17 November 2017

2018 EU-Wide Stress Test

Methodological Note

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Abbreviations

A-IRB	advanced internal ratings-based (approach)
ABCP	asset-backed commercial paper
ABS	asset-backed security
ALM	asset and liability management
AMA	advanced measurement approach
APR	all price risk
bps	basis points
BRRD	Bank Recovery and Resolution Directive 2014/59/EU
CA	comprehensive approach
CCF	credit conversion factor
CCP	central counterparty
CCR	counterparty credit risk
CDO	collateralised debt obligation
CDS	credit default swap
CET1	Common Equity Tier 1
CMBS	commercial mortgage-backed security
COREP	common reporting framework
CRD	Capital Requirements Directive 2013/36/EU
CRM	credit risk mitigation
CRR	Capital Requirements Regulation (EU) No 575/2013
CSV	calculation support and validation
CVA	credit valuation adjustment
DGS	Deposit Guarantee Scheme
DGSD	Deposit Guarantee Scheme Directive 2014/49/EU
DTA	deferred tax asset
DTC	deferred tax credit
DTL	deferred tax liability
DVA	debt valuation adjustment
EaR	earnings at risk
EBA	European Banking Authority

ECAI	external credit assessment institution
ECB	European Central Bank
ECL	expected credit losses
EIR	effective interest rate
EL	expected loss
EMEA	Europe, the Middle East and Africa
ESRB	European Systemic Risk Board
EU	European Union
F-IRB	Foundation IRB
FINREP	financial reporting framework
FVO	fair value option (designated at fair value through profit or loss — as defined in International Accounting Standard 39)
FVOCI	fair value reported in other comprehensive income as defined in IFRS 9
FVPL	fair value through profit or loss as defined in IFRS 9
FX	Forex
HFT	held for trading (as defined in International Accounting Standard 39)
IAA	internal assessment approach
IFRS	International Financial Reporting Standards
IPS	Institutional Protection Schemes
IRB	internal ratings-based (approach)
IRC	incremental risk charge
L1/L2/L3	level 1/level 2/level 3
LGD	loss given default
LR	loss rates
MDA	Maximum Distributable Amount
NFCI	net fee and commission income
nGAAP	national accounting framework based on EU Bank Accounts Directive (BAD) (86/635/EEC)
NII	net interest income
NTI	net trading income
OCI	other comprehensive income
P&L	profit and loss (account)
PD	probability of default
REA	risk exposure amount (risk-weighted exposure amount)

RF	Resolution Fund
RI	relevant indicator
RMBS	residential mortgage-backed security
S1/S2/S3	stage 1/stage 2/stage 3
SFA	supervisory formula approach
SICR	significant increase in credit risk
SMEs	small and medium-sized enterprises
SREP	supervisory review and evaluation process
SRT	significant risk transfer
SSM	Single Supervisory Mechanism
STA	standardised approach
SVaR	stressed value at risk
TE	trading exemption
TI&RH	items held with a trading intent and their related hedges
TR	transition rates
TRA	transparency
VaR	value at risk

1. Introduction

1.1 Background

1. The EBA is required, in cooperation with the ESRB, to initiate and coordinate EU-wide stress tests to assess the resilience of financial institutions to adverse market developments.

2. The objective of the EU-wide stress test is to provide supervisors, banks and other market participants with a common analytical framework to consistently compare and assess the resilience of EU banks and the EU banking system to shocks, and to challenge the capital position of EU banks. The exercise is based on a common methodology, internally consistent and relevant scenarios, and a set of templates that capture starting point data and stress test results to allow a rigorous assessment of the banks in the sample.

3. In particular, it is designed to inform the SREP carried out by competent authorities. The disclosure of granular data on a bank-by-bank level is meant to facilitate market discipline and also serves as a common ground on which competent authorities base their assessments.

1.2 Objectives of this note

4. This document describes the common methodology that defines how banks should calculate the stress impact of the common scenarios and, at the same time, sets constraints for their bottom-up calculations. In addition to setting these requirements, it aims to provide banks with adequate guidance and support for performing the EU-wide stress test. This guidance does not cover the quality assurance process or possible supervisory measures that should be put in place following the outcome of the stress test.

5. The templates used for collecting data from the banks, as well as for publicly disclosing the outcome of the exercise, are an integral part of this document. In addition, this document should be read in conjunction with any additional guidance provided by the EBA on templates, methodology, scenarios and processes.

6. The note also lists components of banks' projections for which banks are required to provide additional qualitative information in accompanying documents (e.g. on the methods applied) as input to the quality assurance process. A summary of the minimum information requirements in this respect is provided in the annex.

1.3 Key aspects

1.3.1 Sample of banks

7. The EU-wide stress test exercise is carried out on a sample of banks covering broadly 70% of the banking sector in the euro area, each non-euro area EU Member State and Norway, as

expressed in terms of total consolidated assets as of end 2016. Since the EU-wide stress test is run at the highest level of consolidation, lower representativeness is accepted for countries with a wide presence of subsidiaries of non-domestic EU banks.

8. To be included in the sample, banks have to have a minimum of EUR 30 bn in assets.

9. The criteria chosen are designed to keep the focus on a broad coverage of EU banking assets and to capture the largest banks. In particular, the EUR 30 bn materiality threshold is consistent with the criterion used for inclusion in the sample of banks reporting supervisory reporting data to the EBA, as well as with the SSM definition of a significant institution.

10. Competent authorities could, at their discretion, request to include additional institutions in their jurisdiction provided that they have a minimum of EUR 100 bn in assets.

11. Banks subject to mandatory restructuring plans agreed by the European Commission could be included in the sample by competent authorities if they were assessed to be near the completion of the plans. Banks under restructuring are subject to the same methodology and assumptions as other banks in the sample.

12. The list of participating banks is given in Annex I.

1.3.2   Scope of consolidation

13. The exercise is run at the highest level of consolidation. The scope of consolidation is the perimeter of the banking group as defined by the CRR/CRD.

14. Insurance activities are therefore excluded both from the balance sheet and from the revenues and costs sides of the P&L. Institutions may be permitted to not deduct the holdings of own funds instruments of an insurance company if this has been previously agreed with their competent authority based on Article 49 of the CRR — however, this cannot be applied solely for the purpose of the EU-wide stress test. If the contributions of insurance activities are included in the balance sheet or P&L, these need to be projected in line with the baseline scenario and the adverse scenario. In this case, requirements defined in section 6.4.1 shall apply to dividend income and other income stemming from insurance activities.

1.3.3   Macroeconomic scenarios and risk type specific shocks

15. The exercise assesses the resilience of EU banks under a common macroeconomic baseline scenario and a common adverse scenario. The scenarios cover the period 2018-2020.

16. The application of the market risk methodology is based on a common set of stressed market parameters, calibrated from the macroeconomic scenario.

17. The credit risk methodology includes a prescribed increase in REA for securitisation exposures, as well as prescribed shocks to credit risk losses for sovereign exposures.

1.3.4 Time horizon and reference date

18. The exercise is carried out on the basis of year-end 2017 figures, and the scenarios will be applied over a period of 3 years from end 2018 to end 2020.

1.3.5 Definition of capital and regulatory regime

19. The impact of the EU-wide stress test will be reported in terms of CET1 capital. In addition, the Tier 1 capital ratio and total capital ratio, as well as a leverage ratio, will be reported for every year of the exercise. Capital ratios are reported on a transitional basis and on a fully loaded basis.

20. The definitions of CET1, Tier 1 and total capital that are valid during every year of the time horizon of the stress test should be applied (i.e. the CRR/CRD definition of capital with transitional arrangements as per December 2017, December 2018, December 2019 and December 2020). Capital components subject to transitional arrangements are reported separately and publicly disclosed. The regulatory framework regarding capital requirements should also be applied as of these dates, including any relevant transitional arrangements. National discretions defined in the CRR/CRD apply with the exception of unrealised gains or losses on sovereign exposures, for which a common approach is given in paragraph 461.

21. The applicable regulatory framework includes decisions by competent authorities regarding the application of the CRR/CRD that were taken before 1 January 2018. These should be applied as of their entry into force.

22. Any changes to the existing regulatory framework shall be applied only if, at the launch of the exercise, they are known to be legally binding during the stress test time horizon and if the requirements (including their implementation schedule) have been endorsed and publicly announced by the relevant authority.[1] Banks are not required to anticipate other changes to the regulatory framework.

23. Neither the roll-out of new internal models nor modifications of existing internal models or transitions between different regulatory treatments during the stress test time horizon are to be considered for the calculation of the REA.

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[1] Banks do not have to take into account changes regarding the calculation of REA for securitisation exposures as defined in the 'Proposal for a Regulation of the European Parliament and of the Council amending Regulation No 575/2013 on prudential requirements for credit institutions and investment firm'.

1.3.6   Hurdle rates

24. No hurdle rates or capital thresholds are defined for the purpose of the exercise. However, competent authorities will apply stress test results as an input to the SREP in line with the EBA Guidelines on common procedures and methodologies for the SREP.[2]

1.3.7   Accounting and tax regime

25. All balance sheet and P&L projections over the years 2018-2020 shall be carried out on the basis of the applicable accounting valid on 1 January 2018. This means that, for banks commencing to report under IFRS 9 in the first quarter of 2018, the 2018 EU-wide stress test takes the impact of the introduction of IFRS 9 into account in starting point data as well as in the projections of banks.

26. For the purposes of the exercise, banks shall recognise the effect of the introduction of IFRS 9 in capital as of 1 January 2018. In addition, banks need to restate selected information as a starting point for projections for specific risk types, e.g. the starting level of credit risk provisions.

27. Banks are not required to anticipate other changes to the accounting and tax regimes that come into effect after the launch of the exercise. The regimes that are valid as at the launch of the exercise should be applied during every year of the time horizon of the stress test. However, for the purpose of the EU-wide stress test, banks are asked to apply a common simplified tax rate of 30%. Historical values until 2017 should be reported based on the regimes that were valid for the corresponding reporting dates, unless banks were required to restate their public accounts.

1.3.8   Static balance sheet assumption

28. The EU-wide stress test is conducted on the assumption of a static balance sheet as in previous exercises. This assumption applies on a solo, sub-consolidated and consolidated basis for both the baseline as well as the adverse scenario. Assets and liabilities that mature within the time horizon of the exercise should be replaced with similar financial instruments in terms of type, currency, credit quality at date of maturity, and original maturity as at the start of the exercise. No workout or cure of S3 assets is assumed in the exercise. In particular, no capital measures taken after the reference date 31 December 2017 are to be assumed.

29. Furthermore, in the exercise, it is assumed that banks maintain the same business mix and model (in terms of geographical range, product strategies and operations) throughout the time horizon. With respect to the P&L, revenue and costs, assumptions made by banks should be in line with the constraints of zero growth and a stable business mix.

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[2] EBA/GL/2014/13.

30. The static balance sheet assumption should also be assumed for assets and liabilities denominated in currencies other than the domestic (reporting) currency — i.e. assets and liabilities remain fixed in the reporting currency. If the euro is not the reporting currency, all stock projections should be translated by applying the exchange rate as of 31 December 2017. In particular, FX effects should not have an impact on the projection of REA. Constraints regarding the impact on P&L items are defined in section 6.

31. There are no exemptions from the static balance sheet assumption. In particular, it also applies to those institutions subject to mandatory restructuring plans formally agreed with the European Commission that are included in the sample at the request of the competent authority (see paragraph 10). Similarly, any divestments, capital measures or other transactions that were not completed before 31 December 2017, even if they were agreed upon before this date, should not be taken into account in the projections.

32. Selected completed capital measures, i.e. the raising, repayment or conversion of capital instruments as well as significant losses after the cut-off date (set at 31 May 2018) shall be reported 'below the line' on a separate template (CSV_CAPMEAS) and will be publicly disclosed. However, these events will not have an impact on the stress test result in terms of capital ratios for the relevant banks.

1.3.9   Approach

33. The approach of the exercise is a constrained bottom-up stress test — i.e. banks are required to project the impact of the defined scenarios but are subject to strict constraints, as well as to a thorough review by competent authorities.

1.3.10 Risk coverage

34. The EU-wide stress test is primarily focused on the assessment of the impact of risk drivers on the solvency of banks. Banks are required to stress the following common set of risks:

- Credit risk, including securitisations;

- Market risk, CCR and CVA;

- Operational risk, including conduct risk.

35. In addition to the risks listed above, banks are requested to project the effect of the scenarios on NII and to stress P&L and capital items not covered by other risk types.

36. The risks arising from sovereign exposures are covered in credit risk and in market risk, depending on their accounting treatment.

1.3.11 Process

37. The process for running the EU-wide stress test involves close cooperation between the EBA, the national competent authorities and the ECB, as well as the ESRB:

- The adverse macroeconomic scenario and any risk type specific shocks linked to the scenario are developed by the ESRB and the ECB in close cooperation with competent authorities, the EBA and national central banks. In particular, the ECB supplies the macroeconomic baseline scenario.

- The EBA coordinates the exercise, defines the common methodology as well as the minimum quality assurance guidance for competent authorities, and hosts a central question and answer facility. The EBA acts as a data hub for the final dissemination of the common exercise. The EBA also provides common descriptive statistics to competent authorities for the purpose of consistency checks based on banks' submissions.

- Competent authorities are responsible for conveying to banks the instructions on how to complete the exercise and for receiving information directly from banks. Competent authorities are also responsible for the quality assurance process — e.g. for validating banks' data and stress test results based on bottom-up calculations, as well as for reviewing the models applied by banks for this purpose. Competent authorities, under their responsibilities, may also run the EU-wide stress test on samples beyond the one used for the EU-wide stress test, and may also carry out additional national stress tests. They are also responsible for the supervisory reaction function and for the incorporation of the findings from the EU-wide exercise into the SREP.

38. The results of the EU-wide stress test on a bank-by-bank basis and in the form of aggregated analyses and reports are published by the EBA using common disclosure templates.

1.3.12 Overview of the methodology by risk type

Table 1: Overview of the methodology by risk type

Section	Scope	Impact on P&L and OCI	Impact on REA	Key constraints
Credit risk	P&L: amortised cost; sovereign positions included; CCR and fair value positions excluded REA: CRR scope for credit risk including securitisations; CCR and fair value positions included	Banks' internal models based on stressed point-in-time PD and LGD parameters and grade migration reflecting the losses of initially performing exposures entering into S3 as well as the losses linked to initially S1 exposures that enter into S2 and become subject to lifetime ECL Additional impact — for initially S3 defaulted assets based on worsening LGD Additional impact — for initially S2 assets based on worsening LGD and lifetime PD Prescribed loss parameters for sovereign exposures	CRR requirements based on stressed PD and LGD parameters	No negative impairments permitted, except and exclusively in the case of transitions from S2 to S1 The coverage ratio for S1 assets cannot decrease No cures from S3 assets, i.e. no transitions from S3 to S2 or S1 REA floored at 2017 value (separately by regulatory approach) Prescribed increase for securitisations and REA for securitisations floored separately for aggregate STA and IRB portfolios

Section	Scope	Impact on P&L and OCI	Impact on REA	Key constraints
Market risk, CCR and CVA	P&L: FVPL, FVOCI, FVO, hedge-accounting portfolios; sovereign positions included; CCR exposures, positions subject to CVA accounting REA: CRR scope for market risk and CVA	Banks' own projections for fees and bid-ask ('client') revenues for their positions held with a trading intent CA banks: full revaluation to all asset categories with full or partial fair value measurement under IFRS 9 TE banks: revaluation of all assets and liabilities with a full or partial fair value behaviour except items held with a trading intent and their related hedges Special treatment for L2 and L3 instruments to take into account modelling uncertainty Default of the two most vulnerable of the 10 largest stressed CCR exposures	Constant for STA approaches VaR constant in the baseline and replaced by SVaR in the adverse Stressed IRC and CVA capital requirements APR constant in the baseline and scaled in the adverse	No impact for the baseline scenario Prescribed simplified approach for TE banks: 0.20% of the sum of the FV of assets and liabilities (net of economic hedges) Simplified approach serves as floor for the impact of the comprehensive approach NTI baseline values prescribed as the minimum of the averages across the last 2, 3, and 5 years (the 2-year average floored at 0) CA banks' own projections for fees and bid-ask ('client') revenues capped at the larger of 75% of client revenues and 75% of baseline NTI REA for IRC and CVA floored at the increase for IRB REA

Section	Scope	Impact on P&L and OCI	Impact on REA	Key constraints
NII	P&L: all interest-earning or interest-paying positions across all accounting categories	Banks' own methodologies to project NII based on the repricing of their portfolio Separate projections for margin and reference rates	N/A	NII cannot increase under the adverse scenario Under the adverse scenario, assumptions cannot lead (at group level) to an increase in the bank's NII compared with the 2017 value before considering the impact of the increase of provisions for non-performing exposures on interest income Under the adverse scenario, banks are required to project income on non-performing exposures net of provisions, subject to a cap on the applicable EIR Under the baseline scenario, banks are required at a minimum to reflect a proportion of the changes in the sovereign bond spread of the country of exposure in the margin component of the EIR of their repriced liabilities Under the adverse scenario, the margin paid on liabilities cannot increase less than the highest amount between a proportion of the increase in the sovereign spread and that of an idiosyncratic component The increase of the margin on repriced assets is capped at a proportion of the increase in sovereign spreads

Section	Scope	Impact on P&L and OCI	Impact on REA	Key constraints
Conduct risk and other operational risks	P&L: impact of potential future losses arising from conduct risk and other operational risks REA: CRR scope for operational risk	Banks' own estimations Specific approach based on qualitative guidance and additional reporting requirements for material conduct events Losses calculated as a function of gross earnings (the relevant indicator) as a fall-back approach in case banks are unable to provide historical data	Banks' own projections for the AMA, basic approach and standard approach	Losses from new conduct risk events are subject to a floor, computed in the baseline scenario as the average of the historical conduct risk losses reported by the bank during the 2013-2017 period for non-material events only. A more conservative floor in the adverse scenario is achieved by applying a stress multiplier to the average Other operational risk losses are subject to a floor computed in the baseline scenario as the average of the historical losses during the 2013-2017 period times a multiplier. A more conservative floor in the adverse scenario is achieved by applying a stress multiplier to the average Capital requirements for operational risk cannot fall below the 2017 value

Section	Scope	Impact on P&L and OCI	Impact on REA	Key constraints
Non-interest income, expenses and capital	P&L and capital items not in scope of risk types or NII	Banks' own estimates, but subject to constraints for specific P&L items Market risk methodology and macroeconomic shocks applied for non-financial assets and defined benefit pension plans	N/A	Dividend income, NFCI and the share of the profit of investments in subsidiaries, joint ventures and associates outside the scope of consolidation cannot exceed the 2017 level in the baseline, while a minimum reduction of net income from each item compared with 2017 is prescribed for the cumulative projections in the adverse scenario Administrative expenses, other operating expenses, depreciation and provisions cannot fall below the 2017 value, unless an adjustment for one-offs is permitted. One-off adjustments are subject to a threshold of 5bps of 2017 REA Common tax rate of 30% applied No P&L contribution for realised gains or losses, derecognition, goodwill, FX effects Other operating income capped at the 2017 value For dividends paid: pay-out ratio based on publicly declared dividend policies. If no policy is available, the pay-out ratio in the baseline is the maximum of 30% and the median of the pay-out ratios in profitable years 2013-2017; in the adverse, the same pay-out ratio as in the baseline scenario shall be assumed (0 accepted in years in which a bank is making losses)

2. Credit risk

2.1 Overview

39. Banks are required to translate the macroeconomic scenarios into corresponding credit risk impacts on both the capital available — i.e. via impairments and thus the P&L — and the REA for positions exposed to risks stemming from the default of counterparties. Banks are requested to make use of their models but are subject to a number of conservative constraints.

40. The estimation of impairments and the translation to available capital requires the use of statistical methods and includes the following main steps: (i) estimating starting values of the risk parameters, (ii) estimating the impact of the scenarios on the risk parameters and (iii) computing impairment flows as the basis for provisions that affect the P&L. Banks commencing to report under IFRS 9 in the first quarter of 2018 are required to forecast these impairments based on the expected credit loss framework of IFRS 9.

41. Banks are requested to forecast credit impairments influenced by the materialisation of a set of single scenarios (baseline and adverse) on the basis of IFRS 9 as prescribed in the methodology laid down in this section unless they are subject to nGAAP.[3] In adapting the previous methodology, the EBA has been conscious of the wide range of practices in place across banks at this early stage. Thus, a few key assumptions have been made in the current methodology that are listed in Box 1.

Box 1: Summary of key assumptions for projection under IFRS 9

- The projection of provisions is based on a single scenario in each macroeconomic scenario (baseline and adverse) (paragraph 116).

- Perfect foresight on macroeconomic projections is assumed, i.e. at any point of time in the projection banks should assume the subsequent path of a variable to be known and equal to what is given in the scenario for the remaining maturity of the exposure (paragraph 112).

- For the estimation of lifetime ECL, after the end of the scenario horizon, the adverse scenario credit risk parameters (i.e. stage transition probabilities and the corresponding loss rates

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[3] In this case, the requirements stated under Annex VI shall be adhered to.

across stages) are assumed to revert to the baseline horizon credit risk parameters. The baseline credit risk parameters are assumed to stay flat after year 3 (paragraph 112).

▪ A common definition of S3 assets as non-performing exposures should be applied for the projections (paragraph 51).

42. For the estimation of REA, banks should adhere to regulatory requirements based on stressed regulatory risk parameters.

43. For securitisation exposures, banks are requested to project impairments based on the risk parameters of the underlying pool. For the estimation of REA, a fixed risk weight increase will be applied to the different credit quality steps.

44. Banks' projections are subject to the constraints summarised in Box 2.

Box 2: Summary of the constraints on banks' projections of credit risk

▪ No cures from S3 assets are permitted (paragraph 83), i.e. the only acceptable transitions are from stage 1 to stage 2, 2 to 1, 1 to 3 or 2 to 3.

▪ No negative impairment losses for stage 3 exposures are permitted over the scenario horizon (paragraph 127).

▪ The coverage ratio for S1 exposures[4] (i.e. ratio of provisions to exposure) cannot decrease over the time horizon of the exercise (paragraph 123).

▪ The restated end-2017 level of REA serves as a floor for the total REA for non-defaulted and defaulted exposures in the baseline and adverse scenarios. This floor must be applied separately to overall aggregate IRB and STA portfolios (paragraph 136).

▪ For securitisation exposures, the end-2017 level of REA serves as a floor for the total risk exposures separately for aggregate IRB and STA portfolios (paragraph 161).

2.2   Scope

45. For the estimation of the P&L impact, the scope of this section covers all counterparties (e.g. sovereigns, institutions, financial and non-financial firms, and households) and all positions (including on-balance and off-balance positions) exposed to risks stemming from the default of

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[4] For banks not subject to IFRS 9, this applies to all performing exposures.

a counterparty, except for exposures subject to CCR and fair value positions (FVOCI and FVPL) which are subject to the market risk approach for the estimation of the P&L effect (or through capital, via OCI, for FVOCI) as stated in section 3. For the avoidance of doubt, FVOCI and FVPL positions are excluded from the estimation of credit risk losses.

46. Hedge-accounting hedges related to positions within the scope of this section can be considered only to the extent that they are already reflected in CRM or substitution effects as of the reference date — i.e. there should be no additional offsetting impact from the hedging instruments in hedge-accounting portfolios measured at cost. These hedging instruments are also not to be reported in market risk templates. Economic hedges are treated according to the market risk methodology.

47. Conversely, the estimation of REA follows the CRR/CRD definition of credit risk. Therefore, exposures subject to CCR and fair value positions (FVOCI and FVPL) are to be included.

48. Specific requirements for securitisation positions are separately covered in section 2.7.

49. The methodology described in this section also applies to the capital charge for IRC (see section 3.8).

2.3 High-level assumptions and definitions

50. The credit risk methodology for the 2018 exercise takes the following approach at a high level:

- The exposure transitions between the three impairment stages defined in IFRS 9 need to be projected for each year.

- For exposures in S2 and S3, banks are expected to provide stressed lifetime expected loss rates.

- A perfect foresight approach is adopted for the calculation of lifetime ECL, whereby the full scenarios should be treated as known when calculating expected credit losses. This means that ECL for initial S2 and S3 exposures will be calculated once at the beginning of each scenario. ECL does not change as a result of the development of the scenario from year to year.

2.3.1 Definitions

51. In previous EU-wide stress test exercises, a key segmentation within the templates was between defaulted and non-defaulted exposures. The analogous split for this exercise, for which banks shall provide starting point values as of 1 January 2018 (i.e. end-2017 figures restated according to IFRS 9) and projected figures, will be between S1, S2 and S3 exposures as per the IFRS 9 regulation:

- **S1** exposures are, as stated in IFRS 9 5.5.5, those whose credit risk has not increased significantly since initial recognition at the reporting date and for which entity must measure loss allowance at an amount equal to 12-month expected credit losses.

- **S2** exposures are those whose credit risk has increased significantly since initial recognition at the reporting date and for which the entity must measure loss allowance at an amount equal to the lifetime expected credit losses while the exposure does not meet the definition of S3. Banks shall project significant increase in credit risk in line with their accounting approaches, i.e. apply the S2 classification criteria used in their IFRS 9 models. However, for the purpose of the stress test projections banks shall also assume without prejudice to other triggers that S1 exposures which experience a threefold increase of lifetime PD (as defined under IFRS 9) compared with the corresponding value at initial recognition undergo an SICR and hence become S2. If lifetime PDs for an exposure are unavailable, banks may apply a 1-year PD as a proxy, e.g. a threefold increase of TR^{1-3} (as defined in paragraph 76) compared with the corresponding value of forward-looking[5] TR^{1-3} at initial recognition could instead be used as a backstop for S2. For the purpose of the stress test, an instrument may be considered to be of low credit risk in a particular year, t, of the stress test if the instrument's $TR^{1-3}(t)$ for that year is less than 0.30%. Instruments which are of low credit risk may be exempted from the classification as S2. For the avoidance of doubt, banks should in general use their own accounting practices where these lead to more conservative results for SICR in the stress test. Banks should provide a description of their internally applied S2 definition and of how the low credit risk exemption was implemented in the explanatory note. In this note, banks should also comment on how the definitions applied for the stress test differ from internally used criteria for the SICR and in particular the low credit risk exemption.

- **S3** exposures are those for which it is deemed to indicate evidence of a 'detrimental impact on the estimated future cash flows' as per the definition of a credit-impaired financial asset in Appendix A of the IFRS 9 regulation. For the avoidance of doubt, all non-performing exposures as per EBA Implementing Technical Standard,[6] defaulted exposures as per Article 178 of the CRR, or impaired exposures as per the applicable accounting standard shall be classified as S3 under IFRS 9 for the stress test period. In the explanatory note, banks should comment on how this definition differs from their internally applied criteria for S3 exposure.

- For the remainder of the document, performing exposure refers to the sum of S1 and S2 exposures, and non-performing exposure refers to S3. For the avoidance of doubt, non-

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[5] Forward-looking in this case is meant to account for expected movements of TR^{1-3} during the lifetime of an exposure.

[6] https://www.eba.europa.eu/documents/10180/449824/EBA-ITS-2013-03+Final+draft+ITS+on+Forbearance+and+Non-performing+exposures.pdf

performing exposures should not be reported as S1 or S2 including for starting point data as of 1 January 2018.

52. **Performing exposure (Exp)** is the performing exposure after substitution effects and after CCF. Exposure is the starting point for the impairment calculation. Non-performing exposures are reported separately:

- For IRB portfolios, banks should use the definition of column 110 ('exposure value') as per COREP table CR IRB 1 as a starting point, and remove non-performing exposures.

- For STA portfolios, banks need to calculate a post-CCF equivalent of column 110 ('net exposure after CRM substitution effects pre-conversion factors') as per COREP table CR SA. Since provisions have already been deducted (column 30 in CR SA), they need to be added to the exposure.[7]

53. Exp should be further split into **of which: S1 (Exp S1)** and **of which: S2 (Exp S2)** based on classification — as either S1 or S2 — of the exposure at the beginning of the period as defined in paragraph 51. Exp should equal the sum of S1 (Exp S1) and S2 (Exp S2).

54. **S1-S2 flow (S1-S2 Flow)** measures the amount of exposures that transition from S1 to S2 into during a given year.

55. **S3 flow (SX-S3 Flow)[8]** measures the amount of exposures that entered into S3 during a given year out of those that were performing (S1 or S2) at the start of the period. It must include all S3 events that occur during a year. Exposures that enter into S3 several times in 2017 must be reported once. The projected values will be computed based on the methodology stated in this section.

56. S3 flow (SX-S3 Flow) should be further split into **S3 flow S1 to S3 (S1-S3 Flow)** and **S3 flow S2 to S3 (S2-S3 Flow)** based on classification — as either S1 or S2 — of the exposure at the beginning of the period. S3 flow (SX-S3 Flow) should equal the sum of S3 flow from S1 (S1-S3 Flow) and S3 flow from S2 (S2-S3 Flow).

57. **S2-S1 flow (S2-S1 flow)** measures the amount of exposures that return to S1 during a given year out of those that were S2 at the start of the period. Transitions from S3 to S1 are not permitted in the stress test methodology.

58. **Non-performing exposure (Exp S3)** refers to S3 exposure. As cures are not to be recognised for exposure projections, this is a cumulative variable containing the initial stock of S3 exposures

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[7] Defaulted assets are to be reported according to the nature of the counterparty.

[8] The memorandum item PD PiT (%) in the CSV_CR_SCEN template shows the S3 flows as a percentage of the beginning-of-year performing exposure stock.

(end 2017) plus the sum of S3 flows of the previous projected year(s). For example, the Non-performing exposure (Exp S3) at end 2019 is the sum of the Non-performing exposure (Exp S3) at end 2017 plus S3 flow (S3 Flow) in 2018 plus S3 flow (S3 Flow) in 2019.

59. Non-performing exposure (Exp S3) should be further split to show **of which: CRR Default (Exp Def)** based on classification of the exposure as default in line with Article 178 of the CRR.

60. **Funded collateral (available)** covers all funded collateral, including real estate property, that is available to cover the exposure (Exp) or stock of defaulted exposures (Def Stock) as defined above. Only CRR/CRD eligible collateral and only the bank's share of collateral (if collateral is assigned to several debtors) is to be reported. No regulatory haircuts should be applied. Banks are required to provide detailed information on how the collateral values have been determined and how often appraisals are refreshed.

61. **Funded collateral (capped)** follows the definition of the available funded collateral (above) but collateral has to be capped at the exposure level. This means that, at the exposure level, collateral cannot be higher than the corresponding exposure.

62. The starting values of the **Stock of provisions (Prov Stock)** are the accounting figures as of 1 January 2018 (i.e. end-2017 figures restated according to IFRS 9) in accordance with the IFRS 9 accounting framework to which the reporting entity is subject as listed in columns 030, 060, 070, 080, 090 of FINREP Table 7 ('financial assets subject to impairment that are past due or impaired') and in accordance with Article 34 and Article 110 of the CRR for defaulted exposures. It is split by **Of which: non-performing assets (Prov Stock S3)** (and additionally **Of which: CRR defaults**) and **Of which: performing assets (Prov Stock Perf)**, which is also further split into **Of which: S1 (Prov Stock S1)** and **Of which: S2 (Prov Stock S2)**.

63. The starting values of the **Gross impairment loss new S3 (Gross Imp Flow SX-S3)** are the accounting flow figures as of end 2017, defined on the basis of 'impairment on (non-)financial assets' (FINREP, table 16.7, column 010; reported year-to-date — i.e. for the starting value provisions that have been set aside in 2017). However, there are two important adjustments to the FINREP figure: (i) the flow should be reported for new S3 assets only (defined as in paragraph 54) and (ii) the flow figures should also include direct write-offs or charge-offs of securities or other assets whose book value is reduced without creating a provision. The guiding principle for this figure is a point-in-time impairment flow, capturing all credit risk-related adjustments, regardless of whether those take the form of provisions or not. The impairment loss should correspond to total impairments of new S3 assets and not only to the additional ones accumulated during the year 2017 — i.e. the stock of impairments that existed at the beginning of the period for these new S3 assets should be included.

64. Gross impairment loss new S3 (**Gross Imp Flow SX-S3**) should equal the sum of Gross Impairment loss S1 to S3 (**Gross Imp Flow S1-S3**) and Gross Impairment loss new S2 to S3 (**Gross Imp Flow S2-S3**).

65. **Gross impairment loss S1 to S1** (**Gross Imp flow S1-S1**) is a flow that reflects the increase in S1 provisions for assets that start and end the period in S1. It reflects, for example, changes in ECL due to macroeconomic scenario changes or rating migrations.

66. **Gross impairment loss S1 to S2 (Gross Imp Flow S1-S2)** is a flow that reflects additional S2 provisions on exposures that begin the period as S1 assets and migrate to S2 — thus becoming subject to a lifetime ECL with perfect foresight.

67. **Gross impairment loss S1 to S3 (Gross Imp Flow S1-S3)** is a flow that reflects additional S3 provisions on exposures that begin the period as S1 assets and migrate to S3 — thus becoming subject to a lifetime ECL with perfect foresight.

68. **Gross impairment loss S2 to S1 (Gross Imp Flow S2-S1)** is a flow that reflects the increase in S1 provisions due to exposure migration from S2. The respective release in lifetime S2 provisions is reflected under **Release of S2 provisions from S2-S1 flows.**

69. **Gross Impairment loss S2 to S3 (Gross Imp Flow S2-S3)** is a flow that reflects additional S3 provisions on exposures that begin the period as S2 assets and migrate to S3.

70. **Gross impairment loss S2 (Gross Imp Flow S2-SX)** is a flow variable defined for all assets which start the period in S2 (regardless of the stage in which they will end up eventually). Banks are required to reflect the full impact of the scenario (with perfect foresight) on S2 assets as soon as they become subject to lifetime ECL. For exposures that begin the stress test in S2, this means that all impairment charges will occur in year 1, with a portion subsequently transitioning to S3 in the following years as the exposures enter S3, i.e. the lifetime ECL for S2 exposures includes all expected credit losses over the lifetime of the exposure. This implies that Gross Imp Flow S2-SX should be zero in years 2 and 3 if no exposures mature or amortise. Changes in Gross Imp Flow S2-SX over time will therefore result from changes in lifetime ECL for exposures replaced to keep the balance sheet static.

71. **Gross impairment loss S3 (Gross Imp Flow S3-S3)** is a flow variable analogue to Gross Imp Flow SX-S3 but reflects additional provisions on S3 assets already existing at the beginning of each period.

72. **Release of S1 provisions from S1-S2 flows** is a flow variable which measures the reduction in Prov Stock S1 caused by transitions from S1 to S2 (S1-S2 Flow). The respective increase in lifetime S2 provisions caused by transitions from S1 to S2 should be reported under **Gross Imp Flow S1-S2.**

73. **Release of S1 provisions from S1-S3 flows** is a flow variable which measures the reduction in Prov Stock S1 caused by transitions from S1 to S3 (S1-S3 Flow). The respective increase in lifetime S3 provisions caused by transitions from S1 to S3 should be reported under **Gross Imp Flow S1-S3.**

74. **Release of S2 provisions from S2-S1 flows** is a flow variable which measures the reduction in Prov Stock S2 caused by transitions from S2 to S1 (S2-S1 Flow) when exposures return to 12-month expected losses rather than lifetime expected losses. The increase in provisions for S1 caused by transitions from S2 to S1 should be reported under **Gross Imp Flow S2-S1**.

75. **Cure rates** are not observed values but forecast values affecting LGD estimation in 2017 and in the projected period across both scenarios. While the impact of cures for reducing projected S3 exposures should not be considered for the purpose of this exercise, assumed cure rates are an important component of the LGD estimations. In doing so, banks are required to model cure rates when estimating PDs and LGDs, and report them in the template CSV_CR_SCEN according to the definitions below in a manner that is consistent with the prescribed definitions of each of the stages and LGD. If a bank does not explicitly calculate cure rates because of its methodological approach, it will be required to outline its calculations of each LGD in more detail in the accompanying note. The following definition applies: Cure(t) is the component of the LGD(t) calculation that corresponds to the assumptions made for the cumulative proportion of existing or projected S3 exposures that cure (through repayments) with zero loss in all years following year t. This naturally depends on the characteristics of the loans at time t.

76. **Point-in-time risk parameters** are the forward-looking projections of 12-month transitions between each of the three stages and the associated loss rates. Transition rates (TR) denote the probability of moving between the stages (S1, S2 or S3) within 12 months. LGD refers to forecast losses associated with possible S3 events. Subscripts denote the event horizon where 12M refers to S3 events possible within 12 months. For the lifetime horizon (denoted by a subscript LT), loss rates (LR) have to be reported which refer to the expected credit losses due to stage 3 events expected over the lifetime of the exposures. For example, the total exposure in S2 multiplied by LR_{LT}^{2-X} should give the lifetime expected credit losses required. This means there is no requirement to separately project lifetime transitions to S3 for S2 exposures. Superscripts indicate the applicable transition in that year (e.g. 1-3 indicates that the parameter refers to S1 to S3 transitions in year t:

   - **TR^{1-3}** refers to the probability of an exposure starting the year in S1 and ending in S3. The loss rate associated with the exposure that transitions from S1 to S3 is **LGD_{12M}^{1-3}**.

   - **TR^{2-3}** refers to the probability of an exposure starting the year in S2 and ending in S3. The loss rate associated with the exposure that transitions from S2 to S3 is **LGD_{12M}^{2-3}**.

   - **TR^{1-2}** refers to the probability of an exposure starting the year in S1 and ending in S2.

   - **TR^{2-1}** refers to the probability of an exposure starting the year in S2 and ending in S1.

   - **LR_{LT}^{1-2}** refers to the lifetime expected loss rate of those exposures that start year t in S1 and end in S2.

- **LR$_{LT}^{2-X}$** refers to the lifetime expected loss rate for all exposures that start the year in S2 regardless of when and where they transition or if they transition to another stage at all.

- **LR$_{LT}^{3-3}$** refers to the lifetime expected loss associated with all exposures that start the year in S3. Note that S3 exposures cannot transition to another stage, because of the 'no cure' constraint.

77. The following requirements apply to TR, LGD and LR used for the projection of impairments:

- Since they are reported at a portfolio level, TR and LR shall be exposure[9]-weighted averages, and LGD shall be TR * exposure-weighted averages.

- All TR, LGD and LR used for forecasting impairments shall be point in time (pit) parameters which must capture current trends in the business cycle. They may include portfolio improvement effects where banks calculate risk parameters at a rating class level. In contrast to the regulatory PD and LGD parameters, they are required for all portfolios, including STA and F-IRB.

- LGDs and LRs must take collateral into account. The development is affected by grade migrations and such an effect must be addressed in the estimation.

- Although TR, LGD and LR are reported together with non-performing and expected credit loss amounts within the projected year, they shall be considered to apply to exposures as of the beginning of the year.

78. **Average maturity** refers to exposure-weighted residual maturity of the exposures included in the asset class reported. See section 2.3.2 for further detail on the treatment of residual maturity under a static balance sheet assumption.

79. **Exposure value** refers to exposure serving as the basis for computation of REA, according to COREP definitions, as set out in Article 111 of the CRR (for the STA portfolio) and Articles 166-168 of the CRR (for the IRB portfolio).

80. **Regulatory risk parameters (PDreg and LGDreg)** refer to those parameters used for the calculation of capital requirements for defaulted and non-defaulted assets as prescribed by the CRR.

81. **ELreg** is the EL based on regulatory risk parameters following the prescriptions of the CRR/CRD for defaulted and non-defaulted IRB exposures.

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[9] As defined in paragraph 52.

82. **L3 assets**, which must be reported in the securitisation templates, refer to the assets whose measurement is based on level 3 inputs as defined in FINREP or IFRS 13.

2.3.2 Static balance sheet assumption

83. According to the static balance sheet assumption, banks are not permitted to replace S3 exposures. New S3 exposures are moved into the stock of S3 exposures, reducing the stock of S1 and/or S2 and keeping the total exposure at a constant level. Furthermore, for the purpose of calculating exposures, it is assumed that no cures from S3, charge-offs or write-offs should take place within the 3-year horizon of the exercise.[10]

84. Within the credit risk framework, and for the purpose of calculating the credit REA, the initial residual maturity is kept constant for all assets. For example, a 10-year bond with residual maturity of 5 years at the start of the exercise is supposed to keep the same residual maturity of 5 years throughout the exercise (including for lifetime ECL calculation purposes) — if it matures or amortises during the stress test horizon it has to be replaced with a bond having the same residual maturity and credit risk characteristics. It should be noted that the constant residual maturity applies, in particular, to the maturity factor used in A-IRB, but also to some provisions in STA, which allow favourable risk weights for short-term exposures.

85. For the purposes of calculating impairments over the 3 years of the scenario, the assumption of a constant balance sheet is also held. Thus, if assets mature or amortise during the stress horizon they have to be replaced with assets with the same credit risk characteristics (including IFRS 9 stage classification) and residual maturity to keep the balance sheet stable.

86. Consistent with the static balance sheet assumption, S1 and S2 credit exposure changes only as a result of the yearly S1, S2 or S3 flows. Market value fluctuations have no impact on the exposure and, in particular, cannot decrease the exposure. In addition, fair value effects shall have no impact on exposure and REA. This includes changes in the FX rate.

2.3.3 Asset classes

87. For the purpose of this stress test, banks are required to report their exposures using the asset classes specified below, which are based on the exposure classes for IRB and STA exposures in the CRR (see Articles 112 and 147 of the CRR) reported in COREP. Competent authorities can require participating banks to report additional optional breakdowns for exposures where they see significant risks. The additional breakdowns are marked as optional in Table 2 and Table 3, where bold text also indicates original COREP categories.

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[10] This is not to be confused with the inclusion of assumptions on future cure rates and write-offs in the generation of LGD parameters, which are implicitly assumed, where applicable.

88. Where exposures are transferred to other classes through credit risk mitigation techniques (substitution approach), this transfer has to be performed in line with the asset classes given in Table 2 and Table 3, and should be reported in asset classes after substitution. For the remainder of this section, any definitions and calculations must be consistent with this approach. For instance, default and loss rates, as well as TR, LGD and LR estimations, must be calculated and estimated for portfolios after substitution.

89. The following tables contain the asset classes, including the additional optional asset classes that should be used for both credit risk impairments and REA.

Table 2: Overview of IRB asset classes

IRB asset classes
Central banks and central governments
Institutions
Corporates
Corporates — Specialised lending
Corporates — Specialised lending — Secured by real estate property
Corporates — Specialised lending — Not secured by real estate property
Corporates — SME
Corporates — SME — Secured by real estate property
Corporates — SME — Not secured by real estate property
Corporates — Others
Corporates — Others — Secured by real estate property
Corporates — Others — Not secured by real estate property
Retail
Retail — Secured by real estate property
Retail — Secured by real estate property — SME
Retail — Secured by real estate property — Non-SME
(OPTIONAL) of which: Residential guaranteed loans (Prêts cautionnés) insured by an eligible residential property loan guarantor
(OPTIONAL) of which: other than Residential guaranteed loans (Prêts cautionnés) insured by an eligible residential property loan guarantor
(OPTIONAL) of which: Owner occupier
(OPTIONAL) of which: Buy to let
(OPTIONAL) of which: Other secured by real estate property
Retail — Qualifying revolving
Retail — Other retail
Retail — Other retail — SME
Retail — Other retail — Non-SME
Equity
Securitisation
Other non-credit obligation assets

Table 3: Overview of STA asset classes

STA asset classes
Central governments or central banks
Regional governments or local authorities
Public sector entities
Multilateral development banks
International organisations
Institutions
Corporates
Corporate — SME
Corporate — Non-SME
Retail
Retail — SME
Retail — Non-SME
Secured by mortgages on immovable property
Secured by mortgages on immovable property — SME
Secured by mortgages on immovable property — Non-SME
(OPTIONAL) of which: Residential guaranteed loans (Prêts cautionnés) insured by an eligible residential property loan guarantor
(OPTIONAL) of which: other than Residential guaranteed loans (Prêts cautionnés) insured by an eligible residential property loan guarantor
(OPTIONAL) of which: Owner occupier
(OPTIONAL) of which: Buy to let
(OPTIONAL) of which: Other secured by real estate property
Items associated with particularly high risk
Covered bonds
Claims on institutions and corporates with ST credit assessment
Collective investment undertakings
Equity
Securitisation
Other exposures

2.3.4   Reporting requirements

90. Banks are requested to provide credit risk information by regulatory approach for the total exposure, the most relevant countries of counterparties to which the institutions are exposed as defined in paragraph 92, and an 'Other Countries' section. The cells for the whole banking group contain the overall exposure of the group towards all counterparties and should be the sum of the countries by country and 'Other Countries' cells.

91. The country of the counterparty refers to the country of incorporation of the obligor. This concept can be applied on an immediate-obligor basis and on an ultimate-risk basis. Hence, CRM techniques can change the allocation of an exposure to a country.

92. The breakdown by country of the counterparty will be reported according to a minimum of:

i. 95% of the sum of total exposure (Exp S1 + Exp S2 + Exp S3), as defined in section 2.3.1, reported in aggregate for three regulatory approaches (i.e. A-IRB, F-IRB and STA).

ii. Top 10 countries in terms of total exposure, as stated above.

93. For example, a bank with 95% of its exposure concentrated in six countries will fill in data only for those six countries specifically. By contrast, if the aggregate sum of exposure of a bank towards the largest 10 countries is below 95% of the total aggregate exposure, the bank will fill in the template only for the top 10 counterparty countries specifically. In either case, the 'Other Countries' section must also be populated.

94. The cut-off date to define the 95% of aggregate sum exposure and top 10 countries is 31 December 2017. The selected countries of the counterparties and the order must remain constant for the two credit risk templates (CSV_CR_SCEN and CSV_CR_REA).

95. Banks with loans under large-scale or nationwide guarantee schemes where the indirect exposure on the guarantor is significant should report the guaranteed exposures separately from the non-guaranteed ones using the additional rows which have been added to the credit risk templates (CSV_CR_SCEN and CSV_CR_REA). Banks should explain how LGDs for guaranteed exposures were modelled and projected.

96. The same cut-off date applies for the allocation of asset classes across the regulatory approach. This means that a bank that applied the STA at the beginning of 2017 but the A-IRB approach at the end of 2017 is requested to report 2017 information in the A-IRB section of the template. This should be applied at an individual exposure level.

97. Historical values shall be reported for 2015, 2016 and 2017 in CSV_CR_SCEN for both the beginning and the end of the year. These values shall be reported on the basis of the accounting standard applicable, i.e. they should not be restated to reflect the retrospective application of IFRS 9. The list of fields required is given in Table 4.

Table 4: Historical parameters to be provided for 2015-2017

Fields to be populated historically
Performing exposure (Exp)
Non-performing exposure (Exp S3)
Of which: CRR default (Exp Def)
Stock of provisions (Prov Stock)
Of which: performing assets (Prov Stock Perf)
Of which: non-performing assets (Prov Stock S3)
Of which: CRR default (Prov Stock Def)
S3 flow (S3 flow)
Of which: CRR default flow (CRR Def Flow)
Gross impairment loss new stage 3 (Gross Imp Flow SX-S3)
Gross impairment loss stage 3 (Gross Imp Flow S3-S3)

98. Parameter values for 2017 shall also be reported for 2017 as given in Table 5. These values should be estimates from banks' models using historical macroeconomic variables for 2017.

Table 5: Historical parameters to be provided for 2017

Parameter	To be provided for 2017
TR	TR^{1-3}, TR^{1-2}, TR^{2-1}, TR^{2-3}
LGD	LGD_{12M}^{1-3}, LGD_{12M}^{2-3}
Cure rates	$Cure_{12M}^{1-3}$, $Cure_{12M}^{2-3}$
LR	LR_{LT}^{1-2}, LR_{LT}^{2-X}, LR_{LT}^{3-3}

99. In addition, banks are requested to report end-of-year 2017 data restated to reflect the full IFRS 9 effect (excluding IFRS 9 transitional arrangements), as starting-point data in the CSV_CR_SCEN template as beginning-of-2018 figures. In order to do so, banks must not take the scenario into account. In the same section of the template, banks are requested to report beginning-of-2018 data according to their own internal definition of S3 assets (see paragraph 51) as well as according to the S3 definition to be applied in the stress test. Restated year-end 2017 provisions for exposures not subject to the credit stress test methodology (e.g. FVOCI debt instruments) should be reported on total level in the CSV_CR_SUM templates under 'Of which: Other IFRS 9 provisions'.

100. Assets valued according to the simplified approach of IFRS 9 (as defined under IFRS 9 5.5.15) shall be reported under S2 for the purpose of this stress test. Purchased or originated credit-impaired assets (POCI) shall be reported as they are under FINREP (table 4.4.1).

101. REA reported in the CSV_CR_REA template should be calculated according to IFRS 9 (excluding IFRS 9 transitional arrangements). Furthermore, in the CSV_CR_REA_IRB and CSV_CR_REA_STA template, end-of-year 2017 (i.e. IAS 39) REA, EL and impairments have to be reported.

2.4 Impact on P&L

2.4.1 Starting point-in-time risk parameters (a hierarchy of approaches)

102. The following paragraphs describe a hierarchy of methods that banks should adhere to when they set the starting (unstressed) point-in-time risk parameters. As a general principle, banks should resort to data from models rather than from accounting approximations:

- Banks should in the first instance extract the relevant parameters from the models that they use to produce impairment provisions according to the IFRS 9 accounting standard.

- For IRB portfolios where there is no model to produce IFRS 9 provisions, banks are required to base their estimation of starting level point-in-time values on their approved internal parameter estimation models.

- For portfolios for which starting level point-in-time parameters cannot be extracted from approved internal models, banks should use non-approved models to extract point-in-time parameters, provided that those models are regularly used in internal risk management and stress testing, and that the competent authority is satisfied with using them for the purpose of the EU-wide stress test.

- For portfolios where no appropriate internal models are in use for estimating the starting TRs, LGDs or LRs, banks are expected to approximate these values using historically observed equivalents (e.g. the S3 transition and loss rates from S1 for $TR^{1\text{-}3}$ and $LGD_{12M}^{1\text{-}3}$). While banks are expected to present parameters reflective of both 2017 macroeconomic conditions and the credit quality of the portfolios, in the calibration of point-in-time starting parameters the overarching objective is the parameter's suitability for projection. Therefore, banks are expected to consider factors that may lead to the observed performance for 2017 being unrepresentative or unsuitable for a sufficiently conservative projection or for small portfolios in which no default has been observed. Only those adjustments of the historical values that result in a more conservative starting point are permitted.

103.   Irrespective of which approach is followed and the extent of the adjustments, banks are required to provide a description of the methodology employed for deriving point-in-time parameters for all portfolios. Banks are requested to apply the terminology used in this note, wherever applicable.

104.   Participating banks will be subject to cross-sectional comparisons of starting level point-in-time parameters after the submission of the results, and might be asked to revise internal figures if they are deemed not suitable for projections.

2.4.2   Projected point-in-time parameters (a hierarchy of approaches)

105.   Likewise, for the estimation of projected parameters, as a general principle, banks should use models rather than resort to benchmarks to determine stressed TR, LGD or LR parameters (under both the baseline scenario and the adverse scenario). However, banks' models will be assessed by competent authorities against minimum standards in terms of econometric soundness and responsiveness of the risk parameters to ensure the model specification results in a prudent outcome.

106.   For portfolios where no appropriate satellite models are available for estimating the stressed TRs LGD or LRs, banks are expected to base their development on the benchmark parameters provided by the ECB. They should apply them at portfolio level, not at rating class level.

107.   Irrespective of the approach, the ECB benchmark parameters will serve as an important benchmark to gauge internal parameter estimates in the baseline as well as in the adverse scenario as described in the following paragraphs. Moreover, banks will be subject to cross-

sectional comparisons after the submission of the results, and might be asked to revise internal figures if they are deemed overly optimistic.

108.   If banks' models allow the estimation of the relationship between point-in-time parameters and the macroeconomic variables at a rating class level, institutions shall employ a rating transition matrix-based approach, considering the effects of TR/LR grade migration on the level of default and impairments projected in the stress test horizon for the given scenarios. In this case, banks are required to calculate point-in-time transition matrices. Transition matrices must ensure that the TR/LR for each grade is adjusted appropriately to reflect the scenario.

109.   Conversely, if a bank's models allow for the estimation of the relationship between point-in-time parameters and the macroeconomic variables at a portfolio level, aggregate parameters for each portfolio are obtained. In addition, banks are required to document the approach followed for this estimation.

110.   In the projection of LGD/LRs, banks must take into consideration the possible impact caused by the decrease in the fair value of credit risk mitigants (e.g. a shock on real estate prices will affect real estate collateral).

111.   The LGD/LR parameters need to be estimated by taking into account both the characteristics of the exposures in S3 and the given scenario. Prudent assumptions are required on the implicit cure rate, the costs associated with the liquidation of collateral, and any other factor affecting the level of impairment. The development of these assumptions across the time horizon for the given scenarios will need to be justified.

112.   For the estimation of LGD/LR and lifetime ECL, it is assumed that there is perfect foresight and, therefore, the macroeconomic scenarios for the remaining lifetime and possible work-out period of the exposure at each point in time should be treated as known when calculating ECL. For example, banks shall incorporate the complete property price shock for all years in their LGD/LR calculation for S1, S2 and S3 exposures in year 1. Thus, in contrast to previous EU-wide stress tests, the cumulative house price shocks are incorporated in the first year of the LGD calculation. For the estimation of LGD/LR and lifetime ECL for 2018-2020, banks shall assume that future macroeconomic parameters and property prices for realising collateral will develop as described in the given scenarios. After the scenario horizon — excluding GDP, for which constant growth rates shall be assumed — those values shall be assumed to stay flat (i.e. stable absolute house prices and all other macroeconomic variables). This has the impact that loss rates for exposures which have moved to S3 until 2020 should be calculated assuming this flat profile for the macroeconomic variables.

113.   Notwithstanding these assumptions on macroeconomic variables, for the purpose of calculating the loss rates for S2 exposures, after the scenario horizon the 2020 baseline credit risk parameters are kept constant. The adverse scenario credit risk parameters for S2 exposures from 2021 onwards are assumed to revert from their 2020 levels to the 2020

baseline parameters. The path of each of the credit risk parameters for S2 exposures is assumed to linearly revert to those observed at the end of the base scenario over 6 years following the end of the adverse scenario.

114.   In order to assess the projected LGD/LR parameters, historical LGD/LR parameters for 2017 are requested as memorandum items. In addition to the LRs based on the coverage ratio, banks must also provide the LGD/LR parameter estimates under the assumption of holding the 2017 macroeconomic conditions constant, i.e. no changes in property prices or other factors beyond those observed by end 2017. This is to enable the comparison of 2017 values to 2018-2020 estimates under both scenarios.

115.   Projected risk parameters shall be reported in the credit risk scenario template (CSV_CR_ SCEN).

2.4.3   Calculation of non-performing assets and impairments

116.   The development of the parameters as described in the previous section based on a single scenario in each macroeconomic scenario (baseline and adverse) must be applied to the computation of the asset flow through the impairment stages and the resulting impairment flows.

117.   The additional impairment losses for each of the stages computed (as described in the following sections) will be reported in the P&L as 'impairment of financial assets other than instruments designated at fair value through P&L'.

118.   In line with paragraph 112, banks should reflect the full impact of the macroeconomic scenario until the exposure's maturity in year 1 of the stress test for initial S2 and S3 assets (i.e. perfect foresight). For example, if property prices drop 10% over the 3-year horizon of the adverse scenario then this drop should be reflected in the impairment loss for old S3 assets in 2018. For the avoidance of doubt, this means that Impairment loss for old S3 assets will be 0 in year 2 and year 3 (with additional provisions on S3 assets coming as they migrate from S1 and S2 and receive a provision with perfect foresight). This is also the case for old S2 assets as long as no replacement for maturing or amortising exposure takes place.

a.   Changes in the stock of provisions

119.   The flow of impairments consists of the flow from existing exposures in each stage and the new exposures that have moved between stages, including the relevant release of provisions in previous stages. The stock of provisions for each stage will change over time during the stress period as summarised in Box 3.

Box 3: Development of the stock of provisions

Prov Stock S1(t+1) = Prov Stock S1(t) + Impairment flow for new S1 exposures – Release of provisions due to flows from S1 + Impairment flow for existing S1 exposures

= Prov Stock S1(t) + Gross Imp Flow S2-S1(t+1) – Release of S1 provisions from S1-S2 flows(t+1) – Release of S1 provisions from S1-S3 flows(t+1) + Gross Imp flow S1-S1(t+1).

Prov Stock S2(t+1) = Prov Stock S2(t) + Impairment flow for new S2 exposures – Release of provisions due to flows from S2 + Impairment flow for existing S2 exposures

= Prov Stock S2(t) + Gross Imp Flow S1-S2(t+1) – Gross Imp Flow S2-S3(t+1) – Release of S2 provisions from S2-S1 flows (t+1) + Gross Imp Flow S2-SX(t+1).

Prov Stock S3(t+1) = Prov Stock S3(t) + Impairment flow due to staging to S3 + Impairment flow for existing S3 exposures

=Prov Stock S3(t) + Gross Imp Flow S1-S3 (t+1)+ Gross Imp Flow S2-S3(t+1) + Gross Imp Flow S3-S3(t+1).

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120.   Projected impairment flows shall be reported on the credit risk scenario template (CSV_CR_SCEN).

b.   Changes in the stock of provisions of S1 exposures

121.   The impairment flow for new S1 exposures is given by those exposures migrating from S2 to S1 (Gross Imp Flow S2-S1). The net impact on Prov Stock S1 is derived by deducting the release of provisions of exposures which begin the period in S1 and transition to S2 (Release of S1 provisions from S1-S2 flows) and to S3 (Release of S1 provisions from S1-S3 flows). The calculation method of new S1 impairments and releases of S1 provisions is outlined in Box 4.

Box 4: Impairment flow for new S1 exposures and release of provisions due to flows from S1

The flow of impairments on new S1 exposures is computed as follows:

$$\text{Gross Imp Flow S2-S1}(t+1) = \text{S2-S1 flow} * \text{TR}^{1\text{-}3}(t+1) * \text{LGD}_{12M}^{1\text{-}3}(t+1).$$

$$\text{S2-S1 flow} = \text{Exp S2}(t) * \text{TR}^{2\text{-}1}(t+1).$$

$$\text{Release of S1 provisions from S1-S2 flows}(t+1) = \chi * \text{Prov Stock S1}(t).$$

$$\text{Release of S1 provisions from S1-S3 flows}(t+1) = \Psi * \text{Prov Stock S1}(t).$$

Where:

- Prov Stock S1(t) is the stock of provisions against S1 exposures at t.

- $\text{LGD}_{12M}^{1\text{-}3}$ ($t+1$) refers to the expected loss rate for exposures that transitions from S1 to S3.

- $\text{TR}^{1\text{-}3}$ refers to the 1-year transition probability of S1 exposures to S3.

- $\text{TR}^{2\text{-}1}$ refers to the 1-year transition probability of S2 exposures to S1.

- χ is the share of Prov Stock S1(t) which is linked to initially S1 assets at t, which enter into S2 at $t+1$ (adjusted for S2-S1 flows). At a maximum, χ can be equal to the share of S1 assets at t, which enter into S2 at $t+1$ — i.e. $\chi \leqslant \text{TR}^{1\text{-}2}(t+1)$.

- Ψ is the share of Prov Stock S1(t) which is linked to initially S1 assets at t, which enter into S3 at $t+1$. At a maximum, Ψ can be equal to the share of S1 assets at t, which enter into S3 at $t+1$ — i.e. $\Psi \leqslant \text{TR}^{1\text{-}3}(t+1)$.

122. The gross impairment flow for exposures existing in S1 (Gross Imp Flow S1-S1) should reflect the change in ECL due to the scenario and grade migration. Box 5 below outlines the method for calculating impairment losses on existing S1 exposures.

Box 5: Impairment flow for existing S1 exposures

The flow of impairments on existing S1 exposures is computed as follows:

Gross Imp Flow S1-S1 $(t+1)=$ Exp S1(t)* TR$^{1\text{-}3}(t+1)$* LGD$_{12M}^{1\text{-}3}(t+1)$ – Prov Stock S1(t).

Where:

- Prov Stock S1(t) is the stock of provisions against S1 exposures at t.

- LGD$_{12M}^{1\text{-}3}(t+1)$ refers to the loss rate for exposures that transitions from S1 to S3.

- TR$^{1\text{-}3}$ refers to the 1-year transition probability of S1 exposures to S3.

123.   A decrease in the coverage ratio (i.e. ratio of provisions to exposure) for the remaining total S1 exposure is not permitted. This floor is applied on the summary template CSV_CR_SUM.

c.   Changes in the stock of provisions of S2 exposures

124.   Box 6 outlines the method for calculating impairment losses on S1 exposures that deteriorate and move to S2 within the year. The estimation of lifetime LR should reflect the impact of the complete macroeconomic scenario such that all impairments will be recognised in year 1.

Box 6: Impairment flow for new S2 exposures and release of provisions due to flows from S2

The flow of impairments on exposures that move from S1 to S2 is computed as follows:

$$\text{Gross Imp Flow S1-S2 }(t+1)= \text{S1-S2 flow}*\text{LR}_{LT}^{1\text{-}2}(t+1).$$

$$\text{S1-S2 flow} = \text{Exp S1}(t)*\text{TR}^{1\text{-}2}(t+1).$$

Where:

- Prov Stock S1(t) is the stock of provisions against S1 exposures at t.

- LR$_{LT}^{1\text{-}2}(t+1)$ refers to the lifetime loss rate parameter for period $t+1$.

- TR$^{1\text{-}2}$ refers to the 1-year transition probability of S1 exposures to S2.

The net flow is therefore given by subtracting Release of S2 provisions from S2-S1 flows from the formula above.

125.   Box 7 shows the approach for calculating impairment losses on existing S2 exposures at the beginning of the year (Gross Imp Flow S2-SX). The net impact on Prov Stock S2 (t+1) is calculated by subtracting from the sum of Gross Imp Flow S1-S2 (t+1) and Gross Imp Flow S2-SX (t+1) the impairment flow for exposures moving from S2 to S3 (Gross Imp Flow S2-S3(t+1)) and the release of provisions on exposures moving from S2 to S1 (Release of S2 provisions from S2-S1 flows (t+1)).

126.   The estimation of lifetime LR should reflect the impact of the complete macroeconomic scenario until the exposure's maturity such that all impairments from initial S2 exposures will be recognised in year 1.

Box 7: Impairment flow for existing S2 exposures

The impairments on exposures that are categorised at the beginning of the year as S2 are computed as:

$$\text{Gross Imp Flow S2-SX } (t+1) = \text{Exp S2}(t) * \text{LR}_{LT}^{2\text{-}X}(t+1) - \text{Prov Stock S2}(t).$$

Where:

▪   Prov Stock S2(t) is the stock of provisions against S2 exposures at t.

▪ $\text{LR}_{LT}^{2\text{-}X}(t+1)$ refers to the lifetime ECL parameters for the period t+1.

d.   Changes in the stock of provisions of S3 exposures

127.   Impairment losses on new S3 exposures from S1 and S2 shall be calculated as shown in Box 8 below. No negative Gross impairment losses new stage 3 (Gross Imp Flow SX-S3) for any given exposure are permitted for any year or scenario. Provisions for initial S1 exposures can be used for S2 and S3 given a static balance sheet assumption (as S1 reduces in size during the forecast period) as shown in Box 4.

Box 8: Impairment flow for new S3 exposures

The flow of impairments on new S3 exposures at time $t+1$ is given by:

Gross Imp Flow SX-S3($t+1$) = Gross Imp Flow S1-S3($t+1$) + Gross Imp Flow S2-S3($t+1$).

Gross Imp Flow S1-S3($t+1$) = Exp S1(t) * TR^{1-3} ($t+1$) * LGD_{12M}^{1-3}($t+1$).

Gross Imp Flow S2-S3($t+1$) = Exp S2(t) * TR^{2-3} ($t+1$) * LGD_{12M}^{2-3}($t+1$).

Where:

- Prov Stock S1 is the stock of provisions against S1 assets at t.

- TR^{1-3} refers to the 1-year transition probability of S1 exposures to S3.

- TR^{2-3} refers to the 1-year transition probability of S2 exposures to S3.

- LGD_{12M}^{1-3}($t+1$) refers to the expected loss rate for exposures that transitions from S1 to S3.

- LGD_{12M}^{2-3}($t+1$) refers to the expected loss rate for exposures that transitions from S2 to S3.

128.   Box 9 below describes the approach to be used to derive the impairment flow on existing S3 exposures to take into account the deterioration of asset quality, particularly under the stress scenario. No negative impairments for any given exposure are permitted for any year or scenario, except and exclusively in the case of transitions from S2 to S1. As described in paragraph 112, perfect foresight applies to impairment losses on existing S3 exposures.

Box 9: Impairment flow for existing S3 exposures

The impairment loss on S3 exposures is given by:

Gross Imp Flow S3-S3 ($t+1$) = MAX {0 ; [LR_{LT}^{3-3}($t+1$)*Exp S3 (t)] – Prov Stock S3 (t)}.

Where:

- Prov Stock S3 (t) is the stock of impairments for existing S3 exposures at t. Only existing specific provisions in excess of the EL can be used to cover the impairment loss.

- LR_{LT}^{3-3}($t+1$) is the LR estimated in $t+1$ for the stock (at t) of S3 exposures.

e.   Impairment losses on sovereign exposures

129.   Banks are requested to estimate default and impairment flows for sovereign positions recorded at amortised costs according to the macroeconomic baseline and adverse scenarios. This covers positions whose exposure (Exp) is reported under the categories 'central banks and central governments' for IRB portfolios, as well as 'central governments or central banks' and 'regional governments or local authorities' for STA portfolios. For exposures to central banks contained in the above IRB and STA portfolios, zero loss rates are to be applied under the baseline and adverse scenarios. Fair value positions (i.e. FVOCI and FVPL) will be subject to the market risk approach.

130.   In order to compute these impairment flows, banks will be provided with a set of stressed probability of default and LGD parameters developed by the ECB for a selection of countries. The application of these parameters is mandatory for all banks.

2.4.4   FX lending

131.   Banks with significant foreign currency exposure are requested to take into account the altered creditworthiness of their respective obligors, given the FX development under the baseline and adverse scenarios. The marginal impact from the risk emanating from FX lending exposure has to cover both TRs and LRs. For TRs, the impact should be based on satellite models that link the macroeconomic scenario to the transition rates. For the loss rate, the impact should be based on an add-on for the LTV ratio in the case of collateralised exposures, while, in the case of uncollateralised exposures, banks should apply the appropriate FX add-on based on relevant historical information.

132.   In particular, banks are requested to evaluate this impact for exposures denominated in a currency other than the local currency of the borrower at asset class level for each country of counterparty if the total share of exposures in foreign currencies is above the thresholds described in Table 6 and Table 7 below.

Table 6: FX lending threshold (per country of counterparty) — IRB asset classes

IRB asset classes	Threshold (%)
Corporates — Specialised lending	5
Corporates — SME	5
Corporates — Other	5
Retail — Secured by real estate property	5
Retail — Qualifying revolving	5
Retail — Other retail	5

Table 7: FX lending threshold (per country of counterparty) — STA asset classes

STA exposure classes	Threshold (%)
Corporate — SME	5
Corporate — Non-SME	5
Retail — SME	5
Retail — Non-SME	5
Secured by mortgages on immovable property — SME	5
Secured by mortgages on immovable property — Non-SME	5

2.5   Impact on REA and IRB regulatory EL

133.   Banks shall simulate the impact on REA and IRB regulatory EL for credit risk caused by the application of the macroeconomic scenarios (baseline and adverse). The scope of the REA templates is wider than the P&L impact section. The exposures to consider in the REA templates will follow the COREP definitions, taking into account exposures subject to counterparty credit risk and all credit risk mitigation techniques.

134.   The exposure value of the positions included in the FVPL and FVOCI portfolio, whose P&L impact is assessed under the market risk framework, will remain constant for the purpose of the REA estimation.

135.   No roll-out of new internal models or modifications of existing internal models during the stress horizon are to be considered for calculating the REA. However, the expected increase in regulatory parameters during the stress horizon, derived from their re-estimation following the addition of new data under stress conditions, must be considered. The projections should take into account any specific conditions for the continued use of such models for regulatory capital purposes — e.g. any regulatory floors and/or parameter-level supervisory scalars.

136.   For both STA and IRB portfolios, the end-2017 level of REA, restated to reflect the full IFRS 9 effect (excluding IFRS 9 transitional arrangements), serves as a floor for the total REA for non-defaulted and defaulted assets calculated using stressed regulatory risk parameters in the baseline and adverse scenarios. This floor must be applied separately for the aggregate IRB and STA portfolios. REA after transitional arrangements is permitted to fall below actual end-2017 levels only if this is due to the impact of the IFRS 9 introduction.

137.   REA for contributions to the default fund of a CCP is assumed to remain constant across both scenarios.

138.   The exposure composition with respect to rating classes is expected to change as a result of defaulted asset flows and credit deterioration. For both STA and IRB portfolios, the exposure distribution among risk grades and defaulted exposures must be adjusted (assuming rating grade migration) based on the banks' own methodologies as appropriate, and consistent with the estimated default flows and migrations for impairment purposes. Accordingly, exposures that are downgraded or that are defaulted must be risk-weighted at

the appropriate risk weights (e.g., in the case of a STA defaulted unsecured exposures, at 100% or 150%).

139.   The impact of the defined scenarios on collateral values and eligibility shall also be considered for REA and IRB EL projections.

140.   For the defaulted exposures, where the institutions apply the LGD values set out in Article 161(1) of the CRR, the REA shall be 0. If the institutions use own estimates of LGD, the REA for defaulted exposures is calculated in accordance with Article 153 of the CRR (as shown in Box 10 below).

Box 10: REA estimation for defaulted assets

REA Def (t) = MAX $\{0$; [LGDreg(t) on default stock – ELBE(t)] * 12.5 * Def Stock$(t)\}$.

Where:

- LGDreg(t) on default stock should incorporate downturn conditions and additional potential unexpected losses due to the impact of the scenarios.

- ELBE (in the CSV_CR_REA template) represents the Expected loss best estimate. The ELBE, as also underlined in Article 181.1(h) of the CRR, should reflect economic circumstances.

141.   IRB excess or shortfall should be calculated at an aggregate level, separately for the portfolios of defaulted and non-defaulted exposures. As per Article 159 of the CRR, the IRB excess resulting from the calculation performed for the defaulted portfolio shall not be used to offset an IRB shortfall resulting from the calculation performed for the portfolio of exposures that are not in default. However, the IRB excess from the overall non-defaulted portfolio may be used to cover any IRB shortfall from the overall defaulted portfolio. If the mechanism outlined above results in an IRB excess of provisions over expected losses, this amount must be included in Tier 2 capital as set out in Article 62(d) of the CRR, i.e. up to 0.6% of REA. The expected loss amounts for equity exposures shall be entered in a dedicated row of the CSV_CR_REA_IRB. The expected loss amounts for other non-credit obligation assets shall be zero.

142.   The provisions related to exposures shall be determined as described for the estimation of impairments in section 2.4.3.

143.   Given the different scopes of the CSV_CR_REA and CSV_CR_SCEN, the stock of provision amounts might not be directly linked to each other.

2.6   REA for CCR

144.   The previous section 2.5 regarding the REA and IRB regulatory EL applies to the exposures subject to CCR (both banking and trading book).

145.   For the calculating the REA for CCR, regulatory exposures relating to CCR will be reported using the appropriate template (CSV_CR_REA) and asset classes listed in Table 2 and Table 3 for only this purpose.

146.   CCR regulatory exposures will remain constant and will not be affected by the impact of market risk scenarios or by any offset for increased accounting CVA in the scenarios (as set out in Article 273(6) of the CRR). In particular, stressed regulatory PD and LGD parameters (PDreg and LGDreg) shall be applied to these constant CCR regulatory exposures for the calculation of stressed REA for CCR.

2.7   Securitisation exposures

147.   All exposures subject to Chapter 5 of the CRR (traditional and synthetic, resecuritisations, and liquidity lines on securitisation transactions) are included in the scope of this section.

148.   Originator positions where no SRT has taken place are to be treated under the credit risk methodology, and should be reported accordingly in the credit risk templates. In particular, this holds for originator and investor exposures to securitisations issued or guaranteed by international organisations, multilateral development banks, governments or government agencies, where firms are subject to the credit risk of these institutions rather than the credit risk of the underlying exposures. Securitisation exposures within correlation trading portfolios are covered by the market risk methodology and must be reported within market risk templates.

149.   In line with section 2.3.2, the static balance sheet assumption should be applied by keeping the outstanding balance of all securitisation exposures unchanged throughout the time horizon of the stress test. Fair value changes should not have an impact on the exposure amount and the REA calculation for the application of the credit risk methodology.

150.   For the computation of the P&L impact, banks are required to estimate the amount of impairments for securitisation exposures that are not subject to mark-to-market valuation, taking into account the features of the baseline and adverse macroeconomic scenarios. FVOCI and FVPL portfolios are thus excluded from the calculation of impairments. The forecast impairments should take into consideration impairments already considered in prior periods, and incremental impairments for each period must be added, and reported appropriately, in the securitisation templates. For each individual security, the underlying pool's credit and prepayment models must be stressed under the different scenarios to produce consistent impairment estimates. Estimated impairments should take into consideration the impact of

credit enhancement and other structural features when applying the credit risk methodology. Banks are required to outline their calculations in an accompanying document.

151.   For securitisation exposures subject to mark-to-market valuation (i.e. FVOCI and FVPL), banks are required to estimate the P&L impact via the mark-to-market loss incurred as a result of the impact of the scenarios according to the market risk methodology (see section 3).

152.   For the estimation of the REA, the stress is applied to the securitisation positions in both the banking book and the trading book (within the scope of this section) according to their regulatory treatment.

153.   For regulatory approaches based on risk weights (i.e. the STA and the IRB method — except exposures under the supervisory formula), a fixed risk weight increase will be applied to the different credit quality steps for restated end2017 data by substituting the original risk weights with predefined increased ones. The increased risk weights reflect the effect on REA of the potential rating migration of the positions. The impact will be shown separately on the securitisation templates according to regulatory approach (CSV_CR_SEC_STA, CSV_CR_SEC_IRB). Securitisation positions deducted from capital shall not be reported in the referred templates.

154.   For this purpose, the securitisation positions are allocated to the three different securitisation categories for which the increase in REA is prescribed: low, medium and high risk. The differentiation is dependent on the structure or asset class of the transaction, regional differentiation, the credit quality of the position and the expected sensitivity to the macroeconomic scenario. The classification is based on an analysis of the migration volatility of different products and their origin, where a higher migration probability indicates a higher risk. The risk categories and allocation of products are the following:

- Risk bucket 1 (low risk): ABCP, EMEA RMBS, EMEA ABS, Americas ABS;

- Risk bucket 2 (medium risk): EMEA CMBS, EMEA CDO, Americas CMBS;

- Risk bucket 3 (high risk): Americas RMBS, Americas CDO and all other positions, including resecuritisations.

155.   Banks are asked to supply information on the IRB and STA exposure per defined risk bucket as of 31 December 2017 (actual and restated). For this purpose, the securitisation positions should be reported in the securitisation templates by credit quality step, securitisation versus resecuritisation, REA calculation approach, and seniority and granularity based on corresponding CRR definitions (e.g. Articles 251, 255, 259, 261 and 262 of the CRR). Risk exposure amounts at the starting points will be automatically computed for each bucket based on risk weights defined in Articles 251 and 261 of the CRR. However, banks are required to report the aggregate risk exposure amount after the application of caps defined in Articles 252 and 260 of the CRR. These caps will not be considered in the projected period.

156.   Banks should estimate the amount of impairments before the calculation of risk-weighted assets for securitisation positions. Impairments estimated for the computation of the P&L impact will be taken into account in accordance with Article 246(1) and Article 266(2) of the CRR. Therefore, for exposures under the STA approach, impairments will be subtracted from the exposure to be risk-weighted. For exposures under the IRB approach, risk weights must be applied on the full exposure (gross of impairments) and then subtract 12.5 times the impairment provisions. Impairment estimates for securitisations shall be reported in the securitisation summary template (CSV_CR_SEC_SUM).

157.   When external ratings are not available and the banks use the IAA for REA calculation purposes, these securitisation positions should be stressed according to what is stated in the previous paragraphs. Each securitisation position should be assigned the credit quality step whose average risk weight is the closest to the one in the considered securitisation contract.

158.   When the banks use the SFA for REA calculation purposes, they shall apply the stress factors for unsecuritised corporate or retail exposures to the risk components (PD, LGD) of the asset pool in the respective exposure class. In this case, as a precondition, the IRB banks will have to demonstrate to the relevant competent authority that the internal methods can be adjusted in a way that is consistent with the scenarios. Beyond the requested data in the relevant template, banks are required to outline their calculations in the accompanying document, reporting all their driving parameters.

159.   The securitisation positions under the IRB SFA and other positions (look through) shall be reported separately (CSV_CR_SEC_IRB_SF, CSV_CR_SEC_OTHER). Risk weights for these securitisation positions under other positions (look through) will increase by applying the same stress factor (i.e. risk weight t+1/risk weight t) applicable to positions in the same regulatory approach, category and risk bucket.

160.   Positions subject to additional risk weights resulting from application of Article 407 of the CRR shall also be reported in the template CSV_CR_SEC_OTHER but are not stressed during the stress horizon, i.e. REA stays constant at the 2017 starting value for those positions.

161.   For both the STA and IRB portfolios, the restated end-2017 level of REA serves as a floor for the total REA calculated under the baseline and adverse scenarios. This floor must be applied separately for aggregate IRB and STA portfolios.

3. Market risk, CCR losses and CVA

3.1 Overview

162.   The impact of market risk on all positions at partial or full fair value measurement is to be assessed via a full revaluation after applying a common set of stressed market risk factor shocks consistent with the adverse macroeconomic scenario. The impact of FX risk on the banking book and related hedges is excluded. Under the trading exemption, banks are allowed to not apply a full revaluation on items held with a trading intent and their related hedges.

163.   Banks have to recalculate the CVA and liquidity reserve based on the adverse macroeconomic scenario consistently with the full revaluation. Banks shall also stress the valuation reserve for L2/L3 assets and liabilities to take into account modelling uncertainty related to those instruments.

164.   In addition, for items held with a trading intent, client revenues can be projected for each year if the bank is able to provide historical evidence of the sustainability of these incomes. Under the trading exemption, banks are allowed to set these revenues to 75% of the baseline NTI.

165.   For CCR, it is assumed that the two most vulnerable of the largest 10 counterparties default.

166.   In addition, banks are required to determine the impact of the scenarios on REA; however, these are largely based on prescribed assumptions.

167.   Banks' projections are subject to the constraints summarised in Box 11.

Box 11: Summary of the constraints on banks' projections of market risk

- No change, i.e. no deviation from the starting value, is assumed under the baseline scenario (paragraphs 222 and 239) for the full revaluation.

- The full revaluation impact on items held with a trading intent and their related hedges is capped at a haircut of the sum of asset and liabilities under the adverse scenario.

- The baseline value for the NTI is defined (based on average historical values) as the minimum of the averages across the last 2, 3 and 5 years, where the 2-year average is floored at 0 (paragraph 252).

- Under the adverse scenario, client revenues projections are capped at 75% of 2017 annual

client revenues and 75% of the baseline NTI.

- REA stays constant in the baseline scenario and cannot decrease below the starting value in the adverse scenario (paragraphs 271 and 272).

- REA is assumed to be a multiple of the risk measures for VaR and APR (paragraphs 274 and 276).

- Banks that do not have in place a VaR model approved by the competent authority are assumed to maintain market risk REA constant at the starting value for both the baseline and adverse scenarios (paragraph 271).

- The impact on REA for IRC and CVA is floored at the increase for IRB REA (paragraphs 275 and 278).

3.2   Scope

168.   The scope of the market risk stress methodology covers all positions under full or partial fair value measurement — i.e. positions in FVPL, FVOCI and amortised cost positions being part of a hedge-accounting relationship.

169.   This scope includes all hedge-accounting portfolios designated to hedge positions assessed at fair value (i.e. FVOCI) or at amortised cost. This includes fair value hedges and cash flow hedges.

170.   In line with paragraphs 30 and 444, the impact of FX risk on banking book positions, i.e. all items but the ones held with a trading intent and their related economic hedges, is excluded from the scope.

171.   Also in scope are all positions for which banks calculate CVA, as well as all positions subject to CCR.

172.   Securitisation positions held at fair value are also covered in this section. The market risk impact for securitisation positions therefore needs to be reported in the market risk templates depending on their accounting treatment and in line with any other positions in the scope of the market risk methodology. However, the stressed REA for securitisation positions that are not in the correlation trading portfolio are not in the scope of the market risk methodology and are covered under credit risk in section 2.

173.   Defined benefit pension funds shall be subject to the application of relevant market risk variables as defined in the adverse scenario. In particular, the same set of shocks to long-term interest rates should be taken into account for the purpose of computing the change in the actuarial discount rate (the IAS 19 discount rate for banks using IAS) and should be consistent with the development of long-term interest rates as defined in the macroeconomic scenarios. The asset and liability positions shall be stressed in line with the requirements for all positions

under partial or full fair value measurement. As outlined in paragraph 441, the eventual shortfall of assets versus liabilities in defined benefit pension funds, resulting from the application of the scenarios, will have an impact on banks' capital. The impact shall be reported by all banks as a memorandum item on the market risk summary template (CSV_MR_SUM).

3.3 High-level assumptions and definitions

3.3.1 Definitions

174. The **comprehensive approach (CA)** is the approach to be applied if there is no trading exemption.

175. The **trading exemption** is an exemption from reporting the full revaluation impact for items held with a trading intent and their related hedges.

176. **Partial fair value** is an accounting measurement under which only specified risks are measured at fair value through profit and loss. For example, amortised cost items that are hedged via a fair value hedge-accounting relationship are at partial fair value because the changes of the fair value of the instrument related to the hedged risk are reported in the P&L.

177. **Hedge-accounting portfolios** are defined in line with FINREP. Only the fair value changes of hedging instruments (cash flow hedges and fair value hedges) that qualify as hedge-accounting instruments under the relevant accounting framework (e.g. IAS 39 or IFRS 9) as of year-end 2017 are recognised as hedging effects from hedge-accounting instruments.

178. **Cash flow hedged items** are items hedged via a cash flow hedge-accounting relationship under either IFRS 9 or IAS 39.

179. **Portfolio cash flow hedged items of interest rate risk** are items hedged via a cash flow hedge-accounting relationship for a portfolio hedge of interest rate risk under either IFRS 9 or IAS 39.

180. **Fair value hedged items** are items hedged via a fair value hedge-accounting relationship under either IFRS 9 or IAS 39.

181. **Portfolio fair value hedged items of interest rate risk** are items hedged via a fair value hedge-accounting relationship for a portfolio hedge of interest rate risk under either IFRS 9 or IAS 39.

182. **Cash flow hedging instruments** are items that are recognised as hedging instruments in a cash flow hedge-accounting relationship under either IFRS 9 or IAS 39.

183.   **Portfolio cash flow hedging of interest rate risk** are items that are recognised as hedging instruments in a cash flow hedge-accounting relationship for a portfolio hedge of interest rate risk under either IFRS 9 or IAS 39.

184.   **Fair value hedging instruments** are items that are recognised as hedging instruments in a fair value hedge-accounting relationship under either IFRS 9 or IAS 39.

185.   **Portfolio fair value hedging instruments of interest rate risk** are items that are recognised as hedging instruments in a fair value hedge-accounting relationship for a portfolio hedge of interest rate risk under either IFRS 9 or IAS 39.

186.   **Items mandatory or optional at FVPL** are positions that are either (i) designated at fair value through profit or loss (IFRS 7.8(a)(i), IAS 39.9) or (ii) non-trading financial assets mandatorily at fair value through profit or loss (IFRS 9.4.1.4).

187.   **FVOCI items held for (i) collecting contractual cash flows and selling financial assets or (ii) holding or selling equity position** are all items measured at FVOCI that are not part of any hedge-accounting relationship.

188.   **Direct sovereign positions** cover only exposures to central, regional and local governments on an immediate borrower basis, and do not include exposures to other counterparts with full or partial government guarantees. These exposures arise from an immediate borrower basis (e.g. an exposure of 100 towards Country A, collateralised with bonds issued by Country B, is reported on Country A but not on Country B) and do not include exposures to other counterparties with full or partial government guarantees or state-owned companies. Exposures towards supranational entities and central banks are treated as non-sovereign positions.

189.   **Items held with a trading intent and their related hedges** are all financial instruments reported in HFT in FINREP but excluding economic hedges of items booked in other accounting categories. This includes all items that are held with a trading intent and all the economic hedges used to hedge these positions.

190.   **Economic hedges** are financial instruments that do not meet the requirements of IAS 39 or IFRS 9 to qualify as hedging instruments, but that are held for hedging purposes. Economic hedges are defined following FINREP. They include those derivatives that are classified as HFT but are not part of the trading book as defined in Article 4(1)(86) of the CRR. The item 'economic hedges' does not include derivatives for proprietary trading.

191.   **Market risk factors** refer to a set of factors identified by the ESRB and the ECB as the main drivers of market risk that were used to calibrate the impact of the adverse macroeconomic scenario on fair value positions. They include interest rates and volatilities for currencies, exchange rates, changes in volatility for equity, commodity and debt instruments, changes in credit spreads for debt instruments, parameters relevant to the correlation trading portfolios and bid/ask spreads to be used for the assessment of the impact on market liquidity.

Most, but not all, of these market risk factors are explicitly captured in the full revaluation template (CSV_MR_FULL_REVAL).

192.   **Additional risk factors** are factors other than the ESRB and the ECB market risk factors that have a material contribution to the overall full revaluation results.

193.   **NTI** is defined as in FINREP ('gains or losses on financial assets and liabilities FVPL, net').[11] In particular, no one-off effects should be deducted or accounted for in the calculation of the NTI, i.e. historical data for NTI may not be adjusted unless the bank officially restated its accounts (e.g. for misvaluing derivative positions) over the years in question. Banks that, in the course of their periodic financial reporting, present the interest income on assets in FVPL as a part of NTI should report this income as a part of NII and remove it from the recurring NTI for historical and projected values. This removal of NII from NTI on a best effort basis is a requirement for all banks. Bank shall describe in the explanatory note how this removal was carried out.

194.   **Client revenues of items held with a trading intent** are defined as all income included in NTI, excluding (i) the P&L due to price movements and the associated marking-to-market of 'at risk' positions and (ii) the impact of the CVA and reserves. Client revenues include (i) income generated from facilitating client trading activity (often a retained portion of the bid/ask spread) or (ii) trading fees and commissions (often a mark-up on the bid/ask spread), as well as prime services revenues and investment banking fees (if these fees are not already reported as part of the fees and commission P&L line). Banks shall describe in the explanatory note how client revenues have been estimated.

195.   **Optional derivatives** are all derivatives, as defined under IFRS 9 or IAS 39, that have an optional pay-off.[12]

196.   **CCR exposures** are exposures related to the risk that the counterparty to a transaction could default before the final settlement of the transaction's cash flows. This refers to CCR as defined in Article 272 of the CRR, and to regulatory exposure for capital requirements as calculated in accordance with Article 273 of the CRR. Exposure for P&L effects as set out in section 3.5.2 refers to the stressed current exposure of the bank — i.e. current exposure following the application of the stress. The relevant exposure measure that should be used is

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[11] FINREP template 2, row 280.

[12] This includes, inter alia, equity single name options, equity index options, equity basket options, equity variance options, equity volatility options, equity warrants, equity convertibles, equity convertible preferred, currency options, FX OTC options, currency swaptions, options on bond futures, options on interest rate futures, options on interest rate swaps and options on CDS. On the other hand, this excludes CDS – single names, CDS – basket, CDS – index, equity index futures, equity forward, equity swaps, equity variance swaps, equity volatility swaps, equity convertible swaps, currency futures, forward FX contracts, currency-linked notes, bond futures, interest rate futures, futures on swaps, single currency interest rate swaps, cross-currency interest rate swaps, basis swaps, bond forwards and forward rate agreements.

current exposure, given by the market value and taking into account legally enforceable counterparty netting and collateral received or posted to the counterparty. Exposure for the calculation of capital requirements as set out in section 2 refers to regulatory exposure as defined in the CRR — i.e. covering current and potential future exposure. The exposures for both the P&L and capital requirements calculations should comprehensively capture trades and aggregated exposures across all forms of CCR at the level of specific counterparties.

197.   **CVA** is an adjustment to the mid-market valuation of the portfolio of transactions with a counterparty, as per Article 381 of the CRR. This adjustment reflects the current market value of the credit risk of the counterparty to the institution, but does not reflect the current market value of the credit risk of the institution to the counterparty. **DVA** is an adjustment to the measurement of derivative liabilities to reflect the own credit risk of the entity.

198.   **IRC** is an approach that captures, in the calculation of capital requirements, the default and migration risks of trading book positions that are incremental to the risks captured by the VaR measure as specified in Article 365(1) of the CRR.

199.   **Correlation trading portfolio and APR:** institutions shall use this internal model to calculate a number that adequately measures APR at the 99.9% confidence interval over a time horizon of 1 year under the assumption of a constant level of risk, and adjusted (where appropriate) to reflect the impact of liquidity, concentrations, hedging and optionality (Article 377 of the CRR).

200.   **Securitisation positions** are defined as in section 2.

201.   **L1/L2/L3 instruments** are defined according to FINREP or IFRS 13.

3.3.2 Static balance sheet assumption

202.   The market risk shock is applied as an instantaneous shock to all positions in the scope of the market risk methodology, with the exception of FVPL positions held with a trading intent and their related hedges for trading exemption banks.

203.   In line with the static balance sheet assumption:

- The notional values of all assets and liabilities under the market risk scope are expected to remain constant over the time horizon of the exercise.

- Banks cannot assume any portfolio management actions in response to the stress scenarios (e.g. portfolio rebalancing or liquidation).

3.3.3   Requirement for the trading exemption

204.   Institutions can request the trading exemption of their competent authorities provided that neither of the following conditions holds:

- The institution has at least one VaR model in place, approved by the competent authority under the CRR;

- The institution's total market risk capital requirement is greater than 5% of the total capital requirement.

205.   Competent authorities can reject the request for the trading exemption even if the previous conditions are fulfilled.

206.   The differences between CA banks and trading exemption banks are specified in sections 3.4 and 3.6 and summarised in Box 12 below.

Box 12: Overview of the differences between CA banks and trading exemption banks for the full revaluation on all assets and liabilities at partial or full fair value

The only differences between CA banks and trading exemption banks are (i) the exemption from the full revaluation for items held with a trading intent and their related hedges; (ii) the setting to 75% of baseline NTI of client revenues for trading exemption banks if the baseline NTI is positive; and (iii) that trading exemption banks should not provide any data on client revenues.

Full revaluation on all assets and liabilities at partial or full fair value

Category of bank	Baseline	Adverse	
Comprehensive approach banks (CA)	No impact	Revaluation of all assets and liabilities with a full or partial fair value	
		For items held with a trading intent and their related hedges, impact is capped at -0.20% of the sum of the fair value of assets and liabilities (net of economic hedges)	
		Losses are scaled by the ratio between the 75th percentile of the daily VaR figures for the full year 2017, and the daily VaR reported for the reference date 31 December 2017	
Trading exemption banks (TE)	No impact	Revaluation of all assets and liabilities with a full or partial fair value behaviour except items held with a trading intent and their related hedges	
		Impact for items held with a trading intent and their related hedges is -0.20% of the sum of the fair value of assets and liabilities	

Projection of client revenues for items held with a trading intent

Category of bank	Baseline	Adverse	
Comprehensive approach banks (CA)	Min {Average (NTI) 2015-2017, Average (NTI) 2013-2017, Max (0, Average (NTI) 2016-2017)}	If baseline NTI < 0	Baseline NTI
		If client revenue data available	min(baseline_NTI * 75%, CRev * 75%, Projected CRev)
		If client revenue data not available	0
Trading exemption banks (TE)	Min {Average (NTI) 2015-2017, Average (NTI) 2013-2017, Max (0, Average (NTI) 2016-2017)}	If baseline NTI < 0	Baseline NTI
		If baseline NTI > 0	Baseline NTI * 0.75

Note: In the CA row the "If baseline NTI > 0" label applies to the two sub-rows "If client revenue data available" and "If client revenue data not available".

3.4 Full revaluation of positions under partial or full fair value measurement

3.4.1 Reference date and time horizon

207.   The reference date for applying the market risk shocks is 31 December 2017.

208.   The overall impact on P&L and capital of the market risk shocks should be fully recognised in the first year of the stress test horizon (i.e. in 2018).

209.   The P&L impact of the market risk stress shall be an instantaneous shock — i.e. no holding period assumptions can be made for any positions for the calculation of gains or losses.

3.4.2 Market risk factors

210.   Scenarios have been defined in terms of shocks to market risk factors in order to project gains and losses on all positions subject to partial or full fair value measurement, with the exception of items held with trading intent and their related hedges in the case of trading exemption banks. The stressed market risk factors have been estimated for the adverse scenario by the ESRB and the ECB.

211.   Not all risk factors provided in the market risk scenarios are explicitly captured in the CA template (CSV_MR_FULL_REVAL). Banks' impact projections should take into account all market risk factors provided in the scenario — e.g. the impact for equity instruments will depend not only on the shocks provided for equity indices, but also on the volatility assumptions in the scenario.

212.   If aggregate and more detailed risk factors are provided, e.g. for the EU and on a country level, the most granular relevant risk factor should be applied in each case.

213.   As the risk factors provided may not necessarily capture all of banks' market risk drivers, all banks are required to stress additional risk factors that are not included in the scenario but have a material contribution — i.e. on a cumulative basis, for banks with an approved VaR model, in the case of items held with a trading intent and their related hedges, the additional risk factors show a relevant impact, and, along with the factors already considered, explain at least 95% of the actual VaR. In addition, banks need to report in the explanatory note the calibration of these risk factors and their impact. This information will be relevant in the quality assurance process in order to assess the degree of fitting between the additional stress factors and the ones included in the scenarios.

214.   Banks shall differentiate between two kinds of additional risk factors:

• Risk factors that are part of aggregated risk factors in the given scenario — e.g. different types of oil as part of the oil risk factor;

- Risk factors that are not included in the scenario in aggregate form — e.g. inflation risk.

215. For the first type of risk factors defined in paragraph 214, banks shall, in general, not extend the set of risk factors to additional, more granular, risk factors but shall apply the shocks given in the scenario directly. However, banks shall assess whether or not the resulting stress is adequate for their portfolio. If this is not the case, e.g. because of illiquid positions in a bank's portfolio or concentrations in more volatile positions, banks shall also extend the scenario to more granular risk factors. This approach may only increase the stress impact of the bank. The list of more granular risk factors and associated shocks derived using this approach should be reported in the explanatory note.

216. In the case of interest rate and credit curves, the shocks for tenors that are not provided in the market risk scenario should be computed by interpolation. For tenors that are shorter or longer than the range of tenors available in the scenario, shocks to the shortest and the longest tenor available respectively should be used.

217. Banks should define their own approach to translate the scenarios to shocks to the additional risk factors, and need to provide evidence to show that this approach is (i) appropriate (i.e. methods and relationships relied upon should be valid); (ii) comprehensive (i.e. material market risks should not be left unstressed); (iii) conservative (i.e. where it is impossible to accurately reflect the impact of the stress scenario, banks should overestimate rather than underestimate its impact).

218. The treatment of additional risk factors, as well as the optional and additional information required by competent authorities, is specified in Box 13. Data that are available in banks' internal systems and are sourced from standard market data providers can be used for the purpose of calibrating shocks to the additional risk factors.

Box 13: Treatment of additional risk factors

Banks should distinguish between additional risk factors that cannot be derived from the risk factors provided by the EBA and the ones that can be directly derived from these risk factors.

In all the cases where supporting information is required, competent authorities will assess the reliability of the shocks applied as part of the quality assurance process.

Approaches for the calibration of the shocks to additional risk factors directly derived from the risk factors provided in the scenario

- Calibrated statistical relationship between risk factors and additional risk factors: if good-quality data are available in sufficient quantity to support a statistical relationship between the additional risk factor and one (or more) of the risk factors in the scenario provided, this relationship should be used to calibrate the shock to the additional risk factor, and the

statistical evidence to support this relationship should be provided, including evidence to indicate to which extent this relationship holds in stressed market conditions.

▪ Where good-quality data are unavailable (e.g. for a new issued corporate bond), such that the variable itself is unobservable and its relationship with other variables cannot be statistically determined, theoretical reasons to support the calibration of the risk factor shift should be provided. For example, there may be arbitrage reasons to support the calibration. In particular, the value of certain illiquid and/or complex trading book positions depends upon unobservable, or difficult to observe, parameters. Such parameters (and the valuation methods in which they are used as inputs) should be adjusted to reflect the severity of the market shock associated with the scenario. For example, if the severity of the market shock might lead to circumstances that would require a remarking of the equity correlation book, then correlations, unobservable parameters, associated basis factors and the valuation methodology should be adjusted accordingly.

Approaches for the calibration of the shocks to additional risk factors that cannot be derived from the risk factors provided in the scenario

▪ Some banks may have to add risk factors that are not correlated to the risk factors provided in the scenario.

▪ If good-quality data are available in sufficient quantity to support a statistical relationship between the risk factor and the macroeconomic variables for which projections are provided in the macroeconomic scenario, this relationship should be used to calibrate the risk factor, and the statistical evidence to support this relationship should be provided, including evidence to indicate how this relationship holds up in stressed market conditions.

▪ Where good-quality data are unavailable such that the variable itself is unobservable or its relationship with other variables cannot be statistically determined, theoretical reasons to support the calibration of the risk factor shift should be provided.

3.4.3   Scope of application of the full revaluation

219.   All accounting categories under a full or partial fair value measurement should be fully revaluated under the adverse scenario (except items held with a trading intent and their related hedges for trading exemption banks). Annex V presents the list of accounting categories and hedging categories that are in scope.

220.   If the systems of a bank do not allow the full revaluation for certain positions that are not held with a trading intent, banks may perform a partial revaluation and apply Taylor approximation techniques. Banks should indicate in the explanatory note how, for which instruments and for what part of the portfolio they applied this approach.

221.   For items that are measured at FVOCI and that would be subject to the impairment model of IFRS 9, the impact from changes in the credit risk of counterparties should be measured at fair value and reported in OCI.

3.4.4   Features of the full revaluation

222.   In the baseline scenario, no impact is assumed (i.e. the impact should be set to zero).

223.   In line with paragraph 208, gains and losses on all position in scope shall be fully recognised in the first year of the stress test.

224.   The impact of the full revaluation should be reported in the template CSV_MR_FULL_REVAL.

225.   Prudential filters will be treated as prescribed in section 6.4.6.

226.   Banks are requested to conduct full revaluations of all their positions under partial or full fair value measurement (except items held with a trading intent and their related hedges for trading exemption banks) and to report impacts by asset classes, accounting and product type, and by differentiating between optional derivatives and other products. In particular, banks need to report:

- The fair value or accounting value and notional of the positions.

- The gain or losses under the full revaluation.

- The first order sensitivities ('delta') of the positions to the risk factors provided in the template CSV_MR_FULL_REVAL, as of the reference date (31 December 2017) as defined in Table 8. Sensitivities need to be reported for all risk factors included in the market risk scenario other than volatilities and the shocks for reserves for liquidity or model uncertainty.

Table 8: Definition of sensitivities

Risk factor category	Current Value	Greek letter	Greek value
Equity FX	X_0	DELTA	$F_X{'}(X_0) \times 1\%$
Interest rate, credit spread	r_0	DELTA	$F_r{'}(r_0) \times 1bp$

227.   The total impact shall then be separately reported for the following items, in line with accounting standards:

- The impact on OCI from revaluation effects of (i) non-hedged risk factors on hedged items — i.e. the impact on OCI after hedging — or (ii) hedged risk factors on cash flow hedging instruments (effective part);

- The impact on P&L from revaluation effects of (i) ineffectiveness of hedging instruments that are part of a cash flow hedge-accounting relationship, (ii) hedged risk factors on hedged instruments via fair value hedge accounting or (iii) all risk factors on FVPL positions.

228.   Direct sovereign positions' fair value and full revaluation impacts should be reported in the template CSV_MR_FULL_REVAL as a memorandum item for all accounting categories and instrument types.

229.   For items that are held with a trading intent and their related hedges, the full revaluation loss for CA banks is capped at a haircut of the sum of asset and liabilities of these positions as described in Box 14. This floor is applied on CSV_MR_SUM on portfolio level.

Box 14: Constraint on the full revaluation of CA banks for items that are held with a trading intent and their related hedges (TI&RH)

Full revaluation impact = VaR scaling factor * Min(-0.20% * Sum(Assets fair value TI&RH, Liabilities fair value TI&RH), Gain or losses on TI&RH items).

Where:

- TI&RH are all positions held with a trading intent and their related hedges, the fair value of assets and liabilities being both positive numbers.

- Gain or losses on TI&RH items are banks' own full revaluations of TI&RH items.

- VaR scaling factor is defined as in paragraph 230.

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230.   In order to account for the possible lack of representativeness of the end-of-year positions, the total loss projected by CA banks under the adverse scenario for items that are held with a trading intent and their related hedges shall be multiplied by a scaling factor that is computed as follows:

- The ratio between the 75th percentile of the daily VaR figures for the full year 2017 and the daily VaR reported for the reference date 31 December 2017 is calculated.

- This ratio is floored at 1 and capped at 1.5.

- The scope of positions for the VaR is permitted to be the prudential trading book. When a regulatory VaR model is not available for this calculation, banks shall apply internally used VaR models.

- The calculation of this ratio as well as the application of the scaling factor is carried out on CSV_MR_SUM.

231.   For the purpose of the stress test, banks shall not, under any circumstances, take into account possible valuation adjustments on debt securities and gains resulting from credit spread widening of own liabilities. Hence, following a deterioration of own creditworthiness, the bank is not allowed to book a gain on those debt securities (or any other fair value liabilities) that represent a net liability to the bank.

232.   The impact of the full revaluation should be reported including basis risk. Banks use their own methodologies to stress basis risk. Key basis risks are expected to cover (inter alia) interest rates, credit spreads and commodity prices. In all cases, banks should assume relative, or if appropriate absolute, changes in the bases (compared with the values observed as of 31 December 2017) that are consistent with the scenario. Banks shall outline the approach taken in the explanatory note.

233.   In addition to the accounting breakdown, market shocks are intended to be applied and reported by relevant risk factors (i.e. interest rate, FX, equity, funds, commodities, credit spread). For instance, for a bond the key risk factors to be considered are interest rate and credit risk. Exceptions to this general rule are, for example, funds and other instruments for which the scenario does include the relative change in the fair value or the yield of the products and for which there is no need to disentangle the effects in underlying shocks. In the case of asset classes similar to the ones for which fair value changes are given, banks shall apply the same approach and shocks.

234.   The impact of the shock on correlation trading portfolios shall be reported together with other positions in the full revaluation market risk template (CSV_MR_FULL_REVAL). Banks holding a correlation trading portfolio in excess of 1% of total REA are deemed to hold a significant correlation trading portfolio. Competent authorities can ask these banks to provide additional information on the impact of these portfolios.

235.   When reporting results, multivariate effects deriving from the application of the market risk parameter shocks shall be taken into account and cumulatively shown in the template in the P&L and OCI impact columns.

236.   Banks are requested to provide a narrative, detailing major hedging strategies at portfolio level, for both hedge-accounting portfolios and economic hedges in the explanatory note.

3.4.5 Trading exemption banks

237.   Banks classified as trading exemption banks according to the criteria set out in paragraph 204 shall estimate the market risk full revaluation impact on FVPL positions held with a trading intent and their related hedges using the haircut approach used as a cap to the full revaluation impact in Box 14.

3.5   Revaluation of market risk reserves

238.   For the purpose of the liquidity and CVA reserves stress test losses (as detailed in this section), all banks are required to stress exposures based on the market risk scenarios and risk factor shocks described in section 3.4.2 in the adverse scenario.

239.   No additional liquidity or CVA losses are assumed for the baseline scenario.

3.5.1 CVA impact on P&L and exclusion of the DVA impact

240.   The negative P&L adjustments arising from CVA changes will reflect deteriorating credit quality for some counterparties under the market risk stress. When calculating the adjustments, all banks, irrespective of whether they are TE or CA banks, should maintain consistency with the calculation of CVA in their accounts and apply their internal methodology in a prudent way. Banks should calculate CVA losses as the CVA at the reference date minus the CVA under the market risk stress, with the latter derived from the application of the prescribed market risk shocks for the adverse macroeconomic scenario.

241.   The projection of CVA losses covers all portfolios in which CVA losses can occur according to the accounting treatment of the bank — i.e. it is not limited per se to FVPL positions or to positions for which a CVA capital charge is calculated. All losses will be captured in the P&L. No separate materiality thresholds are set, as firms should follow their accounting treatment.

242.   In deriving the CVA under the market risk stress, banks may exclude counterparties in default. Banks should pay particular attention to material counterparties whose credit spread is significantly and adversely correlated with the risk factors that drive the CVA related to those counterparties or the collateral posted by those counterparties, in particular making a judgement about whether a more conservative application of their standard methodology would be appropriate in such a material case.

243.   The P&L impact of CVA hedges should be excluded from the stressed CVA reported in the template CSV_MR_RESERVE. Any impact from CVA hedges will be reported following its accounting requirement in the full revaluation template CSV_MR_FULL_REVAL, but no adjustment to those hedges should be assumed. However, the impact of CVA hedges has to be reported as a memorandum item in the template CSV_MR_RESERVE.

244.   Exposures shall be reported net of stressed collateral. No collateral that is to be called beyond what is held at the reference date may be assumed.

245. For the purposes of the stress test, banks shall not take into account possible DVA. Hence, following a deterioration of own creditworthiness, the bank is not allowed to book a P&L profit on those derivatives (or any other fair valued liability including the issuance of own bonds to the market) that present a liability to the bank. This constraint should be applied within each netting set for derivatives.

246. Banks are not allowed to offset the projected CVA fair value impact by any existing reserves.

247. The resulting CVA impact shall be reported using the reserve template (CSV_MR_RESERVE).

248. Banks are asked to break down CVA positions into investment and sub-investment grade for the set of types of counterparties defined in the template CSV_MR_RESERVE, using their normal approach to distinguishing investment grade according to external ratings or, for counterparties with no external rating, according to an internal methodology if applicable.

249. Banks can optionally be asked by the competent authority to report the information listed in Table 9.

Table 9: Informations about the CVA to be reported in the template CSV_MR_RESERVE

Information	Guidance
Average credit spread	For any given counterparty category, the average credit spread (as of 2017 and under the adverse scenario) should be computed as a weighted average spread, across issuers and tenors, weighted by the exposure amount in each tenor bucket (or time step) used.
Expected positive exposure (EPE)	The EPE should be computed in a manner consistent with the internal methodology used by the bank for the calculation of the CVA in its accounts. If an add-on methodology is used for such determination, the add-on should be reported.
Aggregate EPE	In any given counterparty category, the aggregate EPE should be computed as a simple aggregate (i.e. sum) across all counterparties (in this category) of the average EPE profile for such counterparties. For any counterparty, the average EPE profile should be determined as the weighted average of the EPE profile across the various maturity tenors (or time steps), weighted by the size of this time step (i.e. the difference in time between the start and the end of such time), or any other more detailed methodology provided that it remains a reasonable approximation of the overall EPE against that counterparty in the market scenarios in question and a good predictor of the overall CVA adjustment for the counterparty (when combined with the average credit spread).

3.5.2 Reserves for liquidity and modelling uncertainty

250. All banks shall also compute the market liquidity impact due to an exogenous widening in the bid-ask spread given in the scenario for the whole portfolio of items for which these

liquidity reserves are computed. The shocks provided in the market risk scenario take into account both the liquidity shock and modelling uncertainty for L2 and L3 instruments. This requirement is independent of whether banks calculate an additional valuation adjustment (AVA).

251.   Banks shall report the resulting impact on reserves by accounting portfolio, instrument type (L1/L2/L3) and risk factor in the reserves template (CSV_MR_RESERVE).

3.6   Projection of client revenues for items held with a trading intent and NTI impact

3.6.1   Baseline NTI

252.   The baseline NTI for each year is defined as the least of the following: the average of the 2016-2017 NTI (floored at 0), the average of the 2015-2017 NTI, and the average of the 2013-2017 NTI (see Box 15). It will be calculated on the market risk template for the projection of client revenues (CSV_MR_PROJ).

Box 15: Definition of the baseline NTI value for all years

$$\text{NTI}_{2018,2019,2020 \text{ (baseline)}} = \text{Min}\{\text{Average(NTI)}_{2013\text{-}2017}, \text{Average(NTI)}_{2015\text{-}2017},$$
$$\text{Max}(0,\text{Average(NTI)}_{2016\text{-}2017})\}.$$

Where:

- Average(NTI) $_{2016\text{-}2017}$ is the simple average NTI over 2016-2017.

- Average(NTI) $_{2015\text{-}2017}$ is the simple average NTI over 2015-2017.

- Average (NTI) $_{2013\text{-}2017}$ is the simple average NTI over 2013-2017.

253.   In line with this definition, regardless of the approach used in the market risk stress test, all banks have to report their NTI for the years 2013-2017.

3.6.2   Projection of client revenues under the adverse scenario

a. CA banks

254.   If CA banks are able to report quarterly client revenues of items held with a trading intent as defined in paragraph 194 for the years 2013-2017, banks should project these revenues under the adverse scenario for the years 2018-2020 taking into account how the adverse macroeconomic scenario would impact this income. The projections should take into account possible turmoil that may arise as a consequence of the shock or a reduction in trading income

not due to the fair value changes. If historical data for these revenues cannot be reported for the years 2013-2017, all projections shall be set to the baseline NTI or 0, whichever is less.

255.   The projection of client revenues of items held with a trading intent shall not include any projection of gains or losses on these items due to price movements and the associated marking-to-market of 'at risk' positions, and P&L arising from 'no risk' arbitrage deals, as well as for CVA and liquidity reserves.

256.   For each year, the projections of client revenues of items held with a trading intent are capped under the adverse scenario at 75% of 2017 annual client revenues of items held with a trading intent. In addition, client revenues projections should also be capped at 75% of the baseline NTI. For each year, if the baseline NTI is negative, the adverse client revenues should be equal to the baseline NTI. The resulting NTI calculation is shown in Box 16.

Box 16: Formalised description of the computation of client revenues under the adverse scenario for CA banks

$$\text{Client Revenues}_{2018,2019,2020} =$$

$$\text{NTI}_{\text{baseline}}, \text{if NTI}_{\text{baseline}} < 0.$$

$$\text{Min}(\text{Client Revenues}_{2018,2019,2020 \text{ projected}}, 75\%*\text{NTI}_{\text{baseline}}, 75\%*\text{Client Revenues}_{2017}),$$

if quarterly client revenues can be reported for the years 2013-2017 and $\text{NTI}_{\text{baseline}} \geq 0$;

$$0, \text{otherwise.}$$

Where:

- Client Revenues are the client revenues of items held with a trading intent as defined in paragraph 194.

- Client Revenues$_{2018,2019,2020}$ projected are banks' own projections of client revenues.

- Client Revenues$_{2017}$ are the annual historical 2017 client revenues.

b. Trading exemption banks

257.   For each year, the projections of client revenues of items held with a trading intent are set to the NTI baseline if the NTI baseline is negative and to 75% of the baseline NTI otherwise (see Box 17).

Box 17: Formalised description of the computation of client revenues under the adverse scenario for trading exemption banks

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$$\text{Client Revenues}_{2018,2019,2020} =$$

$$\text{NTI}_{baseline}, \text{ if NTI}_{baseline} < 0.$$

$$75\% * \text{NTI}_{baseline}, \text{ if NTI}_{baseline} \geq 0.$$

Where:

- Client Revenues are the client revenues of items held with a trading intent as defined in paragraph 194.

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c. Adverse NTI

258.   For the year 2018, the NTI under the adverse scenario is the sum of the loss under the full revaluation of all items booked in HFT and the client revenues computed on items held with a trading intent. For the years 2019 and 2020, the NTI under the adverse scenario is equal to the client revenues computed in paragraphs 254 to 256. The resulting NTI calculation is shown in Box 18.

Box 18: Formalised description of the computation of the NTI under the adverse scenario

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$$\text{NTI}_{2018\ (adverse)} = \text{Client Revenues}_{2018} + \text{Liquidity reserve impact} + \text{CVA reserve impact} + \text{Loss}_{full\ reval}.$$

$$\text{NTI}_{2019,2020\ (adverse)} = \text{Client Revenues}_{2019,2020}.$$

Where:

- $\text{NTI}_{2018,2019,2020\ (adverse)}$ are final NTI values reported in the P&L sheet.

- $\text{Loss}_{full\ reval}$ is the market risk loss due to the full revaluation of all items booked in HFT (i.e. items held with a trading intent and all economic hedges) as reported in the template CSV_MR_FULL_REVAL and floored as described in Box 14.

- Client Revenues$_{2018\ 2019,2020}$ are client revenues computed as in Box 16 or Box 17 for TE banks.

3.7 Counterparty credit risk losses

259.   For the purpose of CCR stress test losses in the adverse scenario (as detailed in this section), all banks are required to stress exposures based on the market risk scenarios and risk factor shocks described in section 3.4.2. This does not affect regulatory CCR exposure as reported in the credit risk templates for the calculation of the CCR exposure amount, for which the credit risk methodology sets out in section 2 applies.

260.   In addition to the P&L associated with changes in CVAs, counterparty credit losses may arise if counterparties actually default in the stress. This is calculated in the CCR template (CSV_MR_CCR). To gauge the possible impact of this source of P&L, competent authorities will require banks to calculate and report CCR exposure as at the reference date, stressed exposure and appropriate stressed LGD for their top 10 largest counterparties, as described below.

261.   In considering counterparty defaults in conjunction with market risk stresses, market risk factor shocks should be applied to the exposure, whether uncollateralised or collateralised and whether positive or not at the reference date. In cases of collateralised exposures, banks should also stress the collateral in line with the market risk shocks, including any FX market risk shocks for cash collateral and assuming (in line with the general assumption of no portfolio rebalancing) that no additional collateral is provided beyond what is held as of 31 December 2017. Exposures should be stressed based on the scenarios as defined in section 3.4.2.

262.   To identify their top 10 largest counterparties, banks should rank their counterparties, at a counterparty group level, in all accounting portfolios subject to CCR (i.e. including FVPL, FVOCI and amortised cost) by stressed current exposure after netting (if contractually permitted) for the adverse macroeconomic scenario. Collateralised and uncollateralised exposure should be included in this ranking. Exposure shall be reported net of stressed collateral. No collateral that is to be called beyond what is held at the reference date may be assumed.

263.   Banks are required to assume the default of the two most vulnerable of their 10 largest counterparties.

264.   Central governments, central banks, CCPs and other market infrastructures, counterparties explicitly guaranteed by the central government and intra-group exposures should not be included in the set of counterparties and names used to identify the largest exposure. Other guarantees should be taken into account only after establishing the ranking, i.e. in selecting the most vulnerable counterparties of the largest 10 and in determining the appropriate stressed LGDs. Firms should use their judgement in determining what constitutes intra-group for these purposes, which in principle would cover those undertakings within the scope of consolidation.

265.   The selection of the two most vulnerable counterparties involves judgement on the part of the bank of the creditworthiness of these counterparties. In making this judgement, banks should consider both the current creditworthiness of these counterparties and how that creditworthiness might deteriorate under the scenario in question. The judgement of the bank should not be based on a simple application of measures, such as banking book PDs and external or internal credit ratings, but should also take into account idiosyncratic credit factors that would not necessarily be captured in a simple application of the stress to such measures, again with particular reference to the scenario in question. Banks should pay particular attention to exposures to shadow banks and exposures to counterparties exposed to commodity risk.

266.   The overall CCR loss will be calculated as the default exposure of the counterparty identified in paragraph 263, multiplied by the appropriate stressed LGD and minus the accounting CVA impact on P&L (before the application of the market price stress). Here, the appropriate stressed LGD should be consistent with the banking book risk parameter estimates carried out by the bank, while also taking into account any idiosyncratic factors relating to this particular counterparty with reference to the scenario in question. This loss will be added to the total losses resulting from the market risk scenario.

267.   The default of the two most vulnerable counterparties covers the effect that the whole CCR exposure assigned to this counterparty has on the P&L if the counterparty defaults. In addition to the CCR effect, banks are asked to calculate losses from the jump-to-default of the direct credit exposure (additional to the CRR exposure) to this counterparty in the FVPL and FVOCI portfolios. Here jump-to-default is the net profit or loss resulting from an issuer's instantaneous default. Indirect exposures to the issuer (i.e. CDS) should be included, as this corresponds to the default of the reference entity.

268.   The algorithm for identifying and defaulting CCR exposures is summarised in Box 19.

269.   The resulting losses will be captured as impairments in the P&L. The projection of counterparty defaults should be carried out independently from the projection of credit risk losses as defined in section 2.4 — i.e. no adjustments should be made for credit risk exposure or credit risk parameters for the projection of credit risk losses as defined in section 2, based on assumed counterparty defaults.

Box 19: Algorithm for identifying and defaulting CCR exposures

- Exclude exposures not within the scope of the largest counterparty default (i.e. central governments, central banks, CCPs and other market infrastructures, counterparties explicitly guaranteed by the central government and intra-group exposures).

- Apply stress factors defined in the market risk scenario to all traded positions under the adverse macroeconomic scenario.

- Calculate stressed current exposure without assuming any collateral to be called beyond what is currently held (considering only positive exposures after stress).

- Rank counterparties by stressed current exposure. The exposure has to take into account the change in the mark-to-market exposure to the counterparties, as well as the revaluation of the collateral.

- Consider only the 10 largest counterparties in terms of stressed exposures for the adverse scenario.

- Calculate the impact of the default for each of the 10 largest counterparties. This is equal to the stressed current exposure multiplied by the respective stressed LGD, netting the CVA impact on the P&L before application of the stress. The impact is prudentially floored to zero.

- Calculate the final impact of default by summing up the impact of the two most vulnerable counterparties.

3.8   Impact on REA

270.   The starting values for market REA are the values reported as of 31 December 2017.

271.   For the purpose of this exercise, banks that do not have a VaR model approved by the competent authority in place are assumed to maintain market risk regulatory requirements constant at their starting value for both the baseline and adverse scenarios.

272.   Market risk and CVA capital requirements for each year of the stress test horizon are defined as the larger of:

- The initial value of capital charges as of 31 December 2017;

- The sum of capital charges resulting from VaR and SVaR models, IRC, APR and own funds requirements for CVA and STA, as described in paragraphs 273, 274, 275, 276, 277 and 278.

273.   Under the baseline scenario, VaR and SVaR are assumed to remain constant at the level reported for the reference date 31 December 2017. Under the adverse scenario, the VaR will be replaced by the SVaR as of 31 December 2017 (see Table 10).

274.   In cases of partial use of internal models for market risk, the baseline capital requirements are assumed to remain constant at the value reported for the reference date 31 December 2017. Under the adverse scenario, the new VaR and SVaR (i.e. 2 times SVaR, based on paragraph 273) capital charge is added to the capital requirements computed under the STA, which are also assumed to remain constant.

Table 10: VaR assumptions for the calculation of the REA

Reference date	Baseline	Adverse
VaR	VaR	SVaR
SVaR	SVaR	SVaR

275.   Banks modelling IRC must estimate the stress impact of the adverse scenario based on stressed parameters in accordance with section 2. Banks should use the credit spread shocks given in the macro-linked scenario as input to the IRC under the adverse scenario, assumed to be instantaneous and constant over the years ahead. No shocks are assumed under the baseline scenario. Overall, the relative increase in the IRC should be floored at the relative increase of REA in the IRB portfolio in the adverse scenario.

276.   For correlation trading portfolios, the APR will be assumed to be constant in the baseline scenario. In the adverse scenario, the following scaling is assumed, to derive the stressed APR capital charge:

- 8% floor[13] is not binding: 1.5 times the APR capital charge.

- 8% floor is binding: 2 times the floor.

277.   The capital charges for correlation trading positions under the STA are assumed to remain constant at the level of 31 December 2017 under both the baseline scenario and the adverse scenario.

278.   All banks that are subject to a credit risk capital charge for CVA are required to calculate stressed regulatory capital requirements for CVA under the adverse scenario. To determine additional CVA capital needs, banks are requested to recalculate the CVA charge under stress conditions, based on their regulatory approach in use for all books within the scope of that approach. To this end, banks should translate the macroeconomic scenarios into underlying

[13] See Article 364(3) of the CRR.

risk parameters and determine respective stressed capital charges. Overall, the increase in the CVA charge for the adverse scenarios should be floored at the relative increase of REA in the IRB portfolio in the adverse scenario. To be consistent with the approach for the CCR exposure amount, the regulatory exposure used for the calculation of the stressed CVA REA shall be kept constant.

279.   The impact on REA shall be reported using the market REA templates (CSV_ MR_REA).

280.   REA for the CCR capital requirements is calculated using the approach described in section 2.

281.   Finally, REA for securitisation positions is expected to change in accordance with the securitisation methodology described in section 2 as part of the credit risk methodology.

4. NII

4.1 Overview

282.   Banks may use their own methodologies and their existing ALM systems and EaR models to project their NII, relying on their assumptions regarding the pace of the repricing of their portfolio, together with their projections for risk-free reference rates and margins under both the baseline scenario and the adverse scenario. The split between reference rate and margin components of banks' assets and liabilities is introduced to distinguish two risks affecting banks' NII under stress:

- The risk related to a change in the general 'risk-free' yield curves to be captured via the changes in the reference rate components of banks' repriced assets and liabilities and off-balance-sheet short-term and long-term positions;

- The risk related to a change in the 'premium' that the market requires or the bank sets for different types of instruments and counterparties, reflecting the impact on credit and other market risks (e.g. liquidity).

283.   Banks' projections are subject to the constraints summarised in Box 20.

Box 20: Summary of the constraints on banks' projections of NII

- Assumptions cannot lead (at group level) to an increase in the bank's NII compared with the 2017 value under the adverse scenario (paragraph 320).

- Under the adverse scenario, assumptions cannot lead (at group level) to an increase in the bank's NII compared with the 2017 value before considering the impact of the increase of provisions for non-performing exposures on interest income (paragraph 321).

- Under the adverse scenario, banks are required to project income on non-performing exposures net of provisions, subject to a cap on the applicable EIR (paragraph 321).

- Under the baseline scenario, banks are required at a minimum to reflect a proportion of the changes in the sovereign bond spread of the country of exposure in the margin component of the EIR of their repriced liabilities (paragraph 343).

- Under the adverse scenario, the margin paid on interest-bearing liabilities cannot increase less than the higher of a proportion of the increase in the sovereign spreads of the country of exposure and the same proportion applied to the increase of an idiosyncratic component, derived from the impact on banks' wholesale funding rate of a rating downgrade

> ■ Banks are required to cap the margin component of the EIR on their repriced assets at a proportion of the increase in the sovereign spreads of the country of exposure (paragraph 346).
>
> ■ Although no methodological constraints are imposed on the reference rate of new originated or repriced instruments, it is expected that the change in the reference rate of these instruments is consistent with the macrofinancial scenarios for risk-free yield curves (paragraph 334).

4.2 Scope

284. All interest-earning or interest-paying positions across all accounting categories, including not only instruments subject to amortised cost measurement but also those subject to fair value measurement (such as FVOCI positions, FVPL positions and hedge-accounting instruments), are in the scope of this section.

285. Banks that, in the course of their periodic financial reporting, present the interest income on assets in FVOCI and FVPL as a part of NTI should report this income as a part of NII and remove it on a best effort basis from the recurring NTI in line with the provisions of paragraph 193 of this note. Only NII for these positions is within the scope of the NII methodology; the fair value impact on these positions of the stress test scenarios is captured within the market risk methodology, and the impact on the economic value of equity, as required for Pillar 2 analysis, is not needed. The fair value impact on derivatives not recognised for hedge accounting should continue to be recognised in the market risk templates.

286. Fees and commissions that are recognised as NII in the accounting framework are also within the scope of this section. The fees and commissions that can be directly linked to loans should be stressed through the loan's EIR. All other fee and commission income is out of the scope of the NII methodology.

4.3 High-level assumptions and definitions

4.3.1 Definitions

287. **Reference interest rate (Ref Rate)** is defined as the general underlying 'risk-free'[14] rate relevant for the given instrument, as used by banks in the management of their interest rate risk in the banking book.[15] That rate should not include instrument-specific or entity-specific

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[14] The free-yield curve shall be the one provided in the scenario, when available.

[15] See the EBA Guidelines on the management of interest rate risk arising from non-trading activities (EBA/GL/2015/08).

credit risk spreads or liquidity risk spreads. Examples of acceptable rates are swap rates or, for reference rate tenors below 1 year, the applicable interbank rate (e.g. EURIBOR, LIBOR, EONIA). For fixed-rate instruments, banks should use the same reference rate curve for all instruments denominated in a given currency and originated at the same time. Fixed rate instruments are assumed to be replaced with a fixed rate instrument of the same type, original maturity and currency, and the reference rate of the new instrument will be calculated for a tenor equivalent to the original maturity of the replaced instrument using a yield curve projected for the time of origination, for the relevant currency, and in line with the scenario. For floating rate instruments, the reference rate should be aligned with the one relevant at the last repricing date and then be regularly repriced in line with scenario developments (at the frequency defined by the contractual terms of the instrument).

288. **Margin** is defined as the 'premium' charged/paid by banks over the instrument's/portfolio's reference rate, and is equal to the spread between the actual effective interest rate of the instrument and the reference rate.

289. The **EIR** for a given instrument, time interval and component (margin or reference rate) is the rate that equals the ratio of interest income/expenses to the average volume. For banks reporting according to the IFRS 9 standard, this coincides with the EIR as defined in that standard.

290. **Maturity date** is defined as the contractual date on which the Margin or the Ref Rate component of the asset/liability is repriced:

- For fixed-rate instruments[16] it is assumed that the maturity dates of the Ref Rate and the Margin are the same, and equal to the contractual maturity of the instrument.

- For floating rate instruments it is assumed that the Margin is repriced at the contractual maturity of the instrument, while the Ref Rate component is repriced whenever the index rate of the floating rate instrument resets.[17] Therefore, the maturity dates for the Ref Rate and the Margin of floating rate instruments will, in many cases, be different. It is generally expected that the Ref Rate component resets prior to the Margin in most of the cases.

291. **Original maturity** is defined as the total time between the asset's/liability's time of origination and the maturity date. In cases of debt securities, the time of origination should be understood as the acquisition date by the bank and the original maturity should be based on the residual maturity at the acquisition date of the debt security.

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[16] Instruments with overnight original maturity can be considered as fixed rate instruments given that both the reference rate and margin component of the EIR have to be repriced always at the same time on a daily basis.

[17] In this context, as mentioned above, for floating rate products, the index rate of the instrument should be used as the reference interest rate.

292.   **Average point of maturing** is defined as the average fraction of a year at which the maturing positions mature. For each relevant portfolio, the average point of maturing should be computed as an average across the maturing positions in the years 2018-2020. The maturing positions to be considered in this context are those contained in the maturity schedule at the cut-off date.[18]

293.   **Existing position (Exist)** refers to the volume that is not repriced within the time interval of interest.

294.   **Maturing position (Vol Mat)** refers to the average volume of instruments maturing or that have to be repriced within the time interval (i.e. exiting the stock of existing positions of the previous year). The average volume is computed as the product of the notional amount of maturing positions and the average point of the maturing of the relevant portfolio.

295.   **New position (Vol New)** refers to the average volume of instruments whose margin or reference rate is repriced within the time interval. It should be noted that the average volumes reported in Vol Mat and Vol New add up to the total volume of maturing position within the time interval.

296.   **Volume** stands for the notional amount of an instrument, i.e. its gross carrying amount in the case of instruments at amortised cost. In particular, projected volume should abstract from projected fair value changes under both the baseline scenario and the adverse scenario. The average volume represents the average balance of the item over the time interval of interest. For each time interval, banks are requested to decompose the average volume of instruments between existing, maturing and new repriced positions. For each instrument, volumes attached to the reference rate and margin components of the EIR might differ as a result of the discrepancy in the respective maturity dates. All volumes shall include non-performing volumes, unless otherwise stated.

297.   **Sovereign spread (Sov Spread)** is the difference between the yield-to-maturity of a given sovereign's debt security and the swap rate for the same currency and maturity.

298.   **Sight deposits** are deposits legally redeemable immediately at demand without penalties and restrictions.

299.   **Zero rate deposits** are sight deposits for which banks report an EIR equal to zero at the starting point. For the purpose of the stress test exercise, banks shall distinguish:

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[18] As an illustration, and assuming that the bank's repayment schedule is defined on a monthly basis, the average point of maturing will be equal to $[(1/12*CF1+2/12*CF2+ \cdots +12/12*CF12)+(1/12*CF13+2/12*CF14+ \cdots +12/12*CF24) +(1/12*CF25+2/12*CF26+...+12/12*CF36)]/\sum CF_i$, where CF_i denotes the monthly cash flow.

- **Regulated zero rate deposits**, for which the interest rate of zero borne on deposits is legally mandated.

- **Non-regulated zero rate deposits**, for which there is no legally binding provision that forces the interest to be equal to zero.

300.   **Term deposits** are deposits which are not sight deposits, i.e. deposits with a notification period for withdrawal.

4.3.2   Static balance sheet assumption

301.   The projections of NII are based on the assumption of a static balance sheet. Assets and liabilities (both in the banking book and in the trading book) that are repriced (i.e. mature) within the time horizon of the exercise should be replaced with similar financial instruments in terms of type, currency, credit quality at the time of repricing and original time to reprice (both reference interest rate and margin) of the instrument. With regard to the loans and receivables portfolio, the static balance sheet assumption applies to the portfolio as a whole — i.e. when considering both the performing and non-performing part. Indeed, it is expected that, under stress, the total volume of performing assets will decrease and, simultaneously, non-performing assets will increase.

302.   In this context, banks should make a distinction between existing positions, maturing positions and new (i.e. repriced) positions in terms of both the average volumes of each of these three components and the Margin and Ref Rate.

303.   Under the static balance sheet assumption, the sum of the existing, maturing and new positions' average volumes (both in the banking book and in the trading book) should remain constant over time.

304.   The banks' interest income and expenses develop over the stress test time horizon as a result of (i) the repricing of maturing assets/liabilities, (ii) the change in the margin and/or reference rate components earned/paid on assets/liabilities and (iii) the migration of performing positions to non-performing exposures.

4.3.3   Treatment of maturing assets and liabilities

305.   As specified above, banks are required to assume that the residual maturity of their assets and liability equals the contractual date on which the Margin or the Ref Rate component of the asset/liability is repriced. No additional behavioural assumption should be taken into account. Against this background:

- Banks are requested to assume that their sight deposits reprice immediately. Their assumed maturity period is 0. As a result, they should always be considered as a maturing position, regardless of the length of the time interval, and the average point of maturing should be 0.

- In the case of term deposits, the actual term should be used as original maturity.

- Debt liabilities that are callable by the bank's counterparty prior to their overall maturity are expected to be exercised on the first possible call date.

- Concerning loans, each repayment shall be treated as an individual maturing product, and shall be reported in the maturity schedule on its expected repayment date and then repriced with similar financial instruments in terms of type, credit quality at the time of repricing and original time to reprice (both Ref Rate and margin), in line with the static balance sheet assumption.

- No difference in average volumes between baseline and adverse scenario is expected.

306.   Banks are requested to report their existing, maturing and new positions as average volume over the relevant time interval.

307.   For the sake of simplicity, banks are required to assume that the volume of non-performing exposures is proportionally distributed across existing, maturing and new positions, and between fixed rate and floating rate positions. Non-performing events are assumed to take place at the beginning of each time interval.

308.   Instruments with embedded options should reflect the impact of the option in the reference rate component. Upon maturity, it is assumed that the instrument will be replaced with the same instrument with no embedded option, which should be removed with the exception of legally binding embedded options.

309.   Banks will be provided with templates that automatically determine the amount of existing, maturing and new positions, for each instrument and time interval (see Box 21), under the assumptions that:

- The replacement of maturing positions related both to the Ref Rate and the Margin for all years is based on the average point of maturing;

- The rounding of original maturity to the nearest integer above its current value (e.g. 2.4 years original maturity is rounded up to 3 years).[19]

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[19] In exceptional circumstances, when the rounding assumption leads to significant differences between the NII projected relying on the volume formulas encompassed in the template and the NII projected relying on the real payment schedule, banks are allowed to relax this rounding assumption for assets and liabilities with original maturity <2Y. These deviations would have to be documented by the bank and will be thoroughly reviewed by the competent authorities.

Box 21: Calculation of volumes — Illustration

Floating rate portfolio

Product: floating product with a notional value of EUR 2 000 million, residual maturity of 0.25 years (equal to the average point of maturing for both Margin and Ref Rate) — i.e. maturing on 30 March 2018, an original maturity of 1.5 years (rounded to 2 years in line with paragraph 309); the index rate is EURIBOR 3 million with quarterly resetting date.

Initial state:

EIR component	Initial state	Maturity schedule of the total portfolio at the cut-off date, split by original maturity				
	2017	**2018**			**2019**	**2020**
	Volume (average over 2017, in million EUR)	**Total amount (in million EUR)**	**With original maturity <1Y (volume to be repriced in 2018, 2019, 2020) (in million EUR)**	**With original maturity >=1Y and <2Y (volume to be repriced in 2018, 2020) (in million EUR)**	**Total amount (in million EUR)**	**Total amount (in million EUR)**
Margin	2 000	2 000	0	2 000	0	0
Ref Rate	2 000	2 000	2 000	0	0	0

The light shaded cells are directly reported by the bank.

Projections:

EIR component	Total volumes (in m EUR)								
	2018			**2019**			**2020**		
	Existing	**Maturing**	**New**	**Existing**	**Maturing**	**New**	**Existing**	**Maturing**	**New**
Margin	0	500	1 500	2 000	0	0	0	500	1 500
Ref Rate	0	500	1 500	0	500	1 500	0	500	1 500

Calculations:

Volumes related to the Ref Rate EIR component:

The product is assumed to be reset quarterly, so the first resetting will take place in 2018. Against this background, and under the assumption of repricing according to the average point of maturing of the instrument, total volume regarding the Ref Rate component is split between the maturing position (Vol Mat) and the new position (Vol New) each year, following the

formula:

$$\text{Vol Mat} = \text{Total volume*average point of maturing} = 2\,000*0.25 = 500.$$

$$\text{Vol New} = \text{Total volume*(1-average point of maturing)} = 2\,000*0.75 = 1\,500.$$

Volumes related to Margin EIR component:

As the Margin EIR component is assumed to be rolled over (and repriced) in 2018 with a new maturity of 1.5 years (rounded to 2 years), the average maturing volume is split between maturing and new positions in 2018 and 2020 according to the average point of maturing, and is considered an existing position in 2019.

In 2018:

$$\text{Vol Mat 2018} = \text{Avg. point of mat. * (position maturing 2018 according to the original}$$
$$\text{maturity schedule at the cut-off date)} = 0.25 * 2\,000 = 500.$$

$$\text{Vol New 2018} = \text{(1 – Avg. point of mat.) * (position maturing 2018 according to the original}$$
$$\text{maturity schedule at the cut-off date)} = 0.75 * 2\,000 = 1\,500.$$

$$\text{Vol Exist 2018} = \text{Vol Exist 2017 – (Vol Mat 2018 + Vol New 2018)} = 2\,000 – (500 + 1\,500)$$
$$= 0.$$

In 2019:

$$\text{Vol Mat 2019} = \text{Avg. point of mat. * (position maturing in 2019 according to the original}$$
$$\text{maturity schedule at the cut-off date + position maturing in 2018 with original maturity}$$
$$\text{below 1Y)} = 0.25 * (0) = 0.$$

$$\text{Vol New 2019} = \text{(1 – Avg. point of mat.) * (position maturing in 2019 according to the}$$
$$\text{original maturity schedule at the cut-off date + position maturing in 2018 with original}$$
$$\text{maturity below 1y)} = 0.75 * (0) = 0.$$

$$\text{Vol Existing 2019} = \text{Vol Exist 2018 + (Vol Mat 2018 + Vol New 2018) – (Vol Mat 2019+ Vol}$$
$$\text{New 2019)} = 0 + 2\,000 – 0 = 2\,000.$$

In 2020:

$$\text{Vol Mat in 2020} = \text{Avg. point of mat. * (position maturing in initial state as of 2020 +}$$
$$\text{position maturing in initial state as of 2018, and hence in 2019, with original maturity}$$
$$\text{below 1Y + position maturing in initial state as of 2018 with original maturity below 2Y)}$$
$$= 0.25 * (0 + 0 + 2\,000) = 500.$$

$$\text{Vol New in 2020} = \text{(1 – Avg. point of mat.) * (position maturing in initial state as of 2020 +}$$
$$\text{position maturing in initial state as of 2018, and hence in 2019, with original maturity}$$

below 1y + position maturing in initial state as of 2018 with original maturity below 2y)

$$= 0.75 * (0 + 0 + 2\,000) = 1\,500.$$

Vol Exist 2020 = Vol Exist 2019 + (Vol Mat 2019+ Vol New 2019) – (Vol Mat 2020 + Vol New 2020) = 2 000 + 0 – 2 000 = 0.

Fixed-rate portfolio

For fixed-rate portfolios, the calculation of existing, maturing and new volumes related to the Margin EIR component is similar to the floating rate portfolio. The mechanism for the volumes with regard to the Ref Rate EIR component, however, is different from that applied for floating rate products: as reference rate and margin are expected to reprice at the same time, volumes for reference rate are set equal to the volumes calculated for the Margin EIR component of the relevant instrument.

4.3.4 Curve and currency shocks

310. Where required, banks should only use linear interpolation to add tenors to the provided interest rate curves in the macro-financial scenario. In line with paragraph 216, for tenors that are shorter or longer than the range of tenors available in the scenario, the shocks to the shortest and longest tenor available respectively should be applied as floors. Currencies should be stressed independently, based on the curves provided for each currency in the scenario. For currencies where no stress is provided, banks should generate their own curves consistent with the macro-financial scenario and provide justification for this expansion.

4.3.5 Reporting requirements

311. Starting point (2017) and historical data for 2 years (2015 and 2016) on positions as well as projected positions, and the NII impact based on the approach described in this section, shall be reported on the NII template (CSV_NII_CALC). Additional historical (2015-2017) NII information on interest income and expenses, as well as historical (2015-2017) data on interest income from non-performing exposures, shall be reported on the NII summary template (CSV_NII_SUM).

312. Banks are requested to report volumes and project the interest rates earned (or paid) of all their assets and liabilities (including derivatives) split into the margin and reference rate components with the exception of non-performing assets, for which the projected EIR will be reported entirely as margin at total group level and also at country/currency level.

313. In the case of assets and liabilities with structured interest coupons that include embedded options, banks are expected to disentangle the financial instruments in their main components before the application of the interest rate scenarios, report the results in the corresponding parts of the NII template and apply the relevant parts of the methodology to each financial instrument. An example would be an instrument that incorporates four

components: (i) fixed-rate instruments; (ii) embedded options linked to various reference rates; (iii) the 'structured leg', or the fair-value hedges (FVH); and (iv) the EURIBOR leg.

314.   Banks are requested to split their derivatives positions between 'derivatives used for hedge accounting' and 'derivatives not used for hedge accounting'.

315.   The definition of 'hedge-accounting instruments' should be in line with the FINREP definition. Other derivative instruments should be reported under 'derivatives not used for hedge accounting' throughout the stress period. Banks are requested to provide a narrative with additional information on the accounting framework applied and details on the hedging relationships.

316.   In the case of interest rate swaps, and following FINREP Annex V, Part 2.23, banks should report on a gross basis the interest income and interest expenses generated by hedge-accounting derivatives which cover interest rate risk. With regard to economic-hedge derivative instruments, and for the purpose of consistency with hedge-accounting derivatives, banks should report the relevant amounts in the same way as interest income and expenses. Interest rate derivatives used for hedging interest rate risk shall be represented with the receiving leg as an asset and the paying leg as a liability, and interest expenses/income generated shall be reported separately on a gross basis. If banks are reporting derivatives in their supervisory reporting in a different way, they should in their stress test submissions both restate the historical data and report their projections in a way that is consistent with the provisions in this paragraph.

317.   Swaptions should be reported in the relevant derivatives category only if they will be in the money, i.e. they will be exercised during the stress test horizon. In this case, initially the nominal volume should be reported as existing volume on both sides of the balance sheet and the EIR should be set to 0 to ensure that static balance sheet assumption is not violated when the swaption is exercised. In the year when the swaption is exercised, the position should be reported as the underlying swap, i.e. the EIR would need to be adjusted to reflect the underlying swap. If the underlying swap matures within the stress horizon, it should be replaced with a similar instrument. Out-of-the-money swaptions should not be initially reported or rolled over within the stress horizon. It is also assumed that he party will exercise the swaption at the earliest strike date when it is in the money.

318.   FX swaps that involve the swapping of principal and interest in different currencies should be considered under the scope of the NII treatment. Depending on the counterparty of asset and hedge, FX swap positions might be reported in different exposure classes. Cross-currency FX swaps should be reported in both currency legs of the transaction. Moreover, to the extent that interest earnings from these instruments are recognised as trading income, the relevant cash flows should be removed from NTI and covered under NII treatment (see paragraph 193).

319.   For the country/currency breakdown in the templates, banks shall report the country of the 'location' of the activity for all liabilities, and the country of 'residence of the counterparty'

for all assets, including exposures towards sovereigns. 'Location' and 'country of residence of the counterparty' are defined according to FINREP: 'location' means the jurisdiction of incorporation of the legal entity which has recognised the corresponding liability; for branches, it means the jurisdiction of its residence.[20] 'Country of residence of the counterparty' is defined as the residence of the immediate counterparty following FINREP, which means, if there is more than one obligor, the obligor that was the more relevant, or determinant, for the institution to grant the exposure. The number of country/currency pairs reported will be subject to the materiality thresholds specified in Box 22. First, banks will be requested to limit their reporting to the most significant country/currency pairs. Second, banks whose activities are heavily focused on their domestic market and currency will not be requested to provide this additional information. Intra-group transactions shall not be included in the reporting by country/currency.

Box 22: Application of the materiality constraint on the currency/country breakdown requested

The following algorithm should be followed to determine the materiality of the country/currency breakdown:

- For each couple of country/currency, banks must compute the larger of the notional amount of total assets and total liabilities, excluding (only for the purpose of ranking the country/currency couple) the notional amount of derivatives. This will define the volume associated with each country/currency couple.

- Banks must rank the country/currency couple according to their volume.

- Banks are requested to report the country/currency breakdown, either:

  - Up to a 90% coverage of the sum of all country/currency volumes; or

  - Up to 15 country/currency couples.

Domestic banks — i.e. banks whose non-domestic exposures are less than 10% of the sum of domestic and non-domestic country exposures, and whose foreign currency exposures are less than 10% of the sum of domestic and foreign currency exposures — are not requested to report any country/currency breakdown but need only report the results at the banking group level and for their home country.

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[20] See EBA ITS on supervisory reporting Annex V, Reporting on Financial Information, paragraph 107.

4.4   Impact on P&L

4.4.1   High-level constraints on NII

320.   Assumptions cannot lead (at group level) to an increase in the bank's NII, compared with the 2017 value, under the adverse scenario.

321.   Under the adverse scenario, assumptions cannot lead (at group level) to an increase in the bank's NII compared with the 2017 value before considering the impact of the increase of provisions for non-performing exposures on interest income, following the formula in Box 23 below. This is equivalent to specifying that the net interest rate earned on performing assets is capped at the starting point. This constraint is aimed at avoiding the possibility that banks compensate for the decrease in interest income linked to the growth of non-performing exposures with an increase in interest income from performing exposures. It also allows banks to consistently reflect movements of interest rates both in the assets and in the liabilities sides in a better way than if the constraint were applied to absolute volumes of interest expenses (in the format of a floor).

Box 23: Cap on NII under the adverse scenario

$$NII(t, \text{adverse}) \leqslant$$
$$NII(t0) - NII(t0) * ((\Delta ProvNPE(t0 \text{ to } t, \text{adverse})/(VolPE(t0)+VolNPEnet(t0))).$$

Where:

- NII(t, adverse) stands for the total net interest income projected by banks for the time interval t under the adverse scenario.

- NII($t0$) stands for the total net interest income projected by banks at the starting point (i.e. reporting for 2017).

- ΔProvNPE($t0$ to t, adverse) stands for the increase of total provisions on non-performing exposures reported by banks for the time interval t compared with the starting point under the adverse scenario.

- VolPE($t0$) stands for the volume of performing exposures at the starting point.

- VolNPEnet($t0$) stands for the volume of non-performing exposures net of provisions at the starting point.

4.4.2   Interest on performing exposures

322.   Under both the baseline scenario and the adverse scenario, banks should project the interest accrued on performing exposures (including S1 and S2 exposures) in line with their

standing accounting practice and the applicable EIR, projected in accordance with the methodology. The interest revenue on performing exposures is calculated on the gross carrying amount.

4.4.3   Interest on non-performing exposures

323.   Banks are required to project income on non-performing exposures on a net basis, i.e., on the value of the exposure net of provisions. Under the adverse scenario the applicable effective EIR is subject to a cap as defined in Box 24 below.

Box 24: Cap on the EIR for non-performing exposures

The effective interest rate to calculate interest income on non-performing assets is subject, under the adverse scenario, to the simplified constraint below:

$$\text{EIR Non Performing } (t, \text{adverse}) \leq \text{EIR Non Performing } (t0).$$

Where:

- EIR Non Performing (t, adverse) stands for the effective interest rate for a given non-performing portfolio at country/currency level and separately for fixed and floating rate portfolios for the time interval t under the adverse scenario.

- EIR Non Performing ($t0$) stands for the effective interest rate for a given non-performing portfolio at country/currency level and separately for fixed and floating rate portfolio at the cut-off date.

Banks are asked to project the interest income stemming from non-performing exposures capping the increase of the EIR for this type of exposures by the starting point value.

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324.   In order to achieve consistency with the banks' projections of non-performing exposures reported in the credit risk template, banks shall apply the following provisions when reporting both columns of non-performing exposures and the corresponding volumes of provision in the CSV_NII_CALC template:

- The volume of non-performing exposures at the cut-off date in the NII template shall be consistent with the data reported in FINREP.

- The ratio of total NPE flows per country reported in the credit risk template CSV_CR_SCEN in 2018, 2019 and 2020 for a given asset class compared with the total exposures (performing and non-performing) for the same country and asset class at the starting point (NPE growth rate) shall be considered as the increase in non-performing exposures compared with the total volume at the starting point (end-2017) per country in the

CSV_NII_CALC template for the corresponding NII asset type. The NII asset type shall be determined according to the mapping given in Table 11 and Table 12. The same applies to the flow of provisions compared with the total exposures at the starting point, calculated also by country and asset class breakdown (provisions growth rate).

- NPE growth and related provisions of countries that cannot be directly matched between credit risk and NII templates have to be allocated to the category 'Other'.

325.   The NPE growth rate and the provisions growth rate per country for a given asset class shall be applied in the CSV_NII_CALC template to each asset type and country for all the currencies, i.e. for all country/currency pairs, and both for fixed and floating rate instruments.

Table 11: Mapping of the IRB credit risk asset class to the NII asset type

Credit risk — Asset class	NII — Asset type
Central banks and central governments	Assets — Loans and advances — Central banks and general governments
	Assets – Debt securities – Central banks and general governments
Institutions	Assets — Loans and advances — Credit institutions and other financial corporations
Corporates — Specialised lending — Secured by real estate property	Assets — Loans and advances — Non-financial corporations — Other
Corporates — Specialised lending — Not secured by real estate property	Assets — Loans and advances — Non-financial corporations — Other
Corporates — SME – Secured by real estate property	Assets — Loans and advances — Non-financial corporations — SMEs
Corporates — SME — Not secured by real estate property	Assets — Loans and advances — Non-financial corporations — SMEs
Corporates — Others — Secured by real estate property	Assets — Loans and advances — Non-financial corporations — Other
Corporates — Others — Not secured by real estate property	Assets — Loans and advances — Non-financial corporations — Other
Retail — Secured by real estate property — SME	Assets — Loans and advances — Non-financial corporations — SMEs
Retail — Secured by real estate property — Non-SME	Assets — Loans and advances — Households — Residential mortgage loans
	Assets – Loans and advances – Households – Credit for consumption

Credit risk — Asset class	NII — Asset type
Retail — Qualifying revolving	Assets — Loans and advances — Households — Other
Retail — Other retail — SME	Assets — Loans and advances — Non-financial corporations — SMEs
Retail — Other retail — Non-SME	Assets — Loans and advances — Households — Other
	Assets – Loans and advances – Households – Credit for consumption
Equity	Assets — Other assets
Other non-credit obligation assets	Assets — Other assets

Table 12: Mapping of the STA credit risk asset class to the NII asset type

Credit risk — Asset class	NII — Asset type
Central governments or central banks	Assets — Loans and advances — Central banks and general governments
	Assets – Debt securities – Central banks and general governments
Regional governments or local authorities	Assets — Loans and advances — Central banks and general governments
	Assets – Debt securities – Central banks and general governments
Public sector entities	Assets — Loans and advances — Central banks and general governments
	Assets – Debt securities – Central banks and general governments
Multilateral development banks	Assets — Loans and advances — Credit Institutions and other financial corporations
International organisations	Assets — Loans and advances — Central banks and general governments
	Assets – Debt securities – Central banks and general governments
Institutions	Assets — Loans and advances — Credit institutions and other financial corporations
Corporates — SME	Assets — Loans and advances — Non-financial corporations — SMEs

Credit risk — Asset class	NII — Asset type
Corporates — Non-SME	Assets — Loans and advances — Non-financial corporations — Other
Retail — SME	Assets — Loans and advances — Non-financial corporations — SMEs
Retail — Non-SME	Assets — Loans and advances — Households — Other
	Assets – Loans and advances – Households – Credit for consumption
Secured by mortgages on immovable property — SME	Assets — Loans and advances — Non-financial corporations – SMEs
Secured by mortgages on immovable property — Non-SME	Assets — Loans and advances — Households — Residential mortgage loans
Items associated with particularly high risk	Assets — Other assets
Covered bonds	Assets — Debt securities — Credit institutions and other financial corporations
	Assets — Debt securities — Non-financial corporations
Claims on institutions and corporates with an ST credit assessment	Assets — Loans and advances — Credit institutions and other financial corporations/assets — Loans and advances — Non-financial corporations — Other
Collective investments undertakings (CIUs)	Assets — Other assets
Equity	Assets — Other assets
Other exposures	Assets — Other assets

4.4.4 Projection of the components of the EIR

326. Banks will use their own methodologies to project their interest expenses and interest income. In their projections, they will take into account the assumptions given in the following paragraphs.

327. For fixed-rate products, the margin and reference rate are assumed to remain constant until the contractual maturity. For floating rate products, it is assumed that the margin is repriced at the contractual maturity of the instrument, while the reference rate component is repriced whenever the index rate of the instrument resets according to the contractual schedule.

328. For each time interval of the projections, banks are requested to provide separate projections for the margin and reference rate components of the EIR. In addition, banks are

requested to provide a split of the EIR rates between existing, maturing and new repriced positions. For starting reference rates for fixed rate instruments, banks should rely on the reference rate at the point of origination or acquisition. For the starting reference rates for floating rate instruments, banks should rely on the yearly average of the relevant index. For starting margin rates, banks should rely on the difference between the EIR for the instrument for 2017 and the starting reference rate.

329.   For fixed-rate instruments/portfolios, banks will project the reference rate, applying the general risk-free yield curve used in analysis of interest rate risk in the banking book. The reference rate should be calculated for the original maturity of the instrument using a yield curve taken from the time of origination for the relevant currency.

330.   For floating rate products that are contractually linked to an index rate, banks will use the index rate as the reference rate, which should develop in line with the macro-financial scenario. In particular, the reference rate of the floating leg of interest rate swap should be the index rate of the swap, while the reference rate of the fixed leg of the swap will be the fixing of the swap itself

331.   For swaps, the reference rate and margin split of the floating leg would be defined similarly as for floating rate products, and the reference rate and margin split of the fixed leg would be defined similarly as for fixed rate products. The margin could be negative depending on the characteristics of a given swap.

332.   For assets for which banks have the option to adjust the margin at their discretion prior to the maturity of the instrument, it is assumed that banks do not exercise this option.

333.   The change in the margin of repriced instruments will be subject to the so-called pass-through constraints, which provide floors for interest-bearing liabilities and caps for interesting-earning assets. These constraints do not apply to the margin of the instrument prior to their contractual maturity. They do not apply to the reference rate of floating rate instruments whose reference rate is adjusted before the expiration of the instrument's contract (i.e. before the repricing of the margin).

334.   Although no methodological constraints are imposed on the reference rate of repriced instruments, it is expected that the change in the reference rate of repriced instruments is consistent with the macro-financial scenarios for risk-free yield curves.

335.   In order to be coherent with the static-balance sheet assumption, banks need to ensure that the projected deposit rate will not result in an outflow of deposits, i.e. the margin paid on deposits should allow banks to maintain the volume of deposits under stress. This applies in particular to non-regulated zero interest rate deposits, for which banks shall not assume that zero interest rates can be maintained under a rising rate and spread scenario.

336.   For sight and term deposits, the split of the rates between the reference and margin components should be made in accordance with paragraphs 287 and 288.

337.   In the case of zero rate deposits the reference rate is assumed to remain constant over the scenario, such that any change in interest income/expenses earned/paid should be recognised as a change in the margin of the deposits. Subject to this restriction, it is recommended that banks use a reference rate of zero, and reflect interest rate projections entirely in the margin component.

338.   For fixed rate sight deposits other than zero rate deposits, the split shall be made as usual for fixed rate instruments, i.e. in line with paragraphs 287 and 288, and banks shall project the reference rate component considering the 1-month money market rate projections included in the scenario for the relevant currency.

339.   Concerning variable rate deposits, banks are expected to use internal characterisation analysis to assess repricing in the projection of the reference rates, always based on the reference rate shock as defined in the scenario. For this purpose the 1-month money market rate projections included in the scenario for the relevant currency shall be considered.

340.   Reference rates of deposits with rates calculated using a regulatory defined formula shall be calculated according to this formula. In this regard banks are required to provide legal/regulatory evidence about the prescribed application of regulatory formulas. The margin component should be zero, and should remain zero throughout the scenario (i.e. it will not be subject to the pass-through constraints).

341.   While there is no explicit forecast of monetary policy in the stress test scenarios, banks are expected to factor in the projected changes in short-term market rates into the costs of central bank funding. More specifically, banks are required to compute the spread between the central bank rates and the relevant short-term rates at the cut-off, and apply it to the projected path of expected reference market interest rates over the stress test time horizon as provided by the scenario. In line with the static balance sheet assumption, the volume of central bank funding is assumed to remain constant and central bank funding instruments are rolled over into similar central bank instruments.

342.   The impact of interest rate derivatives used for hedging interest rate risk should be recognised in the NII templates by reporting the interest cash flow stemming for those instruments in separate lines. For example, in the case of a 3-year fixed-rate loan with a matching interest rate swap, the reference rate on the loan would be recognised as the 3-year relevant risk-free rate at origination throughout the entire loan period, regardless of interest rate movements. Here, the items in the derivative lines will represent both legs of the swap. In this example, the fixed leg would be represented within the hedging derivatives' liabilities, with the floating leg within the hedging derivatives' assets.

Box 25: Calculation of the NII — Illustration

NII is calculated in several steps in the templates. First, the total interest income earned and interest expenses paid on all assets (i.e. including both performing and non-performing exposures) and liabilities are computed. Then, the interest income relating to the non-performing part of the line item is subtracted from the total. Finally, the interest income for non-performing exposures net of provisions is added back, based on the EIR applicable to NPE. This illustrative example presents the calculation performed for the floating rate product introduced in Box 21.

Projections:

Projections of volumes and EIR for both components and all positions (existing, maturing and new) from the previous examples are used.

EIR component	INITIAL STATE		PROJECTIONS and CALCULATIONS								
	2017		2016			2019			2018		
	Existing	New	Existing	Maturing	New	Existing	Maturing	New	Existing	Maturing	New
Margin	1.0%	1.0%		1.0%	2.0%	2.0%	4.0%	2.5%		2.0%	3.0%
Ref Rate		1.2%	1.2%	1.2%	0.5%	0.5%	0.5%	1.5%	1.5%	1.5%	2.0%

Non-performing assets are assumed to be projected as in the table below.

EIR component	Volumes — NON-PERFORMING (Vol Def)			EIR component — NON-PERFORMING (EIR default)		
	2016	2019	2018	2016	2019	2018
Margin	100	110	110	1.9%	2.2%	1.7%
Ref Rate						

The light shaded cells are reported values provided by the bank.

Calculations — Step 1: Total initial interest income/expense:

Total initial interest income/expense is computed following the relation provided below:

$$\text{Total initial interest income/expense} = (\text{EIR Exist} * \text{Vol Exist} + \text{EIR Mat} * \text{Vol Mat} + \text{EIR New} * \text{Vol New}).$$

EIR component	Total interest income/expense		
	2016	2019	2018
Margin	35	40	55
Ref Rate	13.5	25	37.5

Calculations — Step 2: Impact on total interest income of the non-performing assets:

Step 2a: Part of interest income generated by non-performing assets (gross of provisions) (split into existing and maturing)

The impact of non-performing assets is proportionally distributed among existing and non-performing assets following the relation provided below:

$$\text{Diff Exist} = \text{EIR Exist} * \text{Vol NPE}*(\text{Vol Exist}/(\text{Vol Exist} + \text{Vol Mat} + \text{Vol New}))$$

$$\text{Diff Mat} = \text{EIR Mat} * \text{Vol NPE}*(\text{Vol Mat}/(\text{Vol Exist} + \text{Vol Mat} + \text{Vol New}))$$

$$\text{Diff New} = \text{EIR New} * \text{Vol NPE}*(\text{Vol New}/(\text{Vol Exist} + \text{Vol Mat} + \text{Vol New}))$$

Step 2b: Subtracting the part of interest income generated by non-performing assets (gross of provisions) from the total initial interest income/expense

$$\text{Interest income/expense(PE)} = \text{Total initial Interest income/expense} – (\text{Diff Exist} + \text{Diff Mat} + \text{Diff New})$$

Step 3: Adding back the interest income of NPE at amortised cost (i.e. net of provisions)

$$\text{Total final Interest income/expense} = \text{Interest income/expense(PE)} + \text{EIR NPE}*(\text{Vol NPE} – \text{Prov NPE})$$

a. Constraints on the margin component for liability positions

343.   Under the baseline scenario, banks are required (at a minimum) to reflect a proportion of the changes in the sovereign bond spread of the country of location of the activity in the margin EIR component of their repriced liabilities. Under the adverse scenario, the margin paid on interest-bearing liabilities cannot increase less than the higher of a proportion of the changes in the sovereign spread of the country of location of the activity and the same proportion applied to the increase of an idiosyncratic component, derived from the impact on banks' wholesale funding rate of a rating downgrade as described in Box 26; the impact shall be applied immediately at the beginning of the time horizon.

Box 26: Floor for the development of the margin paid on new liabilities (pass-through constraint)

The margin on banks' new liabilities at time t is floored at:

$$\text{Margin NewL}\ (t) = \text{Margin NewL}\ (t0) + \gamma\ \text{Max}\ (0, \Delta\text{Sov Spread}\ (t), \Delta\ \text{idiosyncratic component}).$$

Where:

- Margin NewL (t) stands for the Margin EIR component on their repriced liabilities during time interval t.

- $t0$ stands for the year preceding the stress test horizon.

- ΔSov Spread (t) is the change in the relevant sovereign spread — i.e. difference between the yield-to-maturity of the 10-year sovereign's debt security and the 10-year swap rate for the same currency, between t and $t0$.

- γ is a factor specific to the different types of liabilities, which reflects the heterogeneity in the relationship between the sovereign spreads and the funding rates across different types of liabilities as summarised in the table below:

	Retail deposits — sight	Retail deposits — term	NFC deposits — sight	NFC deposits — term	Gov. and central banks deposits — sight	Gov. and central banks deposits — term	Deposits from credit institutions and other financial corporations	Debt securities (excl. covered bonds)	Covered bonds	Certificates of deposits and repos
γ	0.1	0.5	0.2	0.5	0.2	0.5	1	1	0.75	0.2

- Δ idiosyncratic component stands for the impact on the idiosyncratic component. Under the baseline scenario, the Δ idiosyncratic component will be 0; under the adverse scenario, it will represent the expected change in the margin of senior unsecured debt, issued in the bank's country of origin or main country of funding, denominated in local currency with 5 years' residual maturity, in the event of an instantaneous external credit assessment institution (ECAI) credit rating downgrade (taking the rating as of end 2017 as the starting point). Under the adverse scenario, Δ idiosyncratic component shall be calculated as a single number per bank, used for all liabilities in all countries/currencies and assumed constant over the scenario. The idiosyncratic component is floored, under the adverse scenario, by the values listed below:

Credit rating (Standard & Poor's classification) 31 December 2017	Shock to the idiosyncratic component (bps)
AAA	25
AA+	30
AA	35
AA-	40
A+	45
A	50
A-	60
BBB+	70
BBB	80
BBB-	95
BB+	110
BB	125
BB-	145
B+/B/B-	175
CCC+/CCC/CCC-/CC+/CC/CC-	225

In order to apply the floor, and in cases where the bank has more than one rating from nominated ECAIs, the following criteria will apply:

▪ Long-term credit ratings will prevail over short-term credit ratings.

▪ Where two credit ratings are available from nominated ECAIs and the two correspond to different impacts on the margin component of the EIR, the rating leading to a more severe impact shall be chosen.

▪ Where more than two credit ratings are available from nominated ECAIs, the two ratings generating the two less severe impacts shall be referred to. Out of the two preselected, the one with a higher impact will be chosen.

If the applicable rating is issued by a nominated ECAI other than Standard & Poor's, the bank shall map it to one of the ratings envisaged in the idiosyncratic component floor table. In this mapping, the following constraint will apply: both ratings shall share the same credit quality step according to Annex III of the Joint final draft Implementing Technical Standards on the mapping of ECAIs' credit assessment under Article 136(1) and (3) of the CRR.

In the exceptional case of a bank with only two credit ratings available from nominated ECAIs with a significant gap between them of 3 or more notches, and when the outlook of the worse rating is positive and the outlook of the better rating is either positive or stable, the bank and the competent authority may discuss during the quality assurance process the rationality of this gap and of the applicable idiosyncratic impact. The competent authority may conclude that this gap is not justified and may approve a deviation from the general rule, allowing the institution to apply the impact corresponding to the credit rating resulting from the median of the two ratings, rounded to the worse of two adjacent ratings. These deviations should be communicated to the EBA together with the justification behind it.

Example

The shock to the idiosyncratic component for a bank with a credit rating of AA- as of end 2017 will

be +40 bps over the entire stress test period under the adverse scenario. Similarly, the shock to the idiosyncratic component for a bank with a credit rating of BB- as of end 2017 will be 145 bps under the adverse scenario.

344.   The pass-through constraint on the development of the EIR applies to all interest expense positions, except derivatives instruments. The floors for the repricing of the margin of interest-bearing liabilities are applicable at country/currency level for each liability type and separately for fixed and floating rate portfolios.

345.   Any legally mandated restrictions to pass-through mechanisms should be identified before submission of the data and explained in accompanying documents. Discussions during the quality assurance process may, in exceptional circumstances, lead to deviations from this rule.

b. Constraints on the margin component for asset positions

346.   Under both the baseline scenario and the adverse scenario, banks are required to cap the margin on their repriced assets by the sum of the margin starting value and a proportion of the change in the sovereign bond spread in the country of exposure, as explained in Box 27.

347.   Exceptional cases of legally prescribed funding matches between the assets and liabilities sides may be identified as part of the quality assurance process, which would need to be taken into account in the stress test when considering the application of the pass-through constraints.

Box 27: Cap on the development of the margin earned on new assets (pass-through constraint)

The Margin EIR component on banks' new repriced assets at time t is capped at:

$$\text{Margin NewA } (t) = \text{Margin NewA } (t0) + \lambda(\text{Max}(\Delta\text{Sov Spread } (t), 0).$$

Where:

- Margin NewA (t) stands for the Margin on the repriced assets in the time interval t.

- $t0$ stands for the year preceding the stress test time horizon.

- ΔSov Spread (t) is the change in the relevant sovereign spread — i.e. difference between the yield-to-maturity of the 10-year sovereign's debt security and the 10-year swap rate for the same currency, between t and $t0$.

- λ is a factor specific to the different types of assets under consideration, which reflects the heterogeneity in the relationship between the sovereign spreads and the lending rates across different types of assets as summarised in the table below:

	Household — Residential mortgage	Household — Other	Credit institutions and other financial corporations	Non-financial corporations	Central bank	Government
λ	0.15	0.15	0.5	0.15	0	1

348.   These caps on pass-through rates apply to all interest income earning positions except derivative instruments. The caps for the repricing of the margin of interest-earning assets are applicable at country/currency level for each asset type and separately for fixed and floating rate portfolios.

5. Conduct risk and other operational risks

5.1 Overview

349.   Banks shall project the P&L impact of losses arising from conduct risk and other operational risks, using, when relevant, their internal models and, in the case of conduct risk, available qualitative information.

350.   Banks shall also project capital requirements for operational risk within the time horizon of the exercise.

351.   Banks' projections are subject to the constraints summarised in Box 28.

Box 28: Summary of the constraints on banks' projections of conduct risk and other operational risks

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- Projections of losses that may arise from new conduct risk events are subject to a minimum floor, computed in the baseline scenario as the average of the historical conduct risk losses reported by the bank during the 2013-2017 period for non-material events only — i.e. excluding past losses of historical material conduct risk events reported during this period. This floor is more conservative under the adverse scenario and requires the banks to apply a stress multiplier to the average (paragraph 388).

- Projections of conduct losses connected to new material conduct risk events are subject to a floor in the quality assurance process, i.e. banks that submit projections which are lower than the floor are required to justify their projections to their competent authority (paragraph 389).

- Projections of losses due to other operational risks are subject to a minimum floor, computed under the baseline scenario as the average of other historical operational risk losses reported by the bank during the 2013-2017 period times a multiplier. This floor is more conservative in the adverse scenario and requires banks to apply a stress multiplier to the average (paragraph 393).

- Total capital requirements for operational risk in each year of the projection horizon shall not fall below the actual minimum capital requirements for operational risk reported by the bank at the beginning of the exercise (paragraph 396).

5.2 Scope

352. The scope of the operational risk stress is defined to cover the impact on the P&L of potential future losses arising from conduct risk and other operational risks. This also covers the effect of the stress on operational risk capital requirements.

5.3 High-level assumptions and definitions

5.3.1 Definitions

353. **Conduct risk** is defined as the current or prospective risk of losses to an institution arising from an inappropriate supply of financial services, including cases of wilful or negligent misconduct. In the COREP template for operational risk (C 17.00), operational risk losses are classified by event type. For the purpose of reporting historical data and projections in the stress test templates, the assumption is that conduct risk losses will correspond to losses related to event type 4 ('clients, products and business practices') and event type 1 ('internal fraud'). Deviations from this rule (i.e. non-conduct events which are classified as event type 1 or 4 and conduct events which are not classified as event type 1 or 4) are allowed in exceptional cases subject to the approval of the competent authorities. In any case, institutions shall justify the exclusion from the consideration as conduct risk of any event classified as event type 1 or 4 and the inclusion in conduct risk of any events that match the definition provided without being classified as event type 1 or 4, supplying evidence to the competent authority that justifies this reclassification. For example, conduct risk will also include violation of national and international rules and regulations (tax rules,[21] anti-money laundering rules, anti-terrorism rules and economic sanctions).

354. **Other operational risk** is defined as the risk of losses according to the definition provided in the CRR (i.e. 'operational risk' means the risk of losses resulting from inadequate or failed internal processes, people and systems or from external events, and includes legal risk), but excluding all conduct-related losses. For the purpose of reporting historical data and projections in the stress test templates, banks will consider as other operational risk all event types that are not defined as conduct risk events above.

355. A **historical material conduct risk event** is defined as any misconduct issue that has triggered aggregate gross losses during the period 2013-2017 greater than 10 bps of the institutions' end-2017 level of CET1 capital at a consolidated level.

356. A **new conduct risk event** is defined as a misconduct issue that, as of the start of the exercise (31 December 2017), is unknown to the bank or is already known but has had no

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[21] Banks should report any tax fines associated with client business as a conduct event. For instance, fines paid by banks that facilitated tax evasion – such as penalties imposed by the US Department of Justice under the 'Swiss Bank Program' – should be classified as a conduct event.

material P&L impact (below 10 bps of the end-2017 CET1 capital of the institution at a consolidated level) during the 2013-2017 period. In this context, new known conduct risk events are material if the firm expects the event to trigger gross losses greater than 10 bps of the end-2017 CET1 capital of the institution at a consolidated level during the 3 years of the exercise.

357.   **Number of loss events** is defined as the number of operational risk events accounted for the first time in the P&L statement within the reporting period (2013-2017 for actual data and 2018-2020 for projections). In the case of loss adjustments within the reporting period, no additional numbers of loss events should be reported.

358.   **Recovery** is defined as an independent occurrence related to the original operational risk loss that is separate in time, in which funds or inflows of economic benefits are received from second or third parties, such as insurers or other parties.

359.   **Gross loss** is defined as a loss stemming from an operational risk event or event type before recoveries of any type.

360.   **Rapidly recovered loss event** is defined as an operational risk event that leads to losses that are partly or fully recovered within 5 working days. In a rapidly recovered loss event, only the part of the loss that is not fully recovered (i.e. the loss net of the partial rapid recovery) should be considered and reported as gross loss. In exceptional cases where an historical event (i.e. misdirected payments) produces artificially and significantly distorted results through the application of the window for rapidly recovered loss events and the operational risk floor, then a limited extension of the 5-day window may be allowed. This extension is solely for the purposes of computing the floors specified in Box 30 and Box 32. It is subject to the decision of the competent authority and requires the bank to provide compelling evidence of the distortion.

361.   **Date of accounting** is defined as the date when an operational risk gross loss or reserve/provision was accounted for for the first time in the P&L statement.

362.   **Total loss recovery** is defined as the sum of the recoveries accounted for within the reporting period, relevant to loss events included into the 'total amount of gross losses'.

363.   The **relevant indicator (RI)** is defined as in Article 316 of the CRR.

5.3.2   Reporting requirements

364.   All banks are required to report historical data on incurred gross losses on conduct risk and other operational risks on a yearly basis from 2013 to 2017 in the general operational risk template (CSV_OR_GEN) at a consolidated level, irrespective of the operational risk approach applied. Banks applying the fall-back solution are still expected to report all available and eligible historical losses incurred during the historical horizon.

365.   Banks shall report, in each year of the reporting period, the total amount of gross losses resulting from the sum of the following elements:

- The gross loss amounts equal or larger than EUR 10 000, corresponding to operational risk events accounted for the first time in the P&L during that specific year, within the reporting period (2013-2017), irrespective of when they have occurred;

- The net loss adjustments arising from, for example, additional settlements, increases of provisions and releases of provisions accounted for during that year and that are equal or larger than EUR 10 000, corresponding to operational risk events accounted for the first time later than January 2007.

366.   In those cases where capital requirements are modelled using AMA or standardised approaches, banks will report historical data on incurred gross losses for conduct risk and other operational risks by loss-size-based buckets (minimum size is EUR 10 000) in CSV_OR_GEN. Banks shall include all losses above EUR 10 000 (or the equivalent, applying the appropriate FX rate at the time of recording the loss), and exclude all losses below this threshold. Historical material conduct risk events will be reported separately in CSV_OR_CON. Banks shall group all payments relating to the same material conduct risk event for the purpose of populating both CSV_OR_GEN and CSV_OR_CON (thus ensuring that material conduct risk events comprising a large number of small items are appropriately captured).

367.   Banks applying the basic indicator approach are also expected to report yearly operational risk-incurred losses from 2013 to 2017 in CSV_OR_GEN, with a split between conduct risk and other operational risks but without further details per loss-size-based buckets. Historical material conduct risk events shall be reported separately in CSV_OR_CON by these banks as well, when relevant.

368.   In the case of events with a lifespan of several years, the initial impact and/or the net loss adjustments should be reported in the pertinent years of accounting. The sum of the initial impact and/or net loss adjustments accounted for during the reporting period (2013-2017) will determine the total size of the event for the purpose of classifying it as material or not material, as well for reporting its amounts (i.e. initial impact and/or loss adjustments) in the relevant loss-size-based bucket. A non-exhaustive list of examples of reporting losses in the relevant loss-size-based bucket is given in Box 29.

Box 29: Examples of reporting losses in the relevant loss-size-based bucket[22]

Example 1

In 2013 the event happens with an initial loss of EUR 15 000, then in 2014 an additional provision of EUR 50 000 is booked for the same event, in 2015 another provision of EUR 200 000 is booked for the same event and finally in 2016 a further provision of EUR 30 000 is again booked for the same event:

Year	Loss	Cumulative loss
2013	15 000	15 000
2014	50 000	65 000
2015	200 000	265 000
2016	30 000	295 000
2017		

The bank should report this event as follows, in accordance with the COREP instructions:

	2013	2014	2015	2016	2017
≥ EUR 10 000 and < EUR 20 000	15 000				
≥ EUR 20 000 and < EUR 100 000		50 000			
≥ EUR 100 000 and < EUR 1 000 000			200 000	30 000	
≥ EUR 100 000 and < EUR 1 000 000					

Example 2

The event happens in 2013 with an initial loss of EUR 5 000, then in 2014 an additional provision of EUR 6 000 is booked for the same event, in 2015 another provision of EUR 90 000 is booked for the same event. In 2016 the bank released EUR 40 000 provision for the same event and finally in 2017 it booked a further provision of EUR 50 000 for the same event:

Year	Loss	Cumulative loss
2013	5 000	5 000
2014	6 000	11 000
2015	90 000	101 000
2016	-40 000	61 000
2017	50 000	111 000

The bank should report this event as follows, in accordance with the COREP instructions:

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[22] Please also refer to question 2016_2867 of the EBA Single Rulebook Q&A on Template C 17.00 (OPR DETAILS) – Reporting of loss adjustments.

	2013	2014	2015	2016	2017
≥ EUR 10 000 and < EUR 20 000					
≥ EUR 20 000 and < EUR 100 000				-40 000	
≥ EUR 100 000 and < EUR 1 000 000			90 000		50 000
≥ EUR 100 000 and < EUR 1 000 000					

Example 3

In 2013 the event happens with an initial loss of EUR 50 000, then in 2014 provisions of EUR 41 000 are released for the same event and finally in 2015 a further provision of EUR 50 000 is again booked for the same event:

Year	Loss	Cumulative loss
2013	50 000	50 000
2014	-41 000	9 000
2015	50 000	59 000
2016		
2017		

The bank should report this event as follows, in accordance with the COREP instructions:

	2013	2014	2015	2016	2017
≥ EUR 10 000 and < EUR 20 000					
≥ EUR 20 000 and < EUR 100 000	50 000		50 000		
≥ EUR 100 000 and < EUR 1 000 000					
≥ EUR 100 000 and < EUR 1 000 000					

In addition, for all three examples banks should add the initial loss and the additional positive and negative loss adjustments to the 'Total amount of gross losses' corresponding to conduct risk or other operational risk as relevant, in the year when the initial loss and the loss adjustments take place.

369. In the case of a rapidly recovered loss event, only the part of the loss that is not fully recovered (i.e. the loss net of the partial rapid recovery) should be considered and reported as gross loss.

370. In the case of a common operational risk event or multiple events linked to an initial operational risk event generating several events or losses, the related losses should be grouped and entered into the template as a single loss. The bank should report one event, if there is a common operational risk event, and/or the number of the several events linked to the root event, if there are multiple events.

371. In accordance with Article 322(3)(b) of the CRR, operational risk losses that are related to market risk shall be included in the operational risk templates, while operational risk losses that are related to credit risk shall be excluded.

372.   When reporting the gross losses, banks will include the following items, in accordance with letters (a), (b), (c) and (f) of Article 28 of the EBA Final Draft RTS on AMA assessment (EBA/RTS/2015/02):

- Direct charges, including impairments and settlement charges, to the P&L and write-downs due to the operational risk event;

- Costs incurred as a consequence of the operational risk event, including external expenses with a direct link to the operational risk event (such as legal expenses and fees paid to advisors, attorneys or suppliers) and costs of repair or replacement to restore the position prevailing before the operational risk event;

- Provisions or reserves accounted for in the P&L statement against probable operational risk losses;

- Timing losses.[23]

373.   When determining the scope of the gross losses to be reported, banks should also consider the provisions included in Articles 29(3), 29(4) and 29(6) of the Final draft RTS on AMA assessment.

374.   Banks are also requested to provide, in the CSV_OR_GEN template, data on the number of loss events, on total loss recovery and on the relevant indicator.

375.   The quality assurance by supervisors of banks' projections is of special relevance in the case of conduct risk, given the high variability of the potential outcomes of the issues when settled, especially the material ones. Banks should support their projections for material conduct risk events with all available evidence, both quantitative and qualitative. Banks may also be asked by their competent authorities to provide evidence regarding issues that are widespread in the industry and have resulted in losses for other institutions, which could be of relevance for them based on their business activities. When quality assuring banks' projections, competent authorities will take into account not only their supervisory knowledge of the particular bank, but also a comparison to the sector and the impact of similar issues in the bank's peer group.

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[23] For the definition of timing losses please refer to Article 1(f) of EBA/RTS/2015/02.

5.4   Impact on P&L

5.4.1   Conduct risk treatment

376.   Banks will stress their conduct risk losses by applying either a qualitative or a quantitative approach in accordance with the instructions below. In both cases, a minimum floor for new non-material conduct risk losses will apply.

377.   Under both approaches, the P&L impact of banks' conduct risk estimates will be included in 'gains or losses arising from operational risk' in the P&L template (CSV_P&L), taking into account the applicable floor.

378.   Institutions will apply the qualitative approach when they report any historical material conduct risk event during the period 2013-2017. Institutions reporting no historical material conduct risk event during 2013-2017 will also apply the qualitative approach if new material events are expected, or if the relevant competent authority deems it necessary based on their knowledge of the bank and on their supervisory judgment (if they deem that the institution may face any new material conduct risk event in the future).

379.   All remaining institutions will apply the quantitative approach.

a.   Qualitative approach to estimating future conduct risk losses

380.   Banks applying the qualitative approach shall:

- Report historical data on incurred gross losses on conduct risk in the general template (CSV_OR_GEN) as indicated in paragraphs 364 to 367 above. In the same template they shall report projections of losses for non-material events during the time horizon of the exercise.

- Identify and report (separately) historical material conduct risk events in the conduct risk template (CSV_OR_CON), including an estimate of all potential losses that may still arise from them, in excess of accounting provisions and losses already booked by December 2017, during the time horizon of the exercise. This is applicable for both the baseline scenario and the adverse scenario.

- Include, in the conduct risk template (CSV_OR_CON), a projection of potential losses that may arise from new material conduct risk events during the time horizon of the exercise, under both the baseline scenario and the adverse scenario.

381.   Banks shall report individually in the CSV_OR_CON the 25 largest historical material events in terms of aggregate projected losses, and also the 25 largest new material events in terms of aggregate projected losses. The rest of material events not included among the 25 historical largest and/or the 25 new largest (if any) shall be reported jointly in a different single row for historical events and in another single row for new events.

382.   Banks' estimates of future conduct costs linked to historical material conduct risk events or new conduct risk events reported in the conduct risk template (CSV_OR_CON) shall be determined, irrespective of whether a provision has been recognised, by evaluating a range of settlement outcomes for each issue and assigning probabilities to these outcomes. Adverse outcomes should be attributed higher probabilities under the adverse scenario than under the baseline scenario, so that banks should have a high level of confidence that, under the adverse scenario, the losses would not exceed the loss estimate for material conduct risk events. These estimates are expected to exceed provisions, except for events where there is a high degree of certainty regarding the eventual cost. Material loss events should be reported regardless of the probability level.

383.   When projecting conduct risk losses linked to historical material conduct risk events and new conduct risk events, banks shall consider the time dimension and report the projected loss in the year when the settlement of the misconduct issue will most likely occur. If there is uncertainty on when the issue will be settled, then banks should distribute the projected loss equally over the 3 years of the exercise.

384.   Table 13 below provides an illustration on the approach to follow in order to project conduct risk losses in the adverse scenario.

Table 13: Projection of conduct risk losses under the qualitative approach and in the adverse scenario — Illustration

Existing treatment of the misconduct issue	Possible approach to projecting future conduct risk losses
An accounting provision has been raised. There is a high degree of certainty over the eventual cost.	The estimate will equal the existing provisions.
An accounting provision has been raised. There is a high degree of uncertainty over the eventual settlement cost. While the IAS 37 provision strikes a balance between potential upside and downside, the likelihood of adverse outcomes exceeding existing provisions is greater than remote.	The estimate should exceed the existing provision. Banks are expected to provide an estimate, even if they are unable to reliably quantify the full range of potential outcomes, by exercising expert judgement. In the adverse scenario, banks should have a high level of confidence that the loss would not exceed the loss estimate for material conduct risk events. Adverse outcomes should be attributed higher probabilities under the adverse scenario than under the baseline scenario.
An accounting provision has not been raised. While a settlement cost is not probable, there is sufficient evidence to determine a range of settlement outcomes, and the possibility of a significant settlement cost is greater than remote.	An estimate should be determined by evaluating a range of settlement outcomes and assigning probabilities to these outcomes. In the adverse scenario, banks should have a high level of confidence that the loss would not exceed the loss estimate for material conduct risk events. Adverse outcomes should be attributed higher probabilities under the adverse scenario than under the baseline

Existing treatment of the misconduct issue	Possible approach to projecting future conduct risk losses
	scenario.
An accounting provision has not been raised. While a possible obligation has been identified, current evidence is insufficient to be able to reliably quantify any potential liability, or range of liabilities, that may exist. The possibility of a significant settlement cost is greater than remote.	An estimate should be determined by exercising expert judgement. In the adverse scenario, banks should have a high level of confidence that the loss would not exceed the loss estimate for material conduct risk events. Adverse outcomes should be attributed higher probabilities under the adverse scenario than under the baseline scenario.

385.   Banks shall provide supervisors with any information — both quantitative and qualitative — they have used in forming this assessment. This information shall include the extent of their business in relevant areas. Banks shall provide supervisors with a summary of how they allocated each misconduct risk to the categories in Table 13 above.

b. Quantitative approach to estimating future conduct risk losses

386.   Banks applying the quantitative approach shall directly in the general template (CSV_OR_GEN) project the P&L impact of conduct risk losses over the 3-year time horizon using banks' own methods.

c. Floor for conduct risk loss projections

387.   Projections of conduct risk losses linked to new non-material conduct risk events shall not fall below a binding floor over the 3-year stress test time horizon under both the baseline scenario and the adverse scenario. The floor is applicable to the total losses from new non-material conduct risk events for the 3 years, but not year by year. If the floor applies, the amount of losses under the floor will be projected equally along the 3 years of the time horizon.

388.   In the baseline scenario, the 3-year floor for potential losses linked to new non-material conduct risk events will be computed as 3 times the average of the historical losses reported by the banks during the 5 years prior to the beginning of the exercise (the 2013-2017 period) for non-material conduct risk events only (i.e. excluding past losses of historical material conduct risk events reported during this period). In the adverse scenario, the floor will be more conservative and banks will be required to apply a stress multiplier to the average. This calculation is detailed in Box 30.

Box 30: Floor for conduct risk losses for non-material conduct events

$$\text{Conduct risk floor for non} - \text{material conduct events}_{(\text{b or adv}),3\ years} =$$
$$3 * \Omega_{(\text{b or adv})} \frac{1}{5} \sum\nolimits_{y=2013}^{2017} (\text{historical conduct losses for non} - \text{material events})_y.$$

Where:

- In the baseline scenario, the stress multiplier is $\Omega_{(\text{CR, b})} = 1$.

- In the adverse scenario, the stress multiplier is $\Omega_{(\text{CR, adv})} = 2$.

389.   Projections of conduct losses connected to new material conduct risk events are subject to a floor in the quality assurance process, i.e. banks that submit projections which are lower than the floor are required to justify their projections to their competent authority. If a bank was unable to provide a reasonable justification then it should apply the floor. The floor applies only for the projections under the adverse scenario and is computed as 3 times the average of the historical losses reported by the banks during the 5 years prior to the beginning of the exercise (the 2013-2017 period) for material conduct risk events multiplied by a stress factor as shown in Box 33. The floor is calculated on template CSV_OR_ GEN.

Box 31: Floor for conduct risk losses for material conduct events in the quality assurance process

$$\text{Conduct risk floor for material conduct events}_{(\text{adv}),3\ years} =$$
$$3 * \Omega_{(\text{adv})} \frac{1}{5} \sum\nolimits_{y=2013}^{2017} (\text{historical conduct losses for material events})_y.$$

Where:

- In the adverse scenario, the stress multiplier is $\Omega_{(\text{CR, adv})} = 1.15$.

390.   In all circumstances, banks will be expected to identify their material risks and potential conduct risk losses and these will be subject to challenger models from supervisors — for example, based on statistical models which look beyond simple averages to identify the specific nature of conduct risk, or by using uncertainty-adjusted means to project potential material conduct risk losses and to challenge banks' own projections.

5.4.2   Treatment of other operational risks

391.   Banks shall enter the P&L impact of other operational risk losses over the 3-year time horizon directly in the general template (CSV_OR_GEN) using the banks' own methods. Banks' projections should be made considering the 50th percentile of the historical yearly aggregate amount of losses under the baseline scenario, and should reach the 90th percentile of the

historical yearly aggregate amount of losses under the adverse scenario. Percentiles refer to the aggregate loss distribution, based on the bank's internal data on the frequency and severity of losses.

392.   The projection of losses for other operational risks shall be reported in 'gains or losses arising from operational risk' in the P&L template (CSV_P&L), taking into account the applicable floor.

393.   Projected losses for 3 years under the adverse and the baseline scenarios must be at least equal to the bank-specific floor computed as shown in Box 32.

Box 32: Floor for the projection of other operational risk losses

$$\text{OOR floor}_{(b \text{ or adv}),3 \text{ years}} = 3 * \Omega_{(b \text{ or adv})} \frac{1}{5} \sum_{y=2013}^{2017} (\text{OOR losses})_y.$$

Where:

- OOR means 'other operational risk'.

- In the baseline scenario, the loss factor is $\Omega_{(OOR,b)} = 0.8$.

- In the adverse scenario, the loss factor is $\Omega_{(OOR,adv)} = 1.5$.

5.4.3   Fall-back solution

394.   If a bank is unable to report relevant historical losses for conduct risk and other operational risks or if relevant historical losses are provided only for material events and the projected losses for the material events are not deemed appropriate by the competent authorities, overall operational risk loss projections (aggregate for the 3 years of the exercise) will be calculated as a function of the relevant indicator, as shown in Box 33. In cases where this method applies, the amount of losses will be projected equally along the 3 years of the time horizon.

Box 33: Fall-back solution for other operational risk losses

$$L_{(b \text{ or } adv)} = \Omega_{(b \text{ or } adv)} * RI_{2017}.$$

Where:

- RI is the relevant indicator.

- L is the total loss projected for the 3 years of the time horizon, meaning that, in each of the 3 years, the loss will be L/3.

- In the baseline scenario, the scaling factor is $\Omega_{(b)} = 0.06$.

- In the adverse scenario, the scaling factor is $\Omega_{(adv)} = 0.15$.

5.5   Impact on capital requirements

395.   Total capital requirements for operational risk in each year of the projection horizon shall not fall below the actual minimum capital requirements for operational risk, as reported by the bank at the beginning of the exercise (31 December 2017).

5.5.1   AMA

396.   Banks shall use their internal models to estimate their capital requirements for operational risk (which includes both conduct risk and other operational risks) over the time horizon of the exercise, for both the baseline scenario and the adverse scenario. For this, banks using the AMA shall take into account the flow of losses projected according to this note, exceeding the existing provisions already considered by the AMA models (i.e. ex ante provisions are not included in the calculation of the capital requirements) in the loss database used to estimate the capital requirements. Projections of operational risk capital requirements will be challenged by competent authorities during the quality assurance process.

5.5.2   Basic approach and standard approach

397.   For operational risk categories where capital requirements are calculated using basic and standard approaches, capital requirements shall, in the baseline scenario and in the adverse scenario, stay constant and equal to capital requirements reported by the bank for the starting point (31 December 2017).

6. Non-interest income, expenses and capital

6.1 Overview

398. Banks shall use their own methodologies to project their non-interest income and expenses items that are not covered by credit risk, market risk or operational risk, for both the baseline scenario and the adverse scenario. These projections are subject to the constraints summarised in Box 34. The macroeconomic shocks and market risk methodologies shall be applied for stressing real estate assets and defined benefit pension plans, respectively.

Box 34: Summary of the constraints on banks' projections of non-interest income, expenses and capital

- For dividend income, NFCI and share of the profit of investments in subsidiaries, joint ventures and associates outside the scope of consolidation, net income from each item cannot exceed the 2017 level in the baseline scenario. In the adverse scenario, a minimum reduction of net income from each item compared with the 2017 reported value is prescribed for the projections (paragraph 413).

- Administrative expenses, other operating expenses, depreciation and other provisions cannot fall below[24] the value observed in 2017 — unless an adjustment of this floor for one-offs is permitted by the competent authority (paragraph 415). Only recognised one-off exceptions exceeding the threshold of 5 bps impact will be permitted (paragraph 418).

- For dividends paid, under the baseline and adverse scenarios, banks shall apply a pay-out ratio based on their publicly declared projected dividend policies. If no dividend policy is available or documented, the bank shall apply the following rule: the pay-out ratio in the baseline should be the larger of 30% and the median of the observed pay-out ratios in profitable years over the last 5 years. In the adverse scenario, the same pay-out ratio as in the baseline scenario shall be assumed, unless the bank can provide evidence that it can deviate from this rule and the deviation is approved by the relevant competent authority. In both cases, a zero dividend is accepted if the bank is loss-making (paragraph 427).

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[24] It is noted that the quantities referred to in this point are reported with a negative sign. Therefore, this constraints statement refers to the absolute amount of these P&L contributions.

- ▪ A common tax rate of 30% shall be applied (section 6.4.4).

- ▪ Other operating income is capped at the 2017 value (paragraph 446).

- ▪ No impact is assumed for FX effects, realised gains or losses on derecognition of financial assets and liabilities not measured at fair value through P&L, gains or losses on derecognition of non-financial assets, impairments on goodwill and negative goodwill (paragraphs 405, 443, 445, 448 and 450).

6.2   Scope

399.   The projections of non-interest income and expenses exclude any P&L positions and capital impacts covered in the approaches for credit risk, market risk, operational risk or NII.

400.   The following FINREP P&L items are part of non-interest income and expenses:

- • Expenses on share capital repayable on demand;

- • Dividend income;

- • NFCI;

- • Gains (losses) on derecognition of financial assets and liabilities not measured at fair value through profit and loss, net;

- • Exchange differences, net;

- • Gains or losses on derecognition of non-financial assets, net;

- • Other operating income;

- • Other operating expenses;

- • Administrative expenses;

- • Depreciation;

- • Modification gains or losses, net;

- • Other provisions or reversal of provisions;

- • Other impairment on financial assets not measured at fair value through profit or loss;

- • Impairment or (-) reversal of impairment on non-financial assets;

- • Negative goodwill recognised in profit or loss;

- Share of the profit or loss of investments in subsidiaries, joint ventures and associates;

- Other income and expenses from continuing operations (impairments of investments in subsidiaries, joint ventures and associates, profit or loss from non-current assets and disposal groups classified as held for sale not qualifying as discontinued operations);

- Profit or loss after tax from discontinued operations.

401.   In addition to the P&L items listed above, this section captures the impact of taxes, defined benefit pension schemes and dividends paid on capital as well as assumptions made regarding the calculation of capital ratios.

6.3   High-level assumptions and definitions

6.3.1   Definitions

402.   All items follow IFRS definitions. Banks shall align with FINREP reporting. If national accounting frameworks are used, banks shall map their accounting framework to the IFRS framework. Banks are requested to provide a mapping table in an accompanying document.

6.3.2   Approach

403.   Banks will have to use their own methodologies in projecting non-interest income and expense paths for the baseline and adverse scenarios for all items not covered in sections 6.4.1, 6.4.2, 6.4.3 and 6.4.5. This applies especially to — but is not limited to — leasing and rental income.

404.   The projections shall incorporate both exogenous factors and bank-specific characteristics. They shall also take into account the specific developments of the originating country. Given potential differences in the business cycles of these countries, the respective income and expense streams accrued by the bank in question will be affected.

405.   In line with the static balance sheet assumptions, no FX effects should be accounted for regarding the above-listed P&L items. The only two channels via which FX rate changes affect the P&L are an indirect credit risk from foreign currency lending that is related to the depreciation of local currencies (see section 2), and market risk effects due to revaluation effects of trading and other fair value portfolios (see section 3). Banks should therefore abstain from accounting for both positive effects (e.g. reduced administrative expenses in countries where a currency depreciates versus the reporting currency) and negative effects (e.g. reduced income in countries where a currency depreciates versus the reporting currency).

6.3.3   Reporting requirements

406.   Banks are required to provide 5 years of historical data for dividend payments together with their projections. Banks shall comment in the accompanying documents on how historical

P&L items are affected by mergers and acquisitions, and how specific projected P&L values have been determined. If the FINREP data are not available for historical years, banks may report pro forma data.

407. Gains (losses) arising from operational risk need to be reported as a separate item. To avoid any double counting, other P&L items therefore have to be adjusted to exclude these gains (losses) whenever relevant.

408. All historical and projected profit or loss values shall be reported on template CSV_P&L. Any additional impact to capital shall be reported on the capital template (CSV_CAP).

409. The items covered in sections 6.4.1 and 6.4.2 and paragraph 429 follow specific approaches that require the use of separate templates, namely CSV_NFCI_DIV, CSV_ONEOFF and CSV_MDA.

6.4 Impact on P&L and capital

6.4.1 Dividend income and NFCI

410. Banks shall project dividend income, NFCI and share of the profit of investments in subsidiaries, joint ventures and associates outside the scope of consolidation by making use of their own models.

411. NFCI and expense items shall be projected separately at the first level of granularity in FINREP template 22.01. Where separate income and expense items are given in FINREP 22.01 these shall be projected separately. The sum of these separate projections shall form the total NFCI projection.

412. Under the baseline scenario, for each of the three items described in paragraph 410, the projection of total net income for each year cannot exceed its reported value for 2017 if the 2017 value is positive, and shall be set to 0 if the 2017 value is 0 or negative.

413. Under the adverse scenario, banks are required to follow one of the approaches subject to different constraints to project NFCI, dividend income and the share of the profit of investments in subsidiaries, joint ventures and associates outside the scope of consolidation (see Box 35):

    i. For banks that model the projections the cumulative projection of the 3 years of the scenario for each item is subject to a minimum reduction compared with three times the 2017 reported value. If this minimum reduction is binding for a bank, the reduced amount of net income will be projected equally across the 3 years of the time horizon.

    ii. Banks that choose not to model the projections themselves shall apply a more severe reduction of the total net income reported for 2017 and distribute it

equally across the 3 years of the time horizon. This simplified approach does not apply to banks reporting significant non-recurring income values in the 2017 starting point for any of the items in the scope of this paragraph. In such case, banks must model their projections and are subject to the caps as defined in (i).

iii. For banks reporting 0 or negative net income for 2017 for one of the items in the scope of this paragraph, (i) and (ii) do not apply. In this case the projection of total net income for each year shall be set to 0.

414. Banks making use of internal models with a different level of detail from the one described in this section shall map their projections to FINREP 22. A description of the model used, along with the mapping applied, shall be included in the accompanying explanatory note.

Box 35: Constraints for the calculation of NFCI, dividend income and the share of the profit of investments in subsidiaries, joint ventures and associates outside the scope of consolidation

For each item in this section, banks that model the projections shall apply the formula for the cumulative projection in the adverse scenario as follows:

$$\text{NetIncome}_{(I),3 \text{ years}} = \text{Min}[\text{NetIncome(own models)}_{3 \text{ years}}; 3 * \text{NetIncome}_{2017} * (1 - \gamma_{(Ia \text{ or } Ib)})]$$

Where:

- $\gamma_{(Ia)}$ is the minimum reduction for NFCI, equal to 10%.

- $\gamma_{(Ib)}$ is the minimum reduction for the remaining two items in this section, equal to 25%.

Banks that chose not to model the projections themselves for any of the items in this section shall apply an overall more severe reduction, so that:

$$\text{NetIncome}_{(II),2018,2019,2020} = \text{NetIncome}_{2017} * (1 - \delta_{(IIa \text{ or } IIb)})$$

Where:

- δ_{IIa} is the more severe reduction for NFCI, equal to 20%.

- δ_{IIb} is the more severe reduction for the remaining two items in this section, equal to 50%.

6.4.2 Administrative expenses, other main cost items and one-off adjustments

415. Administrative expenses, other operating expenses, depreciation and other provisions or reversal of provisions shall be projected by bank-internal models, but cannot fall below the absolute value observed in 2017. Adjustments of these constraints for one-off effects are permitted only for the items listed in this paragraph and as defined in this section, but are subject to thorough quality assurance based on available uncontroversial evidence of the non-recurrence of the event and a reasonable estimate of the recurring part of the cost (based on, and linked to, the historical data of the bank). Possible deviations from the constraints for administrative expenses and other operating expenses related to the MDA requirements of Article 141 of the CRD are set out in section 6.4.3.

416. In addition, and as a necessary condition, banks shall submit a list of those one-off events for consideration to the respective competent authority ahead of the submission of the stress test results. This list of one-off events shall distinguish between one-off events having a positive P&L impact and those having a negative impact, and will be limited to five items in total. Failure to submit the list shall lead to automatic disallowance of all one-offs, whereas submission alone constitutes no claim to eventual recognition by the competent authority. If items are rejected from the list, banks are not allowed to resubmit further applications.

417. One-off events shall be submitted using a dedicated template (CSV_ONEOFF). The pre-tax projected adjustments in each year of the baseline and adverse scenarios shall be equal to the pre-tax amount of the one-off reported for 2017. Banks will have the possibility to modify these amounts to the extent that they result in more conservative (i.e. lower) adjustments under the adverse scenario. The total impact of the one-offs will then be calculated as the sum of the pre-tax projected adjustments over the 3 years of each scenario, scaled by the end-2017 total REA.

418. After a thorough quality assurance, only recognised one-off exceptions as defined in this section and exceeding the threshold of 5 bps impact will be permitted. The resulting adjustments will be recognised in the template CSV_P&L, by singling out the one-off impact for each P&L item in the scope of this section, which will be reported net of the one-off adjustment. The total impact will be allocated equally across the 3 years of the projection.

419. The following instances shall be permissible for assessment by the competent authority:

- Future cost reductions expected as a result of divestments of business units under the following conditions:

    o The affected business unit was fully divested during the course of 2017; and

    o Further follow-up expenses for these divestments were considered in the forecast.

- Business unit restructuring, including measures that are part of a restructuring plan approved by the European Commission, leading to increased integration of one-off costs before synergies can be realised, subject to the following conditions:

  o The restructuring (but not the full restructuring plan in the case of a restructuring plan approved by the European Commission) must have been completed in 2017; and

  o Permissible restructuring costs are post-merger integration costs (subject to the merger having been completed by 31 December 2017) and set-up costs for a bad bank, wholly taken in 2017.

- Employee restructuring/lay-offs and the associated severance costs, subject to the following conditions:

  o Severance costs must have been paid in full or provisioned against by the end of 2017;

  o Any expected future restructuring payments and severance costs still need to be considered in the forecast.

- Extraordinary (i.e. non-recurrent) ex post contributions to DGS, IPS officially recognised as DGS in the sense of EU Directive 2014/49 and RF, subject to the following conditions:

  o In the case of DGS and IPS recognised as DGS, extraordinary ex post contributions must meet the criteria set out in Article 10(8) of the DGSD and Article 104 of the BRRD;

  o In the case of RF, extraordinary ex post contributions are triggered by an exceptional event and can be appropriately documented, e.g. by means of a legislative decree.

420.   Other instances than those listed in paragraph 419 may be considered by the competent authority in exceptional cases. The following exceptions are explicitly not considered:

- Income and expenses for which a methodology has already been prescribed in this note. This includes, in particular — but is not limited to — conduct and litigation costs, which shall be treated in accordance with the methodology prescribed in section 5;

- All actions that are not fully implemented by 31 December 2017. This includes, in particular — but is not limited to — mergers and run-off of businesses which are expected but not executed until year-end 2017. It also includes measures defined in restructuring plans or any contingency plans for stress situations if they are not fully implemented by 31 December 2017;

- Changes in variable compensation;

- Exceptional fees on professional services engagements;

- Changes in real estate / occupancy costs due to, for example, a move.

421.   In projecting the P&L items described in this section, banks shall include the phase-in of ex ante contributions to the Single Resolution Fund, as established in EU Regulation 2015/81.

422.   All exceptional projected cost reductions can be considered only if the adjustment of any corresponding income is taken into account, and is consistent with the remaining methodology as presented in this note (e.g. in setting any caps on income projections based on 2017 levels).

423.   For provisions not related to conduct or other operational risk no reversals are allowed (i.e. the projection is capped at zero).

6.4.3   Dividends paid and distribution restrictions under Article 141 of the CRD

424.   The pay-out ratio described in this section is defined to include all voluntary reductions in the capital base. Such reductions shall be made in the same year that the profit is made (i.e. reductions in the CET1 capital for the year 2017 will reflect dividends paid in 2017 from profits made in the same year).

425.   Banks shall report 5 years of historical dividend pay-outs by referring to the ratio between: (i) dividends, other than those paid in a form that does not reduce CET1 capital (e.g. scrip-dividends), distributed to owners of the entity; and (ii) profit after tax attributable to owners of the entity. If, for a given year, the ratio between (i) and (ii) is negative or above 100%, the pay-out ratio shall be deemed to be 100%. If for a given year, (ii) is zero, the pay-out ratio shall be set to 0% if (i) is zero and 100% if (i) is above zero.

426.   Under the baseline and adverse scenarios, banks shall apply a pay-out ratio (or an absolute pay-out per share) based on their publicly declared projected dividend policies. This includes legally binding contracts, such as profit/loss transfer agreements and policies concerning preferred shares. References to publicly declared dividend policies (e.g. from annual reports, listing brochures) shall be provided in the explanatory notes.

427.   If no dividend policy is available or documented, the bank shall apply the following rules:

- Under the baseline scenario, the bank shall apply a pay-out ratio equal to the maximum of 30% and the median of the observed pay-out ratios in profitable years over the last 5 years. If the bank is loss-making, a zero dividend is accepted.

- Under the adverse scenario, if the bank is loss-making, a zero dividend is accepted. If the bank is profit-making, the bank shall pay a dividend applying the same pay-out ratio as in the baseline scenario for the respective year, unless it can provide evidence that it can

deviate from this rule and the deviation is approved by the relevant competent authority. In such a case, the projections will be subject to a thorough quality assurance analysis and will be challenged by the competent authorities, taking into consideration the eventual declaration of dividend policies in the annual reports. This rule shall be applied to share buybacks as well.

428.   When projecting the amount of distributable profits, banks shall observe Article 141 of the CRD regarding the requirement to meet the combined buffer.

429.   If the projected CET1 ratio for a given year of the stress test horizon falls below the trigger point as per Article 141(3) of the CRD, banks shall project reductions of distributions in line with the following simplifying assumptions for the purpose of the stress test:

- The detailed reduction amounts shall be inserted in the CSV_MDA template together with an assignment to the affected P&L line item. Banks can report distribution reductions for up to five P&L items pre and post tax.

- No reduction of distribution beyond the minimum amount needed to meet the MDA requirement of Article 141(3) of the CRD shall be assumed, i.e., in years of the scenario where the MDA trigger would be breached, banks shall assume that they distribute exactly the MDA.

430.   The distribution reductions shall be documented and justified in the explanatory note. The documentation shall also contain an assessment of to what extent the projected restrictions are possible given potential legal and reputation constraints. This assessment shall refer to the following documents and policies of the bank, which competent authorities may request for quality assurance of the stress test:

- Dividend policies;

- Remuneration policies that document the banks' entitlement to cut the considered variable remuneration or discretionary pension benefits subject to Article 141(8)(d)(iv) of the CRD;

- Documentation of the relevant AT1 instruments.

431.   If a bank restricts distributions in its stress test projections to reflect Article 141(3) of the CRD, it shall complete the template CSV_MDA. In particular, banks shall report the assumed unrestricted distributions under the baseline and adverse scenarios of the stress test as well as the Pillar 2 requirements as of the reference date. For the banks benefiting from the distribution reductions, an indicator showing the event will be publicly disclosed on TRA_P&L. CSV_MDA does not need to be completed if no such restrictions are projected to occur.

432.   Competent authorities may request further details with reference to the distribution restrictions if they deem the accompanying documentation insufficient to validate the above assumptions.

6.4.4 Tax treatment

433.   Banks shall apply a common simplified tax rate of 30%. Existing DTAs that rely on future profitability and do not arise from temporary differences as of 31 December 2017 will not be recalculated according to the simplified tax rate (see paragraph 436).

434.   Banks are required to calculate their tax expense as the sum of current taxes and changes in DTAs. Current taxes shall be calculated by applying a tax rate of 30% to the taxable profit in each year. The taxable profit in each year has to be calculated on the basis of the profit or loss before tax from continuing operations minus those contributions from the P&L template that are reported after income tax in the P&L template (e.g., if applicable, share of profits in associates reported in row 290 of FINREP 02.00), and net of any loss carryforward used in the relevant period.

435.   Banks shall report the taxable profit in the respective line of the CSV_P&L template. For simplicity, banks shall disregard the fact that some of the items included in the P&L may be neither tax-deductible nor taxable under national law.

436.   Banks may project the creation and use of DTAs that rely on future profitability and loss carryforwards under the conditions below. This shall be done in accordance with applicable tax legislation and paying due regard to their own accounting position and the prospects for recovering loss carryforwards under future profitability in line with their accounting procedures:

- DTAs already existing at the start of the stress test horizon (i.e. as of 31 December 2017): these DTAs shall not be recalculated based on the common 30% tax rate, and may therefore be valued and reduced (if applicable) at their underlying tax rate as at 31 December 2017.

- DTAs that rely on future profitability and do not arise from temporary differences created during the stress test horizon: these DTAs may be created during loss-making years in accordance with applicable tax legislation and paragraph 441 and applying the common tax rate of 30% for the creation of the related DTAs.

- Banks should, however, consider whether or not to disregard in full the creation and use of DTAs that rely on future profitability and do not arise from temporary differences, in line with their accounting procedures. In this case, a tax rate of 30% should be applied in profit-making years and a tax rate of 0% in loss-making years.

437.   When projecting distributions, the use of loss carryforwards in a given profitable year shall be applied by giving priority to DTAs created during the stress test over DTAs existing as of 31 December 2017.

438.   DTAs that do not rely on future profitability shall be held constant at their starting value for the purpose of the stress test. Other DTAs shall be calculated for the time horizon of the stress test exercise according to the current regulation (Articles 38, 39 and 48 of the CRR). Full phase-in of the deduction of DTAs from CET1 capital as per Article 469 of the CRR and the associated schedule in Article 472 of the CRR and all ancillary rules as outlined in the CRR shall apply. Banks shall also take into account any accelerated phase-in schedule as established by national legislations and the applicable competent authority. The resulting effects shall be included in the banks' projections and reported in template CSV_CAP.

439.   Banks should provide an explanation of their approach when calculating tax expenses for the stress test in their explanatory note, including a reconciliation of the effective tax rate with the 30% common tax rate for each year of the stress test horizon. An example is provided in Table 14.

Table 14: Example tax calculation

Item	Illustrative example	2017	2018	2019	2020	Comment
1	DTA stock — existing at 31 December 2017 (EOY)	200	200	50	0	Starting stock plus change (16)
2	DTA stock — created during ST (EOY)		300	0	0	Starting stock plus changes (14)+(15)
3	Total DTA (EOY)	200	500	50	0	(1)+(2)
4	Loss carryforward related to DTAs — existing at 31 December 2017 (EOY)[25]	1 333	1 333	333	0	(1) divided by (20)
5	Loss carryforward related to DTAs — created during stress test (EOY)		1 000	0	0	(2) divided by (21)
6	Total loss carryforward (EOY)	1 333	2 333	333	0	(4) + (5)
7	Profit before taxes		-1 000	2 000	5 000	Example numbers
8	Floored at zero		0	2 000	5 000	The higher of (7) and zero
9	Loss carryforward used		0	2 000	333	(10) + (11)
10	Of which related to DTAs — created during stress test		0	1 000	0	The lower of (8) and [(5) end of prev. year]
11	Of which related to DTAs — existing at		0	1 000	333	The lower of [(8)-(10)] and [(4) end of prev.

[25] Loss carryforward existing as at 31 December 2017 can be used in accordance with applicable tax legislation.

Item	Illustrative example	2017	2018	2019	2020	Comment
	31 December 2017					year]
12	Taxable profit		0	0	4 667	(8) – (9)
13	Current taxes		0	0	1 400	(12)*(21)
14	DTA creation during current year of stress test		300	0	0	The lower of [(7)*(21)] and zero
15	DTA use during current year of stress test — created during stress test		0	-300	0	-(10)*(21)
16	DTA use during current year of stress test — existing at 31 December 2017		0	-150	-50	-(11)*(20)
17	Change in DTAs		300	-450	-50	(14)+(15)+(16)
18	Tax expense		-300	450	1 450	(13)-(17)
19	Effective tax rate		30.0%	22.5%	29.0%	(18)/(7)
20	Tax rate (bank) — applicable for DTA stock — existing at 31 December 2017	15%				Example number
21	Tax rate (stress test) — applicable for DTA stock — created during stress test		30.0%	30.0%	30.0%	

440.   Unrealised gains and losses contributing to OCI under the stress test scenarios shall also be subject to the simplified tax rate of 30% in the following way:

- Projected OCI gains and losses shall be reported pre-tax in the market risk calculations and will be subject to the simplified tax rate assumption on CSV_CAP.

- DTAs and DTLs that rely on future profitability and arise from temporary differences shall be projected during the time horizon of the stress test exercise applying the change in Accumulated OCI (reported net of tax charge calculated with the 30% common tax rate, as per COREP C 01.00 table, r180, c010) to the starting amount of DTAs reduced by the associated DTLs.

- Banks shall also provide full transparency on the deferred tax arising from temporary differences in their explanatory notes, detailing how the figures reported in the template were determined. An example is provided in Table 15.

Table 15: Example DTA calculation

Item	Illustrative example	2017	2018	2019	2020	Comment
1	DTAs that rely on future profitability and arise from temporary differences — existing at 31 December 2017	1				Starting stock
2	Accumulated OCI — existing at 31 December 2017	-6				Starting stock
3	Change in OCI — created during ST		-30	-30	-30	Gross change
4	Tax rate		30%	30%	30%	
5	Total Accumulated OCI		-27	-27	-27	(2)+(3)*[1-(4)]
6	DTAs that rely on future profitability and arise from temporary differences — created during ST		9	9	9	-(3)*(4)
7	Total DTAs that rely on future profitability and arise from temporary differences		10	10	10	[(1)+(6)]
8	CET1 for threshold calculation — 31 December 2017	101				As per Art. 48 CRR
9	CET1 for threshold calculation — during ST		80	80	80	As per Art. 48 CRR [(8)+(5)-(2)]
10	10%*CET1 threshold — 31 December 2017	10.1				As per Art. 48 CRR [(8)*10%]
11	10%*CET1 threshold — during ST		8	8	8	As per Art. 48 CRR [(9)*10%]
12	DTAs that rely on future profitability and arise from temporary differences to be risk-weighted — created during ST		7	7	7	As per Art. 48 CRR [Min(6;11)-Min(1;10)]
13	DTAs that rely on future profitability and arise from temporary differences to be deducted — created during ST		2	2	2	As per Art. 48 CRR [(6)-(12)]
14	REA — existing at 31 December 2017	700				Starting stock
15	REA — during ST		718	718	718	As per Art. 48 CRR [(14)+(12)*250%]

441. With the exception of DTAs and DTLs that rely on future profitability and arise from temporary differences — which are deducted according to Articles 38 and 48 of the CRR — DTAs calculated as described in this section will be fully deducted and the creation of DTCs is not allowed for the projected period.

6.4.5 Other P&L and OCI impact

442. **Expenses on share capital repayable on demand:** Expenses should be projected in line with the contractual requirements for banks. In the baseline scenario, they cannot fall below the 2017 value. In the adverse scenario, expenses can be lower than in the baseline only if the bank can provide evidence that this reduction is in line with publicly declared pay-out policies.

443. **Gains (losses) on derecognition of financial assets and liabilities not measured at fair value through profit and loss, net:** No realised gains or losses are expected from the sale of financial assets and liabilities not measured at fair value through profit and loss, i.e. the P&L impact should be set to zero.

444. **Exchange differences:** In line with paragraph 405, no impact will be assumed in the baseline and adverse scenarios, i.e. the P&L item should be set to zero.

445. **Gains or losses on derecognition of non-financial assets, net:** No impact will be assumed in the baseline and adverse scenarios, i.e. the P&L item should be set to zero.

446. **Other operating income:** Projected other operating income shall not be higher than the 2017 value. Banks should also consider reducing their annual forecasts of other operating income in a prudent way below the 2017 value where the 2017 results contain significant non-recurring contributions.

447. **Modification gains or losses:** The P&L impact of modification gains or losses should be set to zero.

448. **Other impairment on financial assets:** Impairments on participations shall be computed in line with the results of the (IFRS) test of impairment and will be consistent with the scenarios. This requirement extends to participations in other banks included in the sample of the EU-wide stress test. No impact should be assumed for the impact on impairments on goodwill, i.e. the P&L contribution should be set to zero.

449. **Impairment on non-financial assets:** Impairments on non-financial assets shall be included not under depreciation but under 'Impairment or reversal of impairment on non-financial assets'. Banks shall project impairments on non-financial assets in line with the economic scenario of the stress test:

- Impairments on residential and commercial real estate will be computed by the application of the shocks from the macroeconomic scenarios on the market value of real estate owned by the bank. Real estate for own use shall be stressed by applying the commercial real estate shocks given in the macroeconomic scenarios.

- Similarly to paragraph 35, banks shall also stress other non-financial assets (e.g. realised physical collaterals such as ships, residual values of leased out assets) on their balance sheets under the stress test scenarios.

- Impairments on non-financial assets should be projected at the level of individual assets and avoid offsetting effects between the impairments on individual assets.

- No reversal of provisions shall be assumed under the scenarios of the stress test.

450.   **Negative goodwill recognised in profit or loss:** No impact should be assumed for the baseline or adverse scenarios, i.e. the P&L item should be set to zero.

451.   **Profit or loss from non-current assets and disposal groups classified as held for sale not qualifying as discontinued operations:** In accordance with the static balance sheet assumption, non-current assets and disposal groups classified as held for sale shall remain on the balance sheet in the exercise and shall be stressed by the application of the relevant shocks given in the macroeconomic and market risk scenarios. The impact shall be reported in line with the accounting treatment of the banks in the P&L account or as OCI.

452.   **Profit or loss from discontinued operations** shall be zero for the stress test time horizon. **Defined benefit pension schemes:** In accordance with the static balance sheet assumption, banks shall disregard the cash flows into and out of the scheme (regardless of whether or not these are contractually agreed), disregard changes to the liability profile (such as any additional accrual or the maturing of the scheme) and disregard any asset rebalancing or planned changes to the asset allocation. This allows the market risk stresses related to the macroeconomic scenarios to be applied to the assets and liabilities on 31 December 2017 as if they were an instantaneous shock. As specified in paragraph 173, this needs to be applied only for the adverse macroeconomic scenario (including the market risk factors). The actuarial gain/loss shall then be apportioned to the first year, as described in the market risk methodology. The projected impact on OCI and pension assets shall be reported by all banks as a memorandum item on the market risk summary template (CSV_MR_SUM) and shall be included in the stress test projections in the following way:

- No impact is assumed under the baseline scenario.

- For the adverse scenario, the projected OCI impact before tax shall be reported on the market risk summary template (CSV_MR_SUM). A positive value corresponds to a net gain arising from DB pension assets and liabilities, while a negative value corresponds to a loss.

- In addition, banks shall provide the net DB pension assets as per Article 4(109) of the CRR at the reference date and the projected change of this item under the adverse scenario.

- No netting between the OCI impact and the change in pension assets shall be assumed in the reporting of the impact on CSV_MR_SUM. Effects arising, e.g. from offsetting OCI gains by increases in deductions, are calculated in CSV_CAP.

- Tax assumptions are applied on the capital template CSV_CAP in line with section 6.4.4.

453. **Deductions of intangible assets (including goodwill) from CET1 capital:** In line with the static balance sheet assumption, banks shall assume that the value of this deduction remains constant at the level reported for year-end 2017 for both baseline and adverse scenarios. The deduction amounts shall not be netted or compensated with annual depreciation and amortisation amounts.

454. **Expenses and provisions or reversal of provision for conduct risk and other operational risk:** Banks shall report expenses and provisions for conduct risk and other operational risk for historical data in line with their accounting practice. Projected losses shall be reported on the P&L template (CSV_P&L) under 'gains or losses arising from operational risk'. In order to avoid double-counting of projected losses, banks shall separate these projections from the P&L item relevant according to their accounting practice, where historical data are being reported on the P&L template in line with paragraph 407, i.e. while historical data might be reported in the P&L template under different items, for instance 'impairment of non-financial assets', 'administrative expenses' and 'provisions or reversal of provisions', in line with the relevant accounting practice, projections of conduct and other operational risk losses will only be included under 'gains or losses arising from operational risk' consistently with figures reported on the general operational risk template (CSV_OR_GEN template).

6.4.6 Impact on capital

455. Banks shall report in template CSV_CAP the specific capital items as of 31 December 2017 before the impact of the IFRS 9 implementation. The adjustments for the new implementation will then be included as 'restated' end-of-year data. The 'restated' capital position will not take into account the changes in the rest of CRR transitional arrangements and will contain only IFRS 9 implementation adjustments.

456. The impact of IFRS 9 on capital ratios and the amount to be transitioned will be reported in the template CSV_CAP (net of taxes) for each year of the scenario. In the same template, banks shall report the adjustments due to IFRS 9 transitional arrangements in accordance with the agreed regulatory approach and the relative factors for each year of the scenario. On all other templates IFRS 9 values should be reported without the impact of transitional arrangements.

457. For the purpose of showing fully loaded capital ratios, an approximate calculation of fully loaded capital ratios is implemented in the capital template (CSV_CAP).[26]

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[26] This approximation is solely based on the effect of the transitional provisions, which may also affect the AT1 and the T2 shortfall. It does not take into account potential implications from the dynamic computation of the threshold for deductions or other minor effects.

458.   Grandfathered AT1 capital instruments eligible as Tier 2 under Article 63 CRR shall be reported under item A.5 of the template CSV_CAP and will hence be included in the calculation of the fully loaded total capital.

459.   Additional Tier 1 and Tier 2 instruments eligible as regulatory capital under the CRR/CRD provisions and that convert into CET1 or are written down upon a trigger event are reported as a separate memorandum item if the conversion trigger is above the bank's CET1 ratio in the adverse scenario. However, the resulting impact in CET1 capital is not taken into account for the computation of capital ratios.

460.   The leverage ratio will be reported following Article 429 of the CRR as per Delegated Regulation (EU) 2015/62 of 10 October 2014, which amends Regulation (EU) No 575/2013 on a transitional and a fully loaded basis for every year of the exercise. Banks should assume that the exposure for the computation of the leverage ratio remains constant.

461.   For the purpose of the EU-wide stress test, a common approach for the application of prudential filters for unrealised gains and losses arising from sovereign assets is required across all EU Member States. 'Minimum' transitional requirements, as set out in Articles 467 and 468 of the CRR, apply to all EU countries independent of national derogations. This means that 100% of the unrealised gains or losses in 2018 will be considered in the capital position of the banks.

462.   Banks using advanced measurement approaches for credit and operational risk (IRB and AMA) shall apply the Basel 1 floors (80%) for the end-2017 starting point of the stress test only. Banks shall apply the floor according to the guidance received from their competent authority and report the REA corresponding to the capital requirement implied by the floor in row 15 ('of which: Basel 1 transitional floor') of the template 'CSV_REA_SUM'.

Annex I: Sample of banks

Table 16: Sample of banks

Country	Bank name[27]
AT	Erste Group Bank AG
AT	Raiffeisen Bank International AG
BE	Belfius Banque SA
BE	KBC Group NV
DE	Bayerische Landesbank
DE	Commerzbank AG
DE	Deutsche Bank AG
DE	DZ BANK AG Deutsche Zentral-Genossenschaftsbank
DE	Landesbank Baden-Württemberg
DE	Landesbank Hessen-Thüringen Girozentrale AdöR
DE	Norddeutsche Landesbank - Girozentrale -
DE	NRW.BANK
DK	Danske Bank
DK	Jyske Bank
DK	Nykredit Realkredit
ES	Banco Bilbao Vizcaya Argentaria S.A.
ES	Banco de Sabadell S.A.
ES	Banco Santander S.A.
ES	BFA Tenedora De Acciones S.A.U.
ES	CaixaBank, S.A.
FI	OP Financial Group
FR	BNP Paribas
FR	Group Crédit Mutuel
FR	Groupe BPCE
FR	Groupe Crédit Agricole
FR	La Banque Postale
FR	Société Générale S.A.
HU	OTP Bank Nyrt.
IE	Allied Irish Banks plc
IE	Bank of Ireland Group plc
IT	Banco BPM S.p.A.
IT	Intesa Sanpaolo S.p.A.

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[27] The final sample can be subject to adjustments, e.g. due to mergers or divestments.

Country	Bank name[27]
IT	UniCredit S.p.a.
IT	Unione di Banche Italiane Società Per Azioni
NL	ABN AMRO Group N.V.
NL	Coöperatieve Rabobank U.A.
NL	ING Groep N.V.
NL	N.V. Bank Nederlandse Gemeenten
NO	DNB Bank Group
PL	Polska Kasa Opieki SA
PL	Powszechna Kasa Oszczednosci Bank Polski SA
SE	Nordea Bank — group
SE	Skandinaviska Enskilda Banken — group
SE	Svenska Handelsbanken — group
SE	Swedbank — group
UK	Barclays Plc
UK	HSBC Holdings Plc
UK	Lloyds Banking Group Plc
UK	The Royal Bank of Scotland Group Plc

Annex II: Template overview

Table 17: Overview of CSV templates

Section or topic	Template name	Description
N/A	Instructions	Summary of templates and colour code applied
N/A	Input	Input of bank name and relevant countries for credit risk and country/currency pairs for NII
Credit risk	CSV_CR_SUM	Credit risk — Summary
Credit risk	CSV_CR_SCEN	Credit risk — Scenarios (projection for credit risk losses)
Credit risk	CSV_CR_REA	Credit risk — REA
Credit risk	CSV_CR_REA_IRB	REA — IRB approach floor
Credit risk	CSV_CR_REA_STA	REA — STA floor
Credit risk	CSV_CR_SEC_SUM	Securitisations — Summary
Credit risk	CSV_CR_SEC_STA	Securitisations — STA (REA)
Credit risk	CSV_CR_SEC_IRB	Securitisations — IRB except exposures under supervisory formula (REA)
Credit risk	CSV_CR_SEC_IRB_SF	Securitisations — IRB supervisory formula (REA)
Credit risk	CSV_CR_SEC_OTHER	Securitisations — Other positions (look through) (REA)
Market risk, CCR losses and CVA	CSV_MR_SUM	Market risk — Summary
Market risk, CCR losses and CVA	CSV_MR_FULL_REVAL	Market risk — Full revaluation template
Market risk, CCR losses and CVA	CSV_MR_RESERVE	Market risk — Revaluation of reserves
Market risk, CCR losses and CVA	CSV_MR_PROJ	Market risk — Projection of client revenues of items held with a trading intent and their related hedges
Market risk, CCR losses and CVA	CSV_MR_CCR	Market risk — Counterparty defaults
Market risk, CCR losses and CVA	CSV_ MR_REA	REA — Market risk
NII	CSV_NII_SUM	NII — Summary
NII	CSV_NII_CALC	NII — Calculation
Conduct risk and other operational risks	CSV_OR_GEN	Conduct and other operational risk losses
Conduct risk and other operational risks	CSV_OR_CON	Material conduct risk losses
Non-interest income, expenses and capital	CSV_REA_SUM	REA — Summary
Non-interest income, expenses and capital	CSV_NFCI_DIV	Development of NFCI, dividend income
Non-interest income, expenses and capital	CSV_ONEOFF	Adjustments for non-recurring events (one-offs)

Section or topic	Template name	Description
Non-interest income, expenses and capital	CSV_MDA	Calculation of potential distribution restriction following breach of the MDA trigger level
Non-interest income, expenses and capital	CSV_CAPMEAS	Major capital measures and material losses
Non-interest income, expenses and capital	CSV_P&L	Development of P&L
Non-interest income, expenses and capital	CSV_CAP	Capital

Table 18: Overview of TRA templates

Section or topic	Template name	Description
N/A	TRA_SUM	Summary adverse or baseline scenario (stress test results)
Credit risk	TRA_CR_STA	Credit risk (loss projection) STA
Credit risk	TRA_CR_IRB	Credit risk (loss projection) IRB
Credit risk	TRA_CR_SEC	Credit risk — Securitisations (REA projection)
Non-interest income, expenses and capital	TRA_REA	REA (projection)
Non-interest income, expenses and capital	TRA_P&L	P&L (projection)
Non-interest income, expenses and capital	TRA_CAP	Capital (projection)
Non-interest income, expenses and capital	TRA_CAPMEAS	Major capital measures and material losses
N/A	TRA_NPE	Information on performing and non-performing exposures (historical)
N/A	TRA_FORB	Information on forborne exposures (historical)

Annex III: Summary of qualitative information to be provided by banks

463.   This annex summarises the requirements given across all sections of the methodological note for qualitative information to be provided by banks to their competent authorities as input to the quality assurance process. It differentiates information that is required for all banks and information that are subject to the discretion of the competent authority.

Table 19: Credit risk (excluding securitisations) — qualitative information to be provided by banks

Description	Requirement	Reference
Bank's explanation of how LGDs for guaranteed exposures were modelled and projected	Banks with loans under large-scale or nationwide guarantee schemes where the indirect exposure on the guarantor is significant	Paragraph 95
Description of the methodology employed for deriving point-in-time parameters for all portfolios (both starting values and projections)	For all banks	Paragraph 103
Methodology applied to estimate the migration effect on point-in-time PD and LGD	For all banks	Paragraph 109
More detailed information on banks' models to estimate credit risk losses including the following information only if projections substantially deviate from benchmark figures and/or where deviations are implausible: portfolios to which models apply (mapping to assets classes), approval by supervisors, assumptions made to account for PD and LGD parameter estimation (e.g. cure rates, etc.), technical information on econometric soundness and responsiveness of risk parameters to ensure that a model specification results in a prudent outcome	Subject to the discretion of the competent authority	Paragraph 105
Detailed information on funded collateral values linked to exposures including how collateral values have been determined and how often appraisals are refreshed	Subject to the discretion of the competent authority	Paragraph 60
Description of the S2 definition applied and of how the low credit risk exemption was implemented in the explanatory note. In this	For all banks	Paragraph 51

Description	Requirement	Reference
note banks should also comment on how the definitions applied for the stress test differ from internally used criteria for the SICR and in particular the low credit risk exemption		
Description of the internally applied S3 definition and of how this definition differs from the definitions applied in the stress test	For all banks	Paragraph 51

Table 20: Credit risk (securitisations) — qualitative information to be provided by banks

Description	Requirement	Reference
Outline of impairments' calculation for securitisations	For all banks	Paragraph 150
Outline of risk exposure amount calculation for securitisations: Other and IRB SFA	For all banks	Paragraph 158
Descriptions of the IAA positions and the mapping to credit quality step	Subject to the discretion of the competent authority	Paragraph 157

Table 21: Market risk, CCR losses and CVA — qualitative information to be provided by banks

Description	Requirement	Reference
Instruments, portfolio share and approach used for positions for which a full revaluation could not be performed	For all banks	Paragraph 220
Description of major hedging strategies at portfolio level	For all banks	Paragraph 236
Calibration and impact of additional risk factors used for the application of the market risk approach	For all banks	Paragraphs 213, 215
Explanation of the impact of the shock on correlation trading portfolios	Subject to the discretion of the competent authority	Paragraph 234
Description of assumptions used for the projection of client revenues for CA banks	For all banks	Paragraph 194
Description of removal of NII from NTI	For all banks	Paragraph 193
Description and justification of actions which have been carried out to appropriately identify	For all banks	Paragraph 232

Description	Requirement	Reference
and include basis risk for the application of the market risk approach		
Definition of 'most vulnerable' counterparty and risk criteria applied	Subject to the discretion of the competent authority	Paragraph 265

Table 22: NII — qualitative information to be provided by banks

Description	Requirement	Reference
Explanation of legally mandated restrictions to pass through mechanisms	For all banks that report legally mandated restrictions	Paragraphs 345, 347
Description of the methodology applied to project NII	For all banks	Paragraph 282
Information on the accounting framework applied to hedging and details of the hedging relationships	For all banks	Paragraph 315
Evidence on the income on non-performing exposures reported in 2017, which will be the basis for the calculation of the cap to interest income from NPEs	For all banks	Paragraph 321
Description of the methodology employed for splitting margin and reference rate component on existing, maturing and new portfolios	Subject to the discretion of the competent authority	Paragraphs 312
List of bank's models to project the margin and reference rate component on new businesses, including inter alia the following information: (i) portfolios to which they apply, (ii) technical information on the models' econometric soundness and responsiveness of interest rate components to ensure a model specification which results in a prudent outcome, (iiI) information on the data used for the estimation of models, (iv) relationship with the macro-financial scenario	Subject to the discretion of the competent authority	Paragraph 326
Information on the calibration of the idiosyncratic component	Subject to the discretion of the competent authority	Paragraph 343
Information on the standing accounting practice applicable to the interest accrued on non-performing exposures	Subject to the discretion of the competent authority	Paragraph 322

Table 23: Conduct risk and other operational risk — qualitative information to be provided by banks

Description	Requirement	Reference
Qualitative and quantitative information that supports banks' projections of losses arising from each material conduct risk event reported individually including the identification of a range of outcomes and assigned probabilities	For all banks	Paragraphs 375, 385
Information on the internal models used for projecting losses and REA including the scope of application	Subject to the discretion of the competent authority	Paragraph 396

Table 24: Non-interest income, expenses and capital — qualitative information to be provided by banks

Description	Requirement	Reference
Mapping of national accounting framework to IFRS	For all banks applying nGAAP	Paragraph 402
P&L items affected by mergers and acquisitions	For all banks	Paragraph 406
Description of the model used to project NFCI and mapping to FINREP 22.01	For banks projecting NFCI	Paragraph 414
List and background information on non-recurring events ('one-off events')	For all banks requesting one-off adjustments	Paragraph 416
References to publicly declared dividend policies	For all banks	Paragraph 426
Documentation underlying the distribution reductions under Article 141(3) of the CRD	For banks failing to meet or exceed their combined buffer requirement	Paragraph 430
Explanation of approach followed when calculating tax expenses	For all banks	Paragraph 437
Details on deferred tax arising from temporary differences	For all banks	Paragraph 440

Annex IV: Summary of key constraints and other quantitative requirements

464.   This annex provides a summary of key constraints, i.e. caps and floors, and other quantitative requirements that need to be met by banks as a minimum for the correct application of the common methodology, and that will be assessed by competent authorities. In addition, the tables indicate which constraints are already implemented in the common templates. The annex solely serves as a summary of information elsewhere in the methodological note and does not constitute additional requirements for banks.

Table 25: Credit risk (excluding securitisations) — key constraints and quantitative requirements

Description	Implementation in templates	Reference
No negative new gross impairments for S3 for any year of the scenario	No	Paragraph 127
No reduction in the Stock of Provisions for S3 caused by Gross Imp Flow S3-S3 permitted	CSV_CR_SCEN	Box 9
No workout or cure of S3 assets is assumed	No	Paragraph 28
At the exposure level, funded collateral cannot be higher than the respective exposure	No	Paragraph 61
The coverage ratio for S1 assets cannot decrease over the time horizon for both scenarios	CSV_CR_SUM	Paragraph 123
Total IRB risk exposure amount cannot decrease over the time horizon for both scenarios	CSV_REA_IRB	Paragraph 136
Total STA risk exposure amount cannot decrease over the time horizon for both scenarios	CSV_REA_STA	Paragraph 136
Exposure value for the calculation of risk exposure amounts is not affected by market value fluctuations	No	Paragraph 86
χ is the proportion of Prov Stock S1(t) which is linked to initially S1 assets at t, which enter into S2 at t+1. At a maximum, χ can be equal to the proportion of S1 assets at t, which enter into S2 at t+1 — i.e. $\chi \leq TR_{12M}^{1-2}(t+1)$.	No	Box 6

Description	Implementation in templates	Reference
Ψ is the share of Prov Stock S1(t) which is linked to initially S1 assets at t, which enter into S3 at t+1. At a maximum, Ψ can be equal to the share of S1 assets at t, which enter into S3 at t+1 — i.e. $\Psi \leq TR^{1\text{-}3}(t\text{+}1)$	No	Box 4
Prescribed formula to calculate impairment flow existing S1 exposures	CSV_CR_SCEN	Box 5
Prescribed formula to calculate impairment flow for new S1 exposures	CSV_CR_SCEN	Box 4
Prescribed formula to calculate impairment flow new S2 exposures	CSV_CR_SCEN	Box 6
Prescribed formula to calculate impairment flow for existing S2 exposures	CSV_CR_SCEN	Box 7
Prescribed formula to calculate impairment flow new S3 exposures	CSV_CR_SCEN	Box 8
Prescribed formula to calculate impairment flow existing S3 exposures	CSV_CR_SCEN	Box 9
Prescribed formula to calculate the development of the stock of provisions of S1, S2 and S3 assets	CSV_CR_SCEN	Box 3
Prescribed formula to calculate REA on defaulted assets	No	Box 10

Table 26: Credit risk (securitisations) — key constraints and quantitative requirements

Description	Implementation in templates	Reference
For exposures under the STA, impairments will be subtracted from the exposure to be risk-weighted	CSV_CR_SEC_STA	Paragraph 156
For exposures under the IRB, risk weights must be applied on the full exposure (gross of impairments) and then subtract 12.5 times the impairment provisions	CSV_CR_SEC_IRB	Paragraph 156
Total IRB risk exposure amount (IRB Non-SFA plus IRB SFA plus IRB Other) cannot decrease compared with the starting point over the time horizon for both scenarios	CSV_CR_SEC_SUM	Paragraph 161
Total STA risk exposure amount (STA plus STA Other) cannot decrease compared with the starting point over the time horizon for both scenarios	CSV_CR_SEC_SUM	Paragraph 161

Table 27: Market risk, counterparty credit risk losses and CVA — key constraints and quantitative requirements

Description	Implementation in templates	Reference
No impact under the baseline scenario	All market risk templates	Paragraph 222
Computation of baseline NTI	CSV_MR_PROJ	Paragraph 252
TE banks haircut for items held with a trading intent and their related economic hedges	CSV_MR_PROJ	Paragraph 229
Adverse scenario client revenues floored at 75% of NTI starting point and 75% of client revenues starting point	CSV_MR_PROJ	Paragraph 255
NII to be excluded from NTI	No	Paragraph 193
NTI in the adverse 2019-2020 equal to floored client revenues	CSV_MR_SUM	Paragraph 258
Prescribed REA increase for VaR, APR	CSV_MR_REA	Paragraph 274
Floor for REA increase for CVA, IRC (floored at the relative increase of REA in the IRB portfolio in the adverse scenario)	CSV_MR_REA	Paragraphs 275,278

Description	Implementation in templates	Reference
Identification of the two most vulnerable counterparties and setting of stressed LGD and the use of stressed exposure without additional collateral for the calculation of counterparty credit losses and the cross default to all exposures for these two counterparties	No	Paragraph 263

Table 28: NII — key constraints and quantitative requirements

Description	Implementation in templates	Reference
Nominal net interest income cannot increase over the stress test time horizon under the adverse scenario relative to 2017	CSV_NII_SUM	Paragraph 320
Under the adverse scenario, assumptions cannot lead (at group level) to an increase in the bank's NII compared with the 2017 value before considering the impact of the increase of provisions for non-performing exposures on interest income	CSV_NII_SUM	Paragraph 321
Under the baseline scenario, banks are required to project the interest accrued on non-performing exposures in line with the standing accounting practice. The interest revenue is calculated on the amortised cost (gross carrying amount less credit allowance)	CSV_NII_SUM	Paragraph 323
Banks are required to project income on non-performing exposures on a net basis, i.e. on the value of the exposure net of provisions	CSV_NII and CSV_NII_SUM	Paragraph 323
Under the baseline scenario, the margin component of the EIR of repriced liabilities will increase at a minimum by a proportion of the increase in the sovereign bond spread of the country of exposure	No	Paragraph 343
Under the adverse scenario, the margin component of the EIR of repriced liabilities will increase at a minimum by a proportion of the higher of the increase in the sovereign spreads of the country of exposure and the impact of the idiosyncratic component shock	No	Paragraph 343
The margin component of the EIR on repriced assets will be capped at the sum of the margin starting value and a proportion of the change in the sovereign bond spread in the country of exposure	No	Paragraph 346

Description	Implementation in templates	Reference
Changes in reference rates projected by banks shall be consistent with the macro-financial scenarios for risk-free yield curves	No	Paragraph 334
Under the static balance sheet assumption, the sum of the existing, maturing and new positions' average volumes should remain constant over time. Within the portfolio, non-performing exposures will increase at the expense of performing exposures along the time horizon of the exercise	CSV_NII	Paragraphs 301, 303
Increase of non-performing exposures in NII will be aligned with the development of non-performing exposures assets in the credit risk templates	No	Paragraph 324

Table 29: Conduct risk and other operational risk — key constraints and quantitative requirements

Description	Implementation in templates	Reference
Projections of losses from new non-material conduct risk events are subject to a minimum overall 3-year floor, computed in the baseline scenario as 3 times the average of the historical conduct risk losses reported by the bank during the 2013-2017 period for non-material events only. Under the adverse scenario the floor is 2 times the floor for the baseline	CSV_OR_GEN	Paragraphs 387, 388
Projections of conduct losses connected to new material conduct risk events are subject to a floor in the quality assurance process, i.e. banks that submit projections which are lower than the floor are required to justify their projections to their competent authority	CSV_OR_GEN	Paragraph 389
Projections of losses due to other operational risks are subject to a minimum overall 3-year floor, computed in the baseline scenario as 3 times the average of the other historical operational risk losses reported by the bank during the 2013-2017 period; the average is multiplied by 0.8 under the baseline scenario and by 1.5 under the adverse	CSV_OR_GEN	Paragraph 393
Total capital requirements for operational risk in each year of the projection horizon shall not fall below the actual minimum capital requirements for operational risk reported by the bank	CSV_OR_GEN	Paragraph 395

Description	Implementation in templates	Reference
31 December 2017		
In the absence of relevant historical losses and/or projections, overall operational risk loss projections, aggregate for the 3 years of the exercise, will be calculated as a function of the relevant indicator (6% of the RI and 15% respectively in the baseline and adverse scenarios)	CSV_OR_GEN	Paragraph 394
For operational risk categories where capital requirements are calculated using basic and standard approaches, capital requirements shall stay constant and equal to capital requirements reported by the bank for the starting point (31 December 2017)	CSV_OR_GEN	Paragraph 397

Table 30: Non-interest income, expenses and capital — key constraints and quantitative requirements

Description	Implementation in templates	Reference
Prescribed caps for dividend income, NFCI and share of the profit of investments in subsidiaries, joint ventures and associates outside the scope of consolidation	CSV_NFCI_DIV	Paragraphs 412, 413, 410
Floor/cap for administrative expenses, depreciation and other provisions or reversal of provisions, other operating income and expenses	No	Paragraphs 415, 446
Limitation of the number of one-off adjustments and permitted as well as excluded cases	CSV_ONEOFF	Paragraphs 416, 420
Prescribed threshold for recognition of submitted one-off adjustments	CSV_ONEOFF	Paragraph 418
Prescribed floor for dividend payments and link between the baseline and adverse scenario	No	Paragraphs 427, 426
Prescribed approach for distribution restrictions under Article 141(3) of the CRD	CSV_MDA	Paragraphs 429, 431
Application of the common tax rate	CSV_CAP	Paragraph 433
The creation of DTAs that rely on future profitability and do not arise from temporary differences is limited to the offsetting of negative pre-tax profits	No	Paragraph 436

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Description	Implementation in templates	Reference
Prescribed floor for DTAs that do not rely on future profitability	CSV_CAP	Paragraph 438
No impact for realised gains or losses, gains or losses on derecognition of non-financial assets, modification gains or losses, negative goodwill, impairments on goodwill, foreign exchange effects	CSV_P&L	Paragraphs 405, 443, 444, 445, 428, 447, 450
Inclusion of adjustments on capital items for the new implementation of IFRS 9 as of 1 January 2018	CSV_CAP	Paragraph 455
Prescribed formula for transitional adjustments to CET1 capital from unrealised gains/losses	CSV_CAP	Paragraph 461

Annex V: Accounting categories and hedging categories in the scope of the market risk approach

Table 31: Balance sheet items at partial or full fair value and the reporting of their impact

Item			Reporting of impact				
			Statement of P&L (Template CSV_P&L)			**Comprehensive income (Template CSV_CAP)**	
Balance sheet	**IFRS 9 measurement type**	**Hedging instruments/hedged item/other use**	**Net trading income (gain or losses on held for trading items)**	**Gain or losses on other FVPL items**	**Gains or losses from hedge accounting**	**Other comprehensive income**	**Cash flow hedges (then accumulated in equity under the cash flow hedge reserve)**
Asset	Amortised cost/FVPL	(i) Fair value hedged item* or (ii) Portfolio Fair value hedged item of interest rate risk*	No	No	Yes, for the hedge risk only	No	No
	FVOCI	(i) Cash flow hedged item* or (ii) Portfolio cash flow hedged item of interest rate risk*	No	No	No	Yes	No, but the hedging derivative related will have an impact on this column in a different line
		(i) Collecting contractual cash flows & selling financial assets or (ii) Holding or selling equity position	No	No	No	Yes	No
	FVOCI/FVPL	(i) Fair value hedged item* or (ii) Portfolio Fair value hedged item of interest rate risk*	No	No	Yes, for the hedge risk only	Yes, for the unhedged risk	No
Net assets and liabilities	FVOCI/FVPL	(i) Cash flow hedging instrument * or (ii) Portfolio Cash flow hedging of interest rate risk*	No	No	Yes, ineffective part (either the part higher than the hedged item change in FV or the change in fair value related to another risk parameter)	No	Yes, but effective part only = that is lesser of (a) cumulative gain/loss on the hedging instrument from hedge inception; and (b) cumulative FV change in FV of the expected future CF on the hedged item
	FVPL	(i) Fair value hedging instrument* or (ii) Portfolio Fair value hedging instrument of interest rate risk*	No	No	Yes	No	No
		Held with a trading intent and their related hedges	Yes	No	No	No	No
		Economic hedges excluding hedges of items held with a trading intent	Yes	No	No	No	No
		Mandatory or optional at FVPL	No	Yes	No	No	No
Liabilities	Amortised cost/FVPL	(i) Fair value hedged item* or (ii) Portfolio Fair value hedged item of interest rate risk*	No	No	Yes, for the hedged risk only	No	No

Reading convention:

- The measurement type is of the form 'measurement 1/measurement 2', with measurement 2 corresponding to either the hedged risk (for the hedged item) or the inefficient part (for the hedging instrument).

- In column 3, 'Hedging instruments/hedged item/other use', all items ending with an asterisk '*' are hedge-accounting designations (under both IAS 39 and IFRS 9).

Examples:

- Amortised cost assets hedged via fair value hedges are revaluated only for the hedged risk, and the impact is reported under the line 'Amortised cost/FVPL', in the column 'Gains or losses from hedge accounting'.

- The impact from the revaluation of cash flow hedging instruments has to be split between an OCI impact for the hedged risk and a P&L impact for hedging ineffectiveness. These impacts should be reported under the line 'FVOCI/FVPL — (i) Collecting contractual cash flows & selling financial assets or (ii) Holding or selling equity position' and in the columns 'Gains or losses from hedge accounting' and 'Cash flow hedges (then accumulated in Equity under the cash flow hedge reserve)'. Moreover, if the hedged risk is foreign exchange risk, the impact of the hedged risk should be reported under foreign exchange differences.

Annex VI: Requirements for banks applying nGAAP

465.   This annex contains additional instructions for banks whose stress test projections are not subject to IFRS 9 assumptions as per paragraph 25. Competent authorities can provide further guidance on country-specific issues.

Credit risk

466.   Banks which are subject to nGAAP are expected to comply with the requirements of this methodological note as it applies to S1 and S3 exposures. All performing exposures and associated provisions should be mapped to S1 equivalent fields, and all non-performing exposures and associated provisions should be mapped to S3. Thus, no stocks and flows of S2 exposures have to be reported by nGAAP banks.

467.   A precise listing of the fields to be populated in the template is provided in Table 31 below.

Table 32: Fields in credit risk templates to be populated by banks applying nGAAPs

	Fields to be populated by nGAAP banks for 2018, 2019 and 2020
Beginning-of-year stocks	Performing exposure (Exp) Of which: S1 (Exp S1)
	Non-performing exposure (Exp S3)
	Non-performing exposure (Exp S3) Of which: CRR default (Exp Def)
	Funded Collateral (available) – S1
	Funded Collateral (capped) — S1
	Funded Collateral (available) — Non-performing exposure
	Funded Collateral (capped) — Non-performing exposure
	Stock of provisions (Prov Stock) Of which: S1 (Prov Stock S1)
	Stock of provisions (Prov Stock) Of which: non-performing assets (Prov Stock S3)
	Stock of provisions (Prov Stock) Of which: CRR default (Prov Stock Def)

Fields to be populated by nGAAP banks for 2018, 2019 and 2020

Within year — flows and parameters	TR1-3
	S3 flow (S3 flow) Of which: CRR default flow (CRR Def Flow)
	LGD12M1-3
	Cure rate stage 1 to stage 3 assets (Cure12M1-3)
	LR3-3
	Gross Imp Flow S1-S1
End-of-year stocks	Performing exposure (Exp) of which: S1 (Exp S1)
	Non-performing exposure (Exp S3)

Market risk

468.   The scope of market risk includes all financial instruments for which the scenario would, based on the applicable accounting regulation, result in a value adjustment (except assets valued by the moderate LOCOM categories). Amortised cost items being part of a hedge-accounting relationship are also recognised in the market risk methodology. Financial instruments shall be mapped for reporting purposes to IFRS categories that imply a comparable accounting treatment as under nGAAP. A mapping to all categories listed in Table 31 is required. The mapping procedure shall ensure that the balance sheet impact of a financial item under nGAAP is equal to the impact implied by the IFRS classification it is mapped to.

469.   To calculate CCR losses as described in section 3.7, the largest counterparty exposure must be taken into account irrespective of its accounting treatment as pointed out in paragraph 262.

470.   Banks shall provide in the accompanying explanatory note a detailed description of the mapping procedure applied to translate nGAAP accounting positions to the IFRS classifications used in the market risk template.

NII

471.   The definition and the respective mapping of performing and non-performing exposures should be aligned with that in place for credit risk.

472.   The effective interest rate should be reported by analogy to the approach outlined in section 4. This applies to performing exposures (S1 and S2 exposures) and non-performing (S3) exposures.