EBA/RTS/2022/09

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Final report

Draft Regulatory Technical Standards specifying standardised and simplified standardised methodologies to evaluate the risks arising from potential changes in interest rates that affect both the economic value of equity and the net interest income of an institution's non-trading book activities in accordance with 84(5) of Directive 2013/36/EU

Contents

1. Executive Summary

Pursuant to the mandate of paragraph 5 of Article 84 of Directive 2013/36/EU[1] (CRD) the EBA has developed a standardised (SA) and simplified standardised (S-SA) methodology for the purpose of the evaluation of the risks arising from potential changes in interest rates that affect both the economic value of equity (EVE) and the net interest income (NII) of an institution's non-trading book activities. These Regulatory Technical Standard (RTS) will meet the need of institutions and supervisors to avail of reliable numerical estimates of institutions' exposures to interest rate risk in the banking book, for the performance of appropriate risk management and supervision, for example in case an institution's internal systems are insufficient.

To harmonise the calculation the EBA has specified common definitions, components and steps for institutions to apply, which lead to estimates comparing the economic value of equity and net interest income between a baseline scenario and an interest rate shock scenario. Where possible, these draft RTS are based on the standardised methodology published by the Basel Committee on Banking Supervision in April 2016, as well as the practices established with the implementation of the EBA Guidelines[2] (EBA/GL/2018/02) on the management of interest rate risk arising from non-trading book activities, applicable since June 2019.

The common definitions and steps consist largely of rules on the slotting of cash flows. Regarding the main categories of behavioural cash flows institutions will use relevant historical data, subject to standardised constraints. This includes the Basel caps regarding the core component for non-maturing deposits (NMDs). In addition, to reflect the interest rate sensitivity of client behaviour regarding NMDs, loans subject to prepayment risk, and term deposits subject to early redemption risk, the institutions' estimates are multiplied by scalars depending on the shock scenario.

In the absence of a final Basel SA on NII, the EBA has developed ab initio the part of the methodology where the NII logic differs from that of EVE. Three main components are identified to estimate the level of NII within a given horizon, namely: i) the aggregation of interest rate payments that are already fixed, the projection of ii) risk free yield and of iii) commercial margin for repricing cash flows. To project risk free yield with appropriate forward rates, additional slotting is needed based on original maturity. Additional components take into account automatic optionality and basis risk.

Regarding the simplified standardised approach (S-SA), to reflect the generally less advanced capacities of the small and non-complex institutions, and to meet the need for a methodology that is at least as conservative, various simplifications have been included.

[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.

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.

2. Background and rationale

1. In June 2019 the Directive (EU) 2019/878 amended the Directive 2013/36/EU and introduced, under Article 84, and in the context of the supervisory review and evaluation process (SREP),[3] the requirement that competent authorities "*ensure that institutions implement internal systems, use the standardised methodology or the simplified standardised methodology to identify, evaluate, manage and mitigate the risks arising from potential changes in interest rates that affect both the economic value of equity and the net interest income of an institution's non-trading book activities.*"[4]

2. With these draft RTS, in line with paragraph 5 of Article 84 of Directive 2013/36/EU, the EBA specifies the standardised and simplified standardised methodologies as envisaged in paragraph 1 of Article 84 of Directive 2013/36/EU, which serve the purpose of the evaluation of the risks arising from potential changes in interest rates that affect both the economic value of equity and the net interest income of an institution's non-trading book activities. In the same paragraph it is specified that the simplified standardised methodology is for small and non-complex institutions as defined in point (145) of Article 4(1) of Regulation (EU) No 575/2013, and is required to be at least as conservative as the standardised methodology.

3. Paragraph 3 of Article 84 of Directive 2013/36/EU clarifies that an evaluation based on the standardised methodology (henceforth "standardised approach" – SA) may be required where the institutions internal systems for the purpose of evaluating the risk of interest rate risk arising from non-trading book activities (IRRBB) on economic value of equity and net interest income are not satisfactory. The assessment of whether an internal system is satisfactory is not part of these RTS (the EBA instead covers this in its Guidelines on IRRBB and credit spread risk, concomitantly published).

4. Further it is to be noted that paragraph 4 of Article 84 of Directive 2013/36/EU provides the power to the competent authority to "*require a small and non-complex institution as defined in point (145) of Article 4(1) of Regulation (EU) No 575/2013 to use the standardised methodology where it considers that the simplified standardised methodology is not adequate to capture interest rate risk arising from non-trading book activities of that institution*".

5. The decision regarding whether an institution implements internal systems, the standardised approach or the simplified standardised approach, will affect the conduct of the Supervisory Outlier Tests (SOTs). For the SOTs the EBA has specified, in parallel to the RTS on SA, draft RTS under paragraph 5a of Article 98 Directive 2013/36/EU, which provide common modelling and parametric

[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] Paragraph 1 of Article 84 of the Directive (EU) 2013/36/EU.

assumptions. As the RTS on SOT do not provide exhaustive rules on the evaluation of IRRBB, and an exhaustive evaluation of IRRBB regarding economic value of equity as well as net interest income is needed, institution shall use those that they employ in their IRRBB measurement and management – i.e., their internal measurement methodologies, the standardised or the simplified standardised approach.

2.1 Basel standards and EU rules

6. 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 2016[5] 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).

7. The Directive (EU) 2019/878 introduced the remaining elements of the Basel standards and added some new ones (e.g., the standardised approach on net interest income, with a mandate to the EBA to develop it). 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).

8. The EBA has conducted an open public consultation on these draft regulatory technical standards and Guidelines in parallel. These draft RTS deal with point (b) above.

2.2 Draft regulatory technical standards on SA

2.2.1 General structure of the standardised approaches

9. The EBA has developed the draft RTS specifying a collection of procedural aspects and applicable assumptions both for the SA on Economic Value of Equity (EVE) and SA on Net Interest Income (NII), as well as for the respective simplified standardised approaches.

10. As approaches on EVE and NII are equally based on cash flows and assumptions on clients' behaviour, many procedural aspects and assumptions of the final Basel SA on EVE equally apply in

[5] Available online: http://www.bis.org/bcbs/publ/d368.htm.

the SA on NII. For example, the slotting of cash flows into 19 pre-defined time buckets in accordance with their repricing date is a key feature of the Basel approach that can apply equally within the EVE and NII. However, there are differences, particularly in the further processing of the cash flows, which makes NII inherently more laborious than EVE.

11. In a nutshell, EVE generally represents the discounted sum of all future cash flows, assuming a run-off balance sheet (which avoids the complexity of determining the applicable interest rates for the renewal of exposures). In contrast, NII is the forward-looking projection of interest income (and expenses) over a pre-defined time horizon (e.g., of up to one, two or three years). While both are based on notional repricing cash flows (interest payments or principal amounts of fixed rate instruments that mature or principal amounts of floating rate instruments that reprice) under EVE they typically are discounted to the present and under NII they are projected to the end of the NII horizon.

12. In the absence of a final Basel SA on NII, the EBA has developed ab initio the part of the methodology where the NII computational logic differs from that of EVE. This led to the development of 3 sub-components, which need to be summed up to arrive at the NII value for exposures other than automatic options:

    (a) The aggregation of interest payments up to and including the repricing date (i.e., NII flows which are already fixed and its amount will not change due to interest rate changes). Material amounts of interest accrued at t=0 need to be subtracted from this amount.

    (b) The projection of risk-free yield for each repricing cash flow between the moment of repricing up to the end of the projection horizon, in accordance with the assumption of a constant balance sheet.

    (c) The projection of the commercial margin for each notional repricing cash flow between the moment of the reset of the margin (typically at the instrument's maturity) up to the end of the projection horizon, in accordance with the assumption of a constant balance sheet.

13. This allows for a calculation of the NII for each interest rate scenario separately, as opposed to an approach that would solely allow for the estimation of the difference in NII between two scenarios (sensitivity only approach). In addition, the SA on NII can be calculated with different assumptions regarding the NII horizon. While this Regulation focuses on an NII horizon of 1 year, it also caters for the need of calculating other horizons necessary for the evaluation of interest rate risk, such as 2 or 3 years.

14. In addition, for both the SA on EVE as for the SA on NII, an add-on for automatic optionality is computed. As per above, a distinction is to be made where under the EVE computation the option values are discounted to the present, under the NII measure, the pay-outs are only considered to

the extent they materialise within the NII horizon with in addition fair value changes for options that mature beyond the NII horizon.

2.2.2 Assumptions in the calculation

15. The EBA has developed the steps and assumptions in the calculation of EVE and NII, taking into account the need of Basel compliance and the avoidance of unnecessary complexity as much as possible. These include the following areas:

Behavioural cash flows

16. Regarding behavioural cash flows, which refers to instruments for which the timing and amount of the cash flows depend on the behaviour of customers, the EBA has further specified the methodology provided in the 2016 Basel SA on EVE. This affects the main categories of behavioural cash flows, comprising i) Non-Maturing Deposits (NMDs), ii) loans subject to prepayment risk, and iii) term deposits subject to the risk of early redemption risk.

17. Institutions are expected to determine several components regarding behavioural cash flows in the baseline scenario based on relevant historical data, combined with standardised constraints and assumptions provided by the EBA. Also, proportionality / simplicity should be considered. Specifically, the following assumptions apply (applicable to both the EVE and NII):

(a) For Non-Maturing Deposits (NMDs) the Basel caps (of 50% to 90%) should apply on the proportion of core deposits (i.e., deposits that are assumed unlikely to be repriced even under significant changes in the interest rate environment) in total deposits as well as the current EBA cap (4 to 5 year) on the weighted average maturity of core deposits.

(b) To reflect the interest rate sensitivity of client/counterparty behaviour the shock scenario scalars of 0.8 and 1.2 from the Basel framework (which are applied to the institutions' baseline estimates) regarding loans subject to prepayment risk and term deposits subject to early redemption risk are implemented as well in these draft RTS. The draft RTS extend the use of these scalars as well to the core proportion of NMDs, to adequately reflect interest rate sensitivity of client behaviour also in this area.

(c) Further, consistent with the Basel standard, the EBA has specified that wholesale NMDs from financial customers cannot be categorised as core, due to the professional nature of these counterparties.

(d) Regarding the estimation of the conditional prepayment rate associated with loans subject to prepayment risk, institutions should perform an estimation of the average prepayment rate based on historic observation that is consistent over time. Consistent with Basel, the average prepayment rate reflects the annual expected prepayments, and shall be used to slot the cash flows of loans over time.

(e) Regarding the estimation of the term deposit redemption rate associated with term deposits subject to early redemption, the draft RTS include the same requirements as for prepayments, however with the difference that the redemption rate reflects the cumulative expected redemptions over the lifetime of the term deposit to be slotted in the overnight bucket, consistent with Basel.

(f) Regarding fixed rate loan commitments to retail counterparties, institutions have to estimate the drawings in the baseline and shock scenarios based on historical internal observations.

18. To allow for proportionality and simplicity, the EBA has developed materiality thresholds for the main categories of behavioural outflows at the level of 2 or 5% of interest rate sensitive assets respectively liabilities in the banking book. Below these thresholds, institutions may opt to disregard these aspects (and instead set the conditional prepayment rate and term deposit redemption rate at 0 and slot all NMDs in the overnight bucket). The thresholds are set at a higher level than under the consultation paper version, responding the consultation feedback indicating some interest in higher thresholds. In addition, the threshold regarding fixed rate loan commitments is an entirely new one, to address feedback that a considerable number of institutions have negligible amounts of these products. The EBA will monitor how these thresholds will work in practice.

Calculation risk free rate and commercial margins

19. For the calculation of the risk-free rate and commercial margins, it is necessary to make assumptions regarding the following:

(a) For the risk-free curve, since there is no universal risk-free spot rate curve per currency, it is left to institutions to select it, in line with Article 4(m) of the EBA's draft RTS on SOT.

(b) Original maturity of repricing cash flows: to project NII, in line with the constant balance sheet assumption, it is necessary to replace maturing cash flows with new business production assumptions, having similar characteristics (product type, fixed/floating, etc.). Importantly, the original maturity of the product (e.g., a loan) underlying a repricing cash flow is a significant determinant of the risk-free interest rate to be expected on new business. To capture this aspect, the EBA has included a double slotting of cash flows, where in addition to the repricing time buckets (which were already necessary for the EVE) institutions slot the same amounts in their original maturity time buckets, leading to a matrix/table of cash flows slotted along an axis of repricing time buckets and an axis of original maturity time buckets. The applicable forward rates are then subsequently based on the mid-points of the time buckets. From an impact assessment perspective, it appears that the use of time buckets, which averts the need of calculating a unique forward rate on a product-by-product basis is easier to implement. In particular, for a given risk free rate and reference date all

institutions have to calculate the same matrix of forward rates given the standardised time buckets.

(c) The rate used as the commercial margin component of NII (to project commercial margin of new business production) is based on the commercial margin of instruments originated in the last year. The historical observation should be segmented by product, counterparty and geographic category. This segmentation has been based on general experience with materiality of FINREP categories. In case no instrument has been originated in the last year in the applicable category, institutions are allowed to draw from observations of comparable portfolios in different product categories. In case of products with observable market quotes, the implied commercial margin can be used based on the fair value and deduction of the risk-free rate.

Simplified standardised approaches

20. In the interest of proportionality, and in accordance with the mandate of Article 84 of the CRD, the EBA has developed simplified standardised approaches for EVE and NII. The simplifications compared to the standardised approach are the following:

(a) In the simplified SA on EVE and NII the proportion of the core component of NMDs is fully prescribed. Moreover, instead of requesting institutions to use their own estimates in the slotting of core NMDs (under the constraint of 4 to 5 years of weighted average maturity) the simplified approach prescribes a linear slotting up to 4, 4.5 or 5 years. The prescribed slotting depends on the scenario (baseline, short rates up, short rates down), the 0.7 or 1.3 scalar used in the computation as well as the category of NMDs (retail transactional, retail non-transactional, wholesale non-financial).

(b) In the simplified SA on EVE and NII institutions calculate the impact of automatic optionality on the basis of pay-outs, by scenario without having to perform a more complex analysis that includes effects of a 25% increase in volatility. Instead, institutions multiply by 110% the impact of automatic optionality, in accordance with the median impact of increases in volatility reported by institutions.

(c) In addition, just for the simplified SA on NII, there are further simplifications:

i. Regarding the cash flow slotting institutions are not required to slot cash flows according to their original maturity, but instead can take the average original maturity for the entire product category.

ii. Regarding the empirical determination of commercial margins, only a breakdown into product categories is required, without any geographic breakdown.

iii. Regarding the interest payments up to and including the repricing date (i.e., NII flows which are already fixed and its amount will not change due to interest

rate changes), instead of aggregating interest payments for all instruments, an approximation can be made based on an estimate of the average interest rate and the outstanding notional values.

21. To support the objective that, in line with Article 84(5) of the CRD, the simplified standardised approach is at least as conservative as the regular standardised approach, the EBA has tested the impact of the simplification regarding the slotting of NMDs as mentioned under point a) of the previous paragraph. The estimated impact on EVE and NII substantiate this expectation (see impact assessment).

Overall conservatism of the SA compared to IMS

22. The EBA has developed the standardised approach with the objective of creating an accurate portrayal of risk under standardised, proportionate assumptions, which is as accurate as possible. However, a standardised methodology is not able to capture each feature of individual risk and it is not intended to replace internal methods with standardised methodologies. Furthermore, supervisors could require institutions to use the standardised methodology to measure IRRBB if internal systems are not satisfactory. Therefore, an appropriate level of conservatism has to be assured, when applying the standardised methodology.

Monitoring of market value changes of instruments held at fair value

23. The EBA has included in its Guidelines on IRRBB a requirement to monitor the market value changes of instruments held at fair value resulting from interest rate changes. Accordingly, the EBA has included a component in the SA on NII so that institutions can measure the market value changes for these instruments. In particular, the calculation is based on a calculation similar to that for the EVE but excludes instruments that are not fair valued. Moreover, cash flows that fall within the NII horizon are excluded from the calculation of market value changes to avoid double counting.

Inclusion of basis risk in the NII

24. The EBA has included a component in the SA on NII in accordance with which institutions are required to estimate and add the impact of basis risk (as in line with the requirement in the EBA Guidelines on IRRBB and credit spread risk, concomitantly published for institutions to include basis risk in their assessment). This calculation, which forms an add-on to delta NII, is mainly based on the notionals of floating rate instruments, and an upward and downward shock calibrated by institutions in a consistent manner. To take into account proportionality, and feedback suggesting that many institutions have only negligent exposures to floating rate instruments, the basis risk add-on only has to be calculated where the sum of floating rate instruments other than those with the overnight reference rate/benchmark exceeds 5% of interest rate sensitive assets in the banking book.

25. 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 proportionality aspects, including the materiality thresholds for the estimation of different behavioral cash flows. The EBA will liaise with competent authorities and institutions as needed for these purposes.

3. Draft regulatory technical standards

COMMISSION DELEGATED REGULATION (EU) …/…

of XXX

supplementing Directive 2013/36/EU of the European Parliament and of the Council with regard to regulatory technical standards specifying standardised and simplified standardised methodologies to evaluate the risks arising from potential changes in interest rates that affect both the economic value of equity and the net interest income of an insitution's non-trading book activities in accordance with 84(5) of Directive 2013/36/EU

(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 and in particular the third subparagraph of Article 84(5) thereof,

Whereas:

(1) To foster harmonisation of practices, when laying out the standardised methodology for the calculation of reliable estimates, this Regulation should provide institutions with common definitions and with the necessary elements for the evaluation of risks, including rules on the slotting of cash flows, calculations for automatic options, calculations for instruments valued at fair value, and the rules for discounting and projection of cash flows

(2) To ensure continuity and compliance with the relevant international standards, the defintions, elements and steps of the methodology set out in this Regulation build upon those established in the EBA Guidelines[6] on the management of interest rate risk arising from non-trading book activities and those established in the standardised methodology of the Basel Committee on Banking Supervision of April 2016.[7]

(3) To ensure harmonization, this Regulation should lay down standardised assumptions, where this is possible, in particular with regard to automatic options. When laying down such assumptions, this Regulation should take into account that professional counterparties generally trigger options to their benefit. In situations where prescriptive assumptions cannot be made, because to do so could lead to risk assessments that lack

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

[7] "Interest rate risk in the banking book" of April 2016 available at: https://www.bis.org/bcbs/publ/d368.htm.

accuracy, as in the case of retail client behaviour to interest rate shocks in the context of specific instruments, this Regulation should prescribe as much as possible the steps, definitions, and restrictions to estimations that institutions should have regard to.

(4) To facilitate implementation by institutions and having regard to the fact that both the economic value of equity and the net interest income estimations can be based on repricing cash flows, both approaches should be based on the same rules regarding slotting in time buckets, with the exception of some cases in which the calculation of net interest income requires additional slotting.

(5) 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.

(6) To enhance risk sensitivity and take into account institution-specific conditions regarding behavioural outflows, the assumptions underlying the cash flow slotting of the non maturing deposits, the term deposits subject to the risk of early redemption and the loans subject to prepayment risk should primarily be based on estimations of the institutions in a way that is consistenly applied over time. However, to underline the standardised nature of the methodology, the conservatism of these behavioural flows should be enhanced by the multiplication by fixed scalars of 0.8 and 1.2, depending on the shock type. In addition, regarding the non-maturing deposits, conservatism should be preserved by the implementation of standardised caps of 90%, 70% and 50% on the proportion of core component depending the counterparty category, and caps on average maturity on the core component of 5, 4.5, and 4 years.

(7) To assure proportionality in cash flow slotting, certain estimations in the context of the non maturing deposits, the loans subject to prepayment risk, the term deposits subject to the risk of early redemption, the non performing exposures, the fixed rate retail lines and the basis risk should be exempted, where the materiality of these exposures fall below pre-defined thresholds.

(8) To facilitate implementation and in line with the standardised nature of the methodology, this Regulation should, for the purposes of discounting cash flows for calculating the economic value of equity or projecting risk free interest income for calculating net interest income, not require, for each repricing cash flow, a calculation, either of their discount or of their risk-free forward rate.. Instead, the determination of the relevant rate should be performed for each repricing bucket, or for the combination of the repricing and the reference term bucket.

(9) For the determination of commercial margins for the projection of new business in the calculation of net interest income and in order for up to date estimates to be generated, recent observations should be used per relevant product type, counterparty category and geographic location. This should generally be based on transactions observed in the last year, or on observable market prices for the instrument with available market quotes.

(10) While the outcomes of the standardised methodology on net interest income provide their highest informational value, where the net interest income horizon is set at 1 year, the

calculation of the interest sensitivity of net interest income over a longer horizon can often provide additional useful information for institutions with significant concentrations of maturities around or beyond the 1 year horizon. Against this background and in order for the economic value of equity metric to be complemented, the 1 year horizon for the net interest income calculation should be a minimum.

(11) Basis risk can influence net interest income in a material way. Against this background and building on existing practice established by EBA Guidelines on the management of interest rate risk arising from non-trading book activities, a methodology for institutions to estimate the impact of basis risk should be provided in this Regulation.

(12) When laying down the simplified standardised methodology, this Regulation should ensure proportionality, thereby providing a framework that is appropriate for the lower risk assessment capacities of the small and non-complex institutions. To that end, in that simplified standardised methodology, a number of elements should be set out, including certain simplifications and conservative measures, such as a prescriptive, linear slotting of non-maturing deposit cash flows applying scenario dependant scalars to the core component, a simplified calculation of automatic optionality based on pay-outs and, for the purpose of net interest income, a calculation of interest rates based on an average reference term per product type and on average commercial margin per product type and an interest rate up to the repricing date of the instruments calculated with estimates of average interest rates.

(13) This Regulation is based on the draft regulatory technical standards submitted to the Commission by the European Banking Authority.

(14) 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 advice of the Banking Stakeholder Group established in accordance with Article 37 of Regulation (EU) No 1093/2010.

HAS ADOPTED THIS REGULATION:

CHAPTER I

GENERAL PROVISIONS

Article 1

General definitions

1. For the purposes of this Regulation, the following definitions apply:

(1) ‘Notional repricing cash flow’ means:

(a) Any amount of the principal at the time of its repricing that is deemed to occur, either on the date at which the institution or its counterparty is entitled to unilaterally change the interest rate, or on the date at which the rate of a

floating rate instrument changes automatically in response to a change in an interest rate benchmark as defined in Article 3(1)(22) of Regulation (EU) 2016/1011 of the European Parliament and of the Council, whichever the earliest;

(b) In the absence of repricing as referred to in (a), any principal amount at the time of repayment of the principal, either in its entirety or at a part of it;

(c) Any interest payment on a part of the principal that has not yet been repaid or repriced.

(2) 'Repricing date' means the date at which a notional repricing cash flow as defined in point (1) occurs.

(3) 'Risk free interest rate' means, for a given currency, the interest rate corresponding to a maturity on a yield curve that does not include instrument-specific or entity-specific credit spreads or liquidity spreads.

(4) 'Fixed rate instrument' means an instrument generating cash flows of interest payments that are pre-determined based on a fixed interest rate till the point of their contractual maturity.

(5) 'Floating rate instrument' means an instrument whose interest rate is reset at pre-determined dates on the basis of an interest rate benchmark as defined in Article 3(1)(22) of Regulation (EU) 2016/1011 of the European Parliament and of the Council or on the basis of an institution's internally managed index.

(6) 'Automatic interest rate option' means an option referred to in the second subparagraph of Article 325e(2) of Regulation (EU) No 575/2013, either explicit or embedded in another financial instrument, including an option under which the institution is likely to provide its counterparty with pay-outs yet absent of a contractual obligation (implicit option), where the pay-outs of the options are interest rate sensitive and the exercise of the option is purely driven by the monetary incentives of the option holder.

(7) 'Geographical location' means the country of incorporation of the debtor or depositor that is a legal entity or country of residence of the debtor or depositor that is a natural person.

(8) 'Behavioural interest rate option' means an option, referred to in the second subparagraph of Article 325e(2) of Regulation (EU) No 575/2013, either explicit or embedded in another financial instrument, including an option under which the institution is likely to provide its counterparty with pay-outs yet absent of a contractual obligation (implicit option), where the pay-outs of the options are interest rate sensitive and where the exercise of the option is not purely driven by the monetary incentive of the counterparty but is dependent on that counterparty's behaviour. Retail non-maturity deposits, non-financial wholesale deposits referred to in Article 7, fixed rate loans to retail counterparties subject to the risk of early repayment as referred to in Article 8, term deposits to retail counterparties subject to the risk of early redemption as referred to in Article 9 and fixed rate loan commitments to retail counterparties referred to in Article 11(3) shall be positions with behavioural options.

(9) 'Non-maturity deposits' means a liability without a maturity date, in which the depositor is free to withdraw the deposit at any point in time.

(10) 'Retail deposits' means a deposit qualifying as retail deposit as defined in Article 411 (2) of Regulation 575/2013.

(11) 'Retail non-maturity deposits held in a transactional account' means a retail non-maturity deposit in an account in which salaries, income or expenses (transactions) are regularly credited and debited or a retail non-maturity deposit which bears no interest even in a high interest rate environment.

(12) "Retail non-maturity deposit held in a non-transactional account" means a retail non-maturity deposit that is not a retail non-maturity deposit held in a transactional account as defined in point (11).

(13) 'Wholesale deposits' means a deposit which is not a retail deposit, including a deposit of a financial customer as defined in Article 411 (1) of Regulation (EU) 575/2013.

(14) 'Stable non-maturity deposits' means the total amount of the part of the non-maturity deposit that is highly likely to remain undrawn, under the current level of interest rates.

(15) 'Pass-through rate' means the percentage of change of the market interest rate assigned to the deposit to enable the institution to maintain the same level of stable deposits at the current level of interest rates.

(16) 'Core component of non-maturity deposits' means the amount of a stable non-maturity deposit that is unlikely to reprice even under significant changes in the interest rate environment.

(17) 'Non-core component of a non-maturity deposit' means the amount of the non-maturity deposit other than its core component. The non-stable part of a non-maturity deposit shall be a non-core component.

(18) 'Reference term' means the period in reference to which the instrument reprices. For fixed rate instruments the reference term is their original maturity which is the time between the origination of the instrument and its contractual maturity date. For floating rate instruments, the reference term is the maturity term of the interest rate benchmark that the instrument refers to and not the remaining time to the next repricing date of the instrument.

Article 2

Positions included in the evaluation

1. In the absence of an internal system and for the purposes of identification, evaluation, management and mitigation of the risks arising from potential changes in interest rates that affect both the economic value of equity and the net interest income of an institution's non-trading book activities, non-trading book positions in financial assets, liabilities and off-balance sheet items at least for each currency where they have a position that is material in accordance with Article 3(1) shall be included for evaluation under the standardised approaches ("positions").

2. The positions shall be, at least, the following:
   (a) Interest rate derivatives;
   (b) Non-interest rate derivatives for which the cash flows are determined in total or in part, by referencing an interest rate;
   (c) Pension obligations and pension plan assets except where their interest rate risk is captured in another risk measure;
   (d) Interest rate-sensitive assets, other than those referred to in points (a) to (c), which are not deducted from Common Equity Tier 1 capital;
   (e) Interest rate-sensitive liabilities other than those referred to in points (a) to (c) and other than Common Equity Tier 1 and other perpetual instruments without any call dates, including non-remunerated deposits;
   (f) Interest rate sensitive off-balance sheet items other than those referred to in points (a) to (c); and
   (g) Small trading book positions referred to in Article 94 of Regulation (EU) No 575/2013, except where their interest rate risk is captured in another risk measure.

Article 3

Materiality, time horizon, and shock scenarios

1. A position shall be material, where the accounting value of assets or liabilities denominated in a currency amounts to at least 5% of the total non-trading book financial assets or liabilities, or to less than 5% where the sum of financial assets or liabilities included in the calculation is lower than 90% of the total non-trading book financial assets (excluding tangible assets) or liabilities.

2. The net interest income shall be calculated for the purposes of this Regulation at a minimum on a time horizon of one year.

3. The remaining time up to the end of a net interest income horizon shall be the net interest rate horizon minus the relevant repricing mid points of the buckets referred to in Annex I, point 1.

4. Institutions shall classify shock scenarios into one of the following types:
   (a) Parallel shocks, of which:
      (i) A shock of increased interest rates in parallel across all maturities;
      (ii) A shock of decreased interest rates in parallel across all maturities.
   (b) A shock involving rotations to the term structure, of which:
      (i) with a decrease of the interest rate at long-term maturities and increase of the interest rate at short-term maturities, leading to a flattening of the interest rate curve;

(ii) with an increase of the interest rate at long-term maturities and decrease of the interest rate at short-term maturities, leading to a steepening of the interest rate curve.

(c) Uneven shocks, of which:

(i) A shock of increased interest rates that is greater at short-term maturities;

(ii) A shock of decreased interest rates that is greater at short-term maturities.

For the purposes of Articles 7(6), 7(7) and 9(5), the shock types in points (a.i), (b.i), and (c.i) of this paragraph shall be referred to as shocks prescribing an increase of short-term interest rates, and the shock types in points (a.ii), (b.ii), and (c.ii) of this paragraph shall be referred to as shocks prescribing a decrease of short-term interest rates.

For the purposes of Article 8(3), the shock types in points (a.i), (b.ii), and (c.i) of this paragraph shall be referred to as shocks prescribing an increase of interest rates, and the shock types in points (a.ii), (b.i), and (c.ii) of this paragraph shall be referred to as shocks prescribing a decrease of interest rates.

CHAPTER II

STANDARDISED APPROACH ON ECONOMIC VALUE OF EQUITY

SECTION 1

ALLOCATION OF REPRICING CASHFLOWS

Article 4

General requirements for allocating repricing cashflows

1. Institutions shall slot by repricing date, currency and type of shock scenario the notional repricing cash flows of their positions into the repricing time buckets laid down in Annex I, point 1, as follows:

(a) For fixed rate instruments in accordance with Article 5.

(b) For floating rate instruments in accordance with Article 6.

(c) For non-maturity deposits in accordance with Article 7.

(d) For fixed rate loans subject to the risk of early repayment in accordance with Article 8.

(e) For term deposits subject to early redemption in accordance with Article 9.

(f) For derivatives not subject to optionality in accordance with Article 10.

(g) For other instruments in accordance with Article 11.

2. 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 risk management and measurement approach for interest rate risk in

the non-trading book. Where commercial margins and other spread components are excluded, institutions shall perform all of the following:

(a) use a transparent methodology for identifying the risk-free rate at origination of each instrument;

(b) use a methodology that is applied consistently across business units;

(c) 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;

(d) notify their exclusion to the competent authority.

3. The impact on notional repricing cash flow deriving from an embedded optionality of an automatic interest rate option shall not be taken into account for the purposes of the slotting referred to in paragraph 1. The notional repricing cash flows shall be slotted as if the embedded optionality does not exist.

4. The notional repricing cash flow deriving from an embedded optionality of a behavioural interest rate option shall be taken into account for the purposes of slotting referred to in paragraph 1.

Article 5

Fixed rate instruments

1. Cash flows deriving from interest payments of positions in fixed rate instruments shall be allocated by repricing date, following any deduction applied in accordance with Article 4(2), to the relevant time bucket referred to Annex I, point 1.

2. Cash flows deriving from intermediate and final repayment of the principal of positions in fixed rate instruments shall be allocated by repricing date to the relevant time bucket referred to in Annex I, point 1.

Article 6

Floating rate instruments

1. Cash flows deriving from positions in floating rate instruments shall be allocated by repricing date into the relevant repricing time buckets referred to in Annex I, point 1, as follows:

(a) Cash flows deriving from interest payments other than payments of the spread component up to the next repricing date, as per the contractual agreement.

(b) The remaining principal amount, as per the contractual agreement.

(c) Spread components up to the final contractual maturity irrespective of any repricing of the non-amortised principal, except where they are excluded according to Article 4(2).

Article 7

Non-Maturity Deposits

1. Institutions shall classify non-maturity deposits according to the counterparty as follows:
   (a) Retail non-maturity deposits, further classified into:
      (i) Retail transactional deposits; and
      (ii) Retail non-transactional deposits.
   (b) Wholesale non-maturity deposits, further classified into:
      (i) Wholesale deposits of financial customers; and
      (ii) Wholesale non-financial deposits.
2. Institutions shall distinguish the stable from the non-stable part of the retail transactional and non-transactional and the wholesale non-financial deposits referred to in paragraph 1 using observed changes of the volume of the deposits due to upward and downward movements of the risk-free interest rate for a period of at least the preceding ten years.
3. Institutions shall further distinguish the stable part of the non-maturity deposits referred to in paragraph 1 into a core and a non-core component.
4. To determine the amount of the non-core component of the stable deposits, institutions shall multiply the amount of all stable deposits by the pass-through rate.
5. When assessing the pass-through rate, institution shall consider the following elements also having regard to positions having similar characteristics:
   (a) The current level of interest rates, the spread between an institution's offer rate and market rate, competition from other firms, the institution's geographical location and demographic and other relevant characteristics of its customer base.
   (b) The unlikely repricing of the core component even under significant changes in the interest rate environment.
6. In scenarios prescribing an increase of short-term interest rates as referred to in Article 3(4), the core component calculated in accordance with paragraph 4 and 5 shall be multiplied by 0.8 and the non-core component shall increase accordingly.
7. In scenarios prescribing a downward movement of short-term interest rates as referred to in Article 3(4), the core component calculated in accordance with paragraphs 3 to 5 shall be multiplied by 1.2 and the non-core component shall decrease accordingly.
8. Institutions shall apply the following caps on the proportion of the core component of the non-maturity deposits when implementing paragraphs 3 to 7:
   (a) 90%, for retail transactional non-maturity deposits referred to in paragraph 1(a)(i);
   (b) 70%, for retail non-transactional non-maturity deposits referred to in paragraph 1(a)(ii);
   (c) 50%, for non-financial wholesale non-maturity deposits referred to in paragraph 1(b)(ii).

9. Institutions shall treat all non-maturity wholesale deposits of financial customers, as referred to in paragraph 1(b)(i) of this Article, as non-core non-maturity deposits.

10. The non-core component of the non-maturity deposits shall be allocated into the repricing time bucket (a) of Annex I, point 1.

11. The core components of the non-maturity deposits shall be allocated consistently over time into the repricing time buckets referred to in Annex I, point 1, based on observed internal data and subject to the following maturity restrictions calculated on a weighted average basis:

    (a) 5 years, for non-maturity deposits referred in paragraph 1(a)(i);

    (b) 4.5 years, for non-maturity deposits referred in paragraph 1(a)(ii);

    (c) 4 years, for non-maturity deposits referred in paragraph 1(b)(ii).

12. Institutions shall identify non-maturity deposits as non-core deposits if the total of non-maturity deposits is smaller than 2% of the positions referred to in Article 2(2) that are accounted for as a liability in accordance with the applicable accounting framework.

Article 8

Fixed rate loans subject to the risk of early repayment

1. Fixed rate loans to retail customers shall be considered as subject to the risk of early repayment, where the borrower has the ability to prepay part or all of the outstanding principal before the contractually agreed repayment date or the contractual maturity date of the principal without bearing the economic costs for such repayment. Where a borrower is bearing the economic cost only above a certain prepayment threshold, the loan shall be considered as a fixed rate loan subject to the risk of early repayment.

2. Institutions shall determine and apply in a way consistent over time and appropriate for the estimation of an average prepayment rate, an estimation of the baseline annual conditional prepayment rate per currency for the positions referred to in paragraphs 1 and 7. That rate shall be distinct for each portfolio of homogeneous positions and shall be determined under the prevailing term structure of interest rates based on all available internal observations. The prepayment rate may be set at 0, where the total of the fixed rate loans referred to in paragraph 1 and 7 is less than 5% of the positions referred to in Article 2(2) that are accounted for as an asset in accordance with the applicable accounting framework.

3. Institutions shall adjust the conditional prepayment rate calculated in accordance with paragraph 2 to the shock scenarios. In scenarios prescribing an increase in interest rates as referred to in Article 3(4), the conditional prepayment rate shall be multiplied by 0.8. while in scenarios prescribing a decrease in interest rates as referred to in Article 3(4), the conditional prepayment rate shall be multiplied by 1.2.

4. For each repricing time bucket of Annex I, point 1 the expected amount of prepaid loans per time bucket shall be estimated by multiplying:

    (a) the outstanding amount of the fixed rate loans referred to in paragraph 1 of a certain homogeneous product type denominated in a certain currency. Amounts matured or

prepaid at a time earlier than the lower limit of the time bucket shall not be regarded as outstanding amounts; by

(b) the appropriate time-weighted conditional prepayment rate, defined as the conditional prepayment rate in accordance with paragraph 2, multiplied by the length of the applicable time bucket specified in Annex I, point 2 and adjusted in accordance with paragraph 3.

5. The prepaid amount of the fixed rate loans referred to in paragraph 1, including penalty fees on the prepaid amount that retail customers pay in the applicable scenario, shall be allocated into the appropriate time buckets of Annex I, point 1. Any part of their repricing cash flows that is not expected to be prepaid shall be allocated into the repricing time buckets referred to Annex I, point 1 on the basis of the contractual repayment schedule for the duration of their contractual maturity.

6. Fixed loans to wholesale customers, where the borrower has the ability to prepay part or all of the outstanding principal before the contractually agreed repayment date or the contractual maturity date of the principal shall not fall under this Article but shall be treated in accordance with Articles 5 and 12.

7. Where the institution is exposed to assets in the form of securities with underlying instruments in the form of loans referred to in paragraph 1 and the issuer of those assets has no obligation to replace the loans in the case of their early repayment, a look-through approach shall be applied and the positions in those assets shall be evaluated in accordance with paragraph 1 irrespective of whether the counterparty of the institutions is a wholesale or retail customer.

Article 9

Term deposits subject to the risk of early redemption

1. Fixed rate term deposits shall be considered as term deposits with the risk of early redemption, where they are retail deposits and the depositor holds the option to redeem any outstanding amount before the contractual maturity date of the deposit.

2. Term deposits referred to in paragraph 1, whose early withdrawal would result in a penalty to the customer compensating both for the loss of interest between the date of the deposit's redemption and the date of its contractual maturity and for the economic cost of redeeming the deposit, may be treated in accordance with Article 5 and not in accordance with paragraph 1.

3. Wholesale fixed rate term deposits shall not fall under this Article and shall be treated under Article 5. Where the wholesale depositor holds the option to redeem any outstanding amount before the contractual maturity date of the deposit and the conditions referred to in paragraph 2 are not met, the option shall be treated as an embedded automatic option in accordance with Article 12.

4. Institutions shall determine, in a way that is consistently applied over time and which is suitable for the estimation of an average early redemption rate, an estimation of the baseline cumulative term deposit redemption rate for term deposits referred to in paragraph 1. The rate shall be determined distinctively for each portfolio of homogeneous products

denominated in a currency, under the prevailing term structure of interest rates, based on all available internal observations. The rate may be set at 0, where the total of term deposits referred to paragraph 1 is smaller than 5% of the positions referred to in Article 2(2) that are accounted for as a liability in accordance with the applicable accounting framework.

5. Institutions shall adjust the term deposit redemption rates determined in paragraph 4 to the shock scenarios. In scenarios prescribing a decrease of the short-term interest rates as referred to in Article 3(4), the redemption rate shall be multiplied by 0.8. In scenarios prescribing an increase of the short-term interest rates as referred to in Article 3(4), the redemption rate shall be multiplied by 1.2.

6. Institutions shall obtain the expected amount of early redeemed term deposits, per time bucket in Annex I, point 1, by the multiplication of:

   (a) the term deposits referred to in paragraph 1 of a certain homogeneous product type denominated in a certain currency with

   (b) the appropriate cumulative term deposit redemption rate adjusted in accordance with paragraph 5.

7. The total amount of the early redeemed term deposits shall be obtained by the aggregation of the early redemption amounts by time bucket in accordance with paragraph 6, for all time buckets and sets of homogeneous product types. The expected early redeemed amounts shall be allocated in the time bucket (a) of Annex I, point 1. The parts of the cash flows of the term deposits referred to in paragraph 1 not expected to be redeemed early shall be allocated in accordance with their contractual maturity into the time buckets of Annex I, point 1.

Article 10

Derivatives not subject to optionality

1. Derivative instruments not subject to optionality shall be separated into a paying and a receiving leg.

2. The receiving leg of a derivative instrument shall be treated as an incoming cash flow, the paying leg of a derivative instrument shall be treated as an outgoing cash flow.

3. Cross-currency interest rate swaps involving swapping principal or interest in different currencies shall be treated separately for each leg in each currency.

4. Institutions shall treat the interest income and expenses of derivative instruments used for hedging separately the income and expenses deriving from the hedged position.

Article 11

Other instruments

1. The cash flow of non-performing exposures of an institution whose non-performing exposure ratio equals or exceeds 2%, shall be allocated net of provisions, reflecting their

expected cash flows and their timing, into the repricing time buckets of Annex I, point 1 in a way that it is consistently applied over time.

2. For the purposes of paragraph 1, non-performing exposures shall be determined by debt securities, loans and advances classified as non-performing in accordance with Article 47a(3) of Regulation 575/2013. The non-performing exposures ratio shall be calculated as the amount of non-performing exposures divided by the amount of total gross debt securities, loans and advances.

3. Where the sum of notional amounts of fixed rate loan commitments to retail counterparties exceeds 2% of the positions referred to in Article 2(2) that are accounted for as an asset in accordance with the applicable accounting framework, institutions shall estimate, taking into account the value of the contract for the counterparty in the baseline and shock scenarios and based on historical internal observations of drawings on fixed rate loan commitments by the type of the counterparty under similar conditions, amounts to be drawn and undrawn in both scenarios. Estimated drawn amounts shall be allocated, in accordance with the estimated time of the drawing, into the repricing time buckets of Annex I, point 1.

SECTION 2

ADD-ONS FOR THE CALCULATION OF STANDARDISED APPROACH ON ECONOMIC VALUE OF EQUITY

Article 12

Economic value of equity add-on for automatic interest rate options

1. Institutions shall calculate the economic value of equity add-on for the explicit and embedded automatic sold and bought interest rate options of their positions referred to in Article 4(3).

2. In case of bought automatic interest rate options, the institution shall determine the change in value of the option between the applicable interest rate shock scenario and the baseline scenario combined with a relative increase in the implicit interest rate volatility of 25%.

3. In case of sold automatic interest rate options, institutions shall calculate the value change for the applicable interest rate shock scenario compared to the baseline scenario. The value change shall be the difference between:

   (a) an estimate of the value of the option for the option holder, given:

      (i) a risk-free yield curve in the applicable currency under the applicable interest rate shock scenario; and

      (ii) a relative increase in the implicit interest rate volatility of 25%.

   (b) the value of the sold option for the option holder, on the basis of the non-shock yield curve and implicit interest rate volatility in the applicable currency at the valuation date.

4. Institutions shall calculate the total measure for automatic interest rate option risk as a result of an interest rate shock scenario in a currency as the difference between the values calculated in accordance with paragraph 2 and 3.
5. For the valuation required in paragraph 2 and 3, institutions shall apply their relevant internal valuation methods.

CHAPTER III

COMPONENTS OF THE NET INTEREST INCOME FRAMEWORKS

SECTION 1

ALLOCATION OF REPRICING CASHFLOWS

Article 13

Specific requirements for allocating repricing cash flows

1. For the allocation of repricing cash flows for the calculation of the net interest income, Articles 4 to 11 shall apply with the following derogations:
    (a) In derogation from Article 4(2), institutions shall include in interest payments the commercial margins and other spread components.
    (b) In addition to the allocation of the notional repricing cash flows referred to in Articles 5, 8, 9 and 11 into the repricing time buckets referred to in those Articles, institutions shall allocate those cash flows into the reference term time buckets of Annex I, point 3. Notional repricing cash flows that are interest payments shall assume the reference term of the instrument that generated them.
    (c) In addition to the allocation of the notional repricing cash flows referred to in Articles 6 and 7 into repricing time buckets referred to in those articles, institutions shall allocate those cash flows into the reference term time bucket of Annex I, point 3 (a).
    (d) Fixed legs of derivative instruments referred to in Article 10 shall be treated under point (b). Floating legs of derivative instruments referred to in Article 10 shall be treated under point (c).

SECTION 2

OPTIONALITY ADD-ONs FOR THE CALCULATION OF STANDARDISED APPROACH ON NET INTEREST INCOME

Article 14

Net interest income add-on for automatic interest rate options up to the net interest income horizon

1. To calculate the net interest income add-on for explicit and embedded automatic interest rate options up to the net interest income horizon, Article 12 shall apply with the following derogations:
    (a) automatic options that can only be exercised beyond the net interest income horizon shall be excluded from the calculation;
    (b) the relative increase in implicit volatility shall be disregarded for the purposes of this calculation;
    (c) the value referred to in Article 12(2) and (3) shall be calculated on the basis of pay-outs expected in the baseline and shock scenarios;
    (d) in derogation from Article 12(2) and (3), the instruments vis-a-vis retail and non-retail counterparties, whose optionality/non-linearity is automatically activated, shall be assumed to be rolled over with comparable characteristics up to the end of the net interest income horizon referred to in (a).

Article 15

Market value changes for automatic interest rate options held at fair value and maturing beyond the net interest income horizon

To calculate the market value changes for automatic interest rate options held at fair value and maturing beyond the net interest income horizon, institutions shall apply Article 12.

CHAPTER IV

CALCULATION OF THE STANDARDISED ECONOMIC VALUE OF EQUITY RISK MEASURE

Article 16

Economic value of equity and delta economic value of equity calculation

1. Institutions shall calculate the economic value of equity for the baseline and the shock scenario in each currency in accordance with paragraphs 2 to 4. The change in the economic value of equity shall be calculated in accordance with paragraphs 5 and 6.

2. Institutions shall allocate the notional repricing cash flows referred to in Articles 5 to 11 into the repricing time buckets referred to in those articles with the following further specifications:

   (a) all positive and negative notional repricing cash flows within a repricing time bucket shall be netted, forming a net long or net short position for each repricing time bucket;

   (b) incoming cash flows shall have a positive sign and outgoing cash flows shall have a negative sign.

3. Net notional repricing cash flows shall be discounted towards a present value by using a discount factor. The discount factor $DF_{i,c}(t_k)$ shall be calculated from the spot zero interest rate $R_{i,c}(t_k)$ at the bucket mid-point for the respective scenario i and currency c multiplied by the bucket mid-point t_k as

$$DF_{i,c}(t_k) = \exp\left(-R_{i,c}(t_k) * t_k\right)$$

4. Institutions shall sum up the discounted net repricing cash flows across all repricing time buckets, to determine the economic value of equity for the baseline and the shock scenario, for each currency.

5. The change in the economic value of equity shall be calculated by subtracting the economic value of equity in the baseline scenario from the economic value of equity in the shock scenario, and by adding the change of the value of the explicit and embedded automatic interest rate option calculated in accordance with Article 12.

6. When calculating the aggregate change for each shock scenario, institutions shall add together any negative and positive changes occurring in each currency. In this calculation 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 by 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 recognized up to the greater of the following values:

   (a) the absolute value of negative changes in EUR or ERMII currencies; or

   (b) the result of applying a factor of 50% to the positive changes of ERMII currencies or EUR.

CHAPTER V

CALCULATION OF THE STANDARDISED NET INTEREST INCOME RISK MEASURE

Article 17

Projected yield of risk free component

1. For the purposes of calculating the contribution to net interest income of the projected risk free yield on the reinvestment or refinancing of repricing cash flows, institutions shall, for each currency and scenario, determine a table of forward rates representative of the risk free component of interest rates that is expected to be applied to risk free loans starting at the

repricing mid points of buckets referred to in Annex I, point 4, and with maturities corresponding to the reference term bucket mid points referred to in Annex I, point 3.

2. Institutions shall determine the forward rates referred to in paragraph 1 in accordance with the following formula:

$$FWD_{i,c}\left(t_k, t_k + REF_j\right) = -\frac{\ln\left[DF_{i,c}\left(t_k + REF_j\right)/DF_{i,c}(t_k)\right]}{REF_j}$$

where:

t_k is the midpoint of repricing bucket k

REF_j is the midpoint of reference term bucket j

$FWD_{i,c}\left(t_k k, t_k + REF_j\right)$ is the forward rate for the respective scenario i and for currency c for a risk-free loan starting at the midpoint of repricing bucket k and maturing at the midpoint of reference term bucket j

$DF_{i,c}(t_k)$ is the discounting factor for the respective scenario i and for currency c and time t_k as referred to Article 16(3).

3. Institutions shall determine the applicable risk free interest rate, for each combination of a repricing bucket midpoint with a reference term bucket midpoint, by multiplying the forward rates of paragraph 1 with the remaining time up to the end of the time horizon of the net interest income calculation set out in Article 3(3). The remaining time up to the end of a net interest income horizon shall be the net interest income horizon minus the relevant repricing mid points of the buckets referred to in Annex I, point 1.

4. Institutions shall calculate the contribution to the net interest income of the projected risk free interest rate on the reinvestment or refinancing of repricing cash flows by multiplying the notional repricing cash flows referred to in Articles 5 to 11, allocated in accordance with Article 13(1) (b) and (c), with the contribution of the corresponding applicable risk free interest rate calculated in accordance with paragraph 3.

Article 18

Projected income from the commercial margin component

1. Institutions shall calculate the contribution to the net interest income of the projected commercial margin on the reinvestment or refinancing of repricing cash flows of the instruments referred to in Articles 5 to 9 by allocating these cash flows at the reset of commercial margins, and by estimating the applicable commercial margin rate and the remaining time up to the end of the net interest income horizon.

2. The allocation referred to in paragraph 1 shall be performed in the repricing time buckets referred to in Annex I, point 4 in accordance with Articles 5 to 9. By way of derogation from Article 6, in the case of floating rate instruments the part of repricing cash flows constituting a principal amount shall be allocated in accordance with its final contractual maturity date.

3. To calculate the contribution of the projected commercial margin on the reinvestment of repricing cash flows to the net interest income, institutions shall allocate the evaluated

positions into the following product types further divided by geographical location), and currency denomination:

(a) The product types of financial assets shall be:

(i) Debt Securities;

(ii) Loans and advances – Non-Financial Corporates;

(iii) Loans and advances - Households – Mortgages;

(iv) Loans and advances - Households – Credit (non-mortgage);

(v) Loans and advances – other counterparties;

(vi) Other products in the non-trading book.

(b) The product types of financial liabilities shall be:

(i) Deposits – Non-Financial Corporates;

(ii) Deposits – Households;

(iii) Deposits – other counterparties;

(iv) Debt securities;

(v) Other liabilities in the non-trading book.

4. To determine the commercial margin rate referred to in paragraph 1, institutions shall apply the following:

(a) In case of instruments traded in deep and active liquid markets where the value of the instrument is capable of being determined on the basis of widely disseminated and easily available market prices, the commercial margin rate shall be determined on the basis of the market price and the interest payments of the instrument with a deduction of the risk-free rate.

(b) In case of other instruments, the commercial margin rate shall be determined by the weighted average of commercial margins received or paid in transactions during the last 360 days, having regard to the product type, geographical location and currency denomination referred to in paragraph 3. In the absence of such transactions, the commercial margin rate shall be determined on the basis of assumptions relying on margins received or paid in comparable portfolios.

5. The commercial margin rate determined in accordance with paragraph 4 in the baseline scenario shall also apply in a shock scenario.

6. To take into account the remaining time in the net interest income horizon, institutions shall determine the percentage of commercial margin yield by multiplying the commercial margin calculated in accordance with paragraph 4 by the remaining time up to the end of the net interest income horizon. The remaining time up to the end of a net interest income horizon shall be the net interest income horizon minus the relevant repricing mid points of the buckets referred to in Annex I, point 1.

7. Institutions shall determine the contribution to the net interest income of the projected commercial margin on the reinvestment or refinancing of repricing cash flows by multiplying the cash flows calculated in accordance with paragraph 2 by the applicable commercial margin yield referred to in paragraph 6.

Article 19

Interest payments or part of interest payments that occur up to and including their reset date

1. To determine the contribution to the net interest income of interest payments occurring up to the repricing date including that date, institutions shall additionally allocate exclusively these interest payments of the instruments referred to in Articles 5 to 11 into the repricing time buckets referred to in Annex I, point 4, provided these interest payments meet the following conditions:
    (a) The size of the interest payment is known and fixed, with no possibility for the payment to change due to a movement in interest rates.
    (b) The interest payment is expected to be paid within the net interest income horizon referred to in Article 3(2).
2. For instruments referred to in Article 6, where the interest payment occurs after the interest repricing date, institutions shall apply paragraph 1 only to the part of the interest payment that represents the commercial margin.

Article 20

Market value changes for instruments held at fair value maturing beyond the net interest income horizon

1. To calculate the market value changes beyond the net interest income horizon for instruments held at fair value, institutions shall perform the allocation in accordance with Article 16(2) taking into account Article 13(1)(a) and with the following derogations:
    (a) Cash flows related to instruments not held at fair value shall be excluded.
    (b) The cash flows repricing in the net interest income time horizon shall be excluded by being set to zero in the repricing time buckets referred to in Annex I, point 4.
2. To calculate the market value changes for instruments held at fair value that are maturing beyond the net interest income horizon, institutions shall apply Article 16(3) to (5) to the allocation performed in accordance with paragraph 1.

Article 21

Net Interest Income add-on for Basis Risk

1. Where the sum of floating rate instruments other than those in the category Overnight of paragraph 2(a) exceeds 5% of the positions referred to in Article 2(2) that are accounted for as an asset in accordance with the applicable account framework, the notional repricing cash flows of floating rate instruments shall be allocated, in addition to their allocation in accordance with Article 6, for each currency by their repricing date, to the repricing time buckets referred to in Annex I, point 4.

2. The notional repricing cash flows referred to in paragraph 1 shall, for the purpose of their allocation, be broken down into the following reference terms, which the floating rate instrument refers to:

   (a) Overnight;

   (b) 1 month;

   (c) 3 months;

   (d) 6 months;

   (e) 12 months.

3. In the absence of a reference term, the notional repricing cash flows shall be assigned to the following categories:

   (a) 'Policy rate' in case the floating rate instrument refers to a central bank policy rate;

   (b) 'Other' in case of a floating rate instrument link to any other benchmark.

   Incoming notional repricing cash flows shall be allocated with a positive sign and outgoing notional repricing cash flows shall be allocated with a negative sign.

4. For the purposes of paragraph 1, institutions shall exclude embedded interest rate options and shall treat those options in accordance with paragraph 9.

5. Institutions shall estimate tightening shocks and widening shocks, in a way that is consistently applied over time, for each reference term category referred to in paragraph 2 and 3 for a given currency on the basis of historic observations of movements in the interest rates of the instruments in each category.

6. The tightening shocks and widening shocks shall be determined by comparing interest rates with the overnight reference term of paragraph 2(a), to the other reference terms as set out in paragraph 2 (b) to (e) and paragraph 3.

7. Institutions shall apply to the notional repricing cash flows for each currency the shocks referred to in paragraph 5 multiplied by the remaining time up to the end of a net interest income horizon. The remaining time up to the end of a net interest income horizon shall be the net interest income horizon minus the relevant repricing mid points of the buckets referred to in Annex I, point 1.

8. Institutions shall aggregate in one amount separately for the tightening and for the widening scenario the results from the calculations referred to in paragraph 7.

9. Institutions shall calculate both in the tightening and in the widening scenario the pay-outs from automatic interest rate options that are explicit or embedded in floating rate instruments, and shall compare these pay-outs to the pay-outs calculated under the baseline scenario. The resulting difference in the pay-outs shall be added to the result calculated in accordance with paragraph 8 for the tightening scenario and the widening scenario separately, with a positive sign for incoming pay-outs and a negative sign for outgoing pay-outs. In this calculation pay-outs shall not be discounted and no assumptions shall be made regarding changes in volatility.

10. The net interest income add-on for basis risk shall be the lower result calculated in accordance with this Article in the tightening and the widening scenario.

Article 22

Net Interest Income and delta Net Interest Income calculation

1. To calculate the net interest income, thereby excluding explicit and embedded automatic interest rate options up to the net interest income horizon, institutions shall take the sum of:
   (a) the projected risk-free yields calculated in accordance with Article 17;
   (b) the projected yield from commercial margins calculated in accordance with Article 18; and
   (c) the sum of interest payments up to their reset date including that date, calculated in accordance with Article 19, reduced by any material interest accrued at t=0.
2. In the calculation of the previous paragraph, institutions shall treat incoming cash flows with a positive sign and outgoing cash flows with a negative sign.
3. To obtain the impact of a shock scenario on net interest income, institutions shall take the sum of:
   (a) The difference between:
      i. the calculation referred to in paragraph 1 relating to a shock scenario;
      ii. the calculation referred to in paragraph 1 relating to the baseline scenario.
   (b) The net interest income add-on for automatic options within the net interest income horizon calculated in accordance with Article 14 of this Regulation.
   (c) The net interest income add-on for basis risk calculated in accordance with Article 21.

   Point (a) to (b) shall be calculated using the same shock scenario. Point (c) shall be calculated on the tightening or widening scenario referred to in Article 21 (10) that has the largest negative impact on the net interest income.
4. When calculating the aggregate change for each shock scenario, institutions shall add together any negative and positive changes occurring in each currency. In this calculation, 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 by 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% to offset losses in EUR. Weighted gains shall be recognized up to the greater of the following values: (i) the absolute value of negative changes in EUR or ERMII currencies or (ii) the result of applying a factor of 50% to the positive changes of ERMII currencies or EUR.

CHAPTER VI

SIMPLIFIED STANDARDISED ECONOMIC VALUE OF EQUITY RISK MEASURE

Article 23

Economic value of equity and delta economic value of equity calculation simplified calculation

1. For the calculation of the economic value of equity and delta economic value of equity under the simplified standardised approach, institutions shall derogate from the standardised approach on EVE as follows:

   (a) In the baseline scenario:

      (i) By way of derogation from Article 7(2) to (8), institutions shall set the amount of core component of non-maturity deposits taking the following proportions:

         (1) 69.23%, for non-maturity deposits referred to in Article 7(1)(a)(i);

         (2) 53.85%, for non-maturity deposits referred to in Article 7(1)(a)(ii);

         (3) 38.46%, for non-maturity deposits referred to in Article 7(1)(b)(ii).

      (ii) Be way of derogation from Article 7(11), institutions shall allocate the core component of non-maturity deposits evenly over time as set out in Annex I point 5.a.

   (b) In scenarios prescribing a decrease of short-term interest rate:

      (i) By way of derogation from Article 7(2) to (8), institutions shall set the amount of core component of non-maturity deposits taking the following proportions:

         (1) 90%, for non-maturity deposits referred to in Article 7(1)(a)(i);

         (2) 70%, for non-maturity deposits referred to in Article 7(1)(a)(ii);

         (3) 50%, for non-maturity deposits referred to in Article 7(1)(b)(ii).

      (ii) Be way of derogation from Article 7(11), institutions shall allocate the core component of non-maturity deposits evenly over time as set out in Annex I, point 5.b.

   (c) In scenarios prescribing an increase of short-term interest rate

      (i) By way of derogation from Article 7(2) to (8), institutions shall set the amount of core component of non-maturity deposits taking the following proportions:

         (1) 48.46%, for non-maturity deposits referred to in Article 7(1)(a)(i);

         (2) 37.69%, for non-maturity deposits referred in Article 7(1)(a)(ii);

         (3) 26.92%, for non-maturity deposits referred to in Article 7(1)(b)(ii).

(ii) By way of derogation from Article 7(11), institutions shall allocate the core component of non-maturity deposits evenly over time as set out in Annex I, point 5.c.

2. Institutions shall perform the calculations of the change in value referred to in Article 12 (2) and (3) using the sum of the pay-outs in the baseline and shock scenarios and discounted by the applicable risk free interest rates Institutions shall disregard any effect of increased volatility multiply the pay-outs of automatic options under the shock scenario by 1.10.

CHAPTER VII

CALCULATION OF THE SIMPLIFIED STANDARDISED NET INTEREST INCOME RISK MEASURE

Article 24

Net interest income and delta net interest income simplified calculation

1. For the calculation of the net interest income and delta net interest income under the simplified standardised approach. institutions shall derogate from the standardised approach on net interest income as follows:

   (a) Institutions shall implement the simplification referred to in Article 23 (1).

   (b) There shall be no allocation in accordance with Article 13(1)(b) of this Regulation. An average reference term for all fixed rate interest rate sensitive banking book assets and an average reference term for all fixed rate interest rate sensitive banking book liabilities shall be calculated for each product type category set out in Article 18(3).

   (c) For the purpose of Article 17, the calculated average reference terms shall be applied instead of the mid points of the reference term buckets referred to in Annex I, point 3.

   (d) By way of derogation from Article 18(2), institutions shall, when applying Article 18(3) (b) only separate the amounts referred to in Article 18(2) by product types and shall not take into account the geographical location breakdown.

   (e) By way of derogation from Article 19, institutions shall calculate interest payments or part of interest payments that occurring up to their repricing date including that date, by the multiplication of:

      (i) the amount of principal of all instruments outstanding; with

      (ii) the institution’s estimate of average interest rate on instruments on the asset or liability side as applicable; with

      (iii) the net interest income horizon, or, in case an instrument is repricing before the net interest income horizon, the mid-point of the applicable repricing time bucket referred to in Annex I, point 1 applicable to the outstanding instrument.

2. By way of derogation from Article 12 (2) and (3), institutions shall calculate the market value changes of automatic options held at fair value maturing beyond the net interest income horizon referred to in Article 15 by using the sum of the pay-outs in the baseline and shock scenarios discounted by the applicable risk free interest rates. Institutions shall disregard any effect of increased volatility and multiply the pay-outs under the shock scenario by 1.10.

Article 25

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

1. Repricing time buckets:

   (a) An overnight time bucket, with the mid-point of 1 day, or approximately 0.0028 years.

   (b) A time bucket exceeding 1 day and up to and including 1 month, with the mid-point of 15 days.

   (c) A time bucket exceeding 1 month and up to and including 3 months, with the mid-point of 60 days.

   (d) A time bucket exceeding 3 months and up to and including 6 months, with the mid-point of 135 days.

   (e) A time bucket exceeding 6 month and up to and including 9 months, with the mid-point of 225 days.

   (f) A time bucket exceeding 9 month and up to and including 12 months, with the mid-point of 315 months.

   (g) A time bucket exceeding 1 year and up to and including 1.5 year, with the mid-point of 1 year and 90 days.

   (h) A time bucket exceeding 1.5 year and up to and including 2 years, with the mid-point of 1 year and 270 days.

   (i) A time bucket exceeding 2 years and up to and including 3 years, with the mid-point of 2 years and 180 days.

   (j) A time bucket exceeding 3 years and up to and including 4 years, with the mid-point of 3 years and 180 days.

   (k) A time bucket exceeding 4 years and up to and including 5 years, with the mid-point of 4 years and 180 days.

   (l) A time bucket exceeding 5 years and up to and including 6 years, with the mid-point of 5 years and 180 days.

   (m) A time bucket exceeding 6 years and up to and including 7 years, with the mid-point of 6 years and 180 days.

   (n) A time bucket exceeding 7 years and up to and including 8 years, with the mid-point of 7 years and 180 days.

   (o) A time bucket exceeding 8 years and up to and including 9 years, with the mid-point of 8 years and 180 days.

   (p) A time bucket exceeding 9 years and up to and including 10 years, with the mid-point of 9 years and 180 days.

   (q) A time bucket exceeding 10 years and up to and including 15 years, with the mid-point of 12 years and 180 days.

   (r) A time bucket exceeding 15 years and up to and including 20 years, with the mid-point of 17 years and 180 days.

   (s) A time bucket exceeding 20 years, with the mid-point of 25 years.

2. Length of time buckets of Article 8(4(b) of this Regulation are as follows:

(a) 0 year.

(b) 1/12 year.

(c) 2/12 year.

(d) 3/12 year.

(e) 3/12 year.

(f) 3/12 year.

(g) 6/12 year.

(h) 6/12 year.

(i) 1 year.

(j) 1 year.

(k) 1 year.

(l) 1 year.

(m) 1 year.

(n) 1 year.

(o) 1 year.

(p) 1 year.

(q) 5 years.

(r) 5 years.

(s) 10 years.

3. Reference term time buckets:

(a) A time bucket exceeding overnight up to and including 12 months, with the mid-point of 12 months.

(b) A time bucket exceeding 1 year and up to and including 1.5 year, with the mid-point of 1 year and 90 days.

(c) A time bucket exceeding 1.5 year and up to and including 2 years, with the mid-point of 1 year and 270 days.

(d) A time bucket exceeding 2 years and up to and including 3 years, with the mid-point of 2 years and 180 days.

(e) A time bucket exceeding 3 years and up to and including 4 years, with the mid-point of 3 years and 180 day.

(f) A time bucket exceeding 4 years and up to and including 5 years, with the mid-point of 4 years and 180 days.

(g) A time bucket exceeding 5 years and up to and including 6 years, with the mid-point of 5 years and 180 days.

(h) A time bucket exceeding 6 years and up to and including 7 years, with the mid-point of 6 years and 180 days.

(i) A time bucket exceeding 7 years and up to and including 8 years, with the mid-point of 7 years and 180 days.

(j) A time bucket exceeding 8 years and up to and including 9 years, with the mid-point of 8 years and 180 days.

(k) A time bucket exceeding 9 years and up to and including 10 years, with the mid-point of 9 years and 180 days.

(l) A time bucket exceeding 10 years and up to and including 15 years, with the mid-point of 12 years and 180 days.

(m) A time bucket exceeding 15 years and up to and including 20 years, with the mid-point of 17 years and 180 days.

(n) A time bucket exceeding 20 years, with the mid-point of 25 years.

4. For the purposes of Articles 16(1), 17(2), 18(1), 19(1)(b) and 21(1), the following repricing time buckets of Annex I, point 1 shall be used in case of different net interest rate horizons:

(a) Bucket (a) to (f) in case of a net interest horizon of 1 year.

(b) Bucket (a) to (g) in case of a net interest horizon of 1.5 year.

(c) Bucket (a) to (h) in case of a net interest horizon of 2 years.

(d) Bucket (a) to (i) in case of a net interest horizon of 3 years.

(e) Bucket (a) to (j) in case of a net interest horizon of 4 years.

(f) Bucket (a) to (k) in case of a net interest horizon of 5 years.

(g) Bucket (a) to (l) in case of a net interest horizon of 6 years.

(h) Bucket (a) to (m) in case of a net interest horizon of 7 years.

(i) Bucket (a) to (n) in case of a net interest horizon of 8 years.

(j) Bucket (a) to (o) in case of a net interest horizon of 9 years.

(k) Bucket (a) to (p) in case of a net interest horizon of 10 years.

(l) Bucket (a) to (q) in case of a net interest horizon of 15 years.

(m) Bucket (a) to (r) in case of a net interest horizon of 20 years.

(n) Bucket (a) to (s) in case of a net interest horizon of 25 years.

5. Prescribed slotting simplified standardised approach.

(a) Baseline scenario:

(i) Up to 5 years, for the category of non-maturity deposits referred in paragraph 2(a)(i), resulting in 30.77%, 1.15%, 2.31%, 3.46%, 3.46%, 3.46%, 6.92%, 6.92%, 13.85%, 13.85% and 13.85% of non-maturity deposits of this category being slotted into time buckets a, b, c, d, e, f, g, h, i, j, and k of point 1 of Annex I respectively;

(ii) Up to 4.5 years, for the category of non-maturity deposits referred in paragraph 2(a)(ii) resulting in 46.15%, 1.00%, 2.00%, 2.99%, 2.99%, 2.99%, 5.98%, 5.98%, 11.97%, 11.97% and 5.98% of non-maturity deposits of this category being slotted into time buckets a, b, c, d, e, f, g, h, i, j, and k of point 1 of Annex I respectively;

(iii) Up to 4 years, for the category of non-maturity deposits referred in paragraph 2(b)(ii) resulting in 61.54%, 0.80%, 1.60%, 2.40%, 2.40%, 2.40%, 4.81%, 4.81%, 9.62%, and 9.62% of non-maturity deposits of this category being slotted into time buckets a, b, c, d, e, f, g, h, i, and j of point 1 of Annex I respectively.

(b) Decrease of short-term interest rates:

(i) Up to 5 years, for the category of non-maturity deposits referred in paragraph 2(a)(i), resulting in 10.00%, 1.50%, 3.00%, 4.50%, 4.50%, 4.50%, 9.00%, 9.00%, 18.00%, 18.00% and 18.00% of non-maturity deposits of this category being slotted into time buckets a, b, c, d, e, f, g, h, i, j, and k of point 1 of Annex I respectively;

(ii) Up to 4.5 years, for the category of non-maturity deposits referred in paragraph 2(a)(ii) resulting in 30.00%, 1.30%, 2.59%, 3.89%, 3.89%, 3.89%, 7.78%, 7.78%, 15.55%, 15.55% and 7.78% of non-maturity deposits of this category being slotted into time buckets a, b, c, d, e, f, g, h, i, j, and k of point 1 of Annex I respectively;

(iii) Up to 4 years, for the category of non-maturity deposits referred in paragraph 2(b)(ii) resulting in 50.00%, 1.04%, 2.08%, 3.12%, 3.12%, 3.12%, 6.25%, 6.25%, 12.51%, and 12.51% of non-maturity deposits of this category being slotted into time buckets a, b, c, d, e, f, g, h, i, and j of point 1 of Annex I respectively.

(c) Increase of short-term interest rates:

(i) Up to 5 years, for the category of non-maturity deposits referred in paragraph 2(a)(i), resulting in 51.54%, 0.81%, 1.62%, 2.42%, 2.42%, 2.42%, 4.85%, 4.85%, 9.69%, 9.69% and 9.69% of non-maturity deposits of this category being slotted into time buckets a, b, c, d, e, f, g, h, i, j, and k of point 1 of Annex I respectively;

(ii) Up to 4.5 years, for the category of non-maturity deposits referred in paragraph 2(a)(ii) resulting in 62.31%, 0.70%, 1.39%, 2.09%, 2.09%, 2.09%, 4.19%, 4.19%, 8.38%, 8.38% and 4.19% of non-maturity deposits of this category being slotted into time buckets a, b, c, d, e, f, g, h, i, j, and k of point 1 of Annex I respectively;

(iii) Up to 4 years, for the category of non-maturity deposits referred in paragraph 2(b)(ii) resulting in 73.08%, 0.56%, 1.12%, 1.68%, 1.68%, 1.68%, 3.37%, 3.37%, 6.73% and 6.73% of non-maturity deposits of this category being slotted into time buckets a, b, c, d, e, f, g, h, i, and j of point 1 of Annex I respectively.

4. Accompanying documents

4.1 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 included in this final report on the draft RTS on standardised and simplified standardised methodologies for the purposes of the evaluation of the risks arising from potential changes in interest rates that affect both the economic value of equity and the net interest income of an institution's non-trading book activities under 84(5) of directive 2013/36/EU.

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, as well as the standards published by the Basel Committee on Banking Supervision in April 2016 on "Interest rate risk in the banking book".

4.1.1 General structure of the standardised approaches

4. The EBA has developed the draft RTS specifying a set of procedural aspects and applicable assumptions related to both the SA on Economic Value of Equity (EVE) and SA on Net Interest Income (NII), as well as for the respective simplified standardised approaches.

5. In a nutshell, EVE is the discounted sum of all future cash flows, assuming a run-off balance sheet (which avoids the complexity of determining the applicable interest rates for the renewal of exposures). In contrast, NII is the forward-looking projection of interest income (and expenses) over a pre-defined time horizon (e.g., of up to one, two or three years). While both are based on notional repricing cash flows (interest payments or principal amounts of fixed rate instruments that mature or principal amounts of floating rate instruments that reprice) under EVE they are discounted to the present and under NII they are projected to the end of the NII horizon.

6. The EBA has developed the part of the methodology where the NII computational logic differs from that of EVE. This resulted in the development of 3 sub-components, which would need to be summed up to arrive at NII (apart from add-ons):

    (a) The aggregation of interest payments up to and including the repricing date (i.e., NII flows not sensitive to interest rate changes).

(b) The projection of risk free yield for each repricing cash flow between the moment of repricing up to the end of the projection horizon.

(c) The projection of the commercial margin for each notional repricing cash flow between the moment of an instrument's maturity up to the end of the projection horizon.

7. In addition, there is an add-on for automatic optionality for both SA on EVE and the SA on NII. There is a difference between EVE and NII: under EVE, the option values are discounted to the present, whereas, under NII the pay-outs are considered to the extent they materialise within the NII horizon combined with value changes regarding options beyond the NII horizon. Further there are add-ons just regarding NII, in the form of the fair value component, and in the form of a charge for basis risk.

8. Most of these aspects are broadly covered by the QIS templates.

4.1.2 QIS results and assumptions in the calculation

9. The calibration and impact assessment of components of the standardised and simplified standardised approaches builds on the EBA QIS from December 2020, where dedicated EU-specific IRRBB worksheets have been included in the Basel III monitoring exercise.

10. 121 banks have participated in the whole EBA QIS but less than the 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. For this reason, the assessments have been made on a best effort basis.

11. During the consultation period, the submission window for QIS data has been reopened for banks to still participate or complement their participation. While not bringing significant changes to the result it has contributed to the the final decisions.

12. The EBA has developed the steps and assumptions in the calculation of EVE and NII, taking into account the need for Basel compliance and the avoidance of complexity where possible. These include the following areas:

Behavioural cash flows

13. Regarding behavioural cash flows, which refers to instruments for which the timing of the cash flows depends on the behaviour of retail customers, the EBA has further specified the methodology provided in the 2016 Basel SA on EVE. This affects all main categories of behavioural cash flows, comprising i) Non Maturing Deposits (NMDs), ii) loans subject to prepayment risk, and iii) term deposits subject to the risk of early redemption risk.

14. As tested under the QIS, institutions will determine themselves the behavioural cash flows in the baseline scenario based on relevant historical data, combined with standardised constraints and assumptions.

15. For Non Maturing Deposits (NMDs), the Basel caps (of 50% to 90%) should apply on the proportion of core deposits (i.e., deposits that are not assumed to reprice even under significant changes in the interest rate environment) in total deposits, as well as the current EBA maturity cap (4 to 5 years) on the weighted average maturity of core deposits. In the QIS results, the EBA found that participating banks were generally compliant with the caps for the category of retail transactional, whereas they were less compliant with the respective caps for retail non-transactional and wholesale NMDs (see below in tables 1 to 3 the figures for institutions that reported the relevant numbers on this item).

Table 1:Distribution of institutions regarding NMD statistics by percentiles for Retail Transactional NMDs.

Retail Transactional NMDs				
Percentile	**Proportion of core deposits**	**Proportion of stable deposits**	**Pass-through rate of stable deposits**	**Average applied maturity of core deposits (years)**
Mean	**70.47%**	**81.54%**	**13.34%**	**4.05**
S.D	**19.96%**	**16.15%**	**17.10%**	**1.75**
5th	33.00%	60.37%	0.00%	1.80
10th	44.03%	67.65%	0.00%	2.21
25th	61.00%	80.00%	0.00%	3.06
50th	76.75%	86.76%	8.56%	4.16
75th	85.06%	90.00%	21.98%	5.00
90th	90.00%	93.13%	30.61%	5.00
95th	90.46%	94.05%	45.14%	5.00
# of banks	38	38	38	38

Table 2: Distribution of institutions regarding NMD statistics by percentiles for Retail non-Transactional NMDs.

Retail Non-Transactional NMDs				
Percentile	**Proportion of core deposits**	**Proportion of stable deposits**	**Pass-through rate of stable deposits**	**Average applied maturity of core deposits (years)**
Mean	**63.09%**	**76.69%**	**16.87%**	**3.05**
S.D	**21.16%**	**20.04%**	**17.68%**	**1.29**
5th	28.21%	42.13%	0.00%	0.79
10th	41.71%	63.20%	0.00%	1.20
25th	50.05%	70.00%	0.00%	2.32
50th	65.74%	80.00%	10.59%	3.29
75th	70.00%	90.50%	29.80%	4.13
90th	89.08%	93.07%	44.00%	4.50
95th	92.95%	95.09%	48.33%	4.50
# of banks	31	31	31	31

Table 3: Distribution of institutions regarding NMD statistics by percentiles for Wholesale NMDs.

	Wholesale NMDs			
Percentile	**Proportion of core deposits**	**Proportion of stable deposits**	**Pass-through rate of stable deposits**	**Average applied maturity of core deposits (years)**
Mean	**44.33%**	**59.38%**	**22.74%**	**3.01**
S.D	**22.06%**	**23.70%**	**24.21%**	**1.96**
5th	15.17%	18.89%	0.00%	0.31
10th	18.71%	25.97%	0.00%	0.74
25th	26.14%	49.73%	0.00%	1.99
50th	46.08%	55.81%	12.40%	3.11
75th	51.87%	76.41%	43.44%	4.00
90th	79.01%	89.55%	53.39%	4.00
95th	81.52%	94.06%	57.22%	4.25
# of banks	34	34	34	34

16. Regarding the estimation of the conditional prepayment rate associated with loans subject to prepayment risk, as well as for the term deposit redemption rate associated with term deposits subject to early redemption, the EBA proposes that institutions should have a consistent well-documented methodology suitable for the estimation of an average based on historical observations.

17. To add proportionality/simplicity, the EBA has developed materiality thresholds for each category of behavioural outflows at the level of 2% of interest rate sensitive liabilities respectively assets in the banking book. Below these thresholds, institutions may opt to disregard these aspects (and instead set the conditional prepayment rate and term deposit redemption rate at 0 and slot all NMDs in the overnight bucket). In this context, the EBA took into account the QIS results which indicated that many institutions do not have these exposures, or may only have immaterial amounts such exposes (Tables 4 and 5 indicate the general distribution of institutions in terms exposures as a % of total banking book liabilities / assets).

Table 4: Distribution of institutions regarding materiality of categories of NMD by percentiles.

Percentile	**Sum Retail Transactional NMDs (as % of Total BB Liab.)**	**Sum Retail Non-Transactional NMDs (as % of Total BB Liab.)**	**Sum Wholesale NMDs (as % of Total BB Liab.)**	**Sum NMDs (as % of Total BB Liab.)**
Mean	**10.32%**	**12.97%**	**9.95%**	**33.23%**
S.D	**13.45%**	**15.72%**	**13.49%**	**29.31%**
5th	0.00%	0.00%	0.00%	0.00%
10th	0.00%	0.00%	0.00%	0.00%
25th	0.00%	0.00%	0.00%	0.00%
50th	1.00%	5.64%	6.05%	35.29%
75th	18.83%	22.61%	15.24%	60.04%
90th	32.30%	33.87%	22.26%	70.52%
95th	37.70%	44.23%	30.38%	76.94%
# of banks	69	69	69	69

Table 5: Distribution of institutions regarding materiality of Terms Deposits subject to early repayment and of Loans subject to Prepayment risk by percentiles.

Percentile	Term Deposits subject to early redemption risk (as % of Total BB Liab.)	Loans subject to prepayment risk (as % of Total BB Liab.)
Mean	**2.01%**	**12.23%**
S.D	**5.94%**	**21.33%**
5th	0.00%	0.00%
10th	0.00%	0.00%
25th	0.00%	0.00%
50th	0.00%	0.00%
75th	0.00%	15.14%
90th	6.83%	48.75%
95th	13.48%	55.95%
# of banks	71	71

Calculation risk free rate and commercial margins

18. For the calculation of the risk-free rate and commercial margin calculation it is necessary to make assumptions regarding the following:

(a) For the risk-free curve, since there is no universal risk-free spot rate curve per currency, it is left to institutions to select it, in line with paragraph 17(n) of the 2018 EBA GL.

(b) Original maturity of repricing cash flows: to project NII, in line with the constant balance sheet assumption, it is necessary to replace maturing cash flows with similar characteristics (product type, fixed/floating, etc.). Importantly, the original maturity of the loan underlying a repricing cash flow is a significant determinant of the risk-free interest rate to be expected on new business. To capture this aspect, the EBA proposes a double slotting of cash flows, where in addition to the repricing time buckets (which were already necessary for the EVE) institutions will have to slot the same amounts in their original maturity time buckets, leading to a matrix/table of cash flows slotted along an axis of repricing time buckets and an axis of original maturity time buckets.

26. As illustrated in Figure 1, the average original maturities of repricing cash flows for the 29 institutions in the sample that provided sufficient data on it, tend to range between 2 and 10 years. However as illustrated in Figure 2, which highlights the results of the 4 institutions with the highest range of original maturities, there can a lot of difference within the same institution. In the figure, assets repricing in one time bucket can have a very different maturity, on average, than the next bucket. This suggests that the underlying asset mix matters a lot regarding original maturity, which substantiates the proposed double slotting of cash flow by instrument.

Figure 1: Average original maturities in years (y-axis) by repricing bucket (x-axis) for 29 institutions.

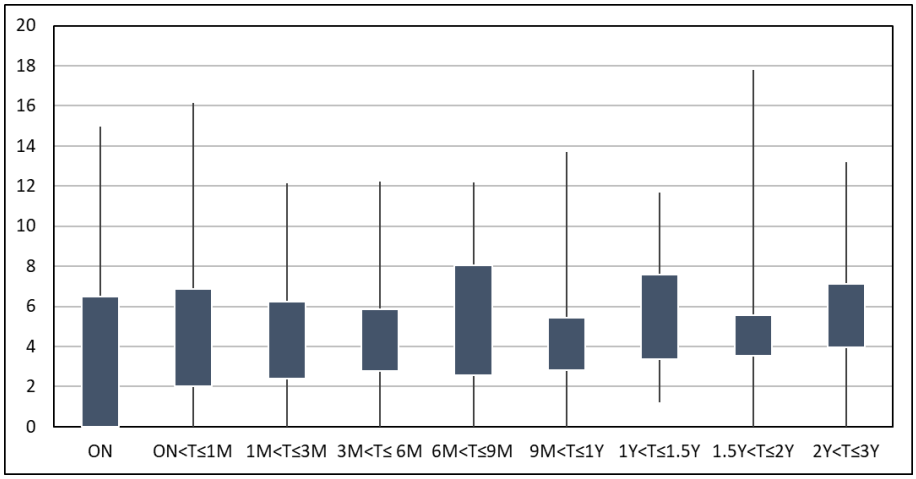
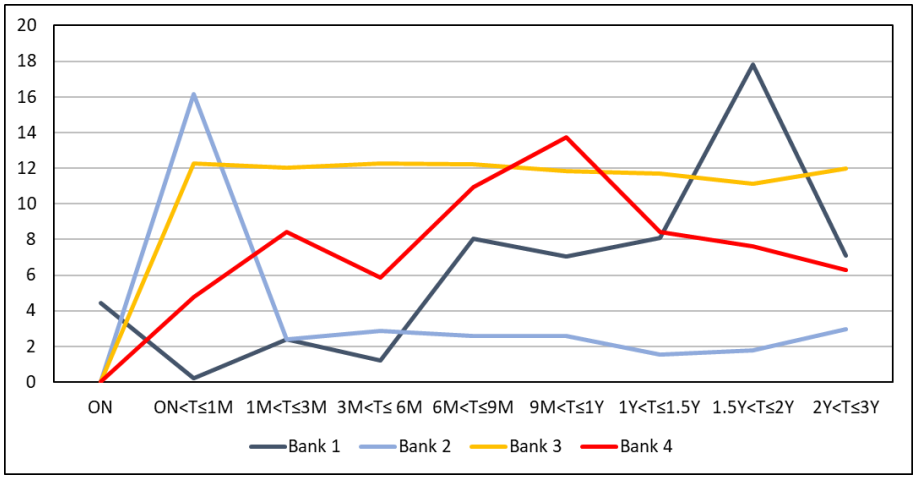


Figure 2: Average original maturities in years (y-axis) by repricing bucket (x-axis) for 4 institutions with the highest range of original maturities.



(c) The yield used in the commercial margin component of NII (which projects commercial margin of new production) will be based on the commercial margin business originated in the last year. The historical observation should be stratified by product, counterparty and geographic category. The product categories have been based on general experience with materiality of FINREP categories (Table 6 and Table 7 below shows data from FinRep 16.1 on interest income and expenses). To be proportionate, in case there's no transaction in the last year in the applicable category, then institutions are allowed to draw from observations of comparable portfolios in different categories. In case of products with observable quotes, the implied commercial margin can be used based on the fair value and deduction of the risk-free rate.

Table 6: Materiality of interest income by category of FINREP 16.1 by broad business model category.

		All banks (157)						
	INCOME	Average	10%percentile	90% percentile	Average: Universal banking (retail/commercial and investment banking) (95 banks)	Average: Retail/commercial banking (50 banks)	Average: Specialised lender (8 banks)	Average: Other business model (1 bank)
010	**Derivatives -Trading**	**6%**	**0%**	**17%**	**7%**	**3%**	**14%**	**0%**
015	of which: interest income from derivatives in economic hedges	3%	0%	6%	3%	1%	14%	0%
020	**Debt securities**	**9%**	**1%**	**18%**	**9%**	**8%**	**8%**	**24%**
030	Central banks	0%	0%	0%	0%	0%	0%	0%
040	General governments	6%	0%	13%	6%	6%	4%	19%
050	Credit institutions	1%	0%	3%	1%	1%	3%	0%
060	Other financial corporations	1%	0%	2%	1%	0%	0%	3%
070	Non-financial corporations	1%	0%	2%	1%	1%	0%	1%
080	**Loans and advances**	**77%**	**49%**	**96%**	**76%**	**84%**	**55%**	**36%**
090	Central banks	1%	0%	2%	1%	0%	0%	0%
100	General governments	2%	0%	6%	2%	2%	13%	0%
110	Credit institutions	2%	0%	4%	2%	1%	1%	17%
120	Other financial corporations	3%	0%	6%	3%	3%	2%	3%
130	Non-financial corporations	30%	12%	47%	32%	28%	33%	16%
140	Households	38%	3%	64%	36%	50%	7%	0%
141	of which: lending for house purchase	18%	0%	37%	16%	26%	0%	0%
142	of which: credit for consumption	10%	0%	27%	11%	10%	0%	0%
150	**Other assets**	**1%**	**0%**	**2%**	**1%**	**1%**	**0%**	**0%**
160	**Deposits**	**3%**	**0%**	**6%**	**3%**	**2%**	**3%**	**40%**
170	Central banks	1%	0%	3%	1%	1%	1%	0%
180	General governments	0%	0%	0%	0%	0%	0%	0%
190	Credit institutions	1%	0%	2%	1%	0%	1%	9%
200	Other financial corporations	1%	0%	1%	1%	1%	1%	32%
210	Non-financial corporations	0%	0%	1%	0%	0%	0%	0%
220	Households	0%	0%	0%	0%	0%	0%	0%
230	**Debt securities issued**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**
240	**Other financial liabilities**	**1%**	**0%**	**0%**	**0%**	**0%**	**8%**	**0%**
250	**Derivatives - Hedge accounting, interest rate risk**	**3%**	**-3%**	**13%**	**4%**	**2%**	**12%**	**0%**
260	**Other Liabilities**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**	**0%**
270	**INTEREST**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
280	of which: interest-income on credit impaired financial assets	2%	0%	6%	2%	4%	1%	0%
290	of which: interest from leases	2%	0%	6%	3%	2%	0%	0%

Table 7: Materiality of interest expense by category of FINREP 16.1 by broad business model category.

	EXPENSES	All banks (157)			Average: Universal banking (retail/commercial and investment banking) (95 banks)	Average: Retail/commercial banking (50 banks)	Average: Specialised lender (8 banks)	Average: Other business model (1 bank)
		Average	10%percentile	90% percentile				
010	**Derivatives -Trading**	**12%**	**0%**	**50%**	**14%**	**8%**	**24%**	**0%**
015	of which: interest income from derivatives in economic hedges	5%	0%	16%	5%	2%	22%	0%
020	**Debt securities**	**1%**	**0%**	**2%**	**1%**	**1%**	**0%**	**0%**
030	Central banks	0%	0%	0%	0%	0%	0%	0%
040	General governments	1%	0%	1%	0%	1%	0%	0%
050	Credit institutions	0%	0%	0%	0%	1%	0%	0%
060	Other financial corporations	0%	0%	0%	0%	0%	0%	0%
070	Non-financial corporations	0%	0%	0%	0%	0%	0%	0%
080	**Loans and advances**	**8%**	**0%**	**23%**	**7%**	**8%**	**3%**	**80%**
090	Central banks	4%	0%	8%	3%	5%	1%	70%
100	General governments	0%	0%	0%	0%	0%	0%	0%
110	Credit institutions	3%	0%	6%	3%	2%	1%	6%
120	Other financial corporations	1%	0%	2%	1%	0%	0%	0%
130	Non-financial corporations	0%	0%	0%	0%	0%	0%	4%
140	Households	0%	0%	0%	0%	0%	0%	0%
141	of which: lending for house purchase	0%	0%	0%	0%	0%	0%	0%
142	of which: credit for consumption	0%	0%	0%	0%	0%	0%	0%
150	**Other assets**	**3%**	**0%**	**7%**	**2%**	**6%**	**2%**	**0%**
160	**Deposits**	**41%**	**9%**	**75%**	**40%**	**47%**	**27%**	**20%**
170	Central banks	1%	0%	3%	1%	1%	0%	0%
180	General governments	2%	0%	5%	2%	1%	2%	0%
190	Credit institutions	8%	0%	20%	8%	6%	2%	7%
200	Other financial corporations	9%	0%	19%	7%	11%	20%	13%
210	Non-financial corporations	6%	0%	13%	7%	5%	1%	0%
220	Households	17%	0%	45%	15%	23%	2%	0%
230	**Debt securities issued**	**32%**	**0%**	**70%**	**34%**	**28%**	**52%**	**0%**
240	**Other financial liabilities**	**2%**	**0%**	**4%**	**2%**	**1%**	**0%**	**0%**
250	**Derivatives - Hedge accounting, interest rate risk**	**-2%**	**-28%**	**32%**	**-2%**	**0%**	**-10%**	**0%**
260	**Other Liabilities**	**2%**	**0%**	**6%**	**3%**	**2%**	**0%**	**0%**
270	**INTEREST**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
280	of which: interest-income on credit impaired financial assets	0%	0%	0%	0%	0%	0%	0%
290	of which: interest from leases	1%	0%	3%	1%	1%	0%	0%

Simplified standardised approaches

19. In the interest of proportionality, and in accordance with the mandate of Article 84 of the CRD, the EBA has developed simplified standardised approaches for EVE and NII. The simplifications are the following:

    (a) For the simplified SA on EVE and NII the proportion of the core component of NMDs (the component not expected to reprice during a shock) is fully prescribed. Moreover, instead of requesting institutions to slot the core NMDs themselves (under the constraint of 4 to 5 years of average maturity) the simplified approach prescribes a linear slotting up to 4, 4.5 or 5 years.

(b) For the simplified SA on EVE and NII institutions will calculate the impact of automatic optionality on the basis of pay-outs by scenario without having to perform a more complicated analysis that includes effects of a 25% increase in volatility. Instead, the impact of automatic optionality will be multiplied by 110% in accordance with the approximate median impact reported by institutions of increases in volatility across scenarios as is indicated in Table 8.

Table 8: Average effects observed on option value of 25% increase in volatility for 12 QIS participating institutions.

on bought options (% under same scenario without vol. increase)	on sold options (% under same scenario without vol. increase)
2.12%	-1.43%
2.22%	-2.57%
3.05%	-3.09%
3.14%	-3.93%
5.52%	-8.64%
9.07%	-11.77%
12.59%	-12.74%
12.76%	-14.17%
14.17%	-16.77%
20.14%	-19.52%
26.42%	-70.07%
41.70%	-210.88%

(c) In addition, just for the simplified SA on NII, there are further simplifications:

i. Regarding the original maturity of repricing cash flows institutions will not be required to slot cash flows according to their original maturity, but instead can take the average original maturity for the entire product category.

ii. Regarding the empirical determination of commercial margins, it will only be required a breakdown into product categories, without any counterparty or geographic breakdown.

iii. Regarding the interest payments up to and including the repricing date (i.e. NII flows not sensitive to interest rate changes), instead of counting/aggregating interest payments, an approximation can be made via an estimate of the average effective yields and the outstanding notionals.

20. To that the objective that, in line with Article 84 of the CRD, the simplified standardised Approach is at least equally conservative as the regular standardised approach, the EBA has tested the impact of the simplification regarding the slotting of NMDs as mentioned under point

a) of the previous paragraph. The estimated impact on NII (as compared to Tier 1) by percentile – Table 9 below – indicate that the version of prescribed slotting with a 0.7 and 1.3 scalar would generally result in the level of conservatism in the NII in line with the slotting performed by the institutions themselves.

Table 9: Distribution of NII/Tier 1 under various versions of the QIS approach.

	QIS Approach Replica		QIS Approach Replica S-SA Without Scalar		QIS Approach Replica S-SA With 0.8/1.2 Scalar		QIS Approach Replica S-SA With 0.7/1.3 Scalar		QIS Approach Replica S-SA With 0.6/1.4 Scalar	
Scenario	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**	**1**	**2**
5th	-9.05%	-2.90%	-4.01%	-4.71%	-7.52%	-5.22%	-8.49%	-5.29%	-8.97%	-5.19%
10th	-5.29%	-1.59%	-3.16%	-2.96%	-4.69%	-3.15%	-5.62%	-3.24%	-5.73%	-3.36%
25th	-2.81%	-0.54%	-1.27%	-1.31%	-1.77%	-1.45%	-2.96%	-1.48%	-3.51%	-1.24%
50th	-0.07%	0.09%	0.43%	-0.15%	0.00%	-0.54%	-0.42%	-0.67%	-0.87%	-0.33%
75th	1.07%	0.46%	1.95%	0.32%	1.31%	0.11%	0.91%	0.06%	0.47%	0.21%
90th	2.12%	1.44%	4.19%	0.87%	2.33%	0.87%	1.65%	0.87%	1.43%	0.87%
95th	3.03%	2.34%	5.38%	1.33%	4.01%	1.25%	2.34%	1.21%	1.76%	1.31%
# of banks	49	49	49	49	49	49	49	49	49	49

Overall conservatism of the SA compared to IMS

21. The EBA has developed the standardised approach with the objective of creating an accurate portrayal of risk under standardised assumptions which is sufficiently conservative. Regarding NII Table 10 provides an overview of outliers on the basis of a total sample of 35 banks with results on 1 year delta NII/T1. It broadly indicates that the QIS (cash flow based) approach leads to somewhat more conservative results.

Table 10: Number of institutions for which the IMS or QIS approach replica result in an outlier under various NII/T1 thresholds.

Threshold	IMS (Reported) - Panel K	QIS Approach Replica
≥ 0%	3	4
[-1%, 0%)	19	12
[-2%, -1%)	8	5
[-3%, -2%)	4	5
[-4%, -3%)	0	3
[-5%, -4%)	1	3
< -5%	1	4
Total	36	36

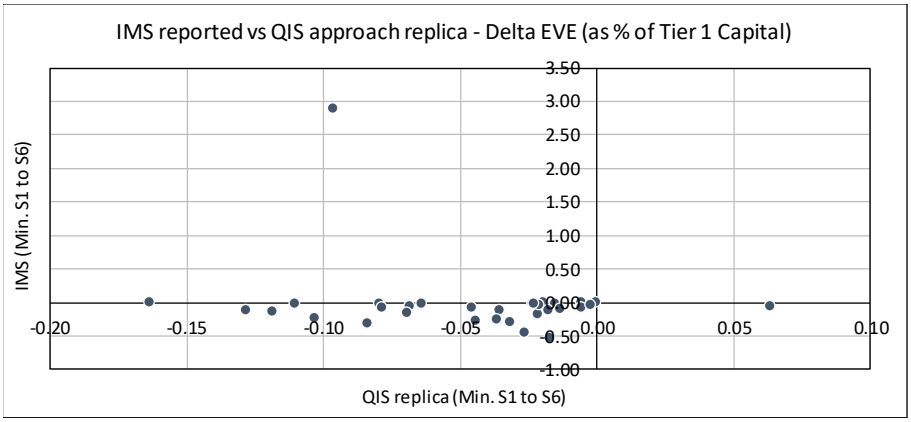
22. To estimate the comparative incentives for institutions to develop internal modelling capabilities, the EBA has also estimated whether the calculation under the standardised approach would generally be more conservative than estimations of institutions themselves regarding EVE. This appears to be the case as indicated in Table 11 below, with outliers that occur significantly more frequently above certain thresholds. Preliminary review by the EBA indicates that many outliers in the QIS approach replica results for EVE may be driven by

incomplete reporting of the cash flows regarding hedges, and hence should be a reason for some institutions to re-examine their data submission.

Table 11: Number of institutions for which the IMS or QIS approach replica result in an outlier under various EVE/T1 thresholds.

Threshold	IMS (Reported) - Panel K	QIS Approach Replica
≥ 0%	1	1
[-5%, -0%)	19	11
[-10%, -5%)	7	6
[-15%, -10%)	4	5
[-20%, -15%)	1	2
[-25%, -20%)	0	1
[-40%, -25%)	0	4
[-55%, -40%)	0	2
< -55%	0	0
Total	32	32

Figure 3: Results of EVE/T1 for which the IMS approach or QIS approach.



Inclusion of fair value effects in the NII

23. The EBA has included a component in the SA on NII measuring the fair value effect. The impact has been tested in the QIS. However, since it concerns a smaller sample of institutions, and since it suffers from the same issues in the data quality as for EVE (see above), the results are not shown.

Inclusion of basis risk value effects in the NII

24. The EBA has included a component in the SA on NII measuring basis risk. This calculation, which forms an add-on to delta NII, is proposed to be mainly based on the notionals of floating rate instruments, and a shocks regarding tightening and widening spreads.

25. For the purposes of the QIS the EBA calibrated an example of a tightening and widening scenario based on historic data. These scenarios, which the institutions were requested to calculate the impact of, are as follows:

Table 12: The basis risk shocks tested in the QIS.

Reference rate	Tightening spread	Widening spread
Interbank ON	0 bps	0 bps
Interbank 1M basis	-30 bps	+54 bps
Interbank 3M basis	-30 bps	+74 bps
Interbank 6M basis	-30 bps	+86 bps
Interbank 12M basis	-30 bps	+98 bps
Policy rate	-30 bps	+45 bps
Other	-30 bps	+80 bps

26. While the proposal in this consultation paper will rely on institutions' own estimations of tightening spread and widening spread scenarios, the QIS results (see Table 13 below) regarding the scenarios in the QIS could provide insight into possible impact of implementing an approach on basis risk.

Table 13 Distribution of results of QIS approach and IMS compared to Tier 1 by percentile based on QIS basis risk shocks.

	Basis risk 1Y NII Sensitivity (as % of Tier 1 Capital)			
	QIS Approach Replica		Results IMS banks	
	7	8	7	8
Mean	**-0.36%**	**0.80%**	**-0.20%**	**-0.61%**
S.D	**1.15%**	**2.51%**	**5.04%**	**6.08%**
5th	-1.84%	-3.19%	-1.80%	-13.77%
10th	-1.37%	-0.96%	-1.14%	-1.62%
25th	-0.78%	0.05%	-0.76%	0.00%
50th	-0.13%	0.53%	-0.30%	0.64%
75th	0.05%	1.69%	0.27%	1.90%
90th	0.49%	2.30%	2.00%	2.55%
95th	0.82%	3.50%	5.18%	3.19%
# of banks	39	39	29	29

27. Table 13 indicates that the proposal included in the QIS (which in terms of calculation steps is broadly similar to the basis risk add-on calculation in the standardised approach) may lead to results that are equivalent to the results that institutions calculate on the basis of their IMS for the same shock dimensions.

4.2 Feedback on the public consultation

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

The consultation period lasted for four months and ended on 4 April 2022. 20 responses were received, of which 13 were published on the EBA website.

This part 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 a 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. A key issue under EBA's assessment was 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 to ensure good comparability and stability of the results of the standardised approach as well as allowing for a comprehensive evaluation of all potentially material risk elements. The EBA has concluded to continue with the proposed incorporation of elements measuring market value changes of instruments held at fair value, since they are important for the evaluation of IRRBB, but take them out of the calculation of the final NII result for consistency between accounting frameworks.

Regarding the calculation of original maturities for the purposes of NII, the EBA continues to find the slotting in accordance with original maturity of repricing cash flows an appropriate compromise between complexity and risk sensitivity. In addition, the EBA would like to recall that for the Simplified SA the calculation can be made on a product category average basis. More generally it is to be kept in mind that the standardised approach and simplified standardised approaches are foreseen to be fall-back approaches only, to determine sufficiently conservative estimates in case the bank does not have a satisfactory internal model.

Regarding the scalars for the estimation of non-maturing deposits, the EBA maintains its proposal on the basis that shock scenarios can significantly change historically observed behaviour also given the long period of subdued interest rate. For the simplified standardised approach, the proposed scalars are necessary to ensure meeting the mandate regarding appropriate conservatism. The EBA monitored the impact assessment as presented in the consultation paper, which was based on the December 2020 QIS, with the December 2021 QIS, and is able to confirm that figures have remained quite stable.

Regarding fixed rate loans subject to prepayment risk the EBA has received feedback pointing to the existence of penalty payments. To enhance risk sensitivity, for those cases where penalties are not sufficient to avoid the need to estimate prepayments, the EBA has changed its treatment to incorporate penalty payment in the cash flow slotting.

On the basis of suggestions from respondents, the EBA has expanded the available set of proportionality thresholds. In particular a threshold has been introduced for fixed rate retail commitments as well as for basis risk, following industry feedback that positions may be negligible for many institutions. In addition, the threshold has been widened regarding fixed rate loans subject to prepayment risk and term deposits subject to early redemption risk. The EBA will monitor the implementation of the thresholds, such as via data available in the QIS where possible.

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

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
Responses to questions in consultation paper (EBA/CP/2021/38)			
Question 1: What is the materiality of prepayments for floating rate instruments and what are the underlying factors? Would you prefer the inclusion of a requirement in Article 6 for institutions to estimate prepayments for these instruments?			
Materiality of prepayment for floating rate instruments	Most of the respondents indicated that the prepayments for floating rate instruments is immaterial, with many highlighting a no more than limited impact on IRRBB metrics. A few respondents pointed out that the phenomenon of prepayment for floating rate instruments could be existent or even material. One respondent suggested, for the sake of prudence, to consider that possible prepayments for floating rate instruments could be material. One respondent indicated that the implementation of dedicated models would pose significant methodological and operational challenges.	The EBA takes note of the comments and, given the low materiality of the phenomenon and the potential operational issue, considers it unnecessary to include in the standardised approach a requirement to estimate prepayment also for floating rate instruments.	No changes made.
Underlying factors for prepayment for floating rate instruments	Respondents highlighted that factors underlying the prepayment for floating rate instruments are typically much less related to the changes in interest rate environment if compared to the prepayment observed on fixed rate instruments or driven by structural, macroeconomic or cultural situation. Consequently, the impact of prepayments on such	The EBA welcomes the comments and considers that the Article 8, which deals with prepayment only for fixed-rate instruments, already addresses the comment.	No changes made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	instruments on IRRBB risk metrics defined in the standardised approach is negligible if at all existent. One respondent indicated that prepayments for floating rate instruments are probably to a large extent driven by clients who want to lock in low interest levels at a certain moment.		
Preference on the inclusion of a requirement in Article 6 to estimate prepayment for floating rate instruments	Most of the respondent didn't see any need to add a requirement in Article 6 for institutions to estimate prepayments for floating rate instruments, also in light of proportionality considerations. One respondent indicated that it seems the right thing to reflect the prepayment for floating rate with appropriate modelling assumptions. One respondent pointed out that prepayment may mostly affect the valuation of the spread component.	The EBA welcomes the comments and opted to retain the current approach, as it is aligned with the BCBS Standards.	No changes made.
Other remarks	One respondent requested clarification of the slotting of the principal amount in case of floating rate instrument because, according to the explanatory box "Floating rate instrument" in Article 4, the principal amount should be put in the bucket corresponding to the date of repricing. This slotting seemed not clear from Article 6.1(b).	The EBA wishes to clarify that the principal amount for Floating rate instrument (Article 6.1(b)) should be slotted in the bucket corresponding to the first reset date, in line with the example given in the explanatory box "Floating rate instrument" in Article 4.	No changes made.
Question 2: Do respondents find that the required determination of stable/non-stable deposits, and core/non-core deposits as described in Article 7 is reflective of the risks and operationally implementable? In case of any unintended consequence or undesirable effect on certain business models or specific activities, please kindly provide concrete examples.			

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
Definition of Retail Non-Maturing Deposits (NMDs)	Two respondents recommended to adapt the definitions applied for the purpose of the standardised methodologies for IRRBB with those applied in the context of the liquidity framework. it was suggested to align the definition of retail deposits in Article 1 (10) (taken from Article 411 (2) of Regulation 575/2013) and leverage the one used in Article 3 (8) of Regulation 2015/61 supplement to 575/2013. According to the suggested amendment all deposits from natural persons are retail and only the SME is checked against the Credit Risk exposure and total deposit amount, if treated as retail or corporate.	The EBA welcomes the comment and wishes to clarify that the definition of retail deposits contained in Article 1(10) of the Consultation Paper refers to Article 411 (2) of Regulation 575/2013 according to which, following the amendment contained in Regulation (EU) 2019/876 of 20 May 2019, all natural persons are considered retail and only the SME or company is checked to be qualify as “retail”.	No change made.
Stable/non-stable deposits	Several respondents pointed out that the definition of stable/non-stable deposits is vague, redundant, not clearly distinguishable from the core/non-core definition and, moreover, mixed with liquidity considerations. Some respondents asked for clarification and more specific instructions for the calculation of stable deposits of the NMDs in Article 7 (2) which is still too vague: “using observed changes of volume due to upward and downward interest rate movements for a period of at least 10yrs”, in particular if read in conjunction with the definition of the stable part on p. 18, which refers to "the current level of interest rates". One respondent supported the definition for the determination of stable/non-stable components,	The EBA notes the comments on the definition of stable/non-stable deposits. However, if the “under the current level of interest rates” would be dropped this would lead to a more conservative result. In addition, the reference to the two-step procedure to estimate the level of core deposits is required from banks according to BCBS Standards. The EBA wishes to clarify that the calculation of stable deposits of the NMDs considers the reference to "observed volume changes over the past 10 years", contained in the BCBS Standards and modifies it in order to deal with the bias in the event that only upward or downward movements have occurred over the ten-year time horizon. In this case it is required to extend the calculation time horizon.	No changes made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	which is considered clear and adequate to represent the risk. One respondent indicated that unstable / stable are concepts usually used in internal models.		
Core/non-core deposits	Some respondents indicated that the definition for the determination of core/non-core components is clear and adequate to represent the risk. Furthermore, the modelling of non-maturing deposits in the standardised approach using core/non-core volumes is common in many banks and it can be considered a reasonable choice for smaller institutions as well. One respondent indicated that the split between core and non-core based on its interest rate sensitivity, does not represent a realistic approach, given that internal prices and remuneration policies of the products are not based on these variables. One respondents pointed out that the definition of core/non-core deposits is vague. Some respondents pointed out that the use of pass-through rates to split between core and non-core based is not appropriate because interest rate sensitivity is not affected by pass through rate and there is low or no correlation at all between behaviour of customer deposits and pass through rate. In particular, banks with more advanced capability to calculate core funds through a quantitative model, in which customer rates depend on the past rates or other additional	The EBA notes the comments on the definition of core/non-core deposits and would like to clarify that it is aligned with the one used in BCBS Standards. The EBA welcomes the comments on the use of pass-through rate to split between core and non-core deposits and wishes to clarify that it is used to have an intuitive and relatively simple way to calculate the core portion of NMDs.	No changes made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	variables may find that the pass-through rate is not highly correlated to their determination of core balances.		
Constraints on core deposits	Regarding the cap on the amount of core deposits (Article 7 (8)), two respondents were concerned about the arbitrariness of its value, its independence from market conditions and the risk of unintended cliff-effect and potential significant mismeasurement of risk, for instance on retail non-transactional deposit for banks with a traditional and retail-based business model. Regarding the cap on the weighted average maturity (Article 7 (11)), many respondents pointed out that the five-year cap to the core fraction only of the non-financial NMD (5 for retail transactional, 4.5 for retail non-transactional and 4 for wholesale non-financial) could have different impact on different products, jurisdiction or business model and could be detrimental to specific assets class with a material impact on the bank ability to support al economy. The parameters for the weighted average maturity can be far from internal models and reality in markets with high interest rates and very low elasticity to the movements of the interest rates, such as Latin-America, producing unrealistic metrics not comparable with internal control and management. NMDs may have longer duration than the envisaged caps if they are treated as both fixed and variable instruments.	The EBA would like to clarify that both the caps on the on the amount of core deposits and on the weighted average maturity of core deposits are in line with the standardised constraints in the BCBS Standards. The same applies to the granularity of the categories of customers envisaged. This approach it is oriented to pursue a prudent and comparable solution, which is also necessary in view of the materiality of NMDs for banks.	No changes made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	One respondent noted that the misalignment between the cap on NMDs and the empirical evidence is even more evident in the Simplified SA, where the maturity constraints refer to the maximum maturity instead of the average (article 23 (1 a ii) and (1 b ii) and (1 c ii)). Some respondents raised comments on the segmentation of NMDs, in particular regarding the distinction between retail transactional and retail-non transactional. This segmentation doesn't add value to the NMD model because is more linked to liquidity consideration rather than interest rate sensitivity. For the sake of simplicity, they suggested to use a unique parameter for retail category (e.g., an 80% as the average between 70% for retail non-transactional and 90% for transactional) or a unique parameter, applicable to the full amount of NMDs. Another respondent suggested to use a cap set to the full amount of NMDs to align the SA proposal to the general framework presented in the Guidelines. Some respondents recognized the principles of simplicity and prudence that have driven the constraints described in Article 7.		
Scalars	Many respondents pointed out that the multipliers to be applied to the core component in upward (0.8)/downward (1.2) scenarios, envisaged in Article 7(6) and (7), are deemed very severe compared to the internal models currently in place with possible undesirable effect on SOT measurement and cliff effect in case a bank is asked to shift from IMS to SA.	The EBA would like to explain that some additional conservatism is necessary considering how long standing interest environment ingrained in the data observations can change and depositor behaviour can shift. Regarding the simplified standardised approach it is important to note that sufficient conservatism needs to be kept compared to the Standardised	No changes made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	Some respondents were concerned about the calibration on these scalars and one of them highlighted that the same 0.8/1.2 scalars used also for prepayment or early redemption rates produce major impact in case of application for NMDs. One respondent pointed out that, in case of the Simplified-SA (Article 24), the calibration of the caps on the core component, according to the increased scalars (around 0.7 and 1.3), is even more severe than in the SA, even when considering the goal of conservative approach as stated in paragraph 5 of art. 84 of Dir. 2013/36/UE.	Approach, which means that the 0.7/1.3 scalars have to be maintained.	
Complexity in implementation	Most of the respondents indicated that the approach is considered to be operationally implementable. Some respondents, however, highlighted that it requires additional model build and manual restatement, with consequently potential operational issues. One respondent was concerned against the risk that the approach, considered tight, may have negative impact on the business model. One respondent pointed out high level of complexity and difficulty to implement the standardised approach. One respondent raised comments that restrictions on NMDs envisaged in the standardised approach are easy to implement for simple models but it is not straightforward for more complex models	The EBA noted the comments and clarifies that the complexity of calculation in the standardised approach is functional to obtaining a measure of risk that is as accurate as possible. To take into account the principle of proportionality and in accordance with the mandate of Article 84 of the CRD, the EBA has developed simplified standardised approaches.	No changes made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	where customer rates depend on the past rates or other additional variables.		
Conservatism	One respondent highlighted that the constraints prescribed in the standardised approaches can lead to incorrect risk measurement and expressed a view according to which, in general, standardised approaches can be no substitute for appropriate internal models in the IRRBB environment. One respondent noted that IRRBB is a symmetric risk and the references to so-called 'conservatism' or 'prudence' are mis-conceived: it is as risky to adopt a too short interest rate profile then a too long interest rate profile. Limitations could generate wrong interest rate risk measurement and management decisions and could generate more risk in the end.	The EBA welcomes the comments and wishes to clarify that the objective of the standardised approach is to harmonise the calculation with common definitions, components and steps for institutions to apply and it does not want to be a substitute for internal models, which banks can choose to apply. In addition, the EBA noted the symmetric nature of IRRBB but, in any case, accurate and prudent hypotheses must be addressed to achieve an adequate level of conservatism. Overall conservatism of the SA compared to IMS (and conservatism of the simplified SA compared to the SA) has been successfully tested with QIS data.	No changes made.
Deposits from financial customers	Two respondents were concerned about the exclusion from the core category of wholesale NMDs from financial customers because it is neither appropriate nor consistent with the Basel Standards. Two respondents asked for clarification about the treatment of a single wholesale deposit to a financial customer which, primarily, serves as a credit-risk mitigation. In these cases, the identification of stable, non-stable, core, or non-core element is irrelevant for the bank. Applying article 7 to this deposit would ignore its purpose,	The EBA welcomes the comments and wishes to clarify that the exclusion from the core category of wholesale NMDs from financial customers depends on the economic rationale that no behavioural assumptions apply to wholesale financial counterparties and is in line with the practices established in the EBA Guidelines (EBA/GL/2018/02), Article 115 (o). In addition, it should be noted that deposits from financial customer that meet the definition in Article 1 (13) follow the treatment provided for in Article 7(9) as a non-core deposit.	No changes made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	resulting in incorrect treatment of that particular wholesale deposit of a financial customer.		
Other remarks	Two respondents requested the EBA to clarify the perimeter of Article 7 (12) also in conjunction with the perimeter defined in Article 7 (2), and, in particular the treatment of wholesale deposits of non-financial customers (Article 7 (1)(b)(ii)). One respondent asked for clarification about potential overlapping definitions between "Fixed rate instruments", "Floating rate instruments" and "NMDs" categories (Article 1.1(4), (5) and (9)). It strongly recommend that for where the repricing index is not based on a direct market liquid index, the standard methodology should allow the usage of models.	The EBA welcomes the comment and clarify that Article 7 (2) applies to NMDs from non-financial wholesale deposits (Article 7 (1) (b) (ii)) and not to wholesale financials (Article 7 (1) (b) (i)). Regarding the possible overlapping definitions between "Fixed rate instruments", "Floating rate instruments" and "NMDs" categories (Article 1.1(4), (5) and (9)), EBA noted the comment and wishes to clarify that the definitions of "Fixed rate instruments" and "Floating rate instruments" could apply also to NMDs. However, in the allocation of repricing cash flows, Article 7 applies to the NMDs (as defined in Article 1.1 (9)), regardless of whether the NMD refers to a floating rate or fixed rate. Regarding floating rate instruments, the repricing index could be also an institution's internally managed index, as described in Article (Article 1.1(5)).	Article 7 (2) is amended with the clarification that it concerns wholesale non-financial deposits.
Question 3: Do respondents find that the required determination and application of a conditional prepayment rate and term deposit redemption rate as described in Article 8 and 9 is reflective of the risks and operationally implementable? In case of any unintended consequence or undesirable effect on certain business models or specific activities, please kindly provide concrete examples.			
Scalars	Some respondents argued that scalars mentioned in Article 8 (3) and Article 9 (5) are not historically accurate and should be perhaps restricted to specific risk measures and differentiated between products.	The EBA highlights that scalars embedded in the draft regulatory technical standard are derived from the Basel standard and no reasons for deviating from it were observed.	No changes made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
Materiality threshold loans subject to prepayment risk	The 2% materiality threshold used for verifying the materiality of both fixed rate loans subject to early repayment and term deposit subject to early redemption is considered not appropriate by many respondents. Some argue that it is low and should be differentiated between products, others that it should be calculated based on a different basis, such as the percentage of possible prepayments or early redemptions.	The EBA would like to clarify that the materiality threshold identified is based on the QIS outcome as described in the dedicated table in the cost-benefit analysis. In order to make the threshold easy to calculate, the materiality should be measured as a ratio between the product affected by behavioural components and the total stock of the respective banking book assets and liabilities. Measuring it based on the percentage of possible prepayments or early redemption would make it less comparable among institutions using different assumptions for identifying products subject to behavioural components. Regarding the materiality threshold for fixed rate loans subject to early repayment, a higher materiality threshold is set. The EBA will continue to monitor the calibration of this threshold based on QIS data.	Article 8(2) has been amended as follows: The prepayment rate may be set at 0, where the total of the fixed rate loans referred to in paragraph 1 and 7 is less than 5% of the positions referred to in Article 2(2) that are accounted for as an asset in accordance with the applicable accounting framework. Also for term deposits subject to early redemption risk the threshold is increased to 5%.
Early redeemed term deposits	A respondents argued that the allocation of term deposits subject to early redemption to the overnight bucket it is not appropriate, while a second one asked further clarification on why the redemption rate can't be used as the prepayment rate for loans.	The EBA would like to clarify that the treatment of term deposits subject to early redemption is consistent with the Basel standard, which prescribes allocating amounts redeemed early to be slotted in the overnight time bucket.	No changes made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
Implementation challenges	Some respondents highlighted that the approach is too complex and operationally challenging, especially for non-complex and small institutions.	The complexity of calculation in the standardised approach is necessary to obtain a measure of risk that is sufficiently accurate.	No changes made.
Other remarks	Two respondents reported that the IT systems allows institutions to project cashflows based on actual maturities. Using maturity and repricing buckets would require banks implementing a cash flow model that is cumbersome and not aligned with internal praxes. In addition, it was highlighted that banks could introduce penalty payments in order to compensate the issuer for the loss linked to early prepayment, but Article 8(5) does not consider such possibility on the behaviour of the customer. The unconditional bucketing of expected prepayment could generate errors. Two respondents asked to clarify that the estimation methodology for calculating the prepayment or the early redemption rate of those products shall be applied consistently over time and not the estimator itself.	The EBA would like to clarify that the 19 time buckets listed in Annex 1 are coherent with the Basel standard and that the usage of maturity and repricing buckets is deemed to properly catch the correct sensitivity of different balance sheet items to interest rate risk. Penalties applied for compensating the lender in case of early repayment should be considered also as cashflows that can be used for reinvestment.	Article 8(2) and Article 9(4) have been amended to clarify that the estimation methodology shall be applied consistently over time. Article 8(5) is amended to clarify that for those loans where a borrower is bearing the economic costs above a certain prepayment threshold, the penalty payments that are expected to happen in a scenario would need to be slotted together with the prepayments.
Question 4: Is the treatment of fixed rate loan commitments to retail counterparties clear and are there other instruments with retail counterparties where a behavioural approach to optionality should be taken?			

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
Fixed rate loan commitments to non-retail counterparties	A respondent highlighted that restriction to retail customers is not necessary in case spreads, such as commercial margins, are included and suggested including drawing models also for non-retail counterparties.	The EBA takes note of the comments and would like to point out that enlarging the scope of fixed rate loan commitments to non-retail counterparties would not be in line with the Basel standard, which explicitly excludes corporate clients and assigns it to the treatment of automatic interest rate options since their behaviour is more driven by automatic interest rate options (and hence have to follow the treatment in Articles 12, 14 and 15).	No changes made.
Materiality threshold fixed rate retail lines	A few respondents suggested including a materiality threshold under which such instruments shall be included.	The EBA welcomes the comment and deems that a materiality criterion of 2%, as done for other products subject to behavioural component, can be applied also for fixed rate loan commitments to non-retail counterparties.	Article 11(3) is amended to include a materiality threshold.
Representation according to the standardised framework	A respondent asked to provide clarification on the expected representation within the standardised framework, also by means of numerical examples.	The EBA welcomes the comment and wishes to clarify that as mentioned in Article 11 (3) for fixed rate loan commitments to retail counterparties institutions should estimate based on historical observations the amount to be draw down in each scenario and allocate it in the correspondent repricing time bucket.	No changes made.
Unconditionally cancellable commitments	A respondent asked to explicitly exclude unconditionally cancellable commitments from the fixed rate loan commitments to retail counterparties. Being unconditionally cancellable they would constitute an exposure to interest rates risk only in case of drawdown.	The EBA highlights that the regulatory technical standard is applicable to all interest rate sensitive assets which are not deducted from Common Equity Tier 1 capital. In case of unconditionally cancellable loan commitments, given the peculiarity of the product, institution shall estimate on the basis of historic	No changes made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
		observation the relevant drawings of those products in interest rate risk scenarios.	
Question 5: Do respondents find that the required determination of the impact of a 25% increase in implicit volatility as described in Article 12 is operationally implementable?			
Treatment of sold and bought options	A respondent asked if the implicit volatility shock shall be applied to both baseline and shock scenarios for sold options while for those that are bought it is applicable only to the shock scenario. A respondent asked to align the RTS with the Basel framework leaving discretion for banks of including all bought option or only those used for hedging sold automatic interest rate options.	The EBA welcomes the comment and would like to clarify that the implied volatility increase is applicable only to shock scenarios for both bought and sold options. The EBA would like to clarify that the restriction of the approach to bought options used for hedging sold automatic interest rate options is not deemed adequate for reflecting the IRRBB profile of such products.	Article 12(3)b is amended to clarify that the implied volatility increase in the shock scenario is for both bought and sold options.
Explicit and embedded options	Two respondents asked clarification whether the treatment disciplined in Article 12 is applicable to automatic embedded and explicit options where the latter is used for hedging the former. The respondents suggest using a net approach in the case of embedded options unique to the instrument considering that the explicit hedging option could be tailor made and so no pricing history can be observed in the market. In case those positions would not be nettable the approach is not considered operationally implementable. A respondent suggested adopting a different treatment for options embedded in amortised cost products from explicit options and those embedded in fair value instruments, in particular the former	The EBA welcomes the comment and wishes to clarify that netting at the start of the calculation is not considered in the Basel standard, so automatic embedded options and explicit options used for hedging the former should be treated separately. It is only at the end of the calculation that the offsetting effects working in an offsetting manner in practice. The EBA would like to clarify that the RTS are applicable to all positions listed in Article 2, irrespective of the accounting framework adopted.	No changes made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	should be excluded from IRRBB calculations since they do not have effects on capital.		
Implied volatility shock	Some respondent asked additional clarifications about the empirical evidence leading to the quantification of 25% shock on implied volatility, highlighting that it may not be representative for all currencies. A respondent state that an economic value of equity sensitivity with shocked volatilities is not appropriate for hedging scenarios, but it may be useful for a stress scenario.	The EBA welcomes the comments and would like to clarify that the adoption of the 25% and its application is aligned with the Basel standard.	No changes made.
Materiality threshold automatic optionality	Many respondents highlighted that the approach is too complex and burdensome, sometimes asking for the introduction of materiality criteria or simplifications. Some respondents pointed out that the approach cannot be operationally implementable in current IMSs or that only a partial implementation is possible	The EBA considers that institutions should be capable of revaluating options subject to an interest rate scenario. There are no obvious materiality thresholds that would seem appropriate.	No changes made.
Other remarks	A respondent asked to clarify that the 25% implied volatility shock is not applicable for SOT calculation while a second one indicated that introducing the volatility shock for the six scenarios related to the economic value of equity will be operationally burdensome and would ultimately alter the risk representation A respondent suggests considering the implied volatility increase only for explicit options and those	The EBA welcomes the comment and wishes to clarify that the increase in implicit volatility is also valid for the SOT calculation when an institution is under the standardised approach, in order to have a minimum set of shock scenarios for institutions, and it is not restricted to explicit options and those embedded in fair value instruments.	No changes made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	embedded in fair value instruments and only in some scenarios, since when using valuation models an automatic increase of interest rates is linked to decreasing implied volatility observed in the market and vice versa.		
Question 6: Do respondents find that the required slotting of repricing cash flows in accordance with the second dimension of original maturity/reference term as described in Article 13 is operationally implementable?			
Double slotting is deemed difficult to implement	Most of the respondents answered that the required slotting of repricing cash flows in accordance with the second dimension of original maturity/reference term as described in Article 13 is operationally implementable. However, it has been highlighted in almost all comments that it will be challenging to perform this calculation, as mapping of items in accordance with original maturity is an information deemed not easily retrievable, and will require a considerable effort in terms of time and investments. Furthermore, a few do not see the rationale behind the structure of the reference term time buckets and believe that a more detailed elaboration is needed on the economic background on why this is deemed adequate. One respondent in particular emphasized the cash flow slotting according to shock scenarios is deemed far too complex and the economic rationale not clear in the case of the core component of the NMDs which by definition are	The EBA notes the comment requesting a transition period to operationally implement the new requirements. Nonetheless, regarding SA and simplified SA it needs to be kept in mind that these are intended merely as fall-back approaches. EBA would like also to emphasize that the simplified standardised approach and the standardised approach are not built for comparison purposes and will be applied to banks which elected it or have been requested to use it due to a deemed "not satisfactory" internal management system by the competent authority. With regard to the core component of the NMDs it is not clear how the comment would relate to the aspect of slotting of original maturity. Instead, the comment seems to be about slotting in the repricing time buckets (i.e., residual maturity). In this regard while "unlikely to reprice even under significant changes in the interest rate environment" (as per article 1(16)) of the RTS SA, it is still important, for example for EVE, to understand whether what kind of residual maturity they would have.	No changes made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	"unlikely to reprice even under significant changes in the interest rate environment". Finally, two respondents mentioned that the approach would not be operationally implementable and considered that the slotting of cash flows into maturity buckets creates an inaccurate projection for the management of the Bank's liquidity position. Hence the standardised approach would be unsuitable for internal management purposes. An alternative approach built on the more accurate model if the institution has implemented such is proposed.	The EBA acknowledges that an operational burden is associated with slotting in accordance with original maturity. However, it is noted that also in liquidity reporting (additional monitoring metrics) breakdowns by original maturity (although defined slightly differently) are reported, which demonstrates that it can be done. As for the liquidity reporting, the small and non-complex institutions (i.e., S-SA institutions) do not have this requirement is not there.	
Treatment of non-contractual cash flows such as early redemptions and prepayments	One respondent also asked for clarification with regard to the treatment of non-contractual cash-flows such as early redemptions and prepayments regarding their repricing term. If, for example, 50% of a fixed deposit is modelled to be redeemed O/N, it should be clarified whether it should be reinvested with the O/N shock or at the initial maturity.	Regarding the question about the treatment of non-contractual cash flows (e.g., early redemptions and early repayments) and the required slotting in the second dimension, EBA would like to clarify that in case of reinvestment the slotting should be made according to the original maturity.	No change made.
Treatment of fixed-rate instruments	One respondent highlighted that for fixed-rate instruments, the implementation of the slotting according to the original maturity at transaction level may be operationally burdensome and recommend applying a simplified approach by assigning the average original maturity at product level to reduce the operational workload. Another one mentioned that the integration of the cash flow of fixed rate instruments for the determination of the projected NII is (deemed) not compliant with a	Concerning the integration of the cash flow of fixed rate instruments for the determination of the projected NII, EBA finds counterintuitive to exclude these instruments in the context of a constant balance sheet which supposes an exact reinvestment of the positions over a 1-year horizon. With regard to the comment about the use of the average original maturity at product level to reduce the operational	No change made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	rolled balance sheet hypothesis, and not perceived its interest (which is neither included in the internal approach nor requested in the calculation of the SOT NII).	workload, EBA considers that it would overly simplify IRRBB measurement and distort the risk assessment.	
Options stripping – Swap legs	A question is also raised with regard to the stripping of options from the underlying transaction and the separate presentation of swap legs to determine fair value changes which is deemed currently not technically implemented, as only net cash flows are processed.	The question is deemed insufficiently clear by EBA as no context/rationale is provided.	No change made.
Question 7: Do respondents find it practical how the determination of several components of the NII calculation, with in particular the fair value component of Article 20 and the fair value component of automatic options of Article 15, is generally based on the processes used for the EVE calculation (in particular Article 16 and Article 12)?			
Inclusions of FV changes in NII	To answer this question most of respondents refer to their answer on the EBA proposal to include FV changes in the NII calculation (also mentioned in response to the draft GL and RTS SOT) and clearly mentioned that NII should solely refer to interest income and expenses. First, the proposal is mainly perceived as a deviation from the mandate provided by CRD that refers to Net Interest Income and from Basel IRRBB standard in which earnings are considered as NII (cf. BCBS 368 para 8 "*Changes in interest rates also affect a bank's earnings by altering interest rate-sensitive income and expenses, affecting its net interest income (NII)*"). One respondent mentioned that it will blur the definition of NII and that it can't be	The inclusion of FV changes is not limited to the SA approach but is also foreseen in the Guidelines (and applicable to Internal approach). The EBA notes that the answers received on this particular question echo the ones received on draft GL and RTS on SOT. EBA takes note of the argument about perceived complexity but would like to clarify that article 20 does not require to estimate the MtM value at t=1 but only at the beginning of the period (t=0) as it leans on the same process as for EVE, which instead avoids complexity. In addition, where notional repricing cash flows fall within the NII horizon they shall be set to zero, which should avoid any overlap for FV instruments maturing within the NII horizon.	A renaming of Articles 15 and 20 regarding the calculation of market value changes of instruments held at fair value, combined with a removal of the elements from the calculation in Article 22.

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	directly referred to as an NII measure. "Earnings Risk" or similar would be more appropriate. Second, concerning the specific calculation foreseen in article 20, some respondents consider that it would introduce a higher complexity in the metric due to the overlapping between the NII and the FV changes during the projection period (i.e., 12M) and, as a consequence, create an overlapping between NII measures and Economic Value (EV) measures, such as SOT EVE and SOT NII (while they should be complementary). On respondent asked to simply delete article 20. Third one respondent mentioned that the calculation of FV changes not only requires excluding the instruments maturing or repricing during the first year. It also requires estimating the future MtM impact at the end of the projection period (t=1 year) on the fair value instruments with longer maturities (>1Y) which is estimated to be computationally very demanding. Fourth It is considered by one respondent that it would disincentive to hedge with cash flow hedging instruments as their changes in fair value would be considered as a risk to NII while they are entered into precisely to make NII less sensitive.	Nonetheless, EBA understands the argument regarding consistency between accounting frameworks and would like to highlight that, to avoid undue weight on accounting treatments, the calculation in Article 20 will, while important for monitoring/evaluation purposes, not contribute to NII in the final drafting of Article 22 of the RTS.	
Treatment of hedged – hedging instruments	Article 20 requires institutions to calculate an add-on for instruments held at fair value. These include the hedging instruments, but, not necessarily, the hedged instruments (hedge accounting does not reclassify the hedged instrument as 'fair value'	EBA understands the argument regarding cash flow hedging and would like to highlight that, to avoid undue weight on accounting treatments, the calculation in Article 20 will, while important for	A renaming of Articles 15 and 20 regarding the calculation of market value changes of

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	instrument). The asymmetric treatment of the hedging instrument and hedged instrument in articles 15 and 20 could cause spurious outcomes for the NII measure of IRRBB.	monitoring/evaluation purposes, not contribute to NII in the final drafting of Article 22 of the RTS.	instruments held at fair value, combined with a removal of the elements from the calculation in Article 22.
FV accounting treatment	One respondent highlighted that the current definition of fair value effects only applies to banks using IFRS, while many small and medium-sized banks in its jurisdiction prepare their financial statements according to local GAAP. Hence it will be difficult for banks using local GAAP to implement the requirements. Generally, those banks have few positions with effects on P&L in different interest rate scenarios. It is suggested to set an appropriate threshold to ensure that such a resource-intensive calculation will only be performed only if the underlying risk is actually material for the bank. Another one mentioned that EBA needs to be clarify in its definition regarding which particular fair value components and instruments are required to be included in the calculations. It is considered that current GL gives room for interpretation which will lead to different practices among banks and jurisdictions.	EBA would like to clarify that indeed small and non-complex which are not applying IFRS standards and do not recognize any FV effects would have to stick to the NII definition as the difference between Net interest Income – Net interest Expenses. Therefore, for consistency reasons (between accounting frameworks), the EBA has decided to treat the element of market value changes of instruments held at fair value as an item to be calculated in the RTS on SA for the purposes of monitoring primarily. With regard to the FV components to be included in the calculation, EBA wants to clarify that it will be all FV changes (through OCI/P&L) in accordance with the applicable accounting framework. Lastly, concerning the potential implementation of a materiality threshold, please see the following comments.	A renaming of Articles 15 and 20 regarding the calculation of market value changes of instruments held at fair value, combined with a removal of the elements from the calculation in Article 22. Otherwise, no change made.
Materiality threshold FV	One respondent suggested to include a threshold under which banks are eligible to disregard such effects in the standardised approach to ensure that this considered “an effort-intensive” calculation is	EBA considers that institutions should be capable of monitoring of the market value changes in FV instruments (or in OCI) resulting from interest rate	None regarding calculation threshold.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	only performed if the underlying risk is actually material for the bank.	changes. Therefore, no materiality threshold would seem appropriate.	
Question 8: Do respondents find that the calculation of the net interest income add-on for basis risk is reflective of the risk and operationally implementable?			
Materiality threshold basis risk	Most of the respondents answered that the calculation of the net interest income add-on for basis risk is reflective of the risk and operationally implementable. However, it is argued that it might be challenging for smaller institutions to compute this add-on. A few respondents mentioned the need to define a materiality threshold as the diversity of interest-linked financial instruments usually found at smaller banks and specialised institutions with a limited product range is low. In the same vein, one respondent argued that the add-on component for basis risk would add further complexity to an already complex framework, while not adding much value in terms of risk measurement accuracy, given the limited materiality of this type of risk for banks in his jurisdiction. Hence it is suggested to introduce a materiality threshold for it. The threshold could be set in terms of minimum outstanding of floating rate positions funded by/invested in other floating positions, but with different benchmark rate indexation.	EBA understands the argument about the need for a materiality threshold and deems relevant the proposal about set in terms of minimum outstanding of floating rate positions funded by/invested in other floating positions, but with different benchmark rate indexation.	To take into account proportionality the basis risk add-on only has to be calculated where the sum of floating rate instruments other than those with the overnight reference rate/benchmark exceeds 5% of interest rate sensitive assets in the banking book.
Calculation methodology	Two respondents also highlighted that the basis risk calculation, as it is defined, includes the variations	The EBA notes the comment and wishes to clarify that basis risk add-on to the NII will be calculated based on	No change made.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	among different tenors of the same yield curve but basis risk when exposed to different yield curves with the same tenor is not considered (multi-curve environment). Besides some respondents mentioned that changes in the slope are directly related to the interest rate scenario evaluated and they should not be calibrated and evaluated separately. Hence, they consider that shocks should be consistent with the IRs scenario evaluated. Still related to the reference curve, one respondent mentioned that the RTS should include the possibility for institutions to define the reference-term curve based on their internal risk management objective. Institutions could in that case determine the reference point to compare with other floating rate indices to measure basis risk and which would not be always the overnight reference rate. One respondent wanted also some clarification about the computation of the add-on: does it correspond to (1) the highest calibrated shock to the sensitivity to that reference rate (2) the largest calibrated shock to the total sensitivity of the entire portfolio (3) to each sensitivity the shock calculated for its reference rate. Finally, it has to be mentioned that two respondents considered the calculation of the add-on as not operationally implementable based on the argument that EBA requires institutions that have an inadequate internal system for the management of IRRBB to be equipped to model conditional	the institution own sensitivity scenario (widening and tightening shocks) to the different reference rate curves and the worst outcome of the different scenario will be added to the NII measure. The add-on is primarily conceived as a shock between different tenors. EBA confirms that it corresponds to applying the calibrated shock, either for the widening or tightening scenario, to the sensitivity to of each reference rate. The approach is not aimed at capturing variations among different tenors of the same yield curve as it aims to capture variations among different interest rate reference rates. In the context of the standardised approach, a multi-curve environment is not considered. Finally, EBA understands the argument about the use of institution own reference term curve to compute the add-on but would like to clarify that it will have to be computed in accordance with the tenors mentioned in article 21(2), meaning in reference to the overnight bucket.	

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	widening and narrowing of spreads between basic rates.		
Question 9: Do respondents find that the adjustments in the Simplified Standardised Approach as set out in Article 23 and 24 are operationally implementable, and do they find that any other simplification would be appropriate?			
Simplified standardised approach still considered as too complex	Most of the respondents welcome the effort made to simplify the SA approach. However, it is still deemed too complex (in particular when it comes to data requirements, options, margins, basis risk, and Fair value changes) and several respondents think that proportionality principle should be better considered. One respondent deemed the approaches not implementable. With regard to EVE: One respondent specifically highlighted the following points: (1) for automatic options it will not be possible for many small banks to calculate the value of automatic options in accordance with Article 12 using a scenario-based full valuation as they do not have the technical capability or expertise to carry out such a valuation. It is also believed the standardised approach should contain a materiality threshold for automatic options below which they do not need to be considered (2) For Early repayment it is estimated that the time and effort involved in implementation should be in proportion to the materiality of influencing factors. The proposed thresholds for the consideration of early repayment is not deemed appropriate. The consultation paper currently envisages that early	Regarding the proposal for automatic options (threshold and sensitivity-based valuation) please refer to the answer to question 5. With regard to the proposal of revision of the early repayment threshold based on the impact of such repayments and not the volume of fixed interest instruments, EBA considers that it would be too complex to implement. Same argument is also considered regarding the proposal about standardised conditional prepayment and redemption rates. Concerning the suggestion to exclude the calculation of coupons already fixed and commercial spreads, EBA considers that it would lead to an overly simplistic and non-risk sensitive results, which is a priority raised by other respondents. Further it needs to be noted that these components are important for the baseline NII calculation. With regard to the proposal to exclude from the metrics the evaluation of interest rate options, when they are bought by the bank, please refer to the answer to question 5.	No change made.

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	repayments should be modelled as soon as 2% of total assets consist of fixed-interest assets with early repayment rights in accordance with Article 8. This would affect a lot of institutions given the scale of their fixed-income lending. Yet this threshold relates only to the volume and not the impact of such repayment rights, which is not deemed appropriate. It is recommended to set thresholds that relate to the expected impact on the risk figure instead of the absolute volume of products with options. With regard to NII: One respondent proposed to introduce a sensitivity approach for the simplified framework for NII by excluding the computation of all fixed coupons and commercial spreads that are needed for the full NII projection (to be noted that in the same vein another respondent suggested to focus only on the reinvestment of the principal in line with the constant balance sheet definition and to consider NII in a "narrow sense" without fixed rate coupons and commercial spreads). As a second possibility, it is suggested to consider the definition of standardised conditional prepayment rates as well as standardised average early redemption rates, to be applied in the Simplified SA, consistently with the modelling approach envisaged for NMDs. As a further simplification, it is also suggested to exclude from the metrics the evaluation of interest rate options, when they are bought by the bank.	Regarding commercial margins EBA would like to clarify that it is not required as part of the RTS to decompose the commercial margin per counterparty.	

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	Another respondent suggests allowing more flexibility and change the wording in the simplified standardised approach from "shall" to "may" to allow for implementation of a more adequate approach. Finally, two respondents mentioned that should be made clear that no breakdown into counterparties is required in the empirical determination of commercial margins.		
Question 10: Do respondents find that all the necessary aspects are covered and the steps and assumptions for the evaluation of EVE and NII as laid out in the standardised approach and simplified standardised approach clear enough and operationally implementable?			
EBA Standardised approach consistency with BCBS principles	Most of the respondents find that the standardised and simplified standardised approaches clear and operationally implementable but still too complex and with a cost-benefit not obvious considering the business models of smaller banks, which (allegedly) traditionally don't take major exposures on this risk. From a more legal perspective, It should be also noted that a few respondents mentioned the fact that implementing a (simplified) standardised approach would be contradictory with Basel principles (Basel 368 para 3) in which it is mentioned that "*The Committee noted the industry's feedback on the feasibility of a Pillar 1 approach to IRRBB, in particular the complexities involved in formulating a standardised measure of IRRBB which would be both sufficiently accurate and risk-sensitive to allow it to act as a means of setting regulatory capital requirements. The Committee concludes that the*	The EBA notes the comment and wishes to clarify that it has received a mandate from paragraph 5 of Article 84 of Directive 2013/36/EU the EBA to develop a standardised (SA) and simplified standardised (S-SA) approach. With regard to the potential difficulties for small and non-complex institutions to implement the S-SA, EBA would like to recall that banks are not obliged to adopt this approach, unless explicitly requested by the competent authority. In that sense, as several respondents doubted about the benefit to use this approach for smaller banks, EBA would like to clarify that if these banks have an IRRBB internal management system deemed satisfactory by their supervisor, they would not have to use the S-SA.	No change made.

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	heterogeneous nature of IRRBB would be more appropriately captured in Pillar 2."		
General comments provided on the S-SA	See below general comments provided by one respondent: First assumptions (e.g., treatment of NMD, add-on on options related to a 25% increase in volatility, exclusion of equity) is deemed not economically founded, complex, and are detrimental to the risk sensitivity of IRRBB measurement. Second the specific treatment to limit NMDs (in both amounts and maturity) in the standardised approach is deemed not substantiated. Moreover, from an operational point of view, the implementation of such an approach is deemed highly complex due to the several re-treatments (1) in some markets, sight deposits have always been zero cost (therefore fixed rate liability), even when in situations of high and very quick increase of rates (2005-2008) and even during the European sovereign debt crisis (2011-2012). Such caps on duration on NMD would (allegedly) alter the assessment of the actual risk taken by the concerned banks. It may push the banks to take forced, unnecessary and potentially risky derivatives positions (2) NMDs may be rate dependent (3) Setting a fixed cap on the stability does not make economic sense. This is suboptimal even when considering convexity effects. In case of stable market conditions, a cap on maturity removes an opportunity to balance the losses	EBA takes note of all the comments made below but would like to recall that the standardised approach will be either elected by the bank or imposed by a competent authority is the IMS is deemed not satisfactory. Although calibration can be considered as rules-based, one should consider it as a fallback approach that needs to be implemented by institutions that lack a satisfactory internal model. Regarding the point bought / sold interest rate automatic options computed with a 25% shock of volatility please refer to the answer to question 5. With regard to the fourth point, it is reminded that the 25% shock will be applied only in the interest rate scenario to compute the equity add-on. Concerning the fifth comment and the computation of EVE, in the BCBS 368 (or SRP 98.45), among the variety of possibilities that can be used to measure the economic value under the standardised approach, for the EVE measure it is observed that by "measuring the change in the net present value of those assets and liabilities under a stressed interest rate scenario shows the actual level of risk to the economic value of equity. In this calculation, therefore, no rate or term is applied to equity itself, which is therefore excluded". About the last comment and the possibility to choose/select articles to be applied with competent	No change made.

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	related to the convexity management when market moves (4) Any undue ill-calibrated parameter would force the banks using SA to manage on wrong basis which could actually increase actual risks and cause losses for them, which cannot hardly be an objective for competent authority (5) From an operational point of view, the multiplication and complexity of assumptions in this approach will complicate the report automation, with manual restatements will necessarily increase the risk of operational error. Third the inclusion of an add on for bought / sold interest rate automatic options computed with a 25% shock of volatility is not so clear: our understanding is that bought and sold options are valuated differently though in many cases, bought options hedge sold option and vice versa. Therefore, we do not understand the rationale of treating differently an option and its hedge. Fourth, for interest rate hedging purposes, using implicit volatility without shock is the best estimate, and it avoids distorting the delta and gamma of the options. Fifth like commercial margins and own equity capital in the internal approach, institutions applying the standard method should be able to integrate equity (on documentation and after validation by the regulator). Excluding equity simply fails to recognize equity stability. This approach	authority approval, it seems difficult to implement from a supervisory point of view as the purpose of the RTS is to implement a standardised (and comparable) approach.	

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	penalizes institutions that made the effort to be highly capitalized. Overall, it is believed that this approach is too restrictive (especially in comparison with the guidelines) and that more flexibility could be allowed. The possibility of deviating from certain assumptions (after validation by the regulator during a check for example) should be possible. The institution should have the possibility to not apply strictly all articles, after validation by the supervisor.		
Use of SA approach associated with internal metric	One respondent mentioned potential inconsistencies that may arise if internal systems were used for one perspective (EVE/NII) and the (simplified) standardised methodology was mandatory for the respective other perspective. For instance, in the case of NMDs, different cash flows could be modelled in the two perspectives: one cash flow that appropriately maps the institution's planned interest rate adjustment policy and one cash flow constructed according to prudential regulations. In this case, different control signals could arise, not only from the differences between the EVE and NII methods but also from the diverging cash flows. This would significantly complicate the interpretation of the results. Solutions to this problem should also be explored. One option would be the simultaneous application of the (simplified) standardised methodology in both perspectives – even if a satisfactory internal system exists for one of them.	EBA does not expect institutions to use both standardised approach and internal measurement system. It is reminded that SA approach will be either elected by the bank, if deemed relevant by an institution for its IRRBB measurement, or imposed by the competent authority in case the internal measurement system is deemed not satisfactory. It is not EBA's intention to request the implementation of standardised and internal systems in parallel. With regard to the second comment, it would look odd (and meaningless) to request to implement a standardised IRRBB measurement and to not use it for a management perspective. Again, it is noted that the SA approach will be imposed only in the case internal measurement is not satisfactory. It is also expected that the competent will justify such a prudential measure (see last comment).	No change made.

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	In the same vein, two respondents mentioned that standardised approaches should not be used to challenge internal measurement systems (by benchmarking them against standardised approaches). On no account should institutions be required to implement standardised and internal systems in parallel. In any event, the data collection for a parallel calculation would be far too time-consuming. Another respondent mentioned that the use of SA approach should be limited to the evaluation (which will be necessarily wrong as mentioned before) and not for the actual management (as banks would have to manage with flawed steering metrics that would be detrimental to the actual risk management) as clearly mentioned in Art.98(3) "A competent authority may require an institution to use the standardised methodology referred to in paragraph 1 where the internal systems implemented by that institution for the purpose of evaluating the risks referred to in that paragraph are not satisfactory." Besides same respondent mentioned that competent authority should demonstrate that the standardised (resp. simplified) methodology would be more relevant than the IMS that it would pretend substituting.		
Additional delay after publication on Official Journal	Some respondents highlighted the importance of simultaneous entry into application between the RTS on SA and the other standards (RTS on SOT and	Since the SA/S-SA is primarily only a fall-back in case the internal models are not satisfactory it does not appear to be necessary to propose an exceptional	No change made.

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	GL on IRRBB). In addition, there was the suggestion that due to necessary investments in IT systems to comply with the new SA they should be granted a proper time span. It has been suggested to extend the current provision of 20 days after the publication on Official Journal of the European Union.	delay after the publication on Official Journal of the European Union.	