Basel Committee on Banking Supervision



Basel III Monitoring Report

September 2017



BANK FOR INTERNATIONAL SETTLEMENTS

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ISBN 978-92-9197-634-8 (online)

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High	lights of the Basel III monitoring exercise as of 31 December 2016	1
Deta	iled results of the Basel III monitoring exercise as of 31 December 2016	11
1.	General remarks	11
	1.1 Scope of the monitoring exercise	11
	1.2 Sample of participating banks	12
	1.3 Methodology	13
	1.4 Data quality	13
	1.5 Interpretation of results	14
2.	Regulatory capital, capital requirements, capital shortfalls and TLAC	14
	2.1 Capital ratios	15
	2.2 Capital shortfalls	21
	2.3 Level of capital	23
	2.4 Composition of capital	27
	2.5 Regulatory adjustments	28
	2.6 Components and determinants of capital requirements	28
	2.7 Leverage ratio	37
	2.8 Interaction of risk-based and leverage ratio requirements	42
	2.9 Total loss-absorbing capacity requirements for G-SIBs	43
3.	Liquidity	44
	3.1 Liquidity Coverage Ratio	44
	3.2 Net Stable Funding Ratio	48
	3.3 Liquidity Coverage Ratio and Net Stable Funding Ratio shortfalls over time	51

Special features

Impact of the revised minimum capital requirements for market risk	57
Impact of the revised securitisation framework	59

Annexes

Annex A: Basel III phase-in arrangements	65
Annex B: Sample statistics and additional results	67
Annex C: Statistical Annex	71
Previous monitoring reports published by the Basel Committee	

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 5 July 2017.

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Highlights of the Basel III monitoring exercise as of 31 December 2016

All banks in the sample meet Basel III minimum and target CET1 capital requirements as agreed up to end-2015

All G-SIBs meet both fully phased-in liquidity minimum requirements

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. This report is the 12th publication of results from the periodic Basel III monitoring exercise¹ and summarises the aggregate results using data as of 31 December 2016. The Committee believes that the information contained in the report will provide relevant stakeholders with a useful benchmark for analysis.

The report includes special features on the results on the impact of the revised minimum capital requirements for market risk and the final standards on securitisation including the simple, transparent and comparable transactions.

Information considered for this report was obtained by voluntary and confidential data submissions from individual banks and their national supervisors. Data were provided for a total of 200 banks, including 105 large internationally active ("Group 1") banks and 95 other ("Group 2") banks.² Members' coverage of their banking sector is very high for Group 1 banks, reaching 100% coverage for some countries, while coverage is lower for Group 2 banks and varies by country.

In general, this report does not take into account any transitional arrangements such as phasein of deductions and grandfathering arrangements. Rather, the estimates presented generally assume full implementation of the Basel III requirements as agreed up to end-2015 based on data as of 31 December 2016. The main part of this report does not reflect any standards agreed since the beginning of 2016, such as the revisions to the market risk framework which are presented separately in a special feature. No assumptions have been made about banks' profitability or behavioural responses, such as changes in bank capital or balance sheet composition, either since this date or in the future. Furthermore, the report does not reflect any additional capital requirements under Pillar 2 of the Basel II framework, any higher loss absorbency requirements for domestic systemically important banks, nor does it reflect any countercyclical capital buffer requirements.

¹ A list of previous publications is included in the Annex.

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

Overview of results

		30 June 2016		31 December 2016		
	Group 1	Of which: G-SIBs	Group 2	Group 1	Of which: G-SIBs	Group 2
CET1 ratio (%)	11.9	11.8	13.4	12.3	12.3	13.4
Target capital shortfalls (€ bn); of which:	4.8	0.9	7.9	0.3	0.0	4.4
CET1	0.0	0.0	0.0	0.0	0.0	0.0
Additional Tier 1	1.4	0.0	3.9	0.0	0.0	3.1
Tier 2	3.4	0.9	4.0	0.3	0.0	1.2
TLAC shortfall 2022 minimum (€ bn)	318.2	318.2		116.4	116.4	
Leverage ratio (%)	5.6	5.6	5.6	5.8	5.8	5.5
LCR (%)	126.4	125.6	157.5	131.4	128.6	159.3
NSFR (%)	114.0	116.4	114.9	115.8	117.3	114.1

All data provided on a fully phased-in basis. See Section 1.1 for details on the scope of the exercise and Table A.2 for the target level capital requirements.

Source: Basel Committee on Banking Supervision.

- Compared with the previous reporting period (June 2016) the average Common Equity Tier 1 (CET1) capital ratio under the fully phased-in Basel III framework has increased from 11.9% to 12.3% for Group 1 banks while is stable for Group 2 banks.
- All Group 1 banks would meet the CET1 minimum capital requirement of 4.5% and the CET1 target level of 7.0% (ie including the capital conservation buffer). This target also includes the G-SIB surcharge where applicable.
- There is no CET1 capital shortfall for Group 2 banks both at the minimum and target levels.
- Applying the 2022 minimum requirements, 12 of the 25 G-SIBs reporting total loss-absorbing capacity (TLAC) data have a combined shortfall of €116.4 billion, compared with €318.2 billion at the end of June 2016.
- Group 1 banks' average Liquidity Coverage Ratio (LCR) improved by 5.0 percentage points to 131.4%, while the average Net Stable Funding Ratio (NSFR) increased from 114.0% to 115.8%. For Group 2 banks, the LCR and NSFR are more stable.

Table 1

Fully phased-in Basel III capital ratios continue to increase

Consistent sample of Group 1 banks



¹ The solid lines depict the relevant minimums, the dotted lines the minimums plus the capital conservation buffer. See Table A.2 for the relevant levels. ² 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.

- CET1 capital ratios for Group 1 banks have increased by 5.1 percentage points from 7.2% to 12.3% since June 2011, total capital ratios have increased by 6.6 percentage points from 8.7% to 15.3%.
- Tier 1 capital ratios improved from 7.4% to 13.5%, mainly driven by increases in capital which more than offset a slight overall increase in risk-weighted assets (RWA).
- In 2011 Tier 1 capital ratios were more than two percentage points lower in Europe and the Americas compared with the rest of the world. However, this relationship has reversed in the meantime. The reasons are twofold. First, the increase in capital since June 2011 was lower in Europe as compared to the other regions. Second, RWA fell for European Group 1 banks while RWA increased for banks in the Americas and, in particular, the rest of the world.

Graph 1

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

Consistent sample of Group 1 banks Graph 2 Per cent 100 80 60 40 20 0 2012 2015 2016 2011 2013 2014 Other Corporate Sovereign Partial use Related entities Market risk Securitisation Bank Retail CVA Operational risk

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.21 for underlying data and sample size.

- As of end-December 2016, credit risk continues to compose the dominant portion of overall MRC, with this category on average comprising 65.4% of total MRC for Group 1 banks. However, the share of credit risk has declined significantly from 74.6% at the end of June 2011.
- Conversely, the share of operational risk MRC which increased from 7.8% at the end of June 2011 to 16.4% at end-2016.
- Among the credit risk asset classes, the share of MRC for corporate exposures increased from 31.0% to 36.5% while the share of MRC for securitisation exposures declined from 7.2% to 1.7%.



Fully phased-in Basel III leverage ratios continue to increase

• The average fully phased-in Basel III Tier 1 leverage ratios are 5.8% for Group 1 banks and G-SIBs and 5.5% for Group 2 banks.

- Basel III leverage ratios have increased by 2.3 percentage points since June 2011 for Group 1 banks, driven by Tier 1 capital increases which more than offset an overall increase in the exposure measure.
- Three out of 87 Group 2 banks with an aggregate shortfall of €2.0 billion would not meet a fully phased-in minimum Basel III Tier 1 leverage ratio of 3%, while all Group 1 banks meet the requirement.
- Leverage ratios are lower in Europe as compared to the Americas and the rest of the world, although the gap has narrowed slightly over time.



Fully phased-in regulatory capital increased by 75.9% since 2011

Consistent sample of Group 1 banks, exchange rates as of 31 December 2016

Table C.16 and Table C.18 provide an additional regional breakdown for Group 1 banks.

From June 2011 to end-December 2016, the level of Group 1 banks' CET1 capital has increased

Source: Basel Committee on Banking Supervision. See Table C.11, Table C.15 and Table C.17 for underlying data and sample size. Table C.12,

- by 75.9% from €2,125 billion to €3,738 billion. While CET1 capital has more than doubled in both the Americas and the rest of the world, the
- increase in Europe was more limited at 56.8%.
- The rise in overall CET1 capital among Group 1 banks appears largely due to profits generated, with particularly large profits shown by banks in the United States and China (combined accounting for more than 50% of all profits reported in Group 1).
- Group 1 banks' profits after tax have increase to around €200 billion per half year since the second half of 2014. Dividend payout ratios for Group 1 banks are typically around one third.

Since 2011, European banks raised 60% of the CET1 capital raised by the Group 1 bank sample but only generated 20% of the profits after tax



Consistent sample of Group 1 banks, exchange rates as of 31 December 2016

Graph 5

The dividend payout ratio is calculated as common share dividends divided by profits after tax, both for a full calendar year to improve comparability across countries with different dividend payment patterns.

Source: Basel Committee on Banking Supervision. See Table C.16 and Table C.18 for underlying data and sample size.

- Since 2011, annual profits after tax have always been higher in the Americas and the rest of the world than in Europe.
- Overall, around 20% of the profits have been generated by Group 1 banks in Europe, more than 30% in the Americas and almost half in the rest of the world.
- Conversely, almost 60% of the CET1 capital raised has been raised by Group 1 banks in Europe.

All G-SIBs and around 90% of Group 1 and Group 2 banks meet fully phased-in liquidity coverage ratio and net stable funding ratio¹



¹ The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the thin vertical lines show the range of the entire sample. ² The sample is capped at 400%, meaning that all banks with an LCR above 400% were set to 400%. The dots represent weighted averages. The horizontal lines represent the 70% minimum (2016, blue dashed line), the 80% minimum (2017, red dashed line) and the 100% minimum (2019, red solid line).

Source: Basel Committee on Banking Supervision. See Table C.42 for underlying data and sample size.

- The average LCR for Group 1 banks is 131.4% and for Group 2 banks 159.3% while at the end-of June 2016, it was 126.4% and 157.5%, respectively.
- The average NSFR is 115.8% for Group 1 banks and 114.1% for Group 2 banks at end-December 2016 compared to 114.0% and 114.9% respectively, at end-June 2016.
- Some 90.7% of Group 1 banks and 95.9% of Group 2 banks in the sample already meet or exceed the final LCR minimum requirement of 100%. All Group 1 and Group 2 banks have LCRs that are at or above the 70% minimum requirement applicable since January 2016.
- Some 94.2% of Group 1 banks and 88.0% of Group 2 banks meet or exceed the 100% minimum NSFR requirement, with all Group 1 banks and 96.4% of Group 2 banks at an NSFR of 90% or higher as of end-December 2016.

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



Consistent sample of Group 1 banks,¹ exchange rates as at the reporting dates

Graph 7

¹ As described in Section 3.2, the NSFR time series depicts data reflecting NSFR standard released in December 2010, January 2014 and October 2015.

Source: Basel Committee on Banking Supervision. See Table C.48, Table C.51 and Table C.54 for underlying data and sample size. Table C.49, Table C.52 and Table C.55 provide additional regional breakdowns for Group 1 banks.

- For a consistent sample of Group 1 banks, the aggregate LCR shortfall at a minimum requirement of 100% declined from €430.6 billion at end-December 2012 to €13.2 billion at end-December 2016.
- The aggregate NSFR shortfall was €29.5 billion for Group 1 banks and €20.8 billion for Group 2 banks at the end-December 2016 compared to €108.6 billion and €8.6 billion at end-June 2016.

LCRs by region gradually converge, NSFR remains lower in Europe and the Americas



¹ As described in the Section 3.2, the NSFR time series depicts data reflecting NSFR standard released in December 2010, January 2014 and October 2015.

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

- The weighted average LCR at end-December 2016 for Group 1 banks is in excess of 120% for each of the three regions.
- While Group 1 banks in Europe and the Americas had initially lower average LCRs compared with the rest of the world, the average LCRs in Europe and the rest of the world and, to a lesser degree, the Americas have tended to gradually converge. The regions with lower end-2012 average ratios saw important increases in particular between end-2012 and June 2014.
- The weighted average NSFR at end-December 2016 for Group 1 banks in each of the three regions is well in excess of 100%.
- The average NSFR for Group 1 banks in Europe and the Americas at around 110% at end-2016 is lower than in the rest of the world at 122.8%. NSFRs have improved in all three regions over the past four years, in particular in the Americas.

Detailed results of the Basel III monitoring exercise as of 31 December 2016

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. Subsequent to the initial comprehensive quantitative impact study published in December 2010, the Committee continues to monitor and evaluate the impact of these capital, leverage and liquidity requirements (collectively referred to as "Basel III") on a semiannual basis.² This report summarises the results of the latest Basel III monitoring exercise using 31 December 2016 data.³

The report does not reflect any standards agreed since the beginning of 2016, such as the revisions to the market risk framework which are analysed separately in a special feature.

1.1 Scope of the monitoring exercise

All but one of the 27 Committee member countries participated in the Basel III monitoring exercise as of 31 December 2016. 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 in February and revised in March 2017.⁴ The questionnaire covered components of eligible capital, the calculation of risk-weighted assets (RWA), the calculation of a leverage ratio and components of the liquidity metrics. The final data were submitted to the Secretariat of the Committee by 5 July 2017.

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

- ² A list of previous publications is included in the Annex.
- ³ The data for Japan are as of the end of September 2016, 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 2016, which corresponds to Canadian banks' fiscal fourth quarter-end.
- ⁴ See Basel Committee on Banking Supervision, *Instructions for Basel III implementation monitoring*, March 2017, <u>www.bis.org/</u> <u>bcbs/qis/</u>.

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

- Revisions to the Basel II market risk framework⁵ and Guidelines for computing capital for incremental risk in the trading book;⁶
- *Enhancements to the Basel II framework*⁷ which include the revised risk weights for rescuritisations held in the banking book;
- Basel III: A global framework for more resilient banks and the banking system as well as the Committee's 13 January 2011 press release on loss absorbency at the point of non-viability;⁸
- Capital requirements for bank exposures to central counterparties;⁹
- Global systemically important banks: updated assessment methodology and the additional loss absorbency requirement as well as the updated list of G-SIBs published by the Financial Stability Board in November 2016;¹⁰
- Total Loss-Absorbing Capacity (TLAC): Principles and Term Sheet;¹¹
- Basel III: the Liquidity Coverage Ratio and liquidity risk monitoring tools;¹²
- Basel III: the net stable funding ratio;¹³ and
- Basel III leverage ratio framework and disclosure requirements.¹⁴

The report reflects the impact of TLAC *holdings* on Group 1 and Group 2 banks' eligible capital and RWA of the revised regulatory capital treatment for securitisations, including simple, transparent and comparable (STC) securitisations, to the extent data were available.¹⁵

1.2 Sample of participating banks

Data were provided for a total of 200 banks, including 105 Group 1 banks and 95 Group 2 banks.¹⁶ 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. Banks were asked to provide data at the consolidated level as of

- ⁵ Basel Committee on Banking Supervision, *Revisions to the Basel II market risk framework*, July 2009, <u>www.bis.org/publ/</u> <u>bcbs158.htm</u>.
- ⁶ Basel Committee on Banking Supervision, *Guidelines for computing capital for incremental risk in the trading book*, July 2009, <u>www.bis.org/publ/bcbs159.htm</u>.
- ⁷ Basel Committee on Banking Supervision, Enhancements to the Basel II framework, July 2009, <u>www.bis.org/publ/bcbs157.htm</u>.
- ⁸ The Committee's 13 January 2011 press release on loss absorbency at the point of non-viability is available at <u>www.bis.org/</u> press/p110113.htm.
- ⁹ Basel Committee on Banking Supervision, *Capital requirements for bank exposures to central counterparties*, July 2012, <u>www.bis.org/publ/bcbs227.htm</u>.
- ¹⁰ Basel Committee on Banking Supervision, *Global systemically important banks: updated assessment methodology and the additional loss absorbency requirement*, July 2013, <u>www.bis.org/publ/bcbs255.htm</u>; Financial Stability Board, 2016 list of global *systemically important banks* (G-SIBs), 21 November 2016, <u>www.fsb.org/wp-content/uploads/2016-list-of-global-systemically-</u> <u>important-banks-G-SIBs.pdf</u>.
- ¹¹ Financial Stability Board, *Total Loss-Absorbing Capacity (TLAC): Principles and Term Sheet*, 9 November 2015, <u>www.fsb.org/2015/</u><u>11/total-loss-absorbing-capacity-tlac-principles-and-term-sheet</u>.
- ¹² Basel Committee on Banking Supervision, *Basel III: The Liquidity Coverage Ratio and liquidity risk monitoring tools*, January 2013, <u>www.bis.org/publ/bcbs238.htm</u>.
- ¹³ Basel Committee on Banking Supervision, Basel III: the net stable funding ratio, October 2014, www.bis.org/bcbs/publ/d295.htm.
- ¹⁴ Basel Committee on Banking Supervision, *Basel III leverage ratio framework and disclosure requirements*, January 2014, <u>www.bis.org/publ/bcbs270.htm</u>.
- ¹⁵ See Basel Committee on Banking Supervision, *TLAC holdings*, October 2016, <u>www.bis.org/bcbs/publ/d387.htm</u>; Basel Committee on Banking Supervision, *Revisions to the securitisation framework*, July 2016, <u>www.bis.org/bcbs/publ/d374.htm</u>.
- ¹⁶ See Table B.1 in the Statistical Annex for details on the sample.

31 December 2016. 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 small 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 2016 ("H2 2016") reporting dates, in order to make more meaningful period-to-period comparisons. The consistent sample differs for the various analyses; typically it includes around 92 Group 1 banks, of which 30 are G-SIBs, and around 58 Group 2 banks. The 30 banks in the G-SIB time series analyses are those banks which have been classified as G-SIBs as of November 2016, 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

Unless otherwise noted, the impact assessment was carried out by comparing banks' capital positions under fully phased-in Basel III as agreed up to end-2015 (hereinafter: fully phased-in Basel III) to the transitional Basel III framework as implemented by the national supervisor (ie with phase-in arrangements). The fully phased-in Basel III results are calculated without considering transitional arrangements pertaining to the phase-in of deductions and grandfathering arrangements set out in the Basel III framework. 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.

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.

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

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 2016 reporting date may differ from the H2 2016 data point in graphs and tables showing the time series for the consistent sample of banks as described above.
- The actual impact of the new requirements 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 2016 or in the future. For this reason, the results are not comparable to industry estimates, which tend to be based on forecasts and consider management actions to mitigate the impact, as well as incorporate estimates where information is not publicly available.
- The Basel III capital amounts shown in this report assume that all common equity deductions are fully phased in and all non-qualifying capital instruments are fully phased out (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 six 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.

Box A

Phase-in provisions for capital ratios

The 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) will be fully phased in by 1 January 2018;
- An additional 2.5% capital conservation buffer above the regulatory minimum capital ratios, which must be met with CET1 capital, will be phased in by 1 January 2019; and
- The additional loss absorbency requirement for G-SIBs, which ranges from 1.0% to 2.5%, will be fully phased in by 1 January 2019. It will be applied as an extension of the capital conservation buffer and must be met with CET1.

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

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

Table 2 shows the aggregate capital ratios under the transitional and fully phased-in Basel III frameworks and the capital shortfalls if Basel III were fully phased-in ("view 2022"), both for the definition of capital and the calculation of RWA, as of December 2016. Details of capital ratios and capital shortfalls are provided in Section 2.1 and Section 2.2.

	Eully implemented Pacel III capital ratios			Pick-based capital		Combined rick based		
	requirequirequirequirequirequirequirequi	uirement, per cent	in per	· cent	shortfalls, in billions of euros ¹		capital an ratio sh in billions	id leverage nortfalls, s of euros ¹
	Min	Target ²	Transitional	Fully phased-in ³	Min	Target ²	Min	Target ²
Group 1 banks								
CET1 capital	4.5	7.0–9.5	12.6	12.3	0.0	0.0	0.0	0.0
Tier 1 capital ⁴	6.0	8.5–11.0	13.8	13.4	0.0	0.0	0.0	0.0
Total capital⁵	8.0	10.5–13.0	16.3	15.3	0.0	0.3	0.0	0.3
Sum					0.0	0.3	0.0	0.3
Of which: G-SIBs								
CET1 capital	4.5	8.0–9.5	12.5	12.3	0.0	0.0	0.0	0.0
Tier 1 capital ⁴	6.0	9.5–11.0	13.9	13.5	0.0	0.0	0.0	0.0
Total capital ⁵	8.0	11.5–13.0	16.3	15.4	0.0	0.0	0.0	0.0
Sum					0.0	0.0	0.0	0.0
Group 2 banks								
CET1 capital	4.5	7.0	14.0	13.4	0.0	0.0	0.0	0.0
Tier 1 capital ⁴	6.0	8.5	14.6	13.9	0.0	1.1	2.0	3.1
Total capital ⁵	8.0	10.5	16.7	15.6	0.0	1.2	0.0	1.2
Sum					0.0	2.4	2.0	4.4

Aggregate capital ratios and (incremental) capital shortfalls

¹ 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. ² The target level includes the capital conservation buffer and the capital surcharges for 30 G-SIBs as applicable. ³ This is as agreed by the Basel Committee up to end-2015. ⁴ The shortfalls presented in the Tier 1 capital row are *additional* Tier 1 capital shortfalls. ⁵ The shortfalls presented in the total capital row are *Tier 2* capital shortfalls.

Source: Basel Committee on Banking Supervision.

2.1 Capital ratios

As compared with transitional CET1, the average CET1 capital ratio of Group 1 banks would have fallen from 12.6% to 12.3% (a decline of 0.3 percentage points) when Basel III deductions and RWA are fully taken into account. For Group 2 banks, the CET1 capital ratio declines from 14.0% under transitional rules to 13.4% as a result of the full phasing-in of Basel III (a reduction of 0.6 percentage points). Results continue to show significant variation across banks as shown in Graph 9 for the transitional Basel III rules and Graph 10 for the fully phased-in Basel III framework. The reduction in CET1 ratios 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),¹⁷ and by increases in RWA (denominator). Since all countries in the sample have already implemented Basel III as of end-June 2015 the overall change in RWA is very limited and mainly due to different national phase-in plans.

Tier 1 capital ratios of Group 1 banks would on average decline 0.4 percentage points from 13.8% to 13.4%, and total capital ratios of this same group would decline on average by 1.0 percentage points from 16.3% to 15.3%. Group 2 banks show similar declines in Tier 1 capital ratios (from 14.6% to 13.9%)

Table 2

¹⁷ See also Table B.2 and Table B.3.

and total capital ratios (from 16.7% to 15.6%). 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.



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

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



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

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

Graph 11 shows that, out of the 105 banks in the Group 1 sample, all show a CET1 ratio under fully phased-in Basel III that is above both the 4.5% minimum capital requirement and the 7.0% target ratio (ie the minimum capital requirement plus the capital conservation buffer). Of 89 banks in the Group 2 sample, all report a CET1 ratio equal to or higher than 4.5%, while only one does not achieve the target of 7.0%.

Basel III Monitoring Report September 2017



Graph 12 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 2016. Transitional capital ratios have not changed greatly.





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

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

Graph 13 below shows the average capital ratios under transitional Basel III rules for a consistent sample of Group 1 banks for the periods end-June 2011 through end-December 2016 by region. All regions have shown consistent growth in capital ratios over this 5.5-year period. CET1 ratios are in line among all regions, however total capital ratios for Europe are at least two percentage points above those of the other two regions as at December 2016.

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

Consistent sample of Group 1 banks



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

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

After full phasing in of Basel III (Graph 14), the CET1, Tier 1 and total capital ratios for this consistent sample of Group 1 banks improved by 0.3, 0.6 and 0.6 percentage points over the previous six months, respectively. For Group 2 banks, the improvement in risk-based capital ratios over the reporting period was 0.0, 0.1 and 0.2 percentage points, respectively. The general improvement in fully phased-in Basel III capital ratios for both groups is due to Basel III-eligible capital added and, to a lesser extent, lower levels of deductions that reduce CET1, in spite of slightly higher overall RWA.

After full phasing in of Basel III (Graph 15), all tier levels of capital ratios for this consistent sample of Group 1 banks for all regions improved over the previous six months. For Americas and the rest of the world, there were marginal improvements on all levels of capital ratios at just 0.3 and 0.2 percentage points. Europe on the other hand had improvements that were significantly higher and different at each level at 0.7, 1.2 and 1.7 percentage points for the CET1, Tier 1 and total capital ratios, respectively.

Graph 13



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

Fully phased-in Basel III CET1, Tier 1 and total capital ratios, by region¹



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.

Graph 16 shows the main drivers for the fully phased-in Basel III Tier 1 capital ratio, ie whether it is driven by a change in Tier 1 capital or RWA for a consistent sample of banks over a 5.5-year period. For Group 1 banks, Tier 1 ratio, RWA and Tier 1 capital have increased by 0.5, 2.3 and 6.5 percentage points from the previous reporting period. In this case the increase in the Tier 1 ratio is a result of an increase in Tier 1 capital, similarly for G-SIBs. For Group 2 banks, the Tier 1 ratio also slightly increased by 0.1 percentage point mainly driven by decrease in RWA of 1.3 percentage points a, even though there was a

decrease of 0.5 percentage points in Tier 1 capital which was not sufficient to result in the drop in the Tier 1 ratio.



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

Graph 17 is similar to Graph 16 except that it shows only a sample of Group 1 banks by region. The rest of the world has experienced stronger growth in both RWA and Tier 1 capital of 6.3 and 8.3 percentage points from the end of June 2016 which has resulted in a more stable Tier 1 ratio with only 0.2 percentage point increase from the previous period. The Americas have also seen a more subdued increase in the Tier 1 ratio of 0.4 percentage points, driven by an increase in Tier 1 capital. Europe saw a steeper increase in the Tier 1 capital ratio of 1.2 percentage points driven by both factors, ie decreasing RWA and increasing Tier 1 capital at -3.2 and 5.1 percentage points, respectively. It is noted also that the biggest changes of over 10 percentage points in both RWA and Tier 1 capital took place in H2 2014 and H1 2015 for the Americas and the rest of the world.

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



Consistent sample of Group 1 banks

2.2 Capital shortfalls

This section shows the capital shortfalls for the Group 1 and Group 2 bank samples assuming full phasing in of the Basel III requirements based on data as of 30 December 2016 and disregarding transitional arrangements. The shortfalls presented are measured against different minimum capital ratio requirements (ie 4.5% CET1, 6.0% Tier 1 and 8.0% total capital) as well as against the target level, which includes the 2.5% capital conservation buffer and capital surcharges for 30 G-SIBs as applicable.

Graph 18 and Graph 19 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 30 December 2016 in addition to capital already held at the reporting date, in order to meet the minimum and target CET1, Tier 1 and total capital ratios under Basel III assuming fully phased-in requirements and deductions. Under these assumptions, there are no capital shortfalls for Group 1 or Group 2 banks with respect to the CET1, Tier 1 or total capital minimum requirements.

For a CET1 target of 7.0% (ie the 4.5% CET1 minimum plus the 2.5% capital conservation buffer) plus any capital surcharge for G-SIBs as applicable according to the updated list of banks published by the Financial Stability Board in November 2016, the Group 1 and Group 2 banks also have no and virtually no shortfall, respectively.

Group 1 banks have no shortfalls at either the CET1 or Tier 1 capital target ratios of 8.5% (ie the 4.5%/6.0% Tier 1 minimum plus the 2.5% CET1 capital conservation buffer) plus the surcharges on G-SIBs as applicable. Group 2 banks would need an additional €1.1 billion of additional Tier 1 or higher-quality capital to meet the target ratio.

Group 1 banks only require €0.3 billion of Tier 2 or higher-quality capital to meet the total capital target ratio of 10.5% (ie the 8.0% Tier 1 minimum plus the 2.5% CET1 capital conservation buffer) plus the surcharges on G-SIBs as applicable. Group 2 banks would need an additional €1.2 billion of Tier 2 or higher-quality capital to meet the total capital target ratio.

As indicated above, no assumptions have been made about bank profits or behavioural responses, such as changes in balance sheet composition that would serve to reduce the impact of capital shortfalls over time. As a point of reference, the aggregate sum of after-tax profits prior to distributions for the six-month period ending 30 December 2016 for Group 1 and Group 2 banks was €239.5 billion and €5.6 billion, respectively.



At the CET1 target level of 7.0% plus the surcharges on G-SIBs as applicable, the aggregate CET1 shortfall of Group 1 banks remained zero over the six-month period ending 31 December 2016 (see Graph 19). Among Group 2 banks the CET1 shortfall at the 7.0% target level is virtually zero since December 2015.

Estimated capital shortfalls at the target level¹

Fully phased-in Basel III, sample and exchange rates as at the reporting dates Graph 19 Group 1 banks Of which: G-SIBs Group 2 banks €bn €bn €bn CET1 Additional Tier 1 Tier 2 ¹ The height of each bar shows the aggregated capital shortfall considering requirements for each tier (ie CET1, Tier 1 and total) of capital.

2.3 Level of capital

Graph 20 shows the development of the level of CET1 capital of banks in the consistent sample of banks assuming full implementation of Basel III for Group 1 banks, Group 2 banks as well as G-SIBs separately. From end-December 2015 to end-December 2016, the level of Group 1 banks' CET1 capital has increased by €215 billion (or 6.1%) to €3,738 billion. More than half of this increase, €140 billion, can be attributed to the G-SIBs in the Group 1 sample which collectively held €2,574 billion of CET1 capital at end-December 2016. Group 2 banks' CET1 is €177 billion and thus only slightly lower than at end-December 2015.

Source: Basel Committee on Banking Supervision. See Table C.10 for underlying data and sample size.



Source: Basel Committee on Banking Supervision. See Table C.11 for underlying data and sample size. Table C.12 provides an additional regional breakdown for Group 1 banks.

The rise in overall CET1 capital among Group 1 banks appears largely due to profits generated, with particularly large profits shown by banks in the United States and China (combined accounting for more than 50% of all profits reported in Group 1). Furthermore, G-SIBs contributed more than two-thirds of the profits generated during H2 2016 for Group 1 banks.

Graph 21 shows the evolution in fully phased-in Basel III capital for a consistent sample of Group 1 banks over the past 5.5 years grouped by region. CET1 capital has grown for all regions with the rest of the world recording the highest growth of over 100% from 2011 and also has the highest current holdings of €1,647 billion compared to Europe at €1,121 billion and Americas at €970 billion. Additional Tier 1 capital has been stable and flat until the first half of 2014 and thereafter it has grown for all regions, however the additional Tier 1 holdings are relatively small compared to CET1 at only €133, €124 and €90 billion for Americas, Europe and the rest of the world, respectively. The highest growth in percentage terms was from the rest of the world, however from a low base of €6 billion. Tier 2 capital has been volatile for all regions with the Americas seeing a decrease between 2011 and 2014. Generally, Tier 2 capital grew for all regions since 2014 to holdings of €278, €153 and €143 billion for Europe, Americas and the rest of the world, respectively (for further details see Table C.12).

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



Consistent sample of Group 1 banks

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.14 for underlying data and sample size.

Graph 22 depicts the evolution of profits, dividends, CET1 capital raised and the dividend payout ratio over time. Here, no clear trend or distinctive feature can be identified for CET1 capital raised over time on global level. Group 1 banks' profits after tax have increased to around €200 billion per half year since the second half of 2014. Dividend payout ratios for Group 1 banks are typically around one third. The dividend payout ratio for Group 2 banks increased significantly in the current period due to higher dividend payments compared to prior periods combined with a small number of banks incurring losses that are very significant relative to the profits of all other Group 2 banks.

Profits, dividends, CET1 capital raised and dividend payout ratio¹



Consistent sample of banks, exchange rates as of 31 December 2016

comparability across countries with different dividend payment patterns.

¹ The dividend payout ratio is calculated as common share dividends divided by profits after tax, both for a full calendar year to improve

Source: Basel Committee on Banking Supervision. See Table C.15 and Table C.17 for underlying data and sample size.

Graph 23 provides the regional breakdown for Group 1 banks. Since 2011, annual profits after tax have always been higher in the Americas and the rest of the world than in Europe. Overall, around 20% of the profits have been generated by banks in Europe, more than 30% in the Americas and almost half in the rest of the world. Conversely, almost 60% of the CET1 capital raised has been raised by banks in Europe.

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



Consistent concelle of Convert 1 housing on state on of 21 December 2016

¹ The dividend payout ratio is calculated as common share dividends divided by profits after tax, both for a full calendar year to improve comparability across countries with different dividend payment patterns.

Source: Basel Committee on Banking Supervision. See Table C.16 and Table C.18 for underlying data and sample size.

Graph 22

Over the second half of 2016, 62 out of the 105 Group 1 banks in the sample raised capital, regarding CET1 the total amount equals €24.6 billion (see Table 3). Of this amount, almost 80% was raised by the G-SIBs in the sample.

Capital raised during H2 2016

Capital raised externally

Full sample of banks, gross amounts, in billions of eurosTable 3							
	Number of banks	Number of banks that raised capital	CET1	Add. Tier 1	Tier 2		
Group 1 banks	105	62	24.6	30.9	34.7		
Of which: AM	22	16	4.8	5.3	8.7		
Of which: EU	37	23	17.4	9.6	14.3		
Of which: RW	46	23	2.4	16.0	11.7		
Of which: G-SIBs	30	23	19.5	14.1	23.4		
Group 2 banks	88	32	5.5	0.8	2.3		
Source: Basel Committee on Banking Supervision.							

It is noticeable that Group 1 banks primarily raised Tier 2 capital (38.5%) and additional Tier 1 (34.3%) rather than CET1 (27.3%) which could indicate that banks are now focussing on the remaining, not yet fully phased in capital requirements such as the leverage ratio, TLAC and presumably the additional requirements stemming from Pillar 2 as for those regulations CET1 is not necessarily the exclusive form of eligible capital. For Group 2 banks, CET1 seems still more in the focus (64.0%) while the share of additional Tier 1 and Tier 2 are significantly lower (9.3% and 26.7% respectively).

Graph 27 depicts the evolution of capital raised over time. Here, no clear trend or distinctive feature can be identified for CET1 raised over time on global level. However, for additional Tier 1 and Tier 2 capital, the time series for Group 1 banks and G-SIBs show a significant and lasting increase in the amount of capital raised starting from the second half of 2013.



Source: Basel Committee on Banking Supervision. See Table C.17 for underlying data and sample size. Table C.18 provides an additional regional breakdown for Group 1 banks.

2.4 Composition of capital

The graphs below show the composition of total capital under transitional Basel III rules (Graph 25) and after fully phased-in Basel III (Graph 26). As expected and as observed for previous reporting dates, CET1 capital is the predominant form of capital with an average share of more than 80% for both banking groups. Under transitional rules, it is slightly lower with 77%. This difference is largely due to the disallowed eligibility of transitional Basel III additional Tier 1 or Tier 2 instruments for banks in many countries under Basel III (eg those that do not meet the requirements set out in the Committee's 13 January 2011 press release on loss absorbency at the point of non-viability).



Structure of regulatory capital under transitional Basel III rules

It is noticeable that for Group 1 banks under the fully phased-in Basel III standards, the positive trend of increasing the share of CET1 capital which had been observed during the first years of the monitoring exercise reversed in 2014 (Graph 25). Since then a decline in the share of CET1 (from 85.4% at the beginning of 2014 to 80.2% of the end of 2016) can be observed simultaneously with a slightly increase of additional Tier 1 elements (3.5% in 2014 and 7.4% at the end of 2016), suggesting that banks are shifting their focus from the risk based capital requirements (which no longer cause a capital demand for most banks) to the leverage ratio requirement.

For Group 2 banks, a strong positive trend can be observed over time for the share of CET1 capital: it increases from 74.8% in 2011 to 83.8% in 2016 which corresponds to a cutback of Tier 2 elements in a similar magnitude (a reduction from 20.8% to 12.4%). Here, it has to be mentioned that Group 2 banks started from a different level as regards to Tier 2, with its share equalling more than 20% in H1 2011 (Group 1: 14.1%).

Structure of regulatory capital under fully phased-in Basel III

Consistent sample of banks





With regard to the composition of Basel III CET1 capital itself, paid-in capital and retained earnings continue to comprise the overwhelming majority of CET1 outstanding. For Group 1 banks, paid-in capital and retained earnings make up more than 90% of outstanding CET1 on average. On a bank-by-bank basis, 29 banks in the Group 1 sample report negative overall balances in AOCI. 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 overall structure of CET1 capital is very similar to Group 1.

2.5 Regulatory adjustments

For the current period, regulatory adjustments reduce overall gross CET1 (ie CET1 before adjustments) for Group 1 banks by 16.0% (see Table B.2). The largest driver of Group 1 bank CET1 adjustments continues to be goodwill (9.0%) followed by deductions for intangibles and combined deferred tax asset (DTA) deductions (2.3% and 1.9%, respectively).

The impact of regulatory adjustments on Group 2 banks is nearly as high as for Group 1 banks, on average being at around 14.9% (see Table B.3). However, 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.

2.6 Components and determinants of capital requirements

2.6.1 Share of different risk types in overall MRC

Graph 27 shows the share of different asset classes in overall minimum required capital (MRC) for a consistent sample of Group 1 banks.¹⁸

¹⁸ 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.

As of end-December 2016, credit risk continues to compose the dominant portion of overall MRC, with this category on average comprising 65.4% of total MRC for Group 1 banks. However, the share of credit risk has declined significantly from 74.6% at the end of June 2011. Conversely, the share of operational risk MRC which increased from 7.8% at the end of June 2011 to 16.4% at end-2016. The share of market risk declined slightly from 6.2% to 5.3% while the share of "other" risk increased somewhat from 11.4% to 12.9%. Among the credit risk asset classes, the share of MRC for corporate exposures increased from 31.0% to 36.5% while the share of MRC for securitisation exposures declined from 7.2% to 1.7%.



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.21 for underlying data and sample size.

Table 4 provides data on relative sizes of asset classes in terms of exposures as well as minimum required capital (MRC) for both Group 1 and Group 2 banks according to current rules at the reporting date. The sample differs considerably from the consistent sample used for the time series above, resulting in differences for the end-2016 reporting date.

Additionally, the MRC per exposure suggests the relative riskiness of the different asset classes as measured by the current framework. Both the numerator (MRC) and the denominator (exposure amounts) of this ratio include exposures under the IRB and standardised approaches for credit risk.¹⁹ Broadly speaking, an MRC per exposure figure of 8% is comparable to a 100% risk weight. Since a common exposure measure for credit, market and operational risk does not exist, the size in terms of exposure and the MRC per exposure are only defined for asset classes subject to a credit risk treatment.

Looking at Table 4 for Group 1 banks, it is observed that while the corporate, retail, sovereign and CVA asset classes comprise the overwhelming majority of exposures, their relative riskiness as measured by MRC per exposure is rather low in comparison to other asset classes. In particular, for related entities and equity exposures the MRC per exposure is 22.6% and 14.3%, respectively. For Group 2 banks,

¹⁹ 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 4.

corporate, retail and sovereign asset classes also comprise the overwhelming majority of exposures. However, unlike for Group 1 banks, the size of the CVA asset class in terms of exposure is materially lower while the share of the bank asset class is moderately higher. With regard to MRC per exposure, asset classes with higher relative riskiness for Group 2 banks include equity exposures (15.9%) and other assets (8.3%). Interestingly, while Group 1 banks as a whole have a rather large share of exposure to CVA (14.2%), the MRC per exposure is very small (0.4%). In contrast, for Group 2 banks, the share of CVA exposure is negligible at 0.2% but the MRC per exposure is considerably higher (15.0%) compared to Group 1 banks overall.

Average asset class size and MRC per exposure

	Group 1			Group 2			
	Size exposure	Size MRC	MRC per exposure	Size exposure	Size MRC	MRC per exposure	
Corporate	28.2	41.1	4.7	20.1	31.0	5.0	
Sovereign	18.6	2.4	0.4	26.5	3.6	0.4	
Bank	7.0	4.6	2.1	11.2	5.6	1.6	
Retail	20.8	15.0	2.3	31.2	20.4	2.1	
Equity	0.7	3.0	14.3	1.1	5.3	15.9	
Purch. receivables	0.1	0.1	2.9	0.0	0.0	4.9	
Securitisation	1.9	1.3	2.2	1.0	0.4	1.4	
Related entities	0.1	0.8	22.6	0.0	0.0	0.1	
Past-due items	0.1	0.1	9.1	0.6	1.7	9.3	
Other assets	4.9	5.2	3.4	1.4	3.7	8.3	
Not assigned ¹	3.5	6.2	5.7	6.7	9.0	4.4	
CVA	14.2	1.9	0.4	0.2	1.1	15.0	
Trading book CCR ²		0.1			0.0		
Market risk		3.8			2.3		
Other trading book		0.1			0.0		
Operational risk		13.7			8.1		
Reg. difference ³		-2.3			0.3		
Floor adjustment		2.3			6.9		
Other ⁴		0.3			0.5		
Total	100.0	100.0	3.2	100.0	100.0	3.2	

¹ 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. ² Counterparty credit risk in the trading book. ³ 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. ⁴ Includes the reconciliation asset class and other Pillar 1 capital requirements.

Source: Basel Committee on Banking Supervision

Table 4
2.6.2 Credit risk

Share of credit risk exposure by asset classes

Graph 28 shows the evolution of exposure for the six major asset classes for a consistent sample of 36 Group 1 banks. In general the share of sovereign exposures has increased steadily in recent years from 12.4% to 19.6% while partial use, bank and other credit exposures have declined slightly.



Risk parameters by IRB asset classes

This section presents IRB risk parameters for a sample of Group 1 banks only. Graph 29 and Graph 30 illustrate weighted average probability of default (PD) and loss-given-default (LGD) for Group 1 banks' exposures subject to the internal ratings-based (IRB) approaches respectively. For Group 1 banks, average PDs are generally highest for retail and corporate portfolios (1.5% and 0.9% respectively) while PDs for bank and sovereign portfolios are considerably lower (0.2% and 0.0%, respectively). Looking further, it is observed that average PDs and LGDs do not differ materially between portfolios primarily being measured using the foundation IRB and advanced IRB approaches.²⁰ For corporate portfolios measured under the foundation IRB approach, PDs and LGDs are slightly higher relative to those measured under advanced IRB. For retail and bank portfolios the opposite is true, PDs and LGDs are moderately higher under the advanced IRB approach. Furthermore, sovereign PDs remain very low under either IRB approach, while average LGDs for sovereigns are generally higher under foundational IRB.

²⁰ In general, the main approach to credit risk is determined by the approach utilised on the non-retail portfolios. Therefore, if a bank uses the foundation IRB approach for all non-retail portfolios and the IRB approach to retail for the retail portfolio, it is considered a "foundation IRB" bank.

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



Source: Basel Committee on Banking Supervision. See Table C.23 for underlying data and sample size.

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



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.24 for underlying data and sample size.

Exposure-weighted average risk weights for non-defaulted exposures by main asset ${\sf classes}^1$

Group 1 IRB banks



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

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

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



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

2.6.3 Market risk

The left panel of Graph 33 shows the distribution of the share of market risk MRC in total MRC. On average, the share of market risk MRC is 3.9% of total MRC for Group 1 banks and 2.3% of total MRC for Group 2 banks. However, there is significant dispersion across banks from zero to more than 25% in both groups. The average share for all bank groups is at a similar level as at end-June 2011. However, as can be seen in

Graph 31

the right panel of Graph 33, Group 1 banks and in particular the G-SIBs among them experienced a significant peak at the end of 2011, and the share of market risk in total MRC has gradually decreased since then.



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.27 and Table C.28 for underlying data and sample size.

Graph 34 below shows the time series of the share of the components of MRC for market risk in total MRC for market risk for Group 1 and Group 2 banks as well as for G-SIBs separately. The time series starts at the end-June 2015 reporting date and uses a consistent sample of banks. For Group 1 banks and in particular the G-SIBs among them, the internal models approach contributes around two thirds to overall market risk MRC. The share of value-at-risk (VaR) and stressed VaR has increased since June 2015 while the shares of the incremental risk capital charge and MRC for correlation trading portfolios have decreased. For Group 2 banks, the internal models approach is much less relevant at only around 20% of market risk MRC, and correlation trading portfolios are negligible. Almost 80% of Group 2 banks' market risk MRC have been calculated using the standardised approach.

Components of minimum capital requirements for market risk



Graph 35 below shows the relation of the 10-day stressed VaR to the current 10-day 99% VaR under the revised market risk framework in the Group 1 sample using a consistent sample of Group 1 banks. The left panel shows the time series since end-2011 for a sample of 23 banks. Under this consistent sample, the ratio of stressed VaR to VaR has fluctuated around 200% with a peak in H1 2014 and a significant increase to 289.1% in H2 2016. The right panel shows the same ratio for a sample which includes 33 additional banks whose data are available since end-June 2015. For this larger sample, the spike in H2 2016 is much less pronounced.



Consistent sample of banks, in per cent

Graph 34

2.6.4 Operational risk

As depicted in Graph 36 below, MRC for operational risk has continuously increased over the past six years. For Group 1 banks and G-SIBs, most of which use the Advanced Measurement Approaches (AMA) as the primary method for the calculation of operational risk capital, this increase is largely explained by the surge in the number and severity of operational risk events during and after the financial crisis, which are factored into the calculation of MRC for operational risk under the AMA. For Group 1 banks and G-SIBs, the share of capital under the AMA has increased from 59.0% to 67.9%, while the share of operational risk MRC as a percentage of total MRC is 13.8% 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,²¹ is largely explained by an increase in business volume, which is a factor captured by the financial statement-based components of the standardised approaches. For Group 2 banks, the share of operational risk MRC as a percentage of total MRC is 8.1%.

The dominance of indicator-based properties found in the standardised approaches for operational risk reflect the size of a bank rather than its risk exposure, which explains the limited variance of MRC for most Group 2 banks. For Group 2 banks, the variance in MRC for the 25th and 75th quantile is around 3 percentage points, while it is approximately 7 percentage points for Group 1 banks and 14 percentage points for G-SIBs. The outliers among Group 2 banks are mostly fee business-specialised banks in the sample where operational risk is virtually an exclusive risk, while outliers among Group 1 banks and G-SIBs are banks using AMA in which past loss events influence future operational risk exposure.



¹ The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the vertical lines generally show the range of the entire sample. The dots represent weighted averages. ² Some banks started reporting operational risk RWAs under the Basic Indicator Approach in 2013 and eventually migrated to the Standardised Approach in 2014. This change increased the reported MRC in the sample by about 19%. Without this change, the overall capital increase would be around 100% instead of 138% and the share of AMA banks would increase up to about 80% in 2016.

Source: Basel Committee on Banking Supervision. See Table C.33 and Table C.34 for underlying data and sample size.

²¹ Which comprise the Basic Indicator Approach (BIA) and the Standardised Approach (TSA), and its variant the Alternative Standardised Approach (ASA).

2.7 Leverage ratio

Key results

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

- *Transitional 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 Basel III Tier 1 capital.

Graph 37 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 Tier 1 capital for Group 1 banks, G-SIBs and Group 2 banks. The weighted average transitional Basel III Tier 1 leverage ratios would be 6.0% for Group 1 banks and for G-SIBs, while it would amount to 5.7% for Group 2 banks. The weighted average fully phased-in Basel III Tier 1 leverage ratios are 5.8% for Group 1 banks and G-SIBs, and 5.5% for Group 2 banks. Group 2 banks show a greater dispersion compared to Group 1 banks.

Under both the transitional and the fully phased-in Basel III Tier 1 leverage ratios, three banks in the sample would not meet the 3% ratio level, all of them being Group 2 banks, with an aggregate incremental shortfall of \notin 2.0 billion.²²

Box B

Basel III leverage ratio framework

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

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

^① Basel Committee on Banking Supervision, *Basel III leverage ratio framework and disclosure requirements*, January 2014, www.bis.org/publ/bcbs270.htm. The Committee proposed revisions to the leverage ratio framework in April 2016, see Basel Committee on Banking Supervision, *Revisions to the Basel III leverage ratio framework, consultative document*, April 2016, www.bis.org/publ/bcbs270.htm. The Committee proposed revisions to the leverage ratio framework in April 2016, see Basel Committee on Banking Supervision, *Revisions to the Basel III leverage ratio framework, consultative document*, April 2016, www.bis.org/bcbs/publ/d365.htm.

²² See also Table 2.



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.35 for underlying data.

Graph 38 shows how the fully phased-in Basel III Tier 1 leverage ratios have evolved over time for a consistent sample of 93 Group 1 banks (including 30 G-SIBs) and 54 Group 2 banks, all of which provided leverage ratio data for all reporting dates from June 2011 to December 2016. For Group 1 banks and G-SIBs, there was an increase in the leverage ratio for the current period of 0.2 percentage points, for both. The increase in both instances was driven by a positive change in Tier 1 capital, however for G-SIBs the increase was also due to a negative change of 0.9% in the exposure measure. Group 2 banks saw a minor drop of 0.1 percentage point largely driven by a decrease in Tier 1 capital of 1.7% as well as a small increase in the exposure measure.



Fully phased-in Basel III Tier 1 leverage ratios¹

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

Source: Basel Committee on Banking Supervision. See Table C.36 for underlying data and sample size.

Graph 39 shows the same information as Graph 38 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 5.5 years. In Europe, leverage ratios started from a low base of 2.7% and increased to 5.0% at end-December 2016. In the Americas and the rest of the world, ratios increased from slightly above 4% in 2011 to more than 6% as at December 2016. In the current period, Europe had a sizeable increase of 0.4 percentage points compared to a 0.1 percentage point increase for Americas and the rest of the world. The contributing factors to such an increase in Europe were an increase of 7.2% in Tier 1 capital together with a drop of 2.4% in the exposure measure.



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

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

Source: Basel Committee on Banking Supervision. See Table C.37 for underlying data and sample size.

Graph 40 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 2016. 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, RWA and Tier 1 capital steadily increased over the period, whereas leverage ratio exposures followed a similar pattern until end-2012 and remained relatively stable thereafter. Furthermore, since June 2012, changes in accounting total assets and RWA have been relatively modest, with a slight increase noticeable in the first half of 2016. For Group 2 banks, RWA and leverage ratio exposures tracked more closely until end-2015. Since then, RWA increased slightly while leverage ratio exposure decreased.

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

Consistent sample of banks, exchange rates as of 31 December 2016

Graph 40



¹ Tier 1 capital, RWA and leverage ratio exposure assume full implementation of Basel III. Note that the data points for H1 2013 use an approximation for the 2014 definition of the Basel III leverage ratio exposure where gross instead of adjusted gross securities financing transaction values are used.

Source: Basel Committee on Banking Supervision. See Table C.38 for underlying data and sample size.

Relationship between the Basel III leverage ratio and risk-based capital requirements

Table 5 below shows the migration of banks from *bounded* to *non-bounded* after Tier 1 capital rising to meet the target Tier 1 risk-based capital ratio.²³ It shows in particular that 1.6% of the banks in the sample do not meet the minimum Basel III leverage ratio of 3%, even after increasing Tier 1 capital to meet the target risk-based Tier 1 capital requirements.

In per cent					Table 5
		Target Tier 1 ratio binding (<8.5% + G-SIB surcharge)?			Total after capital raising to meet
		Yes	No	Total	target Tier 1 ratio
Leverage ratio binding (<3%)?	Yes	0.0	1.6	1.6	1.6
	No	1.0	97.4	98.4	97.4
	Total	1.0	99.0	100.0	99.0
Source: Basel Commi	ttee on Banking	Supervision.			

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

Separate results for the Group 1 and Group 2 banks in the sample are included in Table B.4 and Table B.5 in Annex B, respectively.

²³ That is, a Tier 1 minimum capital ratio of 6% plus a capital conservation buffer of 2.5% plus, where applicable, any G-SIB capital surcharges.

Graph 41 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%,²⁴ whereas the dashed vertical line represents a Basel III Tier 1 leverage ratio of 3%.

The diagonal line represents points where an 8.5% fully phased-in Basel III Tier 1 target risk-based capital ratio results in the same amount of required fully phased-in Basel III Tier 1 capital as a fully phased-in Basel III Tier 1 leverage ratio of 3%. By construction, it also represents a multiple of $8.5\%/3\% \approx 2.83$ between RWA and the Basel III leverage ratio exposure measure. Therefore, for banks plotted above the diagonal line, the Basel III Tier 1 leverage ratio becomes the constraining requirement).²⁵ 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 41, three Group 2 banks do not meet the minimum fully phased-in Basel III Tier 1 leverage ratio of 3% (plotted left of the vertical dashed line). All of these banks meet the Basel III Tier 1 target capital ratio of 8.5%. This graph also shows that the fully phased-in Basel III Tier 1 leverage ratio is constraining for 67 banks out of 191, including 36 Group 1 and 31 Group 2 banks (plotted above the diagonal line).



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

Pending settlement transactions

Different accounting options for pending settlement transactions related to the regular purchase or sale of financial assets under IFRS and US GAAP, respectively Japanese GAAP have raised level playing field concerns across banks. IFRS gives entities the option to apply trade or settlement date accounting for

²⁴ Calculated as the sum of a 6.0% Tier 1 minimum capital ratio plus 2.5% capital conservation buffer.

²⁵ Note that the effect of the G-SIB surcharge is not taken into account here. As the G-SIB surcharges only apply to the risk-based requirement, the relevant proportion between RWA and total leverage ratio exposure that determines whether the Basel III leverage ratio is constraining or not and hence the slope of the diagonal line would be different by bank.

regular purchases or sales of financial assets.²⁶ US GAAP and Japanese GAAP require trade date accounting for banks and broker-dealers; broker-dealers may also offset the receivables and payables associated with pending settlement transactions.

The Committee received 163 valid submissions on the treatment of pending settlement transactions.²⁷ Table 6 shows the current distribution between Group 1 and Group 2 banks. According to this table, results differ across bank groups. Group 2 banks tend to apply settlement date accounting, while the majority of Group 1 banks apply trade date accounting. Banks using the trade date accounting with netting are mostly Group 1 banks.

Total number of banks by group and accounting treatment Table 6						
	Settlement date accounting	Trade date accounting without netting	Trade date accounting with netting ¹			
Group 1	28	42	18			
Group 2	43	26	6			
Total	71	68	24			

¹ Four out of the 24 banks that have reported using trade date accounting with netting have also reported to be IFRS banks, which may imply application of *conditional* netting under IFRS (see IAS 32) despite instructions for the reporting of this item to not reference such conditional netting.

Source: Basel Committee on Banking Supervision.

2.8 Interaction of risk-based and leverage ratio requirements

Overall, as shown in Table 2, the inclusion of applicable Basel III Tier 1 leverage ratio shortfalls has no impact on the capital shortfalls at the minimum or target levels for Group 1 banks which are purely driven by the $\in 0.3$ billion Tier 2 capital shortfall. However, it increases the Tier 1 capital shortfall for Group 2 banks by $\notin 2.0$ billion at the minimum level and at the target level (from zero to $\notin 2.0$ billion and from $\notin 2.4$ billion to $\notin 4.4$ billion, respectively).

Graph 42 below shows the share of banks in a consistent sample *bound*²⁸ by the different regulatory capital constraints, the risk-based Tier 1 capital requirements at the minimum level, the risk-based Tier 1 capital requirements at the target level and the Basel III leverage ratio requirement. In June 2011, 18.5% of Group 1 banks were bound by both the risk-based Tier 1 minimum and leverage ratio requirement; since December 2013, all Group 1 banks meet these requirements. Another 34.8% of Group 1 banks were initially bound by the risk-based Tier 1 requirements at the target level but not the leverage ratio, and it took until the end of 2016 that all banks in the sample also meet these requirements. There have been no banks in the consistent sample which have only been bound by either the risk-based minimum requirement only or the leverage ratio requirement only. For the G-SIBs among those banks, the share of banks initially not meeting the risk-based Tier 1 capital minimum and leverage ratio requirements

²⁶ IFRS defines a *regular way purchase or sale* as a purchase or sale of a financial asset under a contract whose terms require delivery of the asset within the timeframe established generally by regulation or convention in the market place concerned. US GAAP provides a similar definition.

A submission has been considered valid where the bank has correctly reported the accounting treatment used. However, it is still possible that zero figures were reported (eg when there were no pending settlement transactions at the reporting date).

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

was higher at 30.0%, and the share of banks not meeting the risk-based Tier 1 capital target requirement was even higher at 50.0%. However, the adjustment process was faster such that G-SIBs already started meeting all requirements in June 2015.

Among Group 2 banks, 12.7% were bound by both the risk-based Tier 1 minimum and leverage ratio requirement in June 2011; since June 2015, all Group 2 banks meet these requirements. Another 1.8% of Group 2 banks were initially bound by the risk-based Tier 1 minimum capital requirement but not by the leverage ratio. 38.2% of Group 1 banks were initially bound by the risk-based Tier 1 requirements at the target level but not the leverage ratio, and 5.5% of Group 2 banks are still bound by this requirement at the end of 2016. The banks which contribute to the additional leverage ratio-driven shortfall at the end-2016 reporting date are not included in this consistent time series.



2.9 Total loss-absorbing capacity requirements for G-SIBs

The Committee also collected data on additional total loss-absorbing capacity (TLAC) for G-SIBs. Of the 26 G-SIBs which will initially be subject to these requirements,²⁹ 25 participated in the exercise. Overall, applying the 2019 minimum requirements, five of the 25 G-SIBs in the sample have an incremental³⁰ TLAC shortfall of up to 2.1% of RWA, totalling €19.7 billion (see Graph 43). Applying the 2022 minimum requirements, 12 of the 25 G-SIBs in the sample have an incremental shortfall of up to 4.5% of RWA, totalling €116.4 billion.

The incremental shortfalls to the 2019 requirements were up to 7.2% of RWA and €131.4 billion, and the incremental shortfalls to the 2022 requirements were up to 9.9% of RWA or €318.2 billion at the end-June 2016 reporting date. Therefore, the incremental shortfalls have continued to decrease significantly (by around 85% relative to the 2019 minimum requirements and by almost 63% relative to

²⁹ Four G-SIBs are headquartered in an emerging market economy and will only have to comply with the minimum TLAC requirement starting in 2025. See Financial Stability Board, *Total Loss-Absorbing Capacity (TLAC): Principles and Term Sheet*, 9 November 2015, <u>www.fsb.org/2015/11/total-loss-absorbing-capacity-tlac-principles-and-term-sheet</u>.

³⁰ The shortfall is incremental to any risk-based and leverage ratio shortfall discussed above.

the 2022 minimum requirements) from those reported six months earlier for the end-June 2016 reporting date.



Fully phased-in Basel III



3. Liquidity

3.1 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 70% in 2016 and will continue to rise in equal annual steps of 10 percentage points to reach 100% in 2019.

Overall, 97 Group 1 and 58 Group 2 banks provided sufficient data in the end-December 2016 Basel III monitoring exercise to calculate the LCR according to the revised standard.³¹ The weighted average LCR was 131.4% for Group 1 banks and 159.3% for Group 2 banks (see Graph 44 and Table C.42), which compare to average LCRs of 126.4% and 157.5% for Group 1 banks and Group 2 banks, respectively, as of end-June 2016.

The aggregate numbers under the revised LCR standard do not speak to the range of results across participating banks. Graph 44 below also gives an indication of the distribution of banks' liquidity positions. Some 90.7% of all Group 1 banks and 95.9% of Group 2 banks in the Basel III monitoring sample already meet or exceed the final LCR minimum requirement of 100%. All Group 1 and Group 2 banks have

Graph 43

³¹ As with the end-June and end-December 2015 reporting periods, LCR analysis for the end-June 2016 reporting period reflects a sample that excludes all banks from one jurisdiction due to data quality limitations.

LCRs that are at or above the 70% minimum requirement applicable as of January 2016. These results compare to 87.9% and 92.5% of Group 1 and Group 2 banks, respectively, that met the 100% minimum requirement and all Group 1 and Group 2 banks that met the 70% minimum requirement applicable since 1 January 2016.



¹ The median value is represented by a horizontal line, with 50% of the values falling in the 25th to 75th percentile range shown by the box. The upper and lower end points of the thin vertical lines show the range of the entire sample. The sample is capped at 400%, meaning that all banks with an LCR above 400% were set to 400%. The dots represent weighted averages. The horizontal lines represent the 70% minimum (2016, blue dashed line), the 80% minimum (2017, red dashed line) and the 100% minimum (2019, red solid line).

Source: Basel Committee on Banking Supervision. See Table C.42 for underlying data and sample size.

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 ≤ 15.1 billion for Group 1 banks and ≤ 1.6 billion for Group 2 banks as of end-December 2016. This compares to a shortfall of ≤ 26.6 billion and ≤ 3.1 billion as of end-June 2016. This number is reflective only of the aggregate shortfall for banks that are below an LCR minimum requirement of 100% and does not reflect surplus liquid assets at banks above a 100% requirement. At the relevant minimum requirement of 70% the aggregate shortfall was zero for both Group 1 and Group 2 banks at end-December 2016 comparable also to no shortfall at end-June 2016.

The key components of outflows and inflows are shown in Table 7. Group 1 banks show a notably larger percentage of total outflows, when compared with balance sheet liabilities, than Group 2 banks. This can be explained by the relatively greater contribution of wholesale funding activities and commitments within the Group 1 sample, whereas Group 2 banks, as a whole, are less reliant on these types of activities.

LCR outflows and inflows (post-factor) as a percentage of balance sheet liabilities					
Category	Group 1	of which: G-SIBs	Group 2		
Outflows to					
Unsecured retail and small business customers	2.5	2.6	2.8		
Unsecured non-financial corporates	4.9	5.3	2.0		
Unsecured sovereign, central bank, public sector entities (PSEs) and multilateral development banks (MDBs)	1.0	1.1	0.8		
Unsecured financial institutions and other legal entities	5.1	5.1	2.5		
Other unsecured wholesale funding incl. unsecured debt issuance	1.0	0.9	0.4		
Secured funding and collateral swaps	1.8	2.4	0.2		
Collateral, securitisations and own debt	0.7	0.8	0.6		
Credit and liquidity facilities	2.0	2.1	0.8		
Other contractual and contingent cash outflows including derivative payables	2.9	3.2	1.8		
Total outflows ¹	21.4	23.1	11.4		
Inflows from					
Financial institutions	1.9	1.9	0.8		
Retail and small business customers, non-financial corporates, central banks and other entities	1.3	1.3	1.9		
Secured lending and collateral swaps	2.0	2.5	0.3		
Other cash inflows including derivative receivables	1.1	1.1	0.4		
Total inflows ^{1,2}	6.3	6.8	3.2		

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

As at end-December 2016, no Group 1 bank and four Group 2 banks reported inflows that exceeded the 75% cap. Of these four Group 2 banks, all exhibit LCR ratios above the minimum requirement of 100%.

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 45. 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. Within Level 1 assets, 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 83.1% of all eligible liquid assets). While these particular Level 1 assets represent a significant portion of eligible liquid assets for Group 2 banks as well (together accounting for 75.4% of eligible liquid assets), Group 2 banks also hold a significant portion of Level 1 non-0% risk-weighted securities issued or guaranteed by sovereigns, central banks and public sector entities (accounting for an additional 18.8% of eligible liquid assets compared to an additional 2.5% for Group 1 banks). Within the Level 2A asset class, the majority of holdings for Group 1 banks comprises 20% risk-weighted securities issued or guaranteed by sovereigns, central banks or public sector entities, while the majority of holdings for Group 2 banks comprises covered bonds (rated AA- or better). Eligible non-financial common equity shares comprise the majority of holdings of Level 2B assets for Group 1 banks. For Group 2 banks, the majority of holdings of Level 2B assets for Group 1 banks. For Group 2 banks, the majority of holdings of Level 2B assets for Group 1 banks.



residential mortgage-backed securities, non-financial institution corporate bonds (rated BBB- to A+) and non-financial common equity shares.

Caps on Level 2B and Level 2 assets

Due to the 15% Level 2B cap and the 40% overall Level 2 cap, €2.0 billion of Level 2 assets are excluded from high-quality liquid assets. In total, four banks are constrained, of which two banks are constrained only by the Level 2B cap and two banks are constrained only by the Level 2 cap. No bank is constrained by both caps. Of the four total banks that are constrained, one fails to meet an LCR minimum requirement of 100%.

Comparison of liquid assets and inflows to outflows and caps

Graph 46 combines the above LCR components by comparing liquidity resources (pool of high-quality liquid assets and inflows) to outflows. Note that the ≤ 2.66 trillion Group 1 gross surplus shown in the graph differs from the ≤ 15.1 billion gross shortfall at an LCR minimum requirement of 100% that is noted above, as it is assumed here that excess assets at one bank can offset those 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 ≤ 0.19 trillion.



3.2 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.

Overall, 104 Group 1 and 83 Group 2 banks provided sufficient data in the end-December 2016 Basel III monitoring exercise to calculate the revised NSFR according to the standard issued by the Committee in October 2014. Some 94.2% of Group 1 banks and 88.0% of Group 2 banks already meet or exceed the 100% minimum NSFR requirement, with 100% of Group 1 banks and 96.4% of Group 2 banks at an NSFR of 90% or higher as of end-December 2016. This compares to 84.0% of Group 1 banks and 86.0% of Group 2 banks which met or exceeded the 100% minimum standard and 97.9% of Group 1 banks and 96.0% of Group 2 banks that had an NSFR 90% or higher in the end-June 2016 period.

The weighted average NSFR was 115.8% for Group 1 banks and 114.1% for Group 2 banks at end-December 2016 compared to 114.0% and 114.9% respectively, at end-June 2016. Graph 47 shows the distribution of results for Group 1 and Group 2 banks; the red line indicates the 100% minimum requirement, the black horizontal lines inside the boxes indicate the median for the respective bank group. Finally, the dots represent weighted averages.



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

Source: Basel Committee on Banking Supervision. See Table C.42 for underlying data and sample size.

Banks in the sample had a shortfall of stable funding³² at the 100% requirement of €80.9 billion at end-December 2016 compared to €143.4 billion at end-June 2016. 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. For the 104 Group 1 banks in the sample, the shortfall, as described above, is €44.5 billion at end-December 2016 compared to €108.6 billion at end-June 2016. For the 83 Group 2 banks in the sample, the shortfall, as described above, is €36.5 billion at end-December 2016 compared to €34.8 billion at end-June 2016.

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 (46.8%) and Group 2 banks (47.1%). To a lesser degree, banks in the sample utilised funding from financial counterparties, which represented roughly 14.2% of total weighted available stable funding for Group 1 banks and 23.5% for Group 2 banks. By comparison, funding from non-financial corporate counterparties accounted for a greater proportion of total weighted available stable funding for Group 1 banks (14.5%) relative to Group 2 banks (5.9%).

³² The shortfall in stable funding measures the difference between balance sheet positions after the application of available stable funding factors and the application of required stable funding factors for banks where the former is less than the latter.



Funding requirements

The NSFR generally assumes short-dated (ie maturing in less than one year) and higher quality assets require a smaller proportion of stable funding relative to longer term and lower quality assets. Indeed, much of the stable funding requirement across all banks in the sample was the result of longer-term assets such as loans. Loans with longer terms, including mortgages, represented roughly half of the stable funding requirement across all banks (48.3% for Group 1 banks and 53.3% for Group 2 banks). By comparison, HQLA securities represented 4.5% of the total stable funding requirement for Group 1 banks and 3.3% for Group 2 banks.



Source: Basel Committee on Banking Supervision. See Table C.47 for underlying data and sample size.

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

Graph 50 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 2012.³³ Given the different samples of banks, results for the end-June and end-December 2016 periods in this section may differ from the ones in Sections 3.1 and 3.2.

Group 1 banks that have reported LCR data for each of the reporting periods since end-December 2012 show ratios in recent periods that have increased from ratios reported in earlier periods. The weighted average LCR for these banks was 131.9% at end-December 2016. The ratio was 126.8% and 125.6% at end-June 2016 and end-December 2015, respectively, compared to 116.8% and 121.4% at end-June 2013 and end-December 2012, respectively. While 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 several periods, the weighted average LCR of 155.5% for these banks at end-December 2016 represents the highest ratio since the end-December 2012 reporting period. 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 2012.³⁴ Group 1 banks that have reported NSFR data for each of the reporting periods since end-December 2012 show ratios in recent periods that have increased from ratios reported in earlier periods. The weighted average NSFR was 115.5% at end-December 2016 and 114.0% at end-June 2016 and 114.1% at end-December 2015, compared to 99.9% and 99.7% at end-June 2013 and end-December 2012. Although Group 2 banks that have reported NSFR data for each of the reporting periods since end-December 2012 show a ratio at end-December 2016 which is higher than the one in end-June 2016, ratios have been increasing from end-December 2012 to end-December 2015. The weighted average NSFR for these banks was 115.4% at end-December 2016, 114.9% at end-June 2016 and 115.2% at end-December 2015, compared to 101.5% and 100.2% at end-June 2013 and end-December 2012.

The aggregate shortfall at the 100% LCR minimum requirement was ≤ 13.2 billion for Group 1 banks and ≤ 1.6 billion for Group 2 banks at end-December 2016. This compares to shortfalls of ≤ 24.0 billion for Group 1 banks and ≤ 3.1 billion for Group 2 banks at end-June 2016. While the shortfall observed for both bank groups increased slightly between end-June 2015 and end-December 2015 reporting periods, shortfalls observed in the current reporting period have strongly decreased since end-December 2015 (by ≤ 41.0 billion for Group 1 banks and by ≤ 5.6 billion for Group 2 banks, respectively).

The aggregate shortfall for Group 1 and Group 2 banks that do not meet the 100% NSFR requirement has generally declined for each of the respective standards since end-June 2012. The aggregate shortfall at the 100% NSFR minimum requirement was \notin 29.5 billion for Group 1 banks and \notin 20.8 billion for Group 2 banks at end-December 2016. This compares to shortfalls of \notin 108.6 billion for Group 1 banks and \notin 8.6 billion for Group 2 banks at end-June 2016, shortfalls of \notin 180.2 billion and \notin 8.2 billion at end-December 2015 and \notin 1,666.6 billion and \notin 136.5 billion at end-December 2012.

³³ Data for Graph 50 reflects only those banks reporting LCR and NSFR data for each reporting period since end-December 2012. LCR and NSFR samples are different.

³⁴ 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. See Basel Committee on Banking Supervision, *Basel III: the net stable funding ratio*, October 2014, www.bis.org/bcbs/publ/d295.htm.

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

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



¹ As described in the text, the NSFR time series depicts data reflecting NSFR standard released in December 2010, January 2014 and October 2015.

Source: Basel Committee on Banking Supervision. See Table C.48 for underlying data and sample size.

Graph 51 displays the regional breakdown of the weighted average LCR and the weighted average NSFR³⁵ for a consistent sample of Group 1 banks across reporting periods since end-December 2012. The weighted average LCR at end-December 2016 for each of the three regions was in excess of 120%. While Europe and the Americas had initially lower average LCRs compared with the rest of the world, the average LCRs of Europe and the rest of the world and, to a lesser degree, the Americas have tended to gradually converge. The regions with lower end-2012 average ratios saw important increases in particular between end-2012 and June 2014. Interestingly the rest of the world has had fluctuations in the LCR which has seen it drop to levels around 125% and back up to levels closer to 2012 at 136%.

The weighted average NSFR at end-December 2016 for Group 1 banks in each of the three regions was well in excess of 100%. Europe and the Americas at around 110% at end-2016 have lower average NSFRs compared with the rest of the world at 122.8%. NSFRs have improved in all three regions over the past four years, in particular in the Americas.

Graph 52 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 66.7% at end-December 2012 to 89.3% at end-December 2016, while the share of Group 2 banks meeting both requirements increased from 69.2% to 87.2% during the same period. The share of G-SIBs meeting both the LCR and NSFR 100% minimum requirements has increased from 58.3% to 100.0% during that period.

Graph 50

³⁵ This graph depicts the NSFR as calculated under different versions of the NSFR framework (released in December 2010, January 2014 and October 2014, respectively). Calculations performed according to the final standard approved by the Committee in October 2014 start with the end-December 2014 reporting period.

LCR and NSFR by region



¹ As described in the text, the NSFR time series depicts data reflecting NSFR standard released in December 2010, January 2014 and October 2015.

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

Share of banks meeting the LCR and NSFR requirements¹





¹ As described in the text, the NSFR time series depicts data reflecting NSFR standard released in December 2010, January 2014 and October 2015.

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

Graph 53 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 increases in weighted average LCR for Group 1 banks, G-SIBs, and Group 2 banks is mainly driven by continuous increases in HQLA, partially offset by increases in net outflows.

Graph 52

LCR and change in HQLA and net outflows



Graph 54 provides a breakdown by region of the results in Graph 53 for Group 1 banks. It displays the weighted average LCR for Group 1 banks located in each of the three regions. This graph also displays a decomposition of period-to-period LCR changes into changes in HQLA and net outflows. This decomposition indicates in each of the three regions, changes in HOLA have been a slightly more important driver of changes in the weighted LCR, although both sources of changes have played a significant role.

LCR and change in HQLA and net outflows, by region



Consistent sample of Group 1 banks

Graph 55 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 \notin 2.63 trillion and \notin 0.14 trillion for Group 1 and Group 2 banks, respectively, at end-December 2016, which is the largest difference across all reporting periods since end-December 2012.



Graph 56 below depicts the percentage change in ASF and RSF over time. For all bank groups, there were significant positive changes in ASF of around 10 percentage points for the end-December 2013 reporting period and this led to increases in the NSFR across the board of also over 10 percentage points.



NSFR and change in ASF and RSF¹

¹ As described in the text, the NSFR analysis is based on NSFR standard released in December 2010, January 2014 and October 2015. Source: Basel Committee on Banking Supervision. See Table C.54 for underlying data and sample size.

Graph 57 illustrates a regional breakdown of the evolution of the weighted average NSFR and changes in ASF and RSF for Group 1 banks over time. For all regions, figures in 2013 reflect changes to the

definition of the NSFR standard. The main impact of the definitional changes was an increase in ASF for most banks. For the rest of the world, the denominator has on average been increasing since 2014 to 2015 which led to a decrease in the NSFR, while in Europe the increase in NSFR is driven mainly by the decrease in the RSF. In the Americas, the change in ASF had experienced a downward trend from 2013 through 2015, but has increased over 2016. In general, and for most periods, the positive change in ASF exceeds the increase in RSF indicating that the NSFR ratio has increased.



NSFR and change in ASF and RSF,¹ by region

¹ As described in the text, the NSFR analysis is based on NSFR standard released in December 2010, January 2014 and October 2015. Source: Basel Committee on Banking Supervision. See Table C.55 for underlying data and sample size.

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Impact of the revised minimum capital requirements for market risk

This special feature analyses the impact of the revised minimum capital requirements for market risk for the end-December 2016 reporting date. The final revised market risk standard was published by the Committee in January 2016. QIS data for market risk represent best efforts and are less robust than in other areas of the QIS owing to the large number of trading positions at individual banks that require, and will require, numerous manual adjustments until systems reflecting the revised minimum capital requirements for market risk are available. The caveats with regard to data quality apply to both internal models and the revised standardised approaches.

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

A total of 89 banks from 20 countries, of which 71 Group 1 banks and 18 Group 2 banks, have provided data on the revised minimum requirements for market risk at the end-December 2016 reporting date (see Table B.6).

As of end-December 2016, the percentage increase of market risk minimum required capital (MRC) due to the revised market risk standard was significant, with a weighted average overall increase of 51.7%, 51.4% and 106.0% in market risk MRC for Group 1 banks, G-SIBs and Group 2 banks, respectively. As of end-June 2016, the percentage increase was higher, with a weighted average overall increase of 67.2%, 75.9% and 87.4% of current market risk MRC for Group 1 banks, G-SIBs and Group 2 banks, respectively. The left panel of Graph 1 shows a wide dispersion of the isolated impact of the revised market risk standard relative to current market risk MRC. The standardised approach for market risk appears to be a main driver of the large increases. Banks that reported an increase in market risk capital requirements above 100% applied the standardised approach to all or most of their trading book positions. Conversely, banks that reported decreases in MRC used the revised market risk standards' internal model approach (IMA) for most or all of their positions.

A significant change in market risk MRC does not necessarily result in an equivalent effect on overall MRC, because the impact on overall MRC also depends on the share of market risk MRC relative to overall MRC. The impact on total MRC for Group 1 banks and G-SIBs is indeed more muted, with weighted average increases of 2.1% and 2.0%, respectively, at end-December 2016. The weighted average

1.8% increase in overall MRC for Group 2 banks is slightly lower than the respective increases seen for Group 1 banks in spite of the higher average standalone increase. As the sample size for Group 2 banks continues to be relatively small at 18 banks, these results should be interpreted with caution.

The right panel of Graph 1 shows a wide dispersion of the impact of the revised minimum capital requirements for market risk on *overall* MRC but in a different proportion and pattern than the impact relative to current market risk MRC. Generally, banks with less material trading book positions have in some instances reported significant increases in market risk capital requirements, but the relative impact of those changes on overall MRC may be relatively small. This means that banks with small trading books do not disproportionately influence the results relative to current overall MRC.



Impact of revised minimum capital requirements for market risk on MRC¹

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 Table C.56 for underlying data and sample size.

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Impact of the revised securitisation framework

General overview securitisation framework

This special feature explores the impact of the revised securitisation framework.¹ The main changes of the revised framework in comparison to the current framework are:

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

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

- Securitisation Internal-Ratings Based Approach (SEC-IRBA);
- Securitisation External-Ratings Based Approach (SEC-ERBA);²
- Securitisation Standardised Approach (SEC-SA).

Data description

A total of 106 banks submitted data on securitisation exposures, which includes up to 75 Group 1 banks (of which 23 G-SIBs) and 31 Group 2 banks. The sample of Group 1 banks represents between 86.3 and 90.9% of total securitisation exposures of all Group 1 banks while the sample of Group 2 banks represents between 67.1 and 70.4% of total securitisation exposures of all Group 2 banks in the Basel III monitoring sample. The total securitisation exposures and RWA of all Group 1 banks were \leq 1.4 trillion and \leq 428.4 billion respectively, while total exposures and RWA for all Group 2 banks were \leq 42.2 billion and \leq 11.9 billion respectively.

² National supervisors are provided with a national discretion to not implement the SEC-ERBA.

¹ Basel Committee on Banking Supervision, *Revisions to the securitisation framework, amended to include the alternative capital treatment for "simple, transparent and comparable" securitisations*, July 2016, <u>www.bis.org/bcbs/publ/d374.htm</u>.

Banks are included in the analyses below only to the extent that they were able to provide data of sufficient quality to complete the analysis. Accordingly, 18 banks have been excluded from certain sections of the analysis. This may imply that in that the results reported in the following sections should be based on different sample sizes.

Even for banks that were included in the sample, some data biases exist which might affect the results. Two significant sources of bias are:

- The classification of securitisations as being STC or non-STC. In light of the relatively recent publication of the STC criteria³ in July 2015, not all banks have a well-defined process in place to classify a securitisation exposure as STC. This has implied that 52 banks (59%) reported no STC exposures and nine banks (10%) reported all exposures as STC exposures. Given the larger number of banks which reported having no STC exposures, it is further possible that directionally, the share of STC-eligible securitisation exposures has been underestimated, leading to an overestimation of the capital increase under the final standards.
- Allocation of RWA under the current and revised frameworks. The risk-weighting approaches under the current and revised frameworks cannot be mapped nicely; the current framework includes four ratings-based approach look-up tables and two approaches for non-rated exposures, while the revised framework introduced a new hierarchy with the three different approaches (SEC-IRBA, SEC-ERBA and SEC-SA). In this regard, not all banks might have allocated the RWA under the current and revised frameworks in the same way, making direct comparison of the impact by approach impossible.

In both instances, quantification of the potential impact of the bias was not possible based on the data collected.

Further, it is worth noting that the exercise did not consider the Committee's consultation to allow exposures to asset-backed commercial paper conduits to qualify for STC treatment. This means that depending on the outcome of the consultation, capital requirements stemming from the revised framework could be further reduced.

Overview of securitisation exposures

Share of securitisation exposures by role

For banks reporting information related to their role in the securitisation transactions, exposures arising from investor positions⁴ dominate, contributing 61% to the total exposure of ≤ 1.32 trillion – the remaining exposures are evenly split between originator and sponsor positions. The relative breakdown of a jurisdiction's overall exposure according to the role of the bank differs significantly across jurisdictions, given the heterogeneity among securitisation markets and the different strategies applied by banks.

Share of securitisation exposures by STC/non-STC

One of the key changes of the revised securitisation framework was the introduction of the distinction between STC and non-STC exposures. For the monitoring exercise banks reported 20% of their exposures as STC-eligible (Graph 1). However, if the share of STC exposures is analysed on an individual bank level,

³ Basel Committee on Banking Supervision, *Criteria for identifying simple, transparent and comparable securitisations*, July 2015, <u>www.bis.org/bcbs/publ/d332.htm</u>.

⁴ The bank could assume three different roles: (i) originator that securitises assets from its own balance sheet, (ii) sponsor which securitise assets from balance sheet of its client, (iii) investor which buys third-party transactions.

the STC share fluctuates significantly and it can be observed that 59% of the number of banks reported all of their exposures as non-STC and only 22% reported a share of STC exposures of more than 50%. This is because several banks were not yet in the position to make a reasonable classification regarding the STC eligibility. The numbers are therefore subject to a level of data uncertainty. Overall it is reasonable to expect that the amount of STC exposures has been underestimated.

Share of securitisation exposures by approach

Another key change of the revised securitisation framework was the introduction of a new hierarchy with the three different approaches (SEC-IRBA, SEC-ERBA and SEC-SA) to calculate risk weights. In line with the hierarchy of approaches set out under the revised securitisation framework, most of the exposures (40%) are subject to the SEC-IRBA followed by the SEC-ERBA⁵ (37%) and the SEC-SA (23%) (Graph 1). However – similar to the situation of the share of STC exposures – analysing the contribution of the different approaches by jurisdiction or by role of the bank delivers a heterogeneous picture.



¹ The sample consists of 88 banks.

Source: Basel Committee on Banking Supervision. See also Table 1.

The extent of the application of SEC-IRBA significantly depends on the role of the bank. Jurisdictions with a high proportion of originator positions also tend to have a high proportion of their exposures subject to the SEC-IRBA. Such an observation could be because for an originator it is possible to determine the necessary inputs to the SEC-IRBA (such as PDs and LGDs for the underlying exposures) as those exposure are coming from its own balance sheet – whereas an investor, in most cases, will not have sufficient information on the underlying assets to assess the PD and/or LGD.

⁵ Including the Internal Assessment Approach.

Impact of the revised framework

Table 1 shows the securitisation exposures and the related RWA under the current and revised frameworks. The impact of the revised framework on total EAD is negligible – no significant change in total exposures was observed.⁶ However, a limited number of banks classified their securitisation exposures for the current framework according the Basel II standards. Therefore, some changes in exposure amounts are present as a result of the said reporting issue.

The impact of the revised framework on total RWA shows an increase of \notin 196.4 billion, mainly driven by an increase of the RWA for non-STC exposures which contributes 82% to the overall securitisation exposures. This is mainly the result of the combined effect of the overall more conservative calibration of senior securitisation exposures including the introduction of a floor to the risk weight of 15% and the necessary reclassification of some exposures following the Committee's decision to standardise the hierarchy of approaches.⁷

Further, the table shows a significant increase in the RWA for non-STC securitisation exposures across the different approaches (SEC-IRBA, SEC-ERBA and SEC-SA); this has to be read in light of the earlier explanation regarding data quality. It might be that several banks, while correctly calculating the RWA under the current and the revised frameworks, have incorrectly allocated them in the reporting template, making the direct comparison of the impact by approach impossible.

Lastly, the increase of €11.3 billion (175%) for STC RWA under the SEC-ERBA is mainly the result of inconsistent data reported by three banks. It is worth highlighting that for EU banks, when risk weighting the exposures that, according the national framework are currently deducted from Tier 1 capital, the result is a decrease in RWA of €3.5 billion.

⁶ In order to have comparable data, each bank was requested under the exercise to classify their securitisation exposures following the revised framework also for its corresponding classification under the current framework.

⁷ In addition, one bank, while calculating the securitisation RWA under the current framework, has reclassified part of its exposures as re-securitisation, which under the revised framework receives a higher risk weight.

		Exposure			RWA	
	Current framework (€ bn)	Final standards (€ bn)	Change (%)	Current framework (€ bn)	Final standards (€ bn)	Change (%)
Non-STC securitisations: SEC-IRBA	375.9	389.8	3.7	68.5	136.9	100.0
Non-STC securitisations: SEC-ERBA	286.5	255.1	-11.0	76.5	115.7	51.2
Non-STC securitisations: IAA	146.6	136.0	-7.2	16.5	40.1	142.4
Non-STC securitisations: SEC-SA	225.7	225.1	-0.3	94.3	144.5	53.2
Of which: resecuritisation	13.4	14.1	5.7	18.9	32.6	73.0
Non-STC securitisations: total	1,034.7	1,006.0	-2.8	255.8	437.1	70.9
STC securitisations: SEC-IRBA	90.9	104.3	14.7	22.3	31.9	43.2
STC securitisations: SEC-ERBA	64.2	77.8	21.3	6.4	17.7	175.4
STC securitisations: SEC-SA	55.1	56.9	3.2	29.3	30.2	3.2
STC securitisations: total	210.2	239.0	13.7	58.0	79.8	37.7
Others (1250% RW)	2.1	1.5	-30.5	20.2	13.3	-34.0
Total	1,247.1	1,246.5	0.0	333.9	530.3	58.8
Deducted (EU only)	1.1	1.0	-5.5	13.6	10.1	-25.7

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

¹ The sample consists of 88 banks. Under the EU national framework banks are allowed, in alternative to risk weight an exposure to 1250%, to deduct it from Tier 1 capital. According to the final standards these exposures cannot be deducted and will be risk weighted.

Source: Basel Committee on Banking Supervision.

The average RWA increase is 59%. Some countries show significant variations, mainly related to the differences in risk profiles of the participating banks. For example, for banks with a portfolio of highly rated securitisation exposures the RWA will increase significantly due to the increase of the risk weight floor. For example, for a AAA-rated securitisation exposure that does not qualify for STC treatment with a maturity of five years, the risk weight will increase from 7% to 20% which corresponds to a relative increase of 185%. On the other hand, banks holding a securitisation portfolio consisting mainly of sub-investment grade exposure might even experience a RWA decrease. Overall the observed results are in line with the objective of the revised securitisation framework to address the flaws of the Basel II securitisation framework, where highly-rated securitisation exposures had excessively low risk weights and low-rated securitisation exposures had excessively high risk weights.

Graph 2 shows that under the current framework the total average risk weight for STC exposures and non-STC exposures remains unchanged, which reflects the fact that the current framework does not have any preferential treatment for STC exposures. However, under the revised framework even if for both – STC and non-STC exposures – an increase can be observed, the increase for non-STC is significantly higher; this is in line with the objective to establish a preferential treatment for STC exposures.

Table 1

Average risk weight by approach



¹ The sample consists of 88 banks. Total under non-STC securitisations includes deductions for EU and securitisations subject to a 1250% risk weight.

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

Overall, the share of securitisation MRC in overall MRC is expected to increase by 0.9 percentage points from 1.8% to 2.7%.

Annex A: Basel III phase-in arrangements

Basel III phase-in arrangements

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

Table A.1

	2016	2017	2018	As of 2019	
Leverage ratio	Parallel run until 1 Jan 2017 Disclosure started 1 Jan 2015		Migration to Pillar 1		
Minimum CET1 ratio	4.5%	4.5%	4.5%	4.5%	
Capital conservation buffer	0.625%	1.25%	1.875%	2.50%	
G-SIB surcharge		Phase-in		1.0%-2.5%	
Minimum common equity plus capital conservation buffer	5.125%	5.75%	6.375%	7.0%	
Phase-in of deductions from CET1 (including amounts exceeding the limit for DTAs, MSRs and financials)	60%	80%	100%	100%	
Minimum Tier 1 capital	6.0%	6.0%	6.0%	6.0%	
Minimum total capital	8.0%	8.0%	8.0%	8.0%	
Minimum total capital plus capital conservation buffer	8.625%	9.25%	9.875%	10.5%	
Capital instruments that no longer qualify as Tier 1 capital or Tier 2 capital	Phased out over 10 year horizon beginning 2013				

Liquidity coverage ratio	70%	80%	90%	100%
Net stable funding ratio			Introduce minimum standard	

Minimum and target risk-based capital and leverage ratio requirements

Fully phased-in Basel III, in per cent

	Fully impleme	ented risk-based	requirement	Fully implemented leverage ratio requirement
	Minimum	Target non- G-SIBs	Target G-SIBs	Minimum and target
CET1 capital	4.5	7.0	7.0–9.5	
Tier 1 capital ⁴	6.0	8.5	8.5-11.0	3.0
Total capital⁵	8.0	10.5	10.5–13.0	

Table A.2
Annex B: Sam	ole statistics	and additional	results
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Number of banks for w	hich data have	been provided ¹
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Table B.1

		(Group 1	L banks			Group 2 banks					
	AII	RWA and capital	Leverage	LCR	NSFR	Securiti- sation	AII	RWA and capital	Leverage	LCR	NSFR	Securiti- sation
Argentina (AM)	0	0	0	0	0	0	2	2	2	2	2	0
Australia (RW)	4	4	4	4	4	3	1	1	1	1	1	0
Belgium (EU)	2	2	2	2	2	2	3	3	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
France (EU)	5	5	5	5	5	5	2	2	2	2	2	2
Germany (EU)	7	7	7	0	7	6	29	29	29	0	28	8
Hong Kong SAR (RW)	0	0	0	0	0	0	0	0	0	0	0	0
India (RW)	5	5	5	5	5	2	5	5	4	4	3	0
Indonesia (RW)	0	0	0	0	0	0	2	2	2	2	2	0
Italy (EU)	2	2	2	2	2	1	12	12	12	12	12	8
Japan (RW)	16	16	16	16	16	16	3	3	3	3	2	3
Korea (RW)	6	6	6	6	6	6	2	2	2	2	2	2
Luxembourg (EU)	0	0	0	0	0	0	1	1	1	1	1	0
Mexico (AM)	1	1	1	1	1	1	6	6	6	6	5	6
Netherlands (EU)	4	4	4	4	4	3	6	6	6	5	5	1
Russia (EU)	1	1	1	1	1	1	0	0	0	0	0	0
Saudi Arabia (RW)	3	3	3	3	3	2	0	0	0	0	0	0
Singapore (RW)	3	3	3	3	3	3	0	0	0	0	0	0
South Africa (RW)	3	3	3	3	3	3	2	2	2	2	2	2
Spain (EU)	2	2	2	2	2	1	6	6	6	6	6	3
Sweden (EU)	4	4	4	4	4	3	5	5	1	1	1	0
Switzerland (EU)	2	2	2	2	2	2	1	1	1	1	1	0
Turkey (EU)	3	3	3	3	3	0	0	0	0	0	0	0
United Kingdom (EU)	5	5	5	4	4	5	5	5	3	4	4	3
United States (AM)	13	13	13	13	13	11	0	0	0	0	0	0
Total	105	105	105	97	104	82	95	95	87	58	83	41
of which: G-SIBs	30											

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.

CET1 regulatory adjustments

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

Table B.2

	Number of banks	Goodwill	Intangibles	DTA ¹	Financials	DTA above threshold	Excess above 15% ²	Other ³	Total
H1 2011	93	-15.3	-3.7	-3.2	-2.9	-1.7	-2.1	-3.0	-31.9
H2 2011	93	-13.9	-3.5	-2.8	-1.9	-1.6	-1.6	-3.7	-29.0
H1 2012	93	-13.2	-3.3	-2.5	-1.7	-1.1	-1.3	-3.4	-26.5
H2 2012	93	-12.3	-3.1	-2.6	-2.4	-1.1	-1.1	-2.8	-25.5
H1 2013	93	-11.9	-2.9	-2.6	-2.4	-1.0	-0.9	-2.1	-23.8
H2 2013	93	-11.2	-2.7	-2.4	-1.4	-0.5	-0.4	-1.5	-19.9
H1 2014	93	-10.7	-2.6	-2.2	-1.3	-0.4	-0.2	-1.4	-18.8
H2 2014	93	-10.3	-2.5	-2.0	-1.0	-0.4	-0.2	-1.8	-18.2
H1 2015	93	-10.0	-2.4	-1.9	-0.8	-0.3	-0.1	-1.7	-17.3
H2 2015	93	-9.5	-2.3	-1.8	-0.7	-0.3	-0.1	-1.8	-16.7
H1 2016	93	-9.3	-2.3	-1.7	-0.7	-0.2	-0.1	-2.2	-16.7
H2 2016	93	-9.0	-2.3	-1.6	-0.7	-0.3	0.0	-2.0	-16.0

¹ DTAs are the deferred tax assets that are deducted in full under Basel III (ie they exclude DTAs that are related to temporary differences, which are only deducted when they exceed a threshold). ² Excess above 15% pertains to significant investments in the common shares of unconsolidated financial institutions, mortgage servicing rights, and DTAs due to timing differences that do not separately exceed the 10% category thresholds but in the aggregate exceed the 15% basket threshold. ³ Other includes adjustments related to investment in own shares, shortfall of provisions to expected losses, cash flow hedge reserves, cumulative changes in fair value due to changes in own credit risk, net pension fund assets, securitisation gains on sale, mortgage servicing rights and deductions from additional Tier 1 capital to the extent they exceed a bank's additional Tier 1 capital.

CET1 regulatory adjustments

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

Table B.3

	Number of banks	Goodwill	Intangibles	DTA ¹	Financials	DTA above threshold	Excess above 15% ²	Other ³	Total
H1 2011	57	-15.9	-3.8	-0.4	-4.1	-4.4	-2.3	-4.5	-35.2
H2 2011	57	-10.0	-3.7	-0.5	-4.3	-2.3	-1.5	-4.5	-26.6
H1 2012	57	-9.1	-3.3	-0.4	-4.1	-2.4	-1.5	-4.4	-25.0
H2 2012	57	-8.3	-3.2	-0.9	-4.4	-2.4	-1.2	-4.4	-24.9
H1 2013	57	-8.3	-3.1	-1.2	-4.4	-1.8	-1.2	-5.1	-25.0
H2 2013	57	-6.6	-3.2	-0.7	-3.5	-0.4	-0.7	-5.5	-20.8
H1 2014	57	-5.6	-3.0	-0.7	-2.1	0.0	-0.3	-2.1	-13.9
H2 2014	57	-4.7	-3.1	-1.0	-2.9	-0.4	-0.5	-2.5	-15.1
H1 2015	57	-4.3	-2.9	-0.9	-2.7	-0.2	-0.5	-2.0	-13.5
H2 2015	57	-4.3	-2.9	-1.1	-2.5	-0.1	-0.1	-2.3	-13.2
H1 2016	57	-4.2	-3.2	-1.4	-2.1	0.0	-0.1	-2.1	-13.1
H2 2016	57	-4.0	-3.3	-2.2	-3.0	-0.4	-0.4	-1.8	-14.9

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.

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

Group 1 banks, in per cent Table I									
		Target Tier 1 ra (<8.5% + G-SIB	tio binding surcharge)?		Total after capital raising to meet				
		Yes	No	Total	target Tier 1 ratio				
Leverage ratio	Yes	0.0	0.0	0.0	0.0				
binding (<3%)?	No	0.0	100.0	100.0	100.0				
	Total	0.0	100.0	100.0	100.0				
с в I.с. [.]		c · ·							

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

		Target Tier 1 ratio b	inding (<8.5%)?		Total after capital raising to meet
	_	Yes	No	Total	target Tier 1 ratio
Leverage ratio	Yes	0.0	3.5	3.5	3.5
binding (<3%)?	No	2.3	94.2	96.5	94.2
	Total	2.3	97.7	100.0	97.7

Number of banks for which data on the revised minimum capital requirements for market risk have been provided

	Total	Group 1 banks	Group 2 banks
Belgium	3	2	1
Brazil	2	2	0
Canada	5	5	0
China	6	6	0
France	6	5	1
Germany	11	7	4
India	6	2	4
Italy	5	2	3
Japan	9	9	0
Korea	6	5	1
Mexico	2	1	1
Netherlands	2	2	0
Saudi Arabia	2	2	0
Singapore	2	2	0
South Africa	1	1	0
Spain	4	1	3
Sweden	2	2	0
Switzerland	2	2	0
United Kingdom	5	5	0
United States	7	7	0
Total	88	70	18
Source: Basel Committee on Banki			

Source: Basel Committee on Banking Supervision.

Table B.6

Annex C: Statistical Annex

Transitional CET1, Tier 1 and total capital ratios

In per cent

Table C.1

	Group 1 banks			Of	which: G-S	IBs	Group 2 banks		
	CET1	Tier 1	Total	CET1	Tier 1	Total	CET1	Tier 1	Total
Max	29.2	29.2	33.8	18.6	20.9	25.0	46.9	57.6	57.6
75th percentile	14.3	15.9	19.1	13.6	16.0	19.6	18.7	19.6	20.8
Median	12.8	13.7	15.7	12.9	14.7	17.5	13.7	13.8	15.6
25th percentile	11.6	12.5	14.6	11.7	13.0	15.1	11.7	11.9	13.8
Min	8.6	9.1	11.3	10.3	11.0	13.0	7.4	8.2	10.4
Weighted average	12.6	13.8	16.3	12.5	13.9	16.3	14.0	14.6	16.7
Source: Basel Committee	e on Banking	Supervision.							

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

In per cent

	Group 1 banks			Of	Of which: G-SIBs			Group 2 banks		
	CET1	Tier 1	Total	CET1	Tier 1	Total	CET1	Tier 1	Total	
Max	29.6	29.6	34.3	18.6	21.3	26.4	46.9	57.6	57.6	
75th percentile	14.4	15.2	18.1	13.4	15.4	18.5	18.5	18.7	20.7	
Median	12.4	13.4	14.7	12.3	13.9	16.2	13.3	13.5	14.9	
25th percentile	11.0	12.1	13.5	11.5	12.5	13.9	11.3	11.4	12.7	
Min	8.2	8.8	10.1	9.7	11.0	12.1	6.9	7.3	8.8	
Weighted average	12.3	13.4	15.3	12.3	13.5	15.4	13.4	13.9	15.6	
Source: Basel Committee	e on Banking	Supervision.								

Transitional CET1, Tier 1 and total capital ratios

	G	iroup 1 bank	s	0	f which: G-SII	Bs	G	iroup 2 bank	s
	CET1	Tier 1	Total	CET1	Tier 1	Total	CET1	Tier 1	Total
H1 2011	10.1	11.4	14.1	9.6	11.1	13.7	10.0	11.0	14.3
H2 2011	10.3	11.5	14.1	9.8	11.3	13.9	10.4	11.2	14.5
H1 2012	10.8	11.9	14.4	10.5	11.9	14.2	11.1	11.7	15.0
H2 2012	11.3	12.4	15.0	11.1	12.5	14.9	10.8	11.4	14.6
H1 2013	10.9	11.9	14.6	10.9	12.0	14.5	11.1	11.7	15.0
H2 2013	11.3	12.3	15.0	11.4	12.4	15.0	11.5	12.0	15.4
H1 2014	11.4	12.2	14.8	11.2	12.1	14.6	11.4	11.9	14.9
H2 2014	11.7	12.6	15.3	11.5	12.6	15.2	11.7	12.2	15.0
H1 2015	11.9	12.9	15.5	11.8	12.9	15.4	12.2	12.8	15.3
H2 2015	12.2	13.3	15.9	12.1	13.4	16.0	12.4	13.0	15.4
H1 2016	12.2	13.4	15.9	12.1	13.4	15.8	12.6	13.2	15.7
H2 2016	12.6	13.8	16.3	12.5	13.9	16.3	12.9	13.5	15.9

Consistent sample of banks,¹ in per cent

 1 Before the implementation of the Basel III framework, results have been calculated on the basis of the relevant national regulatory frameworks in place at the reporting dates. 2 Group 1 includes 91 banks, G-SIB includes 30 banks and Group 2 includes 57 banks.

Source: Basel Committee on Banking Supervision.

Transitional CET1, Tier 1 and total capital ratios, by region¹

Consistent sample of Group 1 banks,² in per cent

Table C.4

Table C.3

		-								
		Europe			Americas			st of the wor	ſd	
	CET1	Tier 1	Total	CET1	Tier 1	Total	CET1	Tier 1	Total	
H1 2011	10.3	12.1	14.6	9.9	11.3	13.9	10.1	10.7	13.8	
H2 2011	10.2	11.9	14.2	10.0	11.6	14.0	10.6	11.1	14.1	
H1 2012	11.1	12.7	14.9	10.7	12.1	14.3	10.6	11.1	14.0	
H2 2012	11.4	13.0	15.3	11.5	12.8	15.2	11.1	11.6	14.6	
H1 2013	11.9	13.2	16.0	10.8	12.2	14.3	10.1	10.7	13.5	
H2 2013	12.4	13.7	16.7	11.2	12.6	14.7	10.5	11.0	13.7	
H1 2014	11.7	12.8	15.8	11.5	12.3	14.3	11.0	11.5	14.2	
H2 2014	12.1	13.4	16.4	11.7	12.7	14.7	11.3	12.0	14.8	
H1 2015	12.4	13.8	16.9	12.2	13.3	15.4	11.3	12.0	14.5	
H2 2015	12.8	14.4	17.6	12.1	13.3	15.4	11.8	12.6	15.0	
H1 2016	12.8	14.3	17.6	12.1	13.4	15.5	11.9	12.7	14.8	
H2 2016	13.4	15.1	18.5	12.5	13.9	16.0	12.1	12.9	15.1	

¹ Before the implementation of the Basel III framework, results have been calculated on the basis of the relevant national regulatory frameworks in place at the reporting dates. ² Europe includes 33 banks, the Americas include 20 banks and the rest of the world includes 40 banks. Source: Basel Committee on Banking Supervision.

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

Consistent sample of banks,¹ in per cent

	G	Group 1 bank	S	0 [.]	f which: G-SI	Bs	Group 2 banks			
	CET1	Tier 1	Total	CET1	Tier 1	Total	CET1	Tier 1	Total	
H1 2011	7.2	7.4	8.7	6.7	7.0	8.3	7.2	7.6	9.6	
H2 2011	7.7	8.0	9.2	7.3	7.6	8.9	7.3	7.8	9.8	
H1 2012	8.5	8.8	9.9	8.2	8.5	9.7	7.8	8.6	10.2	
H2 2012	9.2	9.4	10.6	8.9	9.2	10.4	7.8	8.4	9.9	
H1 2013	9.5	9.7	11.1	9.3	9.5	11.0	7.8	8.5	10.1	
H2 2013	10.2	10.5	11.9	10.0	10.4	11.8	9.1	9.8	11.7	
H1 2014	10.8	11.2	12.6	10.6	11.1	12.4	10.6	10.9	12.7	
H2 2014	11.1	11.7	13.3	11.0	11.7	13.2	10.9	11.3	12.8	
H1 2015	11.5	12.2	13.9	11.4	12.3	14.0	11.7	12.2	13.7	
H2 2015	11.8	12.7	14.5	11.7	12.8	14.6	12.0	12.5	14.1	
H1 2016	12.0	12.9	14.7	11.9	12.9	14.7	12.3	12.7	14.5	
H2 2016	12.3	13.5	15.3	12.3	13.5	15.4	12.3	12.8	14.7	

¹ Group 1 includes 91banks, G-SIB includes 30 banks and Group 2 includes 57 banks.

Source: Basel Committee on Banking Supervision.

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

Consistent sample of Group 1 banks,¹ in per cent

Table C.6

Table C.5

		Europe			Americas		Rest of the world			
	CET1	Tier 1	Total	CET1	Tier 1	Total	CET1	Tier 1	Total	
H1 2011	6.6	6.8	7.8	6.1	6.8	9.1	8.8	8.9	9.5	
H2 2011	6.9	7.1	8.0	7.1	7.6	10.0	9.2	9.3	10.0	
H1 2012	7.9	8.1	9.0	7.8	8.4	10.5	9.8	9.9	10.5	
H2 2012	8.5	8.6	9.9	8.5	9.0	11.0	10.4	10.5	11.1	
H1 2013	9.3	9.4	11.1	8.8	9.4	11.2	10.2	10.3	11.0	
H2 2013	10.3	10.5	12.4	9.6	10.3	12.0	10.5	10.6	11.4	
H1 2014	10.9	11.3	13.5	10.0	11.0	12.4	11.2	11.3	12.0	
H2 2014	11.3	11.9	14.0	10.4	11.5	13.1	11.4	11.7	12.8	
H1 2015	11.6	12.4	14.7	11.2	12.5	14.2	11.6	12.0	13.1	
H2 2015	12.2	13.1	15.7	11.2	12.6	14.3	12.0	12.5	13.7	
H1 2016	12.3	13.3	16.0	11.5	13.1	15.0	12.0	12.6	13.7	
H2 2016	13.0	14.5	17.7	11.8	13.5	15.3	12.2	12.8	13.9	

¹ Europe includes 33 banks, the Americas include 19 banks and the rest of the world includes 40 banks.

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

Consistent sample of banks,¹ in per cent

	G	Group 1 bank	S	0	f which: G-SI	Bs	Group 2 banks			
-		Cha	nge		Cha	ange		Ch	ange	
	Tier 1 ratio	RWA	Tier 1 capital	Tier 1 ratio	RWA	Tier 1 capital	Tier 1 ratio	RWA	Tier 1 capital	
H1 2011	7.4			7.0			7.6			
H2 2011	8.0	5.9	13.7	7.6	5.7	14.5	7.8	2.7	4.5	
H1 2012	8.8	-0.1	9.8	8.5	-1.2	10.6	8.6	-1.6	8.7	
H2 2012	9.4	-3.6	3.5	9.2	-5.1	2.5	8.4	-0.6	-3.4	
H1 2013	9.7	-0.3	3.1	9.5	0.5	4.5	8.5	-3.0	-2.0	
H2 2013	10.5	-4.3	3.2	10.4	-4.7	3.7	9.8	-3.7	11.9	
H1 2014	11.2	0.6	7.4	11.1	0.4	7.5	10.9	1.2	11.8	
H2 2014	11.7	7.8	12.7	11.7	9.5	15.5	11.3	-1.3	2.5	
H1 2015	12.2	8.2	12.9	12.3	8.4	13.7	12.2	3.9	12.1	
H2 2015	12.7	-0.8	2.9	12.8	-0.7	3.4	12.5	-1.1	1.3	
H1 2016	12.9	0.6	2.3	12.9	0.1	1.5	12.7	-1.3	1.0	
H2 2016	13.4	2.3	6.5	13.5	1.5	6.2	12.8	-1.3	-0.5	
¹ Group 1 includes 93 banks, G-SIB includes 30 banks and Group 2 includes 57 banks. Source: Basel Committee on Banking Supervision										

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

Consistent sample of Group 1 banks,¹ in per cent

Table C.8

		Europe			Americas		Rest of the world			
		Cha	inge	Change			Chang		inge	
	Tier 1 ratio	RWA	Tier 1 capital	Tier 1 ratio	RWA	Tier 1 capital	Tier 1 ratio	RWA	Tier 1 capital	
H1 2011	6.8			6.8			8.9			
H2 2011	7.1	1.4	5.7	7.6	3.4	16.4	9.3	14.4	20.0	
H1 2012	8.1	-3.8	9.6	8.4	0.5	10.5	9.9	3.8	9.4	
H2 2012	8.6	-6.2	0.2	9.1	-5.0	2.4	10.5	0.6	7.1	
H1 2013	9.4	-4.2	4.7	9.4	-2.4	1.2	10.3	5.3	3.0	
H2 2013	10.5	-4.2	6.6	10.4	-7.6	1.7	10.6	-1.9	1.2	
H1 2014	11.3	1.1	8.8	11.0	2.1	8.1	11.3	-0.9	5.8	
H2 2014	11.9	-1.2	4.3	11.5	10.6	16.2	11.7	14.3	18.2	
H1 2015	12.4	3.8	7.6	12.5	5.3	14.5	12.0	13.7	16.1	
H2 2015	13.1	-4.2	1.4	12.6	3.2	3.7	12.5	-0.8	3.6	
H1 2016	13.3	-1.1	0.6	13.0	0.6	4.3	12.6	1.7	2.4	
H2 2016	14.5	-3.2	5.1	13.4	2.1	5.1	12.8	6.3	8.3	

¹ Europe includes 33 banks, the Americas include 20 banks and the rest of the world includes 40 banks. Source: Basel Committee on Banking Supervision.

Estimated capital shortfalls at the minimum level

	Group 1 banks					Of whic	ch: 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	66.6	119.5	30	31.7	52.6	87.9	104	8.6	7.3	5.3
H2 2011	107	11.9	32.5	107.8	30	7.6	22.6	86.2	102	7.6	2.1	4.0
H1 2012	106	3.7	16.2	61.8	30	0.1	11.2	50.4	99	4.8	1.6	5.0
H2 2012	106	2.2	10.2	46.0	30	0.0	5.9	36.1	110	11.4	2.3	8.5
H1 2013	107	3.3	6.9	18.6	30	0.0	1.8	13.0	113	12.4	3.0	8.4
H2 2013	107	0.1	1.4	3.6	30	0.0	0.0	0.2	108	2.0	0.7	4.0
H1 2014	103	0.0	0.0	0.0	30	0.0	0.0	0.0	109	0.1	0.3	3.5
H2 2014	103	0.0	0.0	0.0	30	0.0	0.0	0.0	103	0.0	0.4	1.8
H1 2015	105	0.0	0.0	0.0	30	0.0	0.0	0.0	109	0.0	0.0	0.3
H2 2015	105	0.0	0.0	0.0	30	0.0	0.0	0.0	107	0.0	0.0	0.2
H1 2016	105	0.0	0.0	0.0	30	0.0	0.0	0.0	100	0.0	0.0	0.0
H2 2016	105	0.0	0.0	0.0	30	0.0	0.0	0.0	89	0.0	0.0	0.0
Source: Basel C	ommittee o	on Bankin	ng Supervis	ion.								

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

Estimated capital shortfalls at the target level

	Group 1 banks					Of whic	ch: 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	485.6	221.7	223.6	30	425.9	163.2	158.8	104	32.4	16.4	11.2
H2 2011	107	384.1	226.5	232.4	30	343.9	173.6	162.5	102	21.7	11.7	8.2
H1 2012	106	197.9	197.1	224.4	30	175.2	159.3	151.7	99	16.0	7.3	11.6
H2 2012	106	115.0	159.2	171.7	30	97.5	128.3	112.0	110	25.5	7.0	14.2
H1 2013	107	57.5	104.5	143.9	30	41.8	84.8	95.1	113	27.7	7.5	12.1
H2 2013	107	15.1	48.8	95.4	30	11.8	41.7	62.5	108	9.4	6.9	8.3
H1 2014	103	3.9	18.6	78.8	30	3.9	14.3	64.6	109	2.1	5.7	5.7
H2 2014	103	0.0	6.5	39.7	30	0.0	3.8	29.6	103	1.5	5.9	5.5
H1 2015	105	0.0	2.9	13.0	30	0.0	0.0	11.6	109	0.2	2.9	5.6
H2 2015	105	0.0	3.3	5.2	30	0.0	0.0	1.8	107	0.2	1.5	4.7
H1 2016	105	0.0	1.4	3.4	30	0.0	0.0	0.9	100	0.0	1.0	4.0
H2 2016	105	0.0	0.0	0.3	30	0.0	0.0	0.0	89	0.0	1.1	1.2

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

Source: Basel Committee on Banking Supervision.

Level of capital after full phasing in of Basel III standards

Consistent sample of banks,¹ exchange rates as of 31 December 2016, in billions of euros

Table C.11

Table C.10

	(Group 1 banks		C	of which: G-SIBs		Group 2 banks			
	CET1	Add. Tier 1	Tier 2	CET1	Add. Tier 1	Tier 2	CET1	Add. Tier 1	Tier 2	
H1 2011	2,125	90	386	1,469	77	299	111	7	31	
H2 2011	2,250	80	382	1,551	65	290	113	8	31	
H1 2012	2,451	74	345	1,700	60	263	118	12	25	
H2 2012	2,589	68	357	1,796	53	265	118	9	23	
H1 2013	2,723	70	387	1,884	54	295	118	10	26	
H2 2013	2,913	88	399	2,022	70	283	137	10	27	
H1 2014	3,090	131	391	2,142	106	255	158	4	28	
H2 2014	3,228	179	446	2,246	150	313	159	5	22	
H1 2015	3,404	222	490	2,361	184	349	174	6	22	
H2 2015	3,523	260	523	2,434	214	375	179	6	24	
H1 2016	3,628	290	541	2,506	230	370	181	7	26	
H2 2016	3,738	347	574	2,574	268	398	177	8	26	

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

Basel III Monitoring Report September 2017

Level of capital after full phasing in of Basel III standards

	Europe				Americas		Rest of the world			
	CET1	Add. Tier 1	Tier 2	CET1	Add. Tier 1	Tier 2	CET1	Add. Tier 1	Tier 2	
H1 2011	715	19	104	453	47	169	703	6	47	
H2 2011	756	20	100	539	42	182	841	9	62	
H1 2012	835	16	92	599	42	163	923	7	64	
H2 2012	842	11	121	615	41	145	992	5	62	
H1 2013	883	10	154	621	43	129	1,021	6	74	
H2 2013	935	17	171	629	46	110	1,031	9	77	
H1 2014	994	41	196	669	61	99	1,089	11	63	
H2 2014	1,026	54	190	769	79	118	1,268	33	119	
H1 2015	1,094	68	223	867	104	130	1,461	50	141	
H2 2015	1,094	83	232	894	113	139	1,502	64	149	
H1 2016	1,095	89	244	927	122	151	1,530	73	138	
H2 2016	1,121	124	278	970	133	153	1,647	90	143	

¹ Europe includes 33 banks, the Americas include 19 banks and the rest of the world includes 40 banks. Source: Basel Committee on

Of which: G-SIBs

Add. Tier 1

Tier 2

CET1

Consistent sample of Group 1 banks,¹ exchange rates as of 31 December 2016, in billions of euros

Evolution of fully phased-in Basel III capital

Group 1 banks

Add. Tier 1

Tier 2

Consistent sample of banks,¹ June 2011 = 100

CET1

Banking Supervision.

H1 2011	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
H2 2011	114.2	99.2	107.4	115.5	92.7	106.7	103.6	120.1
H1 2012	126.0	91.2	99.5	128.6	87.2	99.4	110.0	175.7
H2 2012	130.9	80.2	102.2	132.7	72.3	99.1	108.2	137.4
H1 2013	134.9	82.4	111.6	138.7	73.8	113.1	105.2	149.0
H2 2013	138.7	100.1	111.9	143.1	92.7	105.0	118.7	149.5
H1 2014	147.1	157.6	111.9	151.4	146.5	96.7	138.8	65.5
H2 2014	163.7	230.9	133.3	172.0	227.0	127.5	141.4	81.2
H1 2015	182.9	308.1	154.6	193.4	301.3	152.2	158.1	98.8
H2 2015	186.5	360.9	162.6	198.0	351.6	162.2	160.3	96.0
H1 2016	189.8	394.0	166.7	200.2	370.2	157.0	161.5	103.8
H2 2016	199.7	480.7	179.2	210.2	441.6	171.0	159.7	120.5

CET1

 $^1\,$ Group 1 includes 92 banks, G-SIB includes 30 banks and Group 2 includes 58 banks.

Source: Basel Committee on Banking Supervision.

Table C.13

Tier 2 100.0 102.3 80.8 75.2 82.4 85.8 88.2 71.4 73.6 78.3 83.7 85.1

Group 2 banks

Add. Tier 1

Evolution of fully phased-in Basel III capital

Consistent sample of Group 1 banks,¹ June 2011 = 100

Table C.14

	Europe				Americas		Rest of the world			
	CET1	Add. Tier 1	Tier 2	CET1	Add. Tier 1	Tier 2	CET1	Add. Tier 1	Tier 2	
H1 2011	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
H2 2011	105.7	105.2	96.9	119.0	90.0	107.3	119.7	151.0	130.9	
H1 2012	116.8	84.1	88.9	132.4	90.1	95.9	131.4	122.9	135.7	
H2 2012	117.7	57.0	116.4	135.8	88.8	85.4	141.1	87.8	131.0	
H1 2013	123.4	53.0	148.4	137.1	92.2	76.1	145.3	101.1	158.2	
H2 2013	130.7	90.2	165.0	139.0	98.2	65.0	146.6	145.8	164.0	
H1 2014	138.9	213.8	189.3	147.7	130.3	58.6	154.9	188.3	133.4	
H2 2014	143.4	279.0	183.5	169.8	169.9	69.4	180.3	547.5	253.2	
H1 2015	152.9	349.4	215.4	191.5	223.7	76.9	207.8	827.7	300.7	
H2 2015	152.9	429.6	224.2	197.4	242.2	82.0	213.6	1,057.9	317.7	
H1 2016	153.0	459.4	235.3	204.8	261.8	89.4	217.7	1,206.0	294.1	
H2 2016	156.6	640.2	267.9	214.2	284.3	90.2	234.3	1,486.9	304.4	

¹ Europe includes 33 banks, the Americas include 19 banks and the rest of the world includes 40 banks. Source: Basel Committee on Banking Supervision.

Profits, dividends and dividend payout ratio¹

Consistent sample of banks,² exchange rates as of 31 December 2016, in billions of euros

Table C.15

	C	Group 1 bank	s	0	f which: G-SI	Bs	Group 2 banks			
	Profit after tax	Common share dividend	Dividend payout ratio (%)	Profit after tax	Common share dividend	Dividend payout ratio (%)	Profit after tax	Common share dividend	Dividend payout ratio (%)	
H1 2011	146.3	58.7		91.9	41.6		6.2	1.4		
H2 2011	119.3	33.8	34.8	81.2	17.5	34.1	0.8	1.3	38.4	
H1 2012	141.7	60.6		90.0	41.3		4.6	1.4		
H2 2012	170.4	30.1	29.0	106.8	13.0	27.6	1.3	1.3	44.7	
H1 2013	178.6	78.4		115.5	54.7		5.2	1.6		
H2 2013	146.6	29.6	33.2	94.0	12.8	32.2	4.7	1.0	26.4	
H1 2014	159.6	87.9		95.1	64.1		6.7	1.8		
H2 2014	193.3	45.3	37.7	124.0	19.8	38.3	3.7	0.8	25.8	
H1 2015	221.9	89.8		149.8	60.8		8.5	2.3		
H2 2015	208.5	48.6	32.2	136.7	22.4	29.0	9.6	1.3	19.6	
H1 2016	192.7	93.0		131.9	63.3		3.4	2.5		
H2 2016	194.2	45.8	35.9	116.4	18.0	32.8	3.8	1.9	62.0	

 1 The dividend payout ratio is 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. 2 Group 1 includes 91 banks, G-SIB includes 29 banks and Group 2 includes 55 banks.

Profits, dividends and dividend payout ratio¹, by region

		Europe			Americas		Rest of the world			
	Profit after tax	Common share dividend	Dividend payout ratio (%)	Profit after tax	Common share dividend	Dividend payout ratio (%)	Profit after tax	Common share dividend	Dividend payout ratio (%)	
H1 2011	53.9	16.3		37.3	8.9		55.1	33.5		
H2 2011	8.3	5.8	35.5	45.4	9.5	22.3	65.6	18.5	43.1	
H1 2012	38.5	12.5		46.6	11.2		56.6	36.9		
H2 2012	9.7	7.4	41.4	47.9	12.3	24.8	112.9	10.4	27.9	
H1 2013	50.4	16.7		59.0	12.4		69.2	49.3		
H2 2013	-0.5	5.1	43.8	50.8	13.4	23.6	96.2	11.1	36.5	
H1 2014	39.8	21.9		47.2	14.0		72.7	52.0		
H2 2014	37.2	10.6	42.3	55.6	15.6	28.9	100.5	19.1	41.0	
H1 2015	56.2	16.2		69.9	16.3		95.7	57.4		
H2 2015	42.0	13.3	30.0	61.9	17.4	25.5	104.5	17.9	37.6	
H1 2016	45.6	23.0		61.4	17.1		85.7	52.9		
H2 2016	26.1	7.8	42.9	74.9	21.0	27.9	93.2	17.1	39.1	

Consistent sample of Group 1 banks,² exchange rates as of 31 December 2016, in billions of euros

¹ The dividend payout ratio is 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. ² Europe includes 32 banks, the Americas include 20 banks and the rest of the world includes 39 banks.

Source: Basel Committee on Banking Supervision.

Capital raised externally

Consistent sample of banks,¹ exchange rates as of 31 December 2016, in billions of euros

Table C.17

	Group 1 banks			0	f which: G-SIBs		Group 2 banks		
	CET1	Add. Tier 1	Tier 2	CET1	Add. Tier 1	Tier 2	CET1	Add. Tier 1	Tier 2
H1 2011	34.9	4.5	13.0	11.2	1.3	5.9	5.5	1.5	3.3
H2 2011	28.3	5.0	7.2	9.8	3.4	1.1	4.4	0.0	3.2
H1 2012	28.5	3.1	13.8	20.0	0.9	2.9	1.4	1.5	0.3
H2 2012	29.2	6.2	15.2	14.2	3.4	7.6	4.7	0.0	2.0
H1 2013	25.0	7.6	12.4	12.6	4.8	10.8	0.8	0.0	1.9
H2 2013	30.6	20.5	28.6	13.5	15.9	18.7	2.1	1.3	1.0
H1 2014	32.8	40.2	45.0	17.5	28.0	16.3	4.9	1.4	1.6
H2 2014	19.4	46.7	52.4	6.3	42.7	39.2	3.5	1.0	0.5
H1 2015	21.7	44.7	47.6	12.4	35.9	37.4	1.7	0.3	1.6
H2 2015	20.8	32.8	51.6	11.3	26.9	34.9	0.8	0.6	2.0
H1 2016	12.7	27.2	45.1	7.9	16.0	22.1	3.2	1.0	1.7
H2 2016	24.1	26.6	33.4	19.5	12.3	22.3	2.7	0.6	2.0

 $^{\rm 1}$ Group 1 includes 91 banks, G-SIB includes 29 banks and Group 2 includes 55 banks.

Source: Basel Committee on Banking Supervision.

Capital raised externally, by region

Consistent sample of Group 1 banks,¹ exchange rates as of 31 December 2016, in billions of euros

Table C.18

		Europe			Americas		Rest of the world			
	CET1	Add. Tier 1	Tier 2	CET1	Add. Tier 1	Tier 2	CET1	Add. Tier 1	Tier 2	
H1 2011	21.2	1.4	9.1	9.9	3.1	3.9	3.8	0.0	0.0	
H2 2011	14.2	3.4	1.1	5.2	1.4	5.1	8.8	0.1	1.0	
H1 2012	21.3	0.0	3.3	5.4	3.1	8.9	1.8	0.0	1.6	
H2 2012	15.0	1.3	6.7	3.7	3.3	8.6	10.5	1.6	0.0	
H1 2013	14.9	0.0	8.7	5.7	5.5	3.7	4.4	2.1	0.0	
H2 2013	22.4	11.1	20.3	3.5	6.3	7.2	4.7	3.1	1.1	
H1 2014	25.0	26.5	24.7	5.0	11.7	1.8	2.8	2.0	18.5	
H2 2014	7.5	14.8	12.0	3.4	9.9	16.3	8.6	22.0	24.0	
H1 2015	7.7	14.8	26.6	4.4	16.4	14.3	9.6	13.6	6.7	
H2 2015	10.1	10.7	22.6	3.0	6.2	12.5	7.8	15.9	16.5	
H1 2016	4.6	9.1	21.6	7.1	9.7	13.9	1.1	8.4	9.6	
H2 2016	17.4	7.7	13.0	4.3	3.8	8.7	2.4	15.1	11.7	

¹ Europe includes 32 banks, the Americas include 20 banks and the rest of the world includes 39 banks. Source: Basel Committee on Banking Supervision.

Structure of regulatory capital under transitional Basel III rules¹

Consistent sample of banks,² in per cent

	C	Group 1 banks		C)f which: G-SIBs		(Group 2 banks	
	CET1	Add. Tier 1	Tier 2	CET1	Add. Tier 1	Tier 2	CET1	Add. Tier 1	Tier 2
H1 2011	71.9	9.3	18.9	69.7	11.4	18.8	70.1	6.7	23.2
H2 2011	73.1	8.8	18.1	71.1	10.9	18.1	71.8	6.0	22.2
H1 2012	75.0	7.9	17.0	73.6	9.8	16.6	73.9	4.2	21.9
H2 2012	75.3	7.4	17.3	74.3	9.2	16.5	73.5	4.0	22.4
H1 2013	75.0	7.0	17.9	75.4	7.4	17.2	74.3	3.8	21.8
H2 2013	75.7	6.8	17.5	76.0	7.1	17.0	74.7	3.5	21.8
H1 2014	76.8	5.5	17.7	76.8	5.9	17.3	76.8	3.0	20.2
H2 2014	76.5	6.1	17.4	76.1	6.8	17.1	77.9	3.5	18.6
H1 2015	76.8	6.6	16.6	76.3	7.4	16.3	79.5	3.6	16.9
H2 2015	76.7	7.1	16.2	76.1	8.1	15.8	80.3	3.9	15.9
H1 2016	76.9	7.3	15.7	76.7	8.3	15.0	80.7	3.9	15.4
H2 2016	77.1	7.6	15.4	76.8	8.5	14.8	81.0	3.9	15.0

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

Source: Basel Committee on Banking Supervision.

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

Consistent sample of banks,1 in per cent

Table C.20

Table C.19

	(Group 1 banks		C)f which: G-SIBs		(Group 2 banks	
	CET1	Add. Tier 1	Tier 2	CET1	Add. Tier 1	Tier 2	CET1	Add. Tier 1	Tier 2
H1 2011	82.7	3.2	14.1	80.7	4.0	15.3	74.8	4.5	20.8
H2 2011	83.7	2.8	13.5	82.3	3.3	14.4	74.4	5.2	20.4
H1 2012	86.0	2.4	11.6	84.7	2.9	12.4	76.9	7.4	15.7
H2 2012	86.4	2.0	11.5	85.5	2.3	12.1	78.8	6.0	15.2
H1 2013	85.8	2.0	12.1	84.6	2.2	13.1	76.8	6.5	16.7
H2 2013	85.8	2.4	11.8	85.3	2.7	11.9	78.4	5.9	15.7
H1 2014	85.4	3.5	11.1	85.5	4.1	10.4	83.0	2.3	14.6
H2 2014	83.8	4.6	11.7	82.9	5.4	11.7	85.1	2.9	11.9
H1 2015	82.7	5.4	12.0	81.5	6.3	12.2	85.7	3.2	11.1
H2 2015	81.7	6.1	12.2	80.4	7.1	12.5	85.4	3.1	11.6
H1 2016	81.3	6.5	12.2	80.6	7.4	12.0	84.6	3.3	12.2
H2 2016	80.2	7.4	12.3	79.4	8.3	12.3	83.8	3.8	12.4

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

Share of MRC by asset class¹

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

Table C.21

	Number of banks	Corporate	Bank	Sovereign	Retail	Partial use	Securitisation	Related entities	CVA	Market risk	Operational risk	Other	Total
H1 2011	34	31.0	3.5	1.1	18.6	2.8	7.2	10.4	0.0	6.2	7.8	11.4	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	9.5	100.0
H1 2012	34	31.8	3.4	1.2	18.2	2.0	4.4	11.9	0.0	10.1	8.6	8.5	100.0
H2 2012	34	31.9	3.4	1.2	17.9	1.4	3.9	12.8	0.0	8.3	9.8	9.4	100.0
H1 2013	34	32.5	3.6	1.4	17.9	1.8	3.7	6.7	0.2	9.4	11.0	11.7	100.0
H2 2013	34	32.4	3.5	1.3	17.5	1.7	4.1	7.2	0.2	8.5	11.9	11.7	100.0
H1 2014	34	34.7	4.2	2.5	16.3	1.7	2.3	1.6	3.1	7.8	13.4	12.4	100.0
H2 2014	34	34.8	3.8	2.5	16.0	1.7	2.1	1.5	3.2	7.2	14.0	13.2	100.0
H1 2015	34	35.5	3.5	2.6	16.1	1.6	2.0	1.4	2.9	6.9	14.3	13.1	100.0
H2 2015	34	36.7	3.3	2.6	15.7	1.4	1.9	1.5	2.8	6.1	16.2	12.0	100.0
H1 2016	34	37.2	3.2	2.8	15.8	1.3	1.7	1.6	3.0	5.6	16.3	11.4	100.0
H2 2016	34	36.5	2.9	2.6	16.5	1.1	1.7	1.5	2.5	5.3	16.4	12.9	100.0

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

Share of credit exposure

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

Table C.22

	Number of banks	Corporate	Retail	Sovereign	Bank	Other credit	Partial use	Securitisation	Total
H1 2011	36	27.8	27.6	12.4	10.7	12.9	4.9	3.6	100.0
H2 2011	36	28.2	27.4	13.5	9.8	13.3	4.4	3.5	100.0
H1 2012	36	28.3	27.6	14.3	9.7	12.7	4.2	3.3	100.0
H2 2012	36	28.5	28.3	14.9	9.2	11.4	4.6	3.1	100.0
H1 2013	36	28.5	28.0	15.4	9.0	11.7	4.5	2.9	100.0
H2 2013	36	28.7	28.7	15.9	8.7	10.8	4.5	2.7	100.0
H1 2014	36	30.1	28.0	17.9	8.8	10.5	2.0	2.7	100.0
H2 2014	36	30.4	27.8	18.5	8.5	10.2	1.9	2.6	100.0
H1 2015	36	30.8	27.9	18.4	8.1	10.3	1.9	2.7	100.0
H2 2015	36	31.1	28.1	18.9	7.5	9.9	1.6	2.8	100.0
H1 2016	36	30.9	27.9	19.4	7.1	10.0	2.0	2.8	100.0
H2 2016	36	30.7	28.4	19.6	6.8	9.8	1.9	2.8	100.0
Source: Pacel Committee on Pan	king Suponi	sion							

Source: Basel Committee on Banking Supervision.

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

In per cent

Table C.23

	C	Corporate	5	S	overeig	า		Bank			Retail	
	FIRB	AIRB	All	FIRB	AIRB	All	FIRB	AIRB	All	FIRB	AIRB	All
Number of banks	20	45	67	18	42	62	20	45	67	20	42	64
Max	2.4	2.8	2.8	0.3	0.3	0.3	0.7	1.1	1.1	1.7	6.9	6.9
95th percentile	1.7	2.2	2.2	0.2	0.2	0.2	0.4	0.6	0.6	1.7	5.0	3.6
75th percentile	1.4	1.3	1.3	0.0	0.1	0.1	0.1	0.3	0.3	1.0	1.9	1.7
Median	1.0	1.0	1.0	0.0	0.0	0.0	0.1	0.2	0.2	0.7	1.2	1.1
25th percentile	0.6	0.7	0.7	0.0	0.0	0.0	0.1	0.1	0.1	0.5	1.0	0.8
5th percentile	0.3	0.5	0.4	0.0	0.0	0.0	0.1	0.1	0.1	0.4	0.7	0.5
Min	0.3	0.2	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.2	0.6	0.2
Weighted average	1.0	0.9	0.9	0.0	0.0	0.0	0.2	0.3	0.2	1.1	1.5	1.5

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

In per cent

	(Corporat	e	S	Sovereig	n		Bank			Retail	
	FIRB	AIRB	All	FIRB	AIRB	All	FIRB	AIRB	All	FIRB	AIRB	All
Number of banks	20	45	67	18	42	62	20	45	67	20	42	64
Max	43.9	76.3	76.3	45.5	84.3	84.3	43.6	63.6	63.6	51.0	75.3	75.9
95th percentile	43.2	47.5	47.2	45.1	45.9	45.6	42.7	59.2	57.7	49.6	66.3	68.3
75th percentile	42.7	38.7	42.1	45.0	36.7	45.0	36.6	45.2	43.0	39.3	38.3	40.7
Median	42.0	34.7	37.1	45.0	26.4	33.9	31.0	37.6	34.1	29.6	26.4	27.9
25th percentile	40.4	31.8	32.3	44.3	9.4	15.8	25.1	24.7	25.0	19.0	21.8	19.9
5th percentile	32.6	26.3	27.1	42.2	4.8	6.8	21.0	11.1	14.0	13.2	16.7	15.2
Min	30.2	20.7	20.7	41.2	2.1	2.1	18.5	0.0	0.0	12.5	13.8	12.5
Weighted average	40.3	35.0	35.4	44.7	29.3	31.1	29.2	32.4	31.8	21.1	37.2	36.8
Source: Basel Committee on Banking Supervision.												

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

In per cent

asset classes

	Corporate		5	9	Sovereigr	1		Bank			Retail	
	FIRB	AIRB	All	FIRB	AIRB	All	FIRB	AIRB	All	FIRB	AIRB	All
Number of banks	20	45	67	18	42	62	20	45	67	20	42	64
Max	74.4	93.8	93.8	13.9	38.0	38.0	30.3	57.2	57.2	35.9	109.0	109.0
95th percentile	72.2	64.6	71.9	11.4	15.0	13.9	26.6	42.6	42.5	34.0	41.5	44.8
75th percentile	66.4	52.5	57.5	4.8	9.5	8.6	23.1	29.3	28.5	24.3	28.7	30.1
Median	54.7	47.3	48.2	2.5	3.4	3.1	18.2	23.4	21.5	18.5	21.1	20.6
25th percentile	43.8	41.6	42.6	1.7	1.9	1.7	14.7	18.7	17.1	14.9	18.0	17.1
5th percentile	38.6	32.1	32.1	1.1	0.8	0.7	12.0	7.0	8.9	6.7	10.7	9.3
Min	24.3	22.2	22.2	0.0	0.2	0.0	9.2	4.8	4.8	5.5	9.2	5.5
Weighted average	53.0	45.5	46.4	1.7	3.9	3.5	18.0	22.1	21.3	15.1	26.2	25.9
iource: 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.26										
	Number of banks	Average PD non-defaulted exposures	Share of defaulted exposures	Average LGD non-defaulted exposures						
Retail residential mortgages	61	1.1	2.3	24.1						
Other retail	65	2.5	3.4	45.6						
Retail QRE	54	2.2	0.5	85.5						

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

Source: Basel Committee on Banking Supervision.

Distribution of share of market risk MRC in total MRC

In per cent			Table C.27
	Group 1 banks	of which: G-SIBs	Group 2 banks
Max	27.3	17.3	26.6
95th percentile	13.2	14.6	10.8
75th percentile	5.2	6.5	2.0
Median	2.9	3.5	0.6
25th percentile	1.3	1.9	0.0
5th percentile	0.0	1.1	0.0
Min	0.0	0.0	0.0
Weighted average	3.9	4.1	2.3
Source: Basel Committee on Ba	nking Supervision		

Share of market risk MRC in total MRC

	Group 1 banks	Of which: G-SIBs	Group 2 banks
H1 2011	5.9	7.3	2.2
H2 2011	9.1	11.6	2.6
H1 2012	9.5	12.3	2.3
H2 2012	7.9	9.9	2.2
H1 2013	8.9	11.2	2.4
H2 2013	8.1	10.1	2.7
H1 2014	7.8	9.5	2.4
H2 2014	7.2	8.7	3.0
H1 2015	6.8	8.2	3.0
H2 2015	6.0	7.1	2.8
H1 2016	5.6	6.6	2.8
H2 2016	5.3	6.4	1.8

Consistent sample of banks,¹ in per cent

¹ Group 1 includes 36 banks, G-SIB includes 14 banks and Group 2 includes 22 banks.

Source: Basel Committee on Banking Supervision.

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

1 hanl nalo of boales in ~ cictont.

Group 1 banks, consistent s	ample	of banks	, in per o	cent					Ia	ble C.29
	anks	Standa	Standard measurement method Internal mod approach					5	ading s	ssigned
	Number of b	General position risk	Specific position risk	FX and commodity risk	Unassigned	VaR and stressed VaR	Incremental risk charge	Unassigned	Correlation tr portfolio	Other and unas
H1 2015	104	5.9	7.5	7.5	0.8	48.8	10.5	1.6	15.1	2.3
H2 2015	104	6.5	7.0	7.6	0.9	50.9	9.4	1.7	13.1	2.8
H1 2016	104	7.0	6.8	8.6	0.9	53.2	9.4	1.4	9.7	2.9
H2 2016	104	6.3	7.0	9.1	0.6	54.1	8.7	2.1	9.3	2.8

Source: Basel Committee on Banking Supervision.

Table C.29

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

G-SIBs, consistent sample of banks, in per cent

	anks	Standard measurement method				Internal models approach			ading s	q
	Number of b	General position risk	Specific position risk	FX and commodity risk	Unassigned	VaR and stressed VaR	Incremental risk charge	Unassigned	Correlation tra portfolio:	Other and unassigne
H1 2015	30	3.3	5.6	3.7	0.4	53.3	10.2	2.2	18.3	3.1
H2 2015	30	3.8	5.3	4.7	0.5	54.5	9.2	2.3	16.1	3.7
H1 2016	30	3.3	5.7	5.3	0.5	57.7	9.1	2.0	12.4	4.0
H2 2016	30	3.0	5.9	5.6	0.2	58.8	8.4	2.4	11.7	3.9

Source: Basel Committee on Banking Supervision.

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

Group 2 banks, consistent sample of banks, in per cent

Table C.31

Table C.30

	anks	Standard measurement method				Internal models approach			Iding	- 9
	Number of ba	General position risk	Specific position risk	FX and commodity risk	Unassigned	VaR and stressed VaR	Incremental risk charge	Unassigned	Correlation tra portfolios	Other and unassigne
H1 2015	93	29.1	16.7	27.7	6.2	18.2	1.9	0.0	0.2	0.0
H2 2015	93	27.1	17.3	21.3	17.3	15.1	1.8	0.0	0.2	0.0
H1 2016	93	26.7	18.1	24.1	17.3	12.3	1.4	0.0	0.2	0.0
H2 2016	93	17.2	16.4	30.1	15.3	19.7	1.0	0.0	0.2	0.0

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

Consistent sample of banks,¹ in per cent

Table C.32

Table C.33

	Group	o 1 banks
	Banks reporting since end-2011	Banks reporting since June 2015
H2 2011	198.1	
H1 2012	170.7	
H2 2012	199.7	
H1 2013	191.2	
H2 2013	203.8	
H1 2014	247.9	
H2 2014	181.6	
H1 2015	214.9	197.0
H2 2015	193.3	171.7
H1 2016	211.8	215.9
H2 2016	289.1	248.3

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

Source: Basel Committee on Banking Supervision.

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

In per cent

	Group 1 banks	of which: G-SIBs	Group 2 banks					
Max	44.7	44.7	93.5					
95th percentile	30.5	38.9	19.4					
75th percentile	14.0	23.6	9.5					
Median	9.6	12.2	8.0					
25th percentile	6.9	9.2	6.2					
5th percentile	4.5	6.1	3.8					
Min	2.8	5.0	2.0					
Weighted average	13.8	15.6	8.1					
Source: Basel Committee on Banking Supervision.								

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

		•			
	Total December 2010 = 100	Basic indicator approach	Standardised approach	Alternative standardised approach	Advanced measurement approach
H1 2011	100.0	3.3	35.7	2.0	59.0
H2 2011	111.0	3.4	34.6	1.9	60.2
H1 2012	114.7	4.3	32.1	1.8	61.8
H2 2012	122.6	4.4	30.0	1.6	64.0
H1 2013	152.0	19.3	23.1	0.9	56.7
H2 2013	160.5	19.6	21.2	0.8	58.4
H1 2014	175.3	3.1	34.1	0.9	61.9
H2 2014	198.1	2.4	33.9	1.6	62.1
H1 2015	215.2	2.7	33.5	0.7	63.1
H2 2015	230.0	2.5	31.4	0.5	65.6
H1 2016	230.3	3.0	29.0	2.1	65.9
H2 2016	238.1	2.9	26.2	2.9	67.9

Consistent sample of Group 1 banks,¹ in per cent

Table C.34

¹ Group 1 includes 81 banks.

Source: Basel Committee on Banking Supervision.

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

In per cent

Table C.35

	Grou	o 1 banks	Of whi	ch: G-SIBs	Group 2 banks		
	Transitional	Fully phased-in	Transitional	Fully phased-in	Transitional	Fully phased-in	
Max	15.7	15.7	7.7	7.6	20.5	21.0	
75th percentile	7.1	7.1	6.7	6.6	7.3	7.0	
Median	5.7	5.7	5.7	5.5	5.6	5.4	
25th percentile	5.0	4.9	4.9	4.6	4.4	4.3	
Min	3.7	3.1	4.0	3.4	1.4	1.4	
Weighted average	6.0	5.8	6.0	5.8	5.7	5.5	
	D Line C.						

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

Consistent sample of banks,¹ in per cent

91

	G	roup 1 banl	ks	Ot	which: G-S	IBs	Group 2 banks			
		Cha	ange		Change			Change		
	Leverage ratio	Tier 1 capital	Exposure measure	Leverage ratio	Tier 1 capital	Exposure measure	Leverage ratio	Tier 1 capital	Exposure measure	
H1 2011	3.5			3.4			3.5			
H2 2011	3.6	5.2	2.9	3.4	4.5	3.1	3.5	2.6	2.7	
H1 2012	3.8	8.3	3.3	3.6	9.0	3.1	3.7	7.5	2.1	
H2 2012	3.8	5.3	4.3	3.7	5.1	4.4	3.6	-2.3	1.3	
H1 2013	4.1	5.1	-1.8	3.9	4.8	-1.1	3.8	0.8	-4.1	
H2 2013	4.5	7.5	-3.4	4.4	7.9	-4.6	4.5	14.8	-3.2	
H1 2014	4.7	7.3	2.5	4.6	7.4	1.8	5.0	13.1	1.9	
H2 2014	5.0	5.8	-0.3	5.0	6.6	-0.8	5.0	-1.2	-0.8	
H1 2015	5.2	6.7	2.5	5.2	6.5	1.6	5.3	9.9	2.4	
H2 2015	5.5	4.1	-1.3	5.6	3.7	-2.5	5.4	2.5	0.1	
H1 2016	5.6	3.6	3.0	5.6	3.3	3.1	5.4	2.1	1.9	
H2 2016	5.8	4.2	0.0	5.8	3.9	-0.9	5.3	-1.7	0.3	

¹ Group 1 includes 93 banks, G-SIB includes 30 banks and Group 2 includes 54 banks.

Tabl	e C.36
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Fully phased-in original Basel III leverage ratios and component changes, by region

		Europe			Americas		Rest of the world			
		Cha	ange	Change				Change		
	Leverage ratio	Tier 1 capital	Exposure measure	Leverage ratio	Tier 1 capital	Exposure measure	Leverage ratio	Tier 1 capital	Exposure measure	
H1 2011	2.7			4.2			4.1			
H2 2011	2.8	2.7	-1.1	4.1	5.8	9.1	4.2	7.1	3.8	
H1 2012	3.0	8.6	2.5	4.3	7.8	2.2	4.4	8.5	5.4	
H2 2012	2.9	0.8	4.1	4.3	6.0	6.7	4.6	8.7	2.6	
H1 2013	3.2	5.8	-5.2	4.3	0.8	0.2	4.9	7.9	1.2	
H2 2013	3.7	7.7	-7.3	4.8	7.7	-4.7	5.1	7.1	2.3	
H1 2014	4.0	8.3	1.3	5.2	7.5	0.2	5.2	6.3	5.7	
H2 2014	4.2	1.8	-2.5	5.5	4.9	-1.0	5.5	9.8	2.5	
H1 2015	4.4	4.7	0.7	5.9	6.4	0.0	5.7	8.3	6.0	
H2 2015	4.7	1.3	-5.3	6.0	3.1	0.1	6.0	6.9	1.5	
H1 2016	4.6	2.6	3.9	6.2	4.7	1.8	6.0	3.5	2.9	
H2 2016	5.0	7.2	-2.4	6.3	1.3	-0.4	6.1	4.1	2.4	

Consistent sample of Group 1 banks,¹ in per cent

¹ Group 1 includes 93 banks.

Source: Basel Committee on Banking Supervision.

Tier 1 capital, RWA, leverage ratio exposure and accounting total assets

Group 1 banks Group 2 banks Of which: G-SIBs Accounting total assets Accounting total Accounting total **Risk-weighted Risk-weighted** Leverage total **Risk-weighted** Leverage total Leverage total Tier 1 capital Tier 1 capital Tier 1 capital exposure exposure exposure assets assets assets assets 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 98.4 102.9 102.6 104.5 96.9 103.1 102.4 102.6 101.4 102.7 102.5 H1 2012 114.0 97.0 106.4 106.5 94.6 106.3 105.9 110.2 104.9 103.8 113.9 99.0 H2 2012 105.9 107.7 120.0 95.0 111.0 119.6 91.7 111.0 104.8 99.1 106.3 104.5 H1 2013 126.2 96.7 109.0 106.9 125.4 93.0 109.8 105.3 108.5 98.6 101.9 105.0 H2 2013 105.7 135.6 96.3 105.3 135.3 92.1 104.7 103.1 124.6 96.6 98.7 102.2 H1 2014 145.4 96.9 107.9 109.7 145.3 92.8 106.6 106.7 140.9 96.4 100.6 103.8 H2 2014 153.9 98.1 107.6 112.1 155.0 93.9 105.7 109.1 139.2 94.3 99.7 104.2 H1 2015 164.1 100.0 110.3 114.8 165.1 95.0 107.4 110.9 152.9 95.9 102.1 105.8 H2 2015 170.9 100.8 108.8 113.7 171.3 95.1 104.7 108.7 156.7 96.0 102.3 105.4 H1 2016 176.9 102.5 112.0 119.4 177.0 96.8 108.0 114.7 160.0 95.5 104.2 107.6 H2 2016 119.0 95.9 107.3 184.4 102.6 112.0 183.9 107.0 113.5 157.3 93.0 104.5

Consistent sample of banks,¹ exchange rates as of 31 December 2016

Table C.38

¹ Group 1 includes 93 banks, G-SIB includes 30 banks and Group 2 includes 54 banks.

Share of banks bound by the different constraints

		•	•			
	Risk-based Tier 1 minimum and leverage	Risk-based Tier 1 minimum only	Risk-based Tier 1 target and leverage	Risk-based Tier 1 target only	Leverage ratio only	None
2011 H1	18.5	0.0	0.0	34.8	0.0	46.7
2011 H2	12.0	0.0	0.0	39.1	0.0	48.9
2012 H1	7.6	0.0	0.0	35.9	0.0	56.5
2012 H2	3.3	0.0	0.0	35.9	0.0	60.9
2013 H1	2.2	0.0	0.0	28.3	0.0	69.6
2013 H2	0.0	0.0	0.0	17.4	0.0	82.6
2014 H1	0.0	0.0	0.0	5.4	0.0	94.6
2014 H2	0.0	0.0	0.0	6.5	0.0	93.5
2015 H1	0.0	0.0	0.0	1.1	0.0	98.9
2015 H2	0.0	0.0	0.0	1.1	0.0	98.9
2016 H1	0.0	0.0	0.0	1.1	0.0	98.9
2016 H2	0.0	0.0	0.0	0.0	0.0	100.0
Source: Base	l Committee on Bankin	g Supervision.				

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

Share of banks bound by the different constraints

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

		-					
	Risk-based Tier 1 minimum and leverage	Risk-based Tier 1 minimum only	Risk-based Tier 1 target and leverage	Risk-based Tier 1 target only	Leverage ratio only	None	
2011 H1	30.0	0.0	0.0	50.0	0.0	20.0	
2011 H2	23.3	0.0	0.0	53.3	0.0	23.3	
2012 H1	16.7	0.0	0.0	60.0	0.0	23.3	
2012 H2	6.7	0.0	0.0	63.3	0.0	30.0	
2013 H1	3.3	0.0	0.0	56.7	0.0	40.0	
2013 H2	0.0	0.0	0.0	33.3	0.0	66.7	
2014 H1	0.0	0.0	0.0	10.0	0.0	90.0	
2014 H2	0.0	0.0	0.0	6.7	0.0	93.3	
2015 H1	0.0	0.0	0.0	0.0	0.0	100.0	
2015 H2	0.0	0.0	0.0	0.0	0.0	100.0	
2016 H1	0.0	0.0	0.0	0.0	0.0	100.0	
2016 H2	0.0	0.0	0.0	0.0	0.0	100.0	
Courses Doos	Committee on Bealin	- Currentisien					

Source: Basel Committee on Banking Supervision.

Table C.39

Share of banks bound by the different constraints

	Risk-based Tier 1 minimum and leverage	Risk-based Tier 1 minimum only	Risk-based Tier 1 target and leverage	Risk-based Tier 1 target only	Leverage ratio only	None		
2011 H1	12.7	1.8	0.0	38.2	0.0	47.3		
2011 H2	16.4	1.8	0.0	30.9	0.0	50.9		
2012 H1	7.3	1.8	0.0	40.0	0.0	50.9		
2012 H2	9.1	1.8	0.0	29.1	0.0	60.0		
2013 H1	9.1	1.8	0.0	29.1	0.0	60.0		
2013 H2	7.3	1.8	0.0	23.6	0.0	67.3		
2014 H1	1.8	0.0	0.0	20.0	0.0	78.2		
2014 H2	1.8	0.0	0.0	18.2	0.0	80.0		
2015 H1	0.0	0.0	0.0	12.7	0.0	87.3		
2015 H2	0.0	0.0	0.0	14.5	0.0	85.5		
2016 H1	0.0	0.0	0.0	9.1	0.0	90.9		
2016 H2	0.0	0.0	0.0	5.5	0.0	94.5		
Source: Base	l Committee on Bankir	ng Supervision.						

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

Table C.41

Liquidity coverage ratio and net stable funding ratio

In per cent

		Liquidity coverage rati	0	Net stable funding ratio			
	Group 1	Of which: G-SIBs	Group 2	Group 1	Of which: G-SIBs	Group 2	
Max	458.8	174.2	1,334.5	159.9	141.6	447.5	
75th percentile	141.6	139.6	204.2	120.3	120.7	130.2	
Median	127.6	125.2	151.5	112.9	113.0	120.9	
25th percentile	117.7	121.6	124.9	106.1	104.9	108.4	
Min	84.2	112.3	77.2	90.7	100.9	87.5	
Weighted average	131.4	128.6	159.3	115.8	117.3	114.1	
Source: Basel Committee on Banking Supervision.							

Composition of holdings of eligible liquid assets

In per cent			Table C.43					
	Group 1 banks	Of which: G-SIBs	Group 2 banks					
Level 1 cash and withdrawable central banks reserves	42.3	42.4	34.5					
Level 1 non-zero risk weight	2.5	1.5	18.8					
Level 1 zero risk weight	40.8	40.1	40.9					
Level 2A	13.0	14.8	4.2					
Level 2B	1.4	1.3	1.5					
Total	100.0	100.0	100.0					
Source: Basel Committee on Banking Supervision.								

Composition of holdings of level 2A and 2B assets

In per cent			Table C.44
	Group 1 banks	Of which: G-SIBs	Group 2 banks
Level 2A 20% risk weight sovereigns, central banks and PSEs	73.5	77.7	29.2
Level 2A non-financial corporate bonds (AA- or better)	9.8	9.7	4.1
Level 2A covered bonds (AA- or better)	6.9	4.7	40.8
Level 2B residential mortgage-backed securities	0.5	0.4	7.8
Level 2B non-financial corporate bonds (BBB- to A+)	3.7	3.1	7.9
Level 2B non-financial common equity shares	5.0	4.1	7.7
Level 2B sovereign or central bank debt securities (BBB- to BBB+)	0.6	0.3	2.4
Total	100.0	100.0	100.0
Source: Basel Committee on Banking Supervision.			

Comparison of pool of high-quality liquid assets to outflows and cap

In trillions of euros			Table C.45
Total liquid assets and inflows	Group 1	Of which: G-SIBs	Group 2
Level 1 assets	9.95	6.80	0.48
Level 2A assets (post-factor)	1.51	1.20	0.02
Level 2B assets (post-factor)	0.16	0.10	0.01
Inflows (post-factor, after cap)	3.73	2.61	0.12
Total	15.35	10.72	0.63
Outflows and impact of cap			
Outflows (post-factor)	12.69	8.92	0.44
Cap on Level 2 assets	0.00	0.00	0.00
Cap on Level 2B assets	0.00	0.00	0.00
Total	12.69	8.92	0.44
Source: Basel Committee on Banking Supervision.			

Aggregate available stable funding (ASF) by counterparty

In trillions of euros Table C.4								
	Group 1	. banks	Of which	: G-SIBs	Group 2 banks			
	Unweighted Weighted		Unweighted	Weighted	Unweighted	Weighted		
Capital	5.6	5.6	3.7	3.7	0.3	0.3		
Retail and small business	19.6	18.0	12.4	11.4	1.7	1.6		
Non-financial corporates	11.0	5.6	7.6	3.9	0.3	0.2		
Central banks	1.5	0.5	1.0	0.4	0.2	0.2		
Sovereigns/PSEs/MDBs/NDBs	2.7	1.6	1.7	1.0	0.2	0.1		
Financials (other legal entities)	15.3	5.5	9.0	2.9	1.3	0.8		
Other liabilities	6.3	1.6	4.3	1.0	0.5	0.2		
Total	62.0	38.5	39.7	24.2	4.6	3.4		
Source: Basel Committee on Banking Supervision.								

Aggregate required stable funding (RSF) by category

In trillions of euros

	Group 1 banks		Of which:	: G-SIBs	Group 2 banks				
	Unweighted RSF	Weighted RSF	Unweighted RSF	Weighted RSF	Unweighted RSF	Weighted RSF			
Cash and central banks reserves	6.9	0.0	4.9	0.0	0.2	0.0			
Loans to financial institutions	7.0	2.1	4.8	1.4	0.4	0.2			
HQLA	9.8	1.5	6.5	1.0	0.6	0.1			
All residential mortgages	7.3	5.2	3.8	2.7	0.9	0.7			
Loans, < 1 year	7.5	3.8	4.9	2.5	0.5	0.2			
Other loans, > 1 year, risk weight < 35%	1.3	0.9	0.6	0.4	0.3	0.2			
Loans, risk weights > 35%	11.9	10.0	7.2	6.1	0.8	0.7			
Derivative	1.9	1.0	1.4	0.7	0.1	0.0			
All other assets	9.5	8.2	6.4	5.5	0.9	0.8			
Off balance sheet		0.5		0.3		0.0			
Total	63.0	33.3	40.5	20.7	4.7	3.0			
Source: Basel Committee on Banking Supervision.									

LCR, NSFR and shortfalls at a 100% minimum requirement

	•	5				
	Group	o 1 banks	Of whi	ch: G-SIBs	Group	o 2 banks
	Ratio (%)	Shortfall (€ bn)	Ratio (%)	Shortfall (€ bn)	Ratio (%)	Shortfall (€ bn)
LCR						
H2 2012	121.4	430.6	126.8	156.5	145.3	9.6
H1 2013	116.8	401.4	122.8	104.8	149.2	10.4
H2 2013	120.5	278.4	126.0	44.4	142.8	15.7
H1 2014	123.1	219.6	127.1	16.3	143.5	14.2
H2 2014	126.0	88.8	127.6	0.0	139.0	18.0
H1 2015	123.9	47.7	123.9	5.7	138.8	5.4
H2 2015	125.6	54.2	124.1	0.0	148.6	7.2
H1 2016	126.8	24.0	125.7	0.0	153.3	3.1
H2 2016	131.9	13.2	128.9	0.0	155.5	1.6
NSFR						
H2 2012	99.7	1,666.6	101.8	926.4	100.2	136.5
H1 2013	99.9	1,579.0	102.8	866.3	101.5	119.5
H2 2013	111.3	634.6	114.3	361.8	112.6	25.0
H1 2014	110.8	483.2	113.7	254.1	112.6	30.7
H2 2014	111.5	429.5	114.1	241.8	112.9	42.8
H1 2015	112.1	334.1	114.9	187.6	113.6	27.3
H2 2015	114.1	180.2	116.9	78.2	115.2	8.2
H1 2016	114.0	108.6	116.5	27.3	114.9	8.6
H2 2016	115.5	29.5	117.3	0.0	115.4	20.8

Consistent sample of banks,¹ exchange rates as at the reporting dates

Table C.48

¹ Consistent sample across periods; for LCR, Group 1 includes 87 banks, G-SIBs include 25 banks and Group 2 includes 43 banks; for NSFR, Group 1 includes 91 banks, G-SIBs include 26 banks and Group 2 includes 55 banks.

LCR and NSFR, by region

Consistent sample of Group 1 banks, ¹ in per cent							
	Europe		Ame	ericas	Rest of the world		
	LCR	NSFR	LCR	NSFR	LCR	NSFR	
2012 H2	108.9	95.7	106.9	89.5	138.6	109.4	
2013 H1	103.9	96.7	110.7	89.9	129.1	108.5	
2013 H2	109.5	101.5	114.3	102.1	132.1	128.8	
2014 H1	115.3	102.3	121.2	103.6	129.4	124.5	
2014 H2	126.5	102.1	124.9	111.4	126.4	121.1	
2015 H1	124.9	104.2	118.4	110.5	126.2	120.1	
2015 H2	130.5	106.4	120.9	112.1	125.4	122.1	
2016 H1	130.6	107.1	125.2	109.7	125.6	122.3	
2016 H2	133.7	109.5	122.7	110.6	135.6	122.8	

Consistent sample of Group 1 banks,¹ in per cent

¹ For LCR Europe includes 27 banks, the Americas include 18 banks and the rest of the world includes 42 banks. For NSFR Europe includes 32 banks, the Americas include 18 banks and the rest of the world includes 41 banks.

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.50

	Group 1 banks			0.	Of which: G-SIBs			Group 2 banks		
	LCR	NSFR	Both	LCR	NSFR	Both	LCR	NSFR	Both	
H2 2012	70.1	42.9	66.7	76.0	46.2	58.3	69.8	60.0	69.2	
H1 2013	72.4	40.7	63.1	84.0	50.0	58.3	79.1	65.5	74.4	
H2 2013	78.2	70.3	73.8	88.0	57.7	62.5	76.7	89.1	87.2	
H1 2014	82.8	75.8	77.4	96.0	69.2	70.8	83.7	87.3	84.6	
H2 2014	87.4	79.1	75.0	100.0	76.9	79.2	76.7	83.6	76.9	
H1 2015	85.1	81.3	79.8	96.0	84.6	91.7	81.4	83.6	79.5	
H2 2015	86.2	81.3	78.6	100.0	84.6	87.5	81.4	87.3	79.5	
H1 2016	89.7	83.5	82.1	100.0	88.5	91.7	90.7	90.9	82.1	
H2 2016	92.0	94.5	89.3	100.0	100.0	100.0	93.0	89.1	87.2	

¹Group 1 includes 87 banks reporting LCR, 91 reporting NSFR and 84 for both ratios. G-SIBs includes 25 banks reporting LCR, 26 reporting NSFR and 24 for both ratios. Group 2 includes 43 banks reporting LCR, 55 reporting NSFR and 39 for both ratios.

LCR and change in HQLA and net outflows

	Group 1 banks			Of which: G-SIBs			Group 2 banks		
		Change				Change		Change	
	LCR	HQLA	Net outflows	LCR	HQLA	Net outflows	LCR	HQLA	Net outflows
H2 2012	121.4			126.8			145.3		
H1 2013	116.8	-2.2	1.7	122.8	-1.7	1.4	149.2	0.2	-2.4
H2 2013	120.5	0.3	-2.9	126.0	0.2	-2.4	142.8	-3.6	0.7
H1 2014	123.1	5.4	3.2	127.1	5.9	5.0	143.5	8.5	8.0
H2 2014	126.0	12.9	10.3	127.6	12.2	11.9	139.0	1.1	4.3
H1 2015	123.9	12.2	14.2	123.9	10.5	13.8	138.8	2.2	2.3
H2 2015	125.6	0.2	-1.2	124.1	-0.7	-0.9	148.6	7.1	0.1
H1 2016	126.8	2.8	1.9	125.7	2.1	0.8	153.3	3.7	0.5
H2 2016	131.9	7.2	3.0	128.9	5.7	3.1	155.5	3.7	2.3

Consistent sample of banks,1 in per cent

¹ Group 1 includes 87 banks, G-SIB includes 25 banks and Group 2 includes 43 banks.

Source: Basel Committee on Banking Supervision.

LCR and change in HQLA and net outflows

Consistent sample of Group 1 banks,¹ in per cent

Table C.52

Table C.51

_	Europe			Americas			Rest of the world		
	Change				Cł	nange	Change		
	LCR	HQLA	Net Outflows	LCR	HQLA	Net Outflows	LCR	HQLA	Net Outflows
H2 2012	108.5			107.0			138.5		
H1 2013	103.6	-5.9	-1.4	110.8	7.2	3.5	129.0	-3.9	3.1
H2 2013	109.1	3.2	-2.0	114.3	2.9	-0.3	132.0	-2.6	-4.8
H1 2014	115.0	4.9	-0.5	121.2	8.7	2.5	129.3	4.2	6.3
H2 2014	126.3	8.4	-1.3	124.9	19.0	15.5	126.4	12.4	15.1
H1 2015	124.7	9.9	11.3	118.3	4.5	10.3	126.3	17.9	18.0
H2 2015	130.3	3.7	-0.8	121.0	-0.3	-2.5	125.3	-1.4	-0.6
H1 2016	130.4	0.6	0.5	125.2	0.1	-3.2	125.5	5.5	5.3
H2 2016	133.7	3.3	0.7	122.7	5.1	7.2	135.6	11.0	2.8

¹ Europe includes 27 banks, the Americas include 18 banks and the rest of the world include 42 banks.

High quality liquid assets and inflows versus outflows over time

	Group 1 b	anks	Of which:	G-SIBS	Group 2 banks	
	HQLA and inflows (post-factor, after-cap)	Outflows (post-factor)	HQLA and inflows (post- factor, after-cap)	Outflows (post-factor)	HQLA and inflows (post-factor, after-cap)	Outflows (post-factor)
H2 2012	10.00	8.67	7.04	5.90	0.40	0.30
H1 2013	10.13	9.07	7.22	6.23	0.39	0.28
H2 2013	10.15	8.89	7.29	6.20	0.38	0.29
H1 2014	10.78	9.32	7.63	6.43	0.41	0.31
H2 2014	11.88	10.07	8.52	7.15	0.41	0.32
H1 2015	13.09	11.20	9.26	7.91	0.42	0.32
H2 2015	12.96	10.95	9.06	7.71	0.45	0.33
H1 2016	13.71	11.57	9.59	8.15	0.47	0.34
H2 2016	14.43	11.80	9.98	8.31	0.50	0.36

Consistent sample of banks,¹ exchange rates as at the reporting dates, in trillions of euro

Table C.53

¹ Group 1 includes 87 banks, G-SIBs include 25 banks and Group 2 includes 43 banks.

Source: Basel Committee on Banking Supervision.

NSFR and change in ASF and RSF

Consistent sample of banks,1 in per cent

Table C.54

	Group 1 banks			Of which: G-SIBS			Group 2 banks		
	Change			Change				Change	
	NSFR	ASF	RSF	NSFR	ASF	RSF	NSFR	ASF	RSF
H2 2012	99.7			101.8			100.2		
H1 2013	99.9	-0.1	-0.4	102.8	1.4	0.4	101.5	-2.5	-3.8
H2 2013	111.3	10.5	-0.8	114.3	11.6	0.4	112.6	9.0	-1.8
H1 2014	110.8	2.6	3.0	113.7	2.2	2.7	112.6	0.7	0.7
H2 2014	111.5	6.9	6.2	114.1	7.8	7.5	112.9	-3.8	-4.0
H1 2015	112.1	9.6	9.1	114.9	11.2	10.4	113.6	7.3	6.7
H2 2015	114.1	-0.1	-1.9	116.9	-0.2	-1.9	115.2	-0.1	-1.5
H1 2016	114.0	0.9	0.9	116.5	0.1	0.4	114.9	0.7	1.0
H2 2016	115.5	4.9	3.6	117.3	4.7	4.1	115.4	1.3	0.9

¹ Group 1 includes 91 banks, G-SIB includes 26 banks and Group 2 includes 55 banks.
NSFR and change in ASF and RSF, by region

Consistent sample of Group 1 banks,¹ in per cent

Table C.55

	Europe			Americas			Rest of the world		
	Change				Change			Change	
	NSFR	ASF	RSF	NSFR	ASF	RSF	NSFR	ASF	RSF
H2 2012	95.7			89.6			109.6		
H1 2013	96.7	-1.7	-2.8	90.1	0.5	0.0	108.6	1.3	2.2
H2 2013	101.4	10.1	5.1	102.2	17.1	3.2	128.9	8.1	-8.9
H1 2014	102.2	1.2	0.4	103.3	1.9	0.8	124.6	4.2	7.7
H2 2014	102.0	0.1	0.3	111.2	13.4	5.4	121.2	10.4	13.5
H1 2015	104.1	6.3	4.2	110.3	8.9	9.8	120.2	12.8	13.7
H2 2015	106.3	-0.6	-2.6	111.8	1.2	-0.2	122.2	-0.4	-2.0
H1 2016	107.0	-1.4	-2.1	109.6	1.8	3.9	122.3	2.3	2.2
H2 2016	109.5	1.3	-1.0	110.6	6.0	5.0	122.8	8.6	8.2

¹ Europe includes 32 banks, the Americas include 18 banks and the rest of the world include 41 banks.

Source: Basel Committee on Banking Supervision.

Impact of revised minimum capital requirements for market risk

End-December 2016 reporting date, in per cent

Table C.56

	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	184.4	184.4	1,735.1	22.8	15.9	23.3	
95% percentile	155.7	148.3	1,432.8	12.9	12.5	14.3	
75th percentile	99.4	85.9	258.4	3.7	3.6	3.8	
Median	55.1	55.1	153.8	1.8	2.3	1.5	
25th percentile	18.4	19.5	73.7	0.4	0.8	0.8	
5th percentile	-34.4	-25.4	23.9	-0.7	-0.3	0.5	
Min	-65.8	-36.8	18.2	-1.7	-0.6	0.3	
Weighted average	51.7	51.4	106.0	2.1	2.0	1.8	
Source: Basel Committee on Banking Supervision.							

Average risk weight by approach

In per cent					Table C.57	
	IRBA	ERBA	IAA	SA	Total	
STC securitisations						
Current framework	24.5	10.0		53.1	27.6	
Final standard	30.6	22.8		53.1	33.4	
Non-STC securitisations						
Current framework	18.2	26.7	11.3	41.8	27.9	
Final standard	35.1	45.4	29.5	64.2	45.7	
Source: Basel Committee on Banking Supervision.						

Previous monitoring reports published by the Basel Committee

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