
BASEL III MONITORING EXERCISE RESULTS BASED ON DATA AS OF 31 DECEMBER 2023

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Abbreviations

AMA	advanced measurement approach
ASF	available stable funding
BCBS	Basel Committee on Banking Supervision
BI	business indicator
BIC	business indicator component
CCB	capital conservation buffer
CCP	central counterparty
CET1	Common Equity Tier 1
CfA	call for advice
CRD	Capital Requirements Directive
CRR	Capital Requirements Regulation
CVA	credit valuation adjustment
EBA	European Banking Authority
EIF	equity investment in funds
FRTB	fundamental review of the trading book
G-SII	global systemically important institution
HQLA	high quality liquid assets
ILM	internal loss multiplier
IMA	internal model approach
IQR	inter-quartile range
IRB	internal ratings-based
LC	loss component
LCR	liquidity coverage ratio
LR	leverage ratio
LRE	leverage ratio exposure
MRC	minimum required capital
NA	not applicable
NSFR	net stable funding ratio
O-SII	other systemically important institution
OBS	off-balance sheet exposures
OpRisk	operational risk
QIS	quantitative impact study
RSF	required stable funding
RWA	risk-weighted assets
SA	standardised approach
SMA	standardised measurement approach
T1	Tier 1

Executive summary

This report summarises the findings from the third round of the Basel III monitoring exercise that is based on the EBA decision to render the QIS exercise mandatory for a representative set of European Union (EU)/European Economic Area (EEA) credit institutions.¹ The report provides an assessment of the impact of the Basel III reform considering specific provisions that are part of the European regulation for a representative sample of EU/EEA banks.²

On 31 May 2024, the European Parliament and Council adopted the Regulation (EU) 2024/1623 amending Regulation (EU) No 575/2013 as regards requirements for credit risk, credit valuation adjustment risk, operational risk, market risk and the output floor (hereafter CRR3³) and the directive (EU) 2024/1619 amending Directive 2013/36/EU as regards supervisory powers, sanctions, third-country branches, and environmental, social and governance risks (hereafter CRD6⁴). The aforementioned regulations reflect the implementation of the Basel III reform package in the EU and contain certain EU-specific adjustments that are not part of the Basel III framework. The CRR3 is to apply from 1 January 2025, while the CRD6 is to be transposed into national law by January 2026 (i.e. 18 months after entry into force on 9 July 2024).⁵

For the first time, the main Basel III monitoring report presents the estimated impact of the Basel III reform considering the most impactful EU-specific adjustments that are part of the CRR3 and CRD6.⁶ Differently to previous years, the main results also include the effect of all EU buffers and Pillar 2 requirements (P2R). Therefore, results in this report represent an implementation of the Basel III reform that is closer to the CRR3/CRD6 framework. The revisions to the Basel III framework mainly affect exposures – and the resulting risk-weighted assets (RWA) and minimum required capital (MRC) – for credit risk, operational risk (OpRisk) and leverage ratio (LR). Importantly, the new Basel III framework also introduces an aggregate output floor. The impact attributed to the above risk factors is measured and analysed primarily based on the MRC and secondarily on the basis of capital shortfalls and differences in capital and LR.

¹ [EBA/DC/2021/373 \(consolidated version\)](#).

² Regarding operational risk, EU co-legislators have opted for the discretion of setting ILM equal to 1 in the final revised Capital Requirements Regulation (CRR) 3 and Capital Requirements Directive (CRD) 6. Therefore, the results may not be directly comparable with the report published by the Basel Committee on Banking Supervision (BCBS), in which ILM specific was adopted as the base case for measuring the impact of the output floor.

³ [Regulation \(EU\) 2024/1623](#).

⁴ [Directive - EU - 2024/1619 - EN - EUR-Lex \(europa.eu\)](#).

⁵ On 18 June 2024, the European Commission has announced that it will adopt a delegated act in accordance with Article 461a CRR3 postponing the use of the FRTB methods for capital purposes (FRTB-SA and FRTB-IMA) by 1 year. This report does not take into account the FRTB postponement. However, the results, with the exception of the impact of the transitional arrangements for the output floor in 2025 (section 2.8) will not be affected since they are presented at the time of full implementation in 2033.

⁶ In previous years, the results considering the EU-specific adjustments were published as an Annex to the main report. This year, they are presented as the main results, while the Basel III baseline results are presented as an Annex. From the Dec-22 reference date, the analysis on the Net Stable Funding Ratio (NSFR) is moved to the Report on Liquidity Measures that also includes the analysis on the Liquidity Coverage Ratio (LCR).

The cumulative impact analysis uses a sample of 152 banks. The sample is divided into 60 Group 1 banks (large and internationally active banks) and 92 Group 2 banks.^{7,8} Compared to the second mandatory exercise (as of December 2022), the sample has been reduced by 5 banks. Of the 152 banks, 144 banks were included in the sample in accordance with the general provisions of Article 4 of the EBA Decision (EBA/DC/2021/373), while 8 banks were included in the sample in accordance with the provisions of Article 8(3). The reduction in the sample size compared to the previous monitoring exercise is mainly due to the fact that banks that submitted data in accordance with the provisions of Article 8(3) no longer submitted data.

Main results of the December 2023 exercise

The baseline impact assessment quantifies the difference in the minimum required capital between the current EU implementation of the Basel standards (CRR2/CRD5) and the final Basel III framework considering the most impactful EU-specific adjustments that are part of the CRR3 and CRD6 and including all buffers and P2R (henceforth the EU-specific scenario). The main finding is that EU banks would need a total of EUR 0.8 billion in additional Tier 1 capital to comply with the new framework at the time of full implementation in 2033. The main contributing factors are the output floor and OpRisk capital requirements.

The weighted average increase in the total T1 MRC after the reform is 7.8% for all banks (Table 1). For the sub-sample of large and internationally active banks (Group 1), the impact is 8.6%. For Group 2 banks, the impact is 3.6%. The impact of the overall risk-based reforms (excluding the impact of the LR) on the entire sample is 8.8%. Similar to previous years, the output floor and OpRisk are the main drivers of the MRC increases across the group of all banks, contributing 5.7% and 2.8% respectively to the overall result.

Looking at Group 1 banks, the output floor and OpRisk are the two main drivers of the impact at 6.4% and 3.1% respectively. Within the Group 1 banks, the output floor and OpRisk are also the main drivers of the aggregate impact for the global systemically important institutions (G-SIIs), with contributions of 8.6% and 3.8% respectively. For the Group 2 banks, the output floor and credit risk are the main drivers of the aggregate impact, with contributions of 2.0% and 1.0% respectively. Finally, as in previous years, the cumulative risk-based impact for the entire sample is partially offset by the impact of the LR of -1.0%. This offset reflects the fact that some banks that are constrained by the LR in the current framework (i.e. current implementation of Basel standards CRR2/CRD5) will be less constrained by the LR in the revised framework (i.e. full implementation of Basel III under the EU-specific scenario (2033)).

The full implementation of the Basel III framework under the EU-specific scenario leads to a CET1 capital shortfall totalling EUR 0.3 billion, which can be attributed to both Group 1 and Group 2 banks (Table 7). The Tier 1 capital shortfall is around EUR 0.8 billion and the total capital shortfall is EUR 5.1 billion.⁹

⁷ Group 1 banks are banks that have Tier 1 capital of more than EUR 3 billion and are internationally active. All other banks are designated as Group 2 banks.

⁸ Only those banks that submitted data of adequate quality for at least one of the credit risk components (IRB approach or SA), operational risk and leverage ratio were included in the sample of the cumulative analysis. If these banks did not submit data for any of the remaining components of the exercise, i.e. market risk and CVA, the cumulative analysis assumed that the revisions to these components had no impact.

⁹ Capital shortfalls are calculated at the end of the transitional period and do not consider the effect of certain transitional arrangements that will temporarily alleviate the impact.

Table 1: Change in total T1 MRC, as a percentage of the overall current T1 MRC, due to the implementation of the final Basel III framework under the EU-specific scenario (including all buffers and P2R capital requirements – frozen); weighted averages in %

Bank group	Credit risk				Market risk	CVA	Op Risk	Output floor	Other Pillar 1	Total risk-based	Revised LR	Total
	SA	IRB	Sec	CCPs								
All banks	1.2	-1.5	0.0	0.0	1.1	0.3	2.8	5.7	-0.8	8.8	-1.0	7.8
Group 1	1.2	-1.7	0.0	0.0	1.3	0.4	3.1	6.4	-0.9	9.7	-1.2	8.6
G-SIIs	1.4	-1.4	0.0	0.0	2.7	0.5	3.8	8.6	-0.5	14.8	-2.6	12.2
O-SIIs	1.0	-2.1	0.0	0.0	-0.2	0.3	2.6	5.2	-1.2	5.5	-0.1	5.5
Other	0.5	0.5	0.0	0.0	4.1	0.4	2.8	0.5	-0.7	8.0	0.0	8.0
Group 2	1.5	-0.5	0.0	0.0	0.3	0.1	0.8	2.0	-0.1	4.0	-0.3	3.6
O-SIIs	1.4	0.0	0.0	0.0	0.3	0.0	0.9	1.4	-0.2	3.7	-0.5	3.2
Other	1.6	-1.2	0.0	0.0	0.5	0.1	0.6	2.9	-0.1	4.3	0.0	4.2
Universal	1.3	-1.1	0.0	0.0	1.3	0.3	2.9	5.4	-0.8	9.2	-1.1	8.2
Retail-oriented	1.7	-0.8	0.0	0.0	-0.3	0.3	0.5	2.7	-0.3	3.7	-0.7	3.0
Corporate-oriented	-0.1	-6.5	0.0	0.0	0.2	1.1	2.6	9.7	-0.3	6.8	-0.8	6.0

Source: EBA QIS data (December 2023)

Looking at the entire bank sample, the risk-based CET1 ratio falls by 140 basis points as a result of the revised Basel III framework under the EU-specific scenario (Table 6). The more broadly defined Tier 1 and Total Capital ratios fall by 150 and 170 basis points respectively. The LR of 5.8% remains unchanged under the revised Basel III framework compared to the current framework (CRR2/CRD5). This observation applies equally to the different bank groups.

1. Introduction

This report presents the estimated impact of the Basel III reform package on European banks considering the most impactful EU-specific adjustments that are part of the CRR3 and CRD6. Therefore, the impact is presented under the so called “EU-specific scenario”. The assessment of the final package includes the revisions to the internal ratings-based (IRB) approach¹⁰, the standardised approach to credit risk (SA)¹¹ and the standardised approach to operational risk¹² as well as the revisions to the Basel III leverage ratio framework¹³ and the counterparty credit risk framework¹⁴. In addition, the impacts of the fundamental review of the trading book (FRTB)¹⁵ agreed in 2019 and the credit valuation adjustment (CVA) as well as the changes resulting from the revised securitisation framework¹⁶ are taken into account. The assessment also includes the effect of additional implementation features that are part of the CRR3/CRD6 package. With regard to operational risk, the EU co-legislators chose to adopt the discretion to set the ILM equal to 1. In terms of credit risk, the impact includes the effect of certain EU specificities, such as the consideration of the SME and Infrastructure supporting factors, the specific treatment of equity exposures, real estate exposures, SFTs minimum haircut floor and trade finance CCFs. In line with CRR3, the EU CVA exemptions are considered. Finally, the effects of the CRR3 transitional arrangements on the output floor are taken into account during the transitional period. The calculation of the MRC under the EU-specific scenario considers all EU buffers and P2R.

1.1 Data and sample

The final sample for the December 2023 cumulative point-in-time analysis comprises 152 banks – 60 Group 1 banks and 92 Group 2 banks (Table 2). The data submitted for the December 2023 cumulative impact assessment covers a total of 159 banks from all countries in the EEA. The RWA coverage of the EU banking system is 76.2% and ranges from 50.0% to 97.5% depending on the jurisdiction. Of these, 7 banks are subsidiaries of EU parent institutions that are already participating in the exercise. These 7 banks are not included in the sample to avoid double counting. Of the remaining 152 banks, only those that submitted data for at least one of the following components were included in the sample for the cumulative analysis: (a) credit risk (IRB or SA), (b) operational risk and (c) leverage ratio (LR). This criterion led to no further exclusions.

The sub-samples used to analyse the impact of the final Basel III reform on individual risk categories are larger than the sample used for the overall cumulative analysis (see grey shaded column in

¹⁰ See BCBS (2016), Reducing variation in credit risk-weighted assets: Constraints on the use of internal model approaches, March 2016; BCBS (2017), Finalising Basel III: An overview of post-crisis reforms; BCBS (2017), Basel III: Finalising post-crisis reforms; BCBS (2019), Explanatory note on the minimum capital for market risk.

¹¹ See BCBS (2015), Second consultative document: Standards — revisions to the Standardised Approach for credit risk; BCBS (2017), Finalising Basel III: An overview of post-crisis reforms; BCBS (2017), Basel III: Finalising post-crisis reforms.

¹² See BCBS (2016), Standardised Measurement Approach for operational risk: Consultative document; BCBS (2017), Finalising Basel III: An overview of post-crisis reforms; BCBS (2017), Basel III: Finalising post-crisis reforms.

¹³ See BCBS (2016), Revisions to the Basel III leverage ratio framework: Consultative document.

¹⁴ See BCBS (2019), Calculation of RWA for credit risk (CRE): https://www.bis.org/basel_framework/standard/CRE.htm.

¹⁵ See BCBS (2016), Minimum capital requirements for market risk: Standards; BCBS (2019), Explanatory note on the minimum capital for market risk.

¹⁶ See BCBS (2016), Basel III document: Revisions to the securitisation framework, amended to include the alternative capital treatment for ‘simple, transparent and comparable’ securitisations, www.bis.org/bcbs/publ/d374.htm; BCBS and Board of the International Organization of Securities Commissions (2015), Criteria for identifying simple, transparent and comparable securitisations, www.bis.org/bcbs/publ/d332.htm.

Table 2). Therefore, the impact on credit risk, operational risk and LR shown in the individual sections of the report may differ from the impact shown in the overall cumulative analysis.

Table 2: Number of banks included in the cumulative analysis and in the risk specific sections of the report; per country

Country	Included in the Cumulative Analysis	Credit Risk	Market Risk	CVA	Op Risk	LR	RWA Coverage (%)
AT	10	10	4	9	10	10	72.1
BE	6	8	3	7	7	8	92.5
BG	3	3	0	2	3	3	89.1
CY	3	3	0	3	3	3	95.0
CZ	1	1	0	1	1	1	78.6
DE	32	34	13	32	30	34	50.0
DK	7	7	7	6	7	7	87.1
EE	2	2	2	2	2	2	84.3
ES	6	6	6	6	6	6	87.9
FI	3	3	1	3	3	3	90.9
FR	8	8	7	7	8	8	91.6
GR	4	4	4	4	4	4	94.0
HR	1	1	1	1	1	1	94.1
HU	2	2	2	2	2	2	97.5
IE	8	8	6	7	8	8	93.2
IS	3	3	2	3	3	3	93.8
IT	8	8	7	8	8	8	83.6
LI	2	3	2	3	2	3	91.6
LT	1	1	1	1	1	1	78.2
LU	3	3	2	3	3	3	76.2
LV	2	2	2	2	2	2	95.8
MT	4	4	0	2	4	4	66.6
NL	8	8	4	7	8	8	91.2
NO	4	4	1	3	4	4	51.8
PL	5	5	3	5	5	5	82.0
PT	5	7	6	7	7	7	91.9
RO	2	2	1	2	2	2	90.6
SE	6	6	4	6	6	6	77.9
SI	1	1	1	1	0	1	79.7
SK	2	2	0	2	2	2	93.9
All banks	152	159	92	147	152	159	76.2
Group 1	60	63	50	61	59	63	
G-SIIs	7	7	7	6	7	7	
Group 2	92	96	42	86	93	96	

Source: EBA QIS data (December 2023)

1.2 Scenario definition: The EU-specific scenario

Results in the main report present the estimated impact of the Basel III reform package on European banks considering certain EU-specific adjustments that are part of the CRR3 and CRD6. Results under the application of the Basel III baseline standards (i.e. following the Basel III reform package as agreed in December 2017 by the Group of Central Bank Governors and Heads of Supervision (GHOS) – henceforth Basel III baseline), are presented in Annex I. Table 3 presents the main implementation features of the scenario measured in the main report (the EU-specific scenario) in comparison to the one used in the Annex I (the Basel III baseline scenario). All results shown in this report follow the Basel III national discretion of setting ILM equal to 1 for the purpose of calculating Operational risk RWAs.

Table 3: Comparison of the main implementation features of the EU-specific scenario and the Basel III baseline scenario.

Risk Area	Main report – EU-specific scenario [Basel III (applying ILM = 1) with EU adjustments]	Annex I - Basel III baseline scenario [Basel III (applying ILM = 1)]
Credit Risk	<ul style="list-style-type: none"> SA-CR: ECRA framework adopted SA-CR: loan-splitting method adopted on GRRE, GCRE, IPCRE + hard test SME supporting factor (SA and IRB) Infrastructure supporting factor (SA and IRB) CRR3 treatment for equity (SA and IRB) SFTs Postponement of minimum haircut floors (SA and IRB) CRR3 treatment for trade finance CCFs (SA and IRB) CRR3 treatment for revaluation of Real Estate (SA only) 	<ul style="list-style-type: none"> SA-CR: ECRA framework adopted SA-CR: loan-splitting method adopted on GRRE, GCRE, IPCRE + hard test
CVA	<ul style="list-style-type: none"> Final CVA framework (July 2020) CVA exemptions CVA simplified method (based on OEM eligibility criteria) 	<ul style="list-style-type: none"> Final CVA framework (July 2020) No CVA exemptions CVA simplified method (based on EUR 100 billion threshold)
Transitional arrangements Output floor	<ul style="list-style-type: none"> Output floor calibration (2025-2030) CRR3 transitional arrangements for unrated corporates CRR3 transitional arrangements for Residential Real Estate exposures CRR3 transitional arrangements for the SACCR Calibration CRR3 transitional arrangements for securitisations 	<ul style="list-style-type: none"> Output floor calibration (2023-2028)
Buffers and capital requirements	Pillar 1, Pillar 2 and all buffers considered in the MRC calculation	Only Pillar 1, CCB and G-SIIs considered in the MRC calculation

The CRR3/CRD6 features considered in this report are as follows:

- **SME supporting factor:** considering the supporting factor for exposures to SMEs envisaged in the CRR3 under SA and IRB (also including it in non-modelling RWAs for the purpose of the output floor calculation). Under the SA framework, the RW for unrated corporate SME exposures is also adjusted to the one in the CRR3 framework.
- **Infrastructure supporting factor:** considering the supporting factor for exposures to infrastructure projects envisaged in the CRR3 under SA and IRB (also including it in non-modelling RWAs for the purpose of the output floor calculation)
- **CRR3 treatment for equity exposures:** including the preferential risk-weight foreseen in article 133(6) and article 495a of the CRR3 Proposal for certain types of equity exposures under the SA and IRB (also including it in non-modelling RWAs for the purpose of the output floor calculation).
- **Postponement of minimum collateral haircut floors for SFTs (SA and IRB):** not including the minimum collateral haircut floors as defined by the comprehensive approach for collateralised transactions (CA(SH)) which is applicable in the Basel Framework (2023) to SFT exposures under SA and IRB (also including it in non-modelling RWAs for the purpose of the output floor calculation).
- **CRR3 treatment for trade finance CCFs:** including the application of a lower CCF (20% instead of 50%¹⁷) to trade finance transaction-related contingent items as foreseen in article 111¹⁸ of the Council proposal.
- **CRR3 treatment for the revaluation of real estate exposures:** including the requirement to make upwards or downwards adjustments (unlike in the Basel III standards¹⁹) following the regular monitoring of the value of property pledged as collateral. A revaluation is only allowed up to the average value over the last six years as foreseen in article 229 of the Council proposal.
- **CVA exemptions:** maintaining the CVA exemptions envisaged in the CRR3 framework in the own fund requirements for CVA risks;
- **CVA simplified method:** reusing the eligibility criteria of the original exposure method (OEM) (see Article 273a(2) of the CRR3)²⁰ for the eligibility criteria of the simplified method for the own funds requirements for CVA risks;

¹⁷ Under the Basel III framework, these type of exposures are subject to a credit conversion factor (CCF) of 50% (CRE20.42 of the Basel III agreement).

¹⁸ Also referring to the Annex for the definition of CCFs buckets.

¹⁹ The Basel standards generally cap the value of the property recognised for prudential purposes at the value measured at loan origination, unless modifications “unequivocally” increase the value of the property or the national competent authority has exercised the discretion to request a downward adjustment.

²⁰ Article 273a(2) of the CRR3 specifies that an institution may use the OEM, provided that the size of its on- and off-balance-sheet derivative business is equal to or less than both of the following thresholds on the basis of an assessment carried out on a monthly basis using the data as of the last day of the month: (a) 5 % of the institution's total assets; b) EUR 100 million.

- **CRR3 transitional arrangements to the output floor:** including some of the transitional arrangements that are foreseen in article 465 of the CRR3 for the purpose of the output floor calculation. Those transitional arrangements will imply a temporary preferential treatment to calculate the non-modelling RWAs that are used to calculate the output floor impact on a transitional basis:
 - **Unrated corporates:** including the transitional preferential treatment to exposures to corporates as defined in article 465(3) of the CRR3 proposal.
 - **SA-CCR Calibration:** including the transitional calibration for the application of the SA-CCR approach ($\alpha = 1$) as defined in article 465(4) of the CRR3 proposal.
 - **Residential Real Estate (hereafter 'RRE'):** including the transitional preferential treatment to exposures secured by real estate if institutions pass the so-called "super hard test" as defined in article 465(5) of the CRR3 proposal.
 - **Securitisations:** including the transitional calibration for the p-factors that apply to securitisations exposures for the purpose of calculating the output floor as defined in article 465(13).
 - **Output floor calibration:** including the phased-in period for the output floor calibration as foreseen in the CRR3 proposal (2025-2030) which differs from the period foreseen in the baseline Basel III agreement (2023-2028).

1.3 Methodology for impact estimation

General methodological remarks

- **The methodology predominantly assesses the impact in terms of Tier 1 minimum required capital (T1 MRC).** The T1 MRC in this report includes all EU buffers and P2 capital requirements. In particular, it considers the capital conservation buffer (CCB), the capital buffer for global systemically important institutions (G-SIIs),²¹ any higher loss absorbency requirements for other (domestic) systemically important institutions (O-SIIs), the countercyclical capital buffer requirements, the systemic risk buffer and the P2 requirements.²²
- **P2 capital requirements are applied to pre-floored RWAs in the calculation of the EU-specific Basel III T1 MRC. Article 104a paragraph 6(a) of the CRD6 indicates that the nominal P2R amount should not increase as a result of the institution becoming bound by the output floor.** The provision shall apply until a review of their calibration is concluded to avoid automatic increases in the amount of required regulatory capital that may arise from higher RWAs when the institution becomes bound by the output floor, all else being equal.
- **As of December 2023, the only data available for P2R were those applicable to institutions on that date, and therefore the available data does not consider a potential**

²¹ CCB and G-SII buffers are assumed to be part of Pillar 1 requirements given that they are universally applicable and quantifiable.

²² This methodology differs from the approach followed by the BCBS Basel III quantitative impact study for the global banking system where only the CCB and G-SIIs buffers are considered. Annex I shows impact results under the Basel III baseline scenario and following the BCBS methodology for calculating the MRC (i.e. considering CCB and G-SIIs buffer only). Results in Annex I are therefore comparable to the results in the BCBS Basel III quantitative impact study for the global banking system.

revision of its calibration. To avoid any arithmetic increases in the MRC calculation that are driven by the output floor impact, the P2R have been applied as percentages to the pre-floored RWAs only (hereafter “**frozen P2R**”). As a result, the P2R requirements will not automatically increase with the implementation of the output floor, but they may still vary due to the changes in pre-floored RWAs. The following equation summarises the formula that was used to calculate the MRC:

MRC = Sum of:

Floored RWA × [Pillar 1 minima + CCB buffer + CCyCB buffer + max (G-SII, O-SII buffer) + SyRB buffer];

Pre-floor RWA × (Pillar 2 requirements)

- **The Tier 1 minimum required capital (T1 MRC) includes both risk-based capital requirements and leverage ratio-based capital requirements.** The methodology assumes compliance with the higher of the risk-based capital requirements (i.e. those based on risk-weighted assets, including the effect of the output floor) and the leverage ratio-based requirement, under the Capital Requirements Regulation (CRR) 2/Capital Requirements Directive (CRD) 5 and Basel III frameworks (both fully phased-in).
- The impact on T1 MRC is the difference between the EU-specific Basel III and CRR2/CRD5 T1 MRC, divided by the CRR2/CRD5 T1 MRC.
- The estimated results are weighted averages, unless otherwise indicated below the tables and figures.
- From Dec-18 onwards, the Basel III monitoring exercise assesses the impact of the January 2019 FRTB framework.
- From Dec-20 onwards, the Basel III monitoring exercise considers the revision of the CVA framework agreed in July 2020.
- The sample of the point-in-time analysis (Dec-23 reference date only) consists of 152 banks, while the sample of the time-series analysis (Dec-21, Dec-22 and Dec-23) consists of 149 banks, to allow comparisons over time using a constant sample.
- Where applicable in the report, the estimation of the Tier 1 MRC impact that feeds the time series analyses assumes the application of the most recent rules retroactively, where the availability, granularity and quality of past data allows. Data for certain EU-specific adjustments that is considered as of Dec-23 was not available for previous years. In those cases, the EU adjustments have not been considered.
- The figures for operational risk represent the impact resulting from the EU co-legislators’ decision to set ILM=1 for the full implementation of Basel III (2033).
- The analysis applies an adjustment to cope with the results submitted by several banks which apply an overly conservative estimation method for the FRTB capital requirements. This method uses the originally submitted data, separates the overly conservative estimated impact on Equity Investment Funds (EIF) from “other market risk impact”, and recognises only 20% of the impact assigned to the former.²³

²³ For further details, please refer to section 2.6 (FRTB).

1.4 Data quality issues and interpretation of the results

The results should be interpreted with caution, considering that data quality may lead to inaccurate estimations of the results. Moreover, several simplifying and conservative assumptions, adopted by the participating banks, may result in an overestimation of the capital impact:

- Treatment of data quality issues: If no data was provided or if the data provided to measure the impact of a given EU adjustment was not considered of sufficient quality, no impact was assigned to the relevant EU adjustment for the affected bank. As a result, there might be an underestimation of the beneficial effect of EU-specific adjustments, that would in turn result in an overestimation of the capital impact.
- Static balance sheet assumption: Institutions do not react to the revised requirements by adjusting their businesses and/or managing their regulatory capital costs.
- Static requirements assumption: Pillar 2 and combined buffer requirements as of December 2023, defined as a percentage of the bank's RWA, were used both for the CRR baseline and the EU-specific scenario. Higher RWA resulting from the implementation of the revised framework may lead – in some cases – to a revision and, possibly, re-calibration of the Pillar 2 and buffer requirements.
- Profit retention to cover capital shortfall: the cumulative impact analysis assumes no role for profit retention in rebuilding the capital base.

Additionally, the following methodological changes should be considered when comparing results shown in this report with the results shown in the Basel III monitoring report based on data as of December 2022:

- The results in this report compare with those included in the Public Annex to the Basel III monitoring report “Analysis of EU-specific Adjustments” as of December 2022.
- The scenario presented in the current report has been updated based on the publication of the final CRR3 and CRD6 texts. The scenario introduces an additional EU adjustment that was not considered in the previous year – the output floor transitional arrangement for securitisations – and excludes on EU adjustment that was previously considered – the RGLA-PSE adjustment.

1.5 Differences with respect to methodology used by the BCBS

The report presents the impact of the Basel III reforms under the EU-specific scenario. It therefore considers the effect of the most impactful EU adjustments that are part of the CRR3/CRD6 but are not part of the Basel III text. The BCBS quantitative impact study presents the impact of the Basel III reforms as defined in the Basel text and therefore not considering any EU specificities.

The report presents the impact of the reforms under the EU-specific scenario in terms of changes in Tier 1 minimum required capital (T1 MRC), comparing the fully implemented revised EU-specific Basel III requirements with the current fully phased-in Capital Requirements Regulation (CRR) 2/Capital Requirements Directive (CRD) 5 requirements. The report considers all EU buffers

and Pillar 2 requirements (P2R) for the calculation of the T1 MRC. The BCBS quantitative impact study considers Pillar 1, CCB and GSII-s buffer only to obtain an MRC measure that is common across all jurisdictions and not affected by Pillar 2 capital requirements, which may vary across EU countries.

‘Annex I’ includes results mirroring the methodology used in the BCBS quantitative impact study.

It therefore presents the impact of the Basel III reforms without considering any EU-specific adjustment and assessing the impact in terms of Pillar 1 Tier 1 minimum required capital (T1 MRC) considering CCB and GSII-s buffer only. The transition chapter included in this report shows a comparison between the results in the main report and the Annex to facilitate a comparison between the two and identify the main drivers among the different impacts.

The current risk-weighted assets (RWA), which are the basis for the calculation of risk-based T1 MRC, do not include the RWA add-on based on the ‘Basel I floor’²⁴ which was applied by some EU jurisdictions, because it ceased to exist in the EU as of 1 January 2018. As to the revised framework, the exercise assumes full implementation (as of 2028) of the output floor calibrated at 72.5% of the standardised approach RWA of the revised framework, while the estimation of the LR-based Tier 1 MRC consists of the existing minimum requirement (3%) plus 50% of the risk-based G-SIIs surcharge²⁵, where applicable²⁶. The results shown in the report are weighted averages, unless stated otherwise.

1.6 Description of impact metrics

The following variables are used in the analysis for assessing the cumulative impact, in terms of T1 MRC:

- ‘Total’ shows the overall impact on T1 MRC, when moving from the current to the revised framework and after considering that banks must meet the higher of the risk-based capital requirements (i.e. including the 72.5% output floor) and the revised Basel III LR requirement with respect to T1 capital.
- ‘Total risk-based’ shows the impact on the risk-based T1 MRC, i.e. without including the impact of the revisions in the revised Basel LR T1 MRC.
- ‘Credit risk’ shows the impact on T1 MRC assigned to the revisions of the SA and IRB approach for credit risk, as well as the changes arising from the revisions in the Securitisation and CCPs.
- ‘Market risk’ shows the impact on T1 MRC assigned to the revisions to the SA and internal model approach (IMA) for market risk (FRTB).

²⁴ The impact is measured without considering the current national implementation of the Basel I-based transitional floors set out in the Basel II framework. The transitional Basel I-based floor was implemented in Article 500 of Regulation (EU) No 575/2013 (CRR) as a floor to actual own funds rather than a floor to RWAs. The temporary requirement expired on 31 December 2017.

²⁵ For example, for a bank with a G-SIIs buffer of 1% the minimum LR T1 MRC would be 3.5% of the total exposure measure.

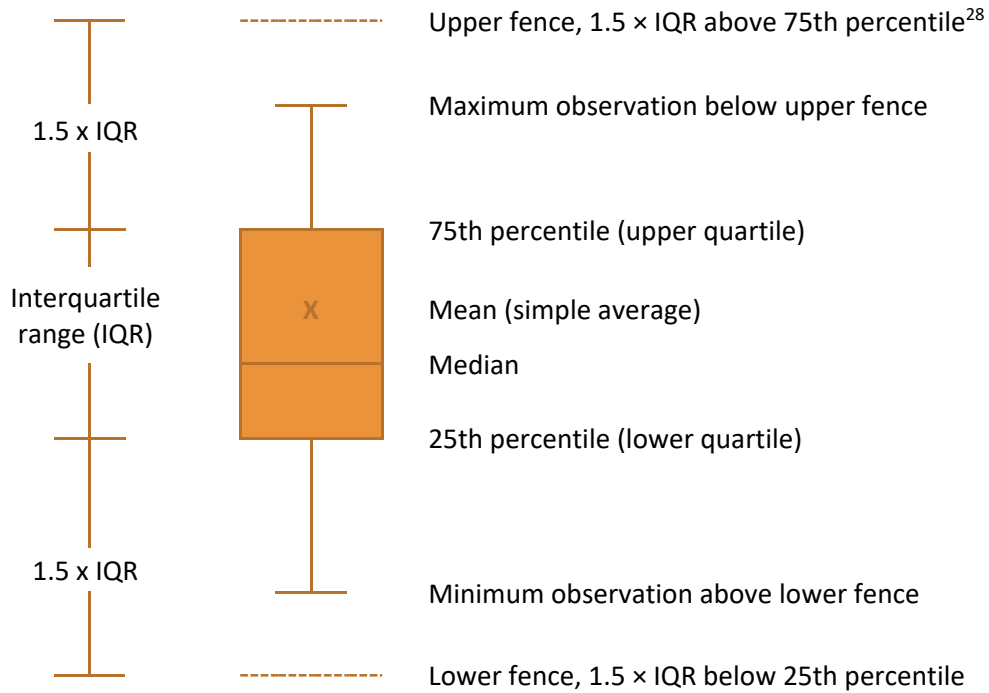
²⁶ See also BCBS (2013), ‘Global systemically important banks: Updated assessment methodology and the higher loss absorbency requirement’; Financial Stability Board (November 2018), ‘2018 list of global systemically important banks (G-SIBs)’, <http://www.fsb.org/wp-content/uploads/P161118-1.pdf>.

- ‘CVA’ shows the impact on T1 MRC due to the revisions to the CVA framework, including the removal of the CVA exemptions under Article 382 of the CRR.
- ‘Operational risk’ shows the impact on T1 MRC due to the introduction of the new standardised measurement approach (SMA), assuming that the EU will choose the option of setting the ILM equal to 1 when implementing the final Basel III framework.
- ‘Other P1 RWA’ shows the impact on T1 MRC assigned to the revisions from the Basel III framework which directly or indirectly affect the level of Other Pillar 1 RWA.
- ‘Output floor’ presents the impact on the level of T1 MRC due to the application of the aggregate output floor on the total RWA. The output floor impact is the difference between 72.5% of the total SA-equivalent RWA and the model-based RWA.
- ‘Revised LR’ shows the impact on LR-based T1 MRC add-ons (i.e. the additional MRC on top of the risk-based MRC) assigned to the implementation of the revised LR framework. A positive change shows that the LR requirement²⁷ becomes more constraining under the new framework, i.e. the final Basel III LR framework increases the T1 capital add-on in relation to the leverage ratio CRR2/CRD5 add-on over the risk-based minimum required Tier 1 capital. A negative change shows that the final Basel III LR Tier 1 add-on becomes less constraining, i.e. the final Basel III LR T1 add-on is lower than the CRR2 / CRD5 LR add-on.
- In addition, the impact of the final Basel III framework is assessed in terms of ‘capital shortfall’ of the actual CET1, T1 and total capital, in relation to the MRC for CET1, T1, and total capital of the new framework, as follows:
- ‘*Capital shortfall*’ is estimated as the difference between the fully implemented MRC metric and the current actual capital set aside by the EU banks.

²⁷ Currently, leverage ratio requirements are not yet binding in the EU; the proposed CRR2/CRD5 will render the leverage ratio requirements binding.

1.7 Distribution metrics

Some charts show box plots that give an indication of the distribution of the results among the participating banks. Those box plots are defined as follows:



²⁸ To calculate the upper and lower fences, 1.5 times the IQR is added to the 75th percentile and deducted from the 25th percentile.

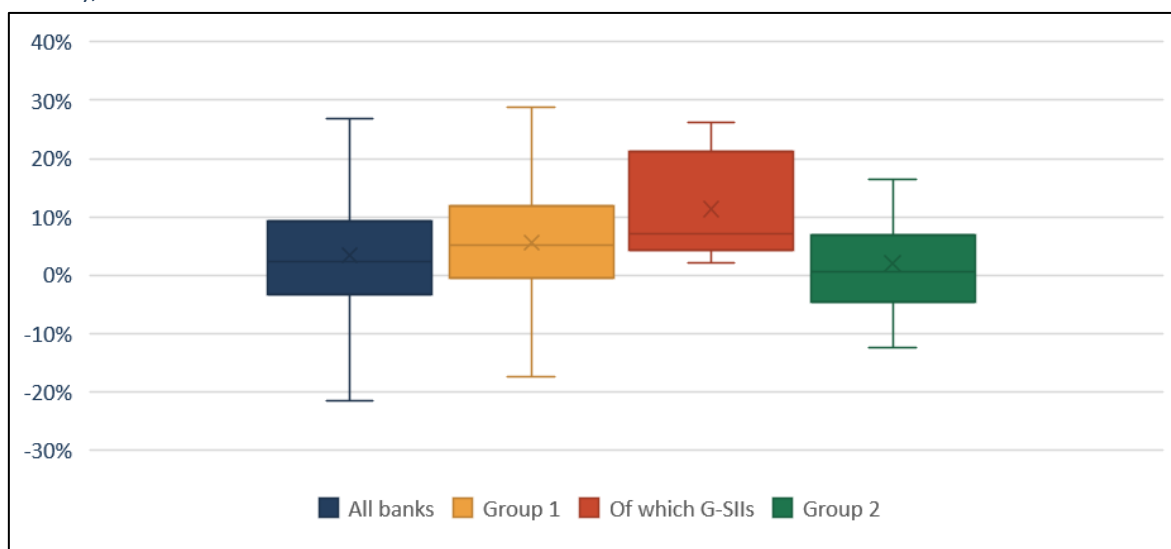
2. Main results: EU-specific scenario

This section presents various metrics for assessing the impact of the full implementation of the Basel III reform package under the EU-specific scenario.

2.1 Cumulative impact analysis of the final Basel III reform under the EU-specific scenario: point-in-time analysis (Dec-23 only)

The analysis in this section focuses on the impact of the final Basel III package under the EU-specific scenario in terms of the Tier 1 minimum required capital (T1 MRC). Figure 1 shows the distribution of T1 MRC across all banks: Group 1 banks (large, internationally active banks), Group 2 banks (other banks) and G-SIIs. At an aggregate level, the simple average for all banks is 3.4% and the median is 2.4%, which implies that there are a few positive outliers. For Group 1 banks, the average and median are 5.6% and 5.2%. G-SIIs have substantially higher values, with an average and median of 11.3% and 7.1% respectively, and Group 2 banks have substantially lower values, with an average and median of 2.0% and 0.7% respectively. The dispersion of impact on T1 MRC, measured as the interquartile range, is clearly the widest for Group 1 banks compared to other bank groups and is mainly affected by the non-G-SIIs within the Group 1 banks.

Figure 1: Distribution of changes in total T1 MRC, due to the implementation of the final Basel III framework under the EU-specific scenario (including all buffers and P2R capital requirements – frozen); in %



Note: the mean ('X') reflects the simple average; Source: EBA QIS data (December 2023)

The weighted average increase in T1 MRC, including all buffers and P2R capital requirements, is **7.8% for all 152 banks in the sample, 8.6% for Group 1 banks and 3.6% for Group 2 banks** (Table 4). For Group 1 banks, the overall increase in T1 MRC consists of a 9.7% increase in the risk-based requirements, mainly driven by the 6.4% increase due to the introduction of the output floor. This increase is offset by a reduction of 1.2% due to the impact of the LR. For Group 2 banks, the overall 3.6% increase in T1 MRC is due to the 4.0% increase in risk-based requirements, mainly driven by a 2.0% increase due to the introduction of the output floor and 1.0% revisions to credit risk. This increase is offset by a reduction of 0.3% due to the impact of the LR.

Looking at the entire sample, the final Basel III capital requirements for operational risk (OpRisk) contribute **2.8% to the overall impact compared to the CRR2/CRD5 framework**. The significant increase in the impact of the MRC for OpRisk is primarily due to the increase in the net interest margin (NIM) over the last year, which triggered the increase in the BIC compared to last year’s estimates, which is the sole determinant of the MRC for OpRisk. This change in this year’s BIC is particularly impactful for AMA banks.

Table 4: Change in total T1 MRC, as a percentage of the overall current T1 MRC, due to the implementation of the final Basel III framework under the EU-specific scenario (including all buffers and P2R capital requirements – frozen); weighted averages in %

Bank group	Credit risk				Market risk	CVA	Op Risk	Output floor	Other Pillar 1	Total risk-based	Revised LR	Total
	SA	IRB	Sec.	CCPs								
All banks	1.2	-1.5	0.0	0.0	1.1	0.3	2.8	5.7	-0.8	8.8	-1.0	7.8
Group 1	1.2	-1.7	0.0	0.0	1.3	0.4	3.1	6.4	-0.9	9.7	-1.2	8.6
G-SIIs	1.4	-1.4	0.0	0.0	2.7	0.5	3.8	8.6	-0.5	14.8	-2.6	12.2
O-SIIs	1.0	-2.1	0.0	0.0	-0.2	0.3	2.6	5.2	-1.2	5.5	-0.1	5.5
Other	0.5	0.5	0.0	0.0	4.1	0.4	2.8	0.5	-0.7	8.0	0.0	8.0
Group 2	1.5	-0.5	0.0	0.0	0.3	0.1	0.8	2.0	-0.1	4.0	-0.3	3.6
O-SIIs	1.4	0.0	0.0	0.0	0.3	0.0	0.9	1.4	-0.2	3.7	-0.5	3.2
Other	1.6	-1.2	0.0	0.0	0.5	0.1	0.6	2.9	-0.1	4.3	0.0	4.2
Universal	1.3	-1.1	0.0	0.0	1.3	0.3	2.9	5.4	-0.8	9.2	-1.1	8.2
Retail-oriented	1.7	-0.8	0.0	0.0	-0.3	0.3	0.5	2.7	-0.3	3.7	-0.7	3.0
Corporate-oriented	-0.1	-6.5	0.0	0.0	0.2	1.1	2.6	9.7	-0.3	6.8	-0.8	6.0

Source: EBA QIS data (December 2023)

2.2 Evolution of the cumulative impact analysis of the final Basel III reform under the EU-specific scenario since the establishment of the EBA mandatory exercise (December 2021 to December 2023)

Based on a constant sample of 149 banks that resulted from the EBA mandatory exercise, i.e. that have consistently submitted data from December 2021 (Dec-21) to December 2023 (Dec-23), Table 5 shows the changes in total T1 MRC since the establishment of the EBA mandatory exercise (Dec-21 reference date). As far as the availability, granularity and quality of the data allow, the estimates are based on the retrospective application of the most recent rules. However, data for certain EU-specific adjustments that are taken into account from Dec-23 are not available for earlier years. In these cases, the EU adjustments were not taken into account. The results related to market risk are based on the January 2019 FRTB framework. The methodology used to quantify the impact of market risk includes the retrospective implementation of the adjustment for overly conservative reporting of EIF positions.

The overall impact, taking into account the risk-based and LR-based requirements, decreases from 11.7% in Dec-21 and 10.1% in Dec-2022 to 7.8% in Dec-23. The main reason is the negative impact of the revisions to credit risk, partially offset by an increase in operational risk requirements. In addition, the current implementation of the Basel III LR framework in the EU coincides with the full Basel III implementation (for the Dec-23 reference date). Thus, G-SIIIs are subject to a '0.5 x G-SIIIs surcharge' under the current framework in addition to the 3% of LR exposures that represents the general capital requirement, which explains the larger offsetting effect of the revised LR for the latest reference date. It must be emphasised that, as outlined above, data on certain EU-specific adjustments that are taken into account from Dec-23 are not available for earlier dates, so the results need to be interpreted with caution.

Table 5: Changes in T1 MRC, due to the implementation of the final Basel III framework under the EU-specific scenario (including all buffers and P2R capital requirements – frozen) for a constant sample of banks from YYYY(-2) to YYYY; weighted averages in %

Reference date	Credit risk	Market risk	CVA	Op Risk	Output floor	Other Pillar 1	Total risk-based	Revised LR	Total
31-Dec-21	1.5	1.8	0.4	1.7	6.6	-0.7	11.4	0.3	11.7
31-Dec-22	0.6	1.2	0.4	2.3	6.3	-0.5	10.3	-0.2	10.1
31-Dec-23	-0.3	1.2	0.3	2.7	5.7	-0.8	8.8	-1.0	7.8

Source: EBA QIS data (December 2023)

2.3 Capital ratios and shortfalls

This section presents the development of the capital ratios from the current framework to the full implementation of the final Basel III framework under the EU-specific scenario, as well as the capital shortfalls that would arise from the full implementation of the final Basel III minimum capital requirements.

2.3.1 Capital ratios

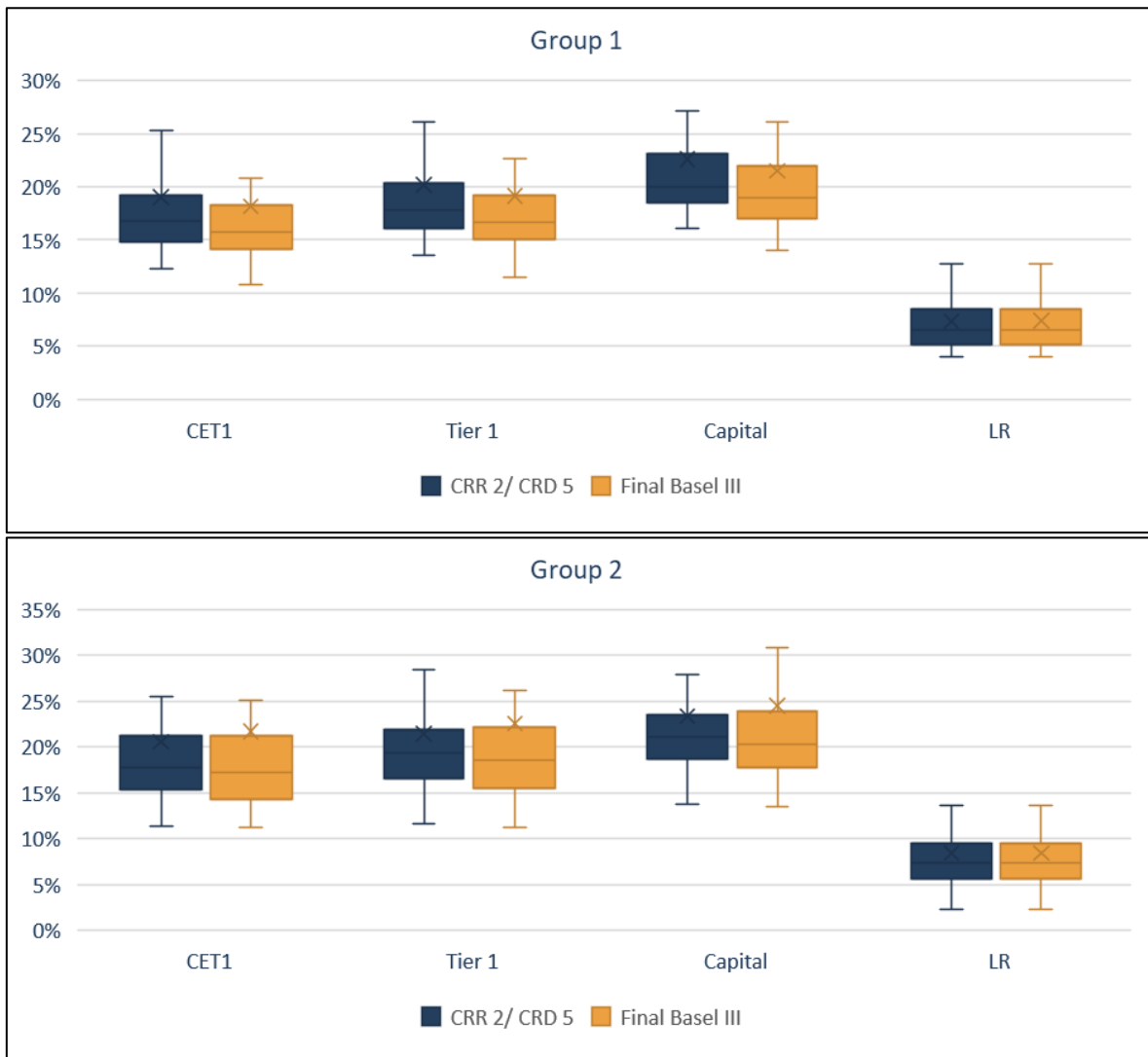
Table 6 shows the results of the calculations for CET1, Tier 1, and total capital ratios and the LR. The average impact on capital ratios is largely similar across all bank categories. However, the dispersion between the different types of capital ratios is significantly greater for Group 2 banks both before and after the introduction of the reform (Figure 2). Looking at the impact of the reform on the distributions, the dispersion of CET1, Tier 1 and total capital ratios becomes slightly wider under the final Basel III framework, while the dispersion of LR remains largely unchanged between the two frameworks.

Table 6: Comparison of risk-based capital ratios and leverage ratios under different states of implementation due to the implementation of the final Basel III framework under the EU-specific scenario; weighted averages in %

Bank group	CET1			Tier 1			Total capital			LR	
	CRR2/CRD5	Transitional EU-specific Basel III	Final EU-specific Basel III (2033)	CRR2/CRD5	Transitional EU-specific Basel III	Final EU-specific Basel III (2033)	CRR2/CRD5	Transitional EU-specific Basel III	Final EU-specific Basel III (2033)	CRR2/CRD5	Final EU-specific Basel III (2033)
All banks	15.9	15.3	14.5	17.2	16.6	15.7	19.7	19.1	18.0	5.8	5.8
Group 1	15.7	15.2	14.2	17.0	16.5	15.4	19.7	19.0	17.8	5.6	5.6
G-SIIs	14.3	13.4	12.3	15.7	14.7	13.5	18.1	17.0	15.6	4.8	4.8
Group 2	16.6	16.2	15.9	17.8	17.4	17.0	20.0	19.5	19.1	6.5	6.5

Source: EBA QIS data (December 2023)

Figure 2: Distribution of capital ratios under CRR2/CRD5 versus fully phased-in final Basel III framework/CRR3/CRD6 (2033); in %



Note: the mean ('X') reflects the simple average; Source: EBA QIS data (December 2023)

2.3.2 Capital shortfalls

The capital shortfall compares the actual capital levels (CET1, Tier 1 and total capital) in December 2023 with the final fully-loaded Basel III framework under the EU-specific scenario, including all buffers and P2R capital requirements, where applicable.²⁹ Results are shown at the end of the transitional period and therefore do not consider the effect of any of the transitional provisions that are part of the CRR3 which may temporarily alleviate the impact of the new framework. The final Basel III framework under the EU-specific scenario will result in a total capital shortfall of EUR 5.1 billion, of which EUR 0.3 billion is attributable to CET1 (Table 7). As of December 2023, we observe 9 banks with a total capital shortfall, 5 banks with a Tier 1 capital shortfall, and 2 banks with a CET1 capital shortfall. The capital shortfall is driven by large institutions, with G-SIs accounting for almost two thirds of the total capital shortfall.

Table 7: Shortfall of current available capital under the final Basel III framework under the EU-specific scenario (including all buffers and P2R capital requirements – frozen); EUR billion

Bank group	CET1	Risk-based T1	Add. LR T1	Total capital
All banks	0.3	0.8	0.1	5.1
Group 1	0.3	0.4	0.0	4.2
G-SIs	0.3	0.4	0.0	3.2
Group 2	0.1	0.3	0.1	0.9

Source: EBA QIS data (December 2023)

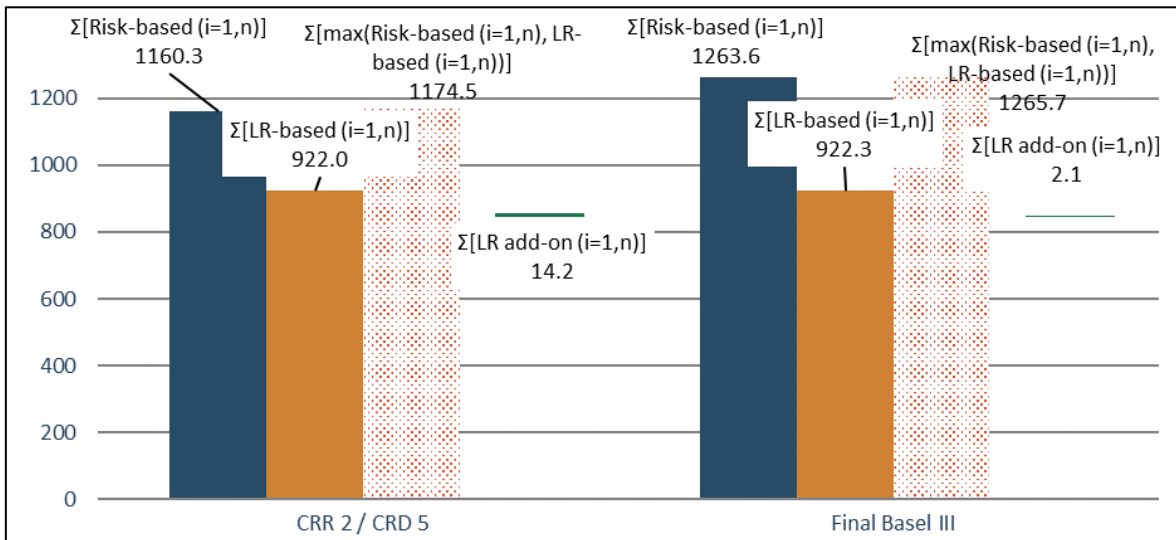
²⁹ Results should be interpreted taking into account the methodological considerations explained in section 1.4 Data quality issues and interpretation of the results.

2.4 Interactions between risk-based and leverage ratio capital requirements

This section analyses whether the leverage ratio (LR) requirements in the final Basel III framework under the EU-specific scenario are, more or less, constraining compared to the CRR2/CRD5 requirements. Figure 3 presents the mechanics for the estimation of the leverage ratio impact. Details of the estimation can be found in the Annex II in section 5.1.

The aggregate Tier 1 MRC, which consists of the combined risk-based and LR-based requirements, increases from EUR 1,174.5 billion under CRR2/CRD5 to EUR 1,265.7 billion under the final Basel III framework under the EU-specific scenario (an increase by 7.8% — see Table 4). The standalone risk-based MRC for all banks under CRR2/CRD5 is EUR 1,160.3 billion, while the standalone LR-based MRC is EUR 922.0 billion. The corresponding figures under the final Basel III framework under the EU-specific scenario are EUR 1,263.6 billion and EUR 922.3 billion, respectively. The total LR requirement add-on estimated at the individual bank level decreases from EUR 14.2 billion under CRR2/CRD5 to EUR 2.1 billion under the final Basel III framework under the EU-specific scenario.

Figure 3: Mechanics of the calculation of the actual leverage ratio MRC impact, T1 MRC under the final Basel III framework under the EU-specific scenario (including all buffers and P2R capital requirements – frozen); EUR billion



Source: EBA QIS data (December 2023)

$\sum[\mathbf{Risk - based}(i = 1, n)]$ being the aggregate risk-based Tier 1 MRC;
 $\sum[\mathbf{LR - based}(i = 1, n)]$ being the aggregate leverage ratio-based Tier 1 MRC;
 $\sum[\mathbf{max(Risk - based}(i = 1, n), \mathbf{LR - based}(i = 1, n))}]$ being the aggregate total Tier 1 MRC, which ensures compliance with both risk-based and leverage-ratio-based requirements at the individual bank level;
 $\sum[\mathbf{LR add - on}(i = 1, n)]$ being the aggregate amount of the leverage ratio add-ons, i.e. the sum of the differences where the leverage ratio-based Tier 1 MRC is higher than the risk-based Tier 1 MRC.

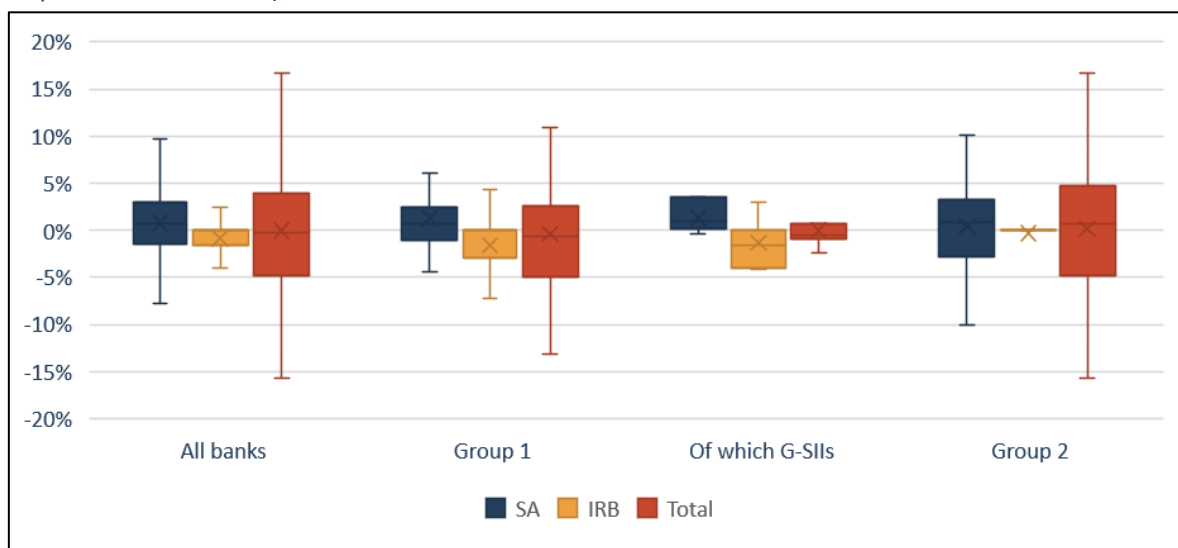
The comparison between CRR2/CRD5 and the final Basel III implementation under the EU-specific scenario therefore indicates that the leverage ratio requirement in the final Basel III framework will become slightly less constraining. This implies that part of the additional MRC previously attributed to the LR will be attributed to the risk-based Basel III MRC. In percentage terms, this change corresponds to the impact on the leverage ratio of -1.0% (i.e. (2.1-14.2)/1,174.5) shown in Table 4.

2.5 Credit risk

This section assesses the impact of the final Basel III framework under the EU-specific scenario in the context of the revisions to the SA and the IRB approaches for credit risk. The changes in the final framework aim, among other things, to increase the risk sensitivity of the SA approach and to restrict the use of the IRB Approach for exposure classes where robust modelling is more difficult; therefore, contributing to the comparability by harmonising definitions and taxonomies between the SA and IRB approaches. The final reforms (i) introduce new asset classes or split the existing asset classes; (ii) presents more granular risk weights in the case of the SA approach; (iii) contains revised methodologies for externally unrated exposures; and (iv) revises the eligibility and/or scope of application of the IRB approach for some asset classes whilst introducing new minimum values for risk parameters ('input floors') as a safeguard to ensure that own funds requirements do not fall below prudent levels.³⁰ Due to these changes, a direct comparison between the proposed and current frameworks is not possible. Therefore, the estimated impact is an approximation.

The analysis suffered from some data quality issues, mainly due to difficulties in allocating portfolios according to the revised asset class categorisation and different interpretations of the revised framework. Although the final Basel III framework allows jurisdictions to choose either the loan-splitting approach or the whole-loan approach for residential and commercial real estate, this analysis adopts the EU approach, which assumes the application of the loan-splitting approach.³¹

Figure 4: Changes in T1 MRC for credit risk (SA and IRB) exposures due to the implementation of the final Basel III framework under the EU-specific scenario (including all buffers and P2R capital requirements – frozen); in % of credit risk MRC



Note: the mean ('X') reflects the simple average; Source: EBA QIS data (December 2023)

The median impact across all portfolios, i.e. SA and IRB, allocated to credit risk only, is approximately -0.19% of current credit risk MRC. Figure 4 shows the distribution of changes in Tier 1 MRC assigned to the revisions to the SA and IRB approaches for credit risk. The median impact for SA portfolios is approximately 0.70% and for IRB portfolios is 0.00%.

³⁰ For more information, please refer to <https://www.bis.org/bcbs/publ/d424.htm>.

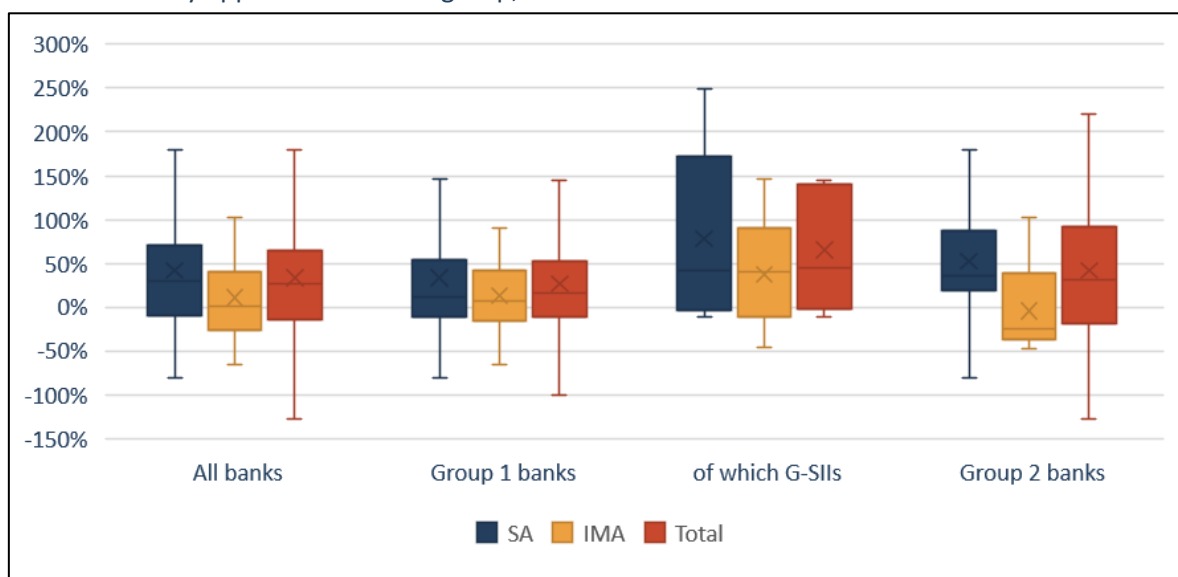
³¹ Nevertheless, a few banks reported data under the whole-loan approach.

2.6 FRTB

This section assesses the impact – ceteris paribus – of the January 2019 BCBS reforms³² in relation to the capital requirements for market risk. As in the remainder of the report, the impact of the FRTB is based on an adjusted estimate that reduces the bias in the originally submitted market risk data. This adjustment is intended to take account of the overly conservative data submitted by several large banks on the EIF. However, since the Dec-21 exercise, the bias has been addressed by reducing the reported impact on the EIF rather than excluding the market risk impact for the banks reporting conservative data, i.e. setting it to zero.

More specifically, several banks treat all trading book positions in the EIF where modelling is no longer permitted under the look-through requirements by applying the most conservative standardised approach (i.e. the ‘other bucket’ treatment). This choice implies that the impact of the FRTB on equity risk will be subject to the highest applicable risk weight, rather than under other possible treatments such as the index treatment or the mandate-based approach as set out in MAR21.36.³³ To compensate for the bias created by the overly conservative reported data, the impact on the EIF has been reduced to 20% of the reported value. This treatment, which is also applied by the BIS in its QIS report, was applied to 19 out of 92 banks that reported market risk data.

Figure 5: Change of market risk capital requirements after FRTB implementation, without floor, broken down by approach and bank group; in % of market risk MRC



Note: the mean ('X') reflects the simple average; Source: EBA QIS data (December 2023)

As in other sections, the data quality checks revealed some additional issues and limitations in the information submitted by the banks, thus, the results should be interpreted with caution. In particular, some outliers affect the aggregated results by pushing the averages above the median across the majority of risk categories and bank groups. Although the reported figures include the impact of the outliers, they have been removed from the visual representation in Figure 5.

³² For more information, please refer to <https://www.bis.org/bcbs/publ/d457.htm>.

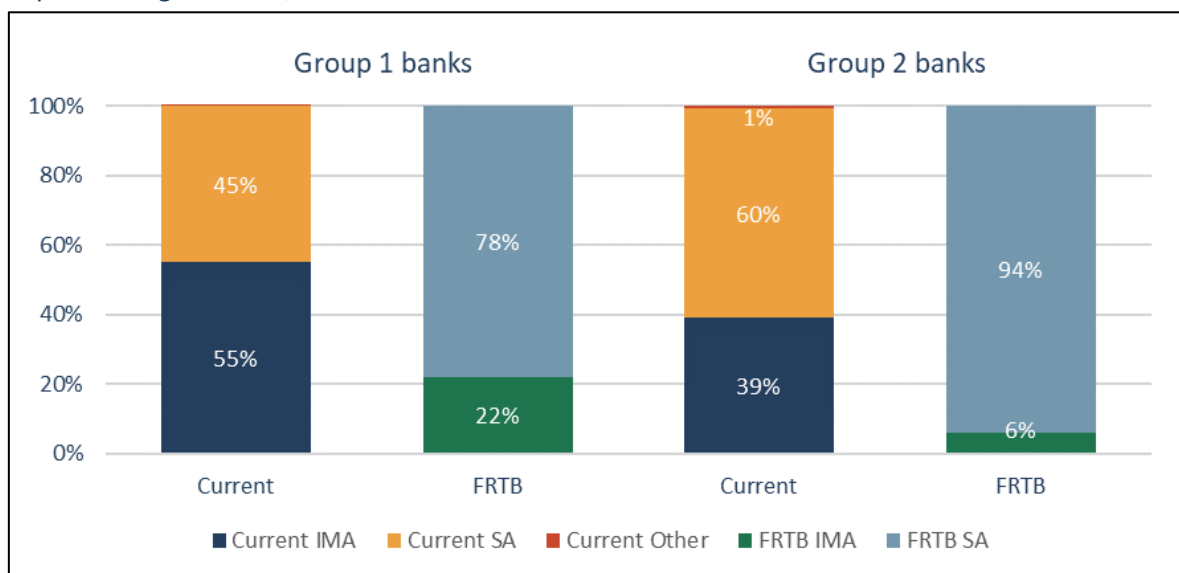
³³ See BCBS (2019) on MAR – Calculation of RWA for market risk/MAR21 – Standardised approach, sensitivities-based method: https://www.bis.org/basel_framework/chapter/MAR/21.htm?inforce=20220101.

Figure 5 shows the impact of the revised market risk standards on the total MRC allocated to market risk. The simple average impact of the FRTB reform for all banks is around 34% of current market risk MRC, with an interquartile range around -13% to 65%. The impact of the revised market risk standards is slightly lower for Group 1 banks, slightly higher for Group 2 banks and significantly higher for G-SIIs.

Concerning the individual approaches to measuring market risk, the distribution of the impacts, represented by the interquartile range, is much broader for the standardised approach (SA) than for the internal model approach (IMA). For the SA, the impacts range from -80% to strongly positive impacts of 180% (without taking into account outliers). Most of the highly positive impacts of the FRTB SA are attributable to the treatment of equity investments in funds (CIUs).

Figure 6 shows the proportion of market risk capital requirements attributable to the approaches under the current and revised frameworks. For Group 1 banks, the IMA is the main contributor under the current framework at 55%, while the SA accounts for the remaining 45%. Under the revised framework, the proportion of minimum capital requirements calculated using IMA decreases to 22%, while the SA increases to 78%. In contrast, for Group 2 banks, most of the minimum capital requirements under the current framework are computed using the SA at 60%, 39% using the IMA and the remainder using other market risk approaches. Under the revised framework, the SA accounts for 94% of the total minimum capital requirement. This shows that banks intend to move to more conservative market risk approaches under the final Basel III framework.

Figure 6: Contribution to the total market risk RWAs by each calculation method before and after implementing the FRTB; in %



Source: EBA QIS data (December 2023)

2.7 Operational risk

For operational risk, the final Basel III framework replaces all existing approaches with the new Standardised Measurement Approach (SMA). In particular, the SMA replaces the model-based Advanced Measurement Approach (AMA). Under the new operational risk framework, banks can only use the SMA. Small banks only have to calculate the MRC based on the business indicator component (BIC), while large banks also have to calculate the so-called loss component (LC). The results in this section are based on the discretion available under Basel III, as chosen by the EU co-legislators, namely, to set ILM equal to 1.

The revisions to the framework result in an aggregate increase in MRC for operational risk of 28.4%, with 32.0% for Group 1 banks and 10.5% for Group 2 banks (Table 8). The sample covers almost the entire population of large Group 1 AMA banks, which are expected to face larger capital increases compared to Group 2 banks, which use either AMA on simpler operational risk exposures or simple standardised approaches. The results also show that the revisions affect banks migrating from the AMA more on average than banks currently using other approaches (33.7% vs. 23.3%). Compared to last year's impact, the impact on AMA banks appears to be significantly higher (33.7% vs. 22.7% in Dec-22), which could be attributed to an increase in the net interest margin (NIM). That is particularly impactful for AMA banks, as for indicator-based banks the current and the revised capital requirements increase while for AMA banks, with overall stable losses, the current capital is stable and even decreases while the indicator-based capital requirement increases. In contrast to AMA banks, the non-AMA banks show a lower increase in the OpRisk capital requirements (23.3% vs 26.0% in Dec-22).

There are several reasons for the higher impact of operational risk on Group 1 banks than on Group 2 banks. First, 15 out of 21 banks that currently use AMA models, representing more than 90% of the AMA OpRisk MRC, belong to Group 1 banks and thus, on average, these banks are able to reduce significantly their capital requirements compared to the current standardised approaches. Second, Group 1 banks, or large Group 2 banks, are usually banks with more complex and fee-based business models, while the rest of Group 2 banks tend to offer more universal and diversified banking services that are not significantly dependent on fees. For the fee-based business models, the new indicator has been set at a more conservative level to reflect the higher operational risks generally observed in these business models. Third, the marginal coefficient increases from 0.12 (bucket 1) to 0.18 (bucket 3) and leads to an increasing average marginal coefficient with an increasing business indicator, so that, by construction, large banks are generally more affected. A final significant reason is observed for banks active in different geographical locations with significant differences of its NIM, which is especially observed for large international active banks. These banks could significantly reduce its capital requirements by using both, the Standardised Approach (TSA) together with the Alternative Standardised Approach (ASA)³⁴. In the final framework, the NIM will be calculated on group level and thus such reductions are not possible anymore but is driving for these banks the impact. Nevertheless, article 316(3) CRR3 allows under certain conditions to calculate the ILDC on entity and not on group level, and therefore, these impact numbers might be overestimated in case these banks can continue to calculate the NIM on entity level.

³⁴ With this approach entities of a group with a high NIM could cap the NIM at 3.5% by using ASA while entities of a group with low NIM are not forced to use the normalised NIM of 3.5%.

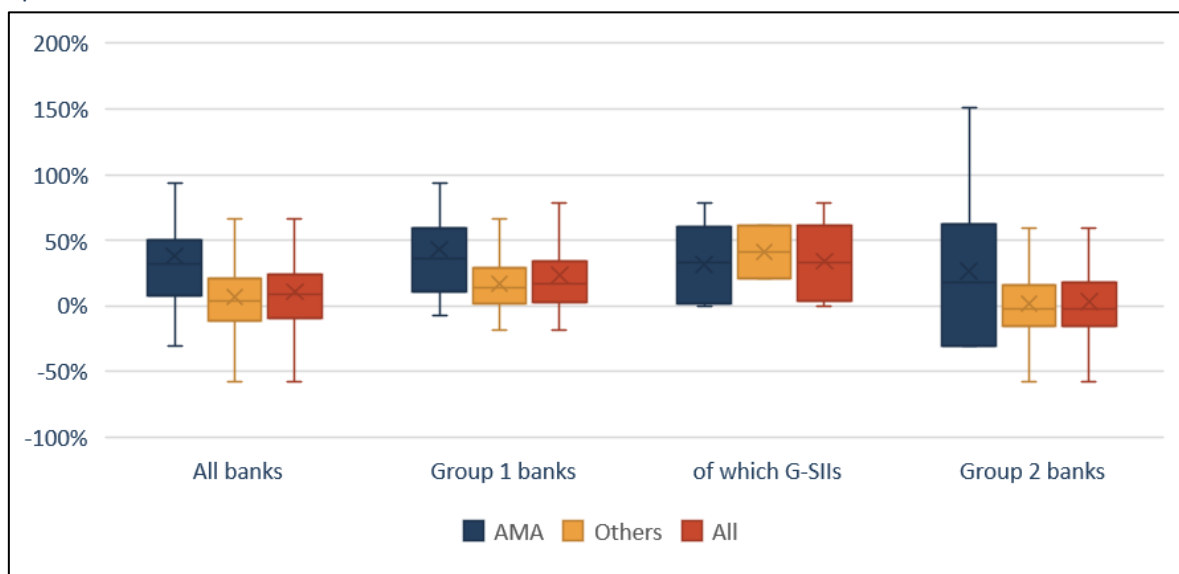
Table 8: Changes in T1 MRC assigned to operational risk only; in % of T1 MRC assigned to operational risk under CRR2/CRD5

Bank group	AMA	Others	Total
All banks	33.7	23.3	28.4
Group 1	35.3	28.0	32.0
G-SIIs	33.9	45.7	37.2
Group 2	10.1	10.6	10.5

Source: EBA QIS data (December 2023)

Figure 7 shows that the distribution of capital requirements for operational risk for Group 2 AMA banks is significantly wider than the corresponding distribution for Group 1 AMA banks, while the simple mean and median are lower than for Group 1 AMA banks. This is because Group 1 banks’ business models offer universal services and therefore have relatively homogenous operational risk characteristics, while Group 2 banks comprise a variety of business models that offer specialised or more diverse types of services. Some Group 2 banks are particularly specialised and do not offer services that would be subject to credit or market risk. Operational risk is therefore the most important risk category for them.

Figure 7: Distribution of changes in T1 MRC assigned to operational risk only; in % of current operational risk MRC



Note: the mean ('X') reflects the simple average; Source: EBA QIS data (December 2023)

2.8 Output floor

This section assesses the impact of four different transitional arrangements for the transitional period from 2025 to 2030:³⁵

- **The calibration of the output floor:** similar to the output floor results shown in the main report under the transitional implementation, the calibration of the output floor will be phased in starting from 50% of the total floored RWA in the first year of the transitional period and progressively increasing every year to reach the 72.5% steady-state level at the end of the transitional period.³⁶
- **Additional output floor transitional arrangements that go beyond 2030,** the year when the 72.5% calibration of the output floor is supposed to be applied. These additional transitional arrangements are particular for the EU-specific scenario and lower the non-modellable RWAs which are to be compared with the modellable RWAs to calculate the output floor impact. The inclusion of the following transitional arrangements will therefore lower the impact arising from the output floor on a transitional basis:
 - CRR3 transitional arrangements for unrated corporates;
 - CRR3 transitional arrangements for Residential Real Estate exposures;
 - CRR3 transitional arrangements for the SACCR calibration;
 - CRR3 transitional arrangements on securitisations.

Table 9 shows that the gradual elevation in the output floor will affect the MRC throughout the phase-in period. According to the provisions of the Basel III reform package, there will be a five-year transitional period for the implementation of the output floor, during which the level of the floor, i.e. the percentage of non-modelled RWA, will gradually increase from 50% in 2025 to the fully phased-in level of 72.5% in 2030.

The analysis does not take into account the institutional discretion of paragraph 2 of Article 465 of the CRR3 to apply a 125% cap on the incremental increase in a bank's RWAs during the transitional period of the implementation of the output floor. Article 465(2) of the CRR3 provides that institutions may, until 31 December 2029, apply a 125% cap on the increase of the RWA due to the implementation of the transitional output floor factor, resulting in the reduction of the year-on-year increase in the output floor impact shown in Table 9.³⁷ The application of this cap (not shown in Table 9) could reduce the impact in the first five years of the transitional period, leaving though the full implementation impact in 2033 unchanged.

The largest increase in the impact of the output floor is observed in 2030, where the percentage of the output floor increases from 70% (2029) to 72.5% (2030) and the impact increases by around 60 basis points (i.e. from 0.8% to 1.4%). The largest impacts for Group 1 and 2 banks are observed in 2030 and 2029, respectively, with an increase in impact of around 60 and 40 basis points (i.e. from 0.8% to 1.4% and from 0.9% to 1.3%). For G-SIIs, the largest impact of the introduction of the output floor is observed in 2030, where the impact is around 70 basis points (i.e. from 0.5% to

³⁵ Transitional period as specified in Article 465 of the CRR3 Proposal

³⁶ Note that the transitional period shown in this report is 2025 to 2030 following Article 465 of the CRR3 proposal. Annex I shows the transitional period as defined in the baseline Basel III framework (2023 to 2028).

³⁷ For example, if applying the output floor to total RWAs results in an impact of EUR 10 billion in 2026 (output floor rate = 55%) and EUR 15 billion in 2027 (output floor rate = 60%), exercising the discretion implies that the impact in 2027 may be capped at EUR 12.5 billion (i.e. EUR 10 billion + EUR 10 billion x 25%).

1.2%), which corresponds to an increase of 28 basis points for every percentage point by which the output floor is increased between 70% and 72.5%.³⁸

Table 9: Cumulative output floor impact during the implementation phase under the final Basel III framework under the EU-specific scenario (including all buffers and P2R capital requirements – frozen); in % of total CRR2/CRD5 T1 MRC

Bank group	2025 ³⁹ (50%)	2026 (55%)	2027 (60%)	2028 (65%)	2029 (70%)	2030 (72.5%) transitional	2033 (72.5%) full
All banks	0.0	0.1	0.1	0.3	0.8	1.4	5.7
Group 1	0.0	0.0	0.0	0.2	0.8	1.4	6.4
G-SIIs	0.0	0.0	0.0	0.0	0.5	1.2	8.6
Group 2	0.2	0.4	0.6	0.9	1.3	1.5	2.0

Source: EBA QIS data (December 2023)

In 2030, when the output floor reaches its steady-state of 72.5%, the contribution of the output floor to the EU average Tier 1 MRC is 1.4%. In that year, the impact of the output floor in the context of the EU-specific implementation is still transitional, as the additional transitional arrangements mentioned above still apply. Table 10 shows the temporary mitigation effects between 2030 and 2033, with the latter marking the year of the fully loaded implementation of the final Basel III framework under the EU-specific scenario. Overall, the temporary reduction in the contribution of the output floor to the EU average Tier 1 MRC is 4.3pp (i.e. 1.4% in 2030 compared to 5.7% in 2033). This temporary impact is more pronounced for Group 1 banks, with a mitigating effect of 5.0pp, and especially for G-SIIs with 7.4pp. This is to be expected as large banks use IRB models to a greater extent and are therefore more likely to be affected by the output floor.

Table 10: Comparison of the cumulative output floor, leverage ratio and total T1 MRC impact between year 2033 (fully-loaded implementation) and year 2030 (last year of the implementation phase) including all buffers and P2R capital requirements; in % of total CRR2/CRD5 T1 MRC

Bank group	Implement. year	Output floor	Total Risk-based	Revised LR	Total
All banks	2033	5.7	8.8	-1.0	7.8
	2030	1.4	4.5	-1.0	3.5
	Δ	4.3	4.3	0.0	4.3
Group 1	2033	6.4	9.7	-1.2	8.6
	2030	1.4	4.7	-1.2	3.5
	Δ	5.0	5.0	0.0	5.0
G-SIIs	2033	8.6	14.8	-2.6	12.2
	2030	1.2	7.4	-2.6	4.9
	Δ	7.4	7.4	0.0	7.4
Group 2	2033	2.0	4.0	-0.3	3.6
	2030	1.5	3.5	-0.1	3.3
	Δ	0.5	0.5	-0.2	0.3

Source: EBA QIS data (December 2023)

Due to the interaction with the leverage ratio, the reduction of the contribution of the output floor to the EU average MRC during the phase-in period does not lead to a one-to-one reduction in the overall EU average MRC. During the phase-in period, the risk-based T1 MRC declines and therefore,

³⁸ This results from the calculation of 70 basis points/2.5% = 28 basis points.

³⁹ The cumulative output floor impact in 2025 does not take into account the postponement in the use of the FRTB methods for capital purposes by 1 year announced on 18 June 2024 by the European Commission.

the leverage ratio appears more binding. As shown in Table 10, for Group 2 banks, the temporary reduction in the contribution of the output floor to the EU average MRC between year 2030 and year 2033, as a result of the EU-specific CRR3 proposals on transitional arrangements (– 0.5pp), in fact results only in a -0.3pp reduction in the overall EU average MRC.

2.9 Interaction between output floor and leverage ratio requirements

The analysis in this report applies the leverage ratio (LR) requirements under the Basel III rules, which provide that they serve as a backstop to the risk-based capital requirements and therefore apply after the risk-based requirements, including the output floor. Under this methodology, the output floor creates an additional capital requirement under the Basel III framework that smooths out the impact of the LR add-on on the risk-based requirements.

This chapter aims to calculate the stand-alone impact of the output floor on the MRC by assuming that all other requirements, including the LR, are applied before the output floor. The order of application of the various requirements does not change the final impact on the MRC, but it does allow the impact of the last applied requirement to be isolated. In the case of the output floor, this recognises that some of the increase in MRC attributed to the output floor in the cumulative analysis (Table 4) is in fact already required by the LR but is 'absorbed' by the output floor in the final Basel III regime because it is applied before the LR. Therefore, this approach underestimates the stand-alone impact of the LR (in fact, it shows a decrease in MRC) and overestimates the stand-alone impact of the output floor.

To illustrate this, three scenarios are calculated:

- **Baseline scenario:** application of the LR requirement after application of the output floor as part of the risk-based requirements (final Basel III regime);
- **Scenario 1:** application of the LR requirement alone, i.e. without application of the output floor;
- **Scenario 2:** application of the output floor requirement after application of the LR requirement, i.e. reversed order of application.

Scenario 1 assumes that the output floor is 0% and scenario 2 is calculated as the difference between the baseline scenario (shown in the cumulative analysis), in which the output floor is set at 72.5%, and scenario 1.

Table 11 shows that in the baseline scenario of the Basel III framework under the EU-specific scenario, 110 banks in the sample are constrained by the risk-based requirements, before the application of the output floor, 33 bank by the application of the output floor and 9 banks by the application of the LR requirement. The implementation of the risk-based requirements without the output floor together with the LR requirements results in 139 banks being constrained by the risk-based requirements and 13 banks being constrained by the LR requirement.

The impacts of the LR and the output floor (in EUR billion) amount to (a) EUR -12.1 billion and EUR 66.8 billion respectively in the baseline scenario, (b) EUR -10.0 billion and zero respectively in scenario 1 and (c) EUR -10.0 billion and EUR 64.6 billion respectively in scenario 2 (Table 12). The negative impact on the LR implies a reduction in the LR add-on from the current CRR2/CRD5 regime, as the add-on is reduced by EUR 12.1 billion (i.e. from EUR 14.2 billion to EUR 2.1 billion) due to the increase of RWA. This corresponds to a LR impact of -1.0% (Table 1) compared to the current Tier 1 MRC (-12.1/1,174.5).

In scenario 1, the LR add-on is EUR -10.0 billion, which implies a total LR impact on the MRC of -0.9%. In scenario 2, the output floor is applied as the last requirement in the sequence (no output floor is applied in scenario 1). In this case, the LR add-on due to the output floor is 5.5%, which is

relatively similar to the LR add-on of 5.7% in the baseline scenario. This implies that the isolated impact of the output floor as a new element of the regulatory framework alone contributes to an increase in MRC of EUR 64.6 billion (i.e. an increase of 5.5%). It should be emphasised that the analysis refers to the final Basel III framework under the EU-specific scenario including all buffers and P2R. As a result, the inclusion of these additional requirements leads to a more binding risk-based requirement by construction, which in turn reduces the overall impact of the LR framework.

Table 11: Number of banks constrained by the risk-based capital requirements, with and without the implementation of the output floor under the implementation of the final Basel III framework under the EU-specific scenario (including all buffers and P2R capital requirements – frozen)

Scenarios	Number of banks constrained by the risk-based requirements	Number of banks constrained by the output floor	Number of banks constrained by the leverage ratio
Risk-based capital requirement with the output floor (baseline scenario)	110	33	9
Risk-based capital requirements without the output floor (scenario 1)	139	-	13

Source: EBA QIS data (December 2023)

Table 12: Impact and implied cumulative impact on T1 MRC of the implementation of risk-based capital requirements, with and without implementation of the output floor under the implementation of the final Basel III framework under the EU-specific scenario (including all buffers and P2R capital requirements – frozen)

Scenarios	Risk-based (without output floor) T1 MRC in EUR bn. (implied impact in %)	Output floor add-on (before LR) on risk-based T1 MRC in EUR bn. (implied impact in %)	LR T1 MRC in EUR bn.	LR add-on in EUR bn. (implied impact in %)	Output floor (after LR) T1 MRC in EUR bn. (implied impact in %)	Total implied impact (%)
Baseline: with output floor (before LR)	1,196.8 3.1%	66.8 5.7%	922.3	-12.1 -1.0%	NA	7.8%
Scenario 1: without output floor	1,196.8 3.1%	NA	922.3	-10.0 -0.9%	NA	2.3%
Scenario 2: with output floor (after LR)	1,196.8 3.1%	NA	922.3	-10.0 -0.9%	64.6 5.5%	7.8%

Source: EBA QIS data (December 2023)

3. Transition from EU-specific scenario to Basel III baseline scenario

This section includes a comparison between the results presented in Section 2 and the results presented in the Annex I of this report. It therefore shows the comparison between the estimated impact of the Basel III reform package considering EU-specific adjustments and the effect of Pillar 2 requirements and all EU buffers in the calculation of the T1 MRC as defined in section 1.2, and the impact without considering such effects. To facilitate the comparison, results under the EU-specific scenario are presented twice: once considering Pillar 2 requirements and all EU buffers in the calculation of the T1 MRC and once considering Pillar 1 requirements and CCB and GSII-s buffer only.

3.1 Comparison of the cumulative impact analysis of the final Basel III reform under the EU-specific scenario vs. the Basel III baseline scenario

The comparison between the results under the EU-specific scenario and the Basel III baseline scenario is made in two steps. As a first step, the EU-specific results considering all EU buffers and requirements are compared with the EU-specific results considering only Pillar 1 requirements, CCB and GSII-s buffer. As a second step, EU-specific results considering only Pillar 1 requirements, CCB and GSII-s buffer are compared with the Basel III baseline scenario. Table 13 shows the comparison of T1 MRC percentage change between the three scenarios.

Risk-based T1 MRC changes under the EU-specific scenario calculated using all buffers and requirements (see rows with heading “EU-specific (P2R and all buffers)” in Table 13) **show, in general, a very small difference in comparison with the risk-based T1 MRC changes under the EU-specific scenario that are calculated using the G-SIIs surcharge, CCB and Pillar 1 requirements only** (see rows with heading “EU-specific (P1R, CCB and GSII-s buffers only)” in Table 13). The rationale behind this small difference is methodological. To calculate the risk-based T1 MRC changes, the delta between the revised T1 MRC risk-based and the current T1 MRC risk-based is calculated applying the same set of buffers to both sides of the equation. The relative increase is then calculated as the ratio between this delta and the maximum of the current T1 MRC risk-based and the current T1 MRC leverage ratio-based. For this reason, the differences arise from the different interaction with the leverage ratio, as the latter becomes less binding after the introduction of all buffers and P2R requirements in the calculation of the risk-based T1 MRCs.

However, a more negative leverage ratio impact results in a significantly lower total T1 MRC change in the EU-specific scenario using only the G-SIIs surcharge, CCB and Pillar 1 requirements (1.7% versus 7.8% when all buffers and requirements are considered). In other words, the leverage ratio offsetting effect is 5.8pp more significant when only the G-SIIs surcharge, CCB and Pillar 1 requirements are considered. The difference in the offsetting effect of the leverage ratio is particularly significant for GSII-s. Indeed, the leverage ratio impact for G-SIIs is -2.6% in the scenario considering all buffers and requirements and -12.5% in the scenario considering only the G-SIIs surcharge, CCB and Pillar 1 requirements. This result is due to the fact that all 7 G-SIIs are

constrained by the leverage ratio in the current framework and are less or not at all constraint by the leverage ratio under the revised framework.

The strict impact of the EU adjustments (i.e. not driven by the application of a different set of capital requirements) can be understood by comparing the EU-specific results considering the G-SIIs surcharge, CCB and Pillar 1 requirements only (see row with heading “EU-specific (P1R, CCB and GSIIs buffers only)” in Table 13) with the Basel III baseline results (see rows with heading “Basel III” in Table 13).

Table 13 shows that the implementation of the final Basel III standards under the EU-specific scenario is expected to increase European banks’ T1 MRC by 4.4pp less. The drivers of such reduction are credit risk (3.9pp), CVA (1.6pp) and output floor (1.0pp). More importantly, the reductions in total MRCs are partially offset by an increase in the leverage ratio impact (2.0pp), which is due to the interaction between the risk-based MRCs and the leverage ratio MRCs. Lower risk-based MRCs imply that the leverage ratio becomes more binding for a subset of institutions.

Group 2 banks benefit more than other categories of banks from the introduction of the EU-specific adjustments (6.0pp). The main driver of the higher reduction in MRC is credit risk (5.8pp) due to the effect of the introduction of the EU adjustments in the Standardised Approach reform (4.5pp). Such effect is not fully compensated by the lower reduction in MRC shown for CVA (0.8pp) and the output floor (0.6pp). **G-SIIs also show a more beneficial effect from the introduction of the EU-specific adjustments than the average European bank (4.8pp).** The main driver of the higher reduction in MRC is credit risk (4.1pp) due to the effect of the introduction of the EU adjustments in the IRB Approach (3.2pp). The interaction with the output floor also has a more important effect in the G-SIIs category (1.9pp). These effects are partially offset by the more important increase in the leverage ratio impact (2.8 pp) in comparison with other bank categories.

Table 13: Comparison of the change in total T1 MRC between the EU-specific scenario (with and without EU buffers and P2R capital requirements) and Basel III; in % of the overall current T1 MRC

Bank group	Scenario	Credit risk				Market risk	CVA	Op Risk	Output floor	Other Pillar 1	Total risk-based	Revised LR	Total
		SA	IRB	Sec.	CCPs								
All banks	EU-specific (P2R and all buffers)	1.2	-1.5	0.0	0.0	1.1	0.3	2.8	5.7	-0.8	8.8	-1.0	7.8
	EU-specific (P1R, CCB and GSIIIs buffers only)	1.1	-1.4	0.0	0.0	1.1	0.3	2.6	5.6	-0.7	8.6	-6.9	1.7
	Δ (P1R – P2R)	-0.2	0.1	0.0	0.0	0.0	0.0	-0.2	-0.1	0.1	-0.2	-5.8	-6.1
	Basel III	2.7	0.8	0.0	0.0	1.1	1.9	2.6	6.6	-0.7	15.0	-8.9	6.1
	Δ (BIII – P1R)	1.7	2.2	0.0	0.0	0.0	1.6	0.0	1.0	0.0	6.5	-2.0	4.4
Group 1	EU-specific (P2R and all buffers)	1.2	-1.7	0.0	0.0	1.3	0.4	3.1	6.4	-0.9	9.7	-1.2	8.6
	EU-specific (P1R, CCB and GSIIIs buffers only)	1.0	-1.5	0.0	0.0	1.3	0.4	2.9	6.2	-0.7	9.4	-7.7	1.6
	Δ (P1R – P2R)	-0.2	0.2	0.0	0.0	0.0	0.0	-0.3	-0.2	0.1	-0.4	-6.6	-6.9
	Basel III	2.1	0.8	0.0	0.0	1.3	2.1	2.9	7.3	-0.7	15.7	-9.9	5.8
	Δ (BIII – P1R)	1.2	2.3	0.0	0.0	0.0	1.8	0.0	1.1	0.0	6.3	-2.2	4.2
G-SIIIs	EU-specific (P2R and all buffers)	1.4	-1.4	0.0	0.0	2.7	0.5	3.8	8.6	-0.5	14.8	-2.6	12.2
	EU-specific (P1R, CCB and GSIIIs buffers only)	1.1	-1.2	0.0	0.0	2.3	0.4	3.3	7.7	-0.5	13.0	-12.5	0.5
	Δ (P1R – P2R)	-0.3	0.3	0.0	0.0	-0.4	-0.1	-0.5	-0.9	0.1	-1.8	-10.0	-11.7
	Basel III	2.1	2.1	0.0	0.0	2.3	2.0	3.3	9.6	-0.5	20.7	-15.3	5.3
	Δ (BIII – P1R)	0.9	3.2	0.0	0.0	0.0	1.6	0.0	1.9	0.0	7.6	-2.8	4.8
Group 2	EU-specific (P2R and all buffers)	1.5	-0.5	0.0	0.0	0.3	0.1	0.8	2.0	-0.1	4.0	-0.3	3.6
	EU-specific (P1R, CCB and GSIIIs buffers only)	1.5	-0.6	0.0	0.0	0.3	0.1	0.8	2.0	-0.1	4.1	-1.8	2.3
	Δ (P1R – P2R)	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	-1.5	-1.4
	Basel III	6.1	0.7	0.0	0.0	0.3	0.8	0.8	2.7	-0.1	11.3	-3.0	8.3
	Δ (BIII – P1R)	4.5	1.3	0.0	0.0	0.0	0.8	0.0	0.6	0.0	7.2	-1.2	6.0

Source: EBA QIS data (December 2023)

Table 14 shows the decomposition of the EU-specific adjustments for the average EU bank. **The main drivers for the reduction of the T1 MRC impact under the EU-specific scenario are the SME supporting factor and the CVA exemptions.** The introduction of the SME supporting factor that reduce the contribution of the credit risk reform (both SA and IRB) to the total T1 MRC change by 2.0pp. The implementation of the CVA exemptions would reduce the contribution of CVA risk to the total MRC change by 1.6pp compared to the baseline Basel III implementation scenario. Other features contribute less to the reduction of the total MRC impact. The postponement of the minimum haircut floors, the more favorable treatment of equity exposures, the introduction of a reduced CCF for trade finance contingent items and the infrastructure supporting factor reduce the contribution of the credit risk reform to the total impact by around -0.5pp, -0.5pp, -0.4pp and -

0.3pp respectively). The introduction of the CRR3 provision allowing the revaluation of the value of the property pledged as a collateral up to the average value for the last six years, has a limited negative impact to the contribution of the SA reform to the total T1 MRC change (-0.05pp).

Table 14: Decomposition of the delta change in total T1 MRC between the EU-specific scenarios with P1R, CCB and GSIs buffers only and under the implementation of the final Basel III framework under the EU-specific scenario; in % of the overall current T1 MRC

Bank group	Scenario	Credit risk				Market risk	CVA	Op Risk	Output floor	Other Pillar 1	Total risk-based	Revised Total LR
		SA	IRB	Sec.	CCPs							
All banks	EU-specific (P1R, CCB and GSIs buffers only)	1.1	-1.4	NA	NA	NA	0.3	NA	NA	NA	NA	NA
	<i>Δ of which:</i>	-1.7	-2.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
	<i>SME SF</i>	-0.8	-1.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
	<i>INF SF</i>	-0.1	-0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
	<i>Equity</i>	-0.5	-0.03	NA	NA	NA	NA	NA	NA	NA	NA	NA
	<i>CCFs</i>	-0.1	-0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
	<i>REE</i>	-0.05	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	<i>SFTs</i>	-0.1	-0.4	NA	NA	NA	NA	NA	NA	NA	NA	NA
	<i>CVA exemptions</i>	NA	NA	NA	NA	NA	-1.6	NA	NA	NA	NA	NA
	Basel III	2.7	0.8	NA	NA	NA	1.9	NA	NA	NA	NA	NA

Source: EBA QIS data (December 2023)

3.2 Comparison of capital shortfalls under the EU-specific scenario vs. the Basel III baseline scenario

The capital shortfall amounts under the EU-specific scenario arise mainly from the introduction of all EU buffers and capital requirements. Results under the Basel III baseline implementation and under the EU-specific scenario considering the G-SIIs surcharge, CCB and Pillar 1 requirements only, show a very limited leverage ratio capital shortfall (0.1 bn EUR in Table 15). The shortfall under these scenarios arises from one institution that reported a leverage ratio shortfall under the current implementation framework.⁴⁰

The introduction of the additional EU buffers and Pillar 2 capital requirements increases the total capital shortfall by 5.0 bn EUR. This increase is in line with expectations as the consideration of additional capital requirements results in a higher minimum required capital while banks’ available capital remains the same.

⁴⁰ The relevant National Competent Authority has confirmed that the shortfall was covered during 2024 and that no shortfall shall be reported as of 3Q2024.

Table 15: Comparison of the shortfalls of current available capital between the EU-specific scenario (with and without EU buffers and P2R capital requirements) and Basel III; EUR billion

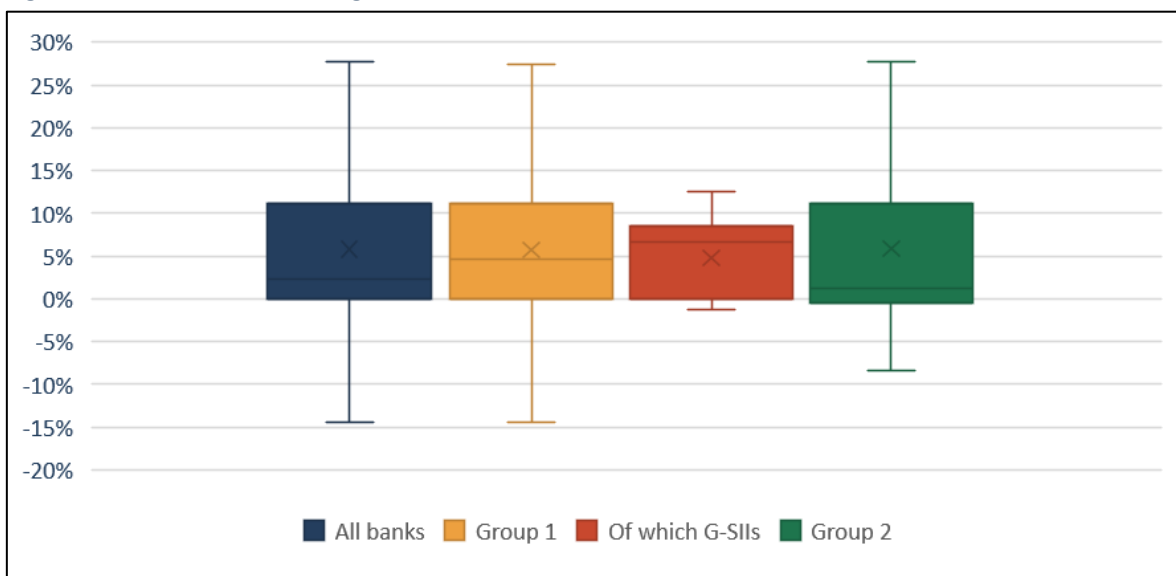
Bank group	Scenario	CET1	Risk-based T1	Add. LR T1	Total capital
All banks	EU-specific (P2R and all buffers)	0.3	0.8	0.1	5.1
	EU-specific (P1R, CCB and GSIs buffers only)	0.0	0.1	0.1	0.1
	Δ (P1R – P2R)	-0.3	-0.7	0.0	-5.0
	Basel III	0.0	0.1	0.1	0.1
	Δ (BIII – P1R)	0.0	0.0	0.0	0.0
Group 1	EU-specific (P2R and all buffers)	0.3	0.4	0.0	4.2
	EU-specific (P1R, CCB and GSIs buffers only)	0.0	0.0	0.0	0.0
	Δ (P1R – P2R)	-0.3	-0.4	0.0	-4.2
	Basel III	0.0	0.0	0.0	0.0
	Δ (BIII – P1R)	0.0	0.0	0.0	0.0
G-SIs	EU-specific (P2R and all buffers)	0.3	0.4	0.0	3.2
	EU-specific (P1R, CCB and GSIs buffers only)	0.0	0.0	0.0	0.0
	Δ (P1R – P2R)	-0.3	-0.4	0.0	-3.2
	Basel III	0.0	0.0	0.0	0.0
	Δ (BIII – P1R)	0.0	0.0	0.0	0.0
Group 2	EU-specific (P2R and all buffers)	0.1	0.3	0.1	0.9
	EU-specific (P1R, CCB and GSIs buffers only)	0.0	0.1	0.1	0.1
	Δ (P1R – P2R)	-0.1	-0.3	0.0	-0.8
	Basel III	0.0	0.1	0.1	0.1
	Δ (BIII – P1R)	0.0	0.0	0.0	0.0

Source: EBA QIS data (December 2023)

4. Annex I: Basel III baseline results

4.1 Cumulative impact analysis of the final Basel III reform: point-in-time analysis (Dec-23 only)

Figure 8: Distribution of changes in total T1 MRC; in %



Note: the mean ('X') reflects the simple average; Source: EBA QIS data (December 2023)

Table 16: Change in total T1 MRC, as a percentage of the overall current T1 MRC, due to the implementation of the final Basel III framework (2030); weighted averages; in %

Bank group	Credit risk				Market risk	CVA	Op Risk	Output floor	Other Pillar 1	Total risk-based	Revised LR	Total
	SA	IRB	Sec.	CCPs								
All banks	2.7	0.8	0.0	0.0	1.1	1.9	2.6	6.6	-0.7	15.0	-8.9	6.1
Group 1	2.1	0.8	0.0	0.0	1.3	2.1	2.9	7.3	-0.7	15.7	-9.9	5.8
G-SIIs	2.1	2.1	0.0	0.0	2.3	2.0	3.3	9.6	-0.5	20.7	-15.3	5.3
O-SIIs	2.2	-0.8	0.0	0.0	-0.2	2.1	2.4	5.5	-1.1	10.2	-4.4	5.8
Other	2.3	3.2	0.0	0.0	4.0	3.8	2.6	0.4	-0.7	15.7	-5.5	10.1
Group 2	6.1	0.7	0.0	0.0	0.3	0.8	0.8	2.7	-0.1	11.3	-3.0	8.3
O-SIIs	7.0	1.1	0.0	0.0	0.2	1.1	0.9	2.2	-0.1	12.3	-4.2	8.1
Other	4.7	0.1	0.0	0.0	0.6	0.4	0.7	3.5	-0.1	9.7	-1.2	8.5
Universal	2.8	1.4	0.0	0.0	1.3	1.9	2.7	6.4	-0.7	15.6	-9.4	6.2
Retail-oriented	4.7	-0.8	0.0	0.0	-0.3	0.5	0.5	2.8	-0.3	7.0	-1.7	5.3
Corporate-oriented	0.5	-4.9	0.0	0.0	0.2	3.4	2.5	10.4	-0.3	11.9	-6.4	5.5

Source: EBA QIS data (December 2023)

4.2 Evolution of the cumulative impact analysis since the establishment of the EBA mandatory exercise (Dec-21 to Dec-23)

Table 17: Changes in T1 MRC due to the implementation of the final Basel III framework for a constant sample of banks from YYYY(-2) to YYYY; weighted averages in %

Reference date	Credit risk	Market risk	CVA	Op Risk	Output floor	Other Pillar 1	Total risk-based	Revised LR	Total
31-Dec-21	4.3	1.8	2.6	1.7	6.6	-0.6	16.4	-2.7	13.7
31-Dec-22	4.3	1.2	2.4	2.2	6.7	-0.4	16.3	-3.7	12.7
31-Dec-23	3.5	1.1	2.0	2.6	6.6	-0.7	15.0	-8.9	6.2

Source: EBA QIS data (December 2023)

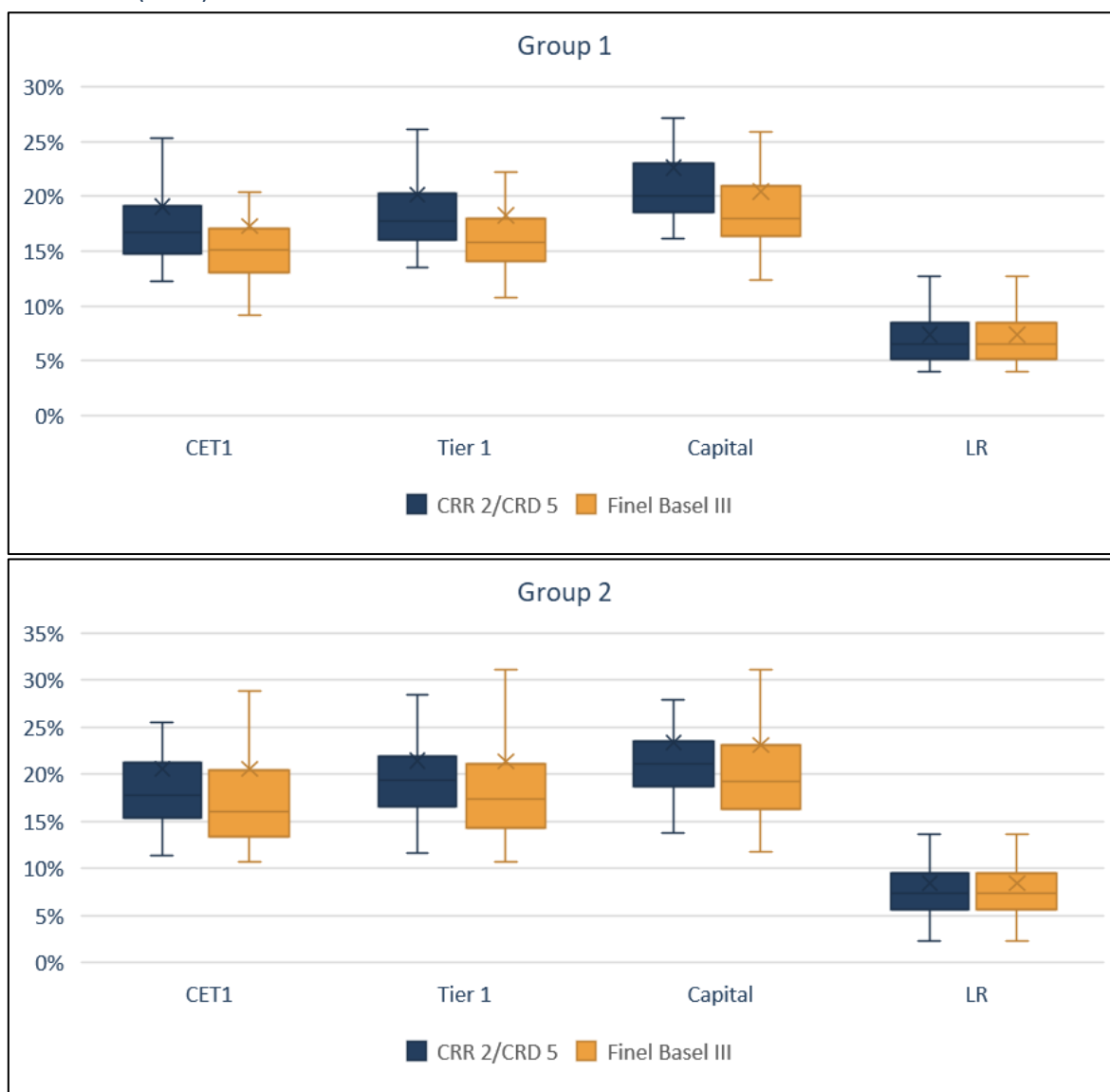
4.3 Capital ratios and shortfalls

Table 18: Comparison of risk-based capital ratios and leverage ratios under different states of implementation; weighted averages in %

Bank group	CET1			Tier 1			Total capital			LR	
	CRR2/CRD5	Transitional Basel III	Final Basel III	CRR2/CRD5	Transitional Basel III	Final Basel III	CRR2/CRD5	Transitional Basel III	Final Basel III	CRR2/CRD5	Final Basel III
All banks	15.9	14.5	13.6	17.2	15.7	14.7	19.7	18.0	16.9	5.8	5.8
Group 1	15.7	14.3	13.3	17.0	15.6	14.5	19.7	18.0	16.7	5.6	5.6
G-SIIs	14.3	12.5	11.4	15.7	13.8	12.5	18.1	15.9	14.4	4.8	4.8
Group 2	16.6	15.1	14.8	17.8	16.2	15.8	20.0	18.2	17.8	6.5	6.5

Source: EBA QIS data (December 2023)

Figure 9: Distribution of capital ratios under CRR2/CRD5 versus fully phased-in final Basel III framework (2030)



Note: the mean ('X') reflects the simple average; Source: EBA QIS data (December 2023)

Table 19: Shortfall of current available capital under the full implementation of the final Basel III framework (2030); EUR billion⁴¹

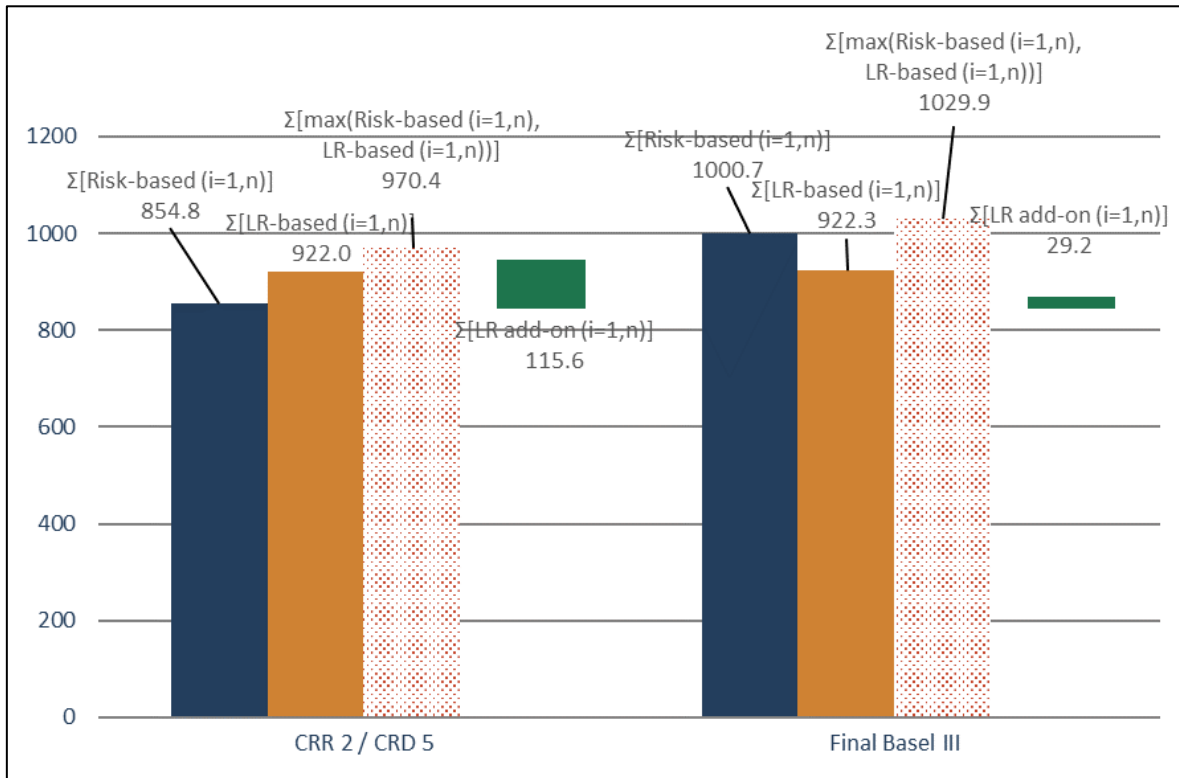
Bank group	CET1	Risk-based T1	Add. LR T1	Total capital
All banks	0.00	0.00	0.05	0.05
Group 1	0.00	0.00	0.00	0.00
G-SIIs	0.00	0.00	0.00	0.00
Group 2	0.00	0.00	0.05	0.05

Source: EBA QIS data (December 2023)

⁴¹ The shortfall arises from one institution that reported a leverage ratio shortfall under the current implementation framework. The relevant National Competent Authority has confirmed that the shortfall was covered during 2024 and that no shortfall shall be reported as of 3Q2024.

4.4 Interactions between risk-based and leverage ratio capital requirements

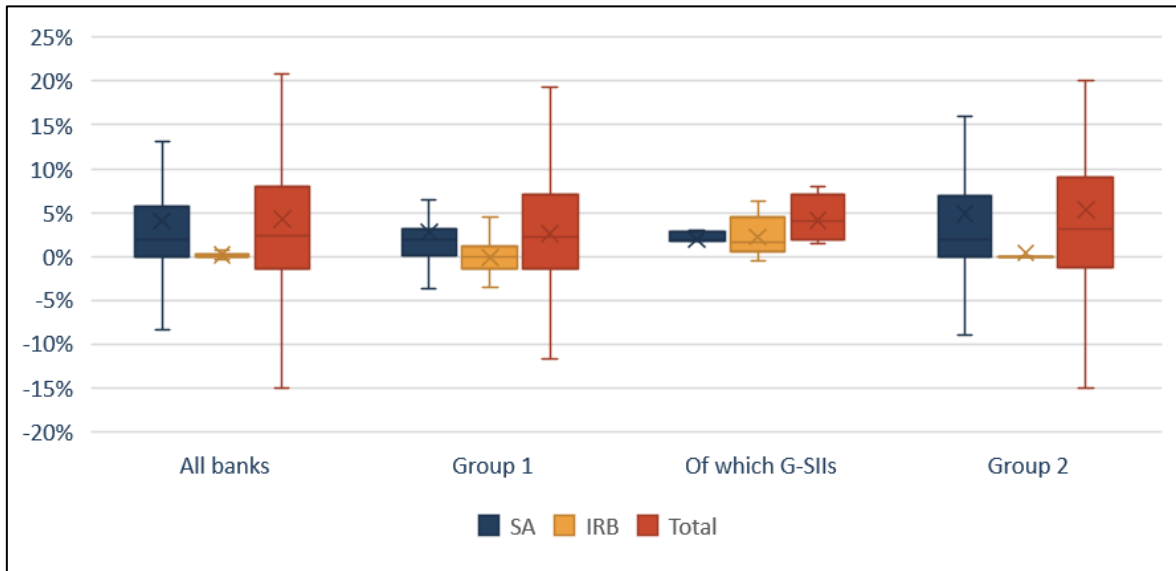
Figure 10: Mechanics of the calculation of the leverage ratio MRC impact, T1 MRC; EUR billion



Source: EBA QIS data (December 2023)

4.5 Credit risk

Figure 11: Changes in T1 MRC for credit risk (SA and IRB) exposures due to the implementation of the final Basel III framework (2030); in % of credit risk MRC



Note: the mean ('X') reflects the simple average; Source: EBA QIS data (December 2023)

4.6 FRTB

In this section, there are no differences between Basel III baseline and the EU-specific scenario. For the results, we therefore refer to the corresponding section 2.6 in the main report.

4.7 Operational risk

In this section, there are no differences between Basel III baseline and the EU-specific scenario. For the results, we therefore refer to the corresponding section 2.7 in the main report.

4.8 Output floor

Table 20: Cumulative output floor impact during the implementation phase; in % of total CRR2/CRD5 T1 MRC

Bank group	2025 (50%)	2026 (55%)	2027 (60%)	2028 (65%)	2029 (70%)	2030 (72.5%)
All banks	0.0	0.1	0.6	2.1	4.9	6.6
Group 1	0.0	0.0	0.6	2.2	5.4	7.3
G-SIIs	0.0	0.0	0.8	3.1	7.2	9.6
Group 2	0.2	0.4	0.7	1.2	2.1	2.7

Source: EBA QIS data (December 2023)

4.9 Interaction between output floor and leverage ratio requirements

Table 21: Number of banks constrained by the risk-based capital requirements, with and without the implementation of the output floor

Scenarios	Number of banks constrained by the risk-based requirements	Number of banks constrained by the output floor	Number of banks constrained by the leverage ratio
Risk-based capital requirement with the output floor (baseline scenario)	87	21	44
Risk-based capital requirements without the output floor (scenario 1)	99	-	53

Source: EBA QIS data (December 2023)

Table 22: Impact and implied cumulative impact on T1 MRC of the implementation of risk-based capital requirements, with and without implementation of the output floor

Scenarios	Risk-based (without output floor) T1 MRC in EUR bn. (implied impact in %)	Output floor add-on (before LR) on risk-based T1 MRC in EUR bn. (implied impact in %)	LR T1 MRC in EUR bn.	LR add-on in EUR bn. (implied impact in %)	Output floor (after LR) T1 MRC in EUR bn. (implied impact in %)	Total implied impact (%)
Baseline:	936.4	64.2	922.3	-86.4	NA	
with output floor (before LR)	8.4%	6.6%		-8.9%	NA	6.1%
Scenario 1:	936.4	NA	922.3	-50.4	NA	
without output floor	8.4%	NA		-5.2%	NA	3.2%
Scenario 2:	936.4	NA	922.3	-50.4	28.3	
with output floor (after LR)	8.4%	NA		-5.2%	2.9%	6.1%

Source: EBA QIS data (December 2023)

5. Annex II: Methodology

5.1 Leverage ratio impact

$$\% \Delta T1MRC(LR) = \frac{\left[\sum_{i=1}^n \max \left\{ \begin{array}{c} 0, \\ ('Final\ Basel\ III\ total\ LR_{based}\ T1\ MRC' - \\ 'Final\ Basel\ III\ total\ risk_{based}\ T1\ MRC') \end{array} \right\} - \sum_{i=1}^n \max \left\{ \begin{array}{c} 0, \\ ('CRR_CRDIV\ total\ LR_{based}\ T1\ MRC' - \\ 'CRR_CRDIV\ total\ risk_{based}\ T1\ MRC') \end{array} \right\} \right]}{\sum_{i=1}^n \max \{ 'CRR_CRDIV\ total\ risk_{based}\ T1\ MRC', \\ 'CRR_CRDIV\ total\ LR_{based}\ T1\ MRC' \}}$$

where:

Final Basel III total LR-based T1 MRC = Final Basel III total leverage ratio exposure × (3% + 0.5 × G-SII surcharge); and,

CRR2/CRD5 total LR-based T1 MRC = CRR 2/CRD 5 total leverage ratio exposure × (3% + 0.5 × G-SII surcharge);

n is the number of banks in the sample.

The analysis adopts the BCBS methodology for estimating the leverage ratio impact.⁴² This methodology quantifies the impact of the leverage ratio as the change in the LR add-ons between the proposed and current regulatory frameworks, as a metric of the change in the LR's constraining power in determining the total T1 MRC.

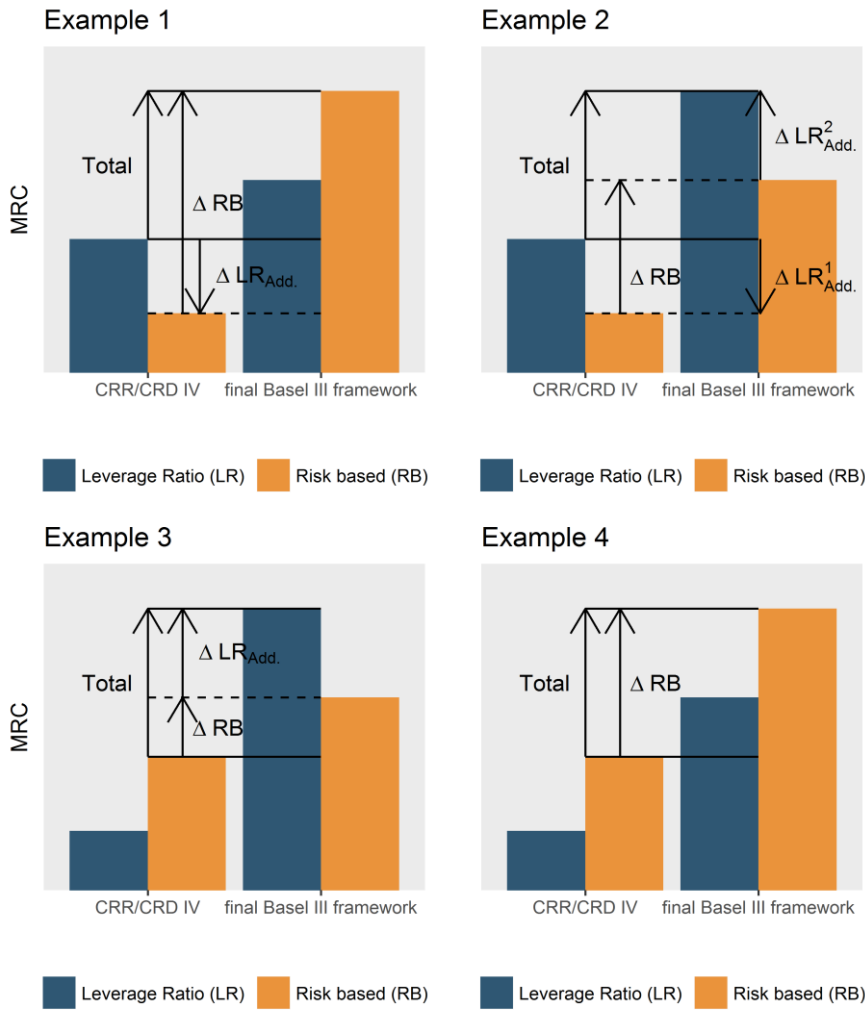
The leverage ratio impact would be negative (see ΔLR_{Add} in example 1 of Figure 12) if the T1 LR add-on of the full implementation of the final Basel III framework (equal to 0 in example 1 of Figure 12) were lower than the T1 LR add-on of the full implementation of the CRR2/CRD5 (positive in example 1 of Figure 12). This particular case indicates that the leverage ratio is less constraining under the final Basel III framework than under the CRR2/CRD5 framework.

The leverage ratio impact would be positive (see ΔLR_{Add} in example 3 of Figure 12) if the T1 LR add-on of the full implementation of the final Basel III framework (positive in example 3 of Figure 12) were higher than the T1 LR add-on of the full implementation of the CRR2/CRD5 (0 in example 3 of Figure 12). This can be interpreted as the leverage ratio becoming more constraining under the final Basel III framework than under the CRR2/CRD5 framework.

The leverage ratio impact would be 0 in cases where either the T1 LR add-on of the CRR2/CRD5 and the T1 LR add-on of the final Basel III framework are both 0 (example 4 in Figure 12), or the T1 LR add-on remained the same under the CRR2/CRD5 and the final Basel III framework (example 2 in Figure 12, where $\Delta LR_{1,Add} = \Delta LR_{2,Add}$, then $\Delta LR_{Add} = 0$). Both cases illustrate that the LR is equally constraining under the CRR2/CRD5 and the final Basel III frameworks. Figure 12 illustrates all four cases of the relationship between the T1 LR-based MRC and T1 risk-based MRC, under the CRR2/CRD 5 and final Basel III framework.

⁴² See BCBS (2017), Basel III monitoring report December 2017: Results of the cumulative quantitative impact study.

Figure 12: Integration of changes in risk-based and leverage-ratio-based MRC



Source: Based on the BIS Basel III monitoring report as of December 2017



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