

EBA/RTS/2022/10

20 October 2022

Final report

Draft Regulatory Technical Standards specifying supervisory shock scenarios, common modelling and parametric assumptions and what constitutes a large decline for the calculation of the economic value of equity and of the net interest income in accordance with Article 98(5a) of Directive 2013/36/EU

Contents

1. Executive Summary	3
2. Background and rationale	4
3. Draft regulatory technical standards	8
4. Accompanying documents	17
4.1 Draft cost-benefit analysis / impact assessment	17
4.2 Feedback on the public consultation	36

1. Executive Summary

In the context of the Supervisory Review and Evaluation Process (SREP), Article 98 of the Directive 2013/36/EU¹ (CRD) envisages a review and evaluation to be performed by competent authorities on the exposure of institutions to the interest rate risk arising from non-trading book activities (IRRBB). A supervisory outlier test (SOT) is envisaged to identify institutions of which, in the context of a shock scenario, their economic value of equity (EVE) declines by more than 15% of their Tier 1 capital or their net interest income (NII) experiences a large decline. If any of those limits are breached, competent authorities, unless they consider notwithstanding the breach that the institution's IRRBB management is adequate and that it is not excessively exposed to IRRBB, shall exercise their supervisory powers like setting additional own funds requirements, limitations of activities with excessive risks, specifying modelling and parametric assumptions, among others established in the CRD.

Pursuant to its mandate in Article 98(5a) of the CRD the EBA has developed these draft Regulatory Technical Standards (RTS) specifying the supervisory shock scenarios and modelling and parametric assumptions for the SOT on EVE and the SOT on NII as well as to provide a definition and calibration of the large decline for the SOT on NII.

As per its mandate the draft RTS are inspired on internationally agreed prudential standards – i.e., the Basel standards. The EBA published in July 2018 Guidelines² “on the management of interest rate risk arising from non-trading book activities”, applicable from June 2019, which included dedicated provisions on the SOT on EVE. The draft RTS generally give continuation to the Guidelines with some additional specifications and introduce the specificities for the SOT on NII.

Next steps

The draft regulatory technical standards will be submitted to the Commission for endorsement following which they will be subject to scrutiny by the European Parliament and the Council before being published in the Official Journal of the European Union. Given the importance of this regulatory product at the time of its publication in the current interest rate risk environment, the EBA will continue its continuous dialogue with stakeholders for a close monitoring of the IRRBB aspects.

¹ Directive 2013/36/EU ([link](#)) amended by Directive (EU) 2019/878 ([link](#)).

² These Guidelines are now replaced by the new Guidelines issued on the basis of Article 84 (6) of Directive 2013/36/EU specifying criteria for the identification, evaluation, management and mitigation of the risks arising from potential changes in interest rates and of the assessment and monitoring of credit spread risk, of institutions' non-trading book activities.

2. Background and rationale

1. In June 2019 the Directive (EU) 2019/878 amended the Directive 2013/36/EU and updated, under a new paragraph 5 of its Article 98, and in the context of the supervisory review and evaluation process (SREP),³ the so called ‘supervisory outlier tests (SOTs)’, *“in order to improve competent authorities’ identification of those institutions which might be subject to excessive losses in their non-trading book activities as a result of potential changes in interest rates”*.⁴
2. The SOTs, as part of the evaluation of the exposures of an institution to the interest rate risk arising from non-trading book activities (IRRBB) in the supervisory review and evaluation process (SREP), aim at assessing whether those exposures have an impact on its economic value of equity (‘SOT on EVE’) or on its net interest income (‘SOT on NII’) beyond specific thresholds.
3. In particular, points (a) and (b) of Article 98(5) refer to such thresholds as:
 - (a) 15% of its Tier 1 capital, in the case of the SOT on EVE; and
 - (b) a ‘large decline’ of the net interest income, in the case of the SOT on NII.
4. In case an institution reaches any of these thresholds, the relevant competent authority shall exercise its supervisory powers⁵ unless it considers, in the context of the SREP, that the institution’s management of IRRBB is adequate and that the institution is not excessively exposed to IRRBB.⁶ Title 6 of the EBA Guidelines on common procedures and methodologies for the SREP and supervisory stress testing under Directive 2013/36/EU refers explicitly to the SOTs as minimum information that competent authorities should consider in their assessment of institutions’ exposure to IRRBB, as stipulated in Article 98(5) of Directive 2013/36/EU and further specified by the delegated regulation adopted in accordance with Article 98(5a) of that Directive.
5. The SOTs are supervisory tools which objective is to inform supervisors about the exposure of institutions to IRRBB by obtaining comparable information for all institutions. The SOTs are important tools for competent authorities to monitor this risk and perform reviews.
6. The EBA has also consulted in parallel on a reviewed version of the 2018 Guidelines for IRRBB and CSRBB, the final version of which is published in parallel to these draft RTS. In the reviewed Guidelines, the SOTs are also seen as an integral part of the internal framework for the management of IRRBB by institutions and should be used as complementary tools for measuring

³ Section III (on ‘Supervisory review and evaluation process’) of Chapter 2 (on ‘Review Processes’) in Title VII (on ‘Prudential Supervision’) of the Directive 2013/36/EU.

⁴ Recital 19 of the Directive (EU) 2019/878.

⁵ Supervisory powers that may include the requirements envisaged in Article 104(1) of the Directive 2013/36/EU (e.g., capital requirements, restrictions of some business activities with excessive risks to the soundness of the institution) or the need to specify other modelling and parametric assumptions for its IRRBB management.

⁶ Article 98(5) of the Directive 2013/36/EU.

exposures to IRRBB and capital allocation. The 2018 Guidelines for IRRBB are repealed with the reviewed Guidelines and RTS. The SOT on EVE envisaged in the 2018 Guidelines are stipulated now in the RTS on SOTs. The reviewed Guidelines include and complement the part related to IRRBB management in the 2018 Guidelines and add CSRBB assessment and monitoring rules.

7. The Directive (EU) 2019/878 reformulates the SOT on EVE, stipulated in the Directive 2013/36/EU,⁷ and introduces the SOT on NII.

2.1 Basel standards and EU rules

8. The implementation into EU rules of the Basel standards on interest rate risk in the banking book published by the Basel Committee on Banking Supervision in April 2016⁸ started with the EBA Guidelines “*on the management of interest rate risk arising from non-trading book activities*” published on 18 July 2018. The 2018 EBA Guidelines introduced supervisory expectations regarding the management of IRRBB, encompassing the identification, measurement, monitoring and control of IRRBB. The Guidelines also included the revised SOT on EVE as an early warning signal and high-level guidance on credit spread risk in the banking book (CSRBB).
9. The Directive (EU) 2019/878 introduced the remaining elements of the Basel standards and added some new ones (SOT on NII, with a mandate to develop the relevant supervisory shock scenarios, modelling criteria and the definition of a large decline of the net interest income). The Directive mandates the EBA to draft Guidelines and draft regulatory technical standards to elaborate those items. Specifically:
 - (a) Draft regulatory technical standards on SOTs (Article 98(5a) of the Directive 2013/36/EU);
 - (b) Draft regulatory technical standards on standardised and simplified standardised approaches (Article 84(5) of the Directive 2013/36/EU); and
 - (c) Guidelines on IRRBB and CSRBB (Article 84(6) of the Directive 2013/36/EU).
10. The EBA has conducted an open public consultation on these draft regulatory technical standards and Guidelines in parallel. These draft regulatory technical standards on SOTs are published under letter (a) above.

2.2 Draft regulatory technical standards on the SOTs

11. Article 98(5a) of the Directive 2013/36/EU specifies the items that are included in the draft regulatory technical standards for the purposes of the SOT EVE and SOT NII.

⁷ Its Article 98(5) established the threshold for outliers as a decline of an institution’s economic value by more than “20 % of their own funds as a result of a sudden and unexpected change in interest rates of 200 basis points or such change as defined in the EBA guidelines.”

⁸ Available online: <http://www.bis.org/bcbs/publ/d368.htm>.

12. The regulatory technical standards may not specify any behavioural assumptions to be considered in the SOTs. This is explicitly excluded by Article 98(5a) of the Directive 2013/36/EU.

13. Institutions will conduct the SOTs applying the specific provisions in the regulatory technical standards. With regard to the modelling and parametric assumptions that are not specified therein, institutions shall use those that they employ in their IRRBB measurement and management – i.e., their internal measurement methodologies, the standardised approach or the simplified standardised approach.

2.2.1 SOT on EVE

14. The draft regulatory technical standards cover:

- (a) The six supervisory shock scenarios that set out the change in interest rates under which the impact on the economic value of equity shall be assessed;
- (b) the treatment of the institution's own equity, in the calculation of the economic value of equity;
- (c) the inclusion, composition and discounting of cash flows sensitive to interest rates arising from the institution's assets, liabilities and off-balance-sheet items, including the treatment of commercial margins and other spread components, in the calculation of the economic value of equity; and
- (d) the use of dynamic or static balance sheet models and the resulting treatment of amortised and maturing positions, new business assumptions, in the calculation of the economic value of equity.

15. These draft final RTS are very much inspired by the Basel standards on SOT EVE. Particularly the draft RTS envisage the six prescribed interest rate shock scenarios in the Basel rules. The draft RTS generally follow the modelling assumptions in the Basel standards – e.g., discretion to include or not commercial margins and subsequent employment of relevant risk-free rates, the use of a run-off balance sheet assumption and consideration of a post-shock interest rate floor. However, the draft RTS foresee an aggregation approach of EVE sensitivities across currencies where, by contrast to Basel, gains are not fully disregarded for proportionality reasons.

2.2.2 SOT on NII

16. The draft regulatory technical standards cover:

- (a) The two supervisory shock scenarios that set out the change in interest rates under which the impact on the net interest income shall be assessed;
- (b) the inclusion and composition of cash flows sensitive to interest rates arising from the institution's assets, liabilities and off-balance-sheet items, including the treatment of commercial margins and other spread components, in the calculation of the net interest income;

- (c) the use of dynamic or static balance sheet models and the resulting treatment of amortised and maturing positions, new business assumptions, in the calculation of the net interest income;
- (d) the period over which future net interest income shall be measured; and
- (e) the definition of 'large decline' for the purposes of identifying outlier institutions under SOT NII.

17. The draft final RTS builds on the jurisdictional discretion foreseen in the Basel rules by which additional outlier tests might be envisaged to capture IRRBB from a perspective including interest income, expenses and even market value changes. The two supervisory shock scenarios and modelling assumptions follow as much as possible those established in the Basel rules for the SOT EVE as well as those established in the context of disclosure – e.g., constant balance sheet and 12 months horizon and inclusion of commercial margins. The same currency aggregation approach of sensitivities as for the SOT EVE is envisaged.

2.2.3 The supervisory shock scenarios

18. The specification of the supervisory shock scenarios builds on those established in the EBA/GL/2018/02 on the management of interest rate risk arising from non-trading book activities from 18 July 2018.

19. These regulatory technical standards establish the interest rate shocks for specific currencies. The shock size for the six interest rate shock scenarios is based on historical interest rates. More precisely, for capturing the local interest rate environment and cycle, a historical time series ranging from 2000 to 2015 for various maturities was used to calculate the parallel, short-end ('short') and long-end ('long') shocks for a given currency. The shocks capture the heterogeneous economic environments across the jurisdictions.

20. For the purposes of the calibration of other currencies, the proposed interest rate shock calibration can lead to unrealistically low interest rate shocks for some currencies and to unrealistically high interest rate shocks for others. In order to ensure a minimum level of prudence and a level playing field, floor and caps are set out. A generic 16-year time series, rather than the specific one between 2000 and 2015, is required to be considered now to collect daily interest rates for the calculation of the overall average interest rate that serves as a basis for calculating the interest rate shock sizes. This should avoid lack of available data.

21. Given the importance of this regulatory product at the time of its publication in the current interest rate risk environment, the EBA will continue its continuous dialogue with stakeholders for a close monitoring of the IRRBB aspects and application of these regulatory technical standards. In this context, particular attention will be paid to the recalibrated maturity-dependent post-shock interest rate floor, the potential migration between NMDs and term deposits in the context of the constant balance sheet assumption in the SOT NII and proportionality aspects. The EBA will liaise with competent authorities and institutions as needed for these purposes.

3. Draft regulatory technical standards

COMMISSION DELEGATED REGULATION (EU) No .../..**of XXX****[...]**

Supplementing Directive 2013/36/EU, amended by Directive (EU) 2019/878, of the European Parliament and of the Council with regard to regulatory technical standards to specify the supervisory shock scenarios, the common modelling and parametric assumptions and the definition of a large decline, for the purposes of the supervisory outlier tests of the exposures of institutions to the interest rate risk arising from non-trading book activities and their impact on net interest income and economic value of equity

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC, as amended by Directive (EU) 2019/878 of the European Parliament and of the Council of 20 May 2019,⁹ and in particular Article 98(5a) thereof,

Whereas:

- (1) The specification of the supervisory shock scenarios set out in this Regulation builds on the relevant specification established by the Basel Committee on Banking Supervision (BCBS)¹⁰ and already reflected in the EBA Guidelines on the management of interest rate risk arising from non-trading book activities¹¹ that apply from 30 June 2019 and will be repealed following the adoption of this Regulation.
- (2) For the purposes of the calculations of the cited economic value of equity and net interest income, this Regulation seeks to specify common modelling and parametric assumptions that institutions should use. To that end, it is appropriate to set out in this Regulation that for the calculation of the net interest income, a constant balance sheet assumption over a one-year time horizon should be used while, for the calculation of the economic value of equity, a run-off balance sheet assumption

⁹ OJ L 150, 7.06.2019, p. 253.

¹⁰ SRP – Supervisory review process – SRP31 – Interest rate risk in the banking book ([link](#)).

¹¹ EBA/GL/2018/02 of 18 July 2018 ([link](#)).

should be used where maturing positions are not replaced. These assumptions aim to provide a good balance in terms of calculation accuracy, reliability of estimates and operational complexity.

- (3) To strike the right balance between ensuring comparability of the results and providing the flexibility necessary due to the long term horizon and the inherent operational complexity, this Regulation should set out that commercial margins and spread components should be included in the calculation of the net interest income, but for the calculation of the economic value of equity, institutions should proceed in accordance with their internal management and measurement approach for interest rate risk in the non-trading book.
- (4) This Regulation is based on the draft regulatory technical standards submitted to the Commission by the European Banking Authority.
- (5) EBA has conducted an open public consultation on the draft regulatory technical standards on which this Regulation is based, analysed the potential related costs and benefits and requested the opinion of the Banking Stakeholder Group established in accordance with Article 37 of Regulation (EU) No 1093/2010.

HAS ADOPTED THIS REGULATION:

Article 1

Supervisory shock scenarios

1. The six supervisory shock scenarios referred to in Article 98(5), point (a) of Directive 2013/36/EU shall be the following:
 - (a) parallel shock up, where there is a parallel upward shift of the yield curve with the same positive interest rate shock for all maturities;
 - (b) parallel shock down, where there is a parallel downward shift of the yield curve with the same negative interest rate shock for all maturities;
 - (c) steeper shock, where there is a steepening shift of the yield curve, with negative interest rate shocks for shorter maturities and positive interest rate shocks for longer maturities;
 - (d) flattener shock, where there is a flattening shift of the yield curve, with positive interest rate shocks for shorter maturities and negative interest rate shocks for longer maturities;
 - (e) short rates shock up, with larger positive interest rate shocks for shorter maturities to converge with the baseline for longer maturities; and
 - (f) short rates shock down, with larger negative interest rate shocks for shorter maturities to converge with the baseline for longer maturities.

2. The two supervisory shock scenarios referred to in Article 98 (5), point (b) of Directive 2013/36/EU shall be the following:
 - (a) parallel shock up, where there is a parallel upwards shift of the yield curve with the same positive interest rate shocks for all maturities; and
 - (b) parallel shock down, where there is a parallel downwards shift of the yield curve with the same negative interest rate shocks for all maturities.
3. The supervisory shock scenarios referred to in paragraphs 1 and 2 shall be calculated on the basis of the currency-specific specified sizes of interest rate shocks set out in ANNEX I and Article 2 and shall apply at least to the exposure of institutions to the interest rate risk arising from non-trading book activities denominated in each currency separately for which the institution has positions where the accounting value of financial assets or liabilities denominated in a currency amounts to 5% or more of the total non-trading book financial assets or liabilities, or less than 5% if the sum of financial assets or liabilities included in the calculation is lower than 90% of total non-trading book financial assets (excluding tangible assets) or liabilities.

Article 2

Currencies not referred to in ANNEX I

1. To calibrate specified sizes for interest rate shocks for currencies not referred to in ANNEX I, the following shall apply:
 - (a) Institutions shall first calculate the daily average interest rate by collecting a 16-year time series of daily ‘risk-free’ interest rates, without instrument-specific or entity-specific credit spreads or liquidity spreads, for each currency for the maturities 3M, 6M, 1Y, 2Y, 5Y, 7Y, 10Y, 15Y and 20Y and then calculate the arithmetic average interest rate for each currency c across all observations in the time series and for all maturities. The result shall be a single measure per currency.
 - (b) If the average interest rate calculated as per point (a) for the first seven years is greater than 700 basis points, then data from the most recent 10 years or until when data is available shall be used; if not, the full 16-year time series of data shall be used.
 - (c) The parallel, short and long Interest rate shock by currency shall be derived from applying the relevant global shock parameter from Table 1 to the average interest rate calculated in point (a).

Table 1. Baseline global interest rate shock parameters

Parallel	$\bar{\alpha}_{parallel}$	60%
Short	$\bar{\alpha}_{short}$	85%

Long	$\bar{\alpha}_{long}$	40%
------	-----------------------	-----

- (d) Institutions shall apply a floor of 100 basis points as well as variable caps of 500 basis points for the short-term shock, 400 basis points for the parallel shock and 300 basis points for the long-term shock, respectively.
- (e) The set of interest rate shocks by currency shall then be rounded to the nearest 50 basis points.
2. The calibration referred to in paragraph 1 should be performed at least every five years.

Article 3

Parametrisation of supervisory shock scenarios

For each currency c the specified size of the parallel, short and long shocks to the ‘risk-free’ interest rate, the following parameterisations of the six supervisory shock scenarios shall be applied:

- (a) *Parallel shock for currency c* : A constant parallel shock up or down across all time buckets:

$$\Delta R_{parallel,c}(t_k) = \pm \bar{R}_{parallel,c}$$

- (b) *Short rate shock for currency c* :

$$\Delta R_{short,c}(t_k) = \pm \bar{R}_{short,c} \cdot e^{\frac{-t_k}{4}},$$

where t_k is the midpoint (in time) of the k^{th} time bucket.

- (c) *Long rate shock for currency c* :

$$\Delta R_{long,c}(t_k) = \pm \bar{R}_{long,c} \cdot \left(1 - e^{\frac{-t_k}{4}}\right)$$

- (d) *Rotation shocks for currency c* :

$$\Delta R_{steepener,c}(t_k) = -0.65 \cdot |\Delta R_{short,c}(t_k)| + 0.9 \cdot |\Delta R_{long,c}(t_k)|;$$

$$\Delta R_{flattener,c}(t_k) = +0.8 \cdot |\Delta R_{short,c}(t_k)| - 0.6 \cdot |\Delta R_{long,c}(t_k)|.$$

Article 4

Changes in the economic value of equity (EVE)

Institutions shall reflect in their calculation of the economic value of equity as referred to in Article 98 (5), point (a) of Directive 2013/36/EU, the following common modelling and parametric assumptions:

- (a) All non-trading book positions from interest rate sensitive instruments shall be taken into account.
- (b) Small trading book business, as defined by paragraph 1 of Article 94 of Regulation (EU) No 575/2013, shall be included unless its interest rate risk is captured in another risk measure.
- (c) All CET1 instruments and other perpetual own funds without any call dates shall be excluded from the calculation of the supervisory outlier test.
- (d) Institutions shall reflect automatic and behavioural options in the calculation. Institutions shall adjust key behavioural modelling assumptions of interest rate sensitive instruments to the features of different interest rate scenarios taking into account the proportionality and materiality thresholds set out in Articles 7(12), 8(2), 9(4), 11(3) and 21(1) of [XXX – Final Name of the RTS SA].
- (e) Pension obligations and pension plan assets shall be included unless their interest rate risk is captured in another risk measure.
- (f) The cash flows from interest rate sensitive instruments shall include any repayment of principal, any repricing of principal and any interest payments.
- (g) Institutions with a non-performing exposures ratio of 2% or more shall include non-performing exposures as general interest rate sensitive instruments whose modelling should reflect expected cash flows and their timing. Non-performing exposures shall be included net of provisions. For these purposes, non-performing exposures are determined by debt securities, loans and advances classified as non-performing in accordance with Article 47a(3) of Regulation 575/2013, while the non-performing exposures ratio is calculated as the amount of non-performing exposures divided by the amount of total gross debt securities, loans and advances calculated at the level of the institution.
- (h) Institutions shall include instrument-specific interest rate caps and floors.
- (i) Commercial margins and other spread components in interest payments in terms of their exclusion from or inclusion in the cash flows shall be treated in accordance with the institutions' internal management and measurement approach for interest rate risk in the non-trading book. If commercial margins and other spread components are excluded, institutions shall (i) use a transparent methodology for identifying the risk-free rate at inception of each instrument; (ii) use a methodology that is applied consistently across business units; (iii) ensure that the exclusion of commercial margins and other spread components from the cash flows is consistent with how the institution manages and hedges IRRBB and (iv) notify their exclusion to the competent authority.
- (j) The change in EVE shall be computed with the assumption of a run-off balance sheet, where existing positions mature and are not replaced.
- (k) A maturity-dependent post-shock interest rate floor shall be applied for each currency starting with -150 basis points for immediate maturity. This floor shall increase by 3 basis points per year, eventually reaching 0% for maturities of 50 years and more. If observed interest rates are lower than the post-shock interest rate floor, institutions shall apply the lower observed interest rate.
- (l) When calculating the aggregate change for each interest rate shock scenario, institutions shall add together any negative and positive changes occurring in each

currency. Currencies other than the reporting currency shall be converted to the reporting currency at the ECB spot FX rate on the reference date. Positive changes shall be weighted by a factor of 50% or a factor of 80% in the case of Exchange Rate Mechanism - ERM II currencies with a formally agreed fluctuation band narrower than the standard band of +/- 15%. Weighted gains shall be recognised up to the greater of (i) the absolute value of negative changes in EUR or ERMII currencies and (ii) the result of applying a factor of 50% to the positive changes of ERMII currencies or EUR, respectively.

- (m) For discounting, an appropriate general 'risk-free' yield curve per currency shall be applied (e.g., an OIS curve). That yield curve shall not include instrument-, sector- or entity-specific credit spreads or liquidity spreads.
- (n) In assessing the risk of interest rate-sensitive products that are linked to inflation or other market factors, prudent assumptions shall be applied. These assumptions shall be based on the current/last observed value, on forecasts of a reputable economic research institute or on other generally accepted market practices and shall be generally scenario-independent.

Article 5

Changes in the net interest income

- (a) Institutions shall reflect in their calculations of the net interest income as referred to Article 98 (5), point (b) the following common modelling and parametric assumptions: Interest income and interest expenses over a one-year horizon shall be considered regardless of the maturity and the accounting treatment of the relevant interest rate sensitive non-trading book instruments.
- (b) The assumptions established in Article 4, except its points (i) and (j), of this Regulation, shall apply here.
- (c) Institutions shall include commercial margins and other spread components.
- (d) Institutions shall compute the change in the net interest income under the assumption of a constant balance sheet, where its total size and composition, including on- and off-balance sheet items, shall be maintained by replacing maturing or repricing cash flows with new instruments that have comparable features with regard to the currency, amount and repricing period of the instruments generating the repricing cash flows. Margins of the new instruments shall be based on the margins from recently bought or sold products with similar characteristics. In the case of instruments with observable market prices recent market spreads shall be used and not historical market spreads.

Article 6

Large decline

1. A decline of an institution's one-year net interest income by more than 2.5% of its Tier 1 Capital, resulting from a sudden and unexpected change in interest rates as set out in any of the two supervisory shock scenarios set out in Article 1, shall constitute a large decline for the purpose of Article 98 (5), point (b) of Directive 2013/36/EU.

2. For the decline set out in paragraph 1 to be calculated, the following formulae shall be applied:

$$\frac{NII_{shock} - NII_{baseline}}{Tier\ 1\ Capital} < -2.5\%$$

Article 7

Entry into force

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels,

For the Commission
The President

[For the Commission
On behalf of the President

[Position]

ANNEX I

Specified size of interest rate shocks $\bar{R}_{\text{shocktype},c}$

	ARS	AUD	BGN	BRL	CAD	CHF	CNY	CZK	DKK	EUR	GBP
Parallel	400	300	250	400	200	100	250	200	200	200	250
Short	500	450	350	500	300	150	300	250	250	250	300
Long	300	200	150	300	150	100	150	100	150	100	150

	HKD	HRK	HUF	IDR	INR	JPY	KRW	MXN	PLN	RON	RUB
Parallel	200	250	300	400	400	100	300	400	250	350	400
Short	250	400	450	500	500	100	400	500	350	500	500
Long	100	200	200	350	300	100	200	300	150	250	300

	SAR	SEK	SGD	TRY	USD	ZAR
Parallel	200	200	150	400	200	400
Short	300	300	200	500	300	500
Long	150	150	100	300	150	300

ARS	Argentine Peso	IDR	Indonesian Rupiah
AUD	Australian Dollar	INR	Indian Rupee
BGN	Bulgarian Lev	JPY	Japanese Yen
BRL	Brazilian Real	KRW	South Korean Won
CAD	Canadian Dollar	MXN	Mexican Peso
CHF	Swiss Franc	PLN	Poland Zloty
CNY	Chinese Yuan	RON	Romanian Leu
CZK	Czech Koruna	RUB	Russian Ruble
DKK	Danish Krone	SAR	Saudi Riyal
EUR	Euro	SEK	Swedish Krona
GBP	Pound sterling	SGD	Singapore Dollar
HKD	Hong Kong Dollar	TRY	Turkish Lira
HRK	Croatian Kuna	USD	United States Dollar
HUF	Hungarian Forint	ZAR	South African Rand

4. Accompanying documents

4.1 Draft cost-benefit analysis / impact assessment

1. Following Article 10 of Regulation (EU) No 1093/2010 (EBA Regulation), the EBA shall analyse the potential costs and benefits of draft Regulatory technical standards. RTS developed by the EBA shall therefore be accompanied by an Impact Assessment (IA) that analyses ‘the potential related costs and benefits’.
2. This analysis presents the IA of the main policy options assessed in the elaboration of the draft RTS on supervisory outlier tests, which the EBA is mandated to develop under Article 98(5a) of Directive 2013/36/EU, as regards exempted entities, financial holding companies, mixed financial holding companies, remuneration, supervisory measures and powers and capital conservation measures, amended by Directive (EU) 2019/878.
3. The IA has built on the QIS on IRRBB conducted by the EBA during the first half of 2021 and has taken into account the EBA Guidelines “on the management of interest rate risk arising from non-trading book activities” published on 18 July 2018.

4.1.1 Supervisory shock scenarios in the SOTs

4. The EBA keeps the supervisory shock scenarios envisaged in the 2018 EBA Guidelines “on the management of interest rate risk arising from non-trading book activities” for the SOT on EVE.
5. For the SOT on NII, the EBA proposes to apply the parallel up and down supervisory shocks scenarios envisaged in the SOT EVE.

4.1.2 Recalibration of the lower bound in the SOTs

6. Point k of paragraph 115 of the 2018 EBA Guidelines “on the management of interest rate risk arising from non-trading book activities”, in the context of the supervisory outlier test, envisages a maturity-dependent post-shock interest rate floor to be applied for each currency starting with -100 basis points for immediate maturities and increasing by 5 basis points per year, eventually reaching 0% for maturities of 20 years and more. It was established therein that the EBA might envisage revising this floor to ensure that the lower reference rate will be sufficiently prudent given future developments in the interest rates.
7. In particular, in March 2020 the AAA yields for all maturities longer than 5Y already were below the affine floor as given in the 2018 EBA Guidelines. This is also true for the yield curve as of 30 December 2020. Put otherwise, already the baseline scenario (before shock) was below the floor. Thus, a recalibration of the maturity-dependent post-shock interest rate floor to -150 bps with a slope of 3 bps per year, proposed in the draft RTS under consultation, seems appropriate.

Table 1: EUR AAA bond yields as published on the ECB website.

	1Y	5Y	10Y	20Y	30Y
Minimum yields (EUR AAA) until Sep 2016	-0.73%	-0.61%	-0.17%	0.28%	0.44%
Minimum yields (EUR AAA) until Mar 2021	-0.91%	-1.00%	-0.82%	-0.51%	-0.43%
Change in minimum yields between Sep 2016 and Mar 2021	-0.19%	-0.39%	-0.65%	-0.79%	-0.87%
Yields (EUR AAA) as of 30 Dec 2020	-0.76%	-0.72%	-0.57%	-0.29%	-0.13%
Yields (EUR AAA) as of 12 Mar 2021	-0.67%	-0.61%	-0.28%	0.12%	0.23%

4.1.3 Time horizon and balance sheet assumption in the SOT on NII

8. Two different time horizons have been assessed in the QIS – i.e., 1 year and 3 years; in the context of two potential balance sheet assumptions – i.e., ‘constant’ versus ‘dynamic’ balance sheet assumptions. Different factors have been considered in the design of the two options: operational complexity, reliability of the estimates of cash flows, comparability of the estimates among banks and calculation accuracy.
9. For avoidance of a doubt, institutions were expected to determine changes in NII on a rolling basis, so that a full year projection is available at each reporting date.
10. In a constant balance sheet assumption, maturing positions are replaced by new business with comparable characteristics regarding the volume, maturity and features (e.g., for caps/floors). However, the currently prevailing interest rate shall be used for setting interest rate characteristics.
11. In a dynamic balance sheet assumption, future business expectations adjusted for the relevant scenario in a consistent manner, would be incorporated, including in terms of volumes and composition of the balance sheet.
12. A constant balance sheet measures IRRBB under the assumption of an unchanged policy, thus providing a practically relevant baseline for the IRRBB assessment. A constant balance sheet measure makes comparison between institutions for the purpose of the outlier test easier than a dynamic balance sheet measure.

4.1.4 Definition of large decline in the SOT on NII.

a. Elements of net interest income

13. Observed practices in the industry have shown that banks consider different elements as net interest income, leading to a lack of comparability of metrics, as well as IRRBB impacts. This heterogeneity would directly hamper the capacity of the upcoming SOT on NII to become an

adequate outlier test. In the final RTS, the EBA determines the elements comprising the net interest income.

14. For these purposes, and depending on the elements considered under net interest income, the following options were considered:

Option 1: Net interest income in the “narrow” sense - “narrow NII”

15. Here, net interest income is calculated as the difference between interest income and interest expenses from non-trading book items.¹²

16. Overall, a harmonised determination of the elements the NII is composed of in the RTS for the purposes of the SOT is an overarching principle.

Option 2: “Wider” net interest income (including other elements) - Earnings

17. There is not a unique definition of earnings. In the 2018 EBA GLs on IRRBB, it was stated that *“in the earnings perspective, institutions should consider not only the effects on interest income and expenses, but also the effects of the market value changes of instruments — depending on accounting treatment — either shown in the profit and loss account or directly in equity (e.g., via other comprehensive income).”*

18. The notion of earnings is linked to “profitability”. Earnings cover a wider scope, which could be summarised under **two options: “narrow” NII and the effect of market value changes of instruments at fair value (option 1)**, or – the aim being to capture the impact of interest rate changes on future profitability, Earnings could technically also **include other P&L lines (option 2) such as fees and commissions**, as long as they are affected by the changes in interest rates (this should be appropriately justified and documented and is expected to remain stable over time). The definition of Earnings is then more open to interpretation than the “narrow” NII one.

Pros and cons of both measures (“narrow” NII/“wider NII” - Earnings) in the context of IRRBB SOT

	“Narrow” NII	“Wider” NII – Earnings
Pros	<ul style="list-style-type: none"> - Easier to standardise and consequently more comparable between banks. - Easier to compute and to check (less computations are needed). 	<ul style="list-style-type: none"> - Covers the bank's total short to medium term interest rate risk (i.e., fair value changes (in Options 1& 2), fees and commissions (in Option 2), and impacts from offsetting between charging fees and setting (negative) interest rates. - Aims to capture all different types of revenues and charges sensitive to interest rate movements (not restricted to interest

¹² In BCBS IRRBB standards, NII is defined as “the difference between total interest income and total interest expense, taking account of hedging activity (e.g. via derivatives)”.

		incomes/expense) recognizing the diverse IRRBB drivers across business models.
		- Closer approximation of the banks IRRBB level and more in line with the applicable EBA/GL/2018/02 (compared to a narrow NII approach).
Cons	- does not cover the bank's total short to medium term interest rate risk , (e.g., fees and commissions, fair value changes).	- Hampered level playing field due to different accounting standards , notably on the scope of items at fair value (higher dependency on accounting rule).
		- Standardisation and comparability is less easy (e.g., different accounting standards).

19. The “narrow” NII captures, in comparison to earnings, a restricted list of charges and revenues. This increases comparability between institutions, but at the cost of potentially omitting IRRBB drivers of institutions’ P&L where a significant part of interest sensitive net income is constituted by other elements than “narrow” NII. Earnings are wider than “narrow” NII and comprehensively capture the risk stemming from interest rate changes. This would allow for assessing the sensitivity of the various types of exposures, for different business models, to interest rate movements more extensively.

b. Metrics to define a large decline

20. The NII SOT targets to identify the decline of an institution’s income (the so called “large decline”) that, due to its non-trading book’s IRRBB exposure, would jeopardise its normal business operations.

21. In order to define such large decline, two steps need to be followed: firstly, determine the metric for measuring a decline of the NII. Secondly, the threshold of such decline that would jeopardise normal business operation will be calibrated.

22. The EBA worked on the first step and established a number of metrics. With the QIS data, the EBA worked on the second step by assessing the impact of different thresholds on the different metrics. This allowed the EBA to ultimately come up with a specific proposal of metric and threshold as a definition of the large decline.

23. Two types of metrics have been elaborated:

Option A: Capital related metric

24. A first category of metrics focuses on the NII variability by linking the NII loss in the relevant scenario to a reference in capital terms (e.g., Tier 1 capital). These metrics are listed as metrics 1 in the following Table. Given that the denominator is not based on recurrent income or

expenses but on Tier 1 capital levels, these metrics are applicable for all banks and different business models.

Option B: Income / expense related metric

25. An alternative category of metrics tests whether the level of net interest income under the relevant shock scenario would be sufficient to maintain normal business operations. Particularly, these measures test whether the NII after a shock would cover the attributable part of the general administrative expenses and relate this (shocked) “Net-NII” to the 1Y NII forecast in a baseline scenario (metric 2). The decline under a shock is measured in percentage points.

CAPITAL RELATED METRICS (applicable to “narrow” NII or earnings)

- 1 - Δ NII
- Δ NII / Tier 1 < x
- The metric is following the same technical idea as the EVE-SOT and relates the change in NII to the Tier 1 capital.
 - It is possible to quickly verify the correctness of its calculation.
 - The metric does not show whether the post-shock NII can sustain normal business operations nor whether it is actually positive.

(Δ NII is the loss in the relevant scenario)

INCOME- / EXPENSE RELATED METRICS (applicable to “narrow” NII or earnings)

- 2 – Income- / expense related metric
- $\frac{NII_{shock} - \alpha \cdot AdmExpens}{NII_{baseline} - \alpha \cdot AdmExpens} - 1 < x,$
- where $\alpha = \frac{NII_{hist}}{Op. inc.}$
- It describes the decline in percentages of the NII that takes also general administrative expenses into account (“Net-NII”).
 - It keeps a close link to the strength and stability of the NII stream in the overall profitability of a bank “normal business operations”.
 - Requires the assumption that expenses are attributed on a proportional basis to the NII (relative to the operating income).
 - The fraction of “attributable expenses” is given by α , which is an estimate of the share of NII on the operating income.
 - It takes into account both the business model and cost structure of a bank.
 - Requires bank- and time-specific parameters α that needs to be updated each year (though it is expected not to vary too strongly).
 - One-offs are likely to affect the operating income and administrative expenses at the same time, and this metric captures both altogether.
-

**(NII_shock (NII_baseline) is the level
of NII in the shock (baseline)
scenario)**

4.1.5 QIS analysis

26. The calibration of the threshold for the definition of the large decline in the SOT on NII builds on the EBA QIS from December 2020, where dedicated EU-specific IRRBB worksheets have been included in the Basel III monitoring exercise.

27. 121 banks have participated in the whole EBA QIS but less than half of them provided data on IRRBB. The following descriptive tables and charts indicate the number of banks that provided sufficient data for each assessment.

a. Metric 1 – capital related metric. Description.

28. Table 2 describes the change of NII (i.e., the difference between the NII under each shock scenario and the NII under the baseline scenario) with respect to the amount of Tier 1 capital, for shock scenarios 1 (parallel shock up), 2 (parallel shock down) and 2 unconstrained (parallel shock down with the full shock disregarding the lower bound) for a one-year and a three-year risk horizon as defined in the instructions of the 2020 QIS. NII here is the difference between interest income and interest expenses only. The results are for each bank aggregated over all currencies considered in the IMS and under the assumption of a constant balance sheet.

Table 2: Metric 1 (NII: Interest income – Interest expenses) – Description.

Δ NII (as % of Tier 1 Capital)						
Scenario	NII Projection 1Y			NII Projection 3Y		
	1	2	2 Unconstrained	1	2	2 Unconstrained
Mean	2.6%	-0.2%	-1.6%	10.5%	-18.0%	-8.1%
S.D.	2.9%	2.2%	3.4%	10.5%	6.0%	10.5%
5th	-0.7%	-3.3%	-7.6%	0.0%	-10.9%	-32.2%
10th	-0.1%	-2.2%	-7.2%	0.4%	-7.7%	-22.6%
25th	0.6%	-1.2%	-4.5%	2.5%	-4.4%	-17.5%
50th	2.1%	-0.6%	-1.4%	8.8%	-2.3%	-8.3%
75th	5.4%	0.0%	0.0%	16.9%	-0.2%	-0.2%
90th	7.2%	0.9%	1.6%	24.4%	1.3%	2.3%
95th	9.6%	1.9%	2.3%	38.9%	4.6%	4.5%
No of banks	54	54	46	50	50	44

29. Table 3 describes the change of NII, i.e. the difference between the NII under each shock scenario and the NII under the baseline scenario with respect to the amount of Tier 1 capital, for shock scenarios 1 (parallel shock up), 2 (parallel shock down) and 2 unconstrained (parallel

shock down with the full shock disregarding the lower bound) as defined in the instruction of the 2020 QIS. NII here is the difference between interest income and interest expenses plus fair value changes of the relevant interest rate sensitive non-trading book instruments accounted at fair value. The results are for each bank also at an aggregated level over all currencies considered in the IMS and under the assumption of a constant balance sheet.

Table 3: Metric 1 (NII: Interest income – Interest expenses +- fair value changes) – Description.

Δ NII including fair value (as % of Tier 1 Capital)						
Scenario	NII Projection 1Y			NII Projection 3Y		
	1	2	2 Unconstrained	1	2	2 Unconstrained
Mean	2.2%	0.2%	-1.2%	11.5%	-0.6%	-7.2%
S.D.	3.4%	2.3%	3.2%	9.2%	6.4%	10.2%
5th	-7.3%	-2.0%	-6.4%	-9.7%	-8.6%	-29.4%
10th	-2.8%	-1.7%	-4.9%	0.0%	-6.0%	-23.1%
25th	0.0%	-0.7%	-3.7%	1.2%	-3.8%	-14.5%
50th	1.7%	-0.3%	-1.4%	7.6%	-2.0%	-7.6%
75th	4.2%	0.2%	0.0%	14.2%	0.0%	-0.2%
90th	5.9%	0.4%	1.4%	21.4%	1.2%	4.9%
95th	6.6%	0.9%	2.4%	35.5%	1.8%	7.0%
No of banks	44	44	41	40	40	39

b. Metric 2 – Income / expense related metric. Description.

30. Table 4 describes under metric 2, $\frac{NII_{shock} - \alpha \cdot AdmExpens}{NII_{baseline} - \alpha \cdot AdmExpens} - 1$, the change of the NII, i.e. the difference between the NII under each shock scenario –and the NII under the baseline scenario considering the part of the administrative expenses that need to be covered, for shock scenarios 1 (parallel shock up), 2 (parallel shock down) and 2 unconstrained (parallel shock down with the full shock disregarding the lower bound) as defined in the instructions of the 2020 QIS. NII here is the difference between interest income and interest expenses only. The results are for each bank at an aggregated level over all currencies considered in the IMS and under the assumption of a constant balance sheet. The coefficient alpha is defined as $\frac{NII_{hist}}{Op. inc.}$.

Table 4: Metric 2 (NII: Interest income – Interest expenses) – Description.

NII						
Scenario	NII Projection 1Y			NII Projection 3Y		
	1	2	2 Unconstrained	1	2	2 Unconstrained
Mean	52.6%	-10.2%	-125.3%	63.0%	17.5%	-62.5%
S.D.	45.1%	11.5%	100.8%	46.5%	32.6%	43.6%
5th	-36.0%	-39.5%	-154.2%	-19.1%	-51.4%	-200.9%
10th	-11.0%	-30.6%	-121.1%	0.2%	-39.7%	-163.5%
25th	4.3%	-17.6%	-64.2%	10.8%	-21.6%	-80.5%
50th	33.2%	-9.5%	-19.9%	50.0%	-11.6%	-45.7%
75th	83.8%	-1.9%	-1.3%	103.5%	-5.2%	-9.5%
90th	151.1%	14.4%	9.3%	171.8%	20.7%	2.1%
95th	183.3%	32.0%	28.4%	212.9%	35.0%	23.2%
No of banks	49	48	45	44	44	42

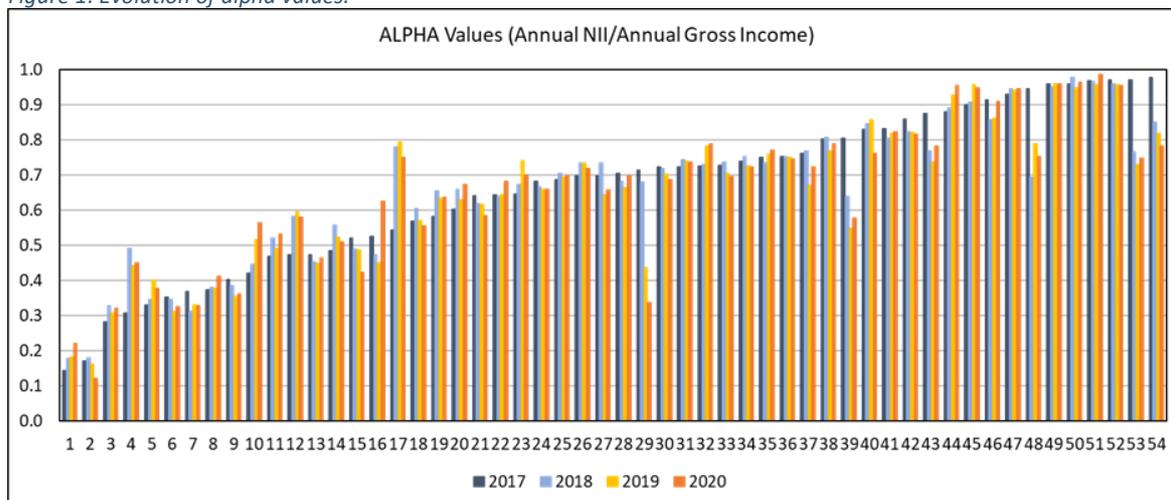
31. Table 5 describes under metric 2, $\frac{NII_{shock} - \alpha \cdot AdmExpens}{NII_{baseline} - \alpha \cdot AdmExpens} - 1$, the change of the NII, i.e. the difference between the NII under each shock scenario and the NII under the baseline scenario) considering the part of the administrative expenses that need to be covered, for shock scenarios 1 (parallel shock up), 2 (parallel shock down) and 2 unconstrained (parallel shock down with the full shock disregarding the lower bound) as defined in the instructions of the 2020 QIS. NII here is the difference between interest income and interest expenses plus fair value changes of the relevant interest rate sensitive non-trading book instruments accounted at fair value. The results are for each bank at an aggregated level over all currencies considered in the IMS and under the assumption of a constant balance sheet. The coefficient alpha is defined as $\frac{NII_{hist}}{Op. inc.}$.

Table 5: Metric 2 (NII: Interest income – Interest expenses +- fair value changes) – Description.

NII (including fair value)						
Scenario	NII Projection 1Y			NII Projection 3Y		
	1	2	2 Unconstrained	1	2	2 Unconstrained
Mean	43.2%	-3.1%	-24.7%	58.2%	21.5%	-14.1%
S.D.	42.7%	10.3%	27.6%	45.7%	31.4%	43.1%
5th	-80.5%	-29.9%	-223.8%	-32.5%	-37.6%	-187.0%
10th	-37.6%	-19.8%	-93.5%	-0.3%	-30.9%	-121.7%
25th	-0.1%	-13.6%	-54.8%	9.5%	-20.8%	-79.4%
50th	28.8%	-4.6%	-24.8%	45.1%	-10.0%	-49.2%
75th	74.0%	0.2%	-1.1%	98.0%	-0.9%	-10.4%
90th	122.8%	15.2%	2.1%	142.3%	31.5%	2.7%
95th	221.3%	36.3%	3.7%	222.4%	52.7%	28.1%
No of banks	42	42	41	39	39	39

32. Figure 1 describes the evolution of the alpha coefficients over time, from 2017 to 2020, for each of those banks providing sufficient information for it. The alpha values are calculated with the historical amount reported of NII and operating income. The net interest income is reported as the result of Interest income from assets allocated to the banking book minus interest expense on liabilities allocated to the banking book. In 80% of the banks (43/54) the difference between the max and min alpha values of these four years references is lower than 0.10 and in 85% of the banks (46/54) it is lower than 0.15. Main outliers are banks that went through mergers/restructuring/acquisitions processes during the observation periods. Furthermore, to be noted that the IFRS 9 accounting standard came into force on 1 January 2018 with implications on the classification and measurement of financial instruments and hedge accounting. Considering only the observations in 2018, 2019 and 2020, and thus disregarding the impact due to changes in the accounting framework, only 3 banks (out of 54) would show a maximum difference higher than 0.1 (only 2 banks with a maximum difference higher than 0.15).

Figure 1: Evolution of alpha values.



c. Delta EVE/Tier 1 capital. Description.

33. Table 6 shows the changes of EVE without own equity – i.e., the difference between the EVE under each shock scenario and the EVE under the baseline scenario with respect to the amount of Tier 1 capital, for shock scenarios 1 (parallel shock up), 2 (parallel shock down), 3 (steepener), 4 (flattener), 5 (short rate up) and 6 (short rate down) as defined in the instructions of the 2020 QIS. The results are for each bank at an aggregated level over all currencies considered in the IMS and under the assumption of a constant balance sheet with a run-off profile.

Table 6: Delta EVE/Tier 1 capital – Description.

Scenario	Delta EVE without own equity (as % of Tier 1 Capital)					
	1	2	3	4	5	6
Mean	-4.47%	1.02%	-1.29%	0.21%	-0.34%	-1.39%
S.D.	18.66%	6.57%	18.50%	2.70%	4.10%	18.13%
5th	-13.14%	-11.70%	-8.40%	-2.28%	-4.21%	-8.75%
10th	-11.67%	-6.49%	-4.80%	-1.16%	-3.87%	-4.57%
25th	-8.04%	-1.04%	-2.53%	-1.08%	-2.88%	-0.39%
50th	-2.23%	0.27%	-0.31%	0.10%	-0.94%	0.26%
75th	3.17%	1.60%	1.41%	1.45%	1.22%	1.59%
90th	8.46%	4.23%	3.29%	4.40%	6.95%	3.48%
95th	14.48%	5.49%	7.19%	6.83%	11.03%	4.51%
No of banks	52	52	53	51	51	53

d. Metric 1 vs delta EVE. Comparative results and outliers.

34. Figure 2 compares the values of metric 1 and delta EVE/Tier 1 capital. The NII in metric 1 is the difference of interest income and interest expenses of banking book instruments. The figure

considers only the minimum value of metric 1 (maximum loss) under the shock scenarios 1 and 2, and the minimum value of delta EVE/Tier 1 under shock scenarios 1 to 6. The EVE does not include own equity. It considers a common sample of the 46 banks for which sufficient data is provided for this comparison. The results are for each bank at an aggregated level over all currencies considered in the IMS and under the assumption of a constant balance sheet.

35. Table 7 provides information of the number of banks, out of the 46 banks mentioned, that would show a delta EVE/Tier 1 above or below -15% (outliers following Article 98(5)(a) of the Directive 2013/36/UE) and simultaneously metric 1 values for various intervals.

36. Figure 3 and Table 8 provide similar information under the consideration that NII here is the difference between interest income and interest expenses plus fair value changes of the relevant interest rate sensitive non-trading book instruments accounted at fair value. A sample of 37 banks is available for these purposes.

Figure 2: Metric 1 vs delta EVE/Tier 1.

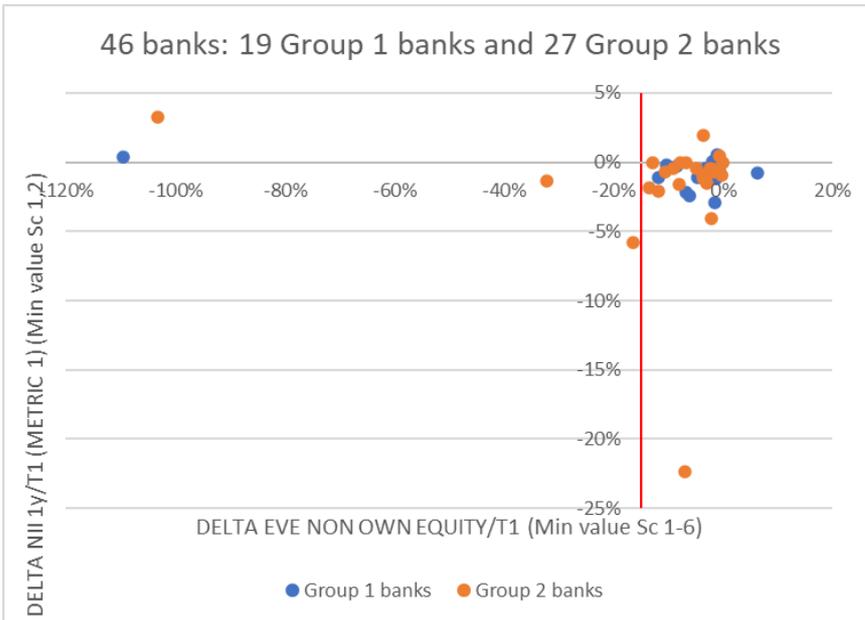


Table 7: Metric 1 vs delta EVE/Tier 1 - Number of banks

		Delta EVE	
		< -15% (Outliers)	≥ -15%
Delta NII	≥ 0%	2	4
	[-1%, 0%)	0	22
	[-2%, -1%)	1	10
	[-3%, -2%)	0	4
	[-4%, -3%)	0	0
	[-5%, -4%)	0	1
	< -5%	1	1
	Total	4	42

Figure 3: Metric 1 (NII & FV) vs delta EVE/Tier 1

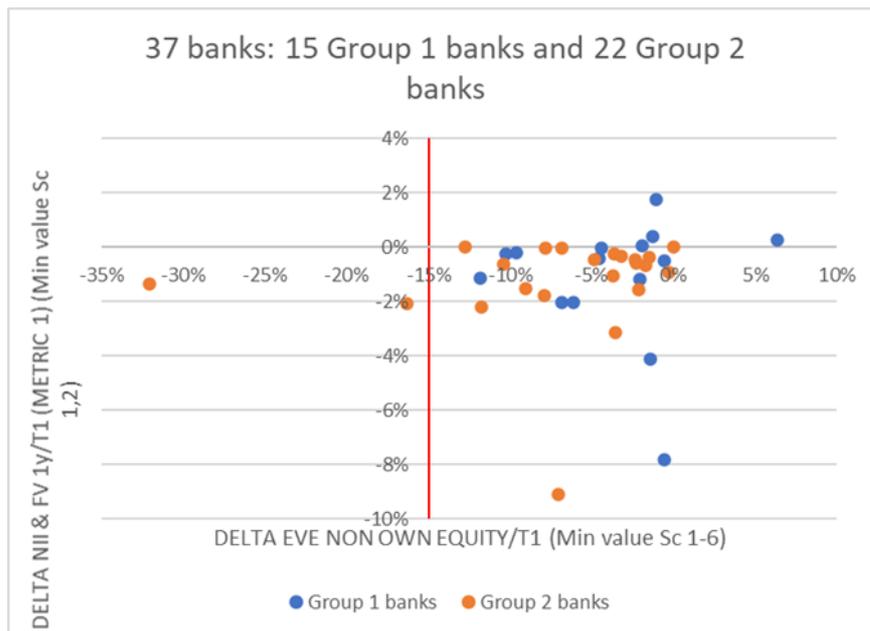


Table 8: Metric 1 (NII & FV) vs delta EVE/Tier 1 - Number of banks

		Delta EVE	
		< -15% (Outliers)	≥ -15%
Delta NII	≥ 0%	0	4
	[-1%, 0%)	0	18
	[-2%, -1%)	1	6
	[-3%, -2%)	1	3
	[-4%, -3%)	0	1
	[-5%, -4%)	0	1
	< -5%	0	2
	Total	2	35

e. **Metric 2 vs delta EVE. Comparative results and outliers.**

37. Figure 4 compares the values of metric 2 and delta EVE/Tier 1 capital. The NII in metric 2 is composed by interest income minus interest expenses of banking book instruments. The figure considers only the maximum value of metric 2 (maximum loss) under the shock scenarios 1 and 2 and the minimum value of delta EVE/Tier 1 under shock scenarios 1 to 6. The EVE does not include own equity. It considers a common sample of the 38 banks for which sufficient data is provided for this comparison. The results are for each bank at an aggregated level over all currencies considered in the IMS and under the assumption of a constant balance sheet.

38. Table 9 provides information of the number of banks, out of the 38 banks mentioned, that would show a delta EVE/Tier 1 above or below -15% (outliers following Article 98(5)(a) of the Directive 2013/36/UE) and simultaneously metric 2 values for various intervals.

39. Figure 5 and Table 10 provide similar information under the consideration that NII here is the difference between interest income and interest expenses plus fair value changes of the relevant interest rate sensitive non-trading book instruments accounted at fair value. A sample of 33 banks is available for these purposes.

Figure 4: Metric 2 vs delta EVE/Tier 1

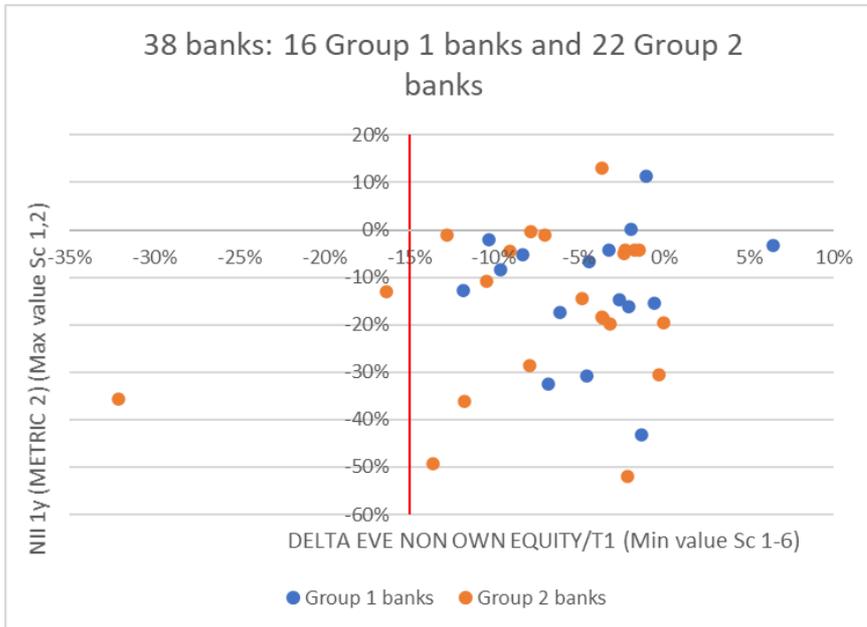


Table 9: Metric 2 vs delta EVE/Tier 1 - Number of banks

		Delta EVE	
		< -15% (Outliers)	≥ -15%
Delta NII	< -50%	0	1
	(-40%, -50%]	0	2
	(-30%, -40%]	1	4
	(-20%, -30%]	0	1
	(-10%, -20%]	1	11
	(0%, -10%]	0	14
	> 0%	0	3
	Total	2	36

Figure 5: Metric 2 (NII & FV) vs delta EVE/Tier 1

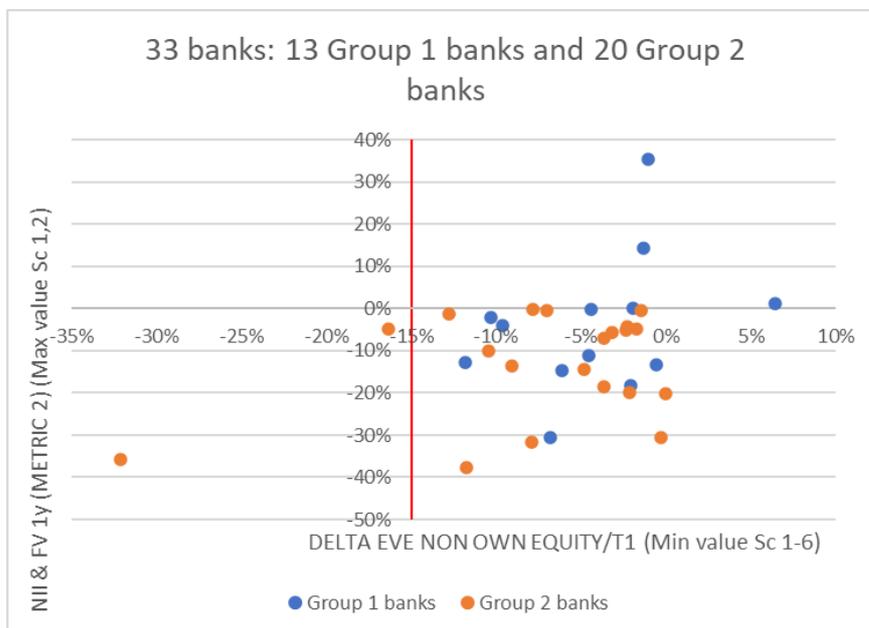


Table 10-Metric 2 (NII & FV) vs delta EVE/Tier 1 - Number of banks

		Delta EVE	
		< -15% (Outliers)	≥ -15%
Delta NII	< -50%	0	0
	(-40%, -50%]	0	0
	(-30%, -40%]	1	4
	(-20%, -30%]	0	2
	(-10%, -20%]	0	9
	(0%, -10%]	1	12
	> 0%	0	4
	Total	2	31

f. Results from qualitative questions

40. Responses to qualitative questions show that first there is a heterogeneity regarding the inclusion or exclusions of commercial margins. The EBA is of the view that banks should include commercial margins in the net interest income in the case of the NII SOT. However, in the case of the EVE SOT, the EBA considers that banks should be allowed to exclude commercial margins if they met several criteria. Second, banks use different interest rates for discounting cash flows. Thus, the EBA wants banks to give the opportunity to select an appropriate yield curve. Third, there is heterogeneity regarding using historical/original or current commercial margins for maturing positions that are renewed. The EBA deems it more appropriate to use current conditions, as historical/original commercial margins might no longer be appropriate under current market conditions.

4.1.6 Conclusions – Definition of the large decline in the SOT on NII

a. Time horizon (1 year versus 3 years)

41. The EBA understands that a one-year time horizon offers a better balanced solution from the perspective of the reliability of the data to be used, the comparability across banks and the operational complexity for the calculations.

b. Determination of the net interest income

42. The EBA has assessed two options:

- (a) Option 1, where the net interest income would be determined by the interest income minus the interest expenses; and
- (b) Option 2, where the net interest income would be determined by the interest income minus the interest expenses plus the fair value changes of those instruments in the banking book accounted at fair value.

43. The EBA considers that Option 1 seems less complex and more harmonised in its calculation. It contributes to avoid differences in the calculation of fair value changes across various accounting frameworks. However, the EBA acknowledges that the inclusion of fair value elements provides a more comprehensive view.

44. The QIS data does not show significantly different results, irrespective of whether fair value changes are included or not. Therefore, based on this data, the final calibration should not be too much influenced by either of the options.

c. Calibration of the outlier threshold

45. The SOT on NII is expected to be at least as stringent as the SOT on EVE. Paragraph SRP 31.83¹³ of the consolidated version of the BCBS standards, within chapter on Supervisory review process - IRRBB, indicates that in addition to the SOT on EVE supervisors also implement additional outlier tests. It indicates that for the additional outlier tests, the threshold for defining an outlier bank should be at least as stringent as in the case of the SOT on EVE.

46. Considering this, the EBA targets to fix the threshold in a way that the number of outlier banks in the SOT on EVE is at least the number of outlier banks under the SOT on NII. For these purposes the EBA has used the QIS data and has calculated the percentile for a 15% EVE decrease, which is the level triggering outliers in the SOT on EVE in accordance with point (b) of paragraph 5 of Article 98 of the CRD. This percentile has been used to identify the threshold for outliers in the SOT on NII.

¹³ See [here](#).

47. For each of the 53 banks, as described in Table 6, the minimum value of delta EVE (without own equity) under the six shock scenarios has been calculated. The percentile for these values below -15% is 0.086.

In the case of Metric 1, for an one-year time horizon and considering interest income and interest expenses only in the delta NII with respect to Tier 1 capital, the threshold for the 0.086 percentile on the minimum values (maximum loss) of metric 1, for shock scenarios 1 and 2 over the 46 banks as described in

48. Table 7 and Figure 2, is -2.5%. This threshold is -3.0% if the delta NII includes market value changes in addition to interest income and expenses for the 37 banks considered in Table 8 and Figure 3.

49. In the case of Metric 2, for a one year time horizon and considering interest income and interest expenses only in the value of net interest income under shock and baseline scenarios, the threshold for the 0.086 percentile on the maximum values (maximum loss) of metric 2, for shock scenarios 1 and 2 over the 38 banks described in Table 9 and Figure 4, is -35%. This threshold is -30% if the delta NII includes market value changes in addition to interest income and expenses for the 33 banks considered in Table 10 and Figure 5.

d. **Final definition of the large decline in the SOT on NII**

50. Following these discussions, the EBA has made the following decisions for simplicity and comparability purposes as ultimate target of the SOT:

- (a) to use a one-year horizon;
- (b) to consider the net interest income determined as interest income minus interest expenses only; and
- (c) To use Metric 1: $\Delta\text{NII} / \text{Tier 1 capital} < -2.5\%$, meaning that a decline of more than 2.5% of NII with respect to Tier 1 capital triggers outliers.

4.2 Feedback on the public consultation

The EBA publicly consulted on the draft proposal for the RTS.

The consultation period lasted for four months and ended on 4 April 2022. 28 responses were received, of which 21 were published on the EBA website. A public hearing was held on 3 March 2022.

This paper presents a summary of the key points and other comments arising from the consultation, the analysis and discussion triggered by these comments and the actions taken to address them if deemed necessary.

In many cases several industry bodies made similar comments, or the same body repeated its comments in the response to different questions. In such cases, the comments, and EBA analysis are included in the section of this paper where EBA considers them most appropriate.

Changes to the draft RTS have been incorporated as result of the responses received during the public consultation.

Summary of key issues and the EBA's response

The EBA has continued working on the draft RTS during the consultation period. At the time the public consultation got started the EBA was considering two alternative metrics for the definition of the large decline in the supervisory outlier test on net interest income. The EBA was also assessing at that time the appropriateness of including or not market value changes of fair value assets in the net interest income.

The EBA has finally concluded on these points after further study and analysis complemented with the feedback received during the consultation. The EBA aims at meaningful and informative test results for the potential identification of weaknesses in IRRBB risk management. For this purpose, the SOT-metric should ensure good comparability across banks and a stable link between the metric and the banks' IRRBB risk management. The EBA monitored the proposed calibration of the thresholds proposed in the consultation paper, which were based on the December 2020 QIS, with the December 2021 QIS, and is able to confirm that the calibration and performance of the metric finally proposed has remained quite stable. The EBA is finally proposing to measure the SOT NII by comparing the change of net interest income with respect to Tier 1 capital, the net interest income being composed of interest income and interest expenses only.

The EBA still considers the appropriateness of the recalibrated lower bound to guarantee the effectiveness of the post shock interest rate floor for the different time buckets. The EBA will monitor the implementation of the RTS with particular attention to the lower bound.

The draft RTS envisage that behavioural assumptions should be applied in the measurement of IRRBB exposures. The EBA considers that proportionality should be taken into account here and refers to the materiality thresholds in the determination of these assumptions as established in the

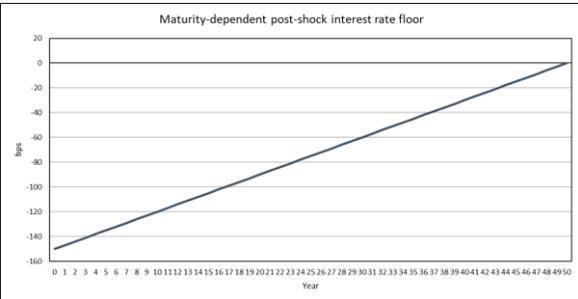
upcoming regulatory technical standards envisaged in Article 84(5) of the CRD for the specification of the standardised approach.

Final clarification is provided on several aspects, either in the regulatory text or in the feedback table, like as regards the aggregation approach of gains and losses by currency or the interaction between the RTS on supervisory outlier test, as to the assumption that are not specified here, and the internal management system employed, either an internal measurement system or the standardised/simplified standardised approach.

Summary of responses to the consultation and the EBA's analysis

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
General comments			
Responses to questions in Consultation Paper EBA/CP/2021/36			
<p>Question 1. Do respondents find the common modelling and parametric assumptions for the purpose of the EVE SOT and the NII SOT in Articles 4 and 5 clear enough and operationally manageable? Specifically, the EBA is seeking comments on the recalibrated lower bound for post-shock IR levels in the EVE SOT and NII SOT as well as on the use of a one-year time horizon and a constant balance sheet with current commercial margins for new business for the NII SOT. Respondents are also kindly requested to express whether they find an inclusion of market value changes in the calculation of the NII SOT clear enough.</p>			
<p>Lower bound – Post shocked interest rate floor</p>	<p>The majority of respondents assessed the level of the recalibrated lower bound as too conservative based on rates observed of the past since for the EUR currency the current lower bound was breached only in the long-term tenors. A few respondents pointed out that there is a large consensus that rates below -100 are ineffective in regard to monetary policy measures.</p> <p>A few respondents noted that the calibration was based on AAA bond yields when it should have been done on the basis of risk-free rates. A few respondents indicated that it does not seem reasonable to extend the floor until 50 years since some CEE currencies do not even have 50 years' rates.</p>	<p>The EBA notes the comments and opted to retain the recalibrated approach of a lower bound starting with -150 basis points for immediate maturities linearly increasing 3 bps per year, reaching 0% for maturities of 50 years. Whereas the recalibration was based on AAA yield bonds, the current lower bound was breached in the long-term tenors for EUR currency. The EBA also considers that the expectations raised by some respondents that the results might be too conservative and lead to a high number of outliers considering that the current lower bound has been used in the calibration of the threshold should be read in the context of the current hedging strategies in place which might also be expected to adapt to the new regulatory framework. In the EBA monitoring of</p>	<p>No changes made.</p>

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	<p>Some respondents noted that this might have a high impact on NII risk measures especially affected by short term rates because typically the floor will not affect adversely in EVE outcomes unless the bank has a policy to hedge market values.</p> <p>One respondent pointed out that if the new lower bound is reached then the legal floors on customer positions could change and therefore it would be necessary to apply different assumptions.</p> <p>One respondent perceived that this new floor will send adverse signals to stable customers such as deposits of floored client loans.</p> <p>One respondent highlighted that there is a dependence of impact of low interest rates with current NMD pricing and applied pricing floors, along with the pricing of other retail products, so such negative rates would distort the stress NII results.</p> <p>Some respondents expressed concerns regarding the calibration of the thresholds for considering an institution as an outlier since it did not take into account the new lower bound so it could lead to a higher number of outliers.</p> <p>One respondent proposed to use as a floor the minimum observed rate when rates are below the floor.</p> <p>One respondent proposed to extend the 0% from 20 to 50y tenor but maintain the -100 bps level as the starting point.</p>	<p>the implementation of the RTS, particular attention will be paid to the lower bound.</p>	

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
Shape of recalibrated lower bound	One respondent noted that the shape of the recalibrated lower bound would have an impact on forward rates used to derive future cash flows.	The EBA would like to clarify that for all the assumptions not specified in the RTS banks should apply the assumptions defined either in the in their internal measurement methodologies, the standardised approach or the simplified standardised approach according to the methodology used.	No changes made.
Application of lower bound	A few respondents requested clarification on whether the floor should be applied on a continuous manner.	The EBA wishes to clarify that the floor should be applied on a continuous manner along the points considered for the spot rate. 	No changes made.
Treatment of various currencies for the linear lower bound	One respondent highlighted that some currencies barely reached levels below 0%, hence, for those currencies a 0 % lower bound should be set.	The EBA notes comments and opted to retain the current approach applying the same floor for every currency. In this context, there is evidence that even for interest rates in currencies which have not reached 0% levels, unexpected market changes might lead to negative interest rates.	No changes made.
Constant balance sheet assumption	A few respondents proposed to allow flexibility to either use a dynamic or a constant balance sheet assumption in order to ensure a better reflection of	The EBA considers that constant balance sheet assumption should apply at a product level and that for the case of monetary policy items an exception to the assumption applies.	No changes made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	<p>reality and also to better capture behavioural assumptions.</p> <p>A few respondents agreed with constant balance sheet assumption provided that some exceptions are allowed. One of them expressed concerns on the treatment of some items if constant balance sheet assumption is considered. In particular, the consideration of migration between NMDs and term deposits and the renewal of TLTROS.</p> <p>One respondent requested clarification on how to apply constant balance sheet assumption to off-balance sheet items, noting that loan commitments disposal imply an increase of the balance sheet size.</p> <p>One respondent indicated that a constant balance sheet assumption cannot be strictly applied in some business models, so a best effort basis should be considered. Alternatively, a dynamic balance sheet assumption as an exception should be allowed</p> <p>One respondent asked for clarification on how to treat overnight exposures that do not occur with the same frequency over the year and change in stressed scenarios.</p> <p>One respondent raised concerns on the treatment of embedded termination rates – i.e., swaptions; since their renewal would generate disproportionate costs and the materiality is rather low so it is required to allow flexibility to use a bank's internal model.</p>	<p>The EBA wishes to clarify that as a general rule, exposures should be renewed with the same features with regard to amount and repricing period on a best effort basis.</p> <p>The EBA wishes to refer to the definition of constant balance sheet in the Article 5(e). It should be noted that with regard to the consideration of comparable features, banks are expected to use the assumptions considered in their internal measurement methodologies, the standardised approach or the simplified standardised approach.</p>	

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	One respondent requested further details on the application of constant balance sheet assumption.		
Use of current commercial margins in constant balance sheet assumption	<p>In general, respondents supported the use of current commercial margins instead of historical since they are more realistic. One respondent expressed concerns on the complexity for considering current commercial margins and for the fact that it is not always in line with internal measures for the use of planning processes.</p> <p>A number of respondents ask for a clarification of the meaning, "bought and sold products" and whether these products should ignore individually negotiated products that do not reflect the market.</p> <p>One respondent pointed out that it should be clear that commercial margins are to be kept scenario independent.</p> <p>One respondent requested to clarify how to derive commercial margins when there is no trade.</p>	<p>The EBA acknowledges the comment on the determination of current commercial margins and would like to clarify that commercial margins should be scenario independent to avoid overlap with other risks – i.e., CSRBB or business model risk.</p> <p>The reference to market spreads in Article 5 (e) is only applicable for instruments with observable market prices. Nevertheless, for the rest of the instruments, bought and sold products should be the basis to derive new commercial margins, for instance, loans recently granted, or bonds recently issued. Products individually negotiated that reflect market reality or expectations are to be included unless it is duly justified.</p>	No changes made.
One-year time horizon	<p>In general, respondents supported the one-year time horizon.</p> <p>One respondent pointed out that if the market value changes are included, the one-year time horizon is too low because the NII contribution will be negligible.</p>	<p>The EBA acknowledges the comments on the one-year horizon if market value changes are included. The one-year time horizon has been maintained to make NII projections more reliable.</p>	No changes made.
Treatment of commercial margins for the supervisory outlier test	A few respondents recommended to extend the possibility to exclude commercial margins to NII risk measures.	The EBA would like to clarify that commercial margins are contributing to NII through reinvestment and therefore they should be part of the NII risk measures	No changes made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	<p>One respondent noted that flexibility should be allowed since IRRBB and CSRBB relates to Market Risk in the CRR while commercial margins do not relate to Market Risk, the regulation should not conflict with other regulations.</p>	<p>for Supervisory Outlier Test purposes, also in line with paragraph 83 of IRRBB and CSRBB Guidelines. In this context, for EVE SOT calculations, institutions are given flexibility to either include or exclude commercial margins as set out in Article 4 (i) of the RTS.</p> <p>Current approach does not seem in conflict with CRR since the scope of position risk in Market Risk is Trading Book while the RTS refers to Banking Book, except when the small trading book exception is applicable.</p>	
<p>Level of the two supervisory interest rate scenarios for the NII supervisory outlier test</p>	<p>Some respondents raised concerns regarding the determination of the two supervisory interest rate scenarios since the shocks are applied instantaneously.</p> <p>Respondents recommended the consideration of gradual shocks of the horizon since short term rates are linked to Central Banks policies and they change interest rates very cautiously. Some of them acknowledge the complexity for implementing gradual interest rate shocks so they alternatively proposed apply a lower magnitude of the shock – i.e., +/-100 bps.</p>	<p>The EBA acknowledges the comments and opted to maintain the parallel shocks of +/- 200 bps shock for NII SOT. Even when gradual shocks might reflect reality in a better way the Article 98 (5) (b) of the CRD V specified that the large decline on NII is measured as a result of a sudden and unexpected change in interest rates, in this way, the two supervisory shock scenarios should happen instantaneously. As for lowering the magnitude of the shock, the EBA sees merit in maintaining consistency with the EVE SOT.</p> <p>Nevertheless, it should be noted that the institutions are expected to develop their own internal interest rate scenarios adequate to their risk profile as set out in paragraph 85 of the IRRBB and CSRBB Guidelines, hence, gradual interest rate shocks can be assessed for internal managerial and be deemed more representative.</p> <p>In addition, the EBA wishes to clarify that a breach of the NII SOT threshold, as well as for the EVE, does</p>	<p>No changes made.</p>

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
		not trigger automatic supervisory measures as set out in Article 104 (a) (2).	
Yield curve	<p>A few respondents indicated that it is not appropriate to use a single risk-free yield curve.</p> <p>One respondent noted that it is understood that risk-free yield curve can be chosen by banks and that some participants use risk free rate yield curves considering a credit spread and requested to allow flexibility to add this more sophisticated approach based on size, complexity and risk profile.</p> <p>One respondent recommended to consider an additional approach, so for financial instruments subject to central clearing (or collateral agreement exchanging O/N rate) an O/N yield curve should apply while the rest can be discounted on the standard swap curve.</p>	<p>The EBA wishes to clarify that one single risk-free yield curve should be used for discounting and that market spreads are not to be considered in the risk-free yield curve. In this context, the bank can choose the risk-free yield curve according to their business model provided it is deemed appropriate, Article 4 (m) provides an example (e.g., and OIS curve).</p>	<p>Point (m) of Article 4 has been amended as follows:</p> <p>“For discounting, an appropriate general ‘risk-free’ yield curve per currency shall be applied (e.g. swap rate an OIS curves). That yield curve shall not include instrument-, sector-specific or entity-specific credit spreads or liquidity spreads.”</p>
Application of shocks to spot or forward rates	<p>A few respondents requested to clarify whether interest rate shocks can be applied to forward rates for simplicity purposes.</p>	<p>The EBA would like to clarify that for all the assumptions not specified in the RTS banks should apply the assumptions defined either in the in their internal measurement methodologies, the standardised approach or the simplified standardised approach according to the methodology used.</p>	No changes made.
Cap for NMDs	<p>Two respondents raised that no limitation for behavioural assumptions – i.e., cap of NMDs</p>	<p>The EBA notes the comment regarding behavioural assumptions constraints and wishes to clarify that the SOT does not impose a constraint in compliance with Article 98 (5) of the CRD V. Nevertheless, it</p>	No changes made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	average maturity should be established in the SOT as set out in Article 98 (5) of the CRD V.	should be clarified that with regard to the modelling and parametric assumptions that are not specified in the RTS, institutions shall use those that they employ in their IRRBB measurement and management – i.e., their internal measurement methodologies, the standardised approach or the simplified standardised approach.	
EVE risk metric calculation	One respondent requested to clarify whether the bank should use full revaluation or sensitivities methodology to calculate the EVE risk metric for SOT purposes.	The EBA wishes to clarify that with regard to modelling and parametric assumption that are not specified in the RTS, institutions shall use those that they employ in their IRRBB measurement and management – i.e., their internal measurement methodologies, the standardised approach or the simplified standardised approach.	No changes made.
Treatment of equity for SOT purposes.	A few respondents pointed out that CET1 instruments contributes to the NII measure because it is invested in bearing assets and it is part of the funding project. One respondent highlighted that the inclusion or the exclusion of equity should be optional.	The EBA notes the suggestion of the inclusion of equity instruments for NII risk metric. The EBA wishes to clarify that CET1 or perpetual own funds without any call dates are not interest bearing liabilities and therefore not contributing to NII, however, if those instruments are invested in interest bearing assets, the assets should be considered in the calculation of NII risk measures. As for EVE risk measures, in order to seek for comparability, the exclusion of CET1 or perpetual own funds without any call dates is chosen.	No changes made.
Currency aggregation	One respondent asks for clarification that nominal and real rates should be treated as the same currency with regards to currency aggregation	The EBA welcomes the comment and wishes to clarify that nominal and real rates should be treated as the same currency. The current drafting of Article 4 (I) refers to negative and positive changes among	No changes made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
Currency aggregation regarding ERM currencies	<p>criteria, otherwise it could impact in the risk profile in some balance sheets.</p> <p>A few respondents raised questions for the application of the currency aggregation criterion proposing to include in Article 4 (l) a formulaic approach to clarify when 50%, 80% or 100% should be applied.</p> <p>According to participants, it should be clarified whether the offsetting among ERM currencies gains and losses in EUR should be done currency by currency or all currencies altogether.</p> <p>Some respondents pointed out that the formula is not continuous which might look a bit odd.</p> <p>A few respondents requested clarification about the treatment for the gains in EUR currency.</p>	<p>different currencies for each interest rate scenario, delta EVE or delta NII occurring in the same currency should be aggregated linearly.</p> <p>The EBA wishes to clarify that for losses in EUR a factor will be applied of 100%, however, the same factor will not be applicable in case of a positive EUR result. Here a factor of 50% will be applicable.</p> <p>For the aggregation of gains and losses between EUR and ERM II some reformulation has been made to ensure a symmetric approach for losses/gains between EUR and ERMII currencies.</p> <p>Some examples illustrating the application of the revised rule, are provided here:</p>	<p>Point (l) of Article 4 has been amended as follows:</p> <p>“When calculating the aggregate change for each interest rate shock scenario, institutions shall add together any negative and positive changes occurring in each currency. Currencies other than the reporting currency shall be converted to the reporting currency at the ECB spot FX rate on the reference date. Positive changes shall be weighted by a factor of 50% or a factor of 80% in the case of Exchange Rate Mechanism - ERM II currencies with a formally</p>

Comments

Summary of responses received

EBA analysis

Amendments to the proposals

The following examples show how this rule works:

1 Simple EUR/USD portfolio – normal aggregation

Currency	Gain/loss	Weighting factor	
EUR	+100	50%	+50.0
USD	-100	100%	-100.0
Total			-50.0

2 EUR/DKK portfolio

Currency	Gain/loss	Weighting factor	
EUR	+100	80%	+80.0
DKK	-100	100%	-100.0
Total			-20.0

3a EUR/DKK portfolio for illustration of (absence of) cliff effect

Currency	Gain/loss	Weighting factor	
EUR	+125	80%	+100.0
DKK	-100	100%	-100.0
Total			0.0

3b EUR/DKK portfolio for illustration of (absence of) cliff effect

Currency	Gain/loss	Weighting factor	
EUR	+126	80%	+100.8
DKK	-100	100%	-100.0
Total			0.0

3c EUR/DKK portfolio for illustration of (absence of) cliff effect

Currency	Gain/loss	Weighting factor	
EUR	+202	50%	+101.0
DKK	-100	100%	-100.0
Total			1.0

The following examples shows the working in a more general currency setting

4 EUR/DKK/USD/JPY portfolio

Currency	Gain/loss	Weighting factor	
EUR	+202	50%	+101.0
DKK	-100	100%	-100.0
USD	-10	100%	-10
JPY	+50	50%	+25
Total			+16

agreed fluctuation band narrower than the standard band of +/- 15%. **Weighted gains shall be recognised up to the greater of (i) the absolute value of negative changes in EUR or ERMII currencies and (ii) the result of applying a factor of 50% to the positive changes of ERMII currencies or EUR, respectively. ~~to offset losses in EUR. However, if the absolute value of 80% of the ERM II currency gains is larger than the absolute value of the EUR loss then a factor of 50% shall apply to positive changes in ERM II currencies.~~**"

Bucketing for SOT purposes

A few respondents requested clarification whether the bucketing methodology is optional and whether

The EBA notes the comment on bucketing and wishes to clarify that maturities mentioned in Article 2 (a)

No changes made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	<p>institutions may use a more accurate model based on actual cash flow schedules and corresponding discount and forward rates.</p> <p>One respondent requested to clarify the buckets to be used for EVE SOT purposes.</p>	<p>are only intended to be used to calibrate shocks for currencies not referred to in ANNEX I.</p> <p>The RTS do not prescribe a predefined set of buckets neither for EVE nor for NII, hence, the institution shall use the ones they employ in their IRRBB measurement and management, i.e. their internal measurement methodologies, the standardised approach or the simplified standardised approach.</p>	
Inflation	<p>One respondent raised concerns regarding the consideration of inflation as scenario independent, especially in high interest rate markets since inflation is highly correlated to the interest rate levels as a component of nominal interest rates.</p> <p>One respondent pointed out that inflation is different than interest rate risk as there could be changes in interest rates that are unrelated to changes in inflation, hence, inflation should be kept constant in IRRBB measurements and to the extent that the institution identify material exposures, should be factor it in its risk management.</p>	<p>The EBA wishes to clarify that for SOT purposes, inflation levels should be scenario independent aiming to get comparable results.</p>	No changes made.
Use of the SOT for managerial purposes	<p>A few respondents pointed out that SOT should not be requested to be completely included into the internal management framework.</p>	<p>The EBA notes the comment and wishes to clarify that the SOT results should be fully integrated into the internal framework for management of IRRBB – i.e., reported to the governing bodies, apart from additional IRRBB measures developed by institutions.</p>	No changes made.
Inclusion of market value changes	<p>A majority of respondents indicated that they deemed inadequate and more complex the inclusion of fair value changes in the NII risk metric</p>	<p>The EBA has decided that in the determination of the net interest income for the purposes of the supervisory outlier test, interest income and interest</p>	Point (a) of Article 5, considering interest income and interest

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	<p>for SOT purposes and results might be misinterpreted, in addition it will mix income statements and PV effects. Some of the responses promoting the exclusion of fair value changes raised that the inclusion would not be in line with the CRD V and Basel Standards.</p> <p>Some respondents pointed out that as a consequence of the inclusion will be an overlap between EVE and NII risk metrics when this should be complementary. A few respondents noted that there is an overlap between NII and FV changes within the risk horizon considered for NII. In this context, a few participants indicated the challenge to perform forward valuations for some products to avoid this overlap.</p> <p>One respondent raised concerns about the overlap between CSRBB and NII if fair value changes are included.</p> <p>Some respondents highlighted that its inclusion will make the metric dependent on the accounting framework, hampering the level playing field. One respondent indicated that the inclusion will be very dependent on the NII projection period and another respondent indicated that it will be very dependent on the business model.</p> <p>One respondent pointed out that the added value is rather limited since the impact is not expected to be so high as shown in the QIS results.</p> <p>One respondent indicated that even when the inclusion could appear to make sense for a shock of</p>	<p>expenses should be considered only. Market value changes of fair value instruments should not be considered. This is to ensure good comparability and avoid differences that might arise due to different applicable accounting frameworks across jurisdictions.</p>	<p>expenses only in the determination of the net interest income, remains. Point (b) of Article 5 in the consultation paper, that was envisaged as an option under consideration to include market value changes has been removed:</p> <p>“For non trading book financial instruments accounted at fair value with a maturity of more than one year, the annual change in their market value shall be considered. [this point b) will be kept if the option to add market value changes is finally decided by the EBA.]”</p>

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	<p>this amplitude, the revenue structure and balance sheet will change and it will not be reflected under a constant balance sheet assumption.</p> <p>A few respondents noted that the inclusion of fair value changes is not in line with FINREP and even hardly with NGAAP since it does not take into account NGAAP specificities.</p> <p>One respondent highlighted that for some banks will be very costly as it is not reflected analogously in their accounting according to national rules.</p> <p>A few respondents ask for a clarification of how this effectively contributes to IRRBB management from an economic perspective.</p> <p>Some respondents pointed out that internal risk measurement and steering is often based on the narrow NII.</p>		
Inclusion of market value changes and ICAAP	<p>One respondent raised concerns regarding the inclusion of fair value changes since it might lead to impact capital volatility and it should be considered that combination of effects is monitored in the ICAAP.</p>	<p>The EBA wishes to clarify that irrespective of the definition of the metric for SOT NII purposes, earnings risk measures, including market value changes, should be part of the IRRBB capital allocation process as set out in the Section 4.2.2 (Capital identification, calculation and allocation for the purpose of IRRBB) of the IRRBB and CSRBB Guidelines.</p>	No changes made.
Fees and commissions	<p>Some respondents highlighted that inclusion of fees and commissions is very burdensome and increases complexity.</p>	<p>The EBA notes the comment and wishes to clarify that for simplicity purposes, fees and commissions are not part of NII risk measures for SOT purposes.</p>	No changes made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	One respondent asks for clarification on the term 'other market factors' in article 4(n).	The term refers to a broad set of indicators which might be of influence on interest rates. There is no exhaustive list but institutions will account for these market factors already in their IRRBB-management.	No changes made.
Other clarifications	Regarding point (n) of Article 4 one respondent remarks that the passage notes that prudent assumptions shall be applied to risk of interest rate-sensitive products that are linked to inflation or other market factors. The respondent requests clarification regarding treatment of these factors in the calculation of the IRRBB measures.	Point (n) of Article 4 envisages that the institution will fundament these assumptions "on the current/last observed value, on forecasts of a reputable economic research institute or on other generally accepted market practices and shall be generally scenario-independent" but ultimately corresponds to the institution to implement them, however, with the notion that when assessing these risks, the starting point should be a prudent treatment of these factors.	No changes made.
	One respondent requests clarification on Article 1(3), where the currency-specific scenarios do not have to be applied to all currencies accounting for less than 5% of the non-trading book assets once the 90% threshold defined in the draft RTS is reached. A concrete clarification specifying how these volumes should be treated is also needed.	For the purposes of aggregating NII and EVE changes for each interest rate shock scenario, Article 1(3) states the currency specific shock scenarios shall be applied at least to exposures of institutions for which: 1. positions where the accounting value of assets or liabilities in a currency amount to 5 percent or more of the total non-trading book financial assets or liabilities; or 2. Less than 5 percent if the sum of financial assets/liabilities is lower than 90%. This means that institutions might also (but would not be obliged to) aggregate changes arising from those shock scenarios to exposures denominated in other currencies.	No changes made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
<p>Question 2. Do respondents have any comment related to these two metrics for the specification and the calibration of the test statistic for the large decline in Article 6 for the purpose of NII SOT? Specifically, do respondents find the inclusion of administrative expenses in metric 2 clear enough? Do respondents have any comment on the example on currency aggregation for metric 1 and metric 2?</p>			
<p>Metric 1 vs Metric 2</p>	<p>Most of the respondents (18 out of 28) showed a strong preference for Option A/Metric 1 ($\frac{NII_{shock} - NII_{baseline}}{Tier\ 1\ Capital}$) arguing reasons of comparability, stability of components, comprehensiveness, simplicity and accuracy of calculations and easiness of management. Only a couple of respondents showed preference for metric 2.</p> <p>Specifically, respondents mentioned that metric 1 will allow a direct relative comparison with the EVE SOT as well across institutions, making the two measures able to provide better integrated information. It was also argued that Tier 1 capital provides a stable denominator and is aligned with the existing EVE SOT as well as Pillar 3 reporting for IRRBB. A further advantage of option A is mentioned to be its simplicity and its ability to transparently compare among the industry. The respondents acknowledge also that the description of this metric is sufficiently precise and comprehensive. It was flagged that it appears as simpler and less prone to variability and pro-cyclicality, being consistent over time since a change in the alpha factor (e.g., following a restructuring) will not, as in Option B (i.e., Metric 2), possibly trigger a transition from non-outlier to outlier status. Metric 1 is considered</p>	<p>The EBA has decided to propose in the draft RTS metric 1. The EBA acknowledges its major strength: simplicity in the calculations stability and comparability across the whole banking sector. These features also facilitate its management.</p>	<p>Article 6 contains Option A on metric 1 for the definition of the large decline. The alternative Option B on metric 2 that the EBA has been assessing during the consultation period is finally removed.</p>

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	<p>to be easier to manage and a better reflection of the risk.</p> <p>Those respondents raised concerns about Metric 2. They pointed out that Metric 2 introduces some degree of estimation due to the inclusion of business model and cost structure parameters. They mentioned that the use of such parameters may impact differently each institution due to their different business models and cost structures and hampers comparability across the banking sector. This metric, in their view, seems also highly sensitive to one-off events affecting operating income/administrative expenses resulting in a potentially unstable alpha parameter and subsequently in unstable measures. Overall, they consider that it appears to be more complex and unstable than Metric 1 whilst not adding useful information for the assessment of the institution's sustainability of NII. Moreover, Metric 2 further uses reported FINREP numbers that, in their view, may reflect accounting or regulatory views rather than 'economic' relevance. In particular, they mention that the definition of alpha refers to FINREP positions which banks preparing N-GAAP accounts do not have available in this form. Also FINREP is recalled to be mandatory only for returns denominated at the reporting currency.</p> <p>A couple of respondents preferred Option B/Metric 2 $\left(\frac{NII_{shock} - \alpha \cdot Administrative\ expenses}{NII_{baseline} - \alpha \cdot Administrative\ expenses} - 1 \right)$, mentioning that it refers to a cost related metric, which looks more in line with established internal</p>		

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	<p>interest rate risk management methodologies. In their view option A/Metric 1 would undermine the nature of the NII risk measures referred to the NII generation. However, one respondent highlighted that the addition of the administrative expenses term makes the metric excessively volatile and unreasonably complex and constitutes a fatal flaw of this option and that, therefore, Metric 2 should be favored only if its denominator is adjusted. It is raised that if the denominator in the formulae is close to (or even exactly) zero, the limit utilization is unbounded even when the NII risk is very small, extreme changes in NII limit utilization are created only by small changes in the underlying NII risk. These respondents also propose an alternative methodology based on a relative change of the NII. They suggest using a simplified Metric 2, by eliminating the administrative costs deduction (i.e., $\frac{NII_{shock}}{NII_{baseline}} - 1$).</p> <p>Some respondents find the threshold/s dependent on the sample considered and stringent due to the very liquid balance sheets for COVID and the very low interest environment considered together with the proposed recalibration of the post shock interest rate floor.</p>		
<p>Question 3. Do respondents consider that all the necessary aspects have been covered in the draft regulatory standard? Do respondents find the provisions clear enough or would any additional clarification be needed on any aspect?</p>			
Size interest rate shocks	One respondent noticed the size of the long interest rate shocks for IDR in Annex 1 exceeds the specified	The limits specified are in line with those in the current EBA/GL/2018/02 on the management of	No changes made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	limits for these shocks in art. 2(d), which is limited at 300 bps.	interest rate risk arising from non-trading book activities and in the Basel standards on IRRBB.	
	A respondent has requested clarification on article 4(f) whether the distribution of cash flows should include known components of the interest rate beyond the repricing date.	Article 4(f) refers to cash flows as a repayment or repricing of the principal or any interest payment. All cash flows both up to repricing dates and after repricing shall be included.	No changes made.
	One respondent asks for clarification on the rationale of the time horizons in art. 2 (b) and whether the horizons shall be determined on a rolling basis on each date of SOT-calculation.	The choice for the 10-year horizon is the inclusion of the most recent years. The alternative of 16 years is the use of all data at disposal. As clarified under item 5.1.3. on “Time horizon and balance sheet assumption in the SOT on NII” (paragraph 9 of the impact assessment) changes in NII are determined on a rolling basis.	No changes made.
Other clarifications	One respondent asks whether longer maturities can be ignored during the calculation of daily average interest rates.	As stated in art. 2(a) daily average interest rates shall be calculated for maturities from 3 months up to 20 years.	No changes made.
	A respondent asks whether the interest rates referred to in article 3 are discount rates or spot rates?	The interest rate used as noted in article 2(a) is the average daily ‘risk-free’ rate quoted on different maturities.	No changes made.
	A respondent requested clarification whether regulatory caps should be considered as “embedded automatic options”?	If a regulatory cap is applicable this will be considered as being an embedded automatic option. This because even though the institution does not receive a premium on the cap, this bound will have to be included in the IRRBB risk management. Therefore,	No changes made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
		the cap can be considered as an embedded automatic option.	
	Several respondents indicated that it's unclear how to apply positive effects in EUR and clarification should be made that home currency always allows for a 100 percent recognition of gains.	Article 4(l) does not envisage a differentiated treatment for aggregating changes denominated in the reporting (home) currency. Article 4(l) only envisages a differentiated treatment in the case of ERM II currencies to offset losses in EUR. For losses in EUR a factor of 100 percent will be applied, however, the same factor will not be applicable in case of a positive EUR result. Here a factor of 50% will be applicable.	No changes made.