Canadian banks' fiscal second quarter-end.

5 See Basel Committee on Banking Supervision, *Instructions for Basel III monitoring*, March 2019, www.bis.org/bcbs/qis/.

metrics. Table A.3 in Annex A shows which standards are relevant for the relevant Basel III regime (initial Basel III, 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). For the first time, this report reflects the finalisation of the market risk framework published in January 2019.[6]

The final data were submitted to the Secretariat of the Committee by 1 August 2019. 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 included for a total of 181 banks, including 105 Group 1 banks and 76 Group 2 banks.[7] 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, 83 Group 2 banks and 189 banks overall, the samples decreased. Nevertheless, the impact of the final Basel III framework could be assessed for a larger sample of 148 banks, among which 86 Group 1 banks and 62 Group 2 banks.[8]

Banks were asked to provide data at the consolidated level as of 31 December 2018. 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 2018 ("H2 2018") reporting dates, in order to make more meaningful period-to-period comparisons. The consistent sample differs for the various analyses; typically it includes around 80 Group 1 banks, of which 29 are G-SIBs, and around 30 Group 2 banks. The G-SIBs in the time series analyses are among those banks which have been classified as G-SIBs as of November 2018, 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

[6] Basel Committee on Banking Supervision, *Minimum capital requirements for market risk*, January 2019 (rev February 2019), www.bis.org/bcbs/publ/d457.htm.

[7] See Table B.1 in the Statistical Annex for details on the sample. Also note that this table shows banks for which data were generally included for the specific topics, but not necessarily sufficiently complete to be used in all analyses.

[8] See Table B.3 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.

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 leverage ratio exposures for the total sample.

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. 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;
- Capital instruments that no longer qualify as non-common equity Tier 1 or Tier 2 capital are phased out beginning 1 January 2013. Fixing the base at the nominal amount of such instruments outstanding on 1 January 2013, their recognition is capped at 90% from 1 January 2013, with the cap reducing by 10 percentage points in each subsequent year;
- An additional 2.5% capital conservation buffer above the regulatory minimum capital ratios, which must be met with CET1 capital, was phased in by 1 January 2019; and
- The additional loss absorbency requirement for G-SIBs, which ranges from 1.0% to 2.5%, was fully phased in by 1 January 2019. It is 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 I-based 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 2018 reporting date may differ from the H2 2018 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 2018 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 non-qualifying 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 three 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 relevant 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. Table 3 shows transitional and fully phased-in CET1 capital ratios under the initial and final Basel III frameworks by regions. Details of capital ratios and capital shortfalls are provided in Section 2.1 and Section 2.4.

Aggregate capital ratios and (incremental) combined capital shortfalls at the target level[1]

Table 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]			
	Initial		Final		Initial		Final	
	Current	Fully phased-in	Transitional	Fully phased-in	Current	Fully phased-in	Transitional	Fully phased-in
Group 1 banks								
CET1 capital	12.7	12.7	12.8	12.2	0.1	0.2	0.6	5.8
Tier 1 capital[3]	14.1	13.9	14.0	13.4	1.5	1.7	7.0	10.1
Total capital[4]	16.6	16.1	16.3	15.6	0.0	0.0	5.3	7.6
Sum					1.5	1.9	12.9	23.5
Of which: G-SIBs								
CET1 capital	12.6	12.6	12.5	12.1	0.0	0.0	0.6	4.8
Tier 1 capital[3]	14.1	13.9	13.9	13.4	0.0	0.0	5.1	9.2
Total capital[4]	16.4	16.1	16.0	15.5	0.0	0.0	5.3	7.6
Sum					0.0	0.0	11.0	21.6
Group 2 banks								
CET1 capital	15.9	15.4	13.5	13.0	0.0	0.0	1.8	1.8
Tier 1 capital[3]	16.7	16.1	14.2	13.6	1.1	1.1	0.9	1.1
Total capital[4]	18.9	18.3	16.2	15.5	0.0	0.0	0.9	0.9
Sum					1.1	1.1	3.6	3.8

[1] The target level includes the capital conservation buffer and the capital surcharges for 29 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

	Initial Basel III standards			Final Basel III standards		
	Number of banks	Current	Fully phased-in	Number of banks	Transitional	Fully phased-in
Group 1 banks	97	12.7	12.7	93	12.8	12.2
Of which: Europe	37	13.6	13.4	36	12.0	11.2
Of which: Americas	18	12.1	12.0	16	12.2	12.1
Of which: RW	42	12.5	12.6	41	13.8	13.1
Of which: G-SIBs	29	12.6	12.6	28	12.5	12.1
Group 2 banks	68	15.9	15.4	65	13.5	13.0

Source: Basel Committee on Banking Supervision.

2.1 Risk-based capital ratios

2.1.1 Initial Basel III standards[9]

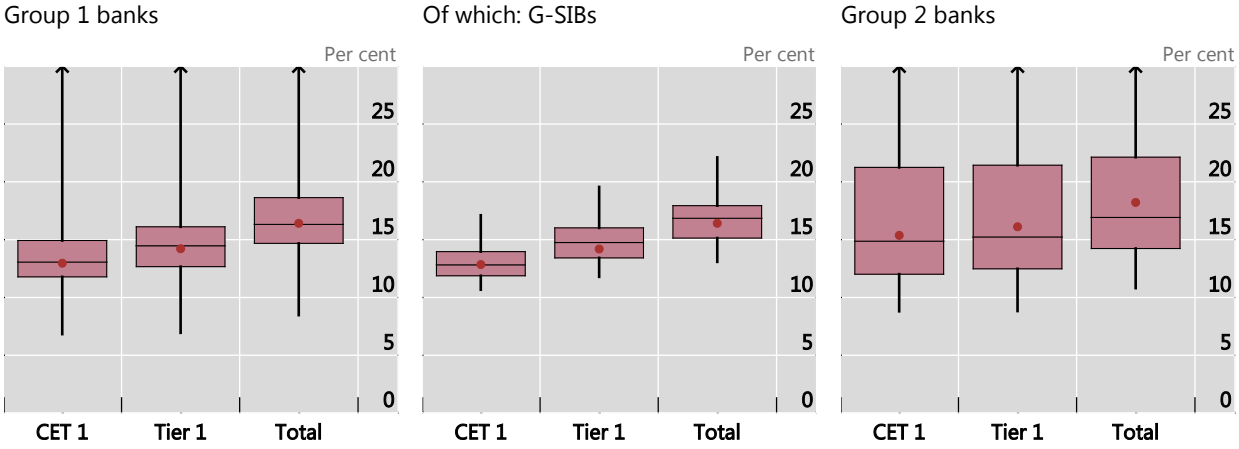
For Group 1 banks, the average CET1 capital ratio would have slightly increased from 12.9% to 13.0% as a result of the full implementation of the initial Basel III standards. For Group 2 banks, the average CET1 capital ratio declines from 15.8% under transitional initial rules to 15.4% as a result of the full phasing-in of initial Basel III (a reduction of 0.4 percentage points). Results continue to show significant variation across banks as shown in 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),[10] and by increases in RWA (denominator). Over the last period, RWA increased by 0.7% for Group 1 banks and RWA decreased by -1.6% for Group 2 banks. One bank in the Group 1 sample is below the 7.0% target CET1 ratio under in the initial Basel III framework. All banks in the Group 2 sample show CET1 ratios above the 7.0% target ratio under the initial Basel III framework. Furthermore, 93% of the Group 1 banks and 96% of the Group 2 banks show a CET1 ratio above 10%.

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 0.4 percentage points from 16.8% to 16.4% from full phasing-in of the initial Basel III framework. Group 2 banks show greater declines in Tier 1 capital ratios (from 16.6% to 16.1%) and total capital ratios (from 18.8% to 18.2%). 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.

[9] Results in this section are before the application of the transitional floors. This may result in minor differences compared to Table 2 and Table 3.

[10] See also Table B.4 and Table B.5.

Fully phased-in initial Basel III CET1, Tier 1 and total capital ratios[1] Graph 12



[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.

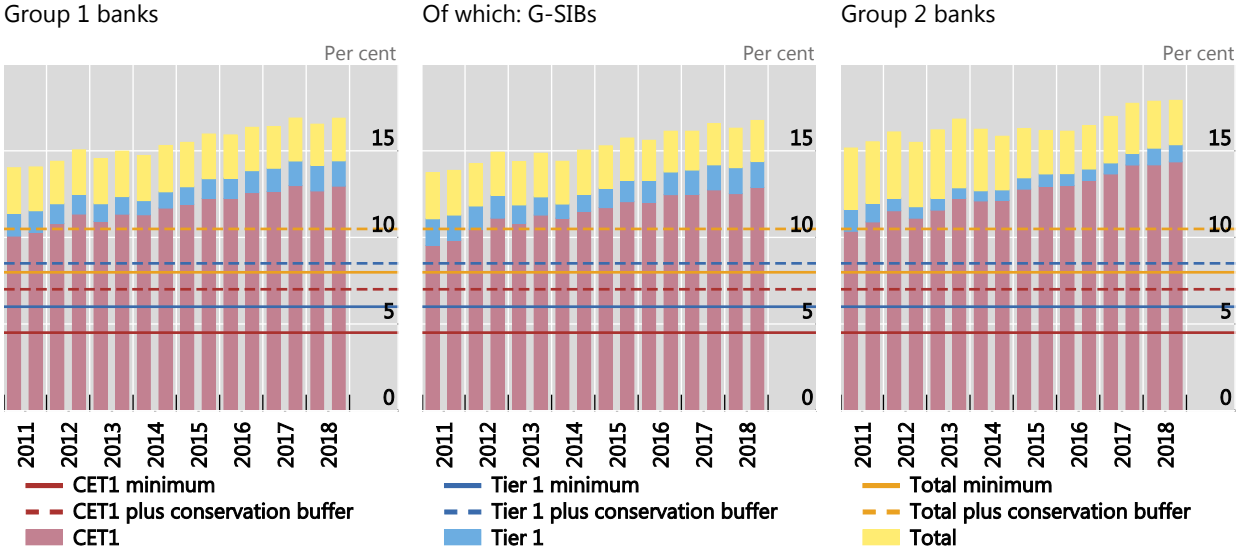
Source: Basel Committee on Banking Supervision. See Table C.2 for underlying data and sample size. Table C.1 provides related information for the transitional initial Basel III capital ratios.

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 2018. Most of the transitional capital ratios have increased over the last period for both Group 1 and Group 2 banks. The total capital ratio for Group 2 banks remains unchanged from the prior period at 17.9%. The overall increase in transitional Basel III capital ratios appears to be largely driven by increases in capital holdings (the numerator).

Graph 14 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 2018 by region. After a slight downturn in the previous period, all regions show improved or mostly stable capital ratios. After showing the highest increase of capital ratio from end-June 2011 to end-December 2017, capital ratios of European banks have decreased over the first half of 2018 and then remained relatively constant from end-June 2018 to end-December 2018. In the Americas and the rest of the world, most of the capital ratios saw slight increases from end-June 2018 to end-December 2018, with the largest improvement coming from the rest of the world. The level of capital ratios remains higher in Europe compared to the Americas and the rest of the world.

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

Consistent sample of banks — Graph 13

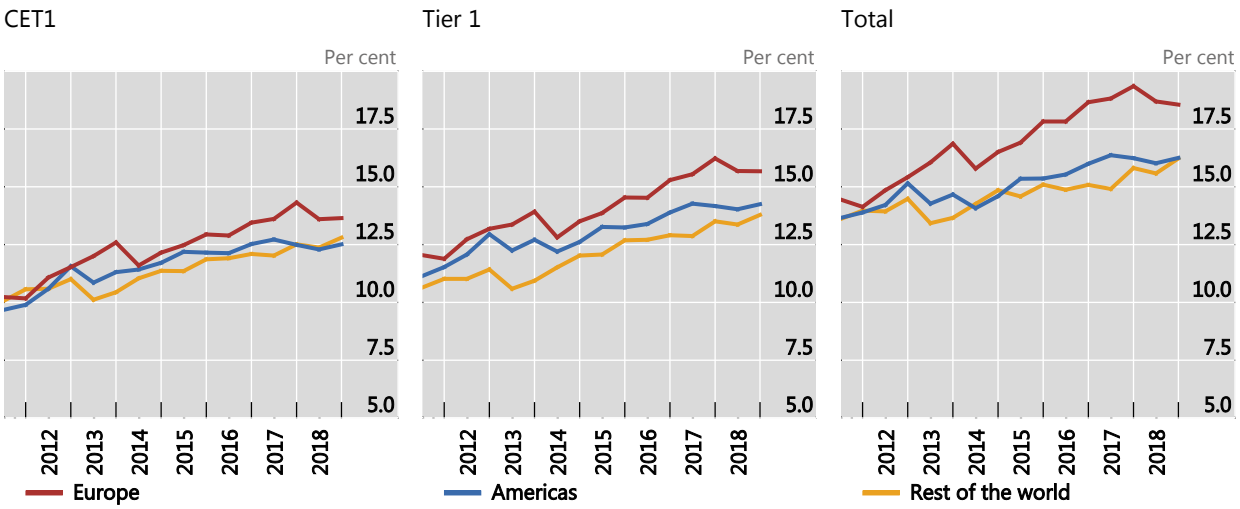


[1] Before the implementation of the Basel III framework, results have been calculated on the basis of the relevant national regulatory frameworks in place at the reporting dates.

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

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

Consistent sample of Group 1 banks — Graph 14



[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.

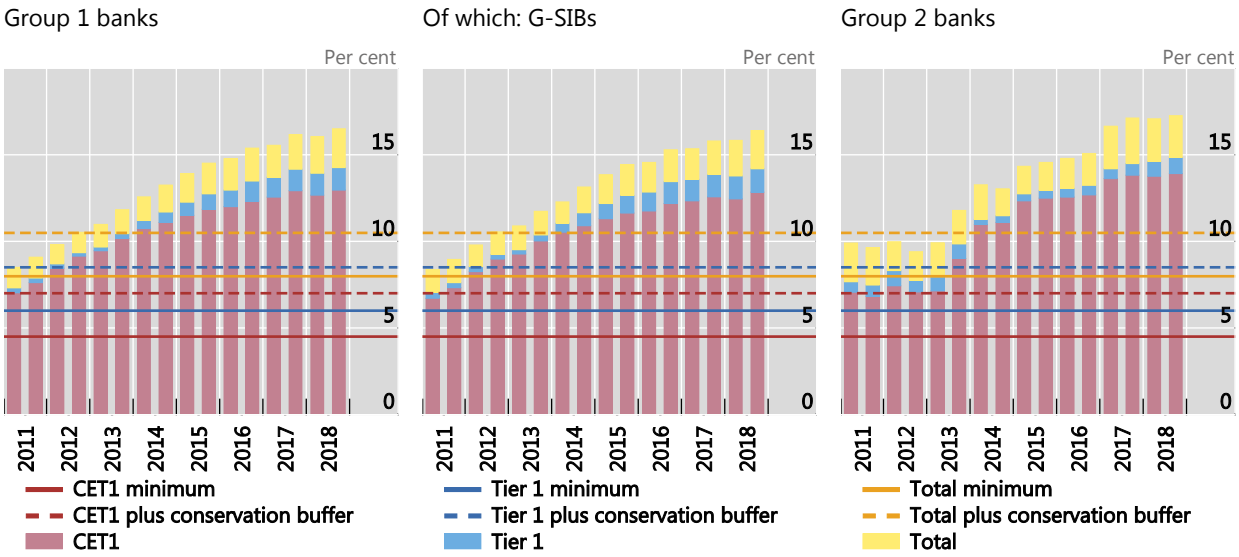
Source: Basel Committee on Banking Supervision. See Table C.4 for underlying data and sample size.

Trends in fully phased-in initial Basel III capital ratios are consistent with trends in transitional initial Basel III ratios discussed earlier. Fully phased-in initial Basel III capital ratios of Group 1 and Group 2 banks for the current period have increased compared with the prior period by 10 to 40 basis points. The

most notable increase was in the total capital ratios of G-SIBs, which increased 50 basis points from 15.9% to 16.4%.

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

Consistent sample of banks — Graph 15



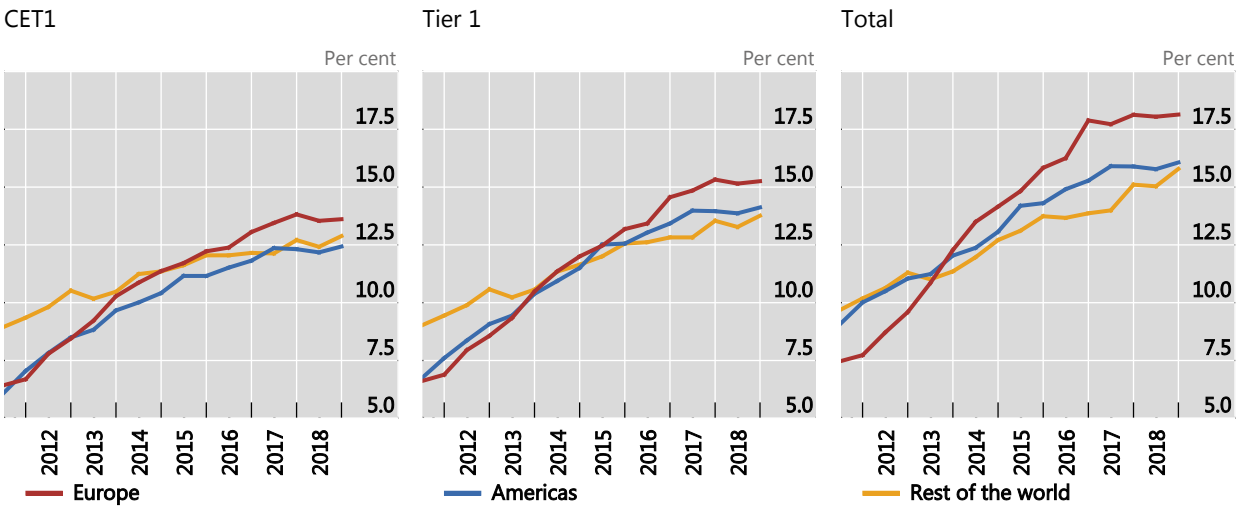
Source: Basel Committee on Banking Supervision. See Table C.5 for underlying data and sample size.

On a fully phased-in basis, Tier 1 capital ratios were more than two percentage points lower in Europe than in the rest of the world region in 2011 (Graph 16). However, this relationship reversed around 2014 when Europe had started reporting the highest levels of capital ratios.

Over the last six months, all tier levels of capital ratios for this consistent sample of Group 1 banks slightly increased for all regions. The greatest increase is recorded for CET1 ratios of 0.4, 0.2 and 0.1 percentage points for the rest of the world region, Americas and Europe, respectively. Total capital ratios improved slightly for Americas and Europe, with the largest increase of 0.8 percentage points for the rest of the world region.

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

Consistent sample of Group 1 banks — Graph 16



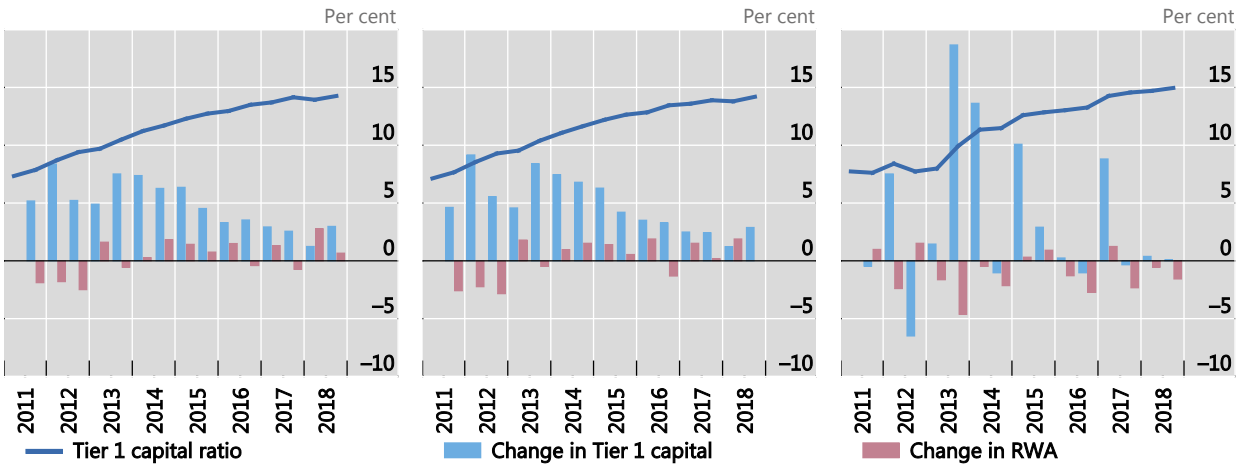
[1] Before the implementation of the Basel III framework, results have been calculated on the basis of the relevant national regulatory frameworks in place at the reporting dates.

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

Over the prior period, RWA increased by 0.7% for Group 1 banks, remained unchanged for G-SIBs and decreased by -1.6% for Group 2 banks. Tier 1 capital in the second half of 2018 increased by 3.0% for Group 1 banks, by 2.9% for G-SIBs and by 0.1% for Group 2 banks (see Graph 17).

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

Consistent sample of banks, exchange rates as of 31 December 2018 — Graph 17



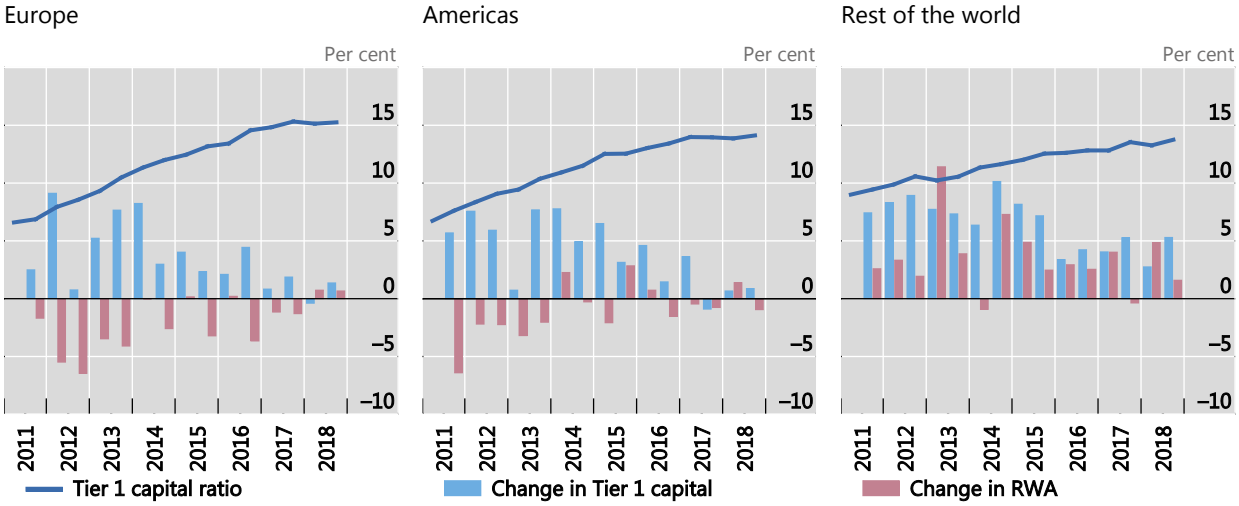
Source: Basel Committee on Banking Supervision. See Table C.7 for underlying data and sample size.

Capital and RWA values generally increased in each region, with the exception of the Americas, in which RWA declined by -0.9% (see Graph 18). Europe saw an increase in RWA of 0.7% and the rest of the world region saw an increase in RWA of 1.6%. The rise in Group 1 banks' Tier 1 capital was distributed across regions but was concentrated in banks located in the rest of the world region, where Tier 1 capital

increased by 5.4%. Europe saw an increase in Tier 1 capital of 1.4% and the Americas saw an increase of 0.9%.

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

Consistent sample of Group 1 banks, exchange rates as of 31 December 2018 Graph 18

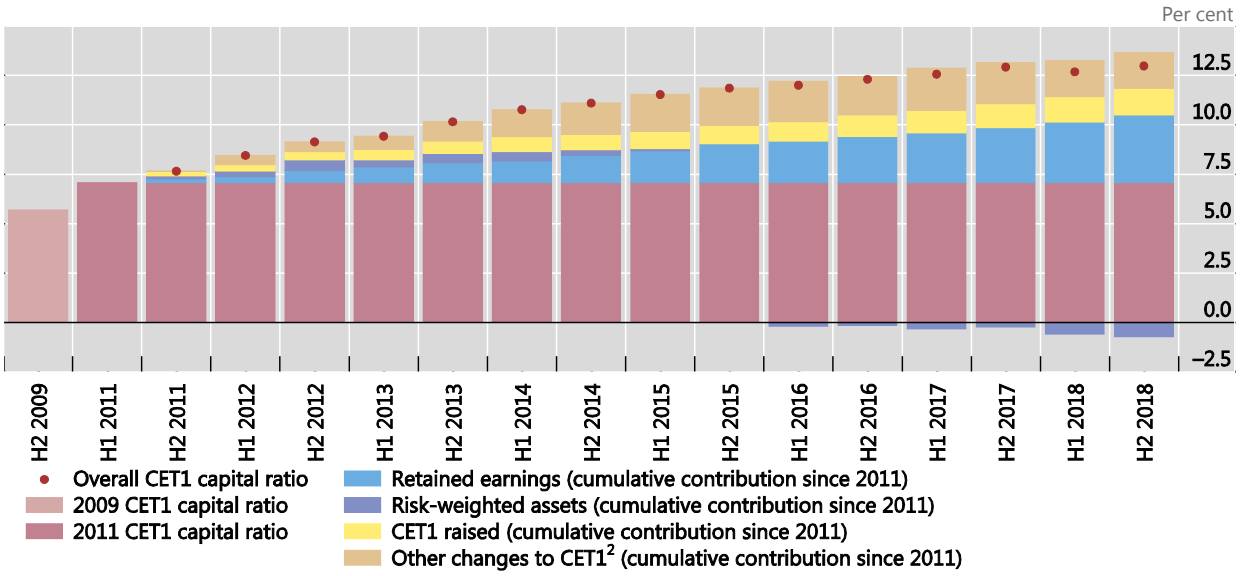


Source: Basel Committee on Banking Supervision. See Table C.8 for underlying data and sample size.

Graph 19 below shows the evolution of fully phased-in Basel III CET1 capital ratios and their drivers. Starting with the June 2011 CET1 capital ratio, the cumulative effect on the ratio of CET1 capital raised, retained earnings and other increases in CET1 capital (such as any reduction in regulatory adjustments) is added to the capital ratio. Furthermore, the impact of cumulative reductions in RWA has a positive impact on capital ratios, while the impact of cumulative increases in RWA is subtracted from the baseline capital ratio. Overall, the graph suggests that retained earnings were the by far most significant contributor to the improvements in CET1 capital ratios.

Evolution of fully phased-in initial Basel III CET1 capital ratios and their drivers

Consistent[1] sample of Group 1 banks — Graph 19



[1] Except the ratio for H2 2009, which is based on the different sample of the Committee's comprehensive Quantitative Impact Study and therefore not fully comparable. [2] Other changes include changes in regulatory adjustments to CET1 capital and any other changes in CET1 capital between two reporting dates which are not reported separately.

Source: Basel Committee on Banking Supervision. See Table C.9 for underlying data and sample size.

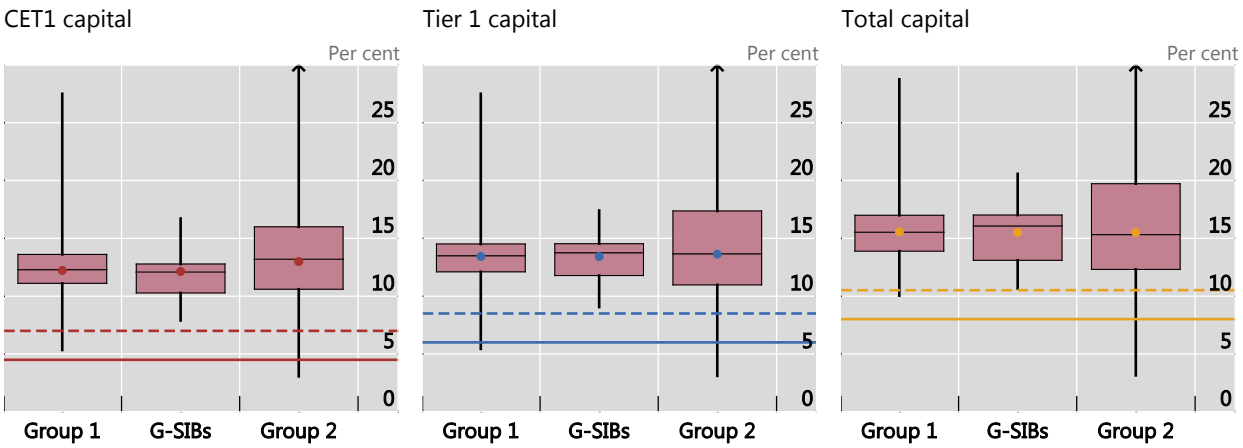
2.1.2 Final Basel III standards

On average the fully phased-in initial Basel III CET1 capital ratio of Group 1 banks (Graph 12) compared to the fully phased-in final Basel III CET1 capital ratio (Graph 20) would decline by 0.8 percentage points from 13.0% to 12.2%. G-SIBs would see an equivalent decrease of 0.7 percentage points from 12.8% to 12.1%. Group 2 banks will also report a CET1 capital ratio decline by 2.4 percentage points from 15.4% to a low of 13.0%. 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 0.8 percentage points and 2.5 percentage points, respectively. Total capital ratios also decline for both groups, with a more pronounced decline for Group 2 banks.

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

Graph 20



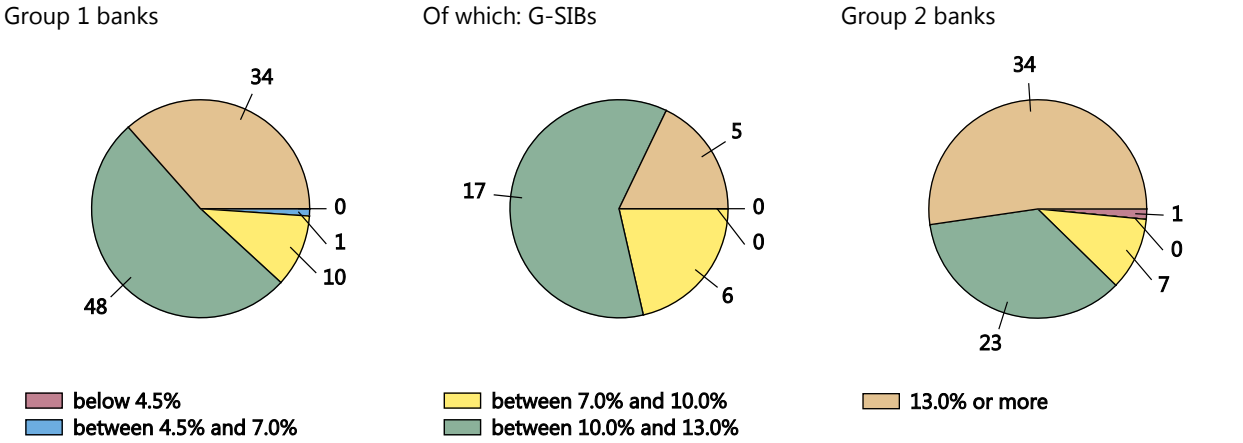
The solid horizontal line represents the relevant minimum requirement, the dotted horizontal line represents the relevant target (excluding any bank-specific G-SIB surcharges).

Source: Basel Committee on Banking Supervision. See Table C.11 for underlying data and sample size. Table C.10 provides the same information for the transitional final Basel III standards.

Under fully phased-in final Basel III, all Group 1 banks in the sample meet the 4.5% CET1 minimum ratio and only one Group 1 bank reports a CET1 ratio below the 7.0% target ratio. Over 36% of Group 1 banks have a CET1 ratio higher than 13% and nearly 90% have a CET1 ratio which is larger than 10%. For Group 2 banks, one bank fails to meet the minimum fully phased-in capital requirement of 4.5% under the final Basel III framework. More than 87% of Group 2 banks have a CET1 capital ratio which is higher than 10% and more than 52% have a capital ratio higher than 13%.

Distribution of fully phased-in final Basel III CET1 ratios

Graph 21



Source: Basel Committee on Banking Supervision.

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

On average, the total change in Tier 1 MRC at the target level from the final Basel III framework is +3.0% for Group 1 banks, +3.3% for G-SIBs and +8.0% for Group 2 banks (see Graph 22). In contrast to the results

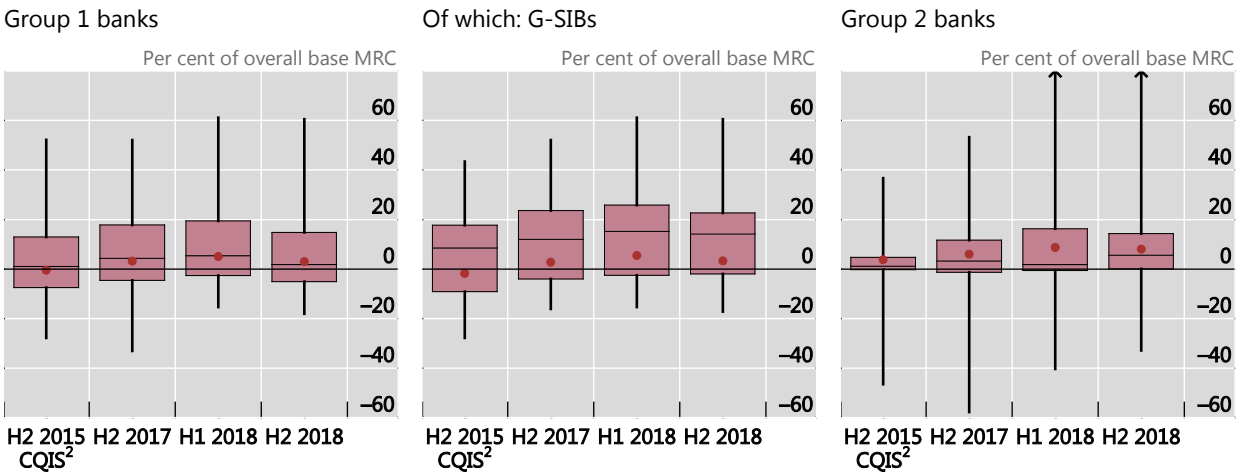
of the cumulative Quantitative Impact Study (QIS),[11] these numbers include the impact of the amended minimum capital requirements for market risk published in January 2019, which has a standalone impact of almost 2.1% on Group 1 banks, 2.6% on G-SIBs and no impact on Group 2 banks. Assuming the same treatment of the revisions to the market risk framework as in the cumulative QIS, the current December-2018 data show increases of 0.8%, 0.7% and 8.0% for Group 1, G-SIBs and Group 2 banks, 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 -5.1% and +14.7%, with a median of 1.8%. The distribution for G-SIBs is wider with a higher median of 14.1%, while the median Group 2 bank shows a 4.9% increase with 50% of the banks in also a rather wide interval from 0.0% to a +14.3% increase in Tier 1 MRC.

The average impact of the final Basel III framework on Group 1 banks has decreased by more than two percentage points when compared to end-June 2018 and is now lower than at the end-2017 reporting date. On average, at end-June 2018, the total change in Tier 1 MRC at the target level was higher at 4.9% for Group 1 banks, 5.4% for G-SIBs and 8.8% for Group 2 banks.[12] This is largely driven by lower market risk impact following the application of the recalibrated 2019 standard. At end-December 2017, the total change in Tier 1 MRC at the target level was 3.6% for Group 1 banks, 3.0% for G-SIBs and 5.9% for Group 2 banks.

Total change in Tier 1 MRC at the target level[1]

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] Results for H2 2015 are based on the Committee's cumulative Quantitative Impact Study and are not fully comparable from a methodological point of view, in particular since all changes from the revised market risk framework were already added to MRC under the current rules such that they were not reflected in the *change* in MRC.

Source: Basel Committee on Banking Supervision. See also Table C.12 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.

[11] In the cumulative QIS, all changes from the revised market risk framework were are already added to MRC under the current rules such that they were not reflected in the *change* in MRC.

[12] The results for the June 2018 reporting date reflect some revisions since the publication of the previous report in March 2019.

- *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 internal ratings-based (IRB) approaches for credit risk, including the effect from migration of approaches.[13]
- *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. 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

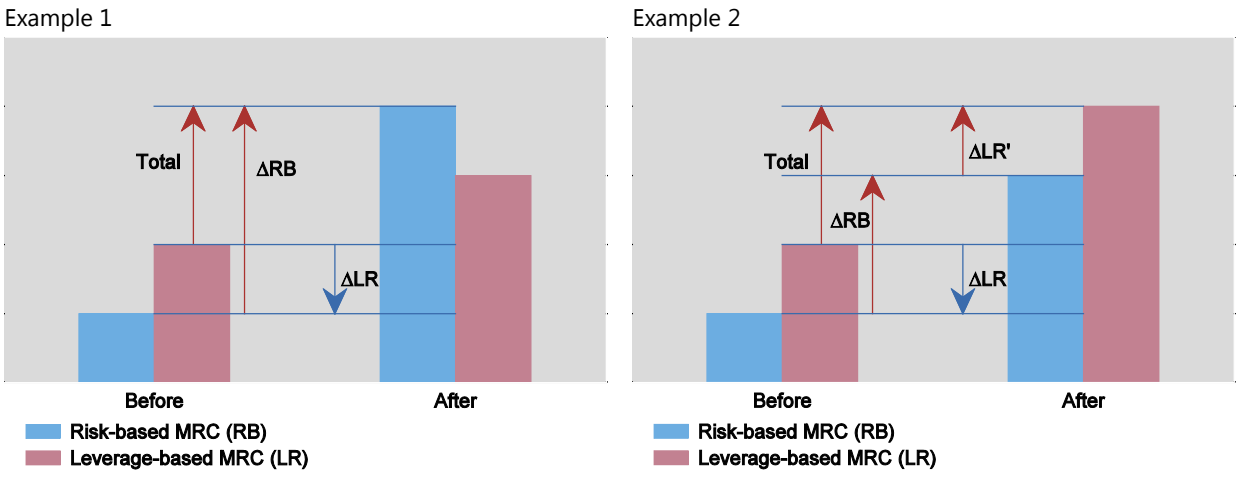
Aggregation of changes in risk-based and leverage ratio MRC

Example 1 shows an illustrative bank that is currently constrained① 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 (ΔLR'); 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 risk-based 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.

[13] 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.

Aggregation of changes in risk-based and leverage ratio MRC Graph A



For Group 1 banks, the Tier 1 MRC would increase by 3.0% following full phasing-in of the final Basel III standards. This increase is composed of a 4.2% increase for the risk-based components combined, driven by the positive contributions of the output floor (2.4%), market risk (2.1%) and CVA (1.9%), as well as reductions in credit risk (-1.3%) and operational risk requirements (-0.8%). This increase is offset by a -1.3% 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 decrease shown in the rest of the world (-5.4%), a small decrease in the Americas (-0.4%) and in contrast to this a strong increase in MRC for European banks (+18.6%). The largest impact for the sample of European banks stems from the output floor (+7.4%) followed by changes in credit risk (+4.0%), operational risk (+3.7%) and CVA (+3.4%). For banks in the Americas increases for market risk (+4.7%) and CVA (+2.3%) are partially offset by MRC reductions in operational risk (-5.0%) and the output floor (-2.3%). For banks in the rest of the world reductions in MRC for credit risk (-5.6%), operational risk (-1.2%) and the leverage ratio (-1.1%) are higher than the rises for CVA (+0.6%) and the output floor (+1.8%).

For Group 2 banks, the overall 8.0% increase in Tier 1 MRC is driven by an increase in the risk-based measure of 13.8% – mainly driven by credit risk (6.8%) and the output floor (4.8%), while the leverage ratio measure partially offsets this increase at -5.8%.

It should be noted that 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

In per cent of overall basis MRC

Table 4

	Number of banks	Total		Risk-based requirements						Leverage ratio
				Total	Of which:					
		With MR[1]	Without MR[1]		Credit risk[2]	CVA	Market risk	Op risk[3]	Output floor[4]	
Group 1 banks	86	3.0	0.9	4.2	–1.3	1.9	2.1	–0.8	2.4	–1.3
Of which: Europe	35	18.6	15.4	21.2	4.0	3.4	2.8	3.7	7.4	–2.6
Of which: AM	16	–0.4	–4.9	–0.3	0.1	2.3	4.7	–5.0	–2.3	–0.1
Of which: RW	35	–5.4	–5.5	–4.4	–5.6	0.6	0.0	–1.2	1.8	–1.1
Of which: G-SIBs	28	3.3	0.7	3.7	–0.9	2.0	2.6	–1.4	1.5	–0.4
Group 2 banks	62	8.0	8.0	13.8	6.8	0.6	0.0	1.6	4.8	–5.8

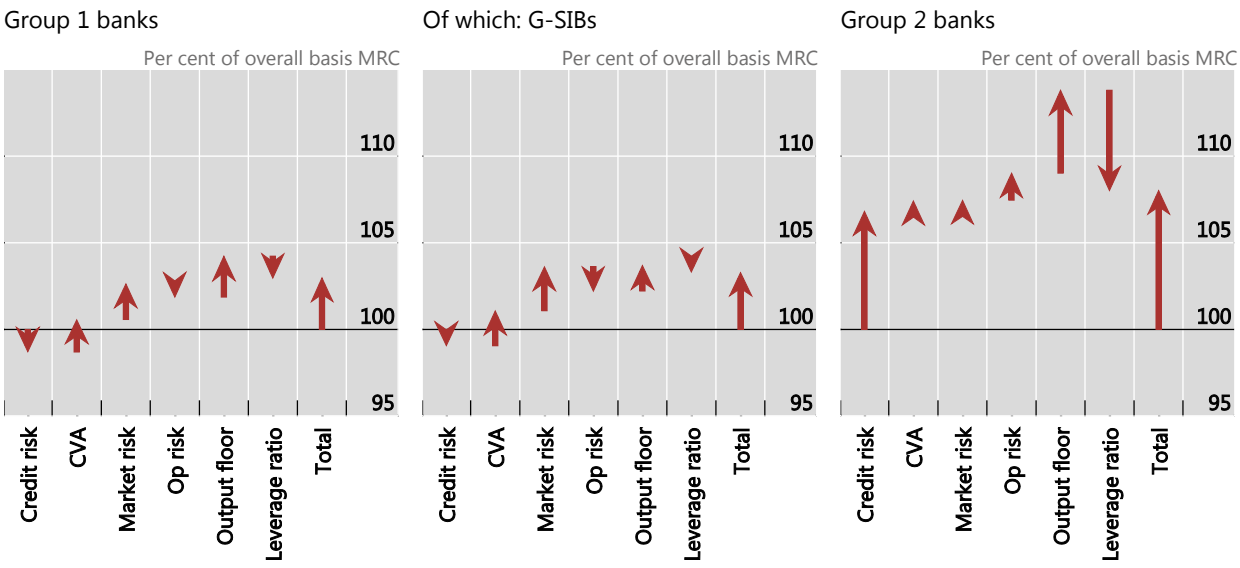
[1] Market risk. Totals without market risk reflect market risk changes in the baseline; therefore, the difference between the two totals is generally not the same as the change shown for market risk individually. [2] Change in MRC due to the revised standardised and IRB approaches, including securitisation. [3] 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. [4] 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 arrows pointing upwards (downwards) highlight the positive (negative) contributions induced by the different parts of the final Basel III framework, except for the rightmost arrow that represents the total MRC impact. 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

Graph 23



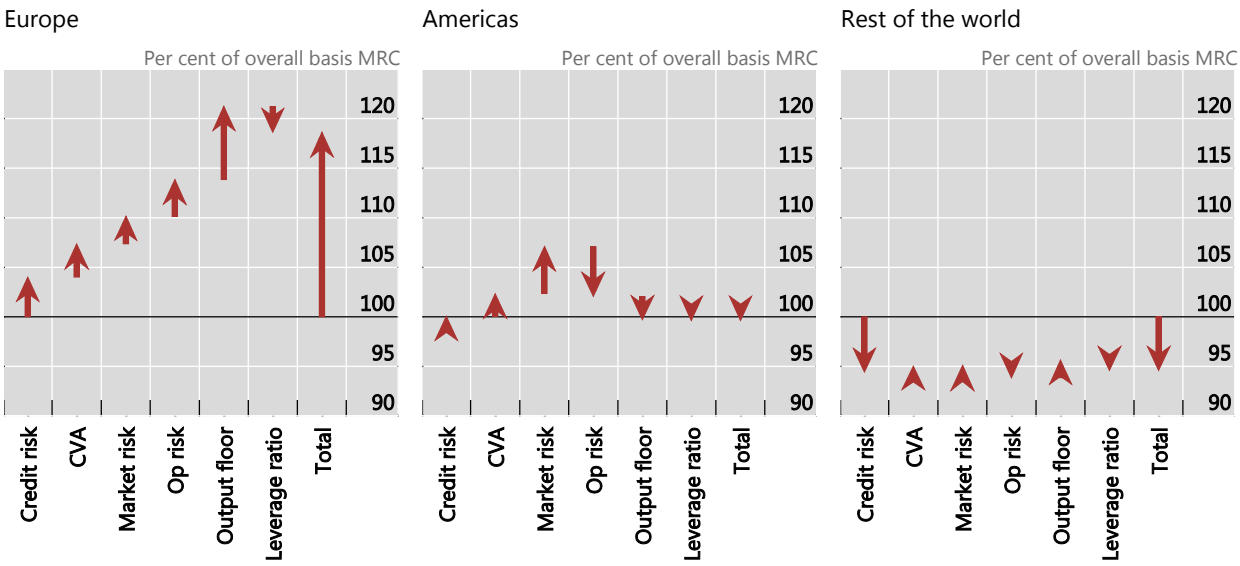
Credit risk shows the change in MRC due to revised standardised and IRB approaches, including securitisation. Operational risk figures may not show supervisor-imposed capital add-ons. Therefore, increases in MRC may be overstated and reductions may be understated. Output floor results are net of the 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, by region

Group 1 banks

Graph 24



Credit risk shows the 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.

2.3 Leverage ratio

2.3.1 Overall 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).

Box C

Basel III leverage ratio framework

Under the January 2014 and December 2017 versions of the Basel III leverage ratio framework,① the Basel III leverage ratio exposure measure (the denominator of the Basel III leverage ratio) includes:

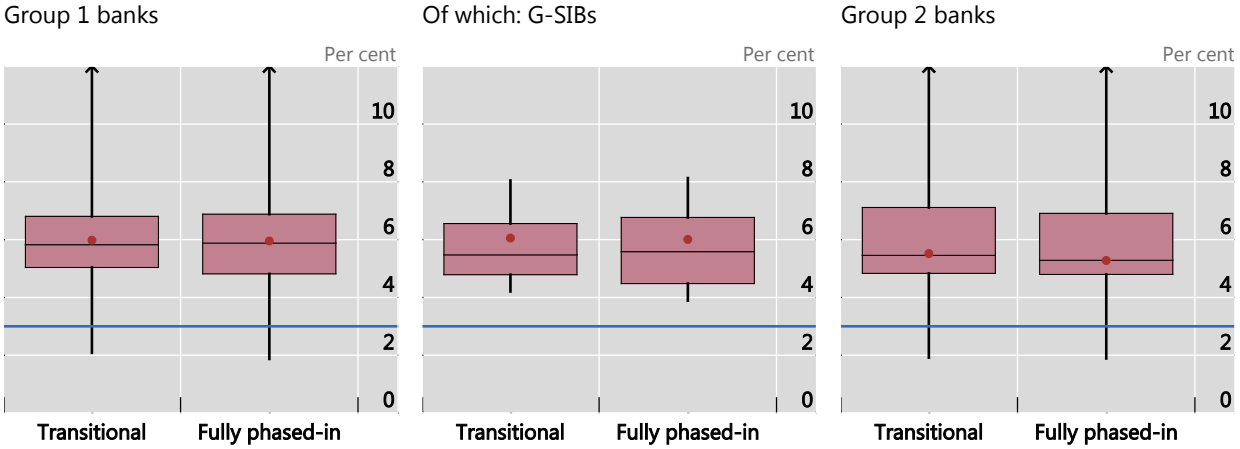
- on-balance sheet assets, excluding securities financing transactions (SFTs) and derivatives;
- SFTs, with limited recognition of netting of cash receivables and cash payables with the same counterparty under strict criteria;
- derivative exposures at replacement cost (net of cash variation margin meeting a set of strict eligibility criteria) plus an add-on for potential future exposure;
- 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.

① 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.

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 and 6.1% for G-SIBs, while it would amount to 5.5% for Group 2 banks. The weighted average fully phased-in Basel III leverage ratios are 6.0% for Group 1 banks, 6.0% for G-SIBs and 5.3% for Group 2 banks. Group 2 banks show a greater dispersion compared to Group 1 banks.

Under both the transitional initial and the fully phased-in final Basel III leverage frameworks, three banks in the sample would not meet the 3% ratio level, one Group 1 bank and two Group 2 banks. The aggregate leverage incremental shortfall under the transitional initial framework is €1.2 billion for Group 1 banks and €1.1 billion for Group 2 banks.

Transitional initial and fully phased-in final Basel III Tier 1 leverage ratios[1] Graph 25



[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).

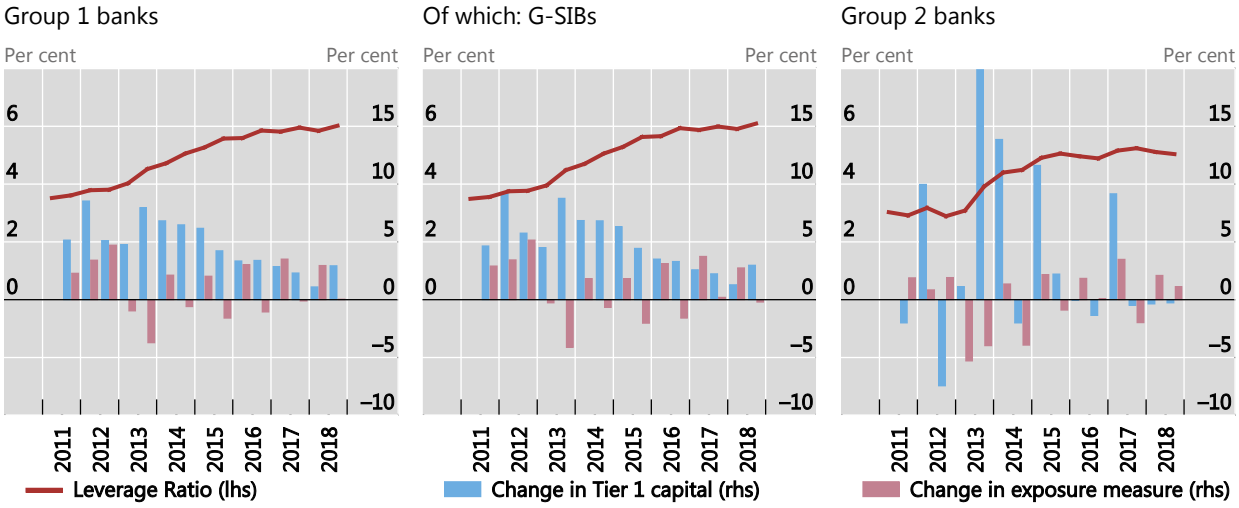
Source: Basel Committee on Banking Supervision. See Table C.13 for underlying data.

Graph 26 shows how the fully phased-in Basel III leverage ratios have evolved over time for a consistent sample of 63 Group 1 banks (including 27 G-SIBs) and 27 Group 2 banks, all of which provided leverage ratio data for all reporting dates from June 2011 to December 2018. For Group 1 banks the leverage ratio slightly increased to 6.0% from 5.8% over the prior period, for G-SIBs to 6.1% from 5.9%, in both cases due to a stable or decreasing exposure measure and an increase in Tier 1 capital. Group 2 banks' leverage ratio decreased by 0.1 percentage points to 5.0%, as the exposure measure increased by 1.1% compared to the prior period while the Tier 1 capital again slightly decreased.

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 5.2% at end-December 2018. In the Americas the leverage ratio increased from 4.2% to 6.5% as at December 2018. For the rest of the world, the leverage ratio increased from 4.1% in 2011 to 6.3% as at end-December 2018. Over the last period, leverage ratios increased by 0.1 percentage points in Europe, 0.2 percentage points in the Americas and 0.2 percentage points in the rest of the world.

Fully phased-in Basel III Tier 1 leverage ratios and component changes[1]

Consistent sample of banks, exchange rates as of 31 December 2018 Graph 26

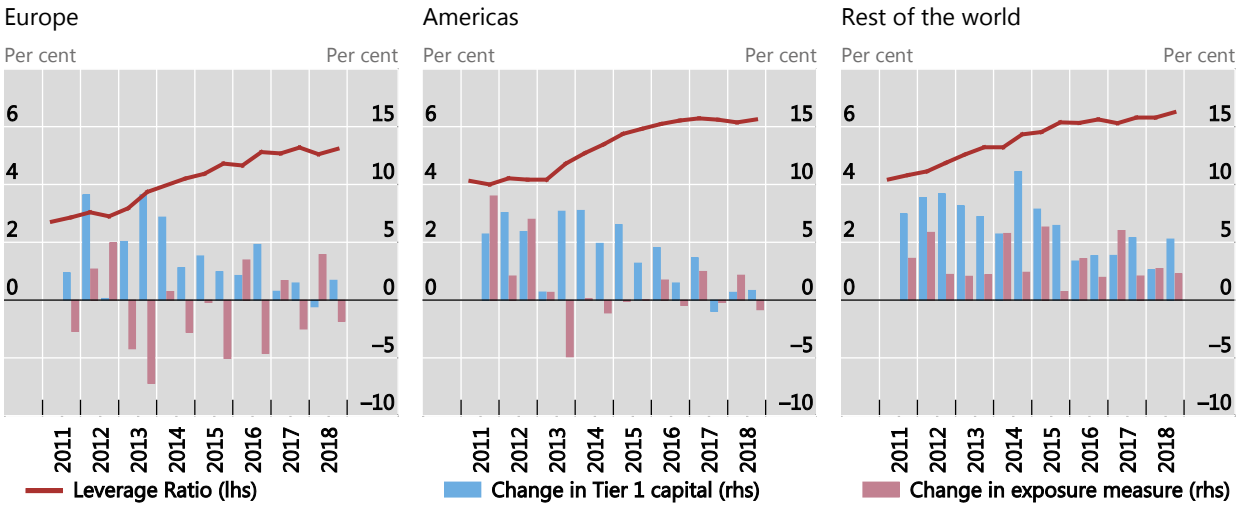


[1] Data points from H1 2011 to H2 2012 use the original definition of the leverage ratio. Data points from H1 2013 to H1 2017 use the definition of the leverage ratio set out in the 2014 version of the framework. Note that the data points for H1 2013 use an approximation for the initial definition of 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.

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 2018 Graph 27



[1] Data points from H1 2011 to H2 2012 use the original definition of the leverage ratio. Data points from H1 2013 to H1 2017 use the definition of the leverage ratio set out in the 2014 version of the framework. 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.

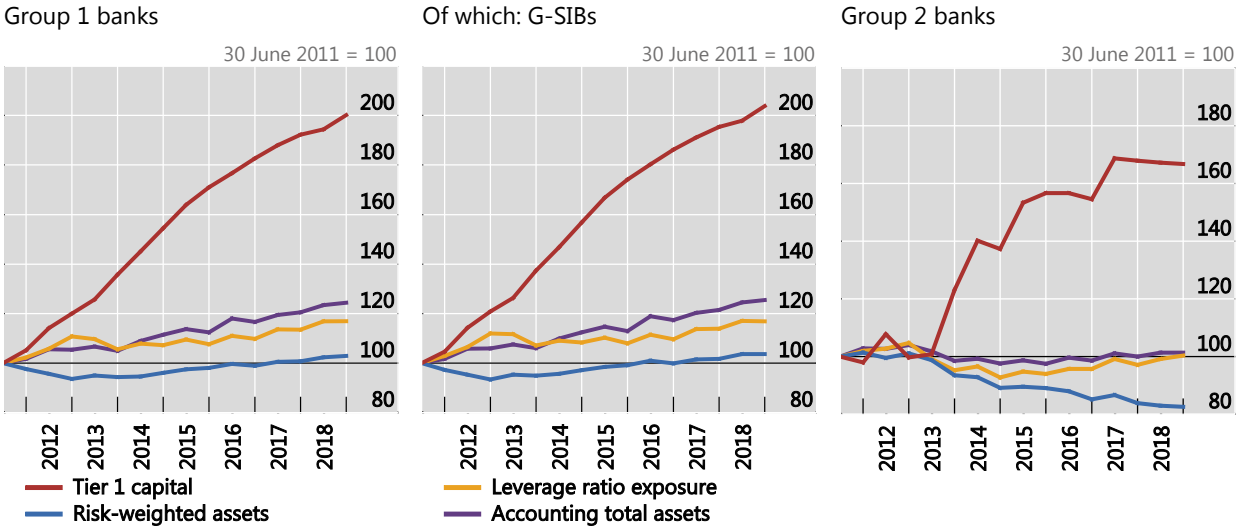
Source: Basel Committee on Banking Supervision. See Table C.15 for underlying data and sample size.

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 2018. 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 RWA decreased slightly in 2012 and then began to increase since 2014. The leverage ratio exposure dropped in 2013, but began to rise steadily. For Group 2 banks, Tier 1 capital generally increased during the period with the peak in June 2017. RWA declined after 2012 to the current period. Leverage total exposure and accounting total assets decreased until the end of 2014, but since have increased through the current period.

Tier 1 capital, RWA, Basel III leverage ratio exposure and accounting total assets[1]

Consistent sample of banks, exchange rates as of 31 December 2018 Graph 28



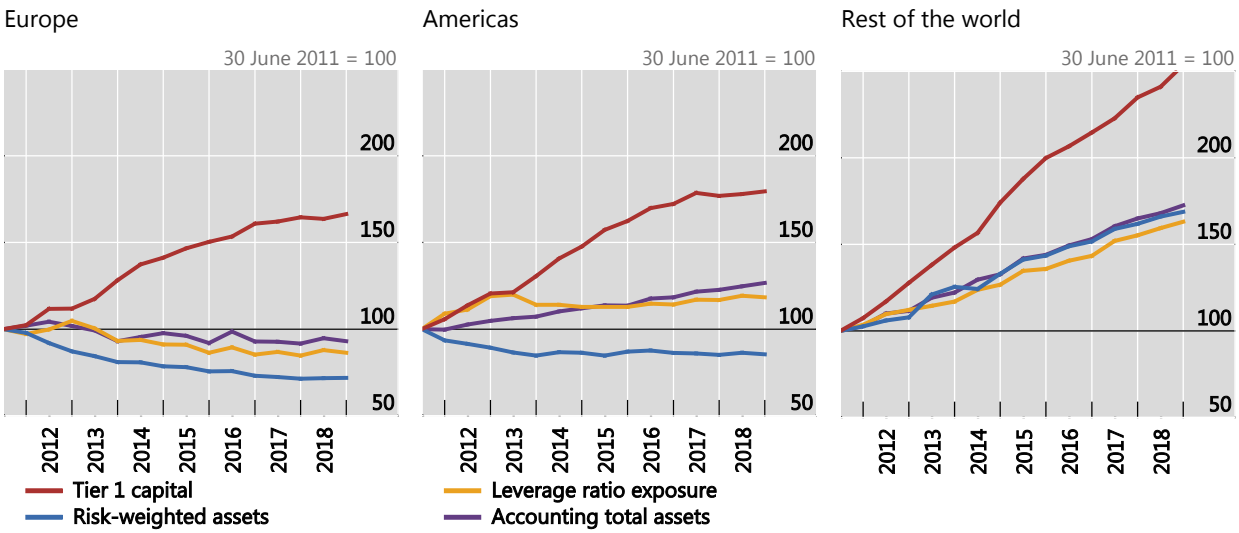
[1] Tier 1 capital, RWA and leverage ratio exposure assume full implementation of Basel III. Data points from H1 2010 to H2 2012 use the original definition of the leverage ratio. Data points from H1 2013 to H1 2017 use the definition of the leverage ratio set out in the 2014 version of the framework. 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.16 for underlying data and sample size.

Graph 29 shows the same information for a consistent sample of Group 1 banks and grouped by region. While leverage exposures decreased somewhat since 2011 for European Group 1 banks, banks in the Americas saw a moderate increase, and exposure for banks in the rest of the world increased by more than 60% over this period.

Tier 1 capital, RWA, Basel III leverage ratio exposure and accounting total assets,[1] by region

Consistent sample of Group 1 banks, exchange rates as of 31 December 2018 Graph 29



[1] Tier 1 capital, RWA and leverage ratio exposure assume full implementation of Basel III. Data points from H1 2010 to H2 2012 use the original definition of the leverage ratio. Data points from H1 2013 to H1 2017 use the definition of the leverage ratio set out in the 2014 version of the framework. 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.

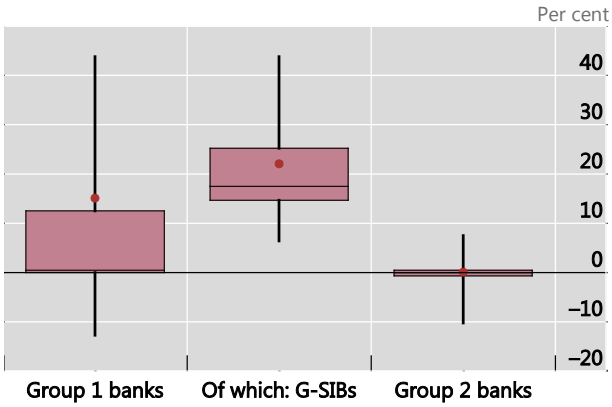
Source: Basel Committee on Banking Supervision. See Table C.17 for underlying data and sample size.

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

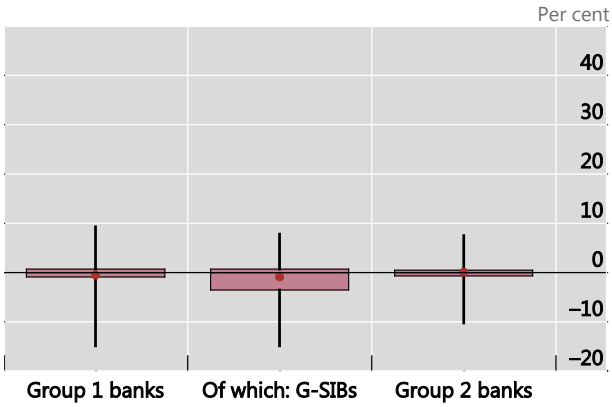
Graph 30 assesses, for Group 1 banks, G-SIBs and Group 2 banks, the changes in leverage ratio MRC at the target level due to the revisions to the Basel III leverage ratio and changes to the exposure measure only. With respect to leverage ratio MRC, Group 1 banks saw an increase on average of 15.1%, G-SIBs saw an increase on average of 22.1%, and Group 2 banks saw an increase on average of 0.1%. With respect to the total exposure measure, Group 1 banks saw a decrease on average of -0.5%, G-SIBs saw a decrease on average of -0.8% and Group 2 banks saw an increase on average of 0.1%. This confirms that the main driver of the change in MRC is the introduction of the G-SIB buffer in the final Basel III framework, even though at individual level some banks might be materially impacted by the change of the leverage ratio exposure measure.

Changes in leverage ratio MRC due to revisions in the final standards[1] Graph 30

Overall change in MRC at the target level[2]



Resulting from changes to the exposure measure only



[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. [2] The increase for G-SIBs is driven by the introduction of a G-SIBs add-on.

Source: Basel Committee on Banking Supervision. See also Table C.18 and Table C.19.

2.4 Combined shortfall amounts

2.4.1 Shortfalls under the initial Basel III standards

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 2018 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 29 G-SIBs as applicable.[14]

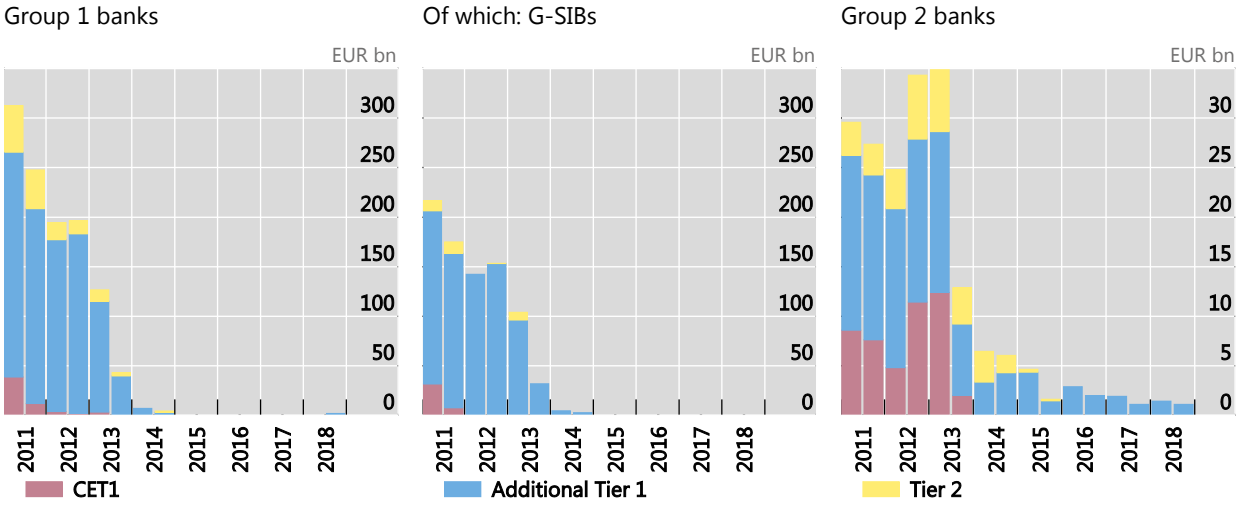
Graph 31 and Graph 32 below as well as Table 2 above provide estimates of the amount of capital that Group 1 and Group 2 banks would need based on data as of 31 December 2018 in addition to capital already held at the reporting date, in order to meet the minimum and target CET1, Tier 1 and total capital ratios under Basel III assuming fully phased-in requirements and deductions. Under these assumptions, Group 1 banks would need €1.9 billion and Group 2 banks €1.1 billion of additional Tier 1 or higher-quality capital to meet minimum (Graph 31). When considering the target level capital requirements (Graph 32), Group 1 banks show a slight €0.1 billion shortfall in CET1 and €1.8 billion shortfall in additional Tier 1 capital while Group 2 banks record €1.1 billion shortfall in additional Tier 1 capital. No Tier 2 capital shortfalls are reported.

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 for the six-month period ending 31 December 2018 for Group 1 and Group 2 banks was €250.4 billion and €5.7billion, respectively.

[14] See Financial Stability Board, *2018 list of global systemically important banks (G-SIBs),* November 2018, www.fsb.org/2018/11/fsb-publishes-2018-g-sib-list/.

Estimated combined capital shortfalls at the minimum level[1]

Fully phased-in initial Basel III standards, sample and exchange rates as at the reporting dates — Graph 31

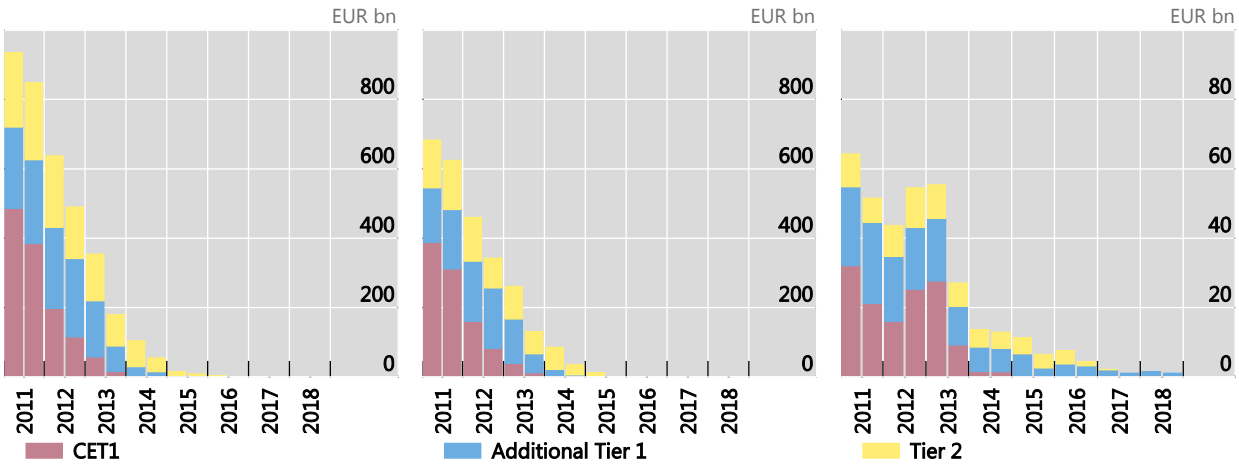


[1] The height of each bar shows the aggregated capital shortfall considering requirements for each tier (ie CET1, Tier 1 and total) of capital.

Source: Basel Committee on Banking Supervision. See Table C.20 for underlying data and sample size.

Estimated combined capital shortfalls at the target level[1]

Fully phased-in initial Basel III standards, sample and exchange rates as at the reporting dates — Graph 32



[1] The height of each bar shows the aggregated capital shortfall considering requirements for each tier (ie CET1, Tier 1 and total) of capital.

Source: Basel Committee on Banking Supervision. See Table C.21 for underlying data and sample size.

2.4.2 Shortfalls under the final Basel III framework

Graph 33 shows the capital shortfalls for the Group 1 and Group 2 bank samples assuming fully phased-in requirements according to the final Basel III standards. Results for the last three Basel III monitoring

exercises (data as of end-December 2017, end-June 2018 and end-December 2018) are compared with the results of the previous cumulative QIS, using data as of end-December 2015.[15]

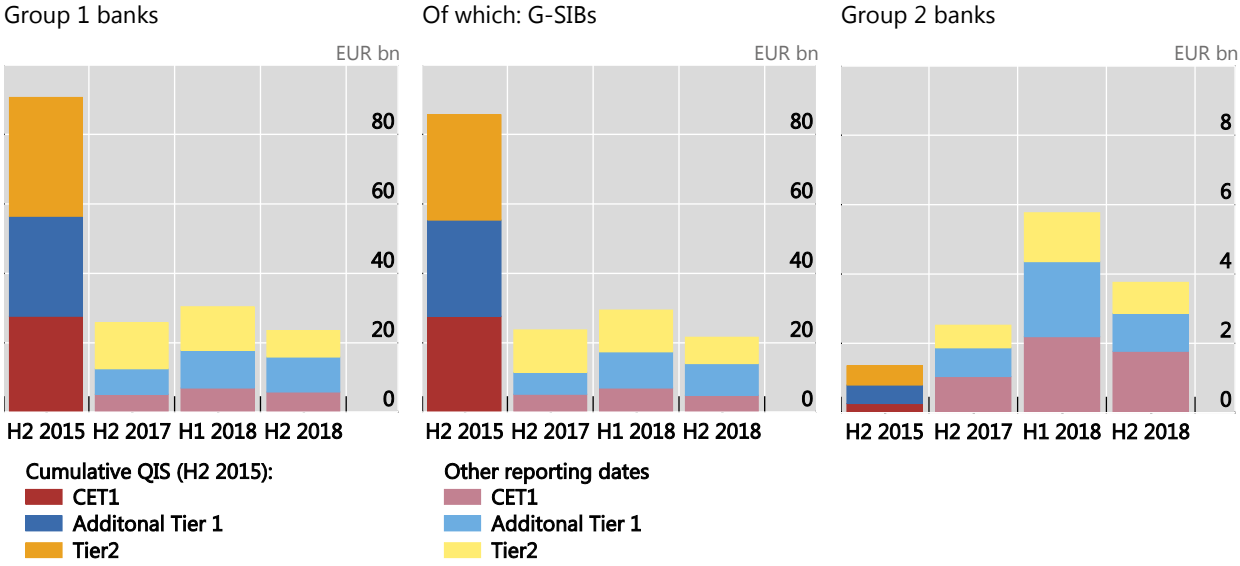
The total capital shortfalls as of the 31 December 2018 reporting date for Group 1 banks are around 23% lower compared to end-June 2018. While the samples for the reporting periods differ slightly, this did not have a significant impact on the shortfalls.

For some banks, the main driver would be the reduction in MRC generated by the final Basel III framework compared to end-June 2018. The most important reductions are recorded for market risk (including the reduced impact from the amended minimum capital requirements for market risk), output floor and credit risk. Another driver for the reduction in the capital shortfalls is the increase in total capital over the period.

Additionally, the capital shortfalls for Group 1 banks are mostly generated by G-SIBs at end-December 2018 (92%). Capital shortfalls for Group 2 banks under the final Basel III standards have also declined since the end-June 2018 exercise (-19%, -50% and -36% for CET1, additional Tier 1 and Tier 2 shortfalls, respectively). For Group 2 banks, the variations until H1 2018 are also driven by differences in the samples. Compared to end-June 2018, the number of Group 2 banks included in the analysis has declined from 68 to 63.

Combined capital shortfalls at the target level[1]

Fully phased-in final Basel III standards, sample and exchange rates as at the reporting dates — Graph 33



[1] Results for H2 2015 are based on the Committee's cumulative Quantitative Impact Study and are not fully comparable from a methodological point of view, in particular since all changes from the revised market risk framework were already added to MRC under the current rules such that they were not reflected in the *change* in MRC. Compared to H2 2017 and H1 2018, the results for H2 2018 include the revised market risk framework as finalised in January 2019.

Source: Basel Committee on Banking Supervision. See also Table C.22.

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

2.5 Total loss-absorbing capacity requirements for G-SIBs

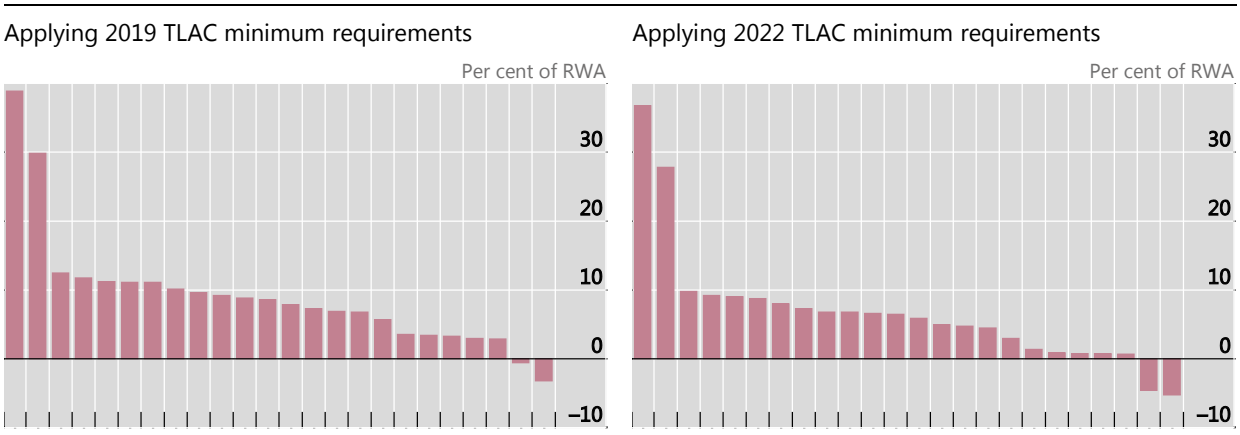
2.5.1 Initial Basel III framework

The Committee also collected data on additional total loss-absorbing capacity (TLAC) for G-SIBs, 24 of which participated in the exercise. Overall, applying the 2019 minimum requirements, two of the 24 G-SIBs in the sample have an incremental[16] TLAC shortfall. This is the same as at end-June 2018. The shortfalls at end-December 2018 are up to 3.2% of each bank's RWA, totalling €13.0 billion (see Graph 34 for relative impact).

Applying the 2022 minimum requirements, two of the 24 G-SIBs in the sample have an incremental shortfall of up to 5.3% of RWA, totalling €32.6 billion. Compared with end-June 2018, the aggregate shortfall has decreased and the number of banks with shortfalls has decreased from six to two.

Distribution of individual G-SIB's incremental TLAC surplus and shortfall across banks[1]

Fully phased-in initial Basel III standards, pure TLAC implementation[2] Graph 34



[1] Surplus is indicated as positive and shortfall as negative. [2] Ie following the FSB TLAC Term Sheet rather than national implementation.

Source: Basel Committee on Banking Supervision.

2.5.2 Final Basel III framework

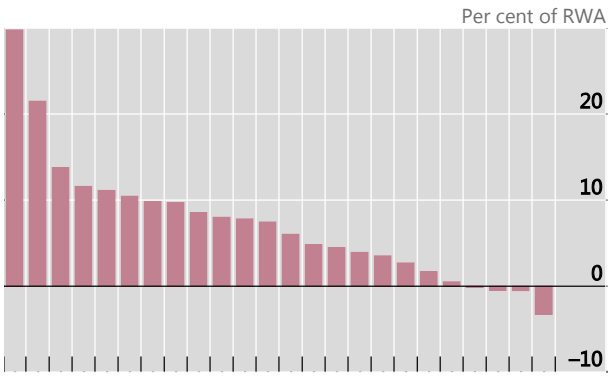
The final Basel III reforms, based on end-December 2018 data, resulted in no significant increase in aggregate capital requirements for the respondent banks. With regards to TLAC, the reforms had little effect on the number of banks or size of shortfalls against the 2019 TLAC requirements. However, relative to the 2022 TLAC requirements, the final Basel III standards increase the number of banks reporting a TLAC shortfall (to six from two against the initial Basel III standards) and the aggregate shortfall is €78.0 billion. However, and highlighting the range of effects that the final Basel III standards have on different banks, there is no significant difference with respect to the range of shortfalls expressed as a percentage of RWA, with the greatest shortfall being 5.6% of RWA (relative to the 2022 requirements).

[16] The shortfall is incremental to any risk-based and leverage ratio shortfall discussed above.

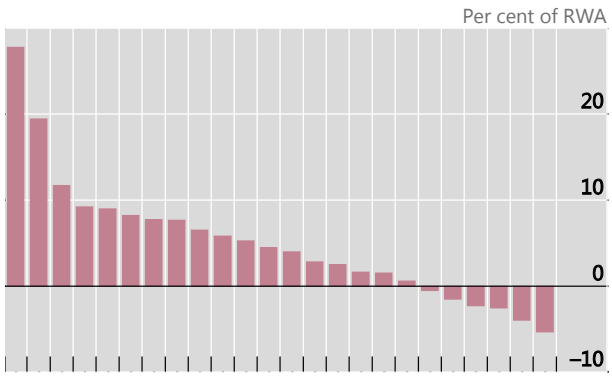
Distribution of individual G-SIB's incremental TLAC surplus and shortfall across banks[1]

Fully phased-in final Basel III standards — Graph 35

Applying 2019 TLAC minimum requirements



Applying 2022 TLAC minimum requirements



[1] Surplus is indicated as positive and shortfall as negative.

Source: Basel Committee on Banking Supervision.

3. Level and composition of regulatory capital

3.1 Level of capital

Graph 36 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-June 2018 to end-December 2018, the level of Group 1 banks' CET1 capital has increased by €110 billion (or 3.0%) to €3,720 billion.[17] Almost 70% of this increase, €76 billion, can be attributed to the G-SIBs in the Group 1 sample, which collectively held €2,595 billion of CET1 capital at end-December 2018.

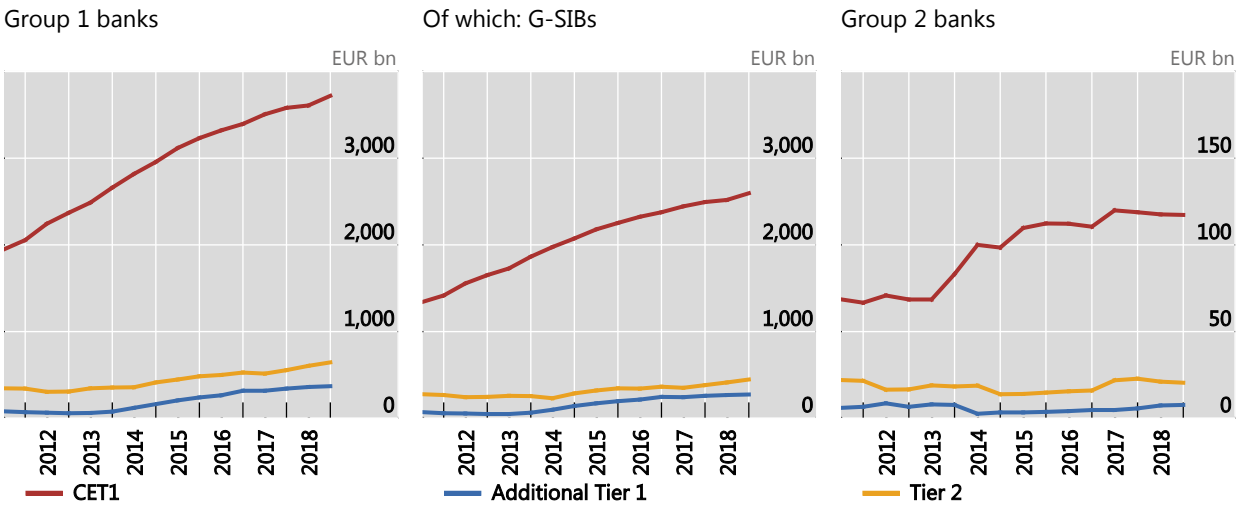
For Group 2 banks the level of CET1, additional Tier 1 and Tier 2 capital remained stable over the period and was €117 billion, €8 billion and €20 billion as of end-December 2018, respectively – an increase or decrease of only €1 billion across all levels.

The rise in overall CET1 capital among Group 1 banks appears largely due to the generated profits, with particularly large profits shown by banks in China and the United States (combined accounting for around 52.5% of all profits reported by Group 1 banks). Furthermore, G-SIBs contributed 71.1% to all the profits generated during the second half of 2018 by Group 1 banks.

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

Level of capital after full phasing in of Basel III standards

Consistent sample of banks, exchange rates as of 31 December 2018 Graph 36



Source: Basel Committee on Banking Supervision. See Table C.23 for underlying data and sample size. Table C.24 provides an additional regional breakdown for Group 1 banks.

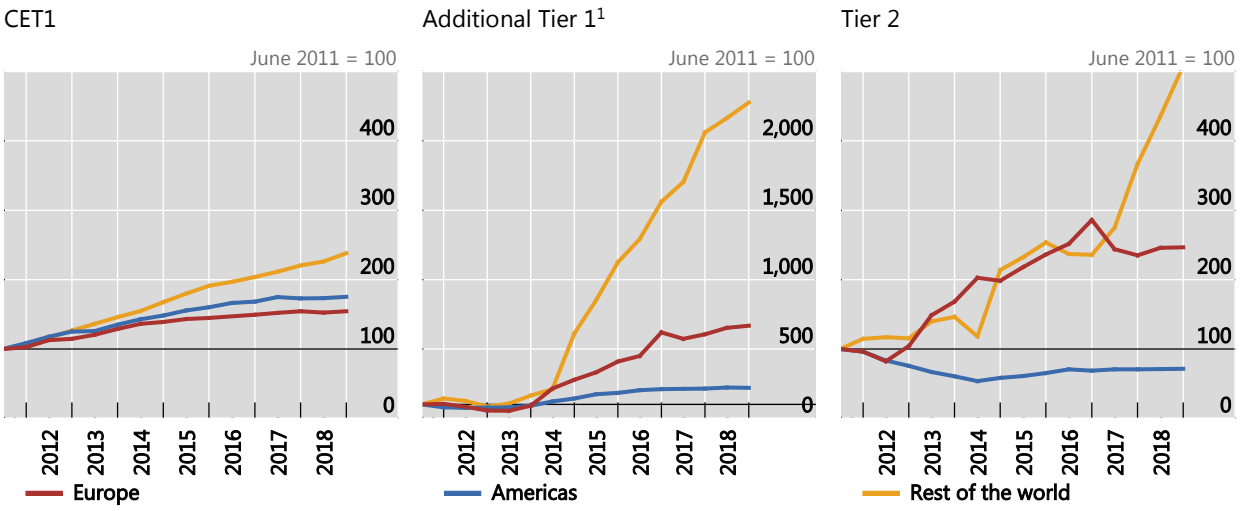
Graph 37 shows the evolution since June 2011 in fully phased-in Basel III capital for a consistent sample of Group 1 banks grouped by region. CET1 capital has slightly increased for Europe and the Americas. The rest of the world region recorded a stronger increase. The rest of the world region has also the highest current holdings of CET1 capital at €1,735 billion with an average of €46.9 billion per bank compared to €1,081 billion at an average of €34.9 billion per bank and €903 billion with a highest average of €50.2 billion per bank for Europe and the Americas, respectively.

Additional Tier 1 capital has been stable and flat until end-2013 and thereafter it has grown for all regions, except in the first half of 2017 for Europe and the Americas where it decreased. However, the additional Tier 1 holdings are significantly smaller compared to CET1 at only €129, €123 and €118 billion for Europe, the Americas and the rest of the world, respectively, at end-December 2018.

Tier 2 capital has been more volatile for all regions with the strongest fluctuations for banks from the rest of the world region. Generally, it has grown compared to the reference date (end-June 2011) for all the regions except the Americas that experienced a decrease between 2011 and 2014 and has increased since 2014. During the second half of 2018, the rest of the world continued to experience an increase in the level of Tier 2 holdings, while they remained stable for Europe and the Americas. At end-2018, holdings of Tier 2 capital stood at €275, €229 and €141 billion for the rest of the world, Europe and the Americas, respectively.

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

Consistent sample of Group 1 banks, exchange rates as of 31 December 2018 Graph 37



[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.26 for underlying data and sample size.

3.2 Profits, dividends and capital raised

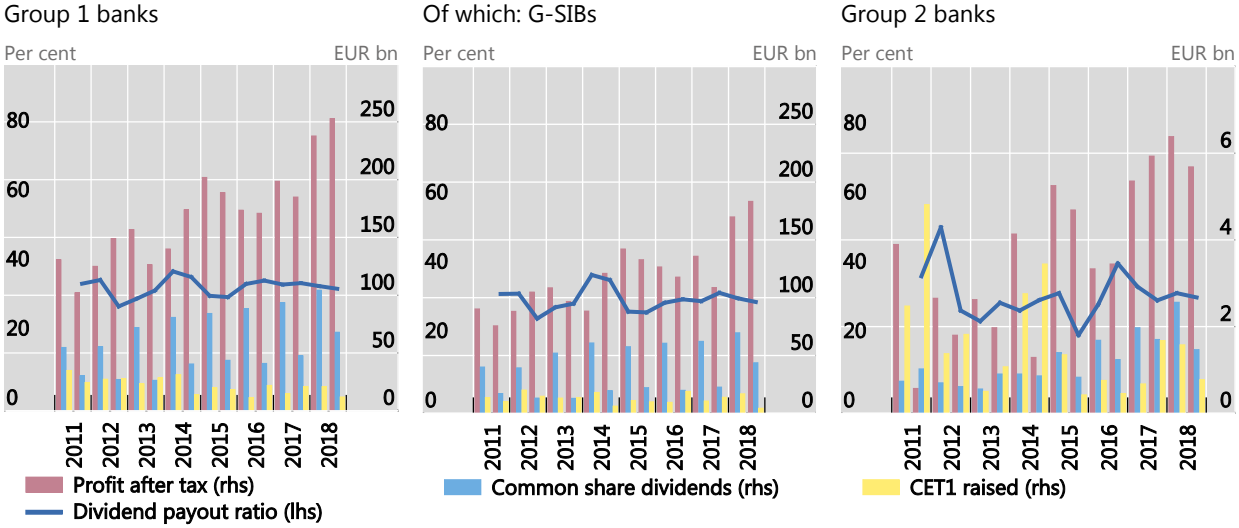
Graph 38 depicts the evolution of profits, dividends, CET1 capital raised and the dividend payout ratio over time. Here, no clear trend or distinctive feature can be identified for CET1 capital raised over time at a global level. Group 1 banks' profits after tax have continued to increase over the last six months and reached record profits since 2011 of €252.9 billion over the second half of 2018. G-SIBs' profits after tax have increased and represent 72.5% of the profits after tax of Group 1 banks.[18] Despite the increase in profits after tax over the last six-month period the annual dividend payout ratios for Group 1 banks remain below the level as of end-June 2018 (0.8 percentage points, decreasing to 35.2% from 36.0%), with the annual dividend payout ratios for G-SIBs showing a similar decrease of 1.1 percentages points decreasing to 32.1% from 33.2%.

Graph 39 provides the regional breakdown for Group 1 banks. Since June 2011, annual profits after tax for the Group 1 banks in the sample continue to be significantly higher in the rest of the world than in the Americas and in Europe. Overall, over the last period almost half of the profits have been generated by banks in the rest of the world region, followed by banks in the Americas and then lastly in Europe. The share of profits of European banks tends to be some two to three percentage points lower than their share in Tier 1 capital or RWA (see also Table B.2). Conversely, the share of profits of banks in the Americas and the rest of the world tends to be in line with or higher than their share in Tier 1 capital or RWA. The highest annual dividend payout ratios were realised by the banks in Europe (38.7%), followed by banks in the rest of the world region (37.5%) and finally in the Americas (29.1%).

[18] The overall profit after tax increased by 6.3% for Group 1 banks and by 7.9% for G-SIBs over the last six-month period. At the opposite, Group 2 banks recorded a decrease of 10.9% over the last period.

Profits, dividends, CET1 capital raised externally and dividend payout ratio[1]

Consistent sample of banks, exchange rates as of 31 December 2018 Graph 38

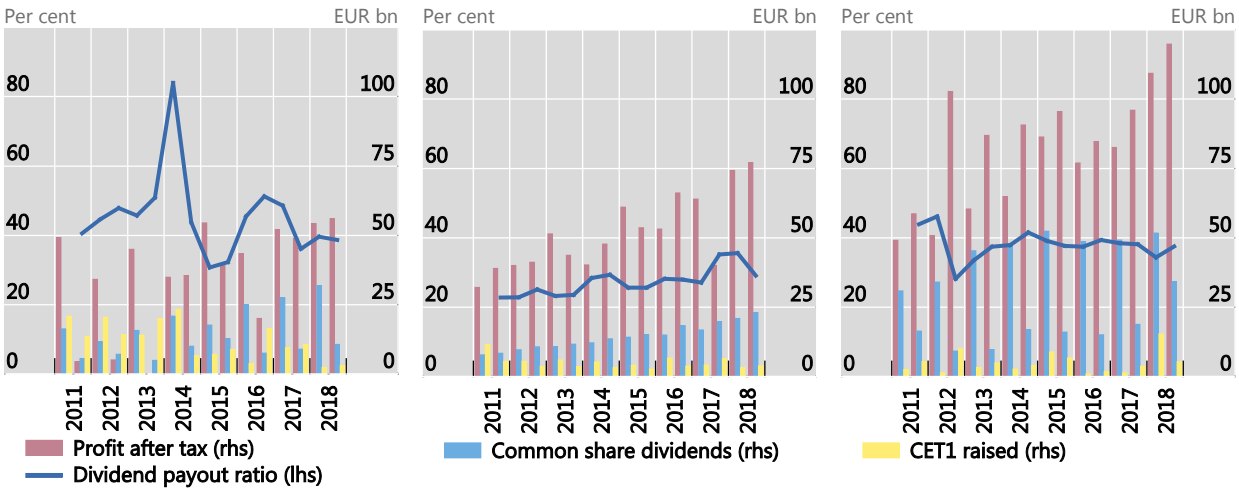


[1] The dividend payout ratio is calculated as common share dividends divided by profits after tax by using a rolling 12 months window to improve comparability across countries with different dividend payment patterns.

Source: Basel Committee on Banking Supervision. See Table C.27 and Table C.29 for underlying data and sample size.

Profits, dividends, CET1 capital raised externally and dividend payout ratio,[1] by region

Consistent sample of Group 1 banks, exchange rates as of 31 December 2018 Graph 39



[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.28 and Table C.30 for underlying data and sample size.

Over the second half of 2018, 63 out of the 103 Group 1 banks in the sample raised capital; regarding CET1 the total amount equals €13.8 billion (see Table 5). Of this amount, 32.6% was raised by the G-SIBs in the sample, compared to more than 75% in the previous period. It is noticeable that Group 1

banks primarily raised Tier 2 (42.6%) and additional Tier 1 (36.3%) rather than CET1 capital (21.1%). This could indicate that banks are focusing on the remaining, not yet fully phased-in, capital requirements such as the leverage ratio and TLAC as well as the minimum requirement for own funds and eligible liabilities (MREL) in countries in the European Union, as for those regulations CET1 is not necessarily the exclusive form of eligible capital. In other countries, the same may hold true for additional requirements stemming from Pillar 2.

For Group 2 banks, CET1 continues to be the focus as it accounted for 61.3% of the capital raised over the second half of 2018.

Capital raised during H2 2018

Full sample of banks, gross amounts, in billions of euros — Table 5

	Number of banks	Number of banks that raised capital	CET1	Add. Tier 1	Tier 2
Group 1 banks	103	63	13.8	23.7	27.8
Of which: Americas	19	15	4.0	4.1	5.4
Of which: Europe	37	22	3.3	12.2	4.5
Of which: Rest of the world	47	26	6.4	7.4	17.9
Of which: G-SIBs	29	21	4.5	14.5	16.7
Group 2 banks	70	19	1.9	0.2	1.0

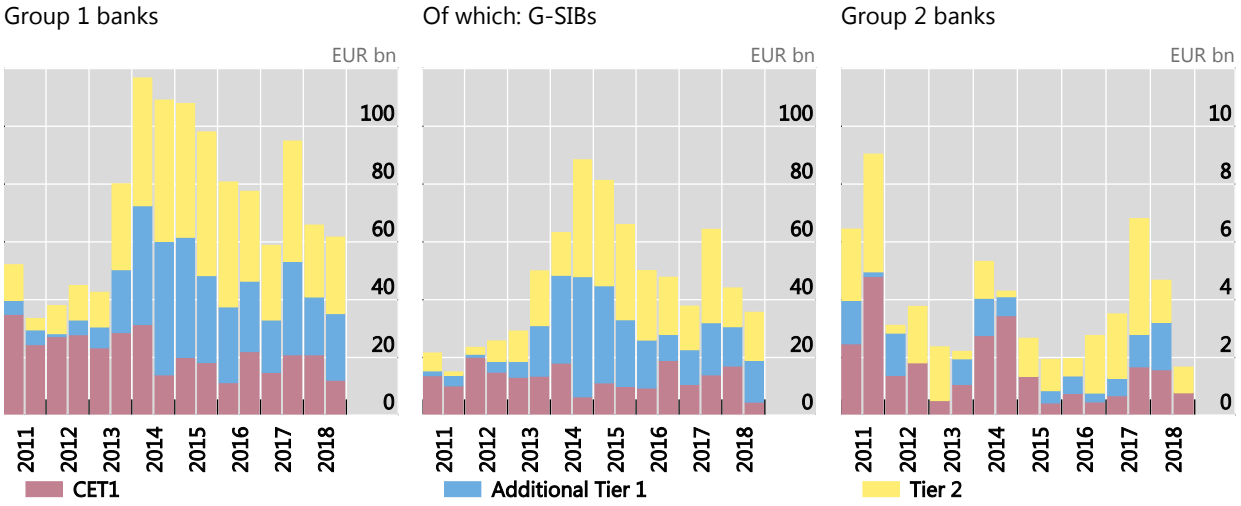
Source: Basel Committee on Banking Supervision.

Graph 40 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 at a global level. Overall, the capital raised by G-SIBs accounts for more than 63.9% of the capital raised by Group 1 banks and accounts for 58.5%, 70.5% and 63.2%, respectively of CET1 capital, additional Tier 1 and Tier 2 capital raised by Group 1 banks. The higher regulatory requirements imposed on large banks in order to improve their resilience and loss-absorbing capacity might explain their high capital issuances.

Around 55.3% of the CET1 capital raised since 2011 has been raised by Group 1 banks in Europe, which is materially higher than their share in terms of Tier 1 capital or RWA (around 25%). For the banks in the Americas and the rest of the world we observe the opposite relationship.

Capital raised externally

Consistent sample of banks, exchange rates as of 31 December 2018 Graph 40



Source: Basel Committee on Banking Supervision. See Table C.29 for underlying data and sample size. Table C.30 provides an additional regional breakdown for Group 1 banks.

3.3 Composition of capital

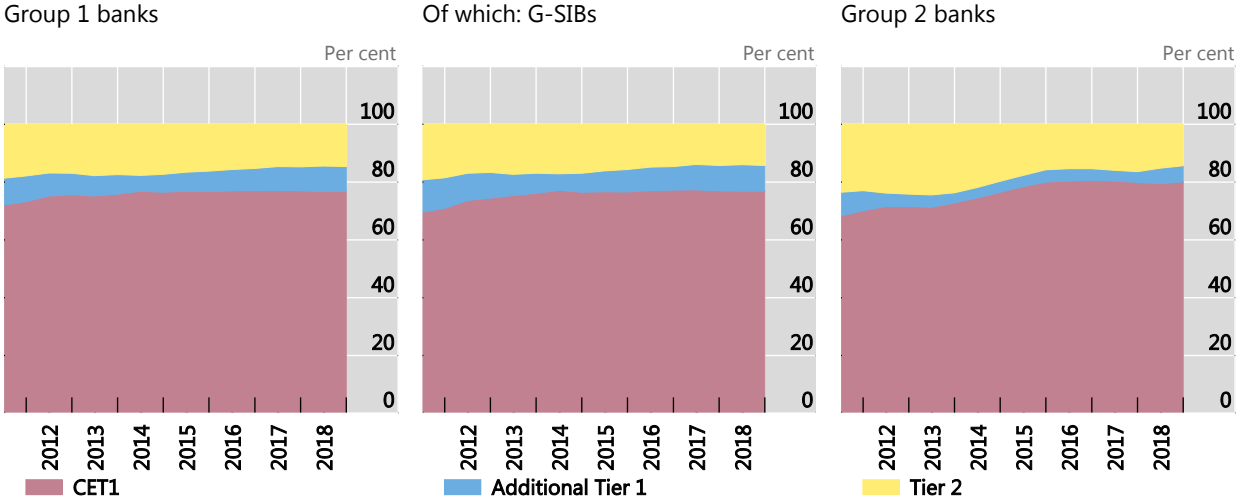
The graphs below show the composition of total capital under transitional Basel III rules (Graph 41) and after fully phased-in Basel III (Graph 42). As expected and as observed for previous reporting dates, CET1 capital is the predominant form of capital under fully phased-in Basel III with an average share of 78.6% and 80.6% for Group 1 and Group 2 banks, respectively. Under transitional rules, it is slightly lower at 76.8% 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. For example, this includes instruments that do not meet the requirements set out in the Basel Committee's 13 January 2011 press release on loss absorbency at the point of non-viability). Furthermore, differences between national implementation of the Basel III framework and the initial Basel III standard contribute to this effect.

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 2013 (Graph 42). Since then a decline in the share of CET1 (from 87.0% at the beginning of 2013 to 78.6% as of December 2018) can be observed simultaneously with a slight increase of additional Tier 1 elements (2.0% in 2013 and 7.8% at the end of December 2018), 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. Additionally, Tier 2 elements also continued to increase since end-June 2017.

For Group 2 banks, a strong positive trend can be observed over time for the share of CET1 capital: it increases from 71.7% in H1 2011 to 80.6% in December 2018, which corresponds to a cutback of Tier 2 elements in a similar magnitude (a reduction from 22.3% to 14.1%). Here, it has to be mentioned that Group 2 banks started from a different level as regards to Tier 2, with its share equalling 22.3% in H1 2011 (Group 1: 14.0%).

Structure of regulatory capital under transitional initial Basel III rules

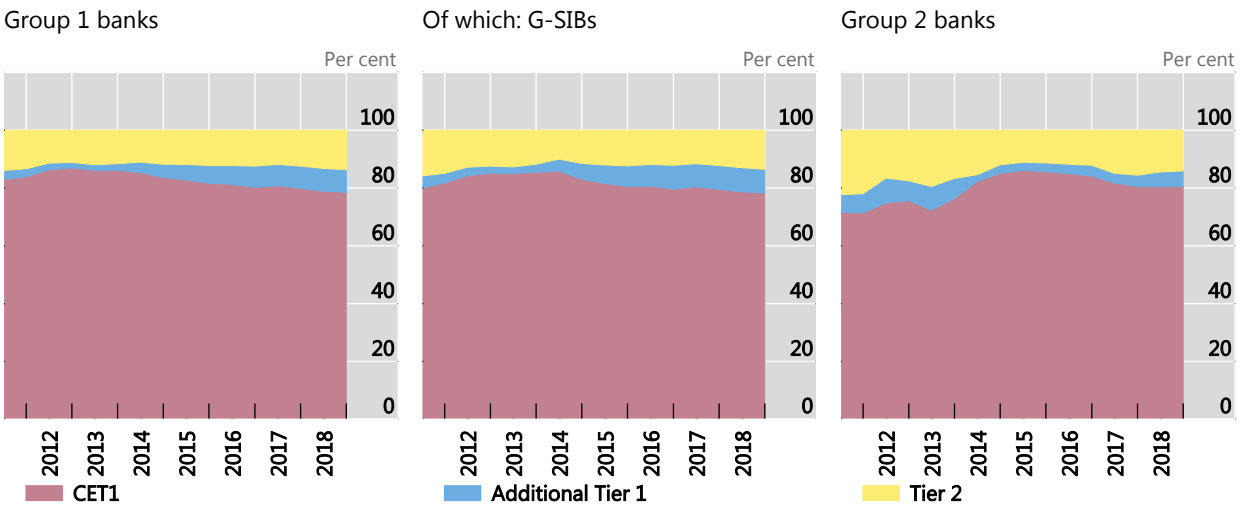
Consistent sample of banks — Graph 41



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

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

Consistent sample of banks — Graph 42



Source: Basel Committee on Banking Supervision. See Table C.32 for underlying data and sample size.

With regard to the composition of Basel III CET1 capital itself (see Table 6), 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 93.3% of outstanding CET1 on average. On average, Accumulated Other Comprehensive Income (AOCI) contributes 5.8% to Group 1 banks' CET1 capital.[19] 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

[19] 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.

retained earnings in total CET1 capital is somewhat lower at 83.1%, while the 15.4% share of AOCI is higher compared to Group 1 banks.

Structure of CET1 capital, by bank group and region

Group 1 banks, in per cent of CET1 capital gross of regulatory adjustments — Table 6

	Number of banks	Paid in capital	Retained earnings	Other comprehensive income	CET1 from recognised subsidiaries
Group 1 banks	100	29.5	63.8	5.8	0.9
Of which: Americas	18	26.1	77.5	–3.7	0.1
Of which: Europe	37	38.2	50.5	9.3	2.0
Of which: Rest of the world	45	25.0	65.4	9.1	0.5
Of which: G-SIBs	29	26.2	68.1	4.7	1.0
Group 2 banks	70	45.1	38.0	15.4	1.5

Source: Basel Committee on Banking Supervision.

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 14.6% (see Table B.4). The largest driver of Group 1 bank CET1 adjustments continues to be goodwill (8.6%) followed by deductions for intangibles, other deductions and combined deferred tax assets (DTA) (2.3%, 1.6% and 1.2%, respectively).

The impact of regulatory adjustments on Group 2 banks is somewhat lower, on average being at around 13.9% (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.

4. Components and determinants of risk-based capital requirements

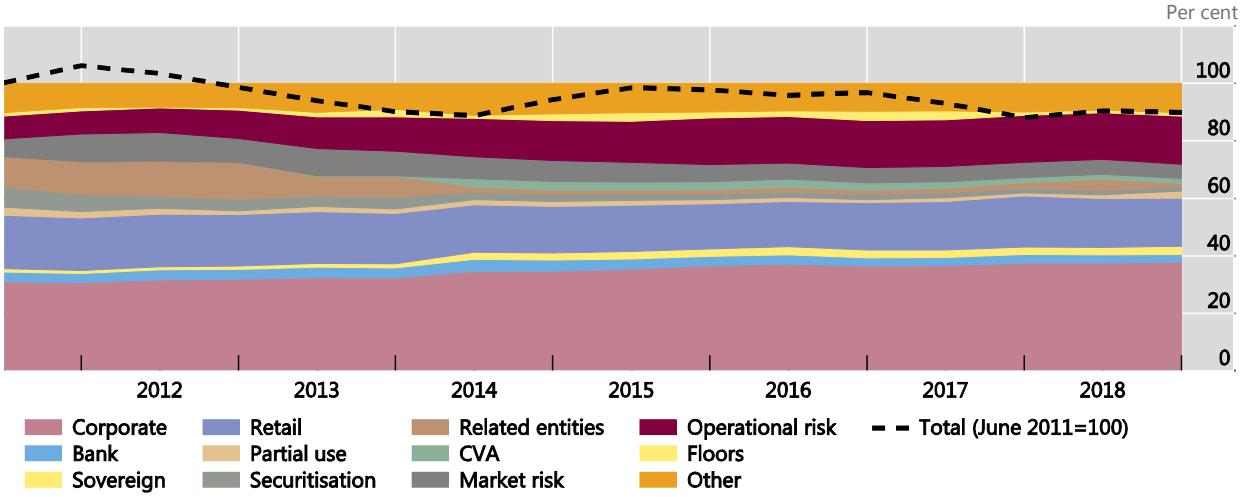
4.1 Share of different risk types in overall MRC under current rules

Graph 43 shows the share of different asset classes in overall MRC for a consistent sample of Group 1 banks.[20] As of end-December 2018, 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 considering a consistent sample over time. However, the share of credit risk has declined from 74.6% at end-June 2011 to its lowest share of 62.8% at end-December 2014 and since then slightly increased to the level at the current reporting date. This looping trend was mainly driven by the MRC of related entities and securitisations while the MRC for corporates slightly increased over the observed time period from 31.0% at end-June 2011 to 37.9% at the current reporting date. Similarly, the share of operational risk MRC increased from 7.8% at the end of June 2011 to 16.7% at end-December 2018. The share of market risk declined slightly from 6.2% to 5.0% in the observed time period while the shares of "other" risk and of the floor requirement have been somewhat stable at around 8% to 11% and zero to 3%, respectively.

[20] 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.

Share of MRC by asset class[1] according to current rules

Consistent sample of Group 1 banks — Graph 43



[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 past-due items under the standardised approach, are listed separately as "partial use".

Source: Basel Committee on Banking Supervision. See Table C.33 for underlying data and sample size.

Table 7 provides data on relative sizes of asset classes in terms of exposures as well as 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 values of the end-December 2018 reporting date.

Additionally, the average risk weight 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.[21] 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 7 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 668.3% and 204.6%, respectively. For Group 2 banks, corporate, retail and sovereign asset classes also comprise the overwhelming majority of exposures. With regard to average risk weights, asset classes with higher relative riskiness for Group 2 banks include equity exposures, past-due items and related entities. For CVA, although the share of CVA exposure is much higher for Group 1 banks than for Group 2 banks (12.3% and 0.5%, respectively), the respective average risk weights are much lower for Group 1 banks than for Group 2 banks (4.2% and 59.8%, respectively).

[21] 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 7.

Average asset class/risk type size and average risk weight[1]

In per cent

Table 7

	Group 1			Group 2		
	Size exposure	Size MRC	Average risk weight	Size exposure	Size MRC	Average risk weight
Credit risk; of which:	87.5	78.4	35.9	99.5	85.5	30.8
Corporate	29.0	41.8	57.7	21.1	37.2	63.0
Sovereign	19.4	2.9	6.0	28.1	3.6	4.6
Bank	6.3	3.8	24.4	10.5	6.3	21.3
Retail	21.9	15.2	27.8	28.9	20.1	24.9
Equity	0.8	3.9	204.6	0.8	4.6	195.0
Purchased receivables	0.2	0.1	28.4	0.0	0.0	99.4
Securitisation	1.9	1.4	28.5	0.7	0.6	32.0
Related entities	0.0	0.5	668.3	0.0	0.0	375.2
Past-due items	0.1	0.3	106.2	0.6	1.9	113.0
Other assets	4.2	5.2	49.5	0.9	2.4	91.6
Failed trades and non-DVP transactions	0.0	0.0	93.5	0.0	0.0	63.8
Not assigned[2]	3.7	8.5	92.6	7.7	10.5	48.8
Regulatory difference[4]		–5.3			–1.8	
CVA	12.3	1.3	4.2	0.5	0.9	59.8
Trading book CCR[3]		0.1			0.0	
Market risk		4.0			2.5	
Other trading book		0.1			0.0	
Operational risk		13.4			9.5	
Floor adjustment		1.8			0.2	
Other[5]		0.7			1.2	
Total	100.0	100.0	40.1	100.0	100.0	35.8

[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

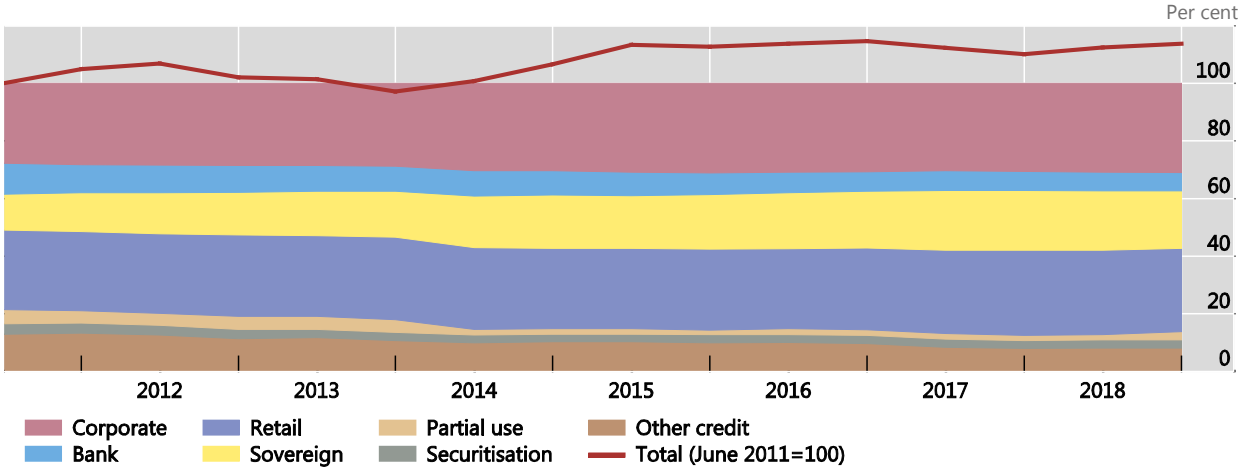
4.2 Credit risk

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

Graph 44 shows the evolution of exposure for the seven 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 19.9% while partial use, bank and other credit exposures have declined.

Share of credit exposure

Consistent sample of Group 1 banks | Graph 44



Source: Basel Committee on Banking Supervision. See Table C.34 for underlying data and sample size.

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

Graph 45 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 (+7.6%) 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 -2.5% (slight decrease of -1.7% for G-SIBs).

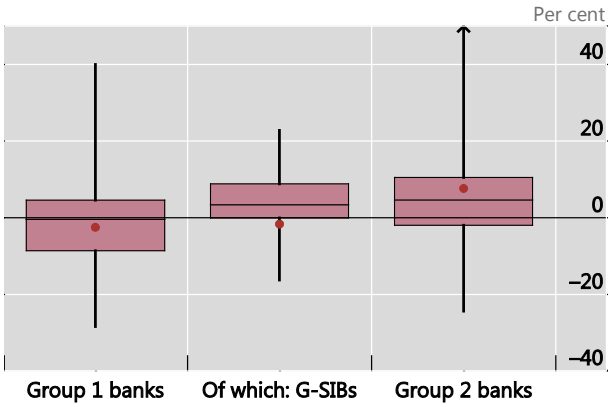
The right panel of Graph 45 breaks down the impact by asset class. For Group 1 banks, corporate exposures contribute -3.7% to the overall change, while the contributions of bank and equity exposures are positive at +1.2% and +0.7%, respectively. For Group 2 banks, bank and equity/subordinated debt exposures contribute +4.3% and +2.4% to the overall change in MRC. The contributions of real estate and retail asset classes account for a less significant +0.6% and +0.5%, respectively. These results are mainly driven by the removal of the advanced IRB (AIRB) approach for exposures to banks and the removal of all IRB approaches for equity exposures, as well as by the reduction of the supervisory loss-given-default (LGD) parameter for unsecured corporate exposures from 45% to 40% under the foundation IRB (FIRB) approach.

The regional breakdown for Group 1 banks in Graph 46 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.

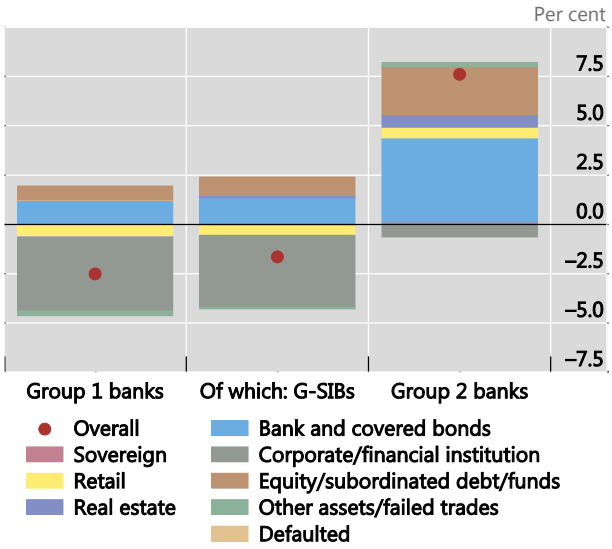
Changes in Tier 1 MRC for credit risk due to the final Basel III standards

Graph 45

Overall distribution[1]



Breakdown by asset class



[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.

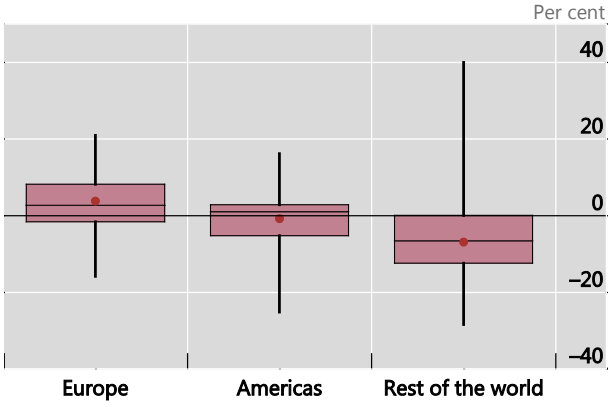
Source: Basel Committee on Banking Supervision. See also Table C.35 and Table C.36.

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

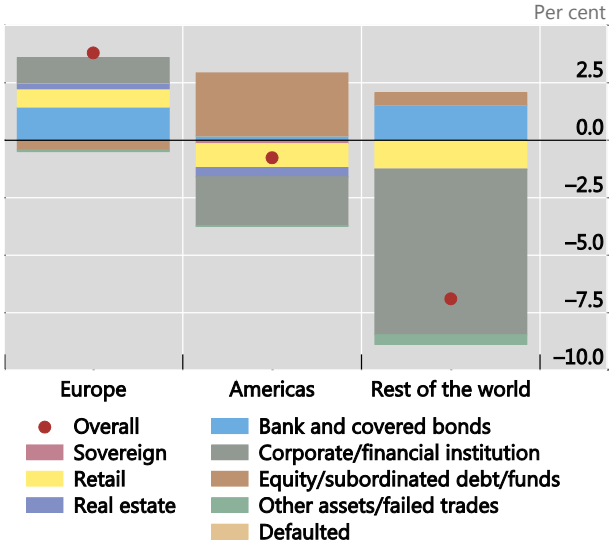
Group 1 banks

Graph 46

Overall distribution[1]



Breakdown by asset class



[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.

4.2.3 Standardised approach for credit risk

Impact of the revisions on MRC

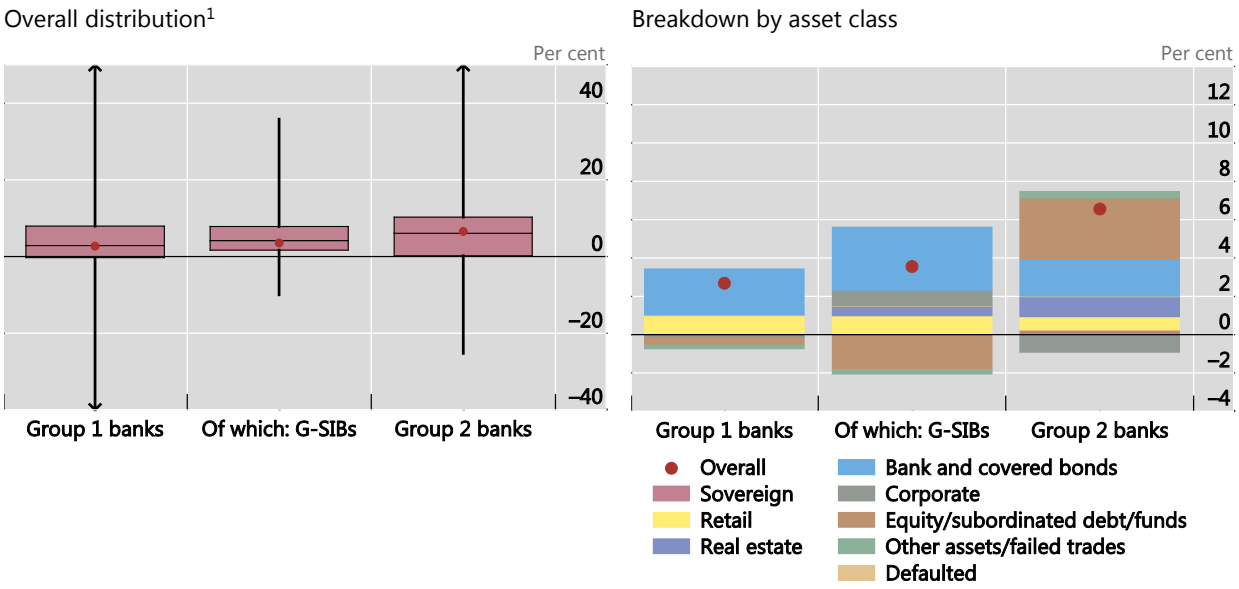
Graph 47 shows the changes in Tier 1 MRC due to the finalisation of the Basel III standards for credit risk exposures that are currently under the standardised approach. These data include exposures of banks subject to the standardised approach for credit risk as well as exposures of banks using the 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 panel of the graph shows the overall distribution of the impact. The revised standardised approach for credit risk results in a weighted average increase in MRC of 2.7% for Group 1 banks, 3.6% for G-SIBs and 6.6% for Group 2 banks. The change in MRC for banks between the 25th and 75th percentiles of the distribution ranges from -0.3% to +7.9% for Group 1 banks, from +1.7% to +7.9% for G-SIBs and from +0.2% to +10.3% for Group 2 banks.

The right-hand panel provides a breakdown of the change of MRC by asset class. For Group 1 banks in the sample, the asset classes with the greatest contribution to the overall change in MRC are exposures to banks and covered bonds (+2.4 percentage points) and retail (+1.0 percentage points). MRC for sovereign, corporate, real estate and defaulted exposures are largely unchanged. For Group 2 banks, MRC for equity and subordinated debt exposures contributed 3.2 percentage points to the overall change in MRC of 6.6%. The increases of MRC for bank and covered bond, real estate and retail exposures are also significant, contributing +1.9; +1.0 and +0.7 percentage points, respectively. The changes in MRC for other asset classes are relatively smaller. The results suggest a large variation across asset classes and countries.

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

Graph 47



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.

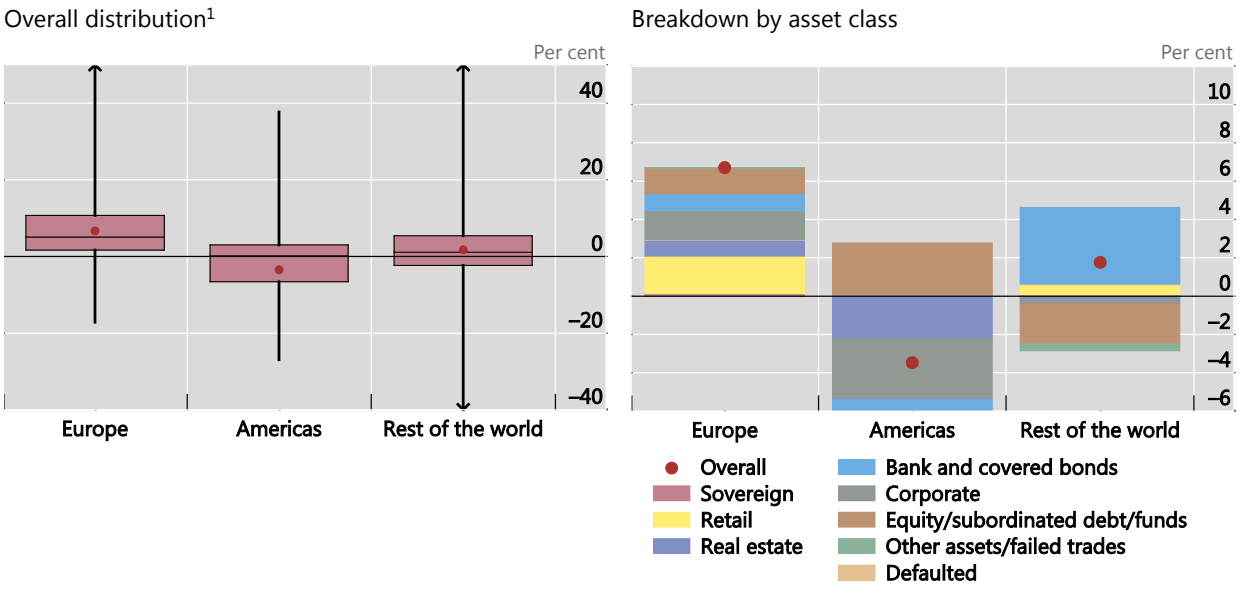
Graph 48 replicates the analysis of Graph 47 but breaks down the results for Group 1 banks by geographical region. For Group 1 banks, the revised standardised approach, on average, has a larger impact on the MRC of European banks (+6.7%) and banks in the rest of the world (+1.8%) than on banks in the Americas where the average MRC slightly decreases (-3.5%). The change in MRC for banks between the 25th and 75th percentile of the distribution ranges from +1.7% to +10.7% for European banks, from -6.6% to +3.0% for banks in the Americas, and from -2.4% to +5.4% for banks in the rest of the world.

Looking at individual asset classes, the results are largely heterogeneous. Exposures to bank and covered bonds is the largest contributor for banks in the rest of the world (4.0%) while having a moderate positive impact for European banks (0.9%) and a moderate negative impact the Americas (-0.9%). Conversely, relative to the other asset classes, equity exposures, subordinated debt and funds have significant positive impacts for the Americas and Europe (+2.7% and +1.3%, respectively) while they have a significant negative impact on the rest of the world (-2.1%). Corporates and real estate have the most negative impacts in the Americas (-3.2% and -2.2% respectively). However, for European banks, corporates provide one of the higher positive impacts (1.5%), second only to retail (2.0%).

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

Graph 48



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.41 and Table C.42.

Average risk weights

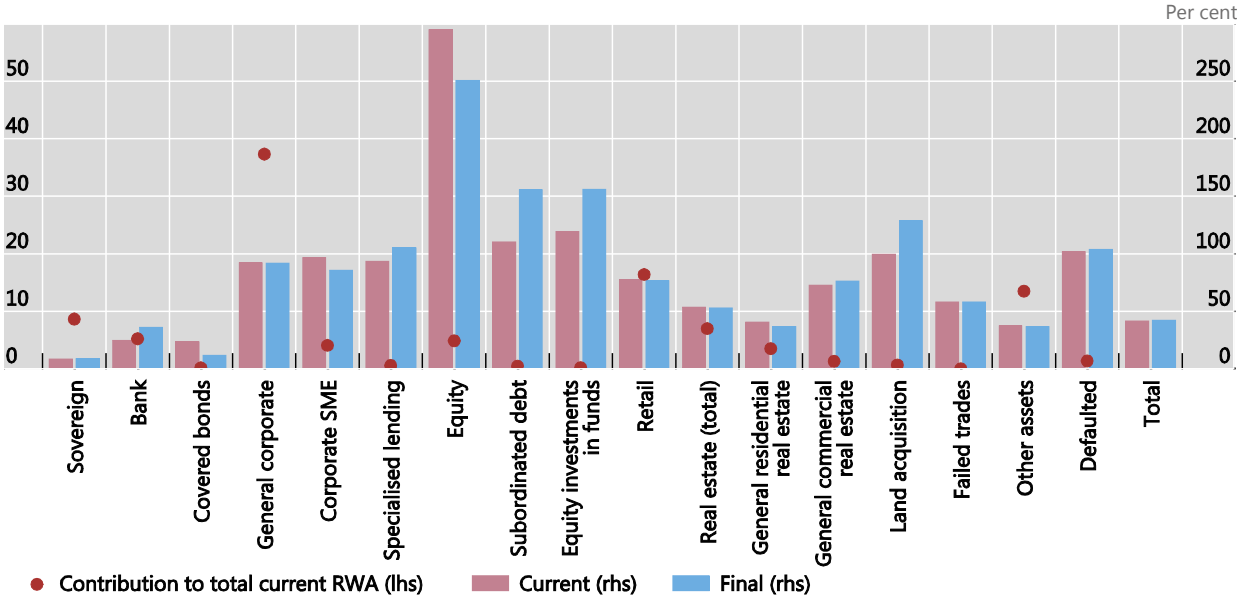
Graph 49 and Graph 50 provide additional detail on the current and revised average risk weights by asset class for Group 1 and Group 2 banks, respectively.

Overall, the average risk weight of Group 1 banks' exposures currently under the standardised approach increases from 41.4% to 42.1% (+0.7 percentage points) when moving from the current to the revised framework. Focusing on individual asset classes for Group 1 banks, subordinated debt shows the largest absolute increase in standardised approach risk weights, from 110.4% to 155.7% (a 45.3 percentage point increase). Additionally, the asset classes land acquisition and equity investment in funds show a significant increase of 29.1 and 36.5 percentage points, respectively. In relative terms, covered bonds appear the most affected, with average risk weights decreasing from 23.4% to 11.9% (a -49.1% decrease), followed by bank exposures (+46.2%) and subordinate debt (+41.0%). Equity exposures show the largest absolute decrease, from 294.7% to 250.6% (a 44.1 percentage point decrease). 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

Group 1 banks

Graph 49



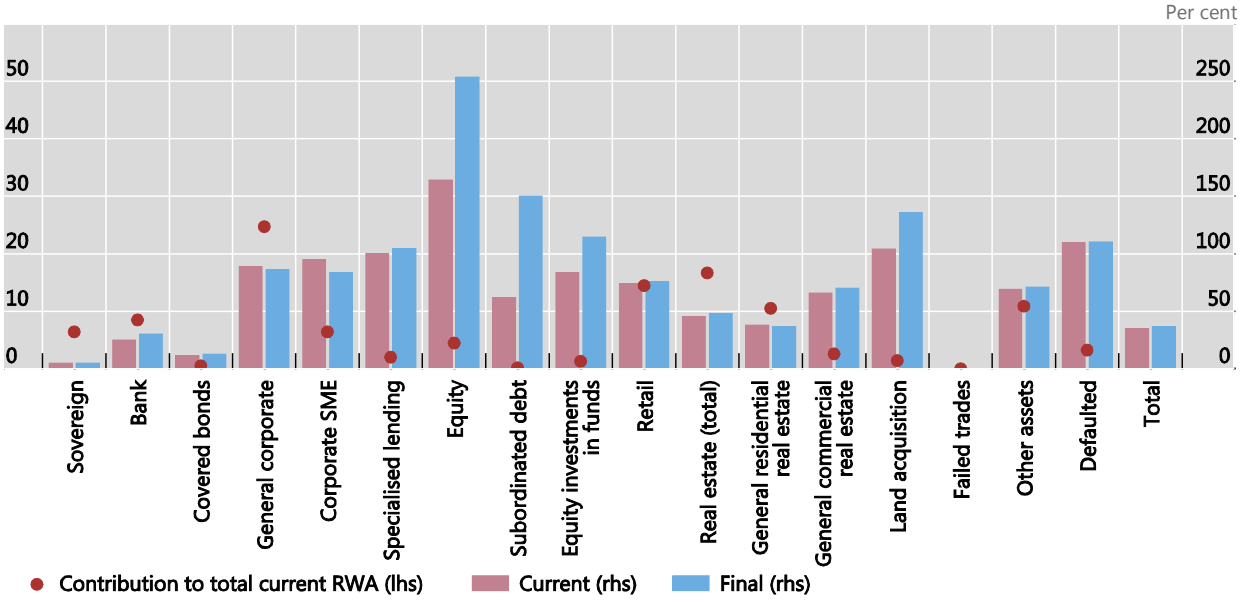
Source: Basel Committee on Banking Supervision. See also Table C.43 which includes a breakdown for G-SIBs. Table C.44 provides an additional regional breakdown.

Looking at Group 2 banks, the overall average risk weight under the standardised approach is estimated to increase by 2.0 percentage points from 34.8% to 36.8% when comparing the current with the revised framework. In comparison to Group 1 banks where subordinated debt and equity exposures had the largest absolute increase and decrease respectively, subordinated debt and equity exposures in Group 2 are the largest increase in both absolute and relative terms, moving from 61.9% to 150.1% and 164.2% to 253.5%, respectively. Also notable in Group 2 were the changes in equity investments in funds and land acquisition, which both had the third and fourth largest increases in both absolute and relative terms, moving from 83.8% to 114.5% and 104.1% to 135.4%, respectively. Corporate small and medium-sized enterprises had the largest negative impact, decreasing by 10.8 percentage points from 94.7% to 83.9%.

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

Group 2 banks

Graph 50



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

4.2.4 Internal ratings-based approach for credit risk

Impact of the revisions on MRC

Graph 51 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 panel of Graph 51 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 (-4.6%) and G-SIBs (-3.5%), and in an increase for Group 2 banks (+9.4%). The change in MRC for the banks between the 25th and 75th percentile of the distribution ranges from -11.6% to +5.4% for Group 1 banks and from -2.9% to +9.2% for G-SIBs. The range for Group 2 bank is wider, from -7.8% to +7.9%.

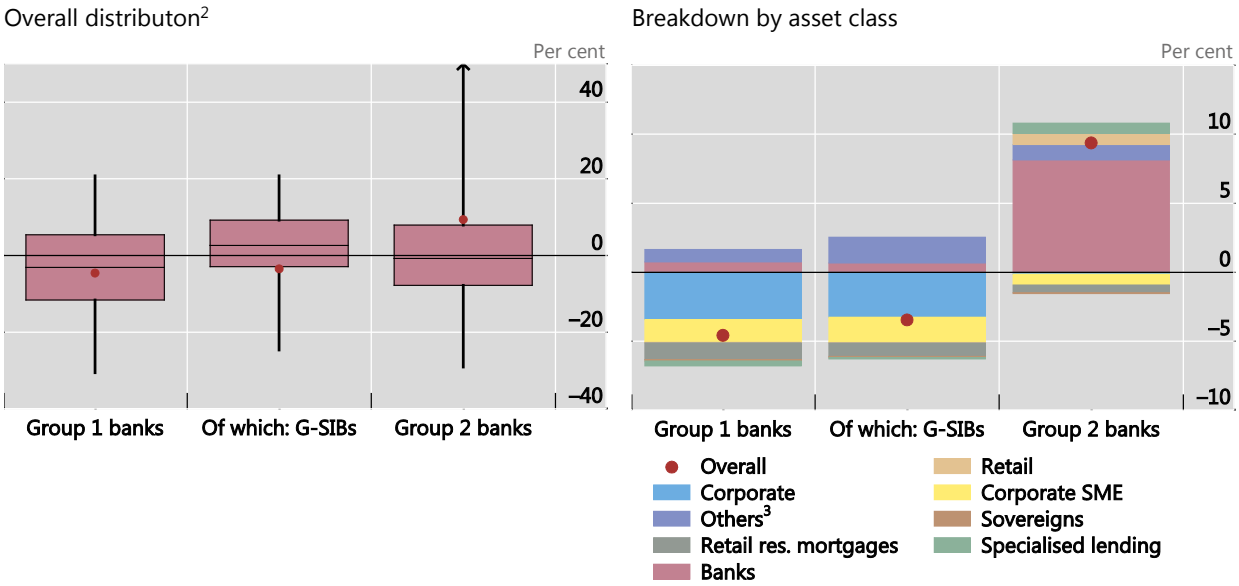
The right-hand panel of Graph 51 breaks down the impact by asset class. Exposures to corporates and to corporate SMEs are the main contributors to the overall decrease in MRC (-3.4% and -1.6%, respectively) for Group 1 banks. The MRC for exposures to retail residential mortgages also shows a small decrease (-1.2%). At the aggregate level, the results may appear counterintuitive, given that the revised framework applies more stringent standards to these asset classes (under the advanced IRB), but are likely to be driven by two factors: (i) certain jurisdictions currently apply super-equivalent requirements, which the analysis assumes will not be carried over to the new framework; and (ii) the changes in the foundation IRB standards, which in many cases result in a decrease in MRC.

The asset classes which experience the largest increases are banks (+0.8% for Group 1 banks, +8.1% for Group 2 banks) and other assets (+0.8% 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 instead of the IRB approaches.

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

Graph 51



[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. 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. [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.

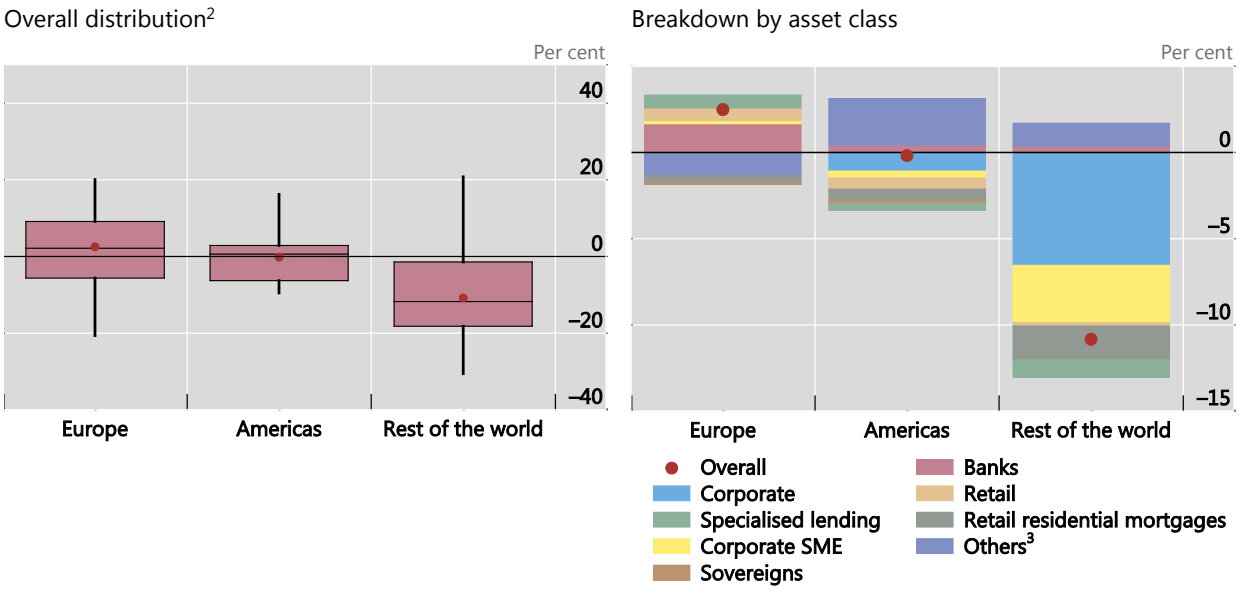
Graph 52 replicates the analysis of Graph 51 but breaks down the results by geographical region considering only Group 1 banks. Overall, the IRB revisions lead to an average increase in overall Tier 1 MRC for European banks (+2.5%), to a slight decrease for banks in the Americas (-0.2%) and to a significant 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 75th percentile of the distribution ranges from -5.6% to +9.1% for Europe, from -6.3% to +2.9% for the Americas and from -18.2% to -1.5% for the rest of the world.

For European banks, exposures to banks (+1.7%), retail and specialised lending exposures (+0.7% and +0.8% respectively) are the main contributors to the overall increase in MRC. For American banks, the main drivers for the MRC change are the decrease for corporate exposures (-1.1%), retail residential mortgages (-0.7%) and other retail (-0.6%). For the rest of the world, the decrease in MRC is mainly driven by exposures to corporates (-6.5%) and corporate SMEs (-3.3%).

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

Group 1 banks

Graph 52



[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.47 and Table C.48.

Average risk weights

Graph 53 and Graph 54 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 approach, and the revised amounts show their average risk weight under the revised framework, ie calculated using the revised standardised approach.

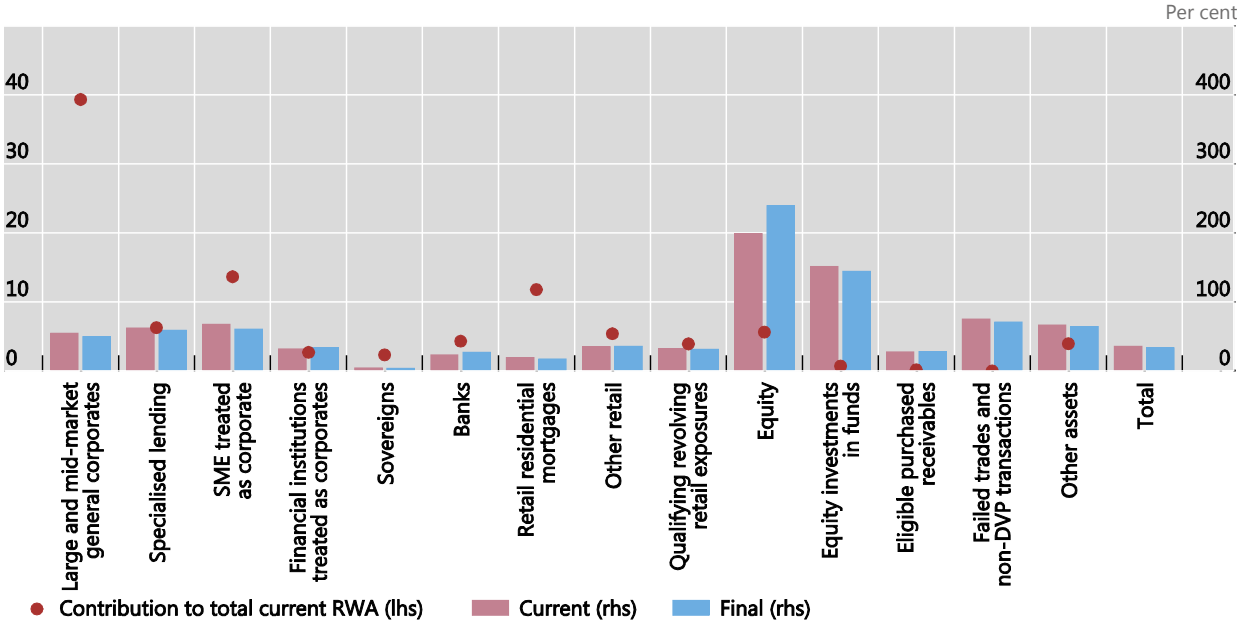
Overall, the average risk weight of Group 1 banks' exposures currently under the IRB decreases from 36.0% to 33.8% (a 6.1% decrease). The asset classes which show a decrease in average risk weights between the current and revised framework make up 81.8% of the total current IRB RWA of Group 1 banks.

Looking at individual asset classes, exposures to SME treated as corporate show the largest decrease in both absolute and relative terms, from 67.8% to 60.6% (a 7.2 percentage points decrease in absolute terms and a 10.6% decrease in relative terms). Equity exposures show the largest increase, both in absolute and relative terms (from 199.1% to 239.5%, a 40.4 percentage points increase in absolute terms and a 20.3% increase in relative terms). This increase is due to the migration of equity exposures 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

Group 1 banks

Graph 53



Source: Basel Committee on Banking Supervision. See also Table C.49 which includes a G-SIB breakdown. Table C.50 provides an additional regional breakdown.

The overall average risk weight of Group 2 banks' exposures currently under the IRB approach increases from 27.1% to 29.7% (a 9.6% increase). The asset classes which show a decrease in average risk weights between the current and revised framework make up 66.0% of the total current IRB RWA of Group 2 banks. Compared to Group 1 banks, the number of asset classes which show a decrease in average risk weights decreases slightly, and makes up a smaller fraction of total RWA.

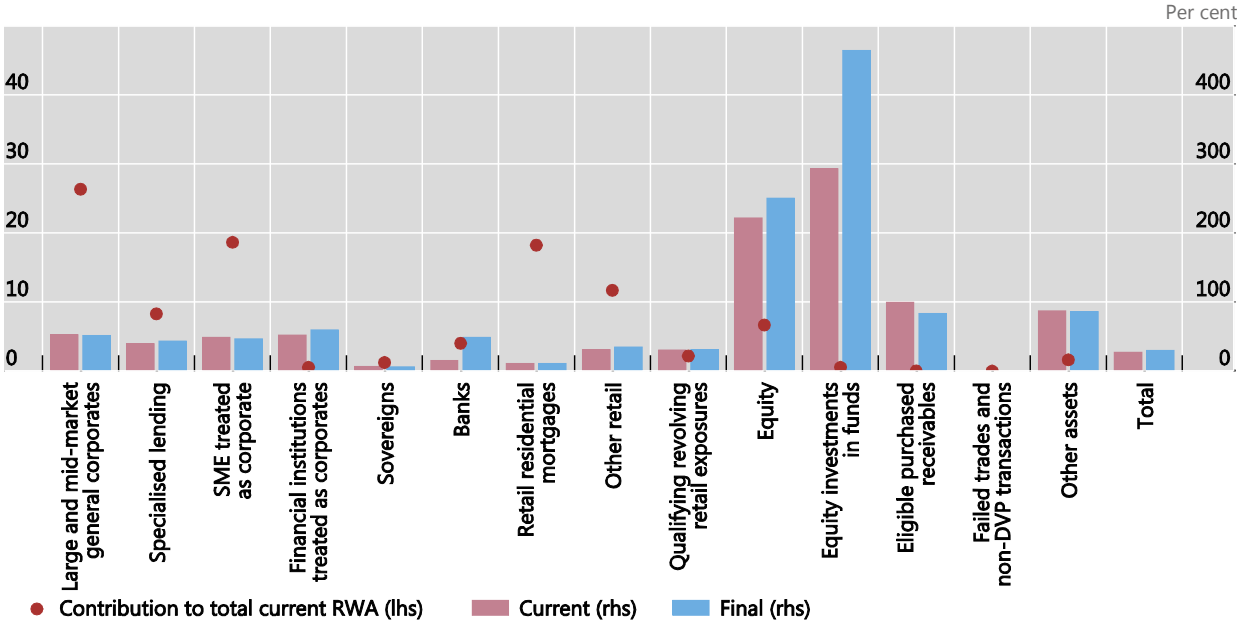
Looking at individual asset classes, eligible purchased receivables show the largest absolute decrease, from 99.4% to 83.3% (a 16.1 percentage points decrease), but their relatively small importance in terms of RWA does not let them impact the average risk weight. Exposures to banks show the largest increase, both in absolute and relative terms (from 15.3% to 48.5%, a 33.2 percentage points increase in absolute terms and a 217% increase in relative terms.[22]

[22] This increase is mostly driven by one bank whose business model focusses on exposures to PSEs, regional governments and local authorities, which are treated as banks under the revised framework.

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

Group 2 banks

Graph 54



Source: Basel Committee on Banking Supervision. See also Table C.49.

Risk parameters by IRB asset classes under current rules

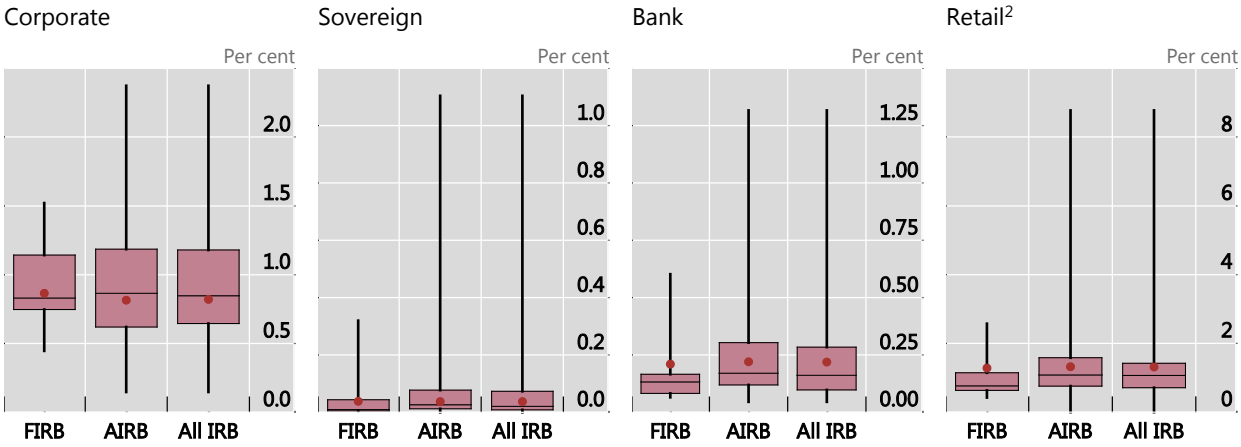
This section presents IRB risk parameters under current rules for a sample of Group 1 banks only. Graph 55 and Graph 56 illustrate weighted average probability of default (PD) and LGD for Group 1 banks' exposures subject to the IRB approaches, respectively. For Group 1 banks, average PDs are generally highest for retail and corporate portfolios (1.33% and 0.82%, 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 do not differ materially between portfolios primarily being measured using the foundation and advanced IRB approaches.[23] For corporate portfolios measured under the advanced IRB approach, PDs are slightly lower relative to those measured under the foundation IRB approach, whereas for retail portfolios measured under the advanced IRB approach, PDs are slightly higher relative to those measured under the foundation IRB approach. When comparing the LGDs, the differences are somewhat larger. The average LGDs for corporate, sovereign and bank portfolios are generally higher under the foundation IRB approach compared to the LGDs modelled under the advanced IRB approach.

[23] 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 classes[1]

Group 1 IRB banks

Graph 55



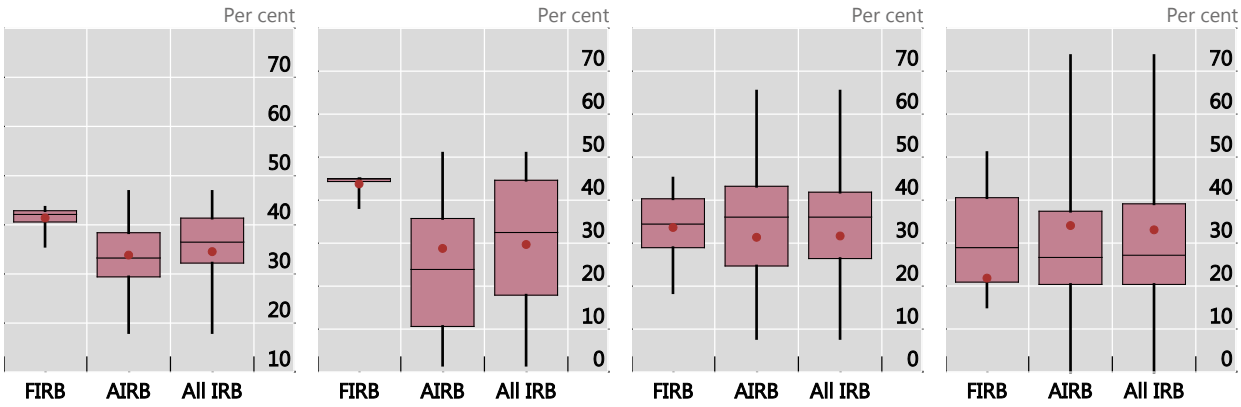
[1] The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the vertical lines generally show the range of the entire sample. The dots represent weighted averages. [2] While there is only one IRB approach for retail, the graph distinguishes between banks using foundation and advanced IRB approach for their non-retail portfolios.

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

Exposure-weighted average LGD after credit risk mitigation for non-defaulted exposures by main asset classes[1]

Group 1 IRB banks

Graph 56

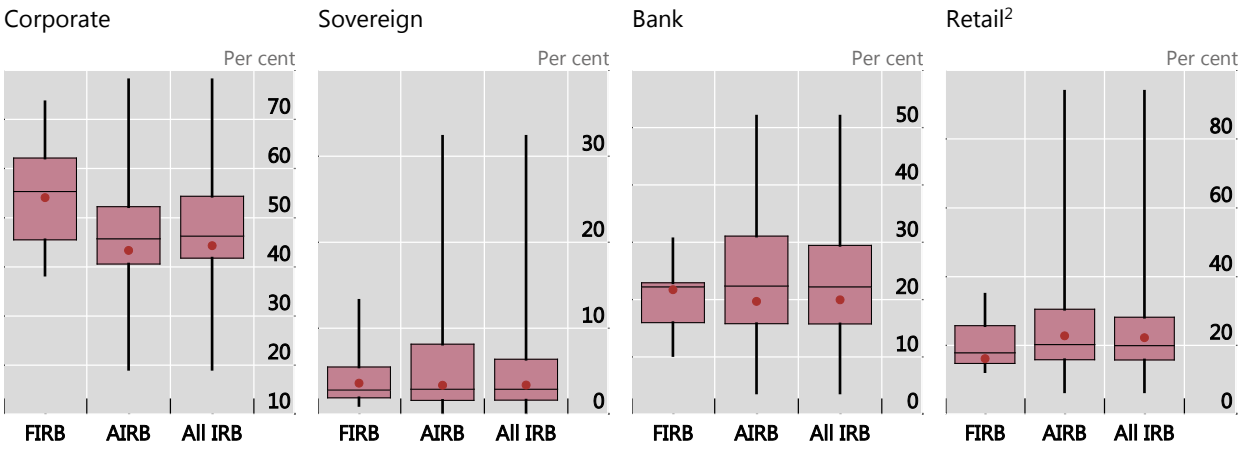


[1] The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the vertical lines generally show the range of the entire sample. The dots represent weighted averages. [2] While there is only one IRB approach for retail, the graph distinguishes between banks using foundation and advanced IRB approach for their non-retail portfolios.

Source: Basel Committee on Banking Supervision. See Table C.52 for underlying data and sample size.

Exposure-weighted average risk weights for non-defaulted exposures by main asset classes[1]

Group 1 IRB banks — Graph 57

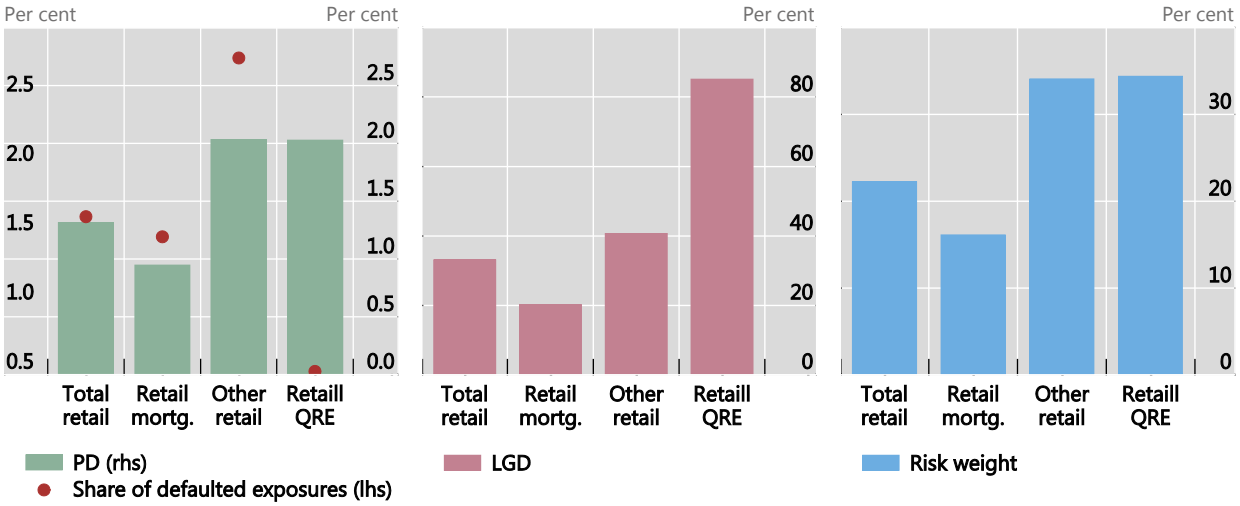


[1] The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the vertical lines generally show the range of the entire sample. The dots represent weighted averages. [2] While there is only one IRB approach for retail, the graph distinguishes between banks using foundation and advanced IRB approach for their non-retail portfolios.

Source: Basel Committee on Banking Supervision. See Table C.53 for underlying data and sample size.

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

Group 1 banks — Graph 58



Source: Basel Committee on Banking Supervision. See Table C.54 for underlying data and sample size.

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

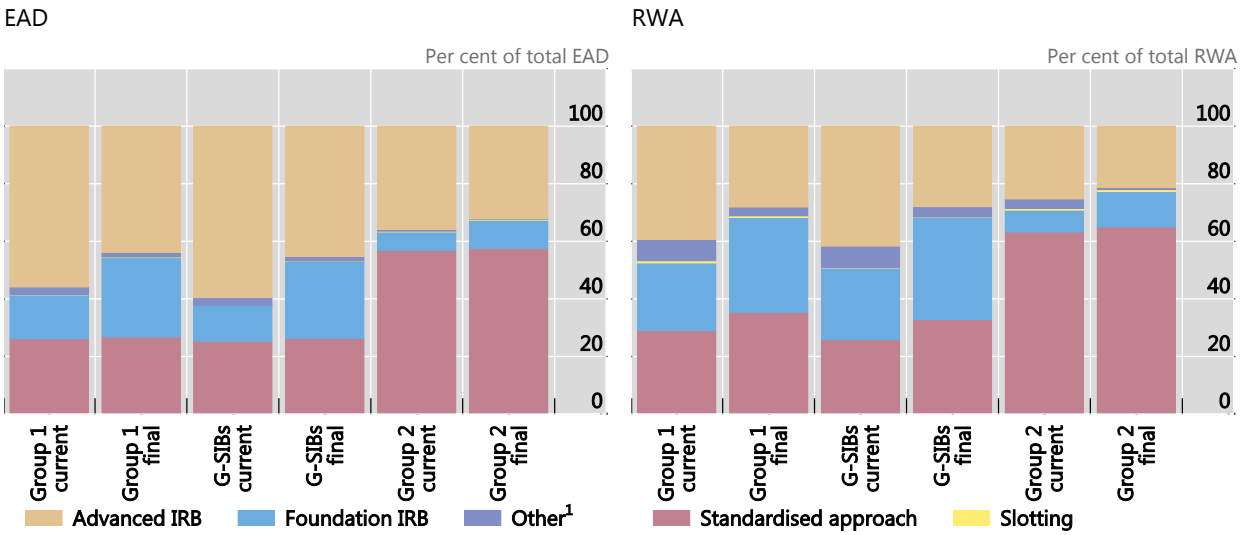
The left panel of Graph 59 shows the distribution of exposure at default (EAD) under different modelling and non-modelling approaches. For the purpose of this section, specialised lending refers to the EAD that

would be subject to the supervisory slotting criteria approach. For Group 1 banks, the portion of exposures under the advanced IRB approach decreases from 55.8% to 43.8% under the revised framework, while exposures under the foundation IRB approach increase from 15.2% to 27.6% of total exposure value. Exposures under the standardised approach increase from 26.2% to 26.8%, mainly driven by the migration of equity exposures (included in the "Other" category). For Group 2 banks, the changes are less pronounced with the portion of exposures under the advanced IRB approach decreasing from 35.9% to 32.2%, while exposures under the foundation IRB increase from 6.3% to 9.7% of total exposures. The portion of exposures under the standardised approach shows a minor increase from 57.0% to 57.6%.

The right panel of Graph 59 replicates the exercise for the distribution of RWA. For Group 1 banks, the distribution of RWA by approach is unchanged compared to the previous exercise. In particular, RWA under the advanced IRB approach decrease from 39.4% to 28.0%, RWA under the foundation IRB approach increase from 23.5% to 33.0% and RWA under the standardised approach increase from 29.0% to 35.3% of total RWA. For Group 2 banks RWA under the advanced IRB approach decrease from 25.3% to 21.2%, RWA under the foundation IRB approach increase from 7.5% to 12.4% and RWA under the standardised approach show a minor increase from 63.3% to 65.0%.

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

Graph 59

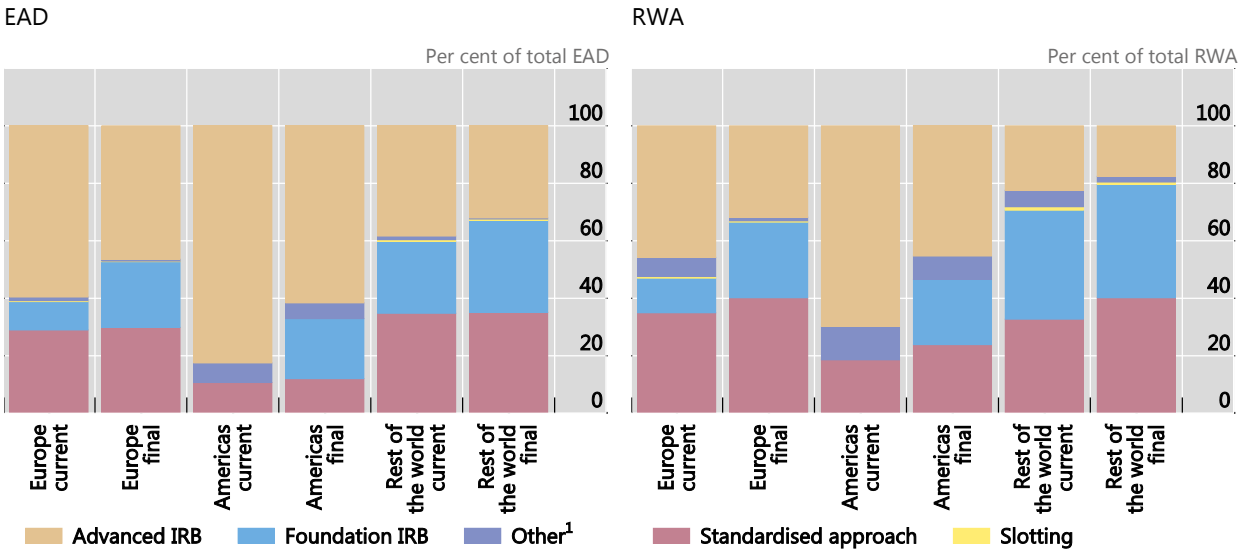


[1] "Other IRB" includes equity exposures, equity investments in funds, failed trades and non-DVP transactions and other assets under the IRB approach for credit risk.

Source: Basel Committee on Banking Supervision. See also Table C.55 and Table C.56

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

Group 1 banks — Graph 60



[1] "Other IRB" includes equity exposures, equity investments in funds, failed trades and non-DVP transactions and other assets under the IRB approach for credit risk.

Source: Basel Committee on Banking Supervision. See also Table C.57 and Table C.58

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,[24] 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

This section explores the impact of the Basel III securitisation framework.[25] In particular, the analysis focuses on the following issues:

- the estimated impact in RWA for securitisation exposures of the implementation of the Basel III securitisation framework, when compared to the Basel 2.5 framework;
- the prevalence of STC vs non-STC exposures and its relationship with the approach used for the calculation of capital requirements.

General overview of the securitisation framework

The main changes of the Basel III securitisation framework in comparison to the previous framework are:

- harmonisation of the treatment of banks operating under the standardised or IRB approaches;

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

[25] 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, www.bis.org/bcbs/publ/d374.htm and Basel Committee on Banking Supervision, *Capital treatment for simple, transparent and comparable short-term securitisations*, May 2018, www.bis.org/bcbs/publ/d442.htm.

- 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) term and short-term securitisations, typically in asset-backed commercial paper (ABCP) structures 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.

The Basel III securitisation framework provides banks with three approaches to calculate RWAs. The definition of which approach will apply follows a defined hierarchy – the capital requirements for securitisation exposures are calculated according to the following sequence:

- Securitisation Internal Ratings-Based Approach (SEC-IRBA);
- Securitisation External Ratings-Based-Approach (SEC-ERBA);[26]
- Securitisation Standardised Approach (SEC-SA).

In addition, banks that are allowed to use SEC-ERBA may also use an additional approach, the Internal Assessment Approach (IAA) to calculate RWAs for unrated securitisation exposures (predominantly liquidity facilities or credit enhancements) to an SA pool within an asset-backed commercial paper (ABCP) conduit.

The internationally-agreed date of implementation of the Basel III securitisation framework is 1 January 2018. According to the *Fifteenth progress report on adoption of the Basel regulatory framework*,[27] in October 2018 only eight Committee member jurisdictions have implemented the Basel III securitisation framework, while in the European Union the final rule is in place and due to enter in force on 1 January 2019. The member jurisdictions where the Basel III securitisation framework was in force in December 2018 are Argentina, Australia, Brazil, Hong Kong SAR, Korea, Saudi Arabia, Singapore and Switzerland. It is important to highlight that this implementation assessment does not refer to the term and short-term STC criteria, which are optional.

Data description

A total of 102 banks submitted data of sufficient quality for securitisation, including 73 Group 1 banks (24 G-SIBs) and 29 Group 2 banks. The Group 1 sample represents 98% of total securitisation exposures of all participating Basel III monitoring banks. Total securitisation exposures and RWA across Group 1 banks were €1.25 trillion and €287.53 billion respectively, compared with €22.4 billion and €7.1 billion for Group 2 banks.

Banks are included in the following analyses only if their data are complete and of sufficient quality. Accordingly, some banks have been excluded from certain sections of the analysis. Hence, certain results reported in the following sections reflect slightly different sample sizes.

Even for banks included in the sample, differences in how they complete the Basel III monitoring template could impact the comparability of the results. The most material issue is the classification as STC or non-STC exposure. Not all banks have performed STC classification for their securitisation exposures, possibly due to the effort required to assess their exposures against the STC criteria.[28] It is likely that some banks have applied a portfolio-wide classification, assigning either all or none of their exposures as STC-

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

[27] Basel Committee on Banking Supervision, *Fifteenth progress report on adoption of the Basel regulatory framework*, October 2018, www.bis.org/bcbs/publ/d452.htm.

[28] 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.

eligible. Table 9 shows that 66 banks (65%) reported no STC exposures and 10 banks (10%) 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 due to the implementation of the Basel III securitisation framework. The share of STC-compliant securitisation exposures can be expected to increase as jurisdictions implement the Basel III securitisation framework.

Overview of securitisation exposures

Investment activity represent 57.3% of banks' exposures to securitisations, with the remaining split evenly between their roles as ABCP sponsors and originator (Table 8). The relative breakdown of a jurisdiction's overall exposure according to the role of the bank differs significantly across jurisdictions, given the idiosyncrasies among securitisation markets and varying business models among banks.

Bank role exposure amounts and RWAs

In billions of euros — Table 8

	Originator	Investor	Sponsor	Total
Exposure amounts	299.3	727.6	243.9	1,270.8
RWA	66.0	189.5	39.1	294.6

Source: Basel Committee on Banking Supervision.

The Basel III securitisation framework distinguishes between STC and non-STC exposures, providing preferential capital treatment to STC exposures. Banks reported 20% of their exposures as STC-eligible (compared to 19% as of June 2018). However, as shown by Table 9 at the individual bank level, the STC share ranges widely with 65% of banks reporting all of their exposures as non-STC and 24% 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 Basel III securitisation framework or implemented the Basel III 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.

Number of banks per range of STC share — Table 9

	Share = 0%	0% < share ≤ 25%	25% < share ≤ 50%	50% < share ≤ 75%	75% < share < 100%	Share = 100%
Total	66	8	4	4	10	10

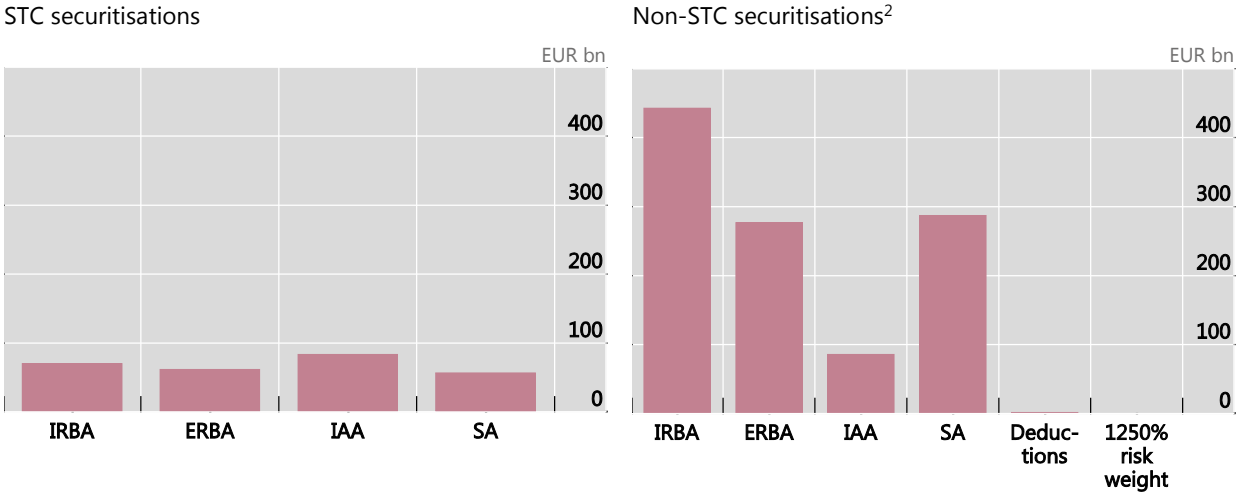
Source: Basel Committee on Banking Supervision.

The Basel III 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, and SEC-ERBA[29] (37%) followed by SEC-SA (25%) (Graph 61). This distribution is almost identical to the one observed for June 2018.

[29] Including the IAA.

Securitisation exposure amounts by approach

All banks[1] Graph 61



[1] The sample consists of 103 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 10.

Impact of the Basel III securitisation framework

Change in RWA for securitisation exposures

Across all banks in the sample from jurisdictions that have not yet implemented the Basel III securitisation framework, the total RWA for securitisation exposures increases by €115.8 billion (40.4%) under the Basel III securitisation framework (Table 10). Directionally, this increase is within the expectations, 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 change shows that increases related to non-STC exposures dominate, comprising €110.6 billion (95.5%) of the total increase. Within non-STC exposures, the 153.4% increase in RWA for securitisation exposures risk-weighted using IAA is due to those exposures currently subject to very low risk weights (11% on average) being transitioned to the Basel III securitisation framework. This revised standard (i) floors the risk weight for non-STC exposures at 15% and (ii) more than doubles the risk weights for lowly rated short-term non-STC securitisation exposures. The increase on the RWA for securitisation exposures risk-weighted using IAA has been partially mitigated by the introduction of the short-term STC standard[30] in May 2018, where STC classification carrying a 10% risk weight floor has been made available for such exposures. STC exposures account for less than 4% of the expected increase in total RWA. Remarkably, non-STC exposures subject to the SEC-SA show a relative increase of only 11.8%, which compares to an average increase of 50.4% for non-STC exposures across all approaches. This behaviour can be explained by the fact that the majority (three quarters) of those exposures is held by US banks. As US banks under the current framework are subject to an approach (the US simplified supervisory formula approach) that is very similar to SEC-SA those exposures show only little changes in RWA in

[30] 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 an 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.

comparison to other countries. The reduction in RWA for STC exposures subject to the SEC-SA (-14.2%) is related to one bank that has classified almost all of its exposures as STC.

Overall, those results are very consistent to the results observed in June 2018.

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

Table 10

	Exposure			RWA		
	Current framework (EUR bn)	Final standards (EUR bn)	Change (%)	Current framework (EUR bn)	Final standards (EUR bn)	Change (%)
Non-STC securitisations: SEC-IRBA	413.4	410.8	–0.6	78.1	116.2	48.8
Non-STC securitisations: SEC-ERBA	260.9	262.6	0.6	39.6	85.7	116.4
Non-STC securitisations: IAA	88.5	85.7	–3.2	10.1	25.6	153.4
Non-STC securitisations: SEC-SA	268.3	271.1	1.0	91.7	102.5	11.8
Of which: resecuritisation	2.7	4.1	50.0	5.7	8.1	42.2
Non-STC securitisations: total	1,031.2	1,030.2	–0.1	219.5	330.1	50.4
STC securitisations: SEC-IRBA	70.2	70.2	0.0	18.2	19.5	7.5
STC securitisations: SEC-ERBA	53.4	55.2	3.4	6.8	8.7	27.0
STC securitisations: SEC-IAA	85.3	83.4	–2.2	8.6	13.6	58.6
STC securitisations: SEC-SA	53.2	53.1	–0.1	21.9	18.8	–14.2
STC securitisations: total	262.2	262.0	–0.1	55.5	60.6	9.3
Others (1250% RW)	1.1	1.1	0.0	11.8	11.9	0.9
Total	1,294.4	1,293.2	–0.1	286.8	402.6	40.4
Deducted (EU only)	1.6	1.4	–7.3	19.4	15.0	–23.0

[1] The sample consists of 109 banks. Under the EU 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.

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 could increase significantly due to the higher risk weight floor. Another example of changes in the framework that impacts the RWA amount is the risk weight applicable to exposures under the SEC-ERBA, which triple from 7% to 20% for a non-STC five year senior AAA-rated exposure. On the other hand, banks holding a securitisation portfolio of senior tranches of sub-investment grade exposure would see RWA decrease.

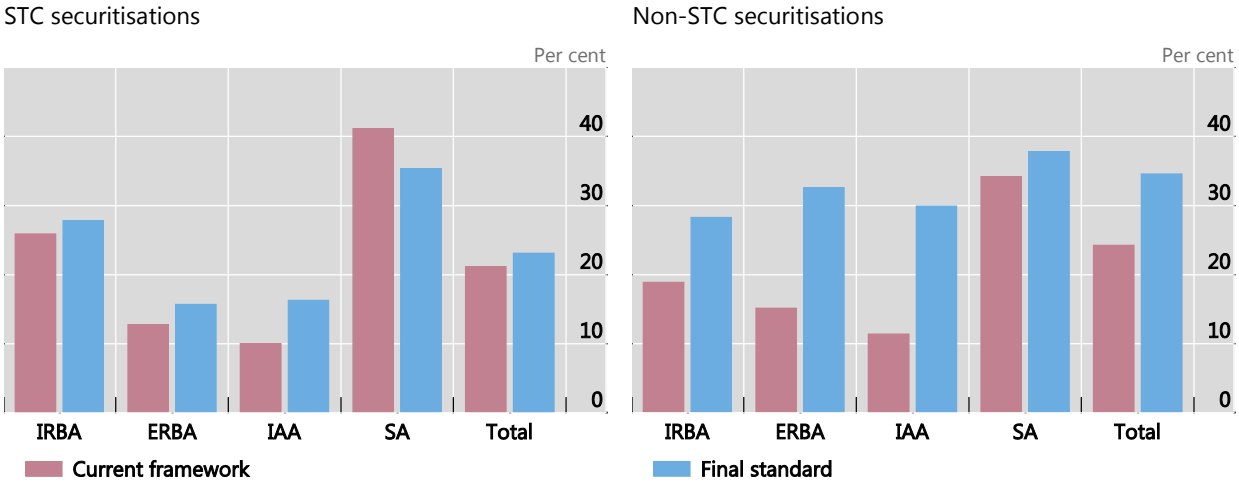
STC and non-STC exposures

Graph 62 compares the average risk weightings applicable to exposures under the previous and the Basel III securitisation frameworks, separated by compliance with STC criteria as assessed by banks. Exposures subject to the SEC-SA show only slight differences, with risk weightings for STC exposures expected to drop, while non-STC exposures should see a similarly marginal increase. However, under the Basel III securitisation framework, relatively large increases in the average risk weight can be observed for exposures treated under the SEC-IRBA, the SEC-ERBA or IAA for non-STC securitisations. On an overall basis, the average risk weight increased from 22% to 31% under the Basel III securitisation framework.[31] Again those results are very consistent to the results observed in June 2018.

[31] STC exposures under the SEC-SA, in contrast to all other exposures, show a decrease in the average risk weights (-6 percentage points). However, it should be noted that those exposures only contribute around 4% of the overall securitisation EAD.

Average risk weight by approach

All banks[1] Graph 62



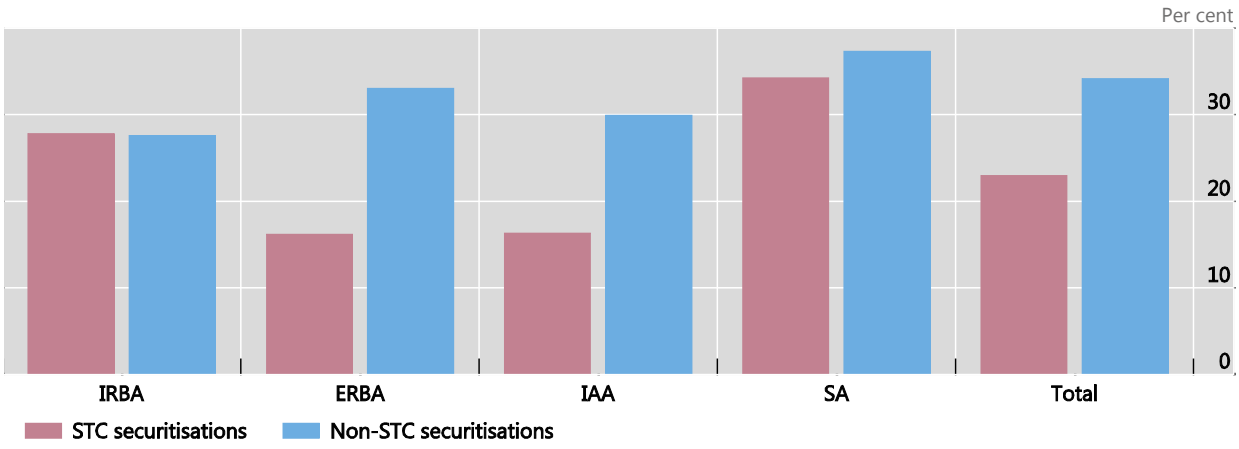
[1] The sample consists of 96 banks. Total under non-STC securitisations includes deductions for EU and securitisations subject to a 1250% risk weight.

Source: Basel Committee on Banking Supervision. See also Table C.59.

Graph 63 compares the average risk weights between STC and non-STC exposures under the Basel III securitisation framework. In line with the calibration of the parameters, the total average risk weights for non-STC exposures is 11.2 percentage points higher than for STC exposures. The exposures risk-weighted using the SEC-ERBA show the greatest difference (16.9 percentage points) in average risk weights between STC and non-STC exposures.

Average risk weight, final standards

All banks[1] Graph 63



[1] The sample consists of 109 banks.

Source: Basel Committee on Banking Supervision. See also Table C.60.

Results under SEC-SA as alternative to the general hierarchy

One of the effects of the Basel III securitisation framework is that some exposures may have a lower risk weight under the SEC-SA than in SEC-IRBA in specific circumstances. This can occur depending on the

maturity, performance and type of underlying assets. In particular, there is the possibility that exposures with long maturity[32] or those related to non-performing loans may be in this situation. Another example might be transactions with underlying assets showing significant dilution risk.[33] While dilution risk is reflected in SEC-IRBA through K_{IRB}, it is not considered in SEC-SA through K_{SA}, although it was one of the factors considered more generally during the calibration relative to SEC-IRBA. Additionally, securitisations of assets that are still performing, but have low or decreasing credit quality, might result in lower SEC-SA risk weights. This effect occurs due to the lower sensitivity of K_{SA} to the credit quality of the underlying assets; as long as assets are still performing, the reliance of SEC-SA on a single, portfolio-level credit risk parameter might lead to an underestimation of the risk under the SEC-SA in comparison to the SEC-IRBA (and SEC-ERBA).

For the reasons above, one of the possible effects of the revised securitisation framework is that banks could have an incentive to use SEC-SA for these particular exposures, instead of SEC-IRBA. Under the hierarchy of approaches, SEC-SA is used when (a) the bank does not have approval to use IRB or cannot estimate K_{IRB} for the underlying exposures due to lack of sufficient data, and (b) the supervisor does not allow the bank to use the SEC-ERBA or the position is not externally rated and there cannot be an inferred credit rating. Comparing the average risk weights of SEC-IRBA/SEC-ERBA/IAA with those obtained if the exposures were risk weighted by SEC-SA should provide preliminary evidence about the need to further exploring the issue, even considering that exposures that are risk weighted under one approach are usually not comparable to exposures under a different approach.

A similar potential issue could arise if banks had incentives to use the more standardised approaches (SEC-ERBA or SEC-SA) rather than the internally modelled approaches (SEC-IRBA and IAA). Because the latter approaches rely on more updated information from the underlying assets and are generally more associated with enhanced risk management by banks, banks are encouraged to use them, including by the introduction of the approach hierarchy. However, if the resulting risk weights for the standardised approaches are materially lower, banks could respond to this incentive, which would undermine the objective imbedded in the design of the framework, that banks use the SEC-IRBA whenever possible. Analogous to the lower sensitivity of SEC-SA to credit risk deterioration described above, a similar delay in recognition of credit deterioration in the underlying exposures can occur under the SEC-ERBA when credit ratings for securitisation positions have not been recently reconsidered to reflect this deterioration.

This report is the first time that banks are asked to report the RWA calculated using the SEC-SA for exposures reported to be under SEC-IRBA, SEC-ERBA and IAA approaches. For this reason, not all participating banks were able to provide this additional information yet, and consequently a number of banks had to be excluded from the analyses presented in this subsection. Data provided by a total of 82 banks were included in the analysis sample corresponding; these banks correspond to 90% of the overall exposure amounts under the SEC-SA.

Table 11 shows the comparison of the average risk-weights following the hierarchy under the Basel III implementation with the average risk-weights when applying the SEC-SA to all exposures. For the total universe of exposures the application of the SEC-SA would result in an increase of 16.2 percentage

[32] Both SEC-IRBA and SEC-ERBA take maturity into account as a risk driver. On the other hand, SEC-SA risk weights are independent of maturity. Thus, long maturity exposures are likely to have lower RWA under the SEC-SA than under the more sophisticated approaches.

[33] Dilution risk is defined in CRE34.8 (www.bis.org/basel_framework/chapter/CRE/34.htm?inforce=20220101) and refers to the possibility that the receivable amount is reduced through cash or non-cash credits to the receivable's obligor. Examples include offsets or allowances arising from returns of goods sold, disputes regarding product quality, possible debts of the borrower to a receivables obligor, and any payment or promotional discounts offered by the borrower (eg a credit for cash payments within 30 days).

points with respect to the average risk weights. This increase can be explained by the fact that the majority of the reported exposures is of relatively high quality (as indicated by an average risk weight of 31.4%) which generally receive under the SEC-SA higher risk weights as under the more risk-sensitive approaches. This conclusion is also supported by the fact that the alternative application of the SEC-SA would results in the largest increase, in particular for approaches which show the lowest risk weights (for example non-STC SEC-IRBA or STC IAA).[34] On the other hand, for low quality exposures the SEC-SA would result in lower risk weights (for example for deduction positions the average risk-weight would decrease by 218 percentage points). This again shows the lower risk-sensitivity of SEC-SA, which is in particular relevant for exposures with very high or very low quality.

SEC-SA as alternative to the general hierarchy of the final standards

Average risk weight by approach vs SEC-SA, in per cent — Table 11

	Final standards	SEC-SA	Change
Non-STC securitisations: SEC-IRBA	27.9	57.3	105.1
Non-STC securitisations: SEC-ERBA	36.6	58.5	59.9
Non-STC securitisations: IAA	31.1	41.5	33.5
Non-STC securitisations: SEC-SA	37.2	37.2	0.0
Of which: resecuritisation	195.4	195.4	0.0
Non-STC securitisations: total	**32.6**	**50.6**	**55.2**
STC securitisations: SEC-IRBA	26.1	25.7	–1.8
STC securitisations: SEC-ERBA	15.5	25.3	62.8
STC securitisations: SEC-IAA	16.3	39.1	139.9
STC securitisations: SEC-SA	34.2	34.2	0.0
STC securitisations: total	22.4	31.8	41.8
Others (1250% RW)	1,112.9	1,112.9	0.0
Total	**31.4**	**47.6**	**51.4**
Deducted (EU only)	1,026.7	808.8	–21.2

Source: Basel Committee on Banking Supervision.

Contribution of securitisation MRC to total MRC

Overall, securitisation's contribution to aggregate MRC is expected to increase by 0.6% from 1.6% to 2.2%.

4.3 Market risk

4.3.1 Current market risk rules

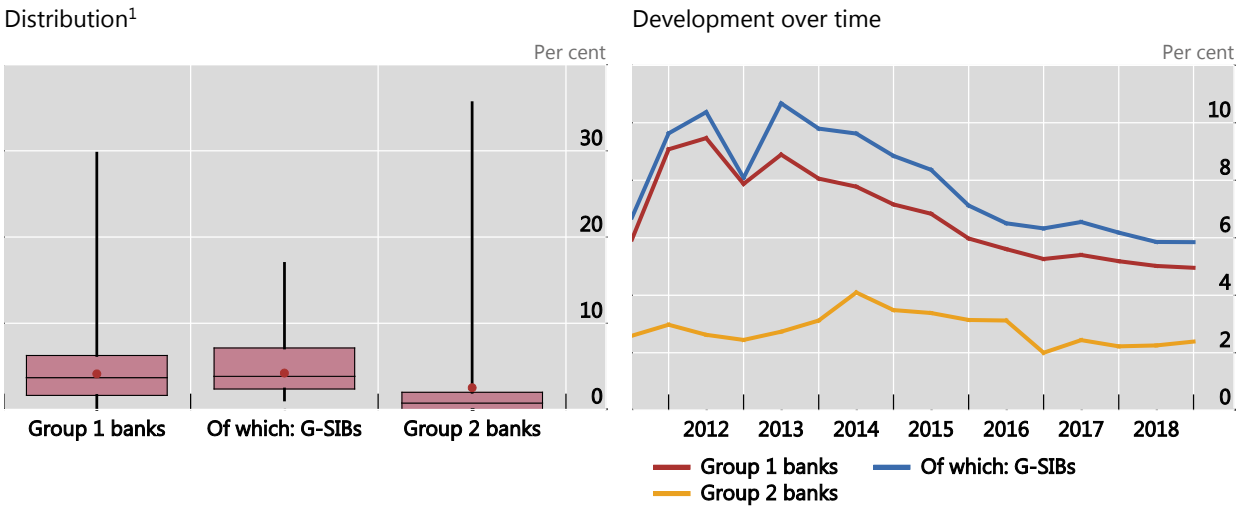
The left panel of Graph 64 shows the distribution of the share of minimum market risk capital requirements in total MRC under the current rules, ie jurisdiction-specific Basel 2.5. On average, the share of market risk MRC is 4.1% of total MRC for Group 1 banks and 2.5% of total MRC for Group 2 banks. However, there is significant dispersion in impacts from zero to 29.7% across participating Group 1 banks and from zero to 35.6% across participating Group 2 banks.

[34] The decrease for STC SEC-IRBA exposures should not be understood as a contradiction to this general tendency as this decrease is caused by one single bank which contributes 70% of exposure amount subject to STC SEC-IRBA. Hence this result might not be representative.

As seen in the trends starting in 2011, shown in the right panel, market risk's contribution to the sample banks' consolidated capital requirements has declined significantly for all of the groups since peaking between 2012 and 2014. This drop is most pronounced for Group 1 banks, which have seen their relative capital requirements attributed to market risk decline by around half. The average share for Group 1 banks and G-SIBs was at a similar level as at end-June 2011. However, data from 2011 should be viewed in light of the fact that many jurisdictions implemented Basel 2.5 beginning in 2012, so the 2011 numbers were reflective of the prior Basel II standards that resulted in significantly less conservative estimates of capital requirements.

Share of market risk MRC in total MRC under the current rules

Graph 64



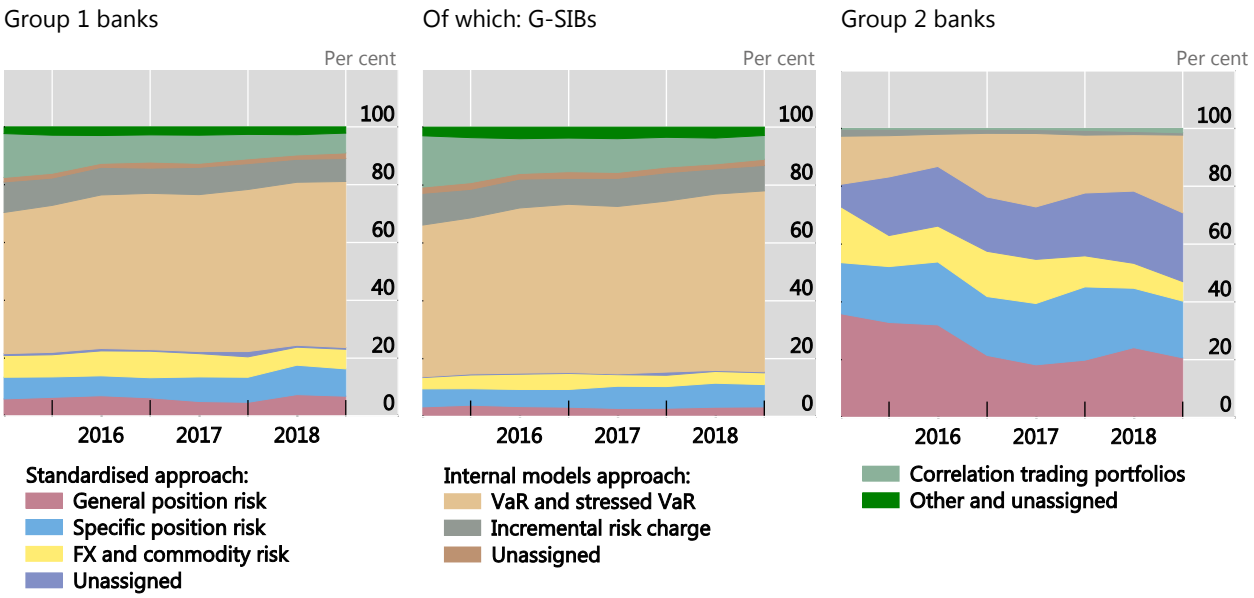
[1] The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the vertical lines generally show the range of the entire sample. The dots represent weighted averages.

Source: Basel Committee on Banking Supervision. See Table C.61 and Table C.62 for underlying data and sample size.

Graph 65 below shows time series decompositions of reported market risk MRC by sub-components since end-June 2015. For Group 1 banks and in particular the G-SIB subset, the internal models approach comprises around two thirds of overall market risk MRC. The contribution of value-at-risk (VaR) and stressed VaR has increased steadily, while the contribution of correlation trading portfolios (CTP) – complex securitisations or credit derivative positions – has decreased. For Group 2 banks, the internal models approach is far less relevant with more than 70% of market risk capital requirements calculated under the standardised approach.

Components of MRC for market risk under the current rules

Consistent sample of banks, in per cent — Graph 65



Source: Basel Committee on Banking Supervision. See Table C.63, Table C.64 and Table C.65 for underlying data and sample size.

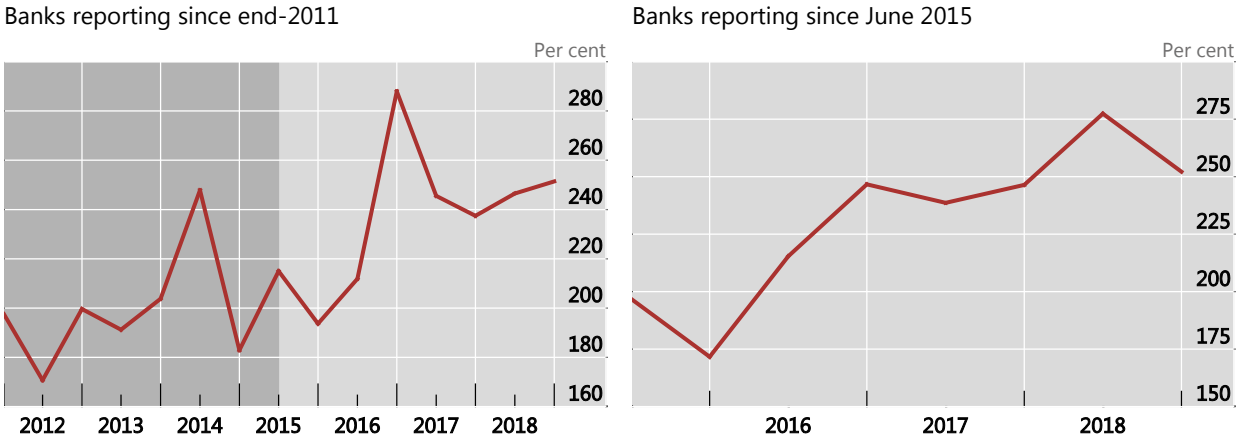
Graph 66 below shows the relation of the 10-day 99% confidence level stressed value-at-risk (VaR) to the current VaR under current market risk rules using two consistent samples of Group 1 banks. The left panel shows the time series since end-2011 for 26 banks. Under this longer run consistent sample, the ratio of stressed VaR to VaR has fluctuated around 200% with a local peak at 247.9% in H1 2014 and a time series high at end-December 2016 of 288.0%.

The right panel of Graph 66 shows the same ratio for a shorter run consistent sample including 31 additional banks which have provided data since 2015. For this larger sample of overall 57 banks, the ratio has continued to increase and reached its peak at end-June 2018 at 277.4%.

In both samples time series the increase can be attributed at least partially to the lower volatility environment that has been observed in the markets over the last several years which reduces VaR figures. Banks' VaR models are based on a fixed backwards-looking time period that rolls forward over time. Stressed VaR, however, is based on the bank's most stressful period. Thus, as banks' VaRs fall in low volatility periods, the ratio becomes elevated.

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

Consistent sample of Group 1 banks — Graph 66



Source: Basel Committee on Banking Supervision. See Table C.66 for underlying data and sample size.

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

This exercise as of end-December 2018 included the first data collection of estimated impacts on capital requirements from the revised market risk framework published in January 2019[35], which replaced an earlier version of the standard as published in 2016. Compared to the 2016 framework, the 2019 standard clarified the scope of exposures that are subject to market risk capital requirements, refined certain elements of the standardised approach, including risk weight adjustments, and improved the processes to assess modellability including capital consequences for falling short of them.

It should be noted that Basel III monitoring market risk data tend to be more variable both over time and across reporting banks than that of other areas of the Basel III monitoring exercise owing to the short term and ever changing nature of trading portfolios when compared to the banking book portfolios, which are mostly held-to-maturity or revolving. In addition, the Basel III monitoring data for market risk under the revised market risk standard are less robust as the impact estimates will continue to require significant manual intervention for a large number of trading positions at each bank until banks develop systems reflecting their local implementations.

Another caveat in interpreting the impact on the internal models approach versus the standardised approach is the potential difference in the scope of trading desks that use models. Participating banks were instructed to calculate the internal models approach capital requirements for trading desks currently subject to the internal models approach, which means that it ignores (i) the potential for banks to change the scope of trading desks that use models; and (ii) the potential consequences of trading desk-level backtesting and the P&L attribution test results. However, this analysis includes the reported data of some banks that used their own judgement regarding desk-level internal models eligibility.

Also, evidence from previous reforms to the market risk capital framework has shown that banks have progressively reduced their overall trading book risk profile in response to strengthened capital requirements and changes in risk appetites. Subsequently, realised impacts of reforms have turned out lower than estimated.

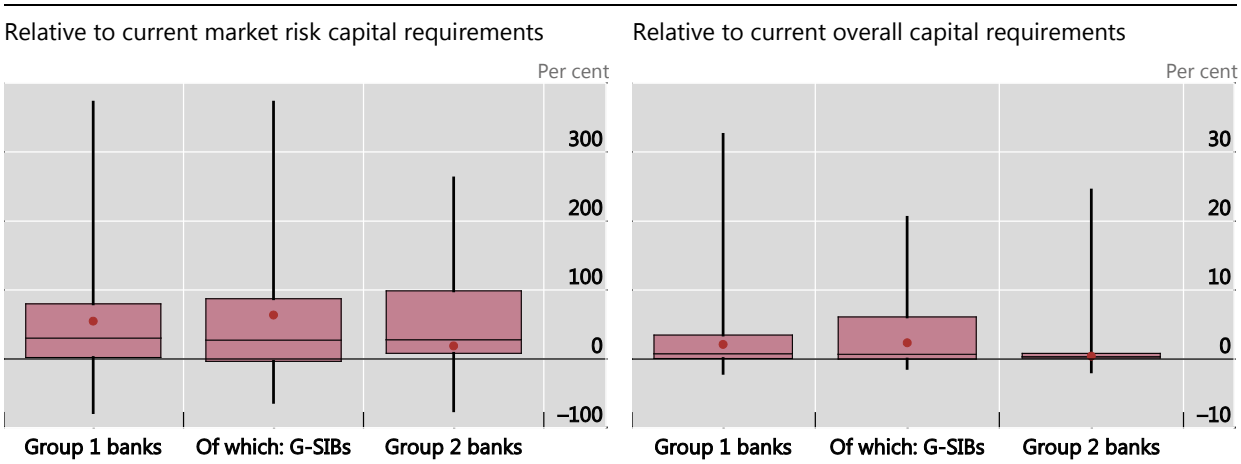
[35] Basel Committee on Banking Supervision, *Minimum capital requirements for market risk*, January 2019 (rev February 2019), www.bis.org/bcbs/publ/d457.htm.

A total of 50 Group 1 banks including 23 G-SIBs, and 14 Group 2 banks provided market risk data at the end-2018 reporting date sufficiently complete to estimate the overall impact of the revised market risk framework.

Graph 67 below shows the revised market risk standards' impact versus current market risk capital requirements (left panel) and total capital requirements (right panel). While the average prospective Basel III market risk capital requirements relative to current market risk capital requirements increases by 54.7% for Group 1 banks and by 18.9% for Group 2 banks, there is wide variability at the bank level. Outliers are far more extreme. However, as a portion of the banks' overall MRC rather than only market risk MRC, the revised standards result in a much more modest average increase of 2.1% for Group 1 banks and 0.4% for Group 2 banks.

Impact on MRC of the revised standards for minimum capital requirements for market risk[1]

Graph 67



[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.67.

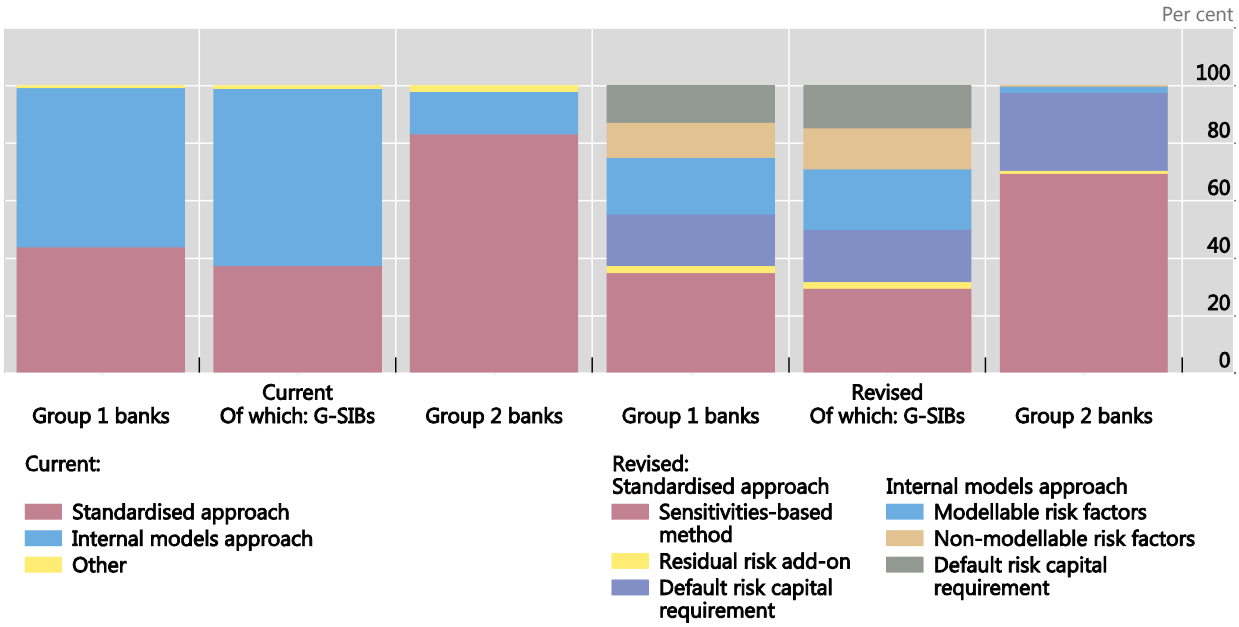
Graph 68 decomposes the total market risk capital requirements under the current rules and under the 2019 standard. The breakdown is shown by the approach for the current rules and by sub-components of the approaches for the 2019 standard. Group 1 banks would expect their share of standardised approach capital requirements to increase from 43.9% to 55.4%. For Group 2 banks, the share of their internal models-based capital requirement is expected to drop from 14.8% to 2.8%.

For positions subject to the revised standardised approach, for Group 1 banks, 63.2% of the standardised approach capital requirement is expected to be attributed to the sensitivities-based method (SbM). For Group 2 banks, the share of SbM is 71.1%. The default risk capital (DRC) requirement contributes 32.2% and 27.7% to the total standardised approach capital requirements for Group 1 and Group 2 banks, respectively. The residual risk add-on (RRAO), which accounts for risks not fully covered by the SbM or the DRC (eg gap risk, correlation risk and behavioural risk), contributes 4.6% to the standardised approach capital requirement for Group 1 banks and 1.1% for Group 2 banks.

With respect to revised IMA, the internally modelled capital requirement (IMCC) would contribute 44.2% to the total internally-modelled capital requirements for Group 1 banks and 94.5% for Group 2 banks. The share of capital requirements from non-modellable risk factors (NMRF) is 27.5% and 5.5% respectively. Finally the DRC for internal models is expected to contribute 28.3% for Group 1 banks.

Breakdown of MRC for market risk by approach and risk component under the current rules and the revised standard

Graph 68



Source: Basel Committee on Banking Supervision. See also Table C.68.

4.4 Operational risk

4.4.1 Current operational risk rules

As depicted in Graph 69 below, MRC for operational risk of Group 1 banks has continuously increased until end-2016 and decreased slightly until end-June 2017. 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.

The evolution of losses over the past 10 years, depicted in Graph 70, gives an explanation of the development of MRC changes. MRC for operational risk first increased with the increasing losses. However, as the losses started to decline the MRC for operational risk stabilised and it has even slightly decreased in recent years. In total, €517.1 billion of gross and €469.5 billion of net operational risk losses have been reported over the past 10 years. Operational risk gross losses increased from €26.6 billion in 2009 up to the peak in 2014 with €77.2 billion. The gross losses have decreased significantly to €35.6 billion since then; however, they still stand above the pre-crisis level. The time-lagged impact of the financial crisis in banks' P&L is caused by the long-standing lawsuits of conduct risk events.

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 66.4% 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 15.6% for G-SIBs.

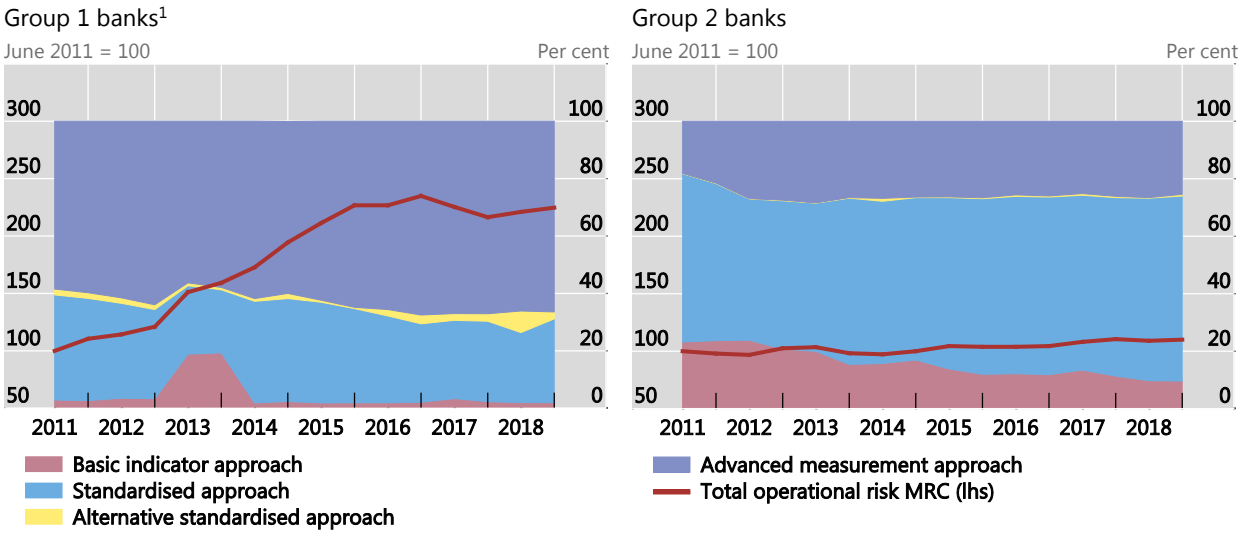
The increase in MRC for operational risk for Group 2 banks, most of which calculate operational risk capital requirements under the framework's non-model-based approaches,[36] is largely explained by

[36] These comprise the Basic Indicator Approach (BIA), the Standardised Approach (TSA) and its variant, the Alternative Standardised Approach (ASA).

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 9.5%.

Total MRC for operational risk and share of approaches

Consistent sample of banks — Graph 69

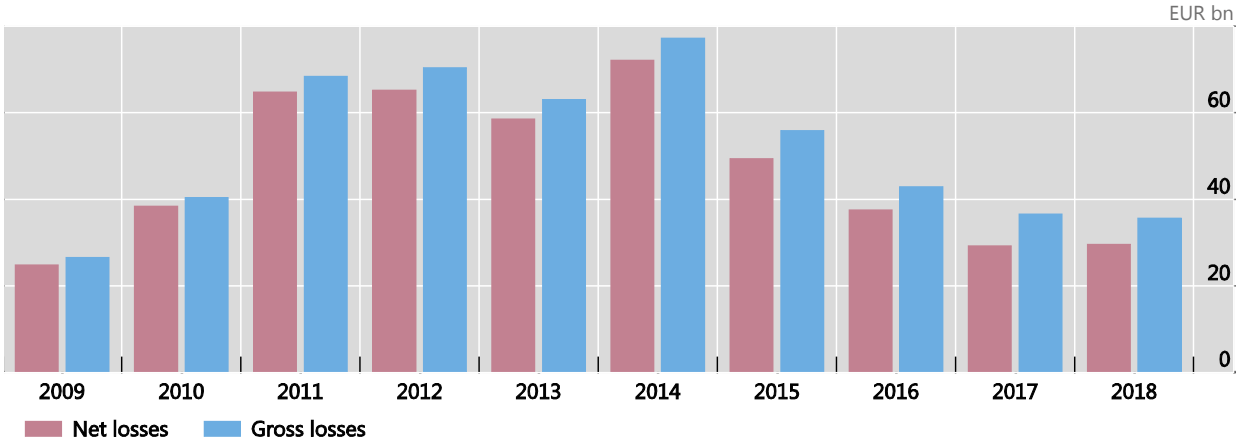


[1] Some banks started reporting operational risk RWAs under the Basic Indicator Approach in 2013 and eventually migrated to the Standardised Approach in 2014.

Source: Basel Committee on Banking Supervision. See Table C.69 and Table C.70 for underlying data and sample size.

Loss evolution over the past 10 years

All banks, exchange rates as of 31 December 2018 — Graph 70

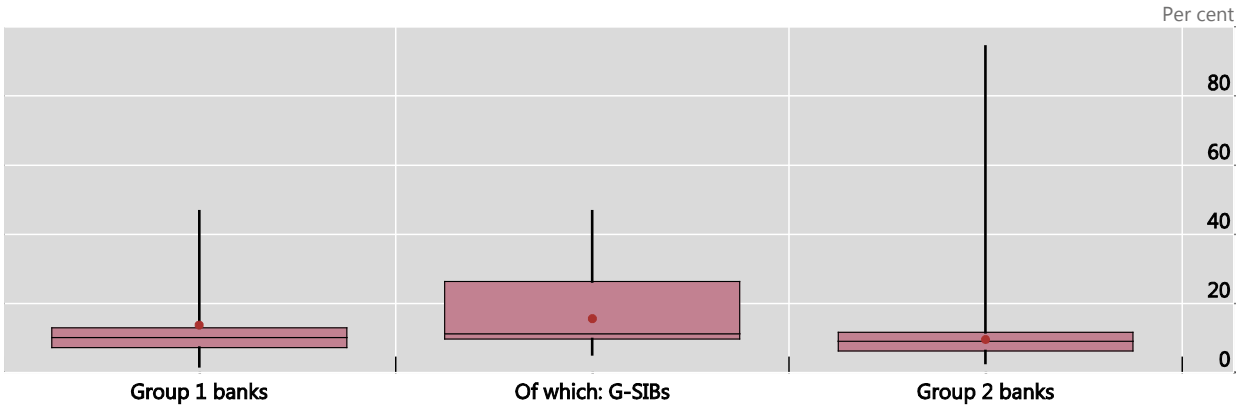


Source: Basel Committee on Banking Supervision. See Table C.71 for underlying data and sample size.

The dominance of indicator-based properties found in the standardised approaches for operational risk reflects the size of a bank rather than its risk exposure, which explains the limited variance of MRC for most Group 2 banks (see Graph 71). For Group 2 banks, the difference between the 25th and 75th quantile of the share of MRC for operational risk in total MRC is 5.4 percentage points. Although the difference of 5.8 percentage points for Group 1 banks is similar, the difference for G-SIBs with 16.7

percentage points is significantly higher. 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.

Distribution of share of MRC for operational risk in total MRC[1] Graph 71



[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.72 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 approaches[37] used for the estimation of operational risk capital requirements with the standardised approach, 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.[38]

According to Table 12, the final operational risk framework generates an aggregate decrease of operational risk MRC of approximately -5.1% for all Group 1 banks and a -9.2% decrease for G-SIBs as well as an increase of 17.7% for the Group 2 banks in the sample. Under the assumption that the evolution of experienced losses is as low as in the last three years (see Graph 70) the observed trend of MRC decreases should continue in the next periods due to the risk sensitive feature of the ILM of the new standardised approach. Finally, it should be noted 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

[37] 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).

[38] 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.

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 12 may be overstated and reductions may be understated.

Changes in operational risk capital requirements

In per cent — Table 12

	Change in Tier 1 MRC[1]	Number of banks migrating from AMA	Number of banks migrating from other approach
Group 1 banks	–5.1	43	56
Of which: AM	–19.6	14	4
Of which: EU	31.3	15	21
Of which: RW	–16.7	14	31
Of which: G-SIBs	–9.2	20	9
Group 2 banks	17.7	6	62

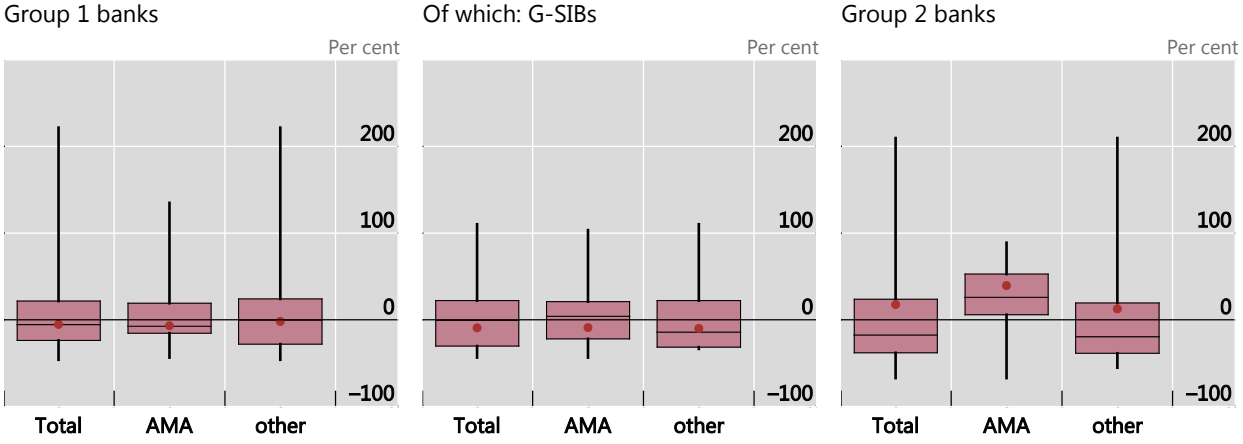
[1] Figures may not show supervisor-imposed capital add-ons. Therefore, increases in MRC may be overstated and reductions may be understated.

Source: Basel Committee on Banking Supervision.

Graph 72 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.

Changes in MRC for operational risk[1]

Graph 72



[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.73.

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

Graph 73 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%,[39] 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%≈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 requires more Tier 1 capital than the Tier 1 risk-based capital ratio (ie the Basel III Tier 1 leverage ratio becomes the constraining requirement).[40] 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 73, two 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). One Group 1 bank neither meets the Tier 1 target risk-based capital ratio of 8.5% nor the minimum fully phased-in Basel III Tier 1 leverage ratio of 3%. This graph also shows that the fully phased-in Basel III Tier 1 leverage ratio is constraining for 65 banks out of 163, including 39 Group 1 and 26 Group 2 banks (plotted above the diagonal line).

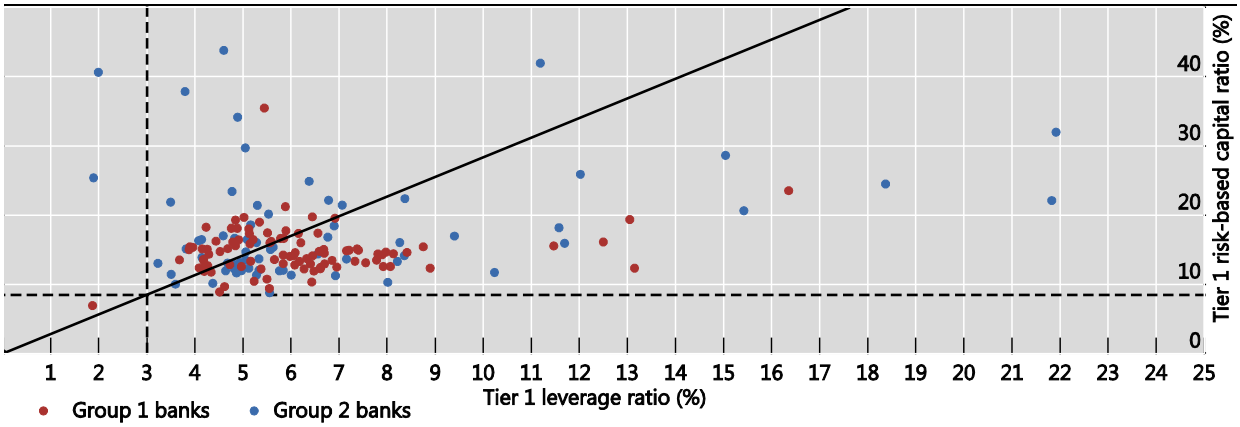
[39] Calculated as the sum of a 6.0% Tier 1 minimum capital ratio plus 2.5% capital conservation buffer.

[40] 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 under the initial Basel III framework, 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.

Fully phased-in initial Basel III Tier 1 risk-based capital and leverage ratios

Consistent sample of banks, in per cent

Graph 73



Source: Basel Committee on Banking Supervision.

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. Also note that while all banks are by definition constrained by one of the measures, this only results in a shortfall for very few of them.

Graph 74 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").[41]

With the exception of Group 2 banks that only use the standardised approach, generally the risked-based capital measure constrains between 35.5% and 50.0% across all groups and frameworks, and it generally constrains a lower share of banks under the final framework. Similarly, with the exception of Group 2 banks that only use the standardised approach, the final framework constrains a larger share of banks by the output floor in comparison to the current framework, which results in greater parity in the shares of banks being constrained by the output floor and the leverage ratio in the final framework. This increase in the share of banks being constrained by the output floor in the final framework is most pronounced in the Group 2 IRB bank sample as the output floor is constraining for a very small portions of Group 2 IRB banks under the current framework.

[41] Graph 74 does not distinguish between IRB and "pure SA" Group 1 banks as out of the 86 Group 1 banks in the sample only seven are "pure SA" banks.

For the Group 2 pure SA banks, the opposite effect is seen with the risked-based capital measure as it is slightly more constraining under the revised final framework.

Under the current framework 37.2% of Group 1 banks are constrained by the Basel III leverage ratio while 16.3% 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, 29.1% of Group 1 banks will be constrained by the floor while 31.4% 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 46.5% to 39.5%.

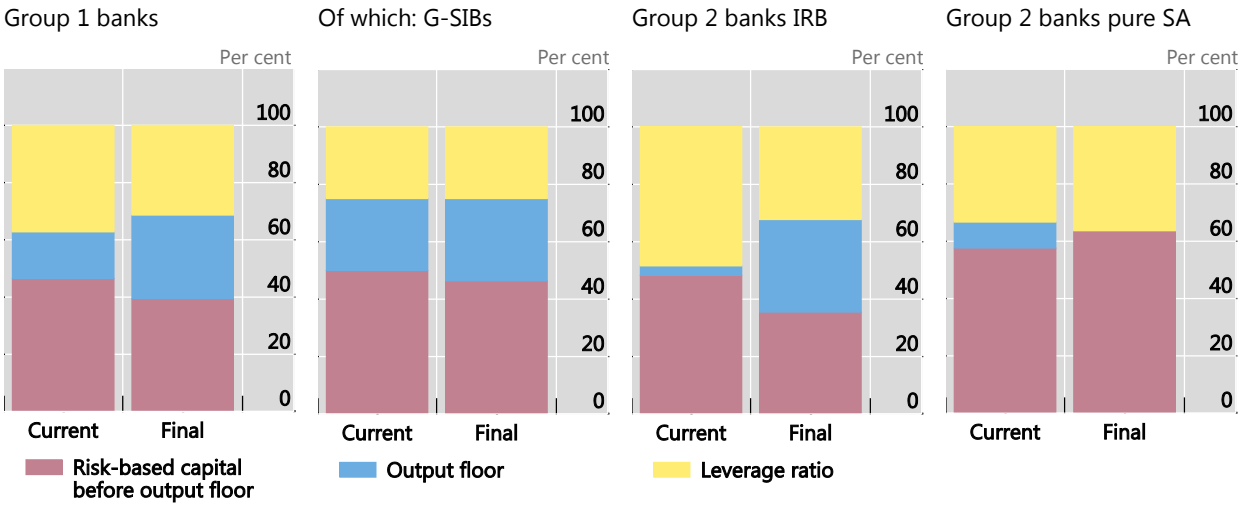
For the subset of G-SIBs, the Basel III leverage ratio is currently constraining for a smaller share of banks (25.0%) as compared to Group 1 banks as a whole while the transitional Basel I-based floor constrains a larger share of banks (25.0%) as compared to Group 1. The remaining 50.0% of G-SIBs are constrained by the risk-based measure before application of the output floors. Under the revised framework, 28.6% of G-SIBs will be constrained by the output floor while the Basel III leverage ratio will be constraining for 25.0% of the G-SIBs. The remaining 46.4% 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, 48.4% are currently constrained by the Basel III leverage ratio while 3.2% 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 48.4% 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 notably decreases to 35.5% and is lower than the share of Group 1 banks constrained by the same requirement. The Basel III leverage ratio will be constraining on 32.3% of Group 2 IRB banks while the share of Group 2 IRB banks constrained by the output floor will significantly increase to 32.3% in comparison to the current output floor.

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 currently constraining for 57.6% of the banks and increase for this reporting period to 63.6% under the revised framework. The Basel III leverage ratio is constraining for 33.3% of these banks and will increase to 36.4% under the final standards. For this reporting period, the output floor is constraining for a small portion of banks (9.1%) under the current framework, 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

Graph 74



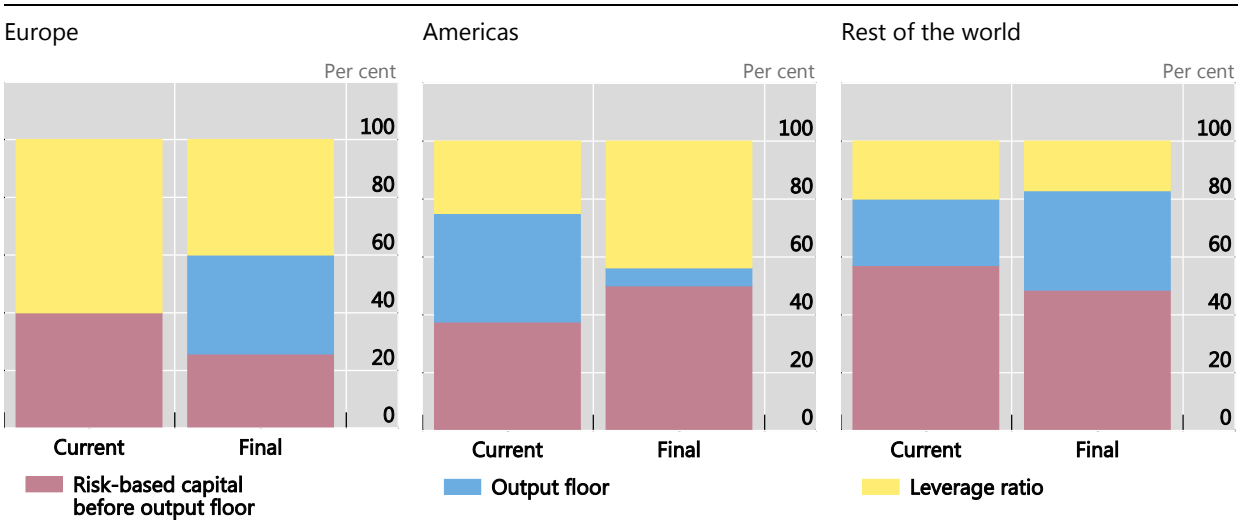
Source: Basel Committee on Banking Supervision. See also Table C.74.

Graph 75 shows the percentage of banks constrained by different parts of the framework, by region. In Europe, the leverage ratio is the most constraining under both the current and final standards at 60.0% and 40.0% respectively. Under the final Basel III framework, the output floor is the most constraining for Europe and the rest of the world at 34.3%. In the Americas, currently the Basel I-based floor and risk-based capital are the most constraining with each measure constraining 37.5% of the banks. Under the final Basel III framework, the risk-based measure before application of the output floors is the most constraining for the Americas with 50.0%. For the rest of the world, 57.1% of the banks are constrained by risk-based capital requirements before application of the output floors under the current regime. Under the final Basel III framework, the risk-based measure will remain the most constraining at 48.6%.

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

Group 1 banks

Graph 75



Source: Basel Committee on Banking Supervision. See also Table C.75.

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 90% in 2018. As of January 2019, it increased to 100% which marks the end of the phase-in of the LCR minimum requirement.

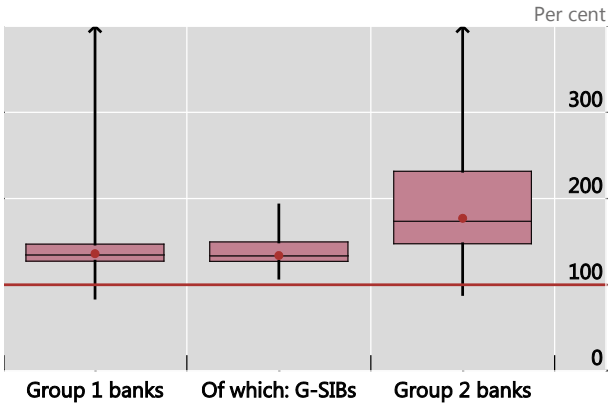
Data provided by 160 banks (97 Group 1 banks and 63 Group 2 banks) was of sufficient quality and coverage to be incorporated in the LCR analysis in this report. As of the reporting date, banks within the LCR sample had total assets of approximately €69.1 trillion. The key takeaways from this iteration of the Basel III monitoring exercise concerning the aggregate analysis of the LCR are as follows:

- The weighted average LCR for Group 1 banks increased by 1.1 percentage points from the previous period to 136.2%. The weighted average LCR for the subset of Group 2 banks reporting data for both the June and December 2018 reporting dates increased by 7.0 percentage points from 170.2% at end-June 2018 to 177.2% at the end of 2018. For the full sample of Group 2 banks, the LCR was 180.2% at end-June 2018.
- Except for one Group 1 bank and one Group 2 bank, which report LCRs below 90%, all banks in the sample reported an LCR that exceeded a minimum requirement of 100%. In the previous period, all banks reported an LCR above the 100% minimum requirement.
- The aggregate LCR shortfall at a minimum requirement of 100% is €2.2 billion (of-which: €2.0 billion for Group 1 banks). In the previous period, the shortfall was non-existent for all banks.
- Banks reported a total of €12.8 trillion in eligible liquid asset holdings (post-haircut and after cap).

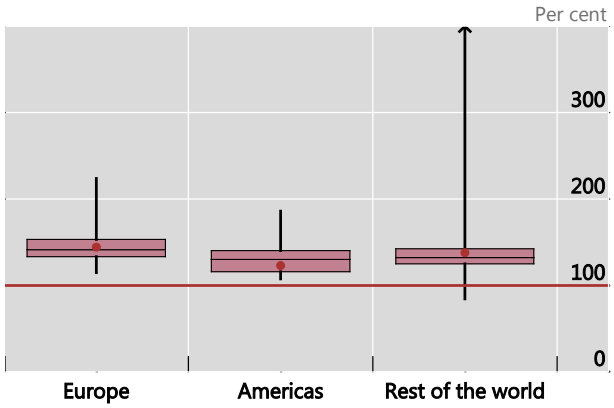
Liquidity Coverage Ratio[1]

Graph 76

By bank group



Group 1 banks, by region



[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 coverage ratios outside the range shown in the graph. 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 line represents the 100% minimum (applicable as from 1 January 2019).

Source: Basel Committee on Banking Supervision. See Table C.76 and Table C.77 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 €2.0 billion for Group 1 banks and €0.1 billion for Group 2 banks. In the previous period, the shortfall was non-existent for all banks since all banks reported an LCR above a 100% minimum requirement. At the currently applicable minimum requirement of 90% the aggregate shortfall is €0.7 billion for Group 1 banks and €0.02 billion for Group 2 banks.

The key components of outflows and inflows are shown in Table 13. Group 1 banks and in particular G-SIBs 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.

LCR outflows and inflows (post-factor)

In per cent of balance sheet liabilities — Table 13

	Group 1 banks	Of which: G-SIBs	Group 2 banks
Outflows to…			
Retail deposits run-off	2.2	2.3	2.4
Unsecured wholesale funding run-off	11.6	12.0	5.4
Secured funding and collateral swaps	1.7	2.2	0.4
Additional requirements run-off	4.3	4.8	1.6
Other contingent funding obligations	1.6	1.6	1.6
Total outflows[1]	21.3	22.9	11.3
Inflows from…			
Secured lending and collateral swaps	2.2	2.7	0.4
Contractual inflows from fully performing loans	3.1	3.2	1.6
Other cash inflows	2.3	2.4	1.0
Total inflows[1,2]	7.1	7.8	2.7

[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

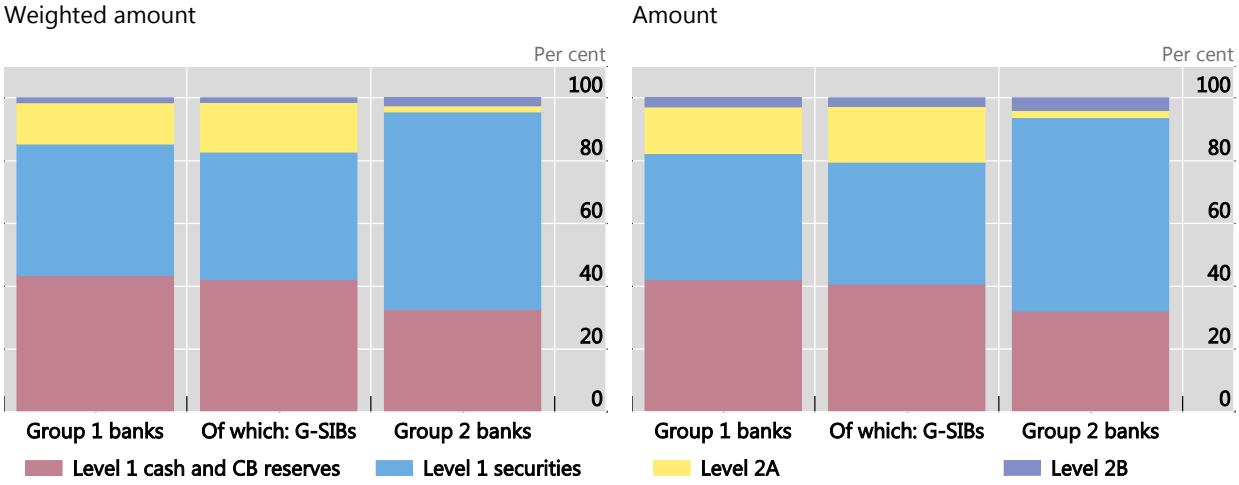
At end-December 2018, 11 Group 1 and 10 Group 2 banks are affected by the cap on inflows with a total amount of capped inflows of €211.9 billion for Group 1 banks and €11.9 billion for Group 2 banks.

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 77. 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 85.3% 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 95.3% of total eligible liquid assets).

Composition of holdings of eligible liquid assets

Graph 77



Source: Basel Committee on Banking Supervision. See Table C.78 for underlying data and sample size.

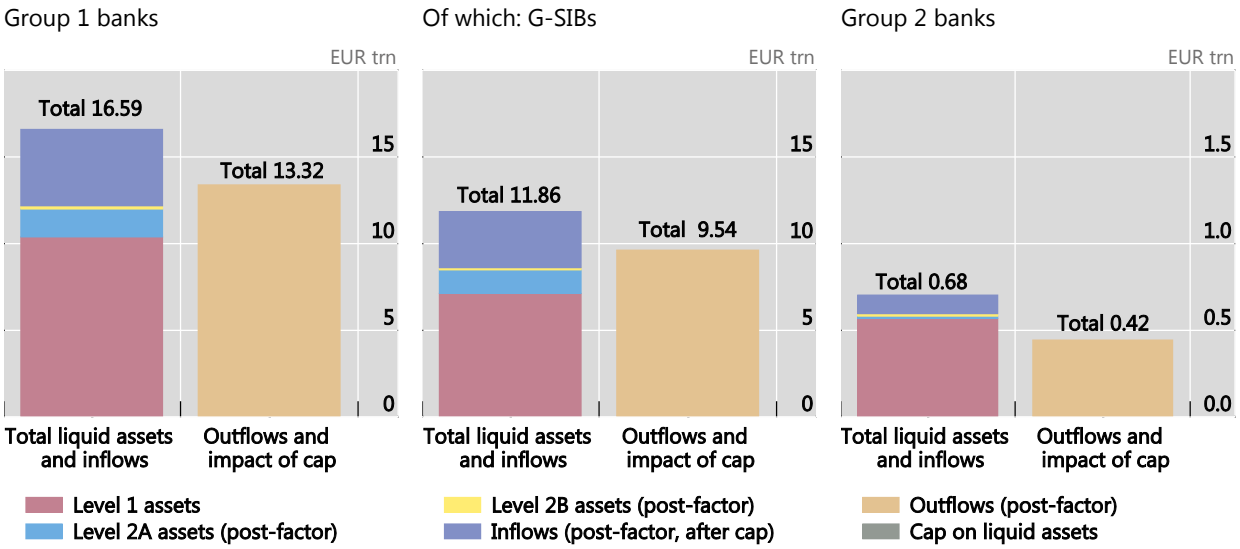
Caps on Level 2B and Level 2 assets

Due to the cap on liquid assets overall €91.9 billion of liquid assets are excluded from high-quality liquid assets. In total, two (Group 1) banks are constrained.

Comparison of liquid assets and inflows to outflows and caps

Graph 78 combines the above LCR components by comparing liquidity resources (pool of high-quality liquid assets and inflows) to outflows. Note that the €3.27 trillion Group 1 gross surplus shown in the graph differs from the €2.0 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 €0.26 trillion compared to a €0.1 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 78



Source: Basel Committee on Banking Supervision. See Table C.79 for underlying data and sample size.

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.

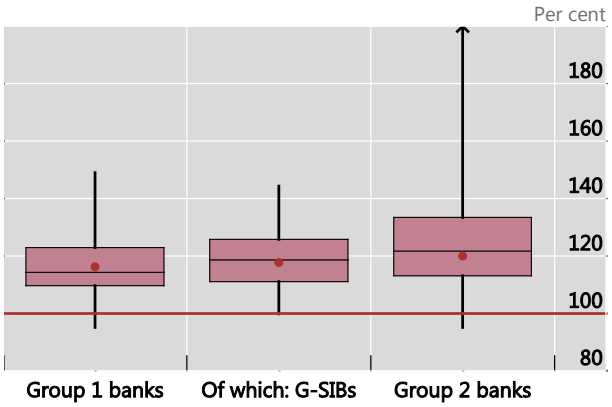
For the NSFR, data provided by 179 banks (103 Group 1 and 76 Group 2 banks) was of sufficient quality and coverage to be incorporated in the analysis in this report. As of the reporting date, these banks had total assets of approximately €69.1 trillion.

The weighted average NSFR was 116.3% for Group 1 banks and 120.0% for Group 2 banks at end-December 2018 compared with 116.0% and 119.2% respectively, at end-June 2018. Overall, 94.2% of Group 1 banks and 94.7% of Group 2 banks reported a ratio that met or exceeded 100% as of end-December 2018, while all banks report a ratio at or above 90% as of the same date.

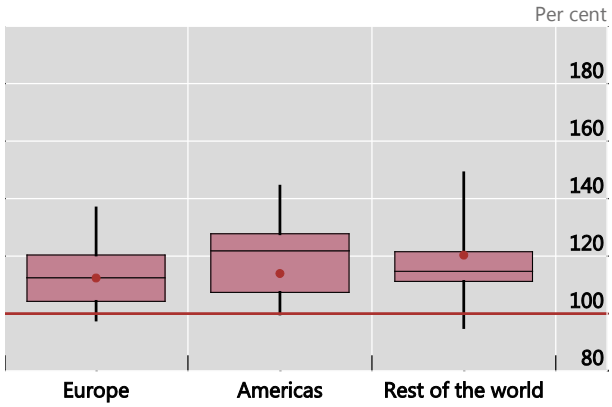
Net stable funding ratio[1]

Graph 79

By bank group



Group 1 banks, by region



[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 net stable funding ratios outside the range shown in the graph. 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 and Table C.77 for underlying data.

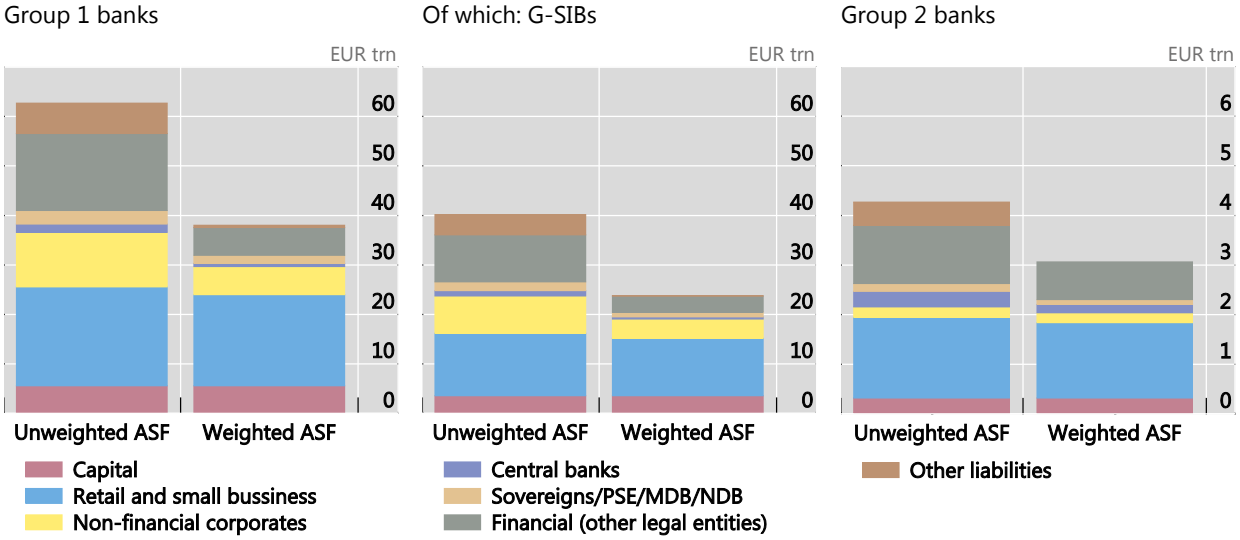
For the 103 Group 1 banks in the sample, the shortfall is €11.2 billion at end-December 2018 compared with €44.4 billion at end-June 2018. For the 76 Group 2 banks in the sample, the shortfall is €3.5 billion at end-December 2018 compared with €4.2 billion at end-June 2018. This number is reflective 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.[42]

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 (48.6%) and Group 2 banks (49.7%). To a lesser degree, banks in the sample utilised funding from financial counterparties, which represented roughly 14.9% of total weighted available stable funding for Group 1 banks and 24.8% for Group 2 banks.

[42] 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.

Aggregate available stable funding (ASF) by counterparty Graph 80



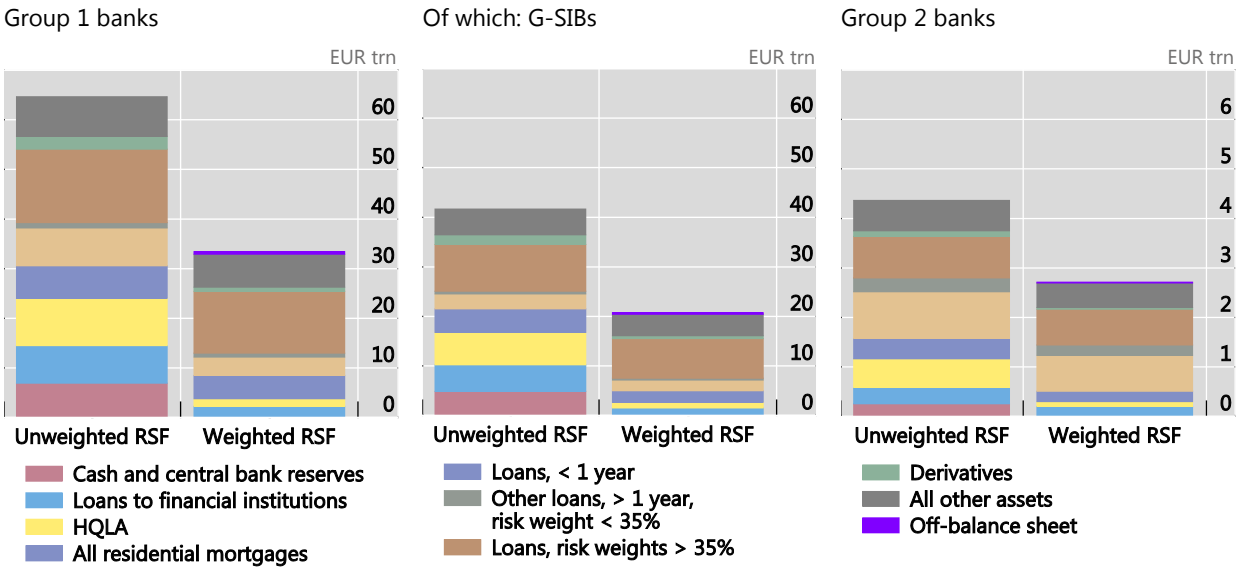
Source: Basel Committee on Banking Supervision. See Table C.80 for underlying data.

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 and loans with a risk weight of more than 35%, represented 53.7% for Group 1 banks and 42.1% 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 4.4% for Group 1 banks and 3.7% 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%.

Aggregate required stable funding (RSF) by category Graph 81



Source: Basel Committee on Banking Supervision. See Table C.81 for underlying data.

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

Graph 82 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.[43] Given the different samples of banks, results for the end-June 2018 and end-December 2018 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 136.2% at end-December 2018. The ratio was 135.6% and 134.8% at end-June 2018 and end-December 2017, 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 2018, the weighted average LCR of these banks is 165.5%. 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.[44] The weighted average NSFR for Group 1 banks was 116.0% at end-December 2018, 115.5% at end-June 2018 and 115.7% at end-December 2017. The weighted average NSFR for Group 2 banks was 120.2% at end-December 2018, 119.6% at end-June 2018 and 119.1% at end-December 2017.

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 with the exception of the previous reporting date where it increased compared to the prior period. The aggregate shortfall with regard to the 100% NSFR minimum requirement was €3.7 billion for Group 1 banks and €0.1 billion for Group 2 banks at end-December 2018. This compares to shortfalls of €28.9 billion for Group 1 banks and €0.8 billion for

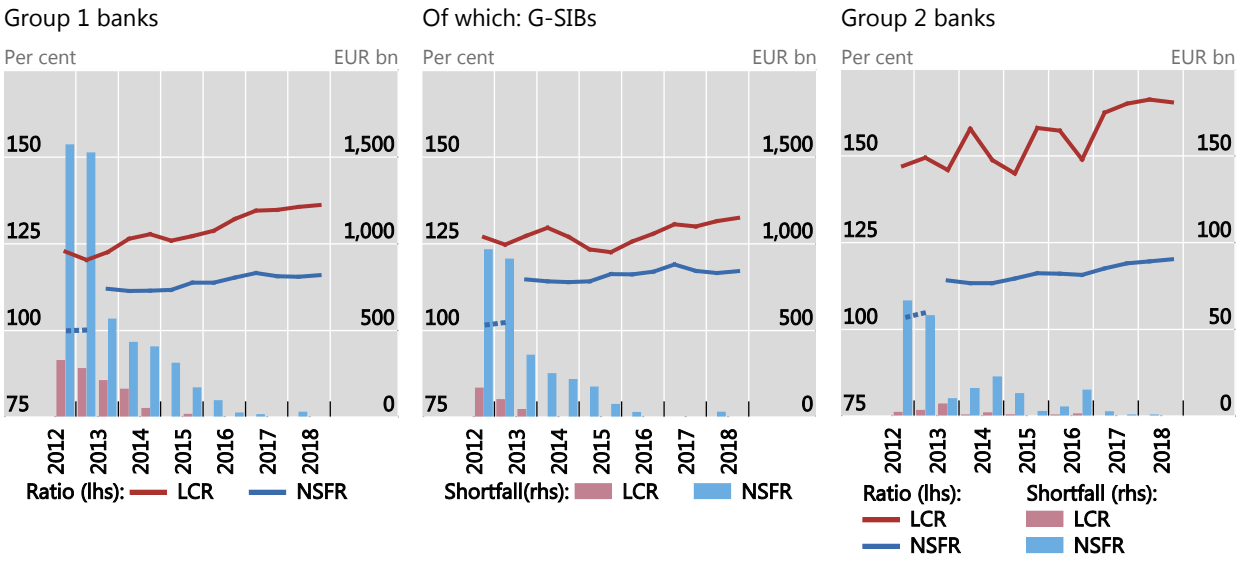
[43] Only those banks are included in this analysis that are reporting LCR and NSFR data for each reporting period since end-December 2012. LCR and NSFR samples are different.

[44] 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, www.bis.org/bcbs/publ/d295.htm.

Group 2 banks at end-June 2018, shortfalls of €2.7 billion and €0.8 billion at end-December 2017 and €15.0 billion and €2.5 billion at end-June 2017.

LCR, NSFR and related shortfalls at a 100% minimum requirement[1]

Consistent sample of banks, exchange rates as at the reporting dates — Graph 82



[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.82 and Table C.83 for underlying data and sample size.

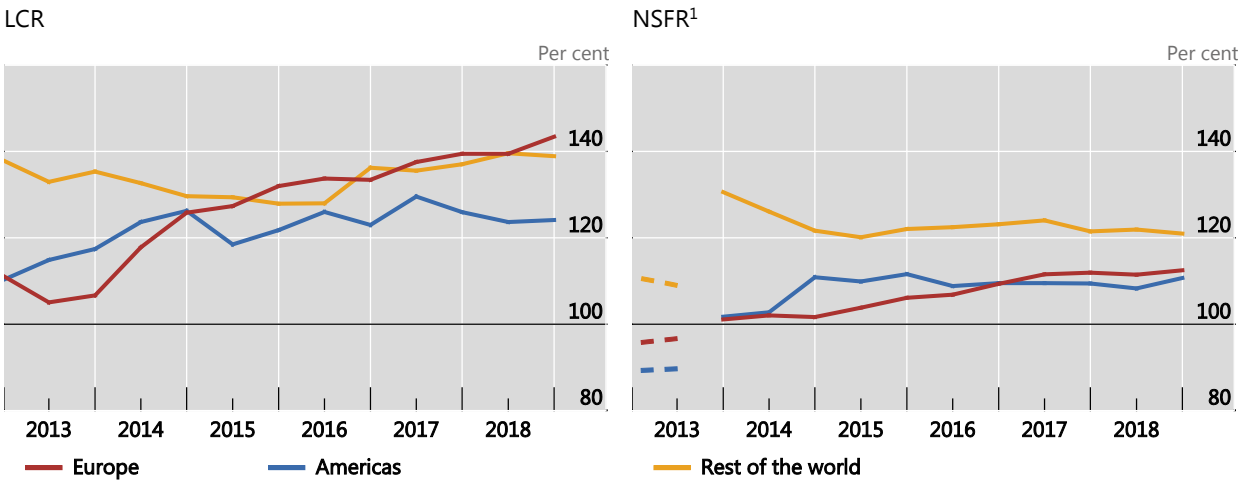
Graph 83 displays the regional breakdown of the weighted average LCR and the weighted average NSFR[45] for a consistent sample of Group 1 banks across reporting periods since end-December 2012. The weighted average LCR at end-December 2018 for each of the three regions was in excess of 120%. While Europe 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 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 2018 for Group 1 banks in each of the three regions was well in excess of 100%. Europe and the Americas at 112.4% and 110.7% at end-December 2018 have lower average NSFRs compared with the rest of the world at 121.0%.

[45] 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

Consistent sample of Group 1 banks — Graph 83



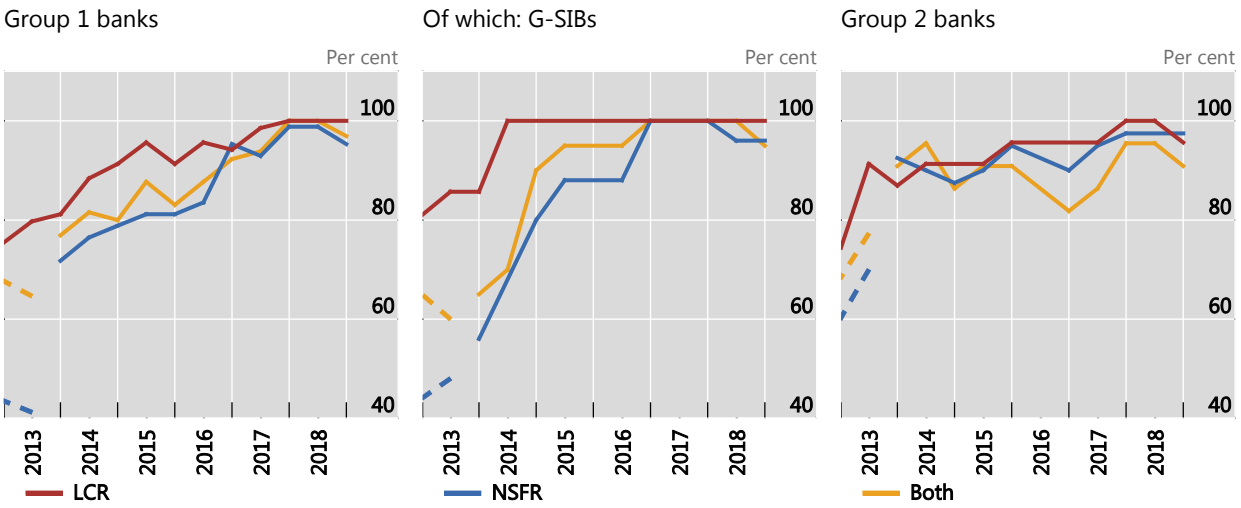
[1] As described in the text, the NSFR time series depicts data reflecting NSFR standard released in December 2010, January 2014 and October 2014.

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

Graph 84 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 67.7% at end-December 2012 to 96.9% at end-December 2018, while the share of Group 2 banks meeting both requirements increased from 68.2% to 90.9% during the same period.

Share of banks meeting the LCR and NSFR requirements[1]

Consistent sample of banks — Graph 84



[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.

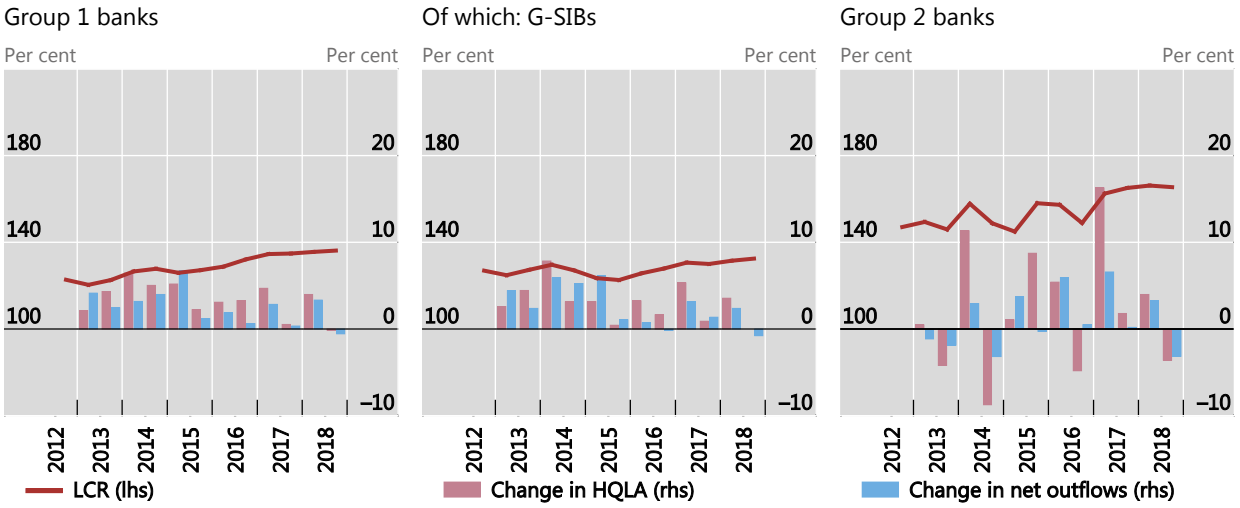
Source: Basel Committee on Banking Supervision. See Table C.85 for underlying data.

Graph 85 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, except for the current period where Group 1 banks reported a decrease in net cash 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.

LCR and change in HQLA and net outflows

Consistent sample of banks, exchange rates as of 31 December 2018 Graph 85

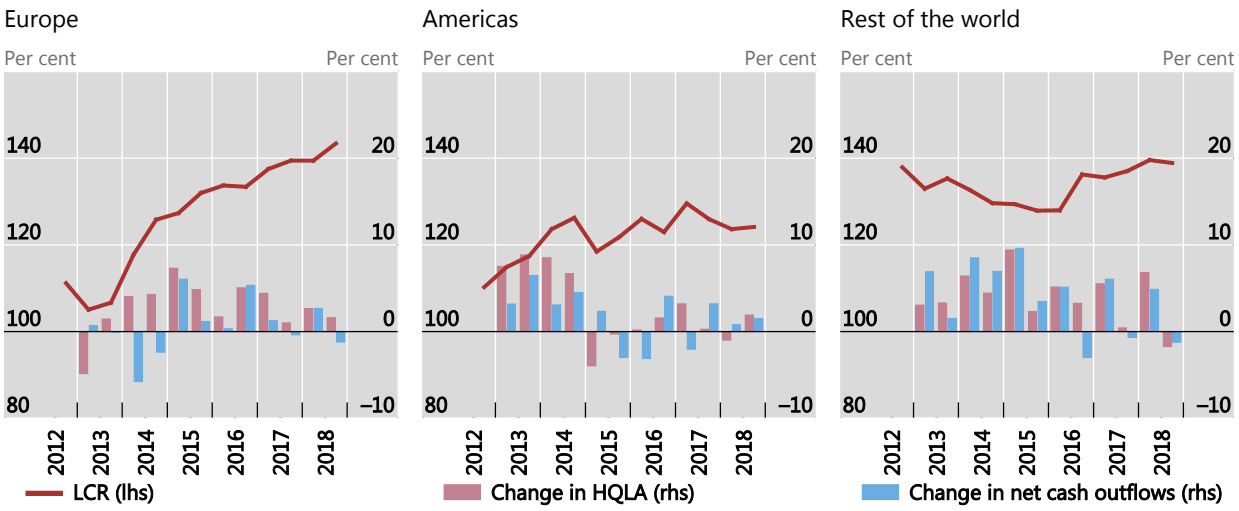


Source: Basel Committee on Banking Supervision. See Table C.86 for underlying data and sample size.

Graph 86 provides a breakdown by region of the results in Graph 85 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.

LCR and change in HQLA and net outflows, by region

Consistent sample of Group 1 banks, exchange rates as of 31 December 2018 Graph 86

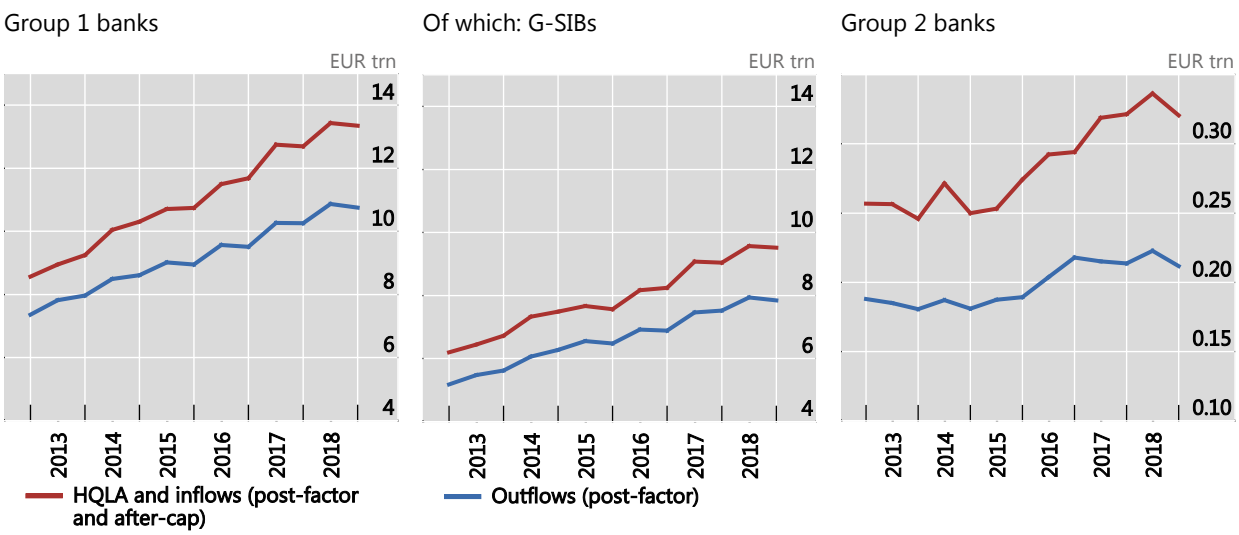


Source: Basel Committee on Banking Supervision. See Table C.87 for underlying data and sample size.

Graph 87 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 €2.60 trillion and €0.11 trillion for Group 1 and Group 2 banks, respectively, at end-December 2018.

High quality liquid assets and inflows versus outflows over time

Consistent sample of banks, exchange rates as of 31 December 2018 Graph 87

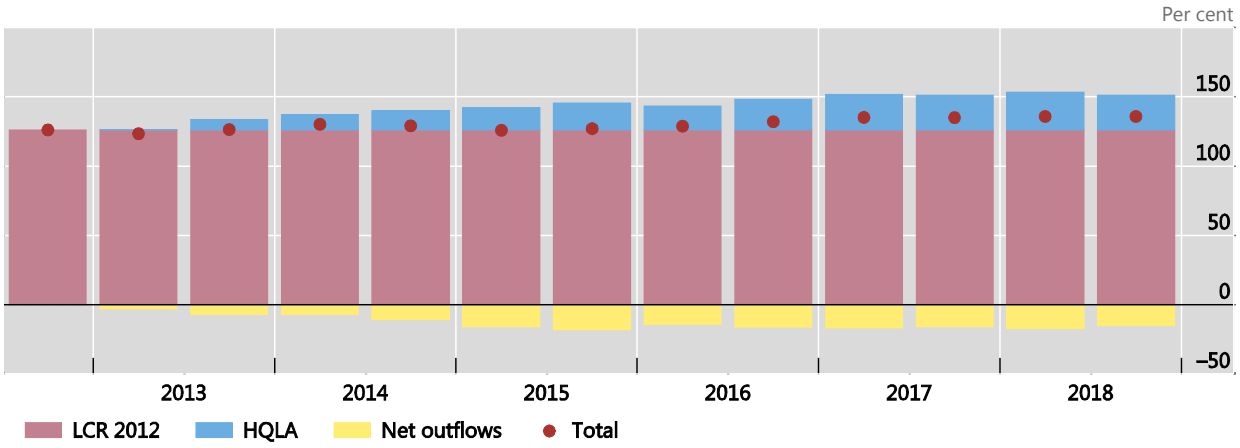


Source: Basel Committee on Banking Supervision. See Table C.88 for underlying data and sample size.

Graph 88 shows the evolution of the LCR and its drivers. Starting with the June 2012 LCR, the cumulative effect on the LCR of an increase in HQLA is added to the LCR, while the impact of cumulative increases in net outflows is subtracted from the baseline LCR. HQLA have grown faster over the years compared to the net outflows which has resulted in an overall improvement in the LCR over time.

Evolution of the LCR and its drivers

Consistent sample of Group 1 banks — Graph 88

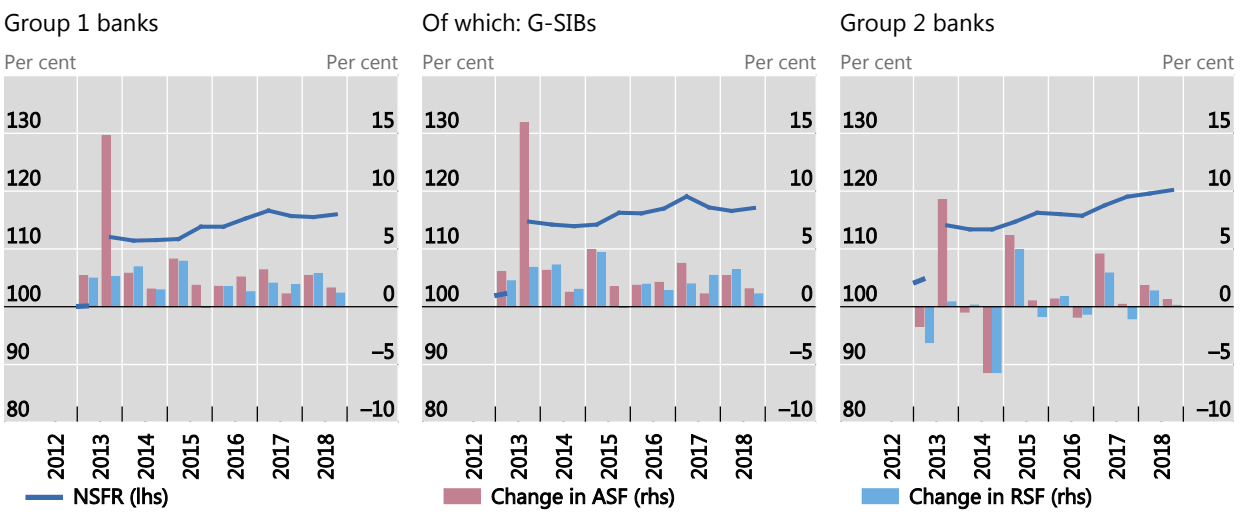


Source: Basel Committee on Banking Supervision. See Table C.89 for underlying data and sample size.

Graph 89 depicts the 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 reporting date, also reflecting the changes to the definition of the NSFR standard. The change in ASF has since stabilised for Group 1 banks to between 1% and 3% per period; however, for Group 2 banks it is slightly volatile over time.

NSFR and change in ASF and RSF[1]

Consistent sample of banks, exchange rates as of 31 December 2018 — Graph 89



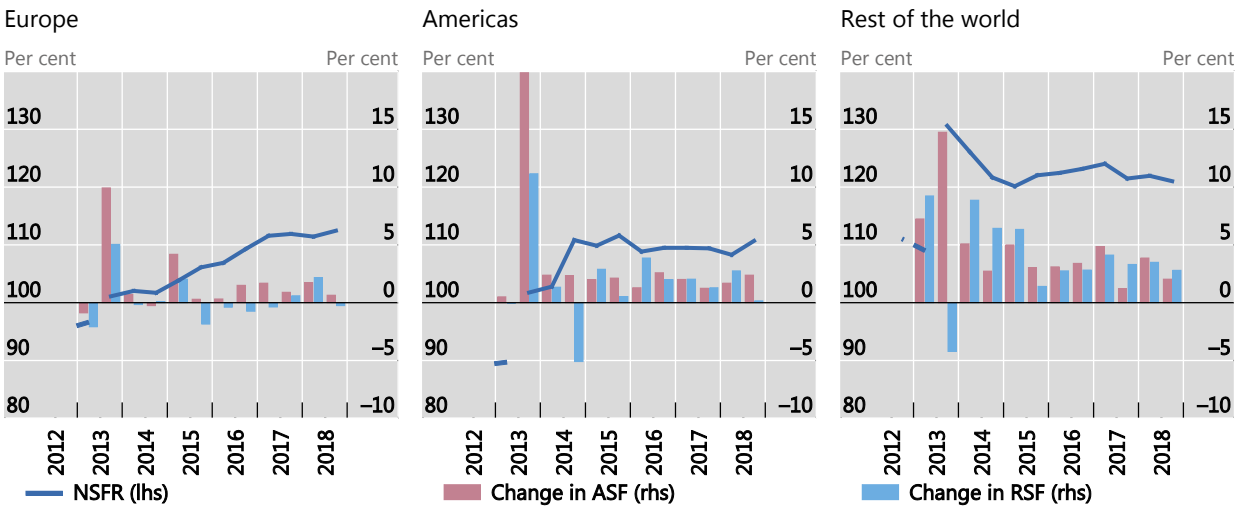
[1] As described in the text, the NSFR analysis is based on NSFR standard released in December 2010, January 2014 and October 2014.

Source: Basel Committee on Banking Supervision. See Table C.90 for underlying data and sample size.

Graph 90 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.

NSFR and change in ASF and RSF,[1] by region

Consistent sample of Group 1 banks, exchange rates as of 31 December 2018 — Graph 90



[1] As described in the text, the NSFR analysis is based on NSFR standard released in December 2010, January 2014 and October 2014.

Source: Basel Committee on Banking Supervision. See Table C.91 for underlying data and sample size.

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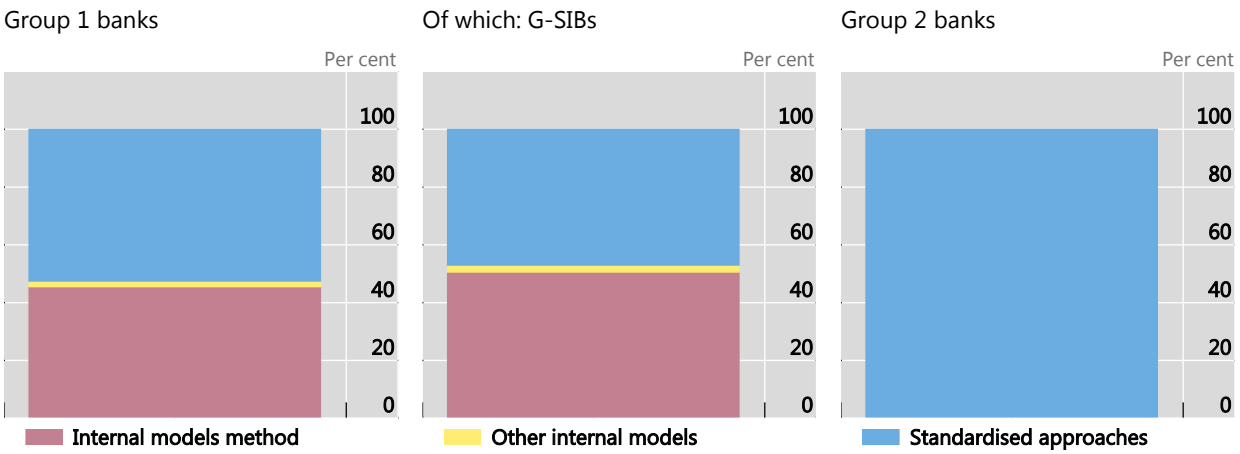
Counterparty credit risk and credit valuation adjustment risk

1. Counterparty credit risk

1.1 Current rules for counterparty credit risk

Graph 1 below shows the composition of counterparty credit risk (CCR) capital by bank group at end-December 2018. Most banks in the sample use standardised approaches to calculate CCR exposures. Amongst those, the current exposure method (CEM) is by far the most widely used. For Group 2 banks, internal model approaches are not relevant. Group 1 banks also use internal models approaches, mainly the internal models method (IMM), to calculate CCR exposures for derivative and securities financing transactions (SFTs). For Group 1 banks, CCR IMM capital requirements contribute 45.5% to total CCR capital requirements. CCR capital requirements calculated using standardised approaches contribute 52.6%. For G-SIBs, more than 50% of total CCR capital requirements come from capital requirements calculated using the IMM. Other internal models methods (repo-VaR and the comprehensive approach using own estimates of haircuts) are generally used for smaller portions of exposures (1.9% for Group 1 banks): they are used by fewer banks and cover only specific products.

Contribution to current CCR capital requirements by approach to EAD calculation — Graph 1



Source: Basel Committee on Banking Supervision. See Table C.92 for underlying data and sample size.

1.2 Overall impact of the revised minimum capital requirements for counterparty credit risk

This section shows the estimated impacts from the introduction of the revised minimum capital requirements for counterparty credit risk. Firstly, it reflects changes to the exposure calculation methodologies, with the introduction of the standardised approach to counterparty credit risk (SA-CCR) published in March 2014, the amendments to the comprehensive approach using supervisory haircuts (CA(SH)) and the removal of the comprehensive approach using own estimates of haircuts (CA(OE)) published in December 2017. In addition, CCR capital requirements are affected by the changes to the credit risk framework that affect the risk weights applied to CCR exposures. Both changes to the framework need to be considered when evaluating the impact to CCR capital requirements. Generally, both changes lead to an increase in CCR capital requirements under the revised framework relative to the current rules. There are some cases where the impact is negative. For some banks the impact from changes in exposure and risk weight calculations offset each other so that the overall impact can be neutral.

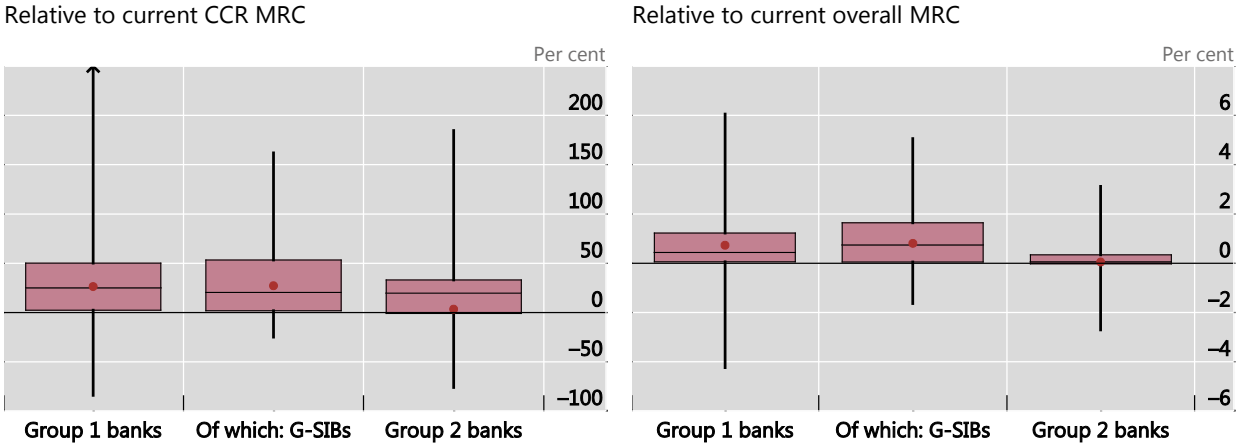
A total of 98 banks, including 66 Group 1 banks, of which 22 G-SIBs, and 32 Group 2 banks, have provided consistent data on the revised minimum capital requirements for counterparty credit risk at the end-December 2018 reporting date.

The left-hand panel of Graph 2 below shows the impact on capital requirements from the introduction of the revised CCR framework compared to the current rules. On the full sample, capital requirements increase by 29.0%. For Group 1 banks and G-SIBs, RWA increase by 26.5% and 27.3%, respectively. For Group 2 banks, the average increase is much smaller (+3.5%). The right-hand panel of Graph 2 provides the impact relative to current overall MRC. Given the small share of CCR capital requirements in overall MRC for most banks, the average impact of the CCR revisions on overall MRC is 0.7% and 0.1% for Group 1 and Group 2 banks, respectively. For 50% of Group 1 banks, the increase is between 0.1% and 1.2% of overall MRC, while it is between 0.0% and 0.3% for 50% of Group 2 banks.

There is larger variability across Group 1 and Group 2 banks than for G-SIBs. One of the factors that drives the changes between the current SA and SA-CCR include the treatment of margin collateral under the current rule (ie CEM or SM). In case banks currently do not recognise the margin collateral, while they do take it into account under the SA-CCR, SA-CCR exposures decrease significantly (sometimes leading to SA-CCR exposures and consequently capital requirements close to zero). In cases where banks have already accounted for margin collateral under CEM, banks see higher exposures due to the SA-CCR framework, with greater impacts if the banks' positions are more material in risk classes which are more significantly impacted by the SA-CCR framework. Changes in the credit risk framework can amplify these impacts.

Haircuts will change for SFTs currently capitalised under CA(SH), and CA(OE) will be removed from the framework. Some banks are not affected by the more conservative supervisory haircuts in the revised CA(SH), but others see their SFTs exposures (and hence capital requirements) increase significantly.

Impact of revised CCR capital requirements compared to current rules Graph 2



Source: Basel Committee on Banking Supervision. See Table C.93 for underlying data and sample size.

2. Overall impact of the revised minimum capital requirements for credit valuation adjustment risk

This section shows the estimated impacts from the introduction of the revised minimum capital requirements for credit valuation adjustment (CVA) risk published in January 2016.

The sample for the analysis of the CVA risk component consists of 77 banks, including 51 Group 1 banks, of which 19 G-SIBs, and 26 Group 2 banks that provided consistent data at the end-December 2018 reporting date. The sample includes 13 banks that currently apply the advanced method for CVA (A-CVA), of which 12 indicate to use the standardised approach for CVA (SA-CVA) under the revised framework. The other 64 banks that currently apply the standard method for CVA (S-CVA) include 10 banks that indicate to apply the SA-CVA and 47 banks that indicate to move to the reduced basic approach for CVA (reduced BA-CVA) under the revised minimum capital requirements for CVA. Overall, only seven banks in the sample indicate to use only the full basic approach for CVA (full BA-CVA) in the future.

The left-hand panel of Graph 3 below shows that the introduction of the revised CVA framework leads to an average increase in CVA capital requirements of 64.8%. The impact differs substantially between Group 1 and Group 2 banks: the average increase for Group 1 banks is 63.9%, while the average increase for Group 2 banks is 122.3%. The impact for G-SIBs is smaller (+55.7%).

The variability in results is very significant. Some banks report decreasing capital requirements when moving to the revised CVA framework with CVA capital requirements decreasing by as much as 67.0%. Other banks report significant increases in the CVA capital requirements relative to the current standards, up to almost 37 times the current capital requirements. Very high increases appear more frequently for S-CVA banks that move to the BA-CVA. These are explained by the increase in exposures from the application of the SA-CCR and the higher risk weights in the BA-CVA compared to the current standardised approach. But also A-CVA banks moving to SA-CVA show high increases in capital requirements. More specifically, capital requirements calculated under the revised SA-CVA are on median 75.5% higher than capital requirements under the current A-CVA. Capital requirements under the revised reduced BA-CVA are on median 76.5% higher than capital requirements under the current S-CVA.

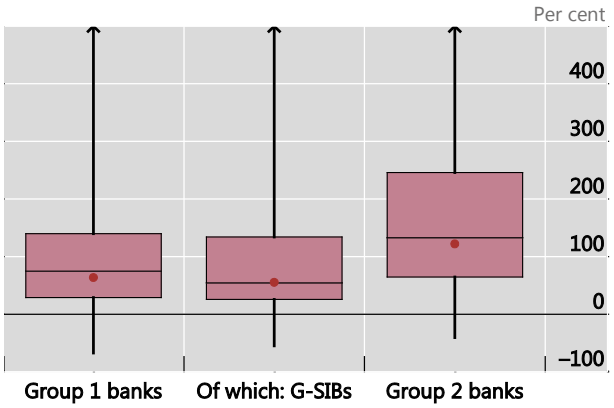
The right-hand panel of Graph 3 provides the impact of the revised CVA capital requirements relative to current overall MRC. Given the small share of CVA capital requirements in overall MRC for most

banks, the average impact of the CVA revisions on overall MRC is 0.1% for both Group 1 and Group 2 banks. The change is between -0.6% and +0.9% for all banks in the sample.

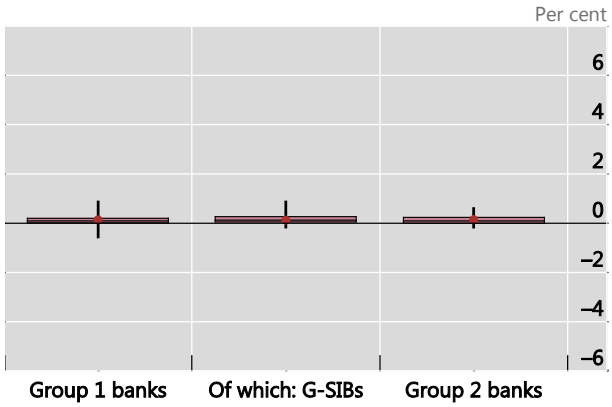
Impact of revised CVA capital requirements compared to current rules

Graph 3

Relative to current CVA MRC



Relative to current overall MRC



One bank in the sample provided CVA data but no data on current overall capital requirements. It is therefore excluded from the right-hand panel.

Source: Basel Committee on Banking Supervision. See Table C.94 for underlying data and sample size.

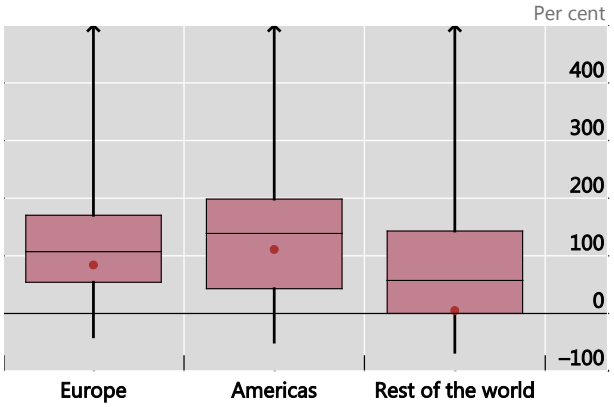
Graph 4 shows that the results also differ across regions. The average impact of +111.3% in the Americas is much higher than in the other regions. While the revised framework leads to an average increase of CVA capital requirements of +83.1% in Europe, the rest of the world shows a slight increase of 4.7%. The variability of results also differs across individual countries. In some countries all banks show similar impacts, and in others the impact ranges from large reductions to very large increases in CVA capital requirements from the introduction of the revised minimum capital requirements for CVA risk.

Impact of revised CVA capital requirements compared to current rules, by region

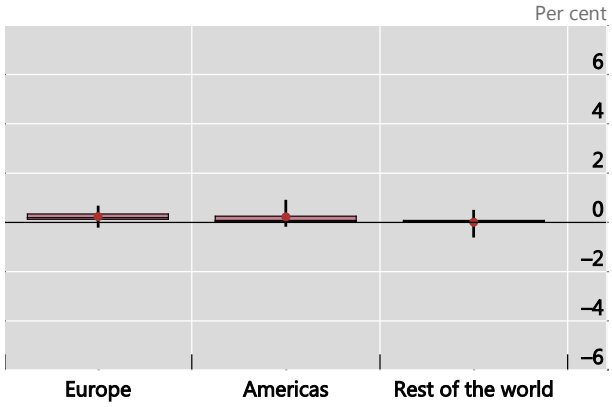
Group 1 banks

Graph 4

Relative to current CVA MRC



Relative to current overall MRC



One bank in the sample provided CVA data but no data on current overall capital requirements. It is therefore excluded from the right-hand panel.

Source: Basel Committee on Banking Supervision. See Table C.95 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 dates are as of 1 January. Table A.1

	2018	As of 2019
Leverage ratio	Migration to Pillar 1	
Minimum CET1 ratio	4.5%	4.5%
Capital conservation buffer	1.875%	2.50%
G-SIB surcharge	Phase-in	1.0%–2.5%
Minimum common equity plus capital conservation buffer	6.375%	7.0%
Phase-in of deductions from CET1 (including amounts exceeding the limit for DTAs, MSRs and financials)	100%	100%
Minimum Tier 1 capital	6.0%	6.0%
Minimum total capital	8.0%	8.0%
Minimum total capital plus capital conservation buffer	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	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

	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					
Output floor	50%	55%	60%	65%	70%	72.5%
	Increase in RWA subject to 25% cap at national discretion.					
Leverage ratio exposure measure and G-SIB surcharge	Introduce					

Definition of 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 framework for more resilient banks and the banking system*, www.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, www.bis.org/publ/bcbs227.htm Capital requirements for banks' equity investments in funds, www.bis.org/publ/bcbs266.htm	
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	Minimum capital requirements for market risk, www.bis.org/bcbs/publ/d457.htm	
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, www.bis.org/publ/bcbs279.htm	
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, www.bis.org/bcbs/publ/d424.htm	Output floor of 72.5%, Basel III: Finalising post-crisis reforms, www.bis.org/bcbs/publ/d424.htm
Leverage ratio	Basel III: A global framework for more resilient banks and the banking system, www.bis.org/publ/bcbs189.htm; Basel III leverage ratio framework and disclosure requirements, www.bis.org/publ/bcbs270.htm	Basel III: Finalising post-crisis reforms, www.bis.org/bcbs/publ/d424.htm	

Minimum and target risk-based capital and leverage ratio requirements

Fully phased-in final Basel III standards, in per cent — Table A.4

	Fully implemented risk-based requirement			Fully implemented leverage 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		

Annex B: Sample statistics and additional results

Number of banks for which data have been included[1] Table B.1

	Group 1 banks						Group 2 banks					
	All	RWA and capital	Leverage	LCR	NSFR	Securitisation	All	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	4	4	4	2	1	1	1	1	1	0
Belgium (EU)	2	2	2	2	2	2	2	2	2	2	2	1
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	6	6	6	0	0	0	0	0	0	0
Finland (EU)	1	1	1	1	1	1	0	0	0	0	0	0
France (EU)	5	5	5	5	5	5	2	2	2	2	2	1
Germany (EU)	7	7	7	7	7	6	23	22	22	23	23	1
India (RW)	8	7	8	8	8	1	2	0	2	2	2	0
Indonesia (RW)	0	0	0	0	0	0	2	2	2	0	2	1
Italy (EU)	2	2	2	2	2	2	10	10	10	10	10	10
Japan (RW)	16	15	16	16	16	15	3	3	3	3	3	3
Korea (RW)	5	5	0	0	5	5	2	2	0	0	2	1
Luxembourg (EU)	0	0	0	0	0	0	2	2	2	2	2	2
Mexico (AM)	1	1	1	0	1	0	5	5	5	0	5	0
Netherlands (EU)	4	4	4	4	4	3	4	4	4	4	4	1
Russia (EU)	1	1	1	1	1	1	0	0	0	0	0	0
Saudi Arabia (RW)	3	3	3	3	3	0	0	0	0	0	0	0
Singapore (RW)	3	3	3	3	3	2	0	0	0	0	0	0
South Africa (RW)	4	4	4	4	4	4	2	2	2	2	2	1
Spain (EU)	2	2	2	2	2	2	5	5	5	5	5	3
Sweden (EU)	3	3	3	3	3	1	3	3	3	3	3	0
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	4	5	4	3	3	4	4	2
United States (AM)	10	10	9	10	10	8	0	0	0	0	0	0
Total	105	103	98	99	104	73	76	72	70	65	76	29
Of which: G-SIBs	29	29	29	29	28	24	0	0	0	0	0	0

[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.

Source: Basel Committee on Banking Supervision.

Additional sample statistics

In billions of euros

Table B.2

	Number of banks	Tier 1 capital	Risk-weighted assets	Accounting total assets	Leverage total exposure
Group 1 banks	92	4,159	29,175	64,271	69,840
Of which: Europe	18	1,027	7,270	14,054	16,406
Of which: Americas	32	1,268	8,328	23,470	24,440
Of which: Rest of the world	42	1,864	13,578	26,747	28,994
Of which: G-SIBs	29	2,869	20,205	43,849	47,901
Group 2 banks	69	235	1,508	4,064	4,205

[1] Tier 1 capital, RWA and leverage ratio exposure assume full implementation of Basel III.

Source: Basel Committee on Banking Supervision.

Number of banks for which data have been included in the assessment of the impact of the final Basel III framework[1] Table B.3

	Group 1 banks	Group 2 banks
Australia (RW)	3	0
Belgium (EU)	2	1
Brazil (AM)	2	0
Canada (AM)	6	2
China (RW)	6	0
Finland (EU)	1	0
France (EU)	5	2
Germany (EU)	7	21
India (RW)	3	0
Italy (EU)	2	9
Japan (RW)	14	3
Luxembourg (EU)	0	2
Mexico (AM)	1	5
Netherlands (EU)	4	4
Russia (EU)	1	0
Saudi Arabia (RW)	2	0
Singapore (RW)	3	0
South Africa (RW)	4	2
Spain (EU)	2	5
Sweden (EU)	3	3
Switzerland (EU)	2	0
Turkey (EU)	1	0
United Kingdom (EU)	5	3
United States (AM)	7	0
Total	86	62

[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.

Source: Basel Committee on Banking Supervision.

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	83	–15.6	–3.7	–3.4	–3.0	–1.8	–2.2	–3.0	–32.8
H2 2011	83	–14.2	–3.6	–2.9	–2.0	–1.6	–1.7	–3.8	–29.8
H1 2012	83	–13.5	–3.4	–2.6	–1.8	–1.2	–1.4	–3.4	–27.2
H2 2012	83	–12.5	–3.2	–2.7	–2.4	–1.2	–1.2	–2.9	–26.1
H1 2013	83	–12.1	–2.9	–2.7	–2.4	–1.1	–1.0	–2.1	–24.4
H2 2013	83	–11.3	–2.7	–2.5	–1.4	–0.5	–0.4	–1.5	–20.4
H1 2014	83	–10.9	–2.7	–2.3	–1.3	–0.4	–0.2	–1.5	–19.2
H2 2014	83	–10.4	–2.5	–2.1	–1.0	–0.4	–0.2	–1.8	–18.5
H1 2015	83	–10.0	–2.4	–1.9	–0.7	–0.3	–0.1	–1.8	–17.5
H2 2015	83	–9.5	–2.3	–1.9	–0.7	–0.3	–0.1	–1.8	–16.9
H1 2016	83	–9.3	–2.3	–1.8	–0.7	–0.2	–0.1	–2.2	–16.9
H2 2016	83	–9.0	–2.3	–1.7	–0.7	–0.3	–0.1	–2.0	–16.2
H1 2017	83	–8.8	–2.3	–1.6	–0.8	–0.3	–0.1	–1.6	–15.4
H2 2017	83	–8.8	–2.3	–1.3	–0.7	–0.1	–0.1	–1.5	–14.8
H1 2018	83	–8.7	–2.3	–1.3	–0.7	–0.1	–0.1	–1.5	–14.6
H2 2018	83	–8.6	–2.3	–1.2	–0.7	–0.1	–0.1	–1.6	–14.6

[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.

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	33	–15.5	–4.0	–0.5	–4.9	–5.4	–2.6	–4.6	–37.6
H2 2011	33	–10.3	–4.1	–0.6	–5.5	–3.5	–1.9	–4.3	–30.1
H1 2012	33	–8.2	–4.0	–0.3	–5.3	–3.0	–2.0	–4.9	–27.6
H2 2012	33	–7.6	–3.8	–0.2	–6.1	–2.4	–1.6	–5.2	–27.0
H1 2013	33	–7.4	–3.7	–0.3	–5.9	–1.8	–1.5	–6.1	–26.7
H2 2013	33	–5.5	–3.7	–0.4	–4.4	–0.7	–0.9	–5.9	–21.5
H1 2014	33	–4.9	–3.3	–0.4	–3.0	0.0	–0.7	–1.9	–14.2
H2 2014	33	–3.1	–3.5	–0.6	–3.4	–0.5	–0.7	–3.1	–15.0
H1 2015	33	–3.1	–3.0	–0.4	–3.4	–0.1	–0.7	–2.5	–13.3
H2 2015	33	–3.1	–3.0	–0.5	–3.2	0.0	–0.2	–3.0	–12.9
H1 2016	33	–3.0	–3.0	–0.9	–2.7	0.0	–0.2	–2.6	–12.4
H2 2016	33	–3.0	–3.0	–1.0	–4.0	0.0	–0.4	–2.2	–13.5
H1 2017	33	–2.9	–2.8	–1.4	–3.1	0.0	–0.1	–2.3	–12.6
H2 2017	33	–2.8	–3.1	–1.6	–3.2	0.0	–0.4	–2.2	–13.3
H1 2018	33	–3.0	–3.1	–1.9	–3.2	0.0	–0.4	–1.8	–13.5
H2 2018	33	–2.9	–3.2	–1.9	–3.1	–0.2	–0.7	–1.8	–13.9

[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.

Annex C: Statistical Annex

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

In per cent — Table C.1

	Group 1 banks			Of which: G-SIBs			Group 2 banks		
	CET1	Tier 1	Total	CET1	Tier 1	Total	CET1	Tier 1	Total
Max	35.5	35.5	37.1	17.1	19.5	22.0	41.8	43.8	45.3
95th percentile	18.4	19.5	22.2	15.5	17.9	21.3	31.8	36.8	39.5
75th percentile	14.9	16.4	19.1	14.0	16.4	19.0	20.9	21.4	22.1
Median	13.0	14.7	16.7	12.9	15.0	17.5	15.2	15.7	17.6
25th percentile	11.5	12.8	14.9	11.9	13.4	15.5	12.0	13.0	14.9
5th percentile	9.8	10.3	12.9	11.2	12.6	14.4	10.9	11.5	12.6
Min	6.8	7.3	8.6	10.7	12.3	13.6	9.0	10.2	11.9
Weighted average	12.9	14.4	16.8	12.9	14.4	16.8	15.8	16.6	18.8

Source: Basel Committee on Banking Supervision.

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

In per cent — Table C.2

	Group 1 banks			Of which: G-SIBs			Group 2 banks		
	CET1	Tier 1	Total	CET1	Tier 1	Total	CET1	Tier 1	Total
Max	35.5	35.5	37.1	17.1	19.6	22.1	41.9	43.8	44.0
95th percentile	18.5	19.6	22.1	15.5	18.0	21.5	31.9	36.2	39.4
75th percentile	14.9	16.1	18.6	14.0	16.0	17.9	21.2	21.4	22.1
Median	13.1	14.5	16.3	12.8	14.7	16.9	14.9	15.2	16.9
25th percentile	11.8	12.7	14.7	11.9	13.4	15.1	12.0	12.5	14.2
5th percentile	9.6	10.3	12.6	11.0	12.5	14.0	10.1	10.7	12.5
Min	6.8	6.9	8.5	10.7	11.8	13.1	8.8	8.8	10.8
Weighted average	13.0	14.2	16.4	12.8	14.2	16.4	15.4	16.1	18.2

Source: Basel Committee on Banking Supervision.

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

Consistent sample of banks, in per cent

Table C.3

	Group 1 banks				Of which: 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	81	10.0	11.3	13.9	29	9.6	11.0	13.7	33	10.3	11.6	15.1
H2 2011	81	10.2	11.5	14.0	29	9.8	11.3	13.8	33	10.9	11.9	15.5
H1 2012	81	10.8	11.9	14.4	29	10.5	11.8	14.2	33	11.5	12.2	16.1
H2 2012	81	11.4	12.5	15.0	29	11.1	12.4	14.9	33	11.1	11.7	15.5
H1 2013	81	11.0	12.0	14.5	29	10.9	11.9	14.4	33	11.6	12.2	16.2
H2 2013	81	11.4	12.4	15.0	29	11.3	12.4	14.8	33	12.2	12.8	16.8
H1 2014	81	11.3	12.1	14.7	29	11.1	11.9	14.4	33	12.1	12.6	16.2
H2 2014	81	11.7	12.7	15.3	29	11.5	12.5	15.1	33	12.1	12.7	15.8
H1 2015	81	11.9	13.0	15.5	29	11.7	12.9	15.3	33	12.7	13.3	16.2
H2 2015	81	12.3	13.4	16.0	29	12.1	13.3	15.8	33	12.9	13.6	16.0
H1 2016	81	12.3	13.4	15.9	29	12.0	13.3	15.6	33	13.0	13.7	16.1
H2 2016	81	12.6	13.9	16.4	29	12.5	13.8	16.1	33	13.3	14.0	16.4
H1 2017	81	12.7	14.0	16.4	29	12.5	13.9	16.1	33	13.7	14.3	17.0
H2 2017	81	13.0	14.4	16.9	29	12.8	14.2	16.6	33	14.2	14.9	17.8
H1 2018	81	12.7	14.2	16.6	29	12.5	14.1	16.3	33	14.2	15.2	17.9
H2 2018	81	13.0	14.4	16.9	29	12.9	14.4	16.8	33	14.4	15.4	17.9

[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 region[1]

Consistent sample of Group 1 banks, in per cent — Table C.4

	Europe				Americas				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	10.2	12.0	14.5	18	9.7	11.1	13.6	34	10.1	10.6	13.6
H2 2011	29	10.2	11.9	14.1	18	9.9	11.5	13.9	34	10.6	11.0	14.0
H1 2012	29	11.1	12.7	14.9	18	10.6	12.1	14.2	34	10.6	11.0	13.9
H2 2012	29	11.5	13.2	15.4	18	11.6	12.9	15.1	34	11.0	11.4	14.5
H1 2013	29	12.0	13.4	16.1	18	10.9	12.2	14.3	34	10.1	10.6	13.4
H2 2013	29	12.6	13.9	16.9	18	11.3	12.7	14.7	34	10.4	10.9	13.7
H1 2014	29	11.6	12.8	15.8	18	11.4	12.2	14.1	34	11.0	11.5	14.3
H2 2014	29	12.2	13.5	16.5	18	11.7	12.6	14.6	34	11.4	12.0	14.9
H1 2015	29	12.5	13.9	16.9	18	12.2	13.3	15.4	34	11.4	12.1	14.6
H2 2015	29	12.9	14.5	17.8	18	12.2	13.2	15.4	34	11.9	12.7	15.1
H1 2016	29	12.9	14.5	17.8	18	12.1	13.4	15.5	34	11.9	12.7	14.9
H2 2016	29	13.5	15.3	18.7	18	12.5	13.9	16.0	34	12.1	12.9	15.1
H1 2017	29	13.6	15.5	18.8	18	12.7	14.3	16.4	34	12.0	12.9	14.9
H2 2017	29	14.3	16.2	19.4	18	12.5	14.2	16.2	34	12.5	13.5	15.8
H1 2018	29	13.6	15.7	18.7	18	12.3	14.0	16.0	34	12.4	13.4	15.6
H2 2018	29	13.6	15.7	18.6	18	12.5	14.2	16.3	34	12.8	13.8	16.2

[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.

Source: Basel Committee on Banking Supervision.

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

Consistent sample of banks, in per cent — Table C.5

	Group 1 banks				Of which: 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	81	7.1	7.4	8.6	29	6.8	7.1	8.5	33	7.0	7.6	9.9
H2 2011	81	7.6	7.9	9.2	29	7.3	7.7	9.1	33	6.7	7.4	9.6
H1 2012	81	8.5	8.7	9.9	29	8.3	8.6	9.9	33	7.3	8.2	9.9
H2 2012	81	9.2	9.4	10.6	29	9.0	9.3	10.7	33	6.9	7.6	9.3
H1 2013	81	9.5	9.7	11.0	29	9.3	9.5	10.9	33	7.0	7.9	9.8
H2 2013	81	10.2	10.5	11.9	29	10.1	10.4	11.8	33	9.0	9.8	11.7
H1 2014	81	10.8	11.2	12.6	29	10.5	11.1	12.3	33	10.9	11.2	13.2
H2 2014	81	11.1	11.7	13.3	29	10.9	11.6	13.1	33	11.0	11.4	12.9
H1 2015	81	11.5	12.3	13.9	29	11.3	12.2	13.9	33	12.2	12.6	14.1
H2 2015	81	11.9	12.7	14.5	29	11.6	12.7	14.4	33	12.4	12.8	14.4
H1 2016	81	12.0	13.0	14.8	29	11.8	12.9	14.6	33	12.5	13.0	14.7
H2 2016	81	12.3	13.5	15.4	29	12.2	13.5	15.3	33	12.7	13.2	15.1
H1 2017	81	12.6	13.7	15.6	29	12.4	13.6	15.4	33	13.6	14.2	16.7
H2 2017	81	12.9	14.2	16.2	29	12.6	13.9	15.8	33	13.8	14.5	17.2
H1 2018	81	12.7	13.9	16.1	29	12.5	13.8	15.9	33	13.8	14.6	17.1
H2 2018	81	13.0	14.3	16.5	29	12.8	14.2	16.4	33	13.9	14.8	17.3

Source: Basel Committee on Banking Supervision.

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

Consistent sample of Group 1 banks, in per cent — Table C.6

	Europe				Americas				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	6.4	6.6	7.5	18	6.1	6.7	9.1	34	9.0	9.0	9.7
H2 2011	29	6.7	6.9	7.7	18	7.0	7.6	10.0	34	9.4	9.4	10.2
H1 2012	29	7.8	8.0	8.7	18	7.8	8.4	10.5	34	9.8	9.9	10.6
H2 2012	29	8.4	8.6	9.6	18	8.5	9.1	11.0	34	10.5	10.6	11.3
H1 2013	29	9.2	9.3	10.9	18	8.8	9.4	11.2	34	10.2	10.2	11.0
H2 2013	29	10.3	10.5	12.3	18	9.7	10.4	12.0	34	10.5	10.6	11.4
H1 2014	29	10.9	11.4	13.5	18	10.0	10.9	12.4	34	11.2	11.3	12.0
H2 2014	29	11.4	12.0	14.2	18	10.4	11.5	13.1	34	11.3	11.6	12.7
H1 2015	29	11.7	12.5	14.8	18	11.2	12.5	14.2	34	11.6	12.0	13.1
H2 2015	29	12.2	13.2	15.8	18	11.2	12.6	14.3	34	12.1	12.6	13.7
H1 2016	29	12.4	13.4	16.2	18	11.5	13.0	14.9	34	12.0	12.6	13.7
H2 2016	29	13.1	14.6	17.9	18	11.8	13.4	15.3	34	12.2	12.8	13.9
H1 2017	29	13.4	14.9	17.7	18	12.4	14.0	15.9	34	12.1	12.8	14.0
H2 2017	29	13.8	15.3	18.1	18	12.3	14.0	15.9	34	12.7	13.5	15.1
H1 2018	29	13.5	15.2	18.0	18	12.2	13.9	15.8	34	12.4	13.3	15.0
H2 2018	29	13.6	15.3	18.1	18	12.4	14.1	16.1	34	12.9	13.8	15.8

Source: Basel Committee on Banking Supervision.

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

Consistent sample of banks, exchange rates as of 31 December 2018, in per cent — Table C.7

	Group 1 banks				Of which: G-SIBs				Group 2 banks			
			Change				Change				Change	
	Number of banks	Tier 1 ratio	Tier 1 capital	RWA	Number of banks	Tier 1 ratio	Tier 1 capital	RWA	Number of banks	Tier 1 ratio	Tier 1 capital	RWA
H1 2011	81	7.4			29	7.1			32	7.7		
H2 2011	81	7.9	5.2	–1.9	29	7.7	4.6	–2.6	32	7.6	–0.5	1.0
H1 2012	81	8.7	8.4	–1.8	29	8.6	9.2	–2.2	32	8.4	7.5	–2.4
H2 2012	81	9.4	5.2	–2.5	29	9.3	5.6	–2.9	32	7.7	–6.5	1.5
H1 2013	81	9.7	4.9	1.6	29	9.5	4.6	1.8	32	8.0	1.5	–1.7
H2 2013	81	10.5	7.5	–0.6	29	10.4	8.4	–0.5	32	9.9	18.7	–4.6
H1 2014	81	11.2	7.4	0.3	29	11.1	7.5	1.0	32	11.4	13.6	–0.5
H2 2014	81	11.7	6.3	1.8	29	11.6	6.8	1.5	32	11.5	–1.0	–2.1
H1 2015	81	12.3	6.4	1.4	29	12.2	6.3	1.4	32	12.6	10.1	0.3
H2 2015	81	12.7	4.5	0.8	29	12.7	4.2	0.6	32	12.8	2.9	0.9
H1 2016	81	13.0	3.3	1.5	29	12.9	3.5	1.9	32	13.0	0.3	–1.3
H2 2016	81	13.5	3.5	–0.4	29	13.5	3.3	–1.3	32	13.3	–1.0	–2.7
H1 2017	81	13.7	2.9	1.3	29	13.6	2.5	1.5	32	14.3	8.8	1.2
H2 2017	81	14.2	2.6	–0.7	29	13.9	2.4	0.2	32	14.6	–0.3	–2.3
H1 2018	81	13.9	1.3	2.8	29	13.8	1.2	1.9	32	14.7	0.4	–0.5
H2 2018	81	14.3	3.0	0.7	29	14.2	2.9	0.0	32	14.9	0.1	–1.6

Source: Basel Committee on Banking Supervision.

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

Consistent sample of Group 1 banks, exchange rates as of 31 December 2018, in per cent Table C.8

	Europe				Americas				Rest of the world			
			Change				Change				Change	
	Number of banks	Tier 1 ratio	Tier 1 capital	RWA	Number of banks	Tier 1 ratio	Tier 1 capital	RWA	Number of banks	Tier 1 ratio	Tier 1 capital	RWA
H1 2011	29	6.6			18	6.7			34	9.0		
H2 2011	29	6.9	2.5	–1.7	18	7.6	5.7	–6.4	34	9.4	7.4	2.6
H1 2012	29	8.0	9.1	–5.5	18	8.4	7.6	–2.2	34	9.9	8.3	3.3
H2 2012	29	8.6	0.8	–6.4	18	9.1	5.9	–2.2	34	10.6	8.9	1.9
H1 2013	29	9.3	5.2	–3.5	18	9.4	0.7	–3.2	34	10.2	7.7	11.4
H2 2013	29	10.5	7.7	–4.1	18	10.4	7.7	–2.0	34	10.6	7.3	3.9
H1 2014	29	11.4	8.3	0.0	18	10.9	7.8	2.3	34	11.3	6.4	–0.9
H2 2014	29	12.0	3.0	–2.6	18	11.5	4.9	–0.3	34	11.6	10.1	7.3
H1 2015	29	12.5	4.0	0.2	18	12.5	6.5	–2.1	34	12.0	8.2	4.9
H2 2015	29	13.2	2.3	–3.2	18	12.6	3.1	2.8	34	12.6	7.2	2.5
H1 2016	29	13.4	2.1	0.2	18	13.0	4.6	0.7	34	12.6	3.4	3.0
H2 2016	29	14.6	4.4	–3.7	18	13.4	1.5	–1.5	34	12.8	4.2	2.5
H1 2017	29	14.9	0.8	–1.2	18	14.0	3.6	–0.5	34	12.8	4.0	4.0
H2 2017	29	15.3	1.9	–1.3	18	14.0	–0.9	–0.8	34	13.5	5.3	–0.4
H1 2018	29	15.2	–0.4	0.8	18	13.9	0.7	1.4	34	13.3	2.8	4.9
H2 2018	29	15.3	1.4	0.7	18	14.1	0.9	–0.9	34	13.8	5.3	1.6

Source: Basel Committee on Banking Supervision.

Evolution of fully phased-in Basel III capital

Group 1 banks, in per cent

Table C.9

	2009 CET1 capital ratio	2011 CET1 capital ratio	Retained earnings (cumulative contribution since 2011)	Risk-weighted assets (cumulative contribution since 2011)	CET1 raised (cumulative contribution since 2011)	Other changes to CET1 (cumulative contribution since 2011)
H2 2009	5.7					
H1 2011		7.1				
H2 2011		7.1	0.2	0.2	0.2	0.0
H1 2012		7.1	0.3	0.3	0.3	0.5
H2 2012		7.1	0.6	0.5	0.4	0.5
H1 2013		7.1	0.8	0.4	0.5	0.7
H2 2013		7.1	1.0	0.5	0.6	1.0
H1 2014		7.1	1.1	0.5	0.8	1.4
H2 2014		7.1	1.4	0.3	0.8	1.6
H1 2015		7.1	1.6	0.1	0.9	1.9
H2 2015		7.1	2.0	0.0	1.0	1.9
H1 2016		7.1	2.1	–0.2	1.0	2.0
H2 2016		7.1	2.3	–0.1	1.1	1.9
H1 2017		7.1	2.5	–0.3	1.1	2.1
H2 2017		7.1	2.8	–0.2	1.2	2.1
H1 2018		7.1	3.1	–0.6	1.3	1.8
H2 2018		7.1	3.4	–0.7	1.3	1.8

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.10

	Group 1 banks			Of which: G-SIBs			Group 2 banks		
	CET1	Tier 1	Total	CET1	Tier 1	Total	CET1	Tier 1	Total
Max	35.4	35.4	37.0	16.7	19.2	20.6	77.4	77.4	77.4
95th percentile	19.1	20.6	23.3	14.9	17.6	20.2	33.7	38.1	38.1
75th percentile	14.7	16.0	18.6	13.2	15.2	18.0	17.7	18.5	21.3
Median	13.0	14.4	16.6	12.4	14.3	16.4	14.4	14.8	15.8
25th percentile	11.6	12.7	14.4	11.3	12.4	14.2	10.8	11.2	12.6
5th percentile	9.5	10.7	12.5	8.7	9.7	11.8	9.2	9.8	10.8
Min	7.3	7.5	10.8	7.9	9.4	10.8	3.0	3.1	3.1
Weighted average	12.8	14.0	16.3	12.5	13.9	16.0	13.5	14.2	16.2

Source: Basel Committee on Banking Supervision.

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

In per cent

Table C.11

	Group 1 banks			Of which: G-SIBs			Group 2 banks		
	CET1	Tier 1	Total	CET1	Tier 1	Total	CET1	Tier 1	Total
Max	27.5	27.5	28.8	16.7	17.4	20.6	77.4	77.4	77.4
95th percentile	17.9	18.0	20.2	14.8	17.0	18.3	33.7	38.1	38.1
75th percentile	13.6	14.5	17.0	12.8	14.5	17.0	16.0	17.4	19.7
Median	12.3	13.5	15.5	12.1	13.8	16.1	13.2	13.7	15.3
25th percentile	11.1	12.1	13.9	10.3	11.8	13.1	10.6	11.0	12.3
5th percentile	9.0	9.9	11.9	8.2	9.4	10.8	8.9	9.8	10.8
Min	5.4	5.4	10.1	7.9	9.1	10.7	3.0	3.1	3.1
Weighted average	12.2	13.4	15.6	12.1	13.4	15.5	13.0	13.6	15.5

Source: Basel Committee on Banking Supervision.

Total changes in Tier 1 MRC at the target level[1]

In per cent

Table C.12

	Group 1 banks				Of which: G-SIBs				Group 2 banks			
	H2 2015	H2 2017	H1 2018	H2 2018	H2 2015	H2 2017	H1 2018	H2 2018	H2 2015	H2 2017	H1 2018	H2 2018
Max	52.2	52.0	61.2	60.5	43.4	52.0	61.2	60.5	36.7	53.3	114.5	85.0
95th percentile	38.0	31.8	30.7	31.2	39.3	42.2	34.9	37.8	15.8	23.2	34.0	40.1
75th percentile	12.9	17.8	19.4	14.7	17.7	23.6	25.8	22.7	4.7	11.6	16.3	14.3
Median	1.0	4.3	5.4	1.8	8.5	12.0	15.2	14.1	1.2	3.2	1.8	5.6
25th percentile	–7.5	–4.6	–2.6	–5.1	–9.2	–4.0	–2.5	–2.0	–0.3	–1.4	–0.6	0.0
5th percentile	–17.0	–15.2	–13.6	–11.5	–22.9	–16.1	–13.9	–16.8	–11.4	–10.4	–6.1	–10.2
Min	–27.8	–33.1	–15.4	–18.1	–27.8	–16.1	–15.4	–17.2	–46.5	–57.7	–40.4	–32.8
Weighted average	–0.5	3.2	5.0	3.0	–1.7	2.8	5.5	3.3	3.8	6.0	8.7	8.0

[1] Results for H2 2015 are based on the Committee's cumulative Quantitative Impact Study and are not fully comparable from a methodological point of view since all changes from the revised market risk framework were are already added to MRC under the current rules such that they were not reflected in the *change* in MRC.

Source: Basel Committee on Banking Supervision.

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

In per cent

Table C.13

	Group 1 banks		Of which: G-SIBs		Group 2 banks	
	Transitional	Fully phased-in	Transitional	Fully phased-in	Transitional	Fully phased-in
Number of banks	95	95	27	27	67	67
Max	16.4	16.4	8.1	8.1	22.0	21.9
95th percentile	10.6	10.8	7.9	7.9	12.6	12.5
75th percentile	6.8	6.9	6.6	6.8	7.1	6.9
Median	5.8	5.9	5.5	5.6	5.5	5.3
25th percentile	5.0	4.8	4.8	4.5	4.8	4.8
5th percentile	4.2	4.0	4.3	4.1	3.4	3.5
Min	2.1	1.9	4.2	3.9	1.9	1.9
Weighted average	6.0	6.0	6.1	6.0	5.5	5.3

Source: Basel Committee on Banking Supervision.

Fully phased-in Basel III Tier 1 leverage ratios and component changes[1]

Consistent sample of banks, exchange rates as of 31 December 2018, in per cent — Table C.14

	Group 1 banks				Of which: G-SIBs				Group 2 banks			
			Change				Change				Change	
	Number of banks	Leverage ratio	Tier 1 capital	Exposure measure	Number of banks	Leverage ratio	Tier 1 capital	Exposure measure	Number of banks	Leverage ratio	Tier 1 capital	Exposure measure
H1 2011	63	3.5			27	3.5			27	3.0		
H2 2011	63	3.6	5.2	2.3	27	3.6	4.7	2.9	27	2.9	–2.0	1.9
H1 2012	63	3.8	8.5	3.4	27	3.8	9.2	3.5	27	3.2	10.0	0.9
H2 2012	63	3.8	5.1	4.7	27	3.8	5.8	5.2	27	2.9	–7.5	1.9
H1 2013	63	4.0	4.8	–1.0	27	4.0	4.5	–0.3	27	3.1	1.1	–5.3
H2 2013	63	4.5	8.0	–3.7	27	4.5	8.8	–4.1	27	3.9	22.0	–4.0
H1 2014	63	4.7	6.8	2.1	27	4.7	6.9	1.8	27	4.4	13.9	1.4
H2 2014	63	5.1	6.5	–0.6	27	5.1	6.8	–0.7	27	4.5	–2.0	–3.9
H1 2015	63	5.3	6.2	2.0	27	5.3	6.3	1.8	27	4.9	11.6	2.2
H2 2015	63	5.6	4.2	–1.6	27	5.6	4.5	–2.0	27	5.1	2.2	–0.9
H1 2016	63	5.6	3.4	3.0	27	5.7	3.5	3.1	27	5.0	0.0	1.9
H2 2016	63	5.9	3.4	–1.1	27	5.9	3.3	–1.6	27	4.9	–1.4	0.1
H1 2017	63	5.8	2.9	3.5	27	5.9	2.6	3.7	27	5.2	9.2	3.5
H2 2017	63	6.0	2.3	–0.1	27	6.0	2.3	0.2	27	5.2	–0.5	–2.0
H1 2018	63	5.8	1.1	3.0	27	5.9	1.3	2.7	27	5.1	–0.4	2.1
H2 2018	63	6.0	3.0	0.0	27	6.1	3.0	–0.2	27	5.0	–0.3	1.1

[1] Data points from H1 2010 to H2 2012 use the original definition of the leverage ratio. Data points from H1 2013 to H1 2017 use the definition of the leverage ratio set out in the 2014 version of the framework. 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.

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

Consistent sample of Group 1 banks, exchange rates as of 31 December 2018, in per cent — Table C.15

	Europe				Americas				Rest of the world			
			Change				Change				Change	
	Number of banks	Leverage ratio	Tier 1 capital	Exposure measure	Number of banks	Leverage ratio	Tier 1 capital	Exposure measure	Number of banks	Leverage ratio	Tier 1 capital	Exposure measure
H1 2011	21	2.7			25	4.2			17	4.1		
H2 2011	21	2.9	2.4	–2.7	25	4.3	7.5	3.6	17	4.0	5.7	9.0
H1 2012	21	3.0	9.1	2.7	25	4.5	8.9	5.9	17	4.2	7.6	2.1
H2 2012	21	2.9	0.2	4.9	25	4.8	9.2	2.2	17	4.2	5.9	7.0
H1 2013	21	3.2	5.1	–4.2	25	5.0	8.2	2.1	17	4.2	0.7	0.7
H2 2013	21	3.7	9.1	–7.2	25	5.3	7.2	2.2	17	4.7	7.7	–4.9
H1 2014	21	4.0	7.2	0.7	25	5.3	5.7	5.8	17	5.1	7.7	0.1
H2 2014	21	4.2	2.8	–2.8	25	5.7	11.1	2.4	17	5.4	4.9	–1.1
H1 2015	21	4.4	3.8	–0.2	25	5.8	7.9	6.3	17	5.7	6.5	–0.1
H2 2015	21	4.7	2.5	–5.1	25	6.1	6.5	0.7	17	5.9	3.2	0.0
H1 2016	21	4.7	2.1	3.5	25	6.1	3.4	3.6	17	6.1	4.5	1.7
H2 2016	21	5.1	4.8	–4.6	25	6.2	3.8	2.0	17	6.2	1.5	–0.5
H1 2017	21	5.1	0.8	1.7	25	6.1	3.9	6.0	17	6.3	3.7	2.5
H2 2017	21	5.3	1.5	–2.5	25	6.3	5.4	2.1	17	6.2	–1.0	–0.2
H1 2018	21	5.1	–0.6	3.9	25	6.3	2.6	2.7	17	6.1	0.7	2.2
H2 2018	21	5.2	1.7	–1.8	25	6.5	5.3	2.3	17	6.3	0.8	–0.8

[1] Data points from H1 2010 to H2 2012 use the original definition of the leverage ratio. Data points from H1 2013 to H1 2017 use the definition of the leverage ratio set out in the 2014 version of the framework. 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.

Tier 1 capital, RWA, Basel III leverage ratio exposure[1] and accounting total assets

Consistent sample of banks,[2] exchange rates as of 31 December 2018, June 2011 = 100 Table C.16

	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	97.6	102.3	101.7	104.7	97.3	102.9	101.7	98.0	101.4	101.9	102.9
H1 2012	114.1	95.6	105.8	105.6	114.2	95.3	106.5	105.8	107.8	99.6	102.8	102.7
H2 2012	120.0	93.6	110.8	105.4	120.8	93.4	112.0	105.9	99.7	101.1	104.8	104.0
H1 2013	125.7	95.0	109.7	106.7	126.3	95.3	111.7	107.6	100.9	98.8	99.2	101.8
H2 2013	135.7	94.4	105.6	105.0	137.4	94.9	107.1	106.1	123.1	93.5	95.3	98.5
H1 2014	145.0	94.6	107.9	109.0	146.8	95.7	109.0	109.9	140.2	92.8	96.6	99.3
H2 2014	154.4	96.1	107.3	111.4	156.8	97.2	108.3	112.4	137.4	89.2	92.8	97.6
H1 2015	164.0	97.5	109.4	113.7	166.7	98.4	110.3	114.7	153.3	89.6	94.8	98.7
H2 2015	170.9	98.0	107.7	112.4	174.2	99.1	108.0	112.9	156.7	89.1	93.9	97.5
H1 2016	176.7	99.7	111.0	118.0	180.3	101.0	111.4	118.9	156.7	88.0	95.7	99.7
H2 2016	182.7	99.0	109.8	116.6	186.2	99.8	109.6	117.3	154.5	85.2	95.8	98.6
H1 2017	187.9	100.5	113.7	119.5	191.1	101.5	113.7	120.3	168.7	86.6	99.1	101.1
H2 2017	192.3	100.7	113.5	120.5	195.4	101.7	114.0	121.5	167.9	83.9	97.2	100.0
H1 2018	194.4	102.4	116.9	123.4	197.9	103.6	117.1	124.5	167.3	83.0	99.2	101.4
H2 2018	200.1	102.9	116.9	124.4	203.9	103.6	116.9	125.5	166.8	82.6	100.3	101.4

[1] Tier 1 capital, RWA and leverage ratio exposure assume full implementation of Basel III. Data points from H1 2010 to H2 2012 use the original definition of the leverage ratio. Data points from H1 2013 to H1 2017 use the definition of the leverage ratio set out in the 2014 version of the framework. 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] For sample size please refer to Table C.14.

Source: Basel Committee on Banking Supervision.

Tier 1 capital, RWA, Basel III leverage ratio exposure[1] and accounting total assets, by region

Consistent sample of Group 1 banks[2], exchange rates as of 31 December 2018, June 2011 = 100 Table C.17

	Europe				Americas				Rest of the world			
	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	102.4	97.8	97.3	102.0	105.7	93.6	109.0	99.7	107.5	102.6	103.6	103.0
H1 2012	111.7	92.0	99.9	104.3	113.7	91.5	111.3	102.7	117.0	106.0	109.7	110.1
H2 2012	111.9	87.3	104.9	101.8	120.5	89.4	119.1	104.9	127.7	107.9	112.1	111.6
H1 2013	117.5	84.4	100.4	99.2	121.3	86.5	119.9	106.4	138.2	121.0	114.5	119.1
H2 2013	128.2	81.0	93.2	93.0	130.6	84.8	114.0	107.2	148.1	125.5	117.0	122.3
H1 2014	137.4	80.9	93.9	95.5	140.8	86.7	114.1	110.1	156.6	124.2	123.7	129.6
H2 2014	141.3	78.6	91.3	97.7	147.7	86.4	112.9	112.0	174.0	133.0	126.7	132.8
H1 2015	146.7	78.2	91.1	96.1	157.3	84.7	112.8	113.7	187.8	141.2	134.7	141.9
H2 2015	150.3	75.7	86.5	92.0	162.3	87.0	112.8	113.6	199.9	143.6	135.7	143.9
H1 2016	153.5	75.7	89.5	98.6	169.7	87.6	114.7	117.6	206.7	149.0	140.6	149.5
H2 2016	160.8	73.1	85.4	93.0	172.2	86.3	114.2	118.3	214.6	151.6	143.4	153.1
H1 2017	162.1	72.3	86.8	92.8	178.6	85.9	117.0	121.6	222.9	158.9	152.1	160.5
H2 2017	164.5	71.4	84.7	91.7	176.8	85.2	116.8	122.7	235.0	161.9	155.2	165.0
H1 2018	163.6	71.8	88.0	94.8	178.0	86.4	119.3	124.8	241.1	166.1	159.5	168.0
H2 2018	166.3	72.0	86.4	93.0	179.5	85.5	118.3	126.7	253.8	168.8	163.1	172.6

[1] Tier 1 capital, RWA and leverage ratio exposure assume full implementation of Basel III. Data points from H1 2010 to H2 2012 use the original definition of the leverage ratio. Data points from H1 2013 to H1 2017 use the definition of the leverage ratio set out in the 2014 version of the framework. 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] For sample size please refer to Table C.14.

Source: Basel Committee on Banking Supervision.

Changes in leverage ratio MRC at the target level due to revisions in the final standards[1]

In per cent — Table C.18

	Group 1 banks	Of which: G-SIBs	Group 2 banks
Max	43.8	43.8	7.5
95th percentile	26.6	36.0	3.5
75th percentile	12.5	25.2	0.5
Median	0.5	17.5	0.0
25th percentile	0.0	14.7	–0.6
5th percentile	–2.8	8.0	–2.4
Min	–12.7	6.4	–10.2
Weighted average	15.1	22.1	0.1

[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 at the target level due to revisions to the exposure measure in the final standards[1]

In per cent — Table C.19

	Group 1 banks	Of which: G-SIBs	Group 2 banks
Max	9.3	7.8	7.5
95th percentile	5.6	7.0	3.5
75th percentile	0.7	0.7	0.5
Median	0.0	0.0	0.0
25th percentile	–0.9	–3.5	–0.6
5th percentile	–6.3	–13.6	–2.4
Min	–14.8	–14.8	–10.2
Weighted average	–0.5	–0.8	0.1

[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.

Estimated combined capital shortfalls at the minimum level

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

Table C.20

	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	107	38.8	226.8	46.9	29	31.7	174.6	10.3	100	8.6	17.6	3.4
H2 2011	107	11.9	196.5	39.3	29	7.6	155.9	11.6	98	7.6	16.6	3.1
H1 2012	106	3.7	173.4	17.4	29	0.1	142.2	0.0	95	4.8	16.0	4.0
H2 2012	106	2.2	180.9	13.3	29	0.0	153.3	0.3	106	11.4	16.4	6.5
H1 2013	107	3.3	111.8	11.5	29	0.0	96.3	7.6	109	12.4	16.2	7.5
H2 2013	107	0.1	39.8	3.2	29	0.0	31.8	0.0	104	2.0	7.2	3.7
H1 2014	101	0.0	7.0	0.0	28	0.0	4.7	0.0	101	0.1	3.3	3.1
H2 2014	102	0.0	3.1	1.3	29	0.0	2.7	0.0	92	0.0	4.3	1.8
H1 2015	105	0.0	0.0	0.0	29	0.0	0.0	0.0	96	0.0	4.3	0.3
H2 2015	105	0.0	0.0	0.0	29	0.0	0.0	0.0	93	0.0	1.5	0.2
H1 2016	105	0.0	0.0	0.0	29	0.0	0.0	0.0	94	0.0	2.9	0.0
H2 2016	104	0.0	0.0	0.0	28	0.0	0.0	0.0	83	0.0	2.0	0.0
H1 2017	101	0.0	0.0	0.0	28	0.0	0.0	0.0	80	0.0	1.9	0.0
H2 2017	80	0.0	0.0	0.0	29	0.0	0.0	0.0	66	0.0	1.1	0.0
H1 2018	94	0.0	0.0	0.0	29	0.0	0.0	0.0	74	0.0	1.4	0.0
H2 2018	96	0.0	1.9	0.0	29	0.0	0.0	0.0	68	0.0	1.1	0.0

Source: Basel Committee on Banking Supervision.

Estimated combined capital shortfalls at the target level

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

Table C.21

	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	107	485.9	233.9	215.4	29	387.3	157.3	138.2	100	32.1	22.8	9.5
H2 2011	107	384.4	241.6	221.8	29	311.2	171.2	141.8	98	21.2	23.4	6.9
H1 2012	106	197.9	233.4	206.4	29	159.4	174.1	126.1	95	16.0	18.7	8.9
H2 2012	106	115.1	226.1	148.8	29	82.2	174.2	85.8	106	25.2	17.8	11.5
H1 2013	107	57.5	162.0	134.7	29	39.0	127.6	94.1	109	27.7	18.1	9.7
H2 2013	107	15.2	73.7	90.7	29	11.8	54.4	63.9	104	9.2	11.1	6.8
H1 2014	101	4.1	25.5	74.8	28	3.9	17.8	64.2	101	1.6	7.0	5.1
H2 2014	102	0.7	14.2	40.1	29	0.0	5.0	29.6	92	1.4	6.7	4.8
H1 2015	105	0.0	3.1	12.6	29	0.0	0.0	11.6	96	0.2	6.4	4.8
H2 2015	105	0.0	3.5	4.7	29	0.0	0.0	1.8	93	0.2	2.3	4.0
H1 2016	105	0.0	1.4	2.7	29	0.0	0.0	0.9	94	0.0	3.7	3.7
H2 2016	104	0.0	0.0	0.3	28	0.0	0.0	0.0	83	0.0	3.1	1.2
H1 2017	101	0.0	0.0	0.0	28	0.0	0.0	0.0	80	0.0	2.0	0.1
H2 2017	80	0.0	0.0	0.0	29	0.0	0.0	0.0	66	0.0	1.1	0.0
H1 2018	94	0.0	0.0	0.0	29	0.0	0.0	0.0	74	0.0	1.4	0.1
H2 2018	96	0.1	1.8	0.0	29	0.0	0.0	0.0	68	0.0	1.1	0.0

Source: Basel Committee on Banking Supervision.

Combined capital shortfalls at the target level[1]

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

Table C.22

	Group 1 banks				Of which: G-SIBs				Group 2 banks			
	H2 2015	H2 2017	H1 2018	H2 2018	H2 2015	H2 2017	H1 2018	H2 2018	H2 2015	H2 2017	H1 2018	H2 2018
CET1	27.6	5.2	7.0	5.8	27.6	5.2	7.0	4.8	0.3	1.0	2.2	1.8
Additional Tier 1	28.8	7.3	10.8	10.1	27.8	6.3	10.3	9.2	0.5	0.8	2.2	1.1
Tier 2	34.3	13.3	12.6	7.6	30.3	12.2	12.0	7.6	0.6	0.7	1.4	0.9

[1] Results for H2 2015 are based on the Committee's cumulative Quantitative Impact Study and are not fully comparable from a methodological point of view.

Source: Basel Committee on Banking Supervision.

Level of capital after fully phased in Basel III standards

Consistent sample of banks, exchange rates as of 31 December 2018, in billions of euros Table C.23

	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	86	1,945	80	345	29	1,339	72	278	34	69	6	22
H2 2011	86	2,057	72	341	29	1,416	60	270	34	67	7	22
H1 2012	86	2,243	65	305	29	1,556	56	245	34	71	9	17
H2 2012	86	2,370	59	309	29	1,652	49	248	34	69	7	17
H1 2013	86	2,487	60	345	29	1,730	50	261	34	68	8	19
H2 2013	86	2,661	77	355	29	1,864	65	257	34	83	8	18
H1 2014	86	2,819	121	357	29	1,974	99	230	34	100	3	19
H2 2014	86	2,959	165	414	29	2,074	141	286	34	99	3	14
H1 2015	86	3,117	206	448	29	2,181	173	321	34	110	3	14
H2 2015	86	3,232	240	486	29	2,254	199	346	34	112	4	15
H1 2016	86	3,320	266	501	29	2,325	215	343	34	112	4	16
H2 2016	86	3,397	318	529	29	2,377	246	364	34	110	5	16
H1 2017	86	3,507	317	515	29	2,445	244	352	34	120	5	22
H2 2017	86	3,580	343	556	29	2,494	260	384	34	119	6	23
H1 2018	86	3,610	362	604	29	2,518	270	415	34	118	7	21
H2 2018	86	3,720	370	645	29	2,595	274	446	34	117	8	20

Source: Basel Committee on Banking Supervision.

Level of capital after full phasing in of Basel III standards, by region

Consistent sample of Group 1 banks, exchange rates as of 31 December 2018, in billions of euros Table C.24

	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	31	701	19	93	18	515	56	198	37	729	5	54
H2 2011	31	718	20	89	18	559	45	190	37	780	7	62
H1 2012	31	790	16	76	18	607	42	165	37	846	7	63
H2 2012	31	802	11	97	18	645	43	149	37	923	4	62
H1 2013	31	845	10	138	18	649	45	132	37	993	6	76
H2 2013	31	903	18	156	18	695	51	120	37	1,063	8	79
H1 2014	31	955	42	188	18	736	68	106	37	1,128	11	64
H2 2014	31	973	54	184	18	764	80	115	37	1,221	32	116
H1 2015	31	1,004	64	202	18	802	97	121	37	1,311	44	126
H2 2015	31	1,014	79	219	18	824	103	129	37	1,393	58	137
H1 2016	31	1,030	87	233	18	857	113	140	37	1,433	67	128
H2 2016	31	1,046	120	265	18	866	118	136	37	1,484	81	128
H1 2017	31	1,066	111	226	18	901	119	140	37	1,540	88	149
H2 2017	31	1,082	117	218	18	891	120	140	37	1,606	106	199
H1 2018	31	1,068	126	228	18	894	124	140	37	1,648	112	236
H2 2018	31	1,081	129	229	18	903	123	141	37	1,735	118	275

Source: Basel Committee on Banking Supervision.

Evolution of fully phased-in Basel III capital

Consistent sample of banks, exchange rates as of 31 December 2018, June 2011 = 100 Table C.25

	Group 1 banks				Of which: 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	86	100.0	100.0	100.0	29	100.0	100.0	100.0	34	100.0	100.0	100.0
H2 2011	86	105.8	89.6	99.1	29	105.8	83.6	97.0	34	97.2	110.0	97.8
H1 2012	86	115.3	80.4	88.4	29	116.2	77.9	88.0	34	103.2	144.7	74.9
H2 2012	86	121.9	72.9	89.6	29	123.4	68.5	89.1	34	99.8	110.4	75.9
H1 2013	86	127.9	75.0	100.1	29	129.1	69.7	93.6	34	99.8	134.0	86.0
H2 2013	86	136.9	95.8	103.1	29	139.2	90.8	92.4	34	121.2	129.1	83.4
H1 2014	86	145.0	150.0	103.8	29	147.4	137.6	82.7	34	145.8	44.8	85.7
H2 2014	86	152.1	204.8	120.3	29	154.8	196.0	102.6	34	143.5	55.8	63.2
H1 2015	86	160.3	255.5	130.2	29	162.8	240.8	115.4	34	159.9	55.6	64.0
H2 2015	86	166.2	298.4	141.0	29	168.3	276.7	124.2	34	163.6	63.1	67.1
H1 2016	86	170.7	331.0	145.4	29	173.6	298.6	123.3	34	163.5	69.5	70.6
H2 2016	86	174.7	395.5	153.4	29	177.5	342.2	130.8	34	160.9	79.4	72.6
H1 2017	86	180.3	394.3	149.4	29	182.6	338.8	126.5	34	174.7	81.4	99.5
H2 2017	86	184.1	426.7	161.4	29	186.2	361.3	138.0	34	173.2	96.5	103.7
H1 2018	86	185.6	449.9	175.3	29	188.0	374.9	148.9	34	171.4	123.4	95.7
H2 2018	86	191.3	460.1	187.3	29	193.7	381.5	160.4	34	170.8	129.5	92.8

Source: Basel Committee on Banking Supervision.

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

Consistent sample of Group 1 banks, exchange rates as of 31 December 2018, June 2011 = 100 Table C.26

	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	31	100.0	100.0	100.0	18	100.0	100.0	100.0	37	100.0	100.0	100.0
H2 2011	31	102.5	104.3	96.2	18	108.5	79.6	96.3	37	107.0	142.2	114.6
H1 2012	31	112.7	82.9	82.4	18	117.9	75.3	83.5	37	116.1	125.9	117.0
H2 2012	31	114.5	56.3	104.3	18	125.1	77.5	75.6	37	126.7	85.0	115.3
H1 2013	31	120.6	53.2	148.4	18	125.9	79.7	66.6	37	136.3	106.4	139.5
H2 2013	31	128.9	91.4	168.3	18	135.0	90.9	60.6	37	145.8	164.4	146.3
H1 2014	31	136.2	214.9	202.5	18	142.9	122.1	53.5	37	154.8	210.2	118.0
H2 2014	31	138.8	277.3	198.4	18	148.4	142.2	58.1	37	167.6	611.8	213.6
H1 2015	31	143.3	332.6	218.0	18	155.6	173.8	61.0	37	180.0	852.9	232.2
H2 2015	31	144.7	409.5	236.3	18	160.0	183.7	65.3	37	191.2	1,125.4	253.7
H1 2016	31	146.9	448.8	251.4	18	166.4	201.6	70.6	37	196.7	1,292.2	236.9
H2 2016	31	149.3	619.6	285.8	18	168.2	210.5	68.7	37	203.7	1,561.2	235.8
H1 2017	31	152.1	572.7	243.8	18	175.0	211.9	70.8	37	211.3	1,704.1	274.8
H2 2017	31	154.4	606.6	234.8	18	173.0	213.9	70.7	37	220.4	2,060.0	366.7
H1 2018	31	152.4	652.5	245.8	18	173.4	221.7	70.9	37	226.2	2,164.9	435.6
H2 2018	31	154.2	668.4	246.5	18	175.3	220.4	71.4	37	238.2	2,277.0	508.5

Source: Basel Committee on Banking Supervision.

Profits, dividends and dividend payout ratio[1]

Consistent sample of banks, exchange rates as of 31 December 2018, in billions of euros — Table C.27

	Group 1 banks					Of which: G-SIBs					Group 2 banks				
	Number of banks	Profit after tax	Common share dividend	Dividend payout ratio (%)		Number of banks	Profit after tax	Common share Dividend	Dividend payout ratio (%)		Number of banks	Profit after tax	Common share dividend	Dividend payout ratio (%)	
				6m	12m				6m	12m				6m	12m
H1 2011	84	130.5	54.9	42.1		28	90.3	40.0	44.3		33	3.9	0.7	19.0	
H2 2011	84	102.1	30.4	29.8	36.7	28	75.6	17.1	22.6	34.4	33	0.6	1.0	179.4	39.5
H1 2012	84	125.0	55.4	44.3	37.8	28	88.1	39.4	44.8	34.5	33	2.7	0.7	26.5	53.6
H2 2012	84	149.0	27.1	18.2	30.1	28	104.9	13.2	12.6	27.3	33	1.8	0.6	34.2	29.6
H1 2013	84	156.8	71.9	45.9	32.4	28	108.6	52.1	47.9	30.6	33	2.6	0.6	21.3	26.6
H2 2013	84	126.3	26.3	20.8	34.7	28	96.8	12.9	13.4	31.6	33	2.0	0.9	45.9	31.9
H1 2014	84	140.0	80.8	57.7	40.2	28	88.4	60.9	68.9	39.9	33	4.1	0.9	21.9	29.7
H2 2014	84	173.9	40.5	23.3	38.6	28	121.2	19.6	16.2	38.4	33	1.3	0.9	67.2	32.6
H1 2015	84	201.9	84.3	41.8	33.2	28	142.1	57.7	40.6	29.4	33	5.3	1.4	26.7	34.7
H2 2015	84	188.6	43.8	23.3	32.8	28	132.9	22.2	16.7	29.1	33	4.7	0.8	17.8	22.5
H1 2016	84	173.6	88.5	51.0	36.6	28	126.5	60.6	47.9	31.9	33	3.3	1.7	50.6	31.4
H2 2016	84	171.0	40.9	24.0	37.6	28	117.9	19.8	16.8	32.9	33	3.4	1.2	36.1	43.2
H1 2017	84	198.5	93.6	47.1	36.4	28	135.9	62.3	45.8	32.4	33	5.4	2.0	36.8	36.5
H2 2017	84	185.0	47.6	25.7	36.8	28	108.9	22.7	20.9	34.7	33	5.9	1.7	28.7	32.6
H1 2018	84	237.9	104.5	43.9	36.0	28	169.9	69.8	41.1	33.2	33	6.4	2.6	40.1	34.6
H2 2018	84	252.9	68.1	26.9	35.2	28	183.3	43.6	23.8	32.1	33	5.7	1.5	25.8	33.4

[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.

Source: Basel Committee on Banking Supervision.

Profits, dividends and dividend payout ratio[1], by region

Consistent sample of Group 1 banks, exchange rates as of 31 December 2018, in billions of euros Table C.28

	Europe					Americas					Rest of the world				
	Number of banks	Profit after tax	Common share dividend	Dividend payout ratio (%)		Number of banks	Profit after tax	Common share dividend	Dividend payout ratio (%)		Number of banks	Profit after tax	Common share dividend	Dividend payout ratio (%)	
				6m	12m				6m	12m				6m	12m
H1 2011	30	49.2	16.3	33.0		18	32.1	7.8	24.3		36	49.1	30.9	62.8	
H2 2011	30	4.5	5.6	123.9	40.6	18	38.9	8.4	21.5	22.8	36	58.7	16.4	28.0	43.9
H1 2012	30	34.2	11.7	34.2	44.6	18	40.0	9.6	24.1	22.8	36	50.8	34.1	67.0	46.1
H2 2012	30	5.1	7.1	139.3	47.9	18	41.2	10.7	26.0	25.1	36	102.7	9.2	9.0	28.2
H1 2013	30	45.0	15.8	35.1	45.7	18	51.4	10.8	20.9	23.2	36	60.4	45.4	75.2	33.5
H2 2013	30	–4.3	4.9	–112.4	50.8	18	43.7	11.7	26.7	23.6	36	86.9	9.8	11.3	37.4
H1 2014	30	35.0	20.8	59.6	83.9	18	40.2	12.2	30.3	28.4	36	64.8	47.7	73.6	37.9
H2 2014	30	35.5	10.0	28.2	43.8	18	47.7	13.6	28.5	29.3	36	90.7	16.9	18.6	41.5
H1 2015	30	54.5	17.7	32.4	30.7	18	61.0	14.2	23.3	25.6	36	86.3	52.4	60.7	39.1
H2 2015	30	39.5	12.7	32.1	32.3	18	53.6	15.2	28.3	25.6	36	95.5	16.0	16.8	37.6
H1 2016	30	43.4	25.0	57.6	45.5	18	53.2	14.9	28.1	28.2	36	77.0	48.6	63.1	37.5
H2 2016	30	20.1	7.5	37.5	51.2	18	66.2	18.4	27.8	27.9	36	84.7	15.0	17.8	39.4
H1 2017	30	52.1	27.5	52.8	48.5	18	63.9	16.8	26.3	27.1	36	82.5	49.2	59.7	38.4
H2 2017	30	49.0	9.0	18.4	36.1	18	40.0	19.8	49.4	35.2	36	96.0	18.8	19.6	38.1
H1 2018	30	54.2	31.9	58.7	39.6	18	74.3	20.9	28.2	35.6	36	109.3	51.7	47.3	34.3
H2 2018	30	56.0	10.7	19.2	38.7	18	77.1	23.1	30.0	29.1	36	119.8	34.2	28.6	37.5

[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.

Source: Basel Committee on Banking Supervision.

Capital raised externally

Consistent sample of banks, exchange rates as of 31 December 2018, in billions of euros Table C.29

	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	84	34.9	4.8	12.4	28	13.7	1.6	6.2	33	2.5	1.5	2.5
H2 2011	84	24.5	5.1	4.0	28	10.2	3.6	1.1	33	4.8	0.2	4.1
H1 2012	84	27.3	1.0	9.7	28	20.1	1.0	2.3	33	1.4	1.5	0.3
H2 2012	84	27.9	5.0	11.9	28	14.9	3.8	7.0	33	1.8	0.0	1.9
H1 2013	84	23.3	7.2	12.1	28	13.2	5.4	10.6	33	0.5	0.0	1.9
H2 2013	84	28.6	21.8	29.8	28	13.5	17.5	19.0	33	1.1	0.9	0.3
H1 2014	84	31.4	41.1	44.3	28	18.1	30.3	14.8	33	2.8	1.3	1.3
H2 2014	84	14.0	46.2	48.9	28	6.4	41.6	40.5	33	3.4	0.7	0.2
H1 2015	84	20.0	41.7	46.3	28	11.2	33.6	36.5	33	1.4	0.0	1.3
H2 2015	84	18.3	30.1	49.7	28	10.0	23.1	32.9	33	0.4	0.4	1.1
H1 2016	84	11.3	26.2	43.3	28	9.5	16.5	24.1	33	0.8	0.6	0.6
H2 2016	84	22.0	24.4	31.1	28	19.0	9.1	19.7	33	0.5	0.3	2.0
H1 2017	84	14.9	18.0	25.8	28	10.7	12.0	15.0	33	0.7	0.6	2.2
H2 2017	84	21.0	32.3	41.6	28	14.0	18.0	32.3	33	1.7	1.1	4.0
H1 2018	84	20.9	20.0	24.9	28	17.0	13.6	13.5	33	1.6	1.6	1.5
H2 2018	84	12.1	23.1	26.5	28	4.5	14.5	16.7	33	0.8	0.0	0.9

Source: Basel Committee on Banking Supervision.

Capital raised externally, by region

Consistent sample of Group 1 banks, exchange rates as of 31 December 2018, in billions of euros Table C.30

	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	30	20.8	1.4	9.2	18	11.6	3.3	3.2	36	2.5	0.0	0.0
H2 2011	30	13.6	3.4	1.1	18	5.5	1.6	2.8	36	5.4	0.0	0.1
H1 2012	30	20.5	0.0	3.4	18	5.5	1.0	5.0	36	1.3	0.0	1.3
H2 2012	30	14.1	1.3	6.4	18	3.7	2.5	5.4	36	10.0	1.2	0.0
H1 2013	30	14.1	0.0	7.9	18	6.0	5.4	4.2	36	3.3	1.8	0.0
H2 2013	30	20.1	11.1	20.4	18	3.6	7.6	8.6	36	4.9	3.1	0.7
H1 2014	30	23.4	25.5	24.0	18	5.3	13.8	2.2	36	2.7	1.8	18.1
H2 2014	30	6.6	15.1	11.6	18	3.3	10.4	15.3	36	4.0	20.8	22.0
H1 2015	30	7.1	14.3	26.3	18	4.0	15.9	13.8	36	8.8	11.5	6.2
H2 2015	30	8.8	9.8	22.0	18	2.7	5.3	11.9	36	6.8	15.0	15.8
H1 2016	30	3.7	9.0	21.4	18	6.7	9.0	12.4	36	0.9	8.2	9.4
H2 2016	30	16.5	7.5	12.7	18	3.8	3.4	8.1	36	1.7	13.5	10.2
H1 2017	30	9.4	10.2	13.5	18	4.1	0.9	7.5	36	1.3	6.9	4.8
H2 2017	30	10.7	9.6	6.2	18	6.5	4.5	1.9	36	3.8	18.3	33.5
H1 2018	30	2.4	7.9	10.6	18	3.2	6.5	3.1	36	15.4	5.7	11.2
H2 2018	30	2.9	12.2	4.4	18	3.9	4.1	5.4	36	5.3	6.7	16.8

Source: Basel Committee on Banking Supervision.

Structure of regulatory capital under transitional Basel III rules

Consistent sample of banks, in per cent

Table C.31

	Group 1 banks				Of which: G-SIBs				Group 2 banks			
	Num. of banks	CET1	Add. Tier 1	Tier 2	Num. of banks	CET1	Add. Tier 1	Tier 2	Num. of banks	CET1	Add. Tier 1	Tier 2
H1 2011	85	72.0	9.3	18.7	29	69.5	11.2	19.3	34	68.2	8.3	23.5
H2 2011	85	73.3	8.9	17.8	29	71.0	10.5	18.5	34	70.1	7.0	22.9
H1 2012	85	75.2	8.0	16.9	29	73.6	9.4	17.0	34	71.6	4.6	23.8
H2 2012	85	75.6	7.4	17.0	29	74.5	8.9	16.6	34	71.6	4.3	24.1
H1 2013	85	75.2	7.0	17.8	29	75.4	7.3	17.3	34	71.4	4.3	24.4
H2 2013	85	75.8	6.8	17.4	29	76.1	7.0	16.9	34	72.8	3.5	23.7
H1 2014	85	76.8	5.5	17.6	29	77.2	5.7	17.2	34	74.6	3.6	21.9
H2 2014	85	76.5	6.1	17.3	29	76.5	6.6	16.9	34	76.5	3.8	19.7
H1 2015	85	76.9	6.6	16.5	29	76.7	7.2	16.1	34	78.4	3.9	17.7
H2 2015	85	76.7	7.1	16.2	29	76.6	7.8	15.6	34	80.0	4.3	15.7
H1 2016	85	77.0	7.4	15.6	29	77.0	8.1	14.8	34	80.4	4.2	15.4
H2 2016	85	77.1	7.6	15.3	29	77.2	8.2	14.6	34	80.6	4.0	15.4
H1 2017	85	77.2	8.2	14.6	29	77.4	8.7	13.9	34	80.4	3.7	15.9
H2 2017	85	76.9	8.4	14.7	29	77.0	8.8	14.3	34	79.9	3.7	16.4
H1 2018	85	76.7	8.9	14.4	29	76.9	9.2	14.0	34	79.4	5.4	15.2
H2 2018	85	76.8	8.6	14.6	29	76.8	8.9	14.2	34	80.1	5.5	14.3

Source: Basel Committee on Banking Supervision.

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

Consistent sample of banks, in per cent

Table C.32

	Group 1 banks				Of which: G-SIBs				Group 2 banks			
	Num. of banks	CET1	Add. Tier 1	Tier 2	Num. of banks	CET1	Add. Tier 1	Tier 2	Num. of banks	CET1	Add. Tier 1	Tier 2
H1 2011	85	82.9	3.2	13.9	29	80.1	4.1	15.8	34	71.7	6.1	22.3
H2 2011	85	83.9	2.8	13.3	29	81.8	3.4	14.9	34	71.4	6.7	21.9
H1 2012	85	86.3	2.3	11.3	29	84.3	2.9	12.8	34	74.8	8.6	16.5
H2 2012	85	87.0	2.0	11.1	29	85.2	2.4	12.4	34	75.6	6.9	17.5
H1 2013	85	86.1	2.0	11.9	29	85.1	2.3	12.6	34	72.4	8.2	19.5
H2 2013	85	86.1	2.3	11.6	29	85.5	2.8	11.7	34	76.4	7.0	16.7
H1 2014	85	85.4	3.6	11.0	29	85.8	4.2	10.0	34	82.4	2.3	15.4
H2 2014	85	83.7	4.6	11.8	29	83.0	5.5	11.4	34	85.1	3.0	12.0
H1 2015	85	82.8	5.4	11.8	29	81.6	6.4	12.0	34	86.2	2.8	11.1
H2 2015	85	81.7	6.1	12.2	29	80.5	7.1	12.3	34	85.7	3.0	11.3
H1 2016	85	81.3	6.5	12.2	29	80.7	7.4	11.8	34	85.0	3.2	11.8
H2 2016	85	80.2	7.5	12.3	29	79.7	8.3	12.1	34	84.2	3.6	12.2
H1 2017	85	80.9	7.3	11.8	29	80.4	8.0	11.6	34	81.8	3.3	14.9
H2 2017	85	79.9	7.6	12.4	29	79.6	8.2	12.2	34	80.6	3.9	15.5
H1 2018	85	78.9	7.9	13.2	29	78.7	8.4	12.9	34	80.5	5.0	14.5
H2 2018	85	78.6	7.8	13.6	29	78.3	8.3	13.5	34	80.6	5.3	14.1

Source: Basel Committee on Banking Supervision.

Share of MRC by asset class[1]

Group 1 banks, consistent sample of banks, in per cent of total MRC — Table C.33

	Number	Corporate	Bank	Sovereign	Retail	Partial use	Securitisation	Related entities	CVA MRC	Market risk	Operational risk	Floors	Other	Total	Total (June 2011=100)
H1 2011	34	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	100.0
H2 2011	34	30.7	3.2	1.1	18.3	2.2	5.8	11.5	0.0	9.6	8.1	1.1	8.4	100.0	106.1
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	34	32.4	3.5	1.3	17.5	1.7	4.1	7.2	0.2	8.5	11.9	2.6	9.1	100.0	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	34.8	3.8	2.5	16.2	1.7	2.4	1.5	3.2	7.2	14.0	2.3	10.6	100.0	94.3
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	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	95.9
H2 2016	34	36.5	2.9	2.6	16.5	1.1	1.7	1.5	2.5	5.3	16.4	3.2	9.7	100.0	96.8
H1 2017	34	36.6	2.9	2.5	17.0	1.2	1.8	1.6	2.1	5.4	16.1	3.1	9.6	100.0	93.0
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
H1 2018	34	37.6	2.8	2.6	17.0	1.3	1.6	3.7	1.8	5.1	16.2	1.0	9.2	100.0	90.4
H2 2018	34	37.9	2.7	2.7	16.7	2.6	1.7	0.9	1.7	5.0	16.7	1.1	10.2	100.0	90.0

[1] The category "other" includes capital requirements for other assets; 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.

Source: Basel Committee on Banking Supervision.

Share of credit exposure

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

Table C.34

	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	28.4	18.0	8.8	9.9	2.0	2.7	100.0	100.8
H2 2014	36	30.3	28.0	18.4	8.4	10.3	1.9	2.6	100.0	106.7
H1 2015	36	30.8	27.9	18.3	8.1	10.3	1.9	2.7	100.0	113.4
H2 2015	36	31.1	28.1	18.9	7.5	9.9	1.6	2.8	100.0	112.7
H1 2016	36	30.9	27.9	19.4	7.1	10.0	2.0	2.8	100.0	113.7
H2 2016	36	30.7	28.5	19.7	6.8	9.7	1.9	2.8	100.0	114.7
H1 2017	36	30.4	29.0	20.8	6.8	8.5	1.9	2.8	100.0	112.3
H2 2017	36	30.5	29.7	20.7	6.6	7.9	1.8	2.8	100.0	110.1
H1 2018	36	30.8	29.3	20.5	6.5	8.2	1.9	2.7	100.0	112.4
H2 2018	36	30.9	29.0	19.9	6.4	8.1	2.8	2.9	100.0	113.9

Source: Basel Committee on Banking Supervision.

Changes in Tier 1 MRC for credit risk due to the final Basel III standards

In per cent

Table C.35

	Group 1 banks	Of which: G-SIBs	Group 2 banks
Max	40.0	22.8	887.6
95th percentile	15.9	16.9	32.9
75th percentile	4.6	8.9	10.5
Median	–0.4	3.4	4.6
25th percentile	–8.6	–0.1	–1.9
5th percentile	–19.0	–16.1	–12.4
Min	–28.4	–16.3	–24.4
Weighted average	–2.5	–1.7	7.6

Source: Basel Committee on Banking Supervision.

Changes in Tier 1 MRC for credit risk due to the final Basel III standards, by asset class

In per cent — Table C.36

	Group 1 banks	Of which: G-SIBs	Group 2 banks
Sovereign	0.0	–0.1	0.1
Bank and covered bonds	1.2	1.3	4.3
Retail	–0.6	–0.5	0.5
Real estate	0.0	0.1	0.6
Defaulted	0.0	0.0	0.0
Corporate / financial institutions treated as corporate	–3.7	–3.7	–0.6
Equity / subordinated debt / funds	0.7	0.9	2.4
Other assets / failed trades / eligible purchased receivables	–0.2	–0.1	0.2
Total	–2.5	–1.7	7.6

Source: Basel Committee on Banking Supervision.

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

Group 1 banks, in per cent — Table C.37

	Europe	Americas	Rest of the world
Max	21.0	16.2	40.0
95th percentile	17.4	13.8	17.7
75th percentile	8.2	2.8	0.1
Median	2.7	1.1	–6.5
25th percentile	–1.6	–5.2	–12.3
5th percentile	–13.2	–20.3	–22.5
Min	–15.8	–25.2	–28.4
Weighted average	3.8	–0.8	–6.9

Source: Basel Committee on Banking Supervision.

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

Group 1 banks, in per cent — Table C.38

	Europe	Americas	Rest of the world
Sovereign	0.0	–0.2	0.0
Bank and covered bonds	1.4	0.2	1.5
Retail	0.8	–1.0	–1.2
Real estate	0.3	–0.4	0.0
Defaulted	0.0	0.0	0.0
Corporate / financial institutions treated as corporate	1.1	–2.1	–7.2
Equity / subordinated debt / funds	–0.4	2.7	0.5
Other assets / failed trades / eligible purchased receivables	–0.1	0.0	–0.4
Total	3.8	–0.8	–6.9

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]

In per cent — Table C.39

	Group 1 banks	Of which: G-SIBs	Group 2 banks
Max	91.0	35.8	52.7
95th percentile	38.1	29.4	28.5
75th percentile	7.9	7.9	10.3
Median	2.8	4.2	6.1
25th percentile	–0.3	1.7	0.2
5th percentile	–12.8	–7.6	–8.2
Min	–51.8	–10.0	–25.3
Weighted average	2.7	3.6	6.6

[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). The change is calculated based on total current MRC for exposures currently under the SA.

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]

In per cent — Table C.40

	Group 1 banks	Of which: G-SIBs	Group 2 banks
Sovereign	0.0	0.0	0.2
Retail	1.0	1.0	0.7
Defaulted	0.0	0.0	0.0
Corporate	0.0	0.8	–0.9
Bank and covered bonds	2.4	3.3	1.9
Equity / subordinated debt / funds	–0.4	–1.8	3.2
Other assets / failed trades	–0.2	–0.2	0.3
Real estate	–0.1	0.5	1.0
Total	2.7	3.6	6.6

[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). 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 — Table C.41

	Europe	Americas	Rest of the world
Max	91.0	37.7	87.3
95th percentile	52.7	37.7	37.7
75th percentile	10.7	3.0	5.4
Median	5.0	0.2	1.1
25th percentile	1.7	–6.6	–2.4
5th percentile	–2.0	–27.0	–18.1
Min	–17.2	–27.0	–51.8
Weighted average	6.7	–3.5	1.8

[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).

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, by region

Group 1 banks, in per cent — Table C.42

	Europe	Americas	Rest of the world
Sovereign	0.1	0.0	0.0
Retail	2.0	0.0	0.6
Defaulted	0.0	0.0	0.1
Corporate	1.5	–3.2	–0.2
Bank and covered bonds	0.9	–0.9	4.0
Equity / subordinated debt / funds	1.3	2.7	–2.1
Other assets / failed trades	0.0	0.0	–0.4
Real estate	0.8	–2.2	–0.1
Total	6.7	–3.5	1.8

Source: Basel Committee on Banking Supervision.

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

In per cent

Table C.43

	Group 1 banks			Of which: G-SIBs			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	8.7	8.7	8.7	10.2	9.3	9.3	6.4	4.8	5.0
Bank	5.2	24.7	36.1	6.3	26.2	39.6	8.5	25.1	30.4
Covered bonds	0.2	23.4	11.9	0.0	18.3	17.2	0.6	11.7	12.8
General corporate	37.3	92.1	91.6	38.0	94.3	95.0	24.7	89.0	86.4
Corporate SME	4.1	96.4	85.8	3.0	94.0	86.2	6.4	94.7	83.9
Specialised lending	0.6	93.5	105.2	0.3	98.7	107.4	2.0	100.3	104.3
Equity	4.9	294.7	250.6	5.8	408.3	251.6	4.5	164.2	253.5
Subordinated debt	0.5	110.4	155.7	0.7	108.4	154.3	0.2	61.9	150.1
Equity investments in funds	0.3	119.6	156.1	0.1	129.7	371.2	1.3	83.8	114.5
Retail	16.4	77.5	76.6	14.0	72.4	73.9	14.5	74.1	75.4
Real estate (total)	7.0	53.6	52.8	5.9	49.2	52.9	16.7	45.6	47.9
General residential real estate	3.5	40.7	36.8	3.3	39.8	39.0	10.5	38.1	36.8
General commercial real estate	1.3	72.8	76.1	1.1	63.8	68.9	2.6	65.9	70.1
Land acquisition	0.7	99.6	128.7	0.6	98.0	122.7	1.4	104.1	135.4
Failed trades	0.0	58.2	58.2	0.0	112.2	112.2	0.0		
Other assets	13.5	37.3	36.7	14.3	32.9	32.4	10.9	69.1	71.1
Defaulted	1.4	101.8	103.7	1.3	100.4	101.6	3.2	109.6	110.2
Total	100.0	41.4	42.1	100.0	39.1	40.2	100.0	34.8	36.8

Source: Basel Committee on Banking Supervision.

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

Group 1 banks, in per cent — Table C.44

	Europe		Americas		Rest of the world	
	Current	Final	Current	Final	Current	Final
Sovereign	7.9	8.0	9.7	9.7	9.0	9.1
Bank	16.6	21.8	34.6	32.6	27.1	41.1
Covered bonds	16.8	19.9	24.5	10.5	29.9	15.2
General corporate	93.0	94.1	96.3	90.7	91.0	90.7
Corporate SME	92.6	86.2	107.1	86.0	98.3	84.8
Specialised lending	98.8	105.1	76.6	100.1	91.4	107.2
Equity	208.0	256.4	97.7	212.4	491.3	261.1
Subordinated debt	148.3	192.1	100.0	150.0	107.8	153.2
Equity investments in funds	91.5	220.9	130.0	161.6	127.3	134.5
Retail	71.9	74.2	87.0	76.0	78.3	79.7
Real estate (total)	46.2	49.5	73.9	58.8	58.7	56.6
General residential real estate	37.1	34.2	48.9	35.4	44.8	41.9
General commercial real estate	58.8	68.8	100.0	107.8	96.8	84.7
Land acquisition	101.5	133.5	92.9	116.8	100.1	127.9
Failed trades	112.0	112.0	203.6	203.6	22.8	22.8
Other assets	65.6	65.7	51.9	51.9	31.5	30.8
Defaulted	112.5	113.5	104.1	105.4	86.2	89.6
Total	40.7	42.8	63.3	59.4	38.8	39.4

Source: Basel Committee on Banking Supervision.

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

In per cent — Table C.45

	Group 1 banks	Of which: G-SIBs	Group 2 banks
Max	20.8	20.8	1,620.5
95th percentile	17.2	18.0	42.7
75th percentile	5.4	9.2	7.9
Median	–3.1	2.6	–0.7
25th percentile	–11.6	–2.9	–7.8
5th percentile	–22.6	–20.3	–27.3
Min	–30.5	–24.6	–29.1
Weighted average	–4.6	–3.5	9.4

Source: Basel Committee on Banking Supervision.

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

In per cent — Table C.46

	Group 1 banks	Of which: G-SIBs	Group 2 banks
Banks	0.8	0.7	8.1
Corporate	–3.4	–3.3	–0.1
Corporate SME	–1.6	–1.8	–0.8
Others	0.9	1.9	1.1
Retail	0.0	–0.1	0.8
Retail res. mortgages	–1.2	–1.0	–0.6
Sovereigns	–0.1	–0.1	–0.1
Specialised lending	–0.4	–0.1	0.7
Total	–4.6	–3.5	9.4

Source: Basel Committee on Banking Supervision.

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

Group 1 banks, in per cent — Table C.47

	Europe	Americas	Rest of the world
Max	20.1	16.2	20.8
95th percentile	18.7	14.8	16.1
75th percentile	9.1	2.9	–1.5
Median	2.2	0.6	–11.7
25th percentile	–5.6	–6.3	–18.2
5th percentile	–14.8	–9.1	–27.8
Min	–20.6	–9.5	–30.5
Weighted average	2.5	–0.2	–10.8

Source: Basel Committee on Banking Supervision.

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

Group 1 banks, in per cent — Table C.48

	Europe	Americas	Rest of the world
Banks	1.7	0.4	0.4
Corporate	–0.1	–1.1	–6.5
Corporate SME	0.2	–0.4	–3.3
Others	–1.3	2.7	1.3
Retail	0.7	–0.6	–0.2
Retail res. mortgages	–0.4	–0.7	–2.0
Sovereigns	–0.1	–0.2	0.0
Specialised lending	0.8	–0.4	–1.0
Total	2.5	–0.2	–10.8

Source: Basel Committee on Banking Supervision.

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

In per cent

Table C.49

	Group 1 banks			Of which: G-SIBs			Group 2 banks		
	Contrib. to total RWA	Current	Final	Contrib. to total RWA	Current	Final	Contrib. to total RWA	Current	Final
Large and mid-market general corporates	39.3	54.9	49.8	41.5	55.7	50.2	26.3	52.6	51.2
Specialised lending	6.3	62.0	58.9	5.3	58.4	57.5	8.3	39.8	43.7
SME treated as corporate	13.7	67.8	60.6	13.9	75.7	66.8	18.6	49.1	46.6
Financial institutions treated as corporates	2.7	31.9	33.7	2.9	33.7	35.5	0.5	52.1	59.8
Sovereigns	2.3	4.5	4.3	2.8	5.1	4.9	1.3	6.5	6.2
Banks	4.3	23.7	27.5	3.7	27.9	32.0	4.0	15.3	48.5
Retail residential mortgages	11.8	19.5	17.5	11.0	21.9	19.9	18.2	11.1	10.7
Other retail	5.4	35.3	35.9	4.4	35.6	36.2	11.7	31.4	34.7
Qualifying revolving retail exposures	3.9	32.8	31.6	4.1	34.7	33.3	2.2	30.5	31.3
Equity	5.6	199.1	239.5	5.1	168.3	228.4	6.7	221.7	250.4
Equity investments in funds	0.7	151.4	144.8	0.6	137.6	153.4	0.5	293.0	464.0
Eligible purchased receivables	0.2	27.9	28.2	0.2	29.8	30.8	0.0	99.4	83.3
Failed trades and non-DVP transactions	0.0	75.2	71.1	0.1	73.8	71.1	0.0		
Other assets	4.0	66.8	64.6	4.3	73.7	74.7	1.6	87.3	86.0
Total	100.0	36.0	33.8	100.0	37.9	36.2	100.0	27.1	29.7

Source: Basel Committee on Banking Supervision.

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

Group 1 banks, in per cent — Table C.50

	Europe			Americas			Rest of the world		
	Contrib. to total RWA	Current	Final	Contrib. to total RWA	Current	Final	Contrib. to total RWA	Current	Final
Large and mid-market general corporates	38.3	48.9	49.1	33.1	48.8	43.8	42.1	61.9	53.4
Specialised lending	7.2	46.0	50.9	6.5	62.9	59.2	5.8	78.9	67.1
SME treated as corporate	9.6	47.4	48.7	7.8	57.7	57.2	19.2	79.2	66.3
Financial institutions treated as corporates	3.0	27.3	29.9	5.0	35.9	37.2	1.3	33.6	34.9
Sovereigns	2.7	5.2	5.0	5.6	7.4	7.1	0.6	1.4	1.3
Banks	5.3	20.5	29.5	3.9	24.3	26.2	3.8	26.0	28.0
Retail residential mortgages	12.8	12.9	12.4	8.7	20.3	18.7	13.0	25.5	21.8
Other retail	8.7	28.9	31.6	5.3	47.5	45.0	3.8	40.1	39.0
Qualifying revolving retail exposures	2.0	29.9	30.2	9.8	37.0	35.0	2.3	27.9	27.1
Equity	7.7	298.7	256.8	4.1	115.0	184.4	5.2	194.3	264.0
Equity investments in funds	0.1	250.1	355.4	0.9	92.5	122.0	1.0	204.4	154.9
Eligible purchased receivables	0.1	22.2	23.8	0.0	23.3	21.9	0.3	29.2	29.3
Failed trades and non-DVP transactions	0.0	9.8	9.7	0.2	82.3	79.1	0.0	164.2	109.0
Other assets	2.3	60.6	61.9	9.0	49.6	49.2	2.5	183.1	192.1
Total	100.0	28.9	29.7	100.0	33.1	32.5	100.0	43.5	38.1

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 — Table C.51

	Corporate			Sovereign			Bank			Retail[1]		
	FIRB	AIRB	All	FIRB	AIRB	All	FIRB	AIRB	All	FIRB	AIRB	All
Number of banks	18	48	66	18	48	66	18	51	69	16	48	64
Max	1.52	2.37	2.37	0.32	1.10	1.10	0.60	1.32	1.32	2.57	8.78	8.78
95th percentile	1.39	1.85	1.63	0.19	0.25	0.25	0.57	1.12	0.88	1.81	4.37	3.92
75th percentile	1.14	1.18	1.18	0.04	0.08	0.08	0.17	0.31	0.29	1.14	1.65	1.56
Median	0.83	0.86	0.85	0.01	0.03	0.02	0.13	0.17	0.16	0.76	1.13	1.07
25th percentile	0.75	0.62	0.64	0.00	0.01	0.01	0.08	0.12	0.09	0.63	0.84	0.75
5th percentile	0.48	0.30	0.39	0.00	0.01	0.00	0.07	0.06	0.06	0.45	0.47	0.44
Min	0.45	0.15	0.15	0.00	0.00	0.00	0.06	0.05	0.05	0.43	0.35	0.35
Weighted average	0.86	0.81	0.82	0.04	0.04	0.04	0.21	0.22	0.22	1.28	1.33	1.33

[1] While there is only one IRB approach for retail, the table distinguishes between banks using foundation and advanced IRB approach for their non-retail portfolios.

Source: Basel Committee on Banking Supervision.

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

Group 1 IRB banks, in per cent — Table C.52

	Corporate			Sovereign			Bank			Retail[1]		
	FIRB	AIRB	All	FIRB	AIRB	All	FIRB	AIRB	All	FIRB	AIRB	All
Number of banks	18	48	66	18	48	66	18	51	69	16	48	64
Max	43.5	46.8	46.8	45.0	50.9	50.9	45.1	65.4	65.4	51.0	73.6	73.6
95th percentile	43.5	42.9	43.5	45.0	46.0	45.1	44.1	59.6	59.1	45.1	64.7	64.1
75th percentile	42.8	38.4	41.3	45.0	35.7	44.7	40.3	43.2	41.8	40.6	37.9	39.5
Median	42.1	33.2	36.5	44.9	23.9	32.5	34.4	36.1	36.1	28.9	26.8	27.2
25th percentile	40.6	29.4	32.2	44.3	10.6	17.9	29.0	24.7	26.4	20.9	21.1	21.1
5th percentile	36.7	23.1	25.2	41.1	6.4	6.9	24.7	12.4	14.1	15.8	15.9	15.7
Min	35.6	18.1	18.1	38.3	1.6	1.6	18.5	7.9	7.9	15.1	12.6	12.6
Weighted average	41.4	33.8	34.5	43.8	28.7	29.7	33.7	31.4	31.7	21.9	34.1	33.1

[1] While there is only one IRB approach for retail, the table distinguishes between banks using foundation and advanced IRB approach for their non-retail portfolios.

Source: Basel Committee on Banking Supervision.

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

Group 1 IRB banks, in per cent — Table C.53

	Corporate			Sovereign			Bank			Retail[1]		
	FIRB	AIRB	All	FIRB	AIRB	All	FIRB	AIRB	All	FIRB	AIRB	All
Number of banks	18	48	66	18	48	66	18	51	69	16	48	64
Max	73.6	78.1	78.1	13.2	32.3	32.3	30.6	52.0	52.0	34.9	93.9	93.9
95th percentile	73.1	62.6	69.4	11.2	16.6	16.1	29.9	48.4	48.0	30.2	41.7	40.4
75th percentile	62.1	52.2	54.3	5.5	8.4	6.6	22.9	31.4	29.7	25.7	31.3	28.7
Median	55.3	45.7	46.2	2.8	3.2	3.1	22.2	22.8	22.3	17.8	20.6	20.1
25th percentile	45.5	40.6	41.8	1.9	1.6	1.7	16.0	15.8	15.8	14.7	16.0	15.8
5th percentile	40.2	25.0	28.3	1.1	0.6	0.6	13.3	6.4	6.5	13.1	12.0	12.0
Min	38.3	19.1	19.1	1.0	0.1	0.1	10.2	3.7	3.7	12.3	8.4	8.4
Weighted average	54.1	43.3	44.3	3.6	3.4	3.4	21.7	19.7	20.0	16.1	23.0	22.5

[1] While there is only one IRB approach for retail, the table distinguishes between banks using foundation and advanced IRB approach for their non-retail portfolios.

Source: Basel Committee on Banking Supervision.

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

Group 1 IRB banks, in per cent — Table C.54

	Number of banks	Average PD non-defaulted exposures	Share of defaulted exposures	Average LGD non-defaulted exposures
Retail mortgages	68	1.0	1.5	20.2
Other retail	64	2.0	2.8	40.7
Retail QRE	62	2.0	0.5	85.1

Source: Basel Committee on Banking Supervision.

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

In per cent

Table C.55

	Group 1 banks		Of which: G-SIBs		Group 2 banks	
	Current	Final	Current	Final	Current	Final
Advanced IRB	55.8	43.8	59.5	45.2	35.9	32.2
Foundation IRB	15.2	27.6	12.6	26.8	6.3	9.7
Other[1]	2.5	1.6	2.7	1.7	0.6	0.2
Standardised approach	26.2	26.8	25.2	26.3	57.0	57.6
Slotting	0.3	0.2	0.0	0.0	0.3	0.3

[1] "Other IRB" includes equity exposures, equity investments in funds, failed trades and non-DVP transactions and other assets under the IRB approach for credit risk.

Source: Basel Committee on Banking Supervision.

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

In per cent

Table C.56

	Group 1 banks		Of which: G-SIBs		Group 2 banks	
	Current	Final	Current	Final	Current	Final
Advanced IRB	39.4	28.0	41.7	28.0	25.3	21.2
Foundation IRB	23.5	33.0	24.9	35.5	7.5	12.4
Other[1]	7.4	3.1	7.5	3.6	3.2	0.8
Standardised approach	29.0	35.3	25.9	32.8	63.3	65.0
Slotting	0.8	0.5	0.1	0.1	0.6	0.6

[1] "Other IRB" includes equity exposures, equity investments in funds, failed trades and non-DVP transactions and other assets under the IRB approach for credit risk.

Source: Basel Committee on Banking Supervision.

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

In per cent

Table C.57

	Europe		Americas		Rest of the world	
	Current	Final	Current	Final	Current	Final
Advanced IRB	59.5	46.3	82.5	61.6	38.3	32.0
Foundation IRB	9.9	22.8	0.0	20.9	25.0	32.1
Other[1]	1.3	0.7	6.8	5.5	1.3	0.4
Standardised approach	29.0	29.9	10.7	12.0	34.8	35.1
Slotting	0.2	0.2	0.0	0.0	0.6	0.4

[1] "Other IRB" includes equity exposures, equity investments in funds, failed trades and non-DVP transactions and other assets under the IRB approach for credit risk.

Source: Basel Committee on Banking Supervision.

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

In per cent

Table C.58

	Europe		Americas		Rest of the world	
	Current	Final	Current	Final	Current	Final
Advanced IRB	45.7	31.7	69.8	45.2	22.4	17.5
Foundation IRB	12.1	26.3	0.1	22.7	37.9	39.5
Other[1]	6.6	1.3	11.6	8.2	5.8	2.0
Standardised approach	35.0	40.2	18.6	23.9	32.8	40.2
Slotting	0.6	0.5	0.0	0.0	1.2	0.8

[1] "Other IRB" includes equity exposures, equity investments in funds, failed trades and non-DVP transactions and other assets under the IRB approach for credit risk.

Source: Basel Committee on Banking Supervision.

Average risk weight by approach

In per cent — Table C.59

	IRBA	ERBA	IAA	SA	Total
STC securitisations					
Current framework	25.9	12.8	10.0	41.1	21.2
Final standard	27.8	15.7	16.3	35.4	23.1
Non-STC securitisations					
Current framework	18.9	15.2	11.4	34.2	24.3
Final standard	28.3	32.6	29.9	37.8	34.6

Source: Basel Committee on Banking Supervision.

Average risk weight, final standards

In per cent — Table C.60

	IRBA	ERBA	IAA	SA	Total
STC securitisations	27.8	16.2	16.3	34.2	23.0
Non STC securitisations	27.6	33.0	29.9	37.3	34.2

Source: Basel Committee on Banking Supervision.

Share of market risk MRC in total MRC

In per cent — Table C.61

	Group 1 banks	Of which: G-SIBs	Group 2 banks
Number of banks	99	29	73
Max	29.7	17.0	35.6
95th percentile	11.4	12.6	9.7
75th percentile	6.3	7.1	2.0
Median	3.7	3.9	0.7
25th percentile	1.6	2.4	0.0
5th percentile	0.0	1.2	0.0
Min	0.0	1.1	0.0
Weighted average	4.1	4.2	2.5

Source: Basel Committee on Banking Supervision.

Share of market risk MRC in total MRC

Consistent sample of banks, in per cent

Table C.62

	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	6.6	17	2.6
H2 2011	36	9.1	14	9.6	17	3.0
H1 2012	36	9.5	14	10.4	17	2.6
H2 2012	36	7.9	14	8.1	17	2.4
H1 2013	36	8.9	14	10.7	17	2.7
H2 2013	36	8.1	14	9.8	17	3.1
H1 2014	36	7.8	14	9.6	17	4.1
H2 2014	36	7.2	14	8.8	17	3.5
H1 2015	36	6.8	14	8.4	17	3.4
H2 2015	36	6.0	14	7.1	17	3.1
H1 2016	36	5.6	14	6.5	17	3.1
H2 2016	36	5.3	14	6.3	17	2.0
H1 2017	36	5.4	14	6.5	17	2.4
H2 2017	36	5.2	14	6.2	17	2.2
H1 2018	36	5.0	14	5.9	17	2.3
H2 2018	36	5.0	14	5.8	17	2.4

Source: Basel Committee on Banking Supervision.

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

Consistent sample of Group 1 banks, in per cent

Table C.63

		Standard measurement method				Internal models approach				
	Number of banks	General position risk	Specific position risk	FX and commodity risk	Unassigned	VaR and stressed VaR	Incremental risk charge	Unassigned	Correlation trading portfolios	Other and unassigned
H1 2015	100	5.9	7.5	7.5	0.7	48.8	10.5	1.6	15.1	2.3
H2 2015	100	6.5	7.0	7.6	0.8	50.9	9.4	1.7	13.1	2.9
H1 2016	100	7.0	6.8	8.6	0.8	53.2	9.5	1.4	9.7	2.9
H2 2016	100	6.3	7.0	9.1	0.6	54.1	8.7	2.1	9.3	2.8
H1 2017	100	5.0	8.5	8.1	0.7	54.3	9.4	1.5	9.6	2.9
H2 2017	100	4.7	8.7	7.0	1.8	56.1	8.9	1.7	8.4	2.6
H1 2018	100	6.9	10.0	6.3	0.6	56.9	8.0	1.5	7.1	2.7
H2 2018	100	6.2	9.1	6.8	0.7	57.9	8.0	2.0	6.9	2.3

Source: Basel Committee on Banking Supervision.

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

Consistent sample of G-SIBs, in per cent

Table C.64

		Standard measurement method				Internal models approach				
	Number of banks	General position risk	Specific position risk	FX and commodity risk	Unassigned	VaR and stressed VaR	Incremental risk charge	Unassigned	Correlation trading portfolios	Other and unassigned
H1 2015	29	3.4	6.2	3.8	0.3	52.0	10.9	2.2	18.1	3.1
H2 2015	29	3.9	5.8	4.4	0.4	53.7	9.8	2.4	15.9	3.7
H1 2016	29	3.5	5.9	4.9	0.4	57.1	9.8	2.0	12.3	4.1
H2 2016	29	3.2	6.1	5.6	0.2	58.0	8.9	2.4	11.6	3.9
H1 2017	29	2.7	7.7	3.8	0.3	58.0	9.6	2.1	11.9	4.0
H2 2017	29	2.9	7.6	3.8	1.2	59.0	9.6	2.0	10.4	3.6
H1 2018	29	3.2	8.2	4.1	0.3	60.8	8.6	1.8	8.9	3.9
H2 2018	29	3.3	7.7	4.1	0.4	62.4	8.5	2.3	8.3	3.0

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.65

		Standard measurement method				Internal models approach				
	Number of banks	General position risk	Specific position risk	FX and commodity risk	Unassigned	VaR and stressed VaR	Incremental risk charge	Unassigned	Correlation trading portfolios	Other and unassigned
H1 2015	62	35.9	17.7	19.5	7.6	16.7	2.4	0.0	0.2	0.0
H2 2015	62	32.8	19.4	10.7	20.3	14.2	2.3	0.0	0.2	0.0
H1 2016	62	32.0	21.8	12.4	20.7	11.0	1.8	0.0	0.3	0.0
H2 2016	62	21.5	20.4	15.6	18.9	22.0	1.4	0.0	0.3	0.0
H1 2017	62	18.2	21.2	15.3	18.2	25.4	1.4	0.0	0.3	0.0
H2 2017	62	20.4	23.2	11.1	22.4	20.6	1.7	0.0	0.6	0.0
H1 2018	62	23.6	20.4	8.7	25.3	19.8	1.2	0.0	1.0	0.0
H2 2018	62	22.5	20.7	6.5	22.6	25.5	0.8	0.0	1.4	0.0

Source: Basel Committee on Banking Supervision.

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

Consistent sample of Group 1 banks, in per cent

Table C.66

	Number of banks	Banks reporting since end-2011	Number of banks	Banks reporting since June 2015
H2 2011	26	198.1		
H1 2012	26	170.7		
H2 2012	26	199.7		
H1 2013	26	191.2		
H2 2013	26	203.8		
H1 2014	26	247.9		
H2 2014	26	182.9		
H1 2015	26	214.9	57	196.8
H2 2015	26	193.7	57	171.6
H1 2016	26	211.9	57	215.4
H2 2016	26	288.0	57	246.7
H1 2017	26	245.5	57	238.7
H2 2017	26	237.5	57	246.5
H1 2018	26	246.6	57	277.4
H2 2018	26	251.4	57	252.2

Source: Basel Committee on Banking Supervision.

Impact of revised minimum capital requirements for market risk

In per cent

Table C.67

	Change relative to total current market 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	372.3	372.3	262.5	32.6	20.5	24.5
95th percentile	176.0	196.4	241.2	15.5	18.1	9.4
75th percentile	79.9	87.1	98.9	3.5	6.1	0.8
Median	30.0	27.2	27.7	0.8	0.7	0.4
25th percentile	1.7	–3.6	7.9	0.1	0.0	0.1
5th percentile	–56.4	–56.6	–58.9	–1.5	–0.6	–1.1
Min	–77.9	–62.8	–75.5	–2.1	–1.3	–1.8
Weighted average	54.7	63.5	18.9	2.1	2.3	0.4

Source: Basel Committee on Banking Supervision.

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

In per cent

Table C.68

	Group 1 banks		Of which: G-SIBs		Group 2 banks	
	Number of banks	Mean	Number of banks	Mean	Number of banks	Mean
Current rules						
Standardised approach	50	43.9	23	37.5	14	83.3
Internal models approach	50	55.4	23	61.6	14	14.8
Other	50	0.7	23	0.9	14	2.0
Revised standard						
Standardised approach						
Sensitivities-based method	50	35.0	23	29.6	14	69.5
Default risk capital requirement	50	17.8	23	18.1	14	27.1
Residual risk add-on	50	2.6	23	2.4	14	1.1
Internal models approach						
Modellable risk factors	50	19.7	23	21.0	14	2.2
Non-modellable risk factors	33	12.3	23	14.3	1	0.1
Default risk capital requirement	50	12.6	23	14.6	14	0.0

Source: Basel Committee on Banking Supervision.

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

Consistent sample of Group 1 banks, in per cent — Table C.69

	Number of banks	Total June 2011=100	Basic indicator approach	Standardised approach	Alternative standardised approach	Advanced measurement approach
H1 2011	79	100.0	2.9	36.7	2.0	58.4
H2 2011	79	110.6	2.7	35.7	1.9	59.7
H1 2012	79	114.4	3.5	33.1	1.9	61.5
H2 2012	79	121.1	3.4	31.1	1.7	63.9
H1 2013	79	151.1	18.9	23.9	0.9	56.3
H2 2013	79	159.2	19.4	22.0	0.8	57.9
H1 2014	79	173.0	1.9	35.5	0.9	61.8
H2 2014	79	194.5	2.4	35.9	1.7	60.0
H1 2015	79	211.3	1.9	35.1	0.7	62.3
H2 2015	79	226.8	2.0	32.7	0.5	64.8
H1 2016	79	226.9	2.0	30.3	2.2	65.6
H2 2016	79	234.9	2.1	27.3	3.0	67.5
H1 2017	79	225.5	3.4	27.2	2.4	67.0
H2 2017	79	216.5	2.3	28.1	2.5	67.1
H1 2018	79	221.1	2.0	24.4	7.4	66.1
H2 2018	79	224.9	2.0	29.2	2.4	66.4

Source: Basel Committee on Banking Supervision.

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

Consistent sample of Group 2 banks, in per cent — Table C.70

	Number of banks	Total June 2011=100	Basic indicator approach	Standardised approach	Alternative standardised approach	Advanced measurement approach
H1 2011	30	100.0	23.1	58.6	0.1	18.2
H2 2011	30	97.9	23.7	54.6	0.1	21.6
H1 2012	30	96.7	23.8	49.2	0.1	26.9
H2 2012	30	102.6	20.8	51.5	0.2	27.5
H1 2013	30	103.6	19.9	51.6	0.1	28.4
H2 2013	30	98.1	15.4	57.9	0.2	26.5
H1 2014	30	97.2	15.7	56.4	1.0	26.8
H2 2014	30	100.1	17.0	56.4	0.2	26.4
H1 2015	30	104.5	13.8	59.6	0.2	26.3
H2 2015	30	103.7	11.9	61.1	0.2	26.7
H1 2016	30	103.7	12.1	61.7	0.5	25.7
H2 2016	30	104.3	11.8	61.8	0.3	26.0
H1 2017	30	108.2	13.4	60.8	0.6	25.2
H2 2017	30	110.5	11.3	62.1	0.5	26.1
H1 2018	30	109.1	9.7	63.6	0.2	26.5
H2 2018	30	110.1	9.6	64.4	0.6	25.4

Source: Basel Committee on Banking Supervision.

Loss evolution over the past 10 years

Exchange rates as of 31 December 2018, in billions of euros — Table C.71

	Number of banks	Net losses	Gross losses
2009	145	24.8	26.6
2010	154	38.4	40.4
2011	159	64.7	68.4
2012	161	65.3	70.4
2013	164	58.5	63.1
2014	167	72.1	77.2
2015	168	49.4	55.9
2016	168	37.5	42.9
2017	167	29.2	36.6
2018	167	29.6	35.6

Source: Basel Committee on Banking Supervision.

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

In per cent

Table C.72

	Group 1 banks	Of which: G-SIBs	Group 2 banks
Max	46.7	46.7	94.3
95th percentile	27.2	39.2	37.5
75th percentile	13.0	26.4	11.7
Median	10.2	11.2	9.1
25th percentile	7.2	9.7	6.3
5th percentile	3.9	6.0	3.6
Min	1.8	5.3	2.8
Weighted average	13.7	15.6	9.5
Number of banks	99	29	73

Source: Basel Committee on Banking Supervision.

Changes in operational risk capital requirements[1]

In per cent

Table C.73

	Group 1 banks			Of which: G-SIBs			Group 2 banks		
		Migration from…			Migration from…			Migration from…	
	Total	AMA	Other	Total	AMA	Other	Total	AMA	Other
Max	221.7	134.8	221.7	110.1	103.4	110.1	209.6	89.0	209.6
95th percentile	99.3	78.8	101.7	94.1	81.3	83.0	75.2	82.0	62.7
75th percentile	21.7	19.2	24.1	22.4	20.9	22.4	23.9	52.9	19.4
Median	–5.6	–7.3	–0.2	–0.5	3.9	–14.1	–17.6	26.0	–19.6
25th percentile	–23.8	–15.3	–28.0	–30.2	–21.9	–31.5	–37.9	5.8	–38.4
5th percentile	–39.9	–39.2	–39.4	–37.8	–40.8	–33.3	–50.6	–50.5	–47.4
Min	–46.0	–43.5	–46.0	–43.5	–43.5	–33.5	–67.3	–67.3	–55.2
Weighted average	–5.1	–6.6	–1.9	–9.2	–9.0	–9.8	17.7	39.7	12.5

[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.

Banks constrained by different parts of the framework

In per cent

Table C.74

	Group 1 banks			Of which: G-SIBs			Group 2 banks IRB			Group 2 banks pure SA		
	Number of banks	Current	Final	Number of banks	Current	Final	Number of banks	Current	Final	Number of banks	Current	Final
Risk-based capital	86	46.5	39.5	28	50.0	46.4	31	48.4	35.5	33	57.6	63.6
Output floors	86	16.3	29.1	28	25.0	28.6	31	3.2	32.3	33	9.1	0.0
Leverage ratio	86	37.2	31.4	28	25.0	25.0	31	48.4	32.3	33	33.3	36.4

Source: Basel Committee on Banking Supervision.

Banks constrained by different parts of the framework, by region

Group 1 banks, in per cent

Table C.75

	Europe			Americas			Rest of the world		
	Number of banks	Current	Final	Number of banks	Current	Final	Number of banks	Current	Final
Risk-based capital	35	40.0	25.7	16	37.5	50.0	35	57.1	48.6
Output floors	35	0.0	34.3	16	37.5	6.3	35	22.9	34.3
Leverage ratio	35	60.0	40.0	16	25.0	43.8	35	20.0	17.1

Source: Basel Committee on Banking Supervision.

Liquidity coverage ratio and net stable funding ratio

In per cent

Table C.76

	Liquidity coverage ratio			Net stable funding ratio		
	Group 1	Of which: G-SIBs	Group 2	Group 1	Of which: G-SIBs	Group 2
Max	406.2	192.6	1,497.7	149.0	144.4	269.1
95th percentile	191.6	170.5	758.4	135.3	141.9	202.0
75th percentile	147.1	149.6	231.8	122.9	125.9	133.4
Median	134.7	133.7	173.9	114.3	118.7	121.8
25th percentile	127.5	127.3	147.5	109.7	111.1	113.2
5th percentile	112.3	112.6	121.5	99.8	101.5	100.2
Min	84.6	107.7	88.8	95.2	99.9	95.2
Weighted average	136.2	134.0	177.2	116.3	117.8	120.0

Source: Basel Committee on Banking Supervision.

Liquidity coverage ratio and net stable funding ratio, by region

Group 1 banks, in per cent

Table C.77

	Liquidity coverage ratio			Net stable funding ration		
	Europe	Americas	Rest of the world	Europe	Americas	Rest of the world
Max	223.7	186.1	406.2	136.7	144.4	149.0
95th percentile	189.9	180.6	217.6	132.0	143.1	134.8
75th percentile	153.5	140.5	142.7	120.4	127.8	121.5
Median	141.4	130.3	132.4	112.5	121.9	114.8
25th percentile	133.5	116.2	124.9	104.3	107.4	111.2
5th percentile	126.5	109.1	111.0	99.1	101.3	100.8
Min	114.8	107.7	84.6	97.8	99.9	95.2
Weighted average	144.4	123.2	137.8	112.4	114.0	120.4

Source: Basel Committee on Banking Supervision.

Composition of holdings of eligible liquid assets

In per cent

Table C.78

	Group 1 banks		Of which: G-SIBS		Group 2 banks	
	Amount	Weighted amount	Amount	Weighted amount	Amount	Weighted amount
Level 1 cash and CB reserves	42.1	43.5	40.7	42.2	32.1	32.8
Level 1 securities	40.2	41.8	38.9	40.6	61.7	62.7
Level 2A	14.8	13.1	17.8	15.8	2.3	2.0
Level 2B	2.9	1.6	2.6	1.4	4.0	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.79

	Group 1 banks	Of which: G-SIBs	Group 2 banks
Total liquid assets and inflows			
Level 1 assets	10.39	7.13	0.57
Level 2A assets (post-factor)	1.60	1.36	0.01
Level 2B assets (post-factor)	0.19	0.12	0.01
Inflows (post-factor, after cap)	4.40	3.25	0.11
Total	16.59	11.86	0.70
Outflows and impact of cap			
Outflows (post-factor)	13.40	9.63	0.44
Cap	–0.08	–0.09	0.00
Total	13.32	9.54	0.44

Source: Basel Committee on Banking Supervision.

Aggregate available stable funding (ASF) by counterparty

In trillions of euros — Table C.80

	Group 1 banks		Of which: G-SIBs		Group 2 banks	
	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted
Capital	5.5	5.5	3.6	3.6	0.3	0.3
Retail and small business	20.0	18.5	12.6	11.6	1.6	1.5
Non-financial corporates	11.0	5.6	7.5	3.9	0.3	0.2
Central banks	1.7	0.7	1.1	0.4	0.2	0.2
Sovereigns/PSEs/MDBs/NDBs	2.8	1.6	1.8	1.0	0.2	0.1
Financials (other legal entities)	15.6	5.7	9.5	3.2	1.2	0.8
Other liabilities	6.2	0.5	4.1	0.1	0.5	0.0
Total	62.7	38.0	40.2	23.8	4.3	3.1

Source: Basel Committee on Banking Supervision.

Aggregate required stable funding (RSF) by category

In trillions of euros

Table C.81

	Group 1 banks		Of which: G-SIBs		Group 2 banks	
	Unweighted	Weighted	Unweighted	Weighted	Unweighted	Weighted
Cash and central banks reserves	6.9	0.0	4.9	0.0	0.3	0.0
Loans to financial institutions	7.6	2.3	5.3	1.5	0.3	0.2
HQLA	9.5	1.5	6.5	1.1	0.6	0.1
All residential mortgages	6.6	4.7	3.0	2.2	0.9	0.7
Loans, < 1 year	7.6	3.7	4.8	2.3	0.4	0.2
Other loans, > 1 year, risk weight < 35%	1.1	0.8	0.5	0.4	0.3	0.2
Loans, risk weights > 35%	14.8	12.5	9.4	8.0	0.8	0.7
Derivative	2.6	0.8	2.0	0.6	0.1	0.0
All other assets	8.0	6.7	5.2	4.3	0.6	0.5
Off-balance sheet		0.5		0.3		0.0
Total	64.7	33.4	41.7	20.7	4.4	2.7

Source: Basel Committee on Banking Supervision.

LCR and related shortfalls at 100% minimum requirement

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

Table C.82

	Group 1 banks		Of which: G-SIBs		Group 2 banks	
	Ratio (%)	Shortfall (€ bn)	Ratio (%)	Shortfall (€ bn)	Ratio (%)	Shortfall (€ bn)
H2 2012	122.8	327.8	127.0	167.9	147.1	2.3
H1 2013	120.4	280.4	124.8	101.8	149.5	3.3
H2 2013	122.6	210.7	127.3	45.0	145.9	7.1
H1 2014	126.5	161.5	129.6	0.0	157.8	0.8
H2 2014	127.8	50.8	127.0	0.0	148.8	2.0
H1 2015	125.9	3.9	123.4	0.0	144.9	0.9
H2 2015	127.2	17.0	122.6	0.0	158.1	0.0
H1 2016	128.8	2.6	125.7	0.0	157.3	0.7
H2 2016	132.2	3.2	128.0	0.0	148.9	1.4
H1 2017	134.5	0.1	130.6	0.0	162.5	0.1
H2 2017	134.8	0.0	130.0	0.0	165.0	0.0
H1 2018	135.6	0.0	131.5	0.0	166.2	0.0
H2 2018	136.2	0.0	132.5	0.0	165.5	0.1

Source: Basel Committee on Banking Supervision.

NSFR and related shortfalls at 100% minimum requirement

Consistent sample of banks, exchange rates as at the reporting dates — Table C.83

	Group 1 banks		Of which: G-SIBs		Group 2 banks	
	Ratio (%)	Shortfall (€ bn)	Ratio (%)	Shortfall (€ bn)	Ratio (%)	Shortfall (€ bn)
H2 2012	99.9	1,571.6	101.5	966.3	103.4	66.5
H1 2013	100.1	1,525.6	102.3	912.5	104.9	58.0
H2 2013	112.0	567.2	114.7	357.4	114.1	10.2
H1 2014	111.4	431.5	114.2	251.3	113.4	16.1
H2 2014	111.5	405.6	113.9	217.1	113.4	22.6
H1 2015	111.7	311.5	114.2	174.0	114.7	13.2
H2 2015	113.8	169.5	116.3	74.6	116.2	2.7
H1 2016	113.9	96.1	116.2	27.3	116.0	5.3
H2 2016	115.3	25.2	117.0	0.0	115.7	15.2
H1 2017	116.6	15.0	119.1	0.0	117.6	2.5
H2 2017	115.7	2.7	117.2	0.0	119.1	0.8
H1 2018	115.5	28.9	116.6	28.9	119.6	0.8
H2 2018	116.0	3.7	117.1	0.8	120.2	0.1

Source: Basel Committee on Banking Supervision.

LCR and NSFR, by region

Consistent sample of Group 1 banks, in per cent — Table C.84

	Europe				Americas				Rest of the world			
	Num. of banks	LCR	Num. of banks	NSFR	Num. of banks	LCR	Num. of banks	NSFR	Num. of banks	LCR	Num. of banks	NSFR
H2 2012	23	111.2	30	95.5	14	110.2	15	89.2	32	137.9	40	111.0
H1 2013	23	105.1	30	96.6	14	114.9	15	89.7	32	132.9	40	109.0
H2 2013	23	106.7	30	101.1	14	117.4	15	101.8	32	135.3	40	130.6
H1 2014	23	117.8	30	102.0	14	123.6	15	102.8	32	132.7	40	126.1
H2 2014	23	125.8	30	101.7	14	126.3	15	110.9	32	129.6	40	121.7
H1 2015	23	127.3	30	103.8	14	118.5	15	109.9	32	129.4	40	120.1
H2 2015	23	132.0	30	106.1	14	121.8	15	111.6	32	127.9	40	122.1
H1 2016	23	133.7	30	106.9	14	126.0	15	108.9	32	127.9	40	122.5
H2 2016	23	133.4	30	109.3	14	123.0	15	109.5	32	136.2	40	123.2
H1 2017	23	137.6	30	111.6	14	129.6	15	109.5	32	135.5	40	124.0
H2 2017	23	139.5	30	111.9	14	125.9	15	109.4	32	137.1	40	121.5
H1 2018	23	139.4	30	111.4	14	123.6	15	108.3	32	139.6	40	121.9
H2 2018	23	143.4	30	112.4	14	124.1	15	110.7	32	138.9	40	121.0

Source: Basel Committee on Banking Supervision.

Share of banks meeting the LCR and NSFR requirements

Consistent sample of banks,[1] in per cent — Table C.85

	Group 1 banks			Of-which: G-SIBs			Group 2 banks		
	LCR	NSFR	Both	LCR	NSFR	Both	LCR	NSFR	Both
H2 2012	75.4	43.5	67.7	81.0	44.0	65.0	73.9	60.0	68.2
H1 2013	79.7	41.2	64.6	85.7	48.0	60.0	91.3	70.0	77.3
H2 2013	81.2	71.8	76.9	85.7	56.0	65.0	87.0	92.5	90.9
H1 2014	88.4	76.5	81.5	100.0	68.0	70.0	91.3	90.0	95.5
H2 2014	91.3	78.8	80.0	100.0	80.0	90.0	91.3	87.5	86.4
H1 2015	95.7	81.2	87.7	100.0	88.0	95.0	91.3	90.0	90.9
H2 2015	91.3	81.2	83.1	100.0	88.0	95.0	95.7	95.0	90.9
H1 2016	95.7	83.5	87.7	100.0	88.0	95.0	95.7	92.5	86.4
H2 2016	94.2	95.3	92.3	100.0	100.0	100.0	95.7	90.0	81.8
H1 2017	98.6	92.9	93.8	100.0	100.0	100.0	95.7	95.0	86.4
H2 2017	100.0	98.8	100.0	100.0	100.0	100.0	100.0	97.5	95.5
H1 2018	100.0	98.8	100.0	100.0	96.0	100.0	100.0	97.5	95.5
H2 2018	100.0	95.3	96.9	100.0	96.0	95.0	95.7	97.5	90.9

[1] Samples for LCR and NSFR may differ. In particular, the bank showing an NSFR shortfall at the end-June 2018 reporting date is not included in the consistent LCR and combined time series.

Source: Basel Committee on Banking Supervision.

LCR and change HQLA plus inflows and outflows

Consistent sample of banks, exchange rates as of 31 December 2018, in per cent — Table C.86

	Group 1 banks				Of-which: G-SIBs				Group 2 banks			
			Change				Change				Change	
	Num. of banks	LCR	HQLA	Net outflows	Num. of banks	LCR	HQLA	Net outflows	Num. of banks	LCR	HQLA	Net outflows
H2 2012	69	122.8			21	127.0			23	147.1		
H1 2013	69	120.4	2.1	4.1	21	124.8	2.6	4.4	23	149.5	0.5	–1.1
H2 2013	69	122.6	4.3	2.4	21	127.3	4.5	2.4	23	145.9	–4.2	–1.9
H1 2014	69	126.5	6.5	3.2	21	129.6	7.8	5.9	23	157.8	11.3	2.9
H2 2014	69	127.8	5.0	4.0	21	127.0	3.1	5.2	23	148.8	–8.7	–3.2
H1 2015	69	125.9	5.2	6.7	21	123.4	3.1	6.1	23	144.9	1.0	3.7
H2 2015	69	127.2	2.2	1.2	21	122.6	0.4	1.1	23	158.1	8.7	–0.3
H1 2016	69	128.8	3.1	1.9	21	125.7	3.3	0.7	23	157.3	5.4	5.9
H2 2016	69	132.2	3.3	0.6	21	128.0	1.6	–0.2	23	148.9	–4.8	0.5
H1 2017	69	134.5	4.7	2.8	21	130.6	5.3	3.2	23	162.5	16.3	6.6
H2 2017	69	134.8	0.5	0.4	21	130.0	0.9	1.4	23	165.0	1.8	0.2
H1 2018	69	135.6	4.0	3.3	21	131.5	3.6	2.4	23	166.2	4.0	3.3
H2 2018	69	136.2	–0.1	–0.6	21	132.5	0.0	–0.8	23	165.5	–3.6	–3.1

Source: Basel Committee on Banking Supervision.

LCR and change HQLA plus inflows and outflows, by region

Consistent sample of banks, exchange rates as of 31 December 2018, in per cent — Table C.87

	Europe				Americas				Rest of the world			
			Change				Change				Change	
	Num. of banks	LCR	HQLA	Net outflows	Num. of banks	LCR	HQLA	Net outflows	Num. of banks	LCR	HQLA	Net outflows
H2 2012	23	111.2			14	110.2			32	137.9		
H1 2013	23	105.1	–4.9	0.7	14	114.9	7.5	3.2	32	132.9	3.0	6.9
H2 2013	23	106.7	1.5	–0.1	14	117.4	8.9	6.5	32	135.3	3.3	1.5
H1 2014	23	117.8	4.1	–5.8	14	123.6	8.5	3.1	32	132.7	6.4	8.5
H2 2014	23	125.8	4.3	–2.4	14	126.3	6.7	4.5	32	129.6	4.5	6.9
H1 2015	23	127.3	7.3	6.0	14	118.5	–4.0	2.3	32	129.4	9.4	9.6
H2 2015	23	132.0	4.9	1.2	14	121.8	–0.3	–3.0	32	127.9	2.3	3.5
H1 2016	23	133.7	1.7	0.4	14	126.0	0.2	–3.1	32	127.9	5.2	5.1
H2 2016	23	133.4	5.1	5.3	14	123.0	1.6	4.1	32	136.2	3.3	–3.0
H1 2017	23	137.6	4.4	1.3	14	129.6	3.2	–2.0	32	135.5	5.5	6.1
H2 2017	23	139.5	1.0	–0.4	14	125.9	0.3	3.2	32	137.1	0.4	–0.7
H1 2018	23	139.4	2.7	2.7	14	123.6	–1.0	0.8	32	139.6	6.8	4.9
H2 2018	23	143.4	1.6	–1.2	14	124.1	1.9	1.5	32	138.9	–1.7	–1.2

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 2018, in trillions of euros Table C.88

	Group 1 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	8.57	7.36	6.20	5.18	0.26	0.19
H1 2013	8.95	7.82	6.45	5.47	0.26	0.19
H2 2013	9.25	7.96	6.72	5.62	0.25	0.18
H1 2014	10.05	8.49	7.33	6.06	0.27	0.19
H2 2014	10.31	8.61	7.49	6.27	0.25	0.18
H1 2015	10.71	9.02	7.67	6.55	0.25	0.19
H2 2015	10.74	8.95	7.57	6.48	0.27	0.19
H1 2016	11.50	9.57	8.17	6.92	0.29	0.20
H2 2016	11.68	9.51	8.24	6.89	0.29	0.22
H1 2017	12.75	10.27	9.07	7.47	0.32	0.22
H2 2017	12.69	10.25	9.04	7.52	0.32	0.21
H1 2018	13.43	10.87	9.57	7.94	0.34	0.22
H2 2018	13.35	10.75	9.52	7.85	0.32	0.21

[1] Group 1 includes 68 banks, G-SIBs include 21 banks and Group 2 includes 23 banks.

Source: Basel Committee on Banking Supervision.

Evolution of the LCR and its drivers

Consistent sample of Group 1 banks, in per cent Table C.89

	LCR 2012	HQLA	Net outflows
H2 2012	125.9	0.0	
H1 2013	125.9	0.5	–3.2
H2 2013	125.9	7.7	–7.2
H1 2014	125.9	11.2	–7.2
H2 2014	125.9	13.9	–10.8
H1 2015	125.9	16.1	–16.1
H2 2015	125.9	19.5	–18.4
H1 2016	125.9	17.4	–14.6
H2 2016	125.9	22.2	–16.2
H1 2017	125.9	25.8	–16.7
H2 2017	125.9	25.1	–16.1
H1 2018	125.9	27.3	–17.5
H2 2018	125.9	25.1	–15.2

Source: Basel Committee on Banking Supervision.

NSFR and change in ASF and RSF

Consistent sample of banks, exchange rates as of 30 June 2018, in per cent

Table C.90

	Group 1 banks				Of which: G-SIBs				Group 2 banks			
			Change				Change				Change	
	Num. of banks	NSFR	ASF	RSF	Num. of banks	NSFR	ASF	RSF	Num. of banks	NSFR	ASF	RSF
H2 2012	85	99.9			25	101.5			40	103.4		
H1 2013	85	100.1	2.7	2.5	25	102.3	3.0	2.2	40	104.9	–1.7	–3.1
H2 2013	85	112.0	14.8	2.6	25	114.7	15.9	3.4	40	114.1	9.3	0.4
H1 2014	85	111.4	2.9	3.5	25	114.2	3.2	3.6	40	113.4	–0.5	0.1
H2 2014	85	111.5	1.5	1.5	25	113.9	1.3	1.5	40	113.4	–5.7	–5.7
H1 2015	85	111.7	4.1	3.9	25	114.2	4.9	4.7	40	114.7	6.2	5.0
H2 2015	85	113.8	1.9	0.0	25	116.3	1.7	0.0	40	116.2	0.5	–0.8
H1 2016	85	113.9	1.8	1.7	25	116.2	1.9	1.9	40	116.0	0.7	0.9
H2 2016	85	115.3	2.6	1.3	25	117.0	2.1	1.4	40	115.7	–0.9	–0.7
H1 2017	85	116.6	3.2	2.0	25	119.1	3.8	2.0	40	117.6	4.6	2.9
H2 2017	85	115.7	1.1	1.9	25	117.2	1.1	2.7	40	119.1	0.2	–1.0
H1 2018	85	115.5	2.7	2.9	25	116.6	2.7	3.2	40	119.6	1.8	1.4
H2 2018	85	116.0	1.6	1.2	25	117.1	1.6	1.1	40	120.2	0.6	0.1

Source: Basel Committee on Banking Supervision.

NSFR and change in ASF and RSF, by region

Consistent sample of Group 1 banks, exchange rates as of 30 June 2018, in per cent — Table C.91

	Europe				Americas				Rest of the world			
			Change				Change				Change	
	Num. of banks	NSFR	ASF	RSF	Num. of banks	NSFR	ASF	RSF	Num. of banks	NSFR	ASF	RSF
H2 2012	30	95.5			15	89.2			40	111.0		
H1 2013	30	96.6	–0.9	–2.1	15	89.7	0.5	–0.1	40	109.0	7.2	9.2
H2 2013	30	101.1	9.9	5.1	15	101.8	26.1	11.2	40	130.6	14.8	–4.2
H1 2014	30	102.0	0.7	–0.2	15	102.8	2.4	1.4	40	126.1	5.1	8.9
H2 2014	30	101.7	–0.2	0.1	15	110.9	2.4	–5.1	40	121.7	2.7	6.4
H1 2015	30	103.8	4.2	2.0	15	109.9	2.0	2.9	40	120.1	5.0	6.3
H2 2015	30	106.1	0.3	–1.8	15	111.6	2.1	0.5	40	122.1	3.0	1.4
H1 2016	30	106.9	0.3	–0.4	15	108.9	1.3	3.9	40	122.5	3.1	2.7
H2 2016	30	109.3	1.5	–0.7	15	109.5	2.6	2.0	40	123.2	3.4	2.8
H1 2017	30	111.6	1.7	–0.4	15	109.5	2.0	2.0	40	124.0	4.9	4.1
H2 2017	30	111.9	0.9	0.6	15	109.4	1.3	1.3	40	121.5	1.2	3.3
H1 2018	30	111.4	1.7	2.2	15	108.3	1.7	2.8	40	121.9	3.9	3.5
H2 2018	30	112.4	0.6	–0.3	15	110.7	2.4	0.2	40	121.0	2.0	2.8

Source: Basel Committee on Banking Supervision.

Contribution to current CCR capital requirements by approach to EAD calculation

All banks, in per cent — Table C.92

	Group 1 banks	Of which: G-SIBs	Group 2 banks
Internal models method	45.5	50.6	
Other internal models	1.9	2.4	0.2
Standardised approach	52.6	47.0	99.8

Source: Basel Committee on Banking Supervision.

Impact of revised CCR capital requirements compared to current rules

In per cent

Table C.93

	Relative to current CCR MRC			Relative to current overall MRC		
	Group 1	Of which: G-SIBs	Group 2	Group 1	Of which: G-SIBs	Group 2
Max	345.3	162.0	184.8	6.1	5.1	3.1
95th percentile	148.6	136.7	111.3	2.8	3.8	1.6
75th percentile	50.1	53.5	33.1	1.2	1.6	0.3
Median	25.0	20.5	19.6	0.4	0.7	0.1
25th percentile	2.2	1.8	–0.9	0.1	0.0	0.0
5th percentile	–33.2	–13.8	–72.8	–1.3	–0.9	–1.8
Min	–84.1	–24.9	–76.1	–4.2	–1.6	–2.7
Weighted average	26.5	27.3	3.5	0.7	0.8	0.1
Number of banks	66	22	32	65	22	31

Source: Basel Committee on Banking Supervision.

Impact of revised CVA requirements compared to current rules

In per cent

Table C.94

	Relative to current CVA MRC			Relative to current overall MRC		
	Group 1	Of which: G-SIBs	Group 2	Group 1	Of which: G-SIBs	Group 2
Max	3,676.4	652.6	2,163.5	0.9	0.9	0.6
95th percentile	643.7	572.4	1,560.8	0.6	0.8	0.6
75th percentile	139.9	134.2	245.9	0.2	0.3	0.2
Median	74.9	54.6	132.8	0.1	0.1	0.1
25th percentile	29.3	25.8	64.8	0.0	0.0	0.0
5th percentile	–49.1	–50.0	–21.9	–0.2	–0.2	–0.1
Min	–67.0	–54.5	–40.4	–0.6	–0.2	–0.2
Weighted average	63.9	55.7	122.3	0.1	0.1	0.1
Number of banks	51	19	26	50	19	25

Source: Basel Committee on Banking Supervision.

Impact of revised CVA requirements compared to current rules, by region

Group 1 banks, in per cent

Table C.95

	Relative to current CVA MRC			Relative to current overall MRC		
	Europe	Americas	Rest of the world	Europe	Americas	Rest of the world
Max	1,308.1	652.6	3,676.4	0.6	0.9	0.4
95th percentile	931.8	652.6	1,435.0	0.6	0.9	0.3
75th percentile	121.6	149.3	104.6	0.3	0.3	0.1
Median	90.0	108.4	54.5	0.2	0.1	0.0
25th percentile	54.3	35.9	0.0	0.1	0.0	0.0
5th percentile	–4.4	–49.4	–58.2	–0.1	–0.1	–0.3
Min	–26.7	–49.4	–67.0	–0.2	–0.1	–0.6
Weighted average	83.1	111.3	4.7	0.2	0.2	0.0
Number of banks	17	10	24	17	10	23

Source: Basel Committee on Banking Supervision.

Previous monitoring reports published by the Basel Committee

December 2010	*Results of the comprehensive quantitative impact study*, December 2010, www.bis.org/publ/bcbs186.htm	
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*, www.bis.org/bcbs/publ/d426.htm	
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
October 2018	*Basel III monitoring report*, www.bis.org/bcbs/publ/d449.htm	
March 2019	*Basel III monitoring report,* www.bis.org/bcbs/publ/d461.htm	