



European Securities and
Markets Authority

Report

**On the application of the IFRS 7 and IFRS 9 requirements regarding
banks' expected credit losses (ECL)**

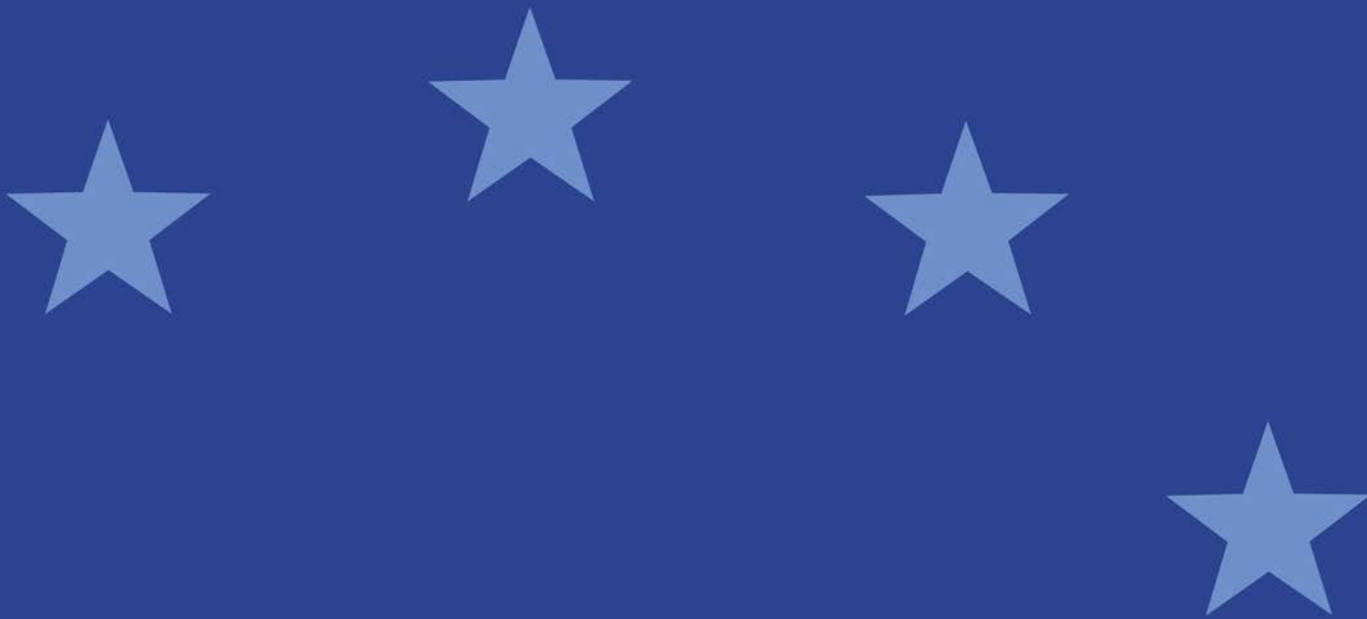




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1 Executive Summary

This Report by the European Securities and Markets Authority (ESMA) provides an overview of the application of the principles and requirements of IFRS 7 *Financial Instruments: Disclosures* and IFRS 9 *Financial Instruments* related to the measurement and disclosure of expected credit losses (ECL) by European banks with the objective of assessing their level of compliance, transparency and comparability.

The overview builds on a desktop review of the 2020 financial statements of a sample of 44 European banks.

ESMA's work addressed the following key topics: (a) general aspects of the ECL-disclosures; (b) assessment of significant increase in credit risk (SICR); (c) forward-looking information (FLI); (d) explanation of changes in loss allowances; (e) transparency of disclosures on credit risk exposures; (f) ECL sensitivity disclosures.

In September 2021, ESMA conducted a workshop with European banks and other stakeholders such as auditors, analysts, investors and academics, with the involvement of national enforcers, to discuss the preliminary findings of the review. This report takes into account the input from that workshop.

Overall, the results show that the principles and requirements of the Standards have generally been well covered in the financial statements of the banks in the sample. However, there is room for improvement in the level of compliance, comparability and transparency in the application of the requirements. In general, ESMA noted the low level of entity-specific details and lack of narrative explanations in some areas. Moreover, ESMA observed that the ECL-related disclosures provided in different parts of the financial statements, in the management commentary or in the risk report should be better linked through cross-referencing.

General aspects of credit risk management

ESMA noted that banks did not always disclose sufficient entity-specific details regarding measurement of the 12-month and lifetime ECL (particularly regarding issues that require application of judgement, such as determination of portfolios if the portfolio approach is applied), write-off policies and management overlays.

ESMA expects banks to disclose, for each material management overlay adjustment, detailed and specific information on its impact on the ECL estimate, the rationale and the methodology applied and to explain any significant changes in methodologies and assumptions from the previous reporting period together with the reasons for those changes. This applies in substance to both in-model and post-model adjustments.

Furthermore, only very few banks in the sample provided ECL-specific climate-related disclosures. Even though banks are currently in the early stages of developing methods and techniques aimed at incorporating climate-related risks, ESMA believes that credit



institutions should provide explanations, where applicable and material, on any credit risk concentrations related to environmental risks and how ECL are affected by those risks.

Assessment of SICR

SICR-related disclosures were often of a general nature and lacked entity-specific details with regard to the approach and significant judgements used in determination of SICR. This refers in particular to the description of the method for collective assessment used for SICR purposes (if applicable). ESMA emphasise the importance of explaining the quantitative and qualitative factors applied, including the length of the “cure” period, and any material differences in the application of the factors across portfolios. Banks that grouped financial instruments for SICR assessment should disclose key risk characteristics of their grouping approach and how the collective assessment was performed (for example use of “bottom up” or “top down” approach) as well as any change in grouping compared to the previous reporting period.

Taking into account that only half of the banks that used relative change in probability of default (PD) as a SICR indicator disclosed quantitative thresholds ESMA recommends that issuers disclose quantitative SICR-thresholds and provide additional explanations if there are significant differences in thresholds depending on portfolio type.

ESMA noted that, while several banks stated that economic support and relief measures did not imply an automatic trigger for SICR, only a small number of banks provided more detailed information as to how the SICR for the exposures affected by these measures was assessed. If, during the reporting period, any significant relief measures were provided to borrowers by issuers, ESMA expects that issuers explain how these measures impacted the assessment of SICR. In particular, if the relief measures do not result in a derecognition of the financial instrument, banks should include a description of how they determined SICR or whether these instruments are impaired in these specific circumstances.

ESMA noted that only one-third of banks that disclosed pandemic-related changes in SICR indicators provided detailed information on those changes. ESMA emphasises the importance of detailed information on any significant changes in the assessment of SICR.

FLI

While ESMA welcomes explanations on how the impact of the pandemic was considered in the macro-economic scenarios in the 2020 financial statements of many banks, we see room for improvement in the banks’ disclosures on FLI. In particular ESMA believes that banks should provide more specific disclosures on the main judgements and estimations related to uncertainties that were taken into account when defining the macroeconomic scenarios and disclose the methodology used to determine the scenario weightings. ESMA recommends that banks disclose quantitative information on the macroeconomic variables considered for each scenario and main geographical areas and/or sectors. In addition, ESMA expects banks to disclose more details of the specific approaches they use for incorporation of FLI in the estimation of probability of default (PD), loss given default (LGD) and/or exposure at default (EAD).



Explanation of changes in loss allowances

ESMA notes a lack of detail in banks' explanations of changes in loss allowances. The disaggregation by class of financial instruments was often provided only to a very limited extent or in some cases not provided at all. Moreover, ESMA observes that many banks did not provide sufficient narrative explanations of the reasons for the changes in the loss allowance. ESMA highlights that, to ensure sufficient transparency, reconciliations should be disclosed both at the entity level and for significant portfolios with shared credit risk characteristics and be accompanied by narrative explanations of changes if those additional explanations are necessary to understand the reasons for changes.

The review has also shown that the explanations on how significant changes in the gross carrying amount contributed to changes in loss allowance were often not sufficiently detailed and could be improved.

To ensure better transparency and comparability, ESMA strongly recommends that credit institutions disclose a joint reconciliation of loss allowance and gross carrying amount and provide a direct link between ECL movements and income statement items, for example by indicating which reconciliation items affected income statement and which did not.

Transparency of disclosures on credit risk exposures

ESMA observed that almost all banks in the sample disclosed quantitative data about the exposure to credit risk, in some cases with a high degree of disaggregation. Around two-thirds of banks used at least one further breakdown dimension in addition to the breakdown by stages and risk categories. However, ESMA recommends disclosing more narrative explanations of the quantitative data. Quantitative disclosures and the narrative descriptions included in different parts of the financial statements or in a management report should be better linked to each other. ESMA stresses the importance of specific information about the nature of collateral received, main types of collateral and guarantees and the basis on which collateral is valued. Where appropriate, disaggregation of exposures by loan to value (LTV) ranges at appropriate level of details can be provided.

ECL sensitivity disclosures

ESMA welcomes the fact that 30% of banks improved ECL sensitivity disclosures compared to the previous reporting period. However, the review has also shown that the ECL sensitivity disclosures were of varying extent and quality. For example, less than half of the banks in the sample that provided multi-factor ECL sensitivity disclosures showed a disaggregated analysis. Also, only a relatively low number of banks in the sample disclosed a high quality explanation of changes in prior assumptions. ESMA emphasises the importance of providing granular disclosures on the sensitivity analysis and the quantitative impact of this analysis on the ECL and, where appropriate, on staging. ESMA recommends that banks provide (in addition to other sensitivity disclosures) the sensitivity analysis based on a 100% weighting of each macroeconomic scenario in order to increase comparability.

The review has demonstrated that the ECL disclosures of different banks are not always comparable, which is partly due to the fact that the principle-oriented disclosure requirements in IFRS 7 are applied to different business models and risk management



approaches. In anticipation of the IASB's Post-implementation Review (PIR) of impairment requirements in IFRS 9 and related disclosures, ESMA will further analyse, taking into account the enforcement cases, whether comparability can be improved through more detailed guidance in IFRS (in particular, with regard to management overlays, sensitivity analyses and an appropriate level of disaggregation of both credit risk exposures and changes in loss allowances).

Next Steps

ESMA expects issuers, their auditors and audit committees to consider the findings of this report when preparing and auditing the financial statements. ESMA expects enforcers will take or have already taken appropriate enforcement actions whenever material misstatements are identified. ESMA and enforcers will monitor the progress of those actions.



2 List of acronyms

APM	Alternative Performance Measures
COVID-19	Coronavirus Disease 2019
CRR	Capital Requirements Regulation (Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012
EAD	Exposure At Default
EBA	European Banking Authority
ECEP	European Common Enforcement Priorities
ECL	Expected Credit Losses
EDTF	Enhanced Disclosure Task Force
EECS	European Enforcers Coordination Session
ESMA	European Securities and Markets Authority
FLI	Forward-Looking Information
FX	Foreign Exchange
GDP	Gross Domestic Product
GLEFI	Guidelines on the Enforcement of Financial Information
IASB	International Accounting Standard Board
IFRS	International Financial Reporting Standard
KAM	Key Audit Matters
LGD	Loss Given Default
LTV	Loan To Value
NCA	National Competent Authority
NPL	Non-Performing Loans
OCI	Other Comprehensive Income



PIR	Post-implementation Review
PD	Probability of Default
POCI	Purchased or Originated Credit Impaired
SICR	Significant Increase in Credit Risk
SME	Small and Medium Enterprises
TCFD	Task Force on Climate-Related Financial Disclosures
UK	United Kingdom

3 Background

1. To strengthen investors' confidence after the global financial crisis, a new impairment model for financial instruments based on expected credit losses (ECL) was developed by the International Accounting Standard Board (IASB) and included in IFRS 9 *Financial Instruments*. 2018 was the first year of mandatory application of IFRS 9 and of the corresponding disclosure requirements in IFRS 7 *Financial Instruments: Disclosures*. The details about the IFRS requirements addressed in this report are provided within each sub-section of the analysis.
2. With the aim of promoting investor protection, ESMA and European enforcers have continuously emphasised the importance of appropriate implementation and application of the IFRS 9 and IFRS 7 requirements regarding banks' ECL. Various aspects of these requirements were addressed in ESMA statements on European Common Enforcement Priorities (ECEP) in 2017-2019.¹
3. In 2020, ESMA focused on the need to provide adequate transparency regarding the consequences of the COVID-19 pandemic. In the public statement released in March 2020², ESMA addressed implications of the pandemic-related public policy measures on the ECL estimation. Later, in its 2020 ECEP statement³, ESMA drew banks' attention to the disclosure of changes in the ECL models in response to a changing economic environment, highlighting in particular the importance of providing disclosures on macroeconomic scenarios and post-model adjustments, explanations of changes in loss allowance by classes of financial instruments compared to the previous period, details on risk concentrations, and the impact of support measures on the assessment of SICR.
4. The recommendations regarding credit institutions' disclosures on the calculation of ECL in ESMA's 2021 ECEP statement⁴ built upon and further expanded some common enforcement priorities for 2020 taking into account the preliminary evidence obtained when preparing this report.
5. From 2019 to date, numerous cases related to accounting for ECL were discussed in the European Enforcers Coordination Sessions (EECS). Five cases were included in Extracts from the EECS database with enforcement decisions related to ECL.⁵

¹ [ESMA32-63-340](#) Public Statement -- European common enforcement priorities for 2017 IFRS financial statements, 27 October 2017; [ESMA32-63-503](#) Public Statement -- European common enforcement priorities for 2018 IFRS financial statements, 26 October 2018; [ESMA32-63-791](#) Public Statement -- European common enforcement priorities for 2019 IFRS financial statements, 22 October 2019

² [ESMA32-63-951](#) Public Statement -- Accounting implications of the COVID-19 outbreak on the calculation of expected credit losses in accordance with IFRS 9

³ [ESMA32-63-1041](#) Public Statement -- European common enforcement priorities for 2020 IFRS financial statements, 28 October 2020

⁴ [ESMA32-63-1186](#) Public Statement -- European common enforcement priorities for 2021 IFRS financial statements, 28 October 2021

⁵ We refer to decisions EECS/0121-01, -04, -08 and -09 in the 25th Extract from the EECS's Database of Enforcement ([ESMA32-63-1192](#)) and to decision EECS/00119-05 in the 23rd Extract from the EECS's Database of Enforcement ([ESMA32-63-717](#))

4 Objectives

6. Consistent with its objective to promote the effective and consistent application of IFRS, ESMA remains strongly committed to contributing to the development of a single set of high quality, understandable, enforceable and globally accepted accounting standards. Therefore, this report aims at providing an overview of the level of banks' compliance with the existing ECL-related requirements of IFRS 9 (impairment requirements) and IFRS 7, with the primary focus on relevance and comparability of disclosures.
7. When reviewing the disclosures of banks, ESMA also considered best practice recommendations on banks' disclosures developed in the past by industry task forces established by the Financial Stability Board (FSB)⁶ and banking supervisors in the United Kingdom (UK).⁷
8. ESMA intends to leverage on the results of this study in its response to the IASB's request for information related to the Post-implementation Review (PIR) of impairment requirements of IFRS 9, which is expected in 2022.

5 Scope and methodology

9. This report focuses on the following key areas:
 - general aspects of the ECL-disclosures;
 - assessment of SICR;
 - forward-looking information (FLI);
 - explanation of changes in loss allowances;
 - transparency of disclosures on credit risk exposures; and
 - ECL sensitivity disclosures.
10. The review was based on desktop examinations of 2020 financial statements.⁸ It was carried out on a sample of 44 issuers from 21 jurisdictions. These issuers were selected to ensure a geographical balance combining large systematically important banks, as well as medium-sized and smaller banks.
11. The overall composition of the sample in terms of jurisdiction, total assets and market capitalisation is illustrated in Tables 1-3 below.

⁶ <https://www.fsb.org/wp-content/uploads/Impact-of-expected-credit-loss-approaches-on-bank-risk-disclosures.pdf>

⁷ <https://www.frc.org.uk/medialibraries/FRC/FRC-Podcasts-Video/DECL-updated-guidance.pdf>

⁸ Please refer to ESMA's 2020 update to the [Guidelines on enforcement of financial information](#), or GLEFI, for further information about the classification of examinations. Please note that whilst this update to the GLEFI was published in 2020, it will only become applicable to NCAs in 2022.

Table 1: Composition of the sample of issuers for reviews by countries

Number of banks per country	Countries
4	France, Germany, Italy, Spain
3	Austria, Netherlands, Sweden
2	Denmark, Finland, Ireland, Norway, Poland
1	Belgium, Croatia, Cyprus, Greece, Hungary, Malta, Portugal, Romania, Slovenia

Table 2: Composition of the sample of issuers for reviews by total amount of assets

Number of banks (% of the sample)	Total Assets as of 31 December 2020
5 (11%)	Less than € 20bn
9 (21%)	€ 20bn - € 100bn
7 (16%)	€ 100bn - € 250bn
10 (23%)	€ 250bn - € 500bn
5 (11%)	€ 500bn - € 1,000bn
8 (18%)	Over € 1,000bn

Table 3: Composition of the sample of issuers for reviews by total market capitalisation

Number of banks (% of the sample)	Market Capitalisation as of 31 December 2020
6 (14%)	Less than € 1bn
10 (22%)	€ 1bn - € 10bn
10 (22%)	€ 10bn - € 20bn
6 (14%)	€ 20bn - € 30bn
3 (7%)	€ 30bn - € 40bn
3 (7%)	Over € 40bn
6 (14%)	Not applicable (issuers of bonds)



12. Global systematically important institutions (G-SIIs) and other large banks according to EBA's definition⁹ are referred to as large banks in this report. The remaining banks in the sample are referred to as small banks.
13. When performing this review, ESMA identified examples of disclosures and included them in the Appendix as an illustration of possible ways selected IFRS 7 requirements are implemented in practice. These examples should not be seen as exhaustive or unique, as there might be different ways for meeting IFRS requirements and objectives based on individual facts and circumstances of each financial institution. Accordingly, certain elements of these examples might be further developed in order to better reflect individual circumstances of respective banks. By including these examples in this report, ESMA does not express any view on whether the disclosed information they contain is complete and accurate or on whether it might not be further questioned as part of regular reviews by national enforcers.
14. On 28 September 2021, ESMA held a workshop with European banks and other stakeholders such as auditors, analysts, investors and academics, with the involvement of national enforcers, to discuss the preliminary findings of the review. This report takes into account the input from that workshop.

6 Analysis of selected subtopics

15. This section is structured into six different sub-sections. Each section starts with a description of the relevant accounting requirements on which ESMA's assessment focused and is followed by an analysis of the findings as well as conclusions and recommendations.

6.1 General aspects of credit risk management

6.1.1 Measuring 12-month and lifetime expected credit losses (ECL)

6.1.1.1 Relevant requirements

16. An entity is required to explain the inputs, assumptions and estimation techniques used to apply the impairment requirements of IFRS 9. IFRS 7 paragraph 35G(a)(i) requires companies in particular to disclose the basis of those inputs, assumptions and techniques used to measure the 12-month and lifetime ECL. Any changes to this basis shall also be disclosed according to paragraph 35G(c). Since IFRS 9 does not prescribe specific approaches to estimate ECL, it is necessary that entities provide key inputs and characteristics of the ECL calculation that the calculation is particularly sensitive to, including definitions of the key inputs.

⁹ See <https://www.eba.europa.eu/risk-analysis-and-data/global-systemically-important-institutions> for further details.

17. Moreover, IFRS 7 paragraph 7.35F(c) requires the disclosure of information that enables users of financial statements to understand and evaluate how the instruments were grouped if expected credit losses were measured on a collective basis.

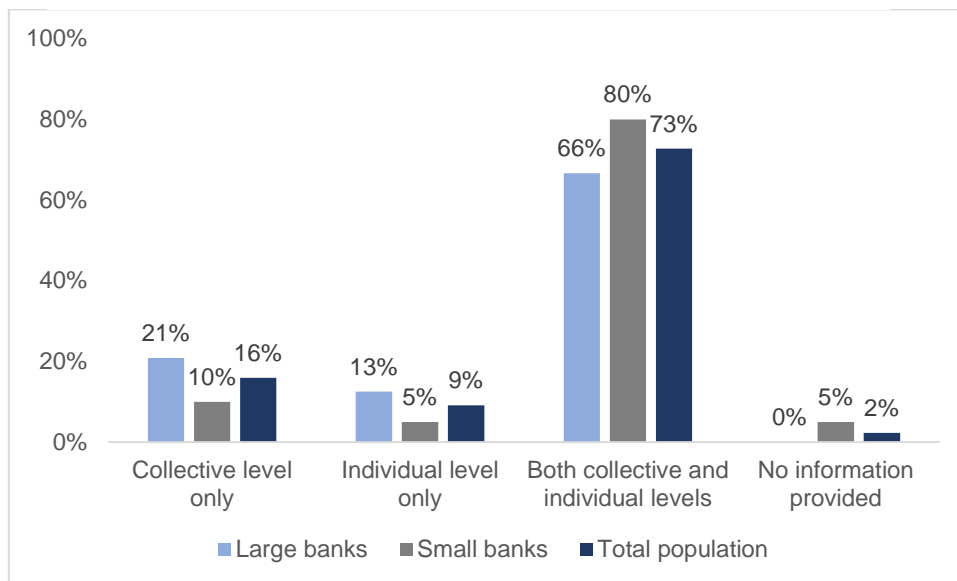
6.1.1.2 Evidence from reviews

18. ESMA observed that all banks in the sample used a probability of default (PD) approach to estimate ECL using the formula $ECL = PD \times LGD \times EAD$.

19. All banks also disclosed the definition of the key inputs used for measuring ECL and how they are assessed. Disclosures of 16% of banks were provided partially or were of a boilerplate nature (e.g. only very general descriptions of PD, LGD and EAD without providing entity-specific details on aspects which required the application of judgement or referring to regulatory requirements without explaining those requirements).

20. Almost all banks provided information of the level at which they calculated ECL. 73% of banks disclosed ECL measurement at both portfolio and transaction levels while 16% measured ECL at portfolio level only and 9% at transaction level only. The portfolio method was mostly applied to exposures that were not individually significant.

Figure 1: Level at which ECL are calculated (% of banks disclosed)



21. Of the banks using the portfolio approach, 80% provided information on how portfolios were determined, in particular what shared risk characteristics were considered for grouping. However, the disclosures of 34% of those banks were incomplete or too general. The banks that provided extensive and transparent disclosures included information on whether statistical analysis, expert assessment or other procedures were used to identify the portfolios and explained shared credit risk characteristics used for the segmentation of exposures. Shared credit risk characteristics applied by those banks included, for example, instrument type, portfolio type, asset class, product type, industry, originating entity, credit risk rating, remaining term to maturity, geographical location of the borrower, value of collateral to the financial asset, forbearance status or days in arrears.

22. ESMA and European enforcers observed that only around 45% of banks (53% of large banks and 38% of small banks) that disclosed how portfolios are determined provided comprehensive disclosures on the scope of the financial instruments to which portfolio measurement was applied. A further 16% provided this information partially or with little detail (e.g. stating that individually significant exposures are assessed on an individual basis). No relevant information was provided by 39% of the banks in the sample.
23. ESMA observes that it was often not clear whether there were any significant differences in the ECL calculation for different portfolios. Although some differences can be assessed on the basis of granular quantitative disclosures on credit risk exposures and loss allowances (see section 6.5), additional narrative information on how different portfolios are treated regarding key ECL measurement inputs would be useful for users.
24. Two thirds of the banks disclosed their accounting policies applied to purchased or originated credit impaired (POCI) financial instruments. However, these policies mostly repeated IFRS requirements. Examples of entity-specific information provided by some banks are: describing circumstances in which credit-impaired assets are originated by the bank and explaining whether the impairment gains arising from POCI assets are recognised on the balance sheet as a direct adjustment to the asset's gross carrying amount or as a negative loss allowance.
25. European enforcers noted that it was often difficult to assess how material the POCI assets were to the banks on the basis on the information presented in the financial statements.
26. Finally, ESMA noted that disclosures on measuring 12-month and lifetime ECL were spread over different sections of the financial statements of the banks in the sample and were found in a wide variety of places. This observation is also valid for other disclosures covered in section 6.1.

6.1.1.3 Conclusions and recommendations

27. While ESMA notes that all banks in the sample disclosed the basis for the inputs, assumptions and techniques used to measure the ECL, ESMA urges the banks to disclose more entity-specific details, particularly on the issues that require application of judgement (e.g. how the model parameters are derived or which specific credit enhancements are taken into account when measuring ECL).
28. The review has shown in particular that there is room for improvement of disclosures on the portfolio approach when calculating ECL, since a significant number of banks applying this approach either provided boilerplate information on how portfolios were determined or did not provide this information at all. ESMA notes that this information is important to understand banks' credit risk management practices and urges banks to provide information on shared risk characteristics considered for grouping, the scope of financial instruments to which portfolio measurement has been applied, any significant differences in the ECL calculation for different portfolios and the treatment of different portfolios in terms of key ECL measurement inputs. We also refer to our conclusions and recommendations regarding the use of the portfolio approach in the assessment of SICR in section 6.2.



29. When POCI financial instruments are material, entity should disclose their specific accounting policies for these instruments avoiding mere repeating the IFRS requirements.
30. ESMA notes that disclosures on the details of the ECL measurement were spread over different sections of banks' financial statements and other statements such as in the management commentary or in a risk report. ESMA reminds banks of the requirements of IFRS 7 paragraph 35C and recommends they better link their disclosures through cross-referencing. This recommendation also applies to other disclosures on general aspects of credit risk management described in section 6.1.

6.1.2 Definition of default, forborne, non-performing loans

6.1.2.1 Relevant requirements

31. IFRS 7 paragraph IFRS 7.35F(b) requires companies to disclose an entity's definition of default including the reasons for selecting those definitions. Moreover, according to paragraph 7.35F(d) information that enables users of financial statements to understand and evaluate how an entity determined that financial assets are credit-impaired shall also be provided. Furthermore, paragraphs 35G(a)(iii) and IFRS 7 paragraph 35G(c) require disclosing the basis of inputs and assumptions and the estimation techniques used to determine whether a financial asset is credit-impaired as well as any changes in the estimation techniques or significant assumptions made during the reporting period, including the reasons for those changes.

6.1.2.2 Evidence from reviews

32. 93% of the banks in the sample disclosed their definition of default and the specific quantitative and qualitative factors considered in defining default for the different types of financial instruments (e.g. more than 90 days past due, breach of loan covenants). A few banks did not disclose details of the definition and only referred to the regulatory definition. 84% of banks mentioned explicitly that their definition of default is aligned with the regulatory definition.
33. Two banks in the sample indicated that they adjusted their default definition for accounting purposes to the European Banking Authority (EBA)'s new regulatory definition of default during the reporting period. Both banks indicated that the change had no material impact on their expectations for credit losses. For one bank, the change in the definition only impacted the staging of assets.
34. 65% (74% of large banks and 55% of small banks) disclosed that their definition of forborne financial instruments for accounting purposes is aligned with the regulatory definition.
35. Looking at disclosures on forborne financial instruments ESMA found that 47% of banks (52% of large banks and 40% of small banks) in the sample disclosed how these instruments (when no derecognition was required) were treated in terms of staging including criteria defined to determine when to transfer „cured” forborne exposures back to stage 1 and explained the circumstances in which forborne exposures were considered



credit-impaired alongside the criteria used to assess whether they are no longer credit-impaired. 14% of banks disclosed only general principles.

36. 62% of issuers (52% of large banks and 74% of small banks) using the notion of NPL in their disclosures explained their definition of NPL (e.g. “the counterparty is in default or the counterparty is no longer in default, but has received an additional forbearance measure, or became more than 30 days past due during the forbore probation period”).
37. Useful information provided by some banks with regards to the difference between the definition of default and of non-performance included explanations on whether an exposure is categorised as non-performing for the entire amount (including off-balance sheet items), criteria for ending non-performance classification (e.g. if there is a cure period and the length of the cure period for each portfolio) and quantitative information on the difference between non-performing exposures and exposures in default.
38. In general, European enforcers found that the relationship between forbearance (a regulatory term), NPL and modifications (IFRS 9 terminology) was not always clear. A clear understanding of this relationship is important as the regulatory guidance on forbearance also prescribes probation/cure periods. In the financial statements of banks, there were often indications of different cure periods for accounting and regulatory purposes. Even though banks often noted that the classification as forbore followed regulatory guidance, it was not always clear how this also applies to staging.

6.1.2.3 Conclusions and recommendations

39. ESMA welcomes the fact that almost all banks in the sample have disclosed their definition of default, including the specific factors related to different types of financial instruments. ESMA expects that banks whose definition of default will be affected by the new regulatory definition in 2021 will disclose information on the impact of the amended definition in their 2021 financial statements.
40. ESMA encourages banks to disclose more details on the forbore financial instruments including how these instruments were treated in terms of staging. Moreover, ESMA considers explanations of any differences between the definition of default and non-performance helpful for users.

6.1.3 Write-off policy and impairment

6.1.3.1 Relevant requirements

41. IFRS 7 paragraph 35F(e) requires the disclosure of information that enables users of financial statements to understand and evaluate an entity’s write-off policy, including the indicators to assess whether there is no reasonable expectation of recovery and information about the policy for financial assets that are written-off but are still subject to enforcement activity.
42. Moreover, paragraph 35F(d) requires entities to explain how they determined that financial assets are credit-impaired.

6.1.3.2 Evidence from reviews

43. ESMA observed that only two thirds of issuers (75% of large banks and 47% of small banks) disclosed their write-off policy. However, some disclosures were very brief and/or not entity-specific (e.g. some banks only stated that write-offs are recognised when recovery of any recognised amount is considered remote or if they do not have reasonable expectations of recovering a financial assets in its entirety or partially). Only 16% of issuers addressed in their write-off policies the difference between collateralised and non-collateralised financial assets.

44. Banks that provided transparent write-off disclosures presented in particular the following information:

- entity-specific indicators that there is no reasonable expectation of recovery;
- differences between classes of financial instruments, including the difference between collateralised and non-collateralised instruments;
- in which situations credit enforcement activities are not pursued (e.g. when a trustee in bankruptcy has submitted its final accounts of the distribution of assets in conjunction with the bankruptcy, when a scheme of arrangement has been accepted or when a claim has been conceded in its entirety);
- whether and when the financial assets written off could still be subject to credit enforcement activities;
- position in the income statement where the write-off is recognised;
- how payments to the bank in relation to written-off financial assets are recognised in the income statement;
- when a write-off is full and when it is partial.

45. Almost all banks in the sample disclosed the accounting policies applied in relation to impairment modelling for stage 3 financial instruments. However, the disclosures of about half of the banks were boilerplate, providing no specific qualitative input (such as governance, objective circumstances leading to impairment, use of scenarios, consideration of the collateral) and only included a general description of ECL models.

46. Finally, 52% (46% of large banks and 60% of small banks) disclosed that a probation/cure period was established for exposures ceasing to be classified as stage 3.

6.1.3.3 Conclusions and recommendations

47. ESMA urges banks (particularly small banks) to disclose their entity-specific impairment and write-off policies in order to comply with the requirements of IFRS 7 paragraphs 35F(e) and 35F(d), including a description of specific indicators used and, if relevant and material,

the differences between the different types of assets (e.g. collateralised and non-collateralised financial assets).

6.1.4 Management overlays

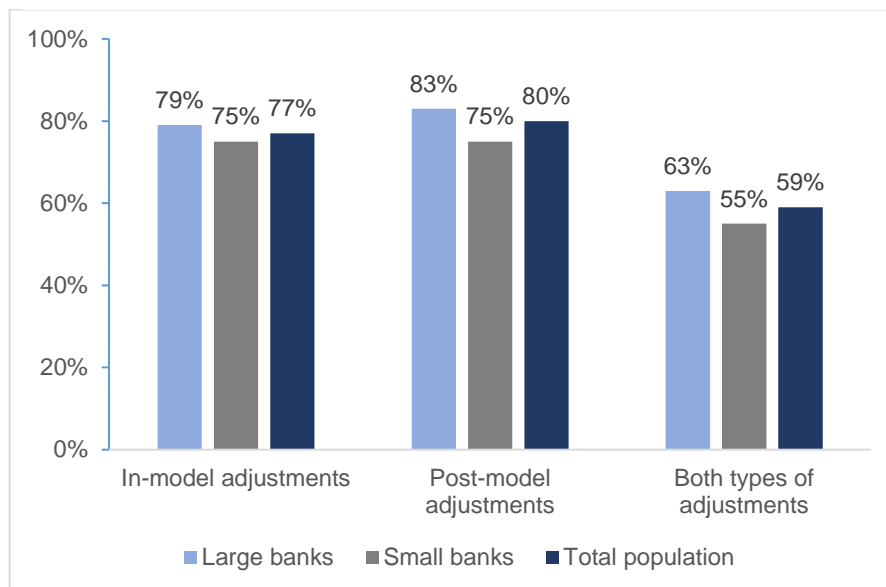
6.1.4.1 Relevant requirements

48. When material adjustments in the form of management overlays are used in the measurement of ECL, enhanced transparency should be provided by issuers in order to fulfil the specific requirements of IFRS 7 paragraphs 35G, 35D and 35E and the overarching objectives and principles of paragraph 35B.

6.1.4.2 Evidence from reviews

49. To take into account uncertainties related to the COVID-19 pandemic, many banks incorporated specific adjustments in their calculation of the ECL provisions. The adjustments either took the form of ECL model revisions, including updates of the model inputs (so-called “in-model adjustments”), or were applied outside the primary models (“post-model adjustments”). In the financial statements of banks, the latter were often also referred to as “management overlays” and “top-level adjustments”. 77% of the banks in the sample disclosed using in-model updates, 80% applied post-model adjustments, 59% made use of both.

Figure 2: Disclosure of management overlays (% of banks disclosed)



50. While all banks that used in-model adjustments provided descriptions of those adjustments, the disclosures of 21% of banks were not specific as to how the effect of COVID-19 was taken into account. Only very few banks that made in-model-adjustments provided quantitative effects of these adjustments on the loan loss provisions. ESMA acknowledges that it may often be difficult to quantify the effect of these adjustments.

51. 60% of the issuers (70% of large banks and 47% of small banks) that disclosed top-level adjustments provided specific disclosures on the rationale for those adjustments and the methodology used. Disclosures of other banks were brief or of a boilerplate nature, for example stating that management exercised judgement based on its knowledge of the group's lending portfolios, their particular characteristics and behavioural/transactional aspects, or simply mentioning that management's adjustments were related to payment holidays and to time lag in expected defaults.
52. ESMA noted that 71% of banks with post-model adjustments (75% of large banks and 67% of small banks) quantified the impact of these adjustments on the ECL (one bank stated that the COVID-19 post-model adjustments had no major impact on the increase of expected credit losses). Two-thirds of those banks disaggregated the total amount. 10 banks provided a breakdown by type of adjustment, 7 by stages and a few banks disaggregated by product type, geography, division or industry.
53. Only 3 banks disclosed the quantitative effect of post-model adjustments on stage transfer (movements between stages). 2 banks disaggregated the adjustment in the effect due to the pandemic and due to other reasons.
54. Only a few banks in the sample described their governance processes related specifically to the application of post-model adjustments. This information included, for example, details of the composition of an expert panel which determined the post-model adjustments or information on whether an independent validation of adjustments was conducted within the bank.

6.1.4.3 Conclusions and recommendations

55. The review has shown that the disclosures of banks on management adjustments are of variable quality and often lack entity-specific details important to understand the nature of these adjustments and their impact on the amounts in the financial statements. To comply with the requirements of paragraphs 35G, 35D and 35E of IFRS 7, ESMA expects issuers to disclose, for each material adjustment, detailed and specific information on its impact on the ECL estimate, the rationale and the methodology applied. The rationale should clearly specify the reasons for the adjustment (e.g. to include the latest macroeconomic outlook, or to address model limitations resulting from insufficient inclusion of certain risks). The description of the methodology should include significant inputs and assumptions. These disclosures should be provided at an appropriate level of granularity, for example by explaining to which specific type of products, exposures, sectors or geographic areas the adjustments are related to, if relevant.
56. A corresponding breakdown of the quantitative impact of the adjustments may be appropriate in order to increase transparency and meet the requirements of paragraph 35H of IFRS 7. Where material, ESMA expects issuers to provide information, in line with the requirements of paragraph 35F(a), on whether the adjustments relate to a specific impairment stage and, if applicable, what impact they have on the staging of the underlying instruments. ESMA also recommends that issuers consider how their ECL sensitivity disclosures in the notes to the financial statements can incorporate material management overlays and provide the rationale for the chosen method, if relevant.



57. In order to comply with the requirement of IFRS 7 paragraph 35G(c) issuers should explain any significant changes in methodologies and assumptions from the previous reporting period and the reasons for those changes. This information should enable users to understand the extent of the movements, their nature (i.e. changes in underlying assumptions) and the reasons for the development of adjustments (i.e. incorporation of the post-model adjustments in the core model, if applicable).

58. ESMA emphasises that the above considerations apply in substance to both types of adjustments, in-model adjustments and post-model adjustments.

59. We refer to Examples 1-4 in the Appendix to this report which illustrate how IFRS 7 requirements with regard to management overlays can be implemented in practice.

6.1.5 Climate-related risk factors

6.1.5.1 Relevant requirements

60. In November 2020, the IFRS Foundation published educational material on “The effects of climate-related matters on financial statements prepared applying IFRS Standards” (the application of which is not mandatory).¹⁰ The material contains a non-exhaustive list of examples of when companies may need to consider climate-related matters in their reporting and was aimed at supporting the consistent application of IFRS Standards. IFRS Standards do not explicitly refer to climate-related matters. However, companies must consider climate-related matters in applying IFRS Standards when the effect of those matters is material in the context of the financial statements taken as a whole. More specifically, IFRS 7 requires disclosure of information about a company’s financial instruments, including information about the nature and extent of risks arising from financial instruments and how the company manages those risks. Climate-related matters may expose a company to risks in relation to financial instruments. For example, for lenders, it may be necessary to provide information about the effect of climate-related matters on the measurement of ECLs or on concentrations of credit risk.

6.1.5.2 Evidence from reviews

61. ESMA observed that very few banks in the sample provided ECL-specific climate-related disclosures. While a quarter of the banks provided disclosures on how environmental or climate-related issues were taken into account in credit risk management, these disclosures were mostly of a very general character and there were no indications of consideration of environmental or climate-related issues in determining ECL provisions.

62. One bank mentioned that it performed a preliminary estimation at the group level of the potential impact of some chronic (i.e. sea-level rise) and acute (i.e. landslides and flooding) hazards on the value of mortgage collaterals.

¹⁰ <https://www.ifrs.org/news-and-events/news/2020/11/educational-material-on-the-effects-of-climate-related-matters/>



63. Another bank stated that climate risk cannot be used as an input for its ECL models as long as structured climate risk data is not available for a longer period. The bank also mentioned that climate risk will be added via a top-level adjustment in case it has an impact on the ECL.
64. One bank provided a table showing the proportion of lending to the public and to credit institutions that presents material climate-related risks exposures by groups and sectors as defined in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).
65. A further bank mentioned that climate-related risks to which it is exposed are not expected to have consequences for the impairment or the fair value of assets.

6.1.5.3 Conclusions and recommendations

66. To meet the objective in IFRS 7 paragraph 1, ESMA expects credit institutions to disclose if material climate-related and environmental risks are taken into account in credit risk management, including information about the related significant judgements and estimation uncertainties.
67. ESMA acknowledges that many banks are currently in the early stages of developing methods and techniques aimed at incorporating climate-related risks into the calculation of ECL (e.g. through adjustment of the long term growth rates of specific industries based on the climate change risks). However, ESMA believes that, in order to comply with the objective of IFRS 7 paragraph 35B, credit institutions should provide explanations, where applicable, on any credit risk concentrations related to environmental risks and how those risks affect the amounts recognised in the financial statements including ECL.

6.2 Assessment of significant increase in credit risk (SICR)

6.2.1 Relevant requirements

68. IFRS 7 paragraph 35F(a) requires entities to provide information that enables users of financial statements to understand and evaluate how an entity determined SICR. The entities shall provide the basis of inputs and assumptions and the estimation techniques used to determine SICR and changes in the estimation techniques or significant assumptions made during the reporting period and the reasons for those changes should also be disclosed (IFRS 7 paragraphs 35G(a)(ii) and 35G(c)). This information shall include if and how the entity has used the low credit risk expedient and if and how the entity has rebutted the presumption that loans that are 30 days past due have suffered a significant increase in credit risk since initial recognition (IFRS 7 paragraphs 35F(a)(i) and 35F(a)(ii) and (iii)).
69. Moreover, IFRS 7 paragraph 35F(c) requires disclosure of information that enables users of financial statements to understand and evaluate how the instruments were grouped if ECL were measured on a collective basis. IFRS 7 paragraph 35F(f)(i) requires disclosures on how an entity determines whether the credit risk on a financial asset that has been



modified while the loss allowance was measured at an amount equal to lifetime ECL has improved to the extent that the financial assets are moved to stage 1.

6.2.2 Evidence from reviews

Significant judgements and general SICR approach

70. All banks in the sample disclosed the significant judgements used in determination of SICR. However, 74% (70% of large banks and 80% of small banks) provided only boilerplate information.

71. ESMA noted that 84% of banks in the sample provided a description of the approach or method used to establish the criteria for identifying the SICR for each material portfolio. Disclosures of around 20% of those banks were very general and less informative.

Collective vs. individual assessment of SICR

72. Around 60% (67% of large banks and 50% of small banks) disclosed how they group financial assets based on shared credit risk characteristics for SICR purposes. 70% (61% of large banks and 80% of small banks) did not disclose any changes in the grouping of financial assets in 2020 due to the COVID-19 for SICR assessment purposes. Examples of changes disclosed by around 30% of banks are:

- segregating lending exposures into two subpopulations depending on whether they were affected by COVID-19;
- making the model more granular so that it can identify changes at sector level;
- taking more micro-sectors into account;
- adding a qualitative SICR trigger based on subgroups by industry and industry sector.

73. While around 90% of banks disclosed whether the SICR is assessed individually, collectively or using both approaches, one-third of those banks provided only boilerplate descriptions stating for example that the bank assesses SICR using a combination of individual and collective information and reflects significant increases in credit risk at the individual financial instrument level.

74. While disclosures of around 45% of banks (54% of large banks 35% of small banks) included indications of the collective SICR assessment, only around half of those banks provided a description of the method for collective assessment specifically for SICR purposes. For further information on the portfolio approach see section 6.1.2.

Use of practical expedients

75. 32% of banks reported using the low credit risk operational simplification. Almost all issuers using the low credit risk exemption disclosed material judgements related to the determination and use of this simplification. Around 60% of banks stated explicitly that the

exemption is only applied to certain types of debt securities (mostly “investment grade” bonds). Two banks in the sample mentioned explicitly that the exemption is also applied to loans (in one case, however, only “exceptionally”). From the disclosure of four banks, it was not clear whether the exemption was also applied to loans, as they generally referred to using the simplification for exposures to certain sectors (such as banking, government institutions, housing cooperatives and communities).

76. Almost all banks mentioned the use of 30 days past due as one of the SICR indicators (see below for further details on SICR indicators applied by the banks). However, only very few banks provided disclosures on the importance of this backstop-measure. These banks stated that it does not represent a major trigger for stage 2 classification. Similarly, only a very small number of banks provided information on the rebuttal of the 30 days past due presumption. ESMA found that the banks in the sample did not disclose information about the rebuttal due to the COVID-19 situation. In many cases, it was not clear whether the rebuttal is generally possible. A few banks mentioned that they generally do not rebut this presumption. A small number of banks stated that rebuttal occurs on very rare occasions. One bank explained that there may be cases where the presumption was rebutted as a result of studies that show a low correlation of the SICR with this past due threshold.

Disaggregation of SICR disclosures

77. Only 30% of issuers (26% of large banks and 35% of small banks) disaggregated (half of them partially) disclosures on SICR thresholds (whether qualitative or quantitative) by class (e.g. by type of counterparty, geographical area, type of products or significant concentration of credit risks).

Changes in SICR indicators

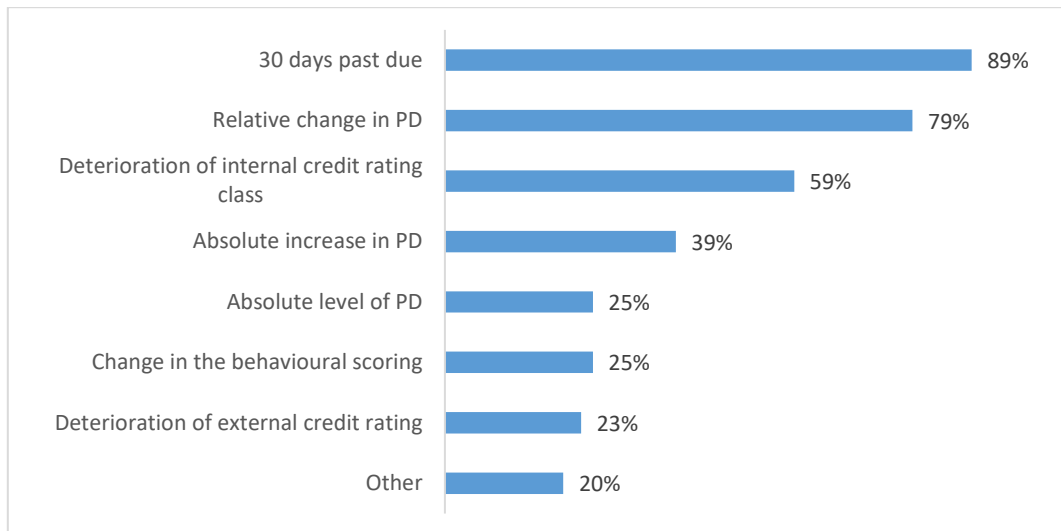
78. 70% of banks (75% of large banks and 65% of small banks) disclosed changes in SICR indicators or thresholds due to COVID-19. Examples of other pandemic-related changes include taking into account governmental support programs, introduction of an expert-based assessment for companies in sectors which were particularly affected by COVID-19, applying new triggers to positions in risky sectors or considering all exposures to vulnerable sectors to be subject to SICR.
79. ESMA noted that only one-third of banks that disclosed pandemic-related changes provided detailed information on those changes. The other disclosures were less specific; for example, some banks only stated that they broadened the number of indicators in order to strengthen the likelihood of detecting SICR for clients with COVID-19 moratoria, or that a new criterion for reclassifying loans into stage 2 has been established due to the COVID-19 pandemic, without further explanations.
80. 42% of issuers (33% of large banks, 54% of small banks) that disclosed changes in SICR indicators or thresholds due to COVID-19 also mentioned that they took into account government economic support programs (such as moratoria on repayment of loans, overdraft facilities and mortgages, loan guarantees) when assessing SICR. They stated that economic support and relief measures did not imply an automatic trigger for SICR. However, only a few banks provided more detailed information.

81. 68% (83% of large banks and 50% of small banks) disclosed changes related to the treatment of forbearance, 3% disclosed no changes and 24% did not provide specific disclosures. 9% of banks that reported changes specifically mentioned changes related to both moratoria and non-moratoria, 27% to moratoria and 2% to non-moratoria measures.

Quantitative and qualitative SICR indicators

82. All banks in the sample used a combination of quantitative and qualitative SICR indicators. Information about the quantitative SICR indicators disclosed by banks in any of their material portfolios is presented in the figure below.

Figure 3: Quantitative SICR indicators used by the banks in the sample (% of banks disclosed)



83. In some cases, it was not clear from the disclosure what type of threshold was used, e.g. when it was disclosed that SICR is determined by a set of mostly quantitative but also qualitative criteria which are mainly based on the risk grades of customers and on their evolution in order to detect significant increases in PD complemented by other information regarding the customers' behaviour.

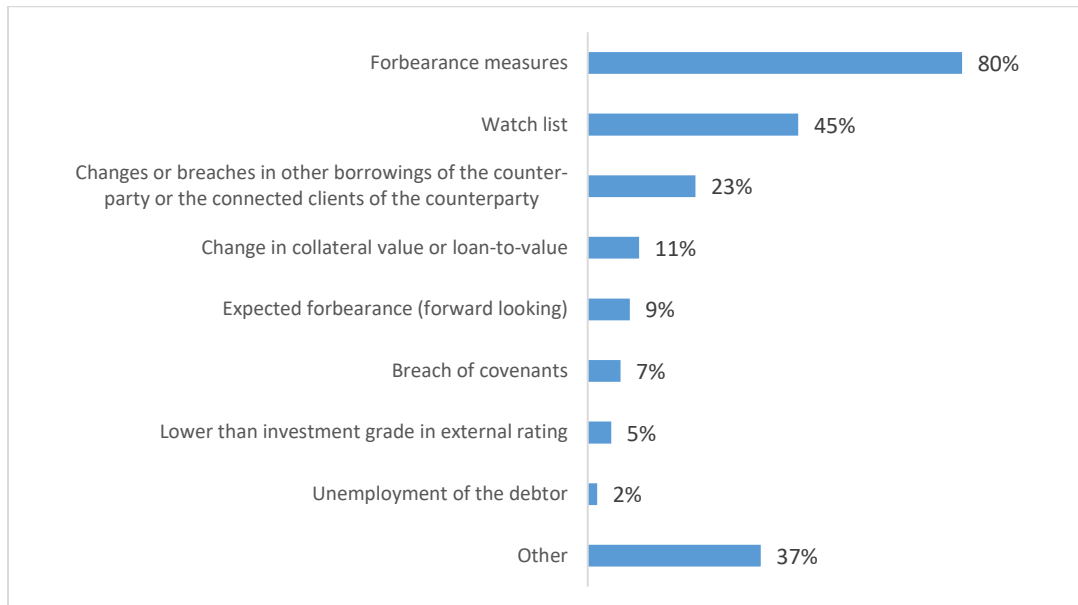
84. Only half of the banks that used relative change in PD as a SICR indicator disclosed quantitative thresholds. They only provided general statements on how this indicator was specifically defined (e.g. non-linear function that depends on the level of residual lifetime PD at origination requiring higher relative increases if the PD is low).

85. 44% of banks that disclosed quantitative thresholds had one common threshold for all financial instruments, stating for example that the remaining lifetime PD at the reporting date should be more than double and more than 50 basis points higher than lifetime PD for the same reporting period as estimated at initial recognition. 56% of banks used different quantitative thresholds depending on the portfolio type, initial rating or PD.

86. In a few cases, the range of relative thresholds was very wide (e.g. increase in PD between 30% and 250%) and no additional information (e.g. on more disaggregated level) was

disclosed. ESMA believes that in such cases additional qualitative explanations are necessary to provide transparency.

Figure 4: Qualitative SICR indicators used by the banks in the sample (% of banks disclosed)



87. The category “Other” includes the loss of key markets, buyers or suppliers; unexpected developments in the macroeconomic environment (in particular due to the pandemic); uncertainties about geopolitical events; the absence of a rating; significant industry risk; occurrence of a past due event within the last 12 months, even if it has been regularised; changes in contract terms; changes to management approach; early signs of cash flow/liquidity problems such as delay in servicing of trade creditors/loans; expert judgements.

Probation period

88. Finally, only 43% of banks disclosed application of a probation period (cure period) when transferring exposures back from stage 2 to stage 1. Approximately two-thirds of those issuers applied probation period only for forbearance. Of the banks that disclosed application of a probation period, about half had a period length of 1-2 years and the other half had a longer period.

6.2.3 Conclusions and recommendations

89. The review has shown that SICR-related disclosures in the financial statements of significant number of banks are of a general nature and lack entity-specific details with regard to the approach and significant judgements used in the determination of SICR. ESMA reminds users of the importance of disclosures on the inputs, assumptions and the estimation techniques used to determine SICR. This refers in particular to the description of the method for collective assessment used for SICR purposes. Banks that grouped financial instruments for SICR assessment are expected to disclose key risk characteristics underlining the grouping approach (including specific indicators used) and how the



collective assessment was performed (for example use of “bottom up” or “top down” approach) as well as any change in grouping compared to the previous reporting period. Furthermore, ESMA highlights the importance of disclosing the length of the cure period when transferring exposures back from stage 2 to stage 1.

90. Looking at the disclosures on quantitative and qualitative thresholds used by banks, ESMA considers it useful not only to describe these thresholds but also to explain which of the applied thresholds represented the major triggers (both quantitative and qualitative) for the stage 2 classification in the reporting period.
91. In relation to economic support and relief measures ESMA emphasises the importance of disclosing how the SICR for the exposures affected by these measures was assessed and how banks ensured that expected and granted forbearance measures triggered SICR regarding borrowers experiencing financial difficulties. ESMA emphasises the importance of these disclosures. If the relief measures do not result in a derecognition of the financial instrument, banks should include a description of how they determined SICR in these specific circumstances providing, for example, information on related significant judgements, type of (new) indicators applied and the level of assessment (counterparty, sector, type of financial instruments etc.) at an appropriate level of detail. Banks should also provide explanations on how they considered the impact of the expiry of the relief measures on SICR assessment.
92. ESMA encourages banks to consider disaggregating disclosures on SICR thresholds (qualitative or quantitative) by class of financial instruments. Moreover, ESMA recommends that issuers disclose quantitative SICR thresholds, such as PD deterioration triggers. If there are significant differences in thresholds depending on portfolio type, additional explanations are required.
93. Regarding the low credit risk expedient, banks are expected to disclose, where relevant, the main types of transactions or portfolios that are impacted by this expedient, including qualitative and quantitative criteria used to define “low credit risk”. Application of other practical expedients should be disclosed if material
94. Finally, ESMA stresses importance of detailed information on any significant changes in SICR assessment, including pandemic-related changes.
95. We refer to Examples 5 and 6 in the Appendix to this report which illustrate how IFRS 7 requirements with regard to SICR can be implemented in practice.

6.3 Forward-looking information (FLI)

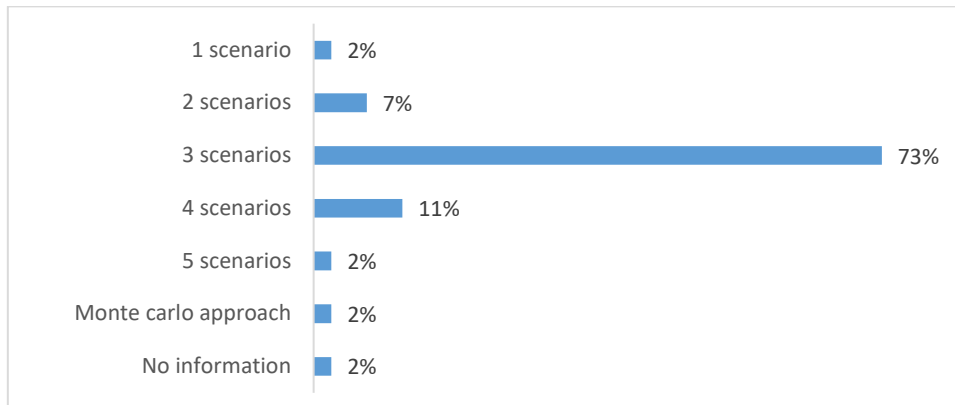
6.3.1 Relevant requirements

96. IFRS 7 requires disclosures on how FLI has been incorporated into the determination of expected credit losses, including the use of macro-economic information (paragraph 35G(b)) as well as any changes in the estimation techniques and the reasons for those changes (paragraph 35G(c)).

6.3.2 Evidence from reviews

97. ESMA noted that almost all banks in the sample used more than one macro-economic scenario for their ECL estimates, with the most popular number of scenarios applied being three.

Figure 5: Number of scenarios used by the banks in the sample (% of banks disclosed)



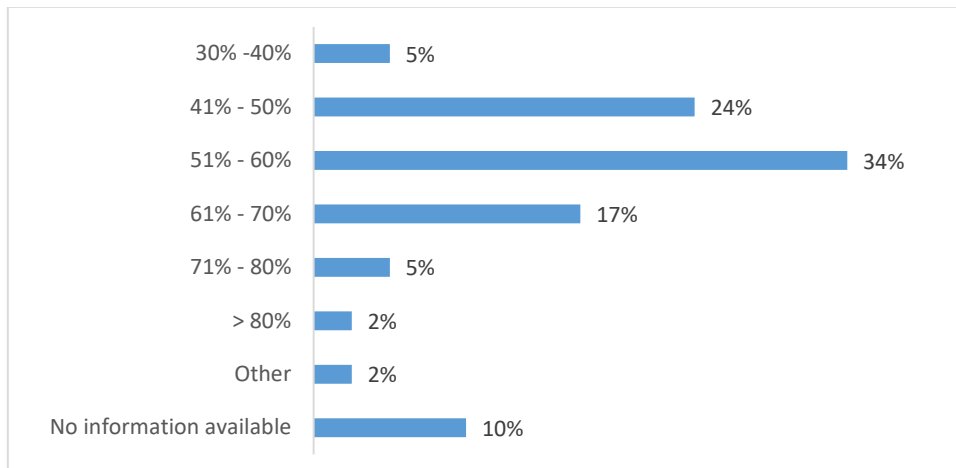
98. 83% of banks that reported using multiple scenarios disclosed the weighting of those scenarios. However, only a few banks disclosed the methodology used to determine the weightings.

99. For example, one bank stated that it employs a simulation tool for scenario generation and for assessing probability weights. This tool uses recent actual observed values and historical data to produce a number of possible paths for the relevant economic variables based on their historical relationships and volatilities. Another bank explained that the weights of the alternate two scenarios are computed using a relationship with the position in the credit cycle. A further bank explained that with regard to the probability of occurrence of the scenarios, it “considered (a) the prudential nature of the baseline scenario, which is in the lowest bracket of the range observed among the various estimators and the median of Bloomberg consensus and (b) the high asymmetry of the alternative scenarios with respect to the baseline scenario, which makes the latter just above the adverse one, and decided on the basis of this information to assign the baseline scenario with a probability of 60%, while a probability of occurrence of 20% was assigned respectively to the favourable scenario (more in line with the other estimators) and to the adverse one”.

100. All other banks simply stated that they applied expert judgement (or a combination of expert judgement and statistical analysis, which was not further explained) or did not provide any useful explanations.

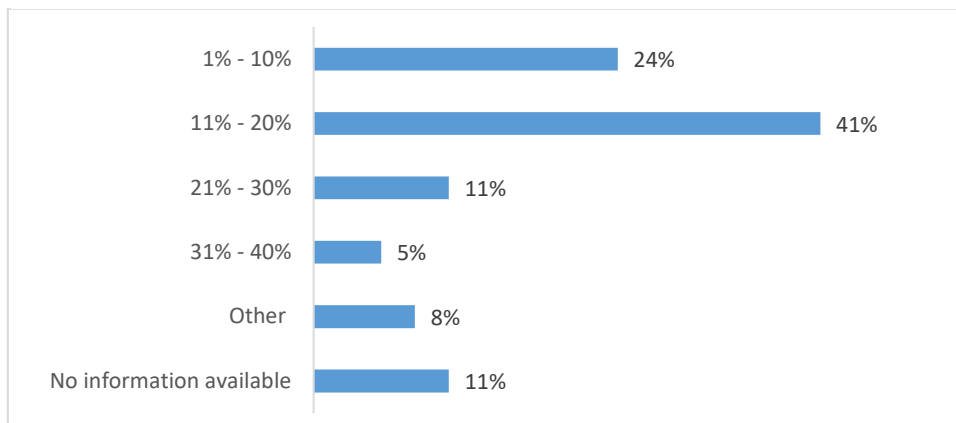
101. The banks in the sample most often assigned to their baseline scenarios a weighting of 60% (8 banks) or 50% (7 banks). The disclosed weights of the baseline scenario per weighting range are shown in the graphic below.

Figure 6: Baseline scenario weightings used by the banks in the sample (% of banks disclosed)



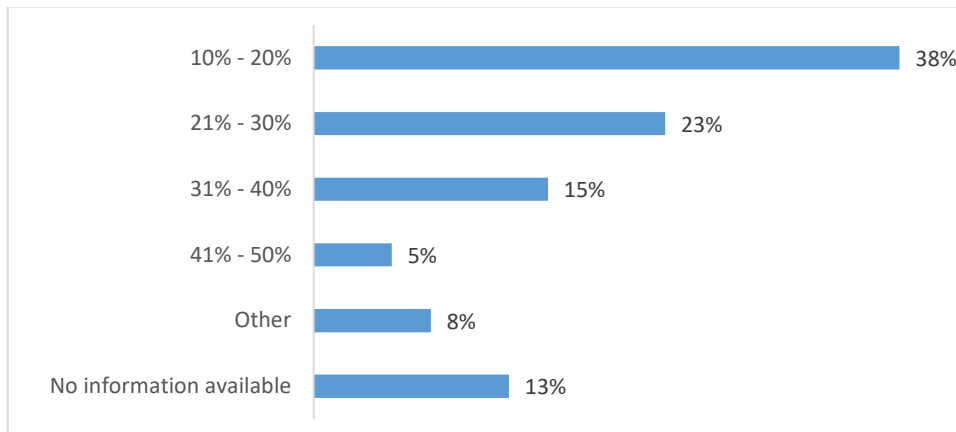
102. The category “Other” includes one bank that used different baseline scenarios depending on the unit/area with weights ranging from 32.5% to 80%.
103. The most frequently used weighting of the most optimistic scenario was 20% (6 banks), followed by 10% and 15% (5 banks each).

Figure 7: Most optimistic scenario weightings used by the banks in the sample (% of banks disclosed)



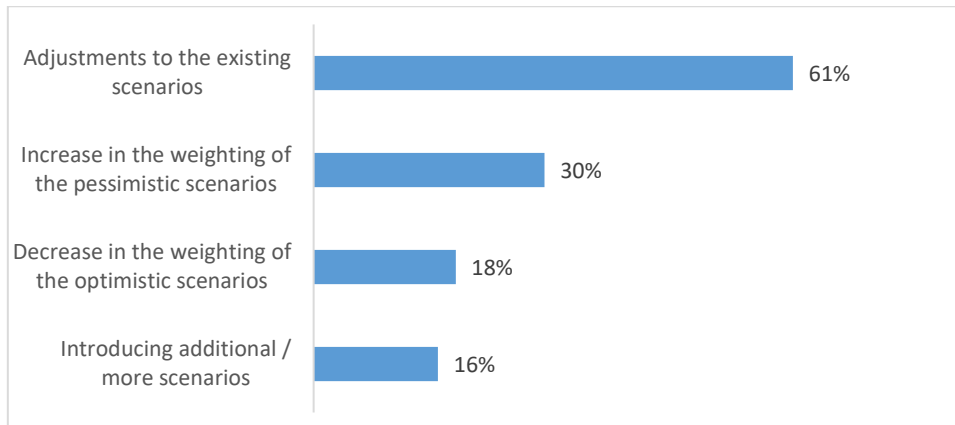
104. The “Other” category includes banks whose weighting varied depending on the unit/area.
105. The most frequently used weights for the most pessimistic scenario were 25% and 20% (7 and 6 banks, respectively).

Figure 8: Most pessimistic scenario weightings used by the banks in the sample (% of banks disclosed)



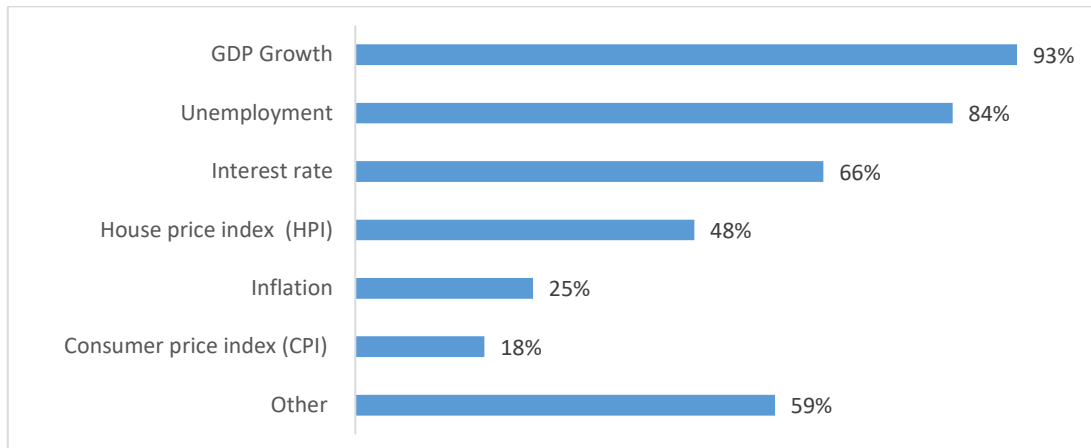
106. ESMA assessed whether there was evidence that the range of weightings of the scenarios used by the banks in the sample resulted in an estimate close to one (baseline) scenario. Considering both the weightings and the sensitivity analysis (see section 3) for three banks in the sample, there were no indications of such outcome.
107. In addition to the quantitative scenario data, 70% of banks (80% of large banks, 55% of small banks) disclosed the qualitative characteristics of the scenarios used. For example, they disclosed their assumptions regarding the effectiveness of the pandemic-related economic policy measures adopted. ESMA observed, however, that descriptions of the baseline scenario were very often significantly more detailed than descriptions of the alternative scenarios. 30% of banks provided no or only very limited general narrative descriptions, so that their main assumptions were difficult to understand. For example, one bank only stated that, as a consequence of its expectation that the economic situation caused by the COVID-19 pandemic is transitory and will be followed by a recovery, different scenarios have been taken into consideration in the calculation of expected losses, resulting in the model management believes suits best the current economic situation and the combined recommendations issued by the authorities.
108. 41% of the banks in the sample mentioned explicitly that their economic scenarios capture the effect of non-linearity. Three of those banks (including the bank that used only one macroeconomic scenario) disclosed usage of specific adjustment factors to account for the potential effects of non-linear correlations. However, those banks did not provide detailed information on how those adjustment factors were calculated. One bank only mentioned that the factor was reviewed on an event-driven basis in the fourth quarter of 2020 and increased slightly.
109. Almost all banks disclosed information on how the impact of the pandemic was taken into account when using FLI. Around 77% of banks provided detailed information on how their scenarios were adjusted as a result of the pandemic.

Figure 9: Types of adjustments to FLI due to COVID-19 (% of banks disclosed)



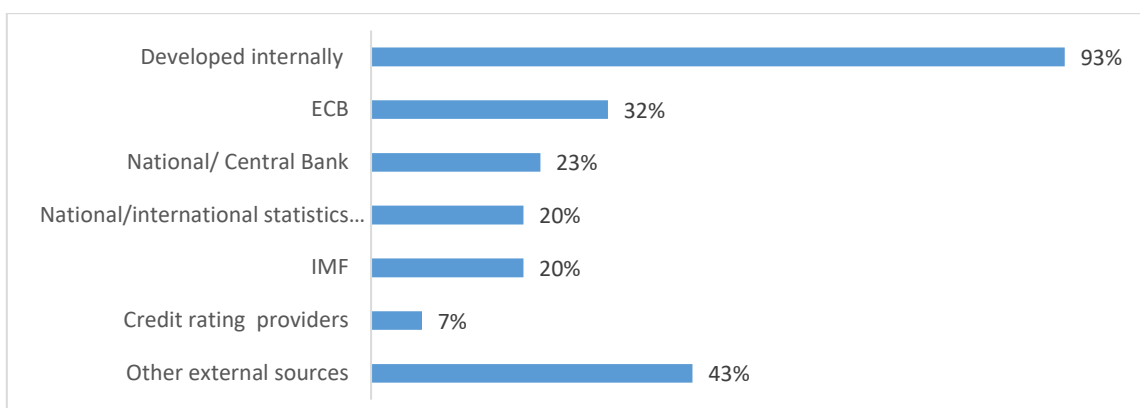
110. Scenarios introduced additionally mostly were pessimistic scenarios. For example, one bank divided the single pessimistic scenario in two pessimistic scenarios, the first one depicting a “V”-shaped evolution and the second one expressing a “U”-shaped GDP evolution. Another bank, in order to incorporate the available reasonable and supportable information and apply meaningful upside and downside scenarios, constructed three additional narrative-driven alternative scenarios (one upside and two downside) to reflect different length of restrictions, depth of downturn and pace of economic recovery.
111. ESMA noted that the banks in the sample did not provide specific information about scenarios for the measurement of collateral. However, a significant number of banks used housing prices as a macroeconomic variable in their scenarios (see below).
112. Only 23% banks in the sample (29% of large banks and 15% of small banks) provided specific information on the frequency of their collateral measurement. 7 of those banks remeasured collateral generally once a year. Two banks remeasured once a year for non-performing exposures and once every three years for other assets. According to the disclosures of one bank, real estate valuations are re-estimated at least once within 3 years and immediately after the occurrence of any material event.
113. Useful details provided by some banks on their collateral measurement include description of the collateral valuation and management process with specific details relevant for different collateral types, activities related to monitoring and validation of evaluation mechanism and valuations, existence of any risk concentrations with regard to collateral and methods to assess these risk concentrations, disclosure of the value of the collateral taken in possession during the reporting period.
114. Almost all banks in the sample disclosed macroeconomic variables used for ECL estimation. The most commonly used variable was the GDP growth (real or nominal) and the unemployment rate.

Figure 10: Macroeconomic variables used for ECL estimation (% of banks disclosed)



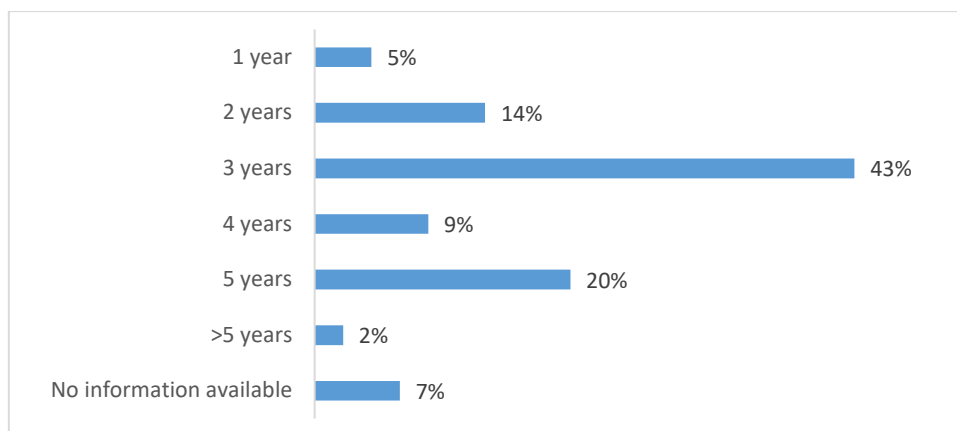
115. The category “Other” includes, among others, leading stock market indices (e.g. DAX 30, EURO Stoxx50), FX rates, industrial production, consumer expenditure, commodity prices (e.g. oil price), savings rate.
116. Two thirds of the banks (71% of large banks, 55% of small banks) disclosed the forecast for all macroeconomic variables by scenario, 16% for some macroeconomic variables, 9% for some scenarios (mostly only for the baseline scenario).
117. Around 57% of banks indicated that they explicitly consider the impact of the government/public support measures in their modelled scenarios.
118. To determine the relevance of macroeconomic variables for ECL estimation, around half of the banks reported using a combination of statistical analysis and expert judgement. 23% of banks disclosed using statistical analysis only and 5% disclosed using expert judgement only. One bank stated that it outsourced the development of the scenarios to a leading economic research company. The remaining banks (22%) were not specific about the methods they applied.
119. ESMA observed that almost all banks disclosed that they used multiple sources of information to estimate their ECL.

Figure 11: Information sources used for the FLI (% of banks disclosed)



120. According to the financial statements of a quarter of the banks in the sample, their baseline scenarios were anchored to the ECB forecasts.
121. Almost all banks stated explicitly that they incorporated FLI in the estimation of PD. However, three quarters of the banks did not indicate what specific approach they used. 7 banks stated that they used a direct conditioning approach. One bank used a shift-factor approach and another one reported using the Vasicek one-factor model.
122. 75% and 34% of banks stated that they incorporated FLI in the estimation of LGD and EAD respectively with other banks not being specific on this.
123. 70% of banks made specific disclosures on the frequency with which they update their FLI used to calculate ECL. 34% of those banks updated this information at least quarterly, 23% at least semi-annually and 14% at least annually. Information is updated more frequently with significant macroeconomic changes. Several banks indicated that, due to COVID-19, FLI was updated in 2020 more often than in previous years.
124. The length of the detailed forecast period applied by the vast majority of banks in the sample varies between two and five years.

Figure 12: Length of the detailed forecast period (% of banks disclosed)



125. 16% of banks (8 banks) stated in their financial statements that they changed the length of their detailed forecast period in 2020. 4 banks had a longer and another 4 banks a shorter period compared to the previous year.

6.3.3 Conclusions and recommendations

126. While ESMA welcomes explanations on how the impact of the pandemic was considered in the macro-economic scenarios in the 2020 financial statements of many banks, it sees room for improvement in the banks' disclosures on FLI.
127. In particular, ESMA encourages banks to provide more specific disclosures on the main judgements and estimations related to uncertainties that were taken into account when defining the macroeconomic scenarios and to disclose the methodology used to determine



the scenario weightings. This applies in particular to smaller banks, as ESMA has identified significant differences in the level of detail provided by the large banks and the smaller banks in the sample.

128. ESMA also recommends that credit institutions disclose quantitative information on the macroeconomic variables considered for each scenario and main geographical areas and/or sectors. ESMA notes that anchoring the baseline macroeconomic scenarios to the ECB forecasts constitutes good practice.
129. Moreover, ESMA notes that a significant number of banks in the sample provided very limited narrative descriptions and encourages banks to provide more details on the qualitative characteristics of the scenarios (e.g. rationale for specific developments in the macroeconomic variables), in particular on the main assumptions underlying the alternative scenarios.
130. ESMA expects banks to disclose more details of the specific approaches they use for incorporation of FLI in the estimation of PD, LGD and/or EAD. The details on how to include this information in the estimation of PD are of particular importance for banks that do not use a portfolio approach for determining SICR, which is the case for a significant number of banks in our sample based on our observations presented in section 6.2.2.
131. ESMA also recommends that banks improve disclosures on how they determined the relevance of macroeconomic variables for ECL estimation.
132. To help users better understand the trends in macro-economic variables ESMA recommends the use of visual helps such as graphs.
133. We refer to Examples 7-9 in the Appendix to this report which illustrate how IFRS 7 requirements with regard to FLI can be implemented in practice.

6.4 Explanation of changes in loss allowances

6.4.1 Relevant requirements

134. IFRS 7 paragraph 35H requires an explanation of changes in the loss allowance and the reasons for those changes to be provided by class of financial instrument in the form of a tabular reconciliation of the loss allowance from the opening balance to the closing balance, showing separately the changes for financial assets allocated to stages 1, 2 and 3 and for assets that are purchased or originated credit-impaired (POCI).
135. IFRS 7 paragraph B8D states that in addition it may be necessary to provide a narrative explanation of the changes. Furthermore, paragraph B8E requires separate disclosure of information about the changes in the loss allowance for loan commitments and financial guarantee contracts.
136. Moreover, in accordance with IFRS 7 paragraph 35I, an entity shall provide an explanation of how significant changes in the gross carrying amounts of financial instruments during the period contributed to changes in the loss allowance. The relevant

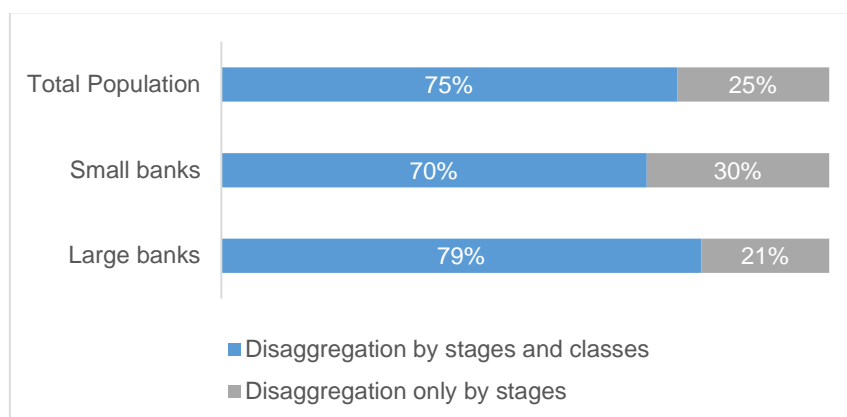
qualitative and quantitative information shall be provided per stage (and separately for POCI assets).

137. According to IAS 1 paragraph 82(ba), the income statement shall include a separate line item presenting impairment losses determined in accordance with impairment requirements of IFRS 9.

6.4.2 Evidence from reviews

138. ESMA observed that almost all issuers in the sample provided a tabular reconciliation of the loss allowance from the opening to closing balance for each stage. However, ESMA noted that the tabular reconciliations generally showed a very low level of disaggregation by class of financial instruments. 25% of banks (21% of large banks and 30% of small banks) provided no disaggregation at all (apart from the stage breakdown). 45% of banks that disaggregated their loss allowances for financial assets (42% of large banks and 50% of small banks) provided a breakdown by IFRS 9 measurement category (i.e. financial assets measured at amortised cost and financial assets measured at fair value through OCI), with 9% of these banks providing no further breakdowns. 36% of banks showed allowances for loans to banks and loans to customers separately. 21% presented a more detailed breakdown by loan type or by customer type. 6% disclosed separately a reconciliation for the lease receivables. 24% used some other criteria for disaggregation (e.g. distinguishing between individual and collective allowances or between allowances for the parent company and for subsidiaries).

Figure 13: Disaggregation within the tabular reconciliations (% of banks)



139. 32% of banks provided reconciliation only for some classes but not for all financial assets subject to impairment according to IFRS 9. Only 70% of banks (79% of large banks, 60% of small banks) provided a separate tabular reconciliation by stage for their off-balance sheet commitments such as loans commitments and financial guarantees.

140. Only 60% (65% of large banks, 53% of small banks) provided a narrative explanation of the reasons for the changes in the loss allowance. Almost all of those banks provided explanations of effects due to the COVID-19 pandemic (e.g. sectors most affected, detailed information on stage transfers, effects of post-model adjustments). Some banks provided details on the developments in specific sectors (e.g. increased restructurings and write-

offs). Other explanations provided by banks included e.g. growth in particular sectors, FX-effects, oil price developments, implementation of an internally developed model which showed lower provisions, updates to loan disposal plan, effects connected with a new definition of default. Several banks presented and described changes in some APMs such as stage 3 coverage ratio, credit impairment ratio. The remaining banks (40%) provided no or very few narrative explanations (e.g. very general statements about the COVID-19 implications).

141. A separate reconciliation for POCI financial assets was disclosed by 36% of the banks in the sample. Only 27% of banks disclosed the total amount of undiscounted expected credit losses at initial recognition on POCI assets initially recognised during the reporting period. On the basis of information presented in the financial statements of other banks, it was in many cases difficult to assess whether material amounts were not disclosed.
142. 77% (92% of large banks, 58% of small banks) provided explanations on how significant changes in the gross carrying amount contributed to changes in loss allowance. However, around 40% of those banks did not (or not sufficiently) disaggregate this information and a further 14% provided this information only partially (e.g. only for loans to customers but not for loans to credit institutions).
143. Almost all banks provided quantitative information on the changes in the gross carrying amounts. However, one third of the banks did not sufficiently disaggregate this information to classes of financial instruments and around 10% provided the quantitative information only partially (e.g. only on selected classes of loans).
144. Significantly fewer banks (around 50%) provided qualitative information with explanations of changes in gross carrying amounts. Moreover, around 15% of banks provided this information partially.
145. Around 60% of banks disclosed a reconciliation for gross carrying amounts in a tabular format. 30% (38% of large banks and 18% of small banks) provided a joint reconciliation of loss allowance and gross carrying amount in one table.
146. The table below provides details on the reconciliation items included in the loss allowance movement schedules.

Table 4: *Items included individually in the reconciliation of loss allowances*

<i>Item name</i>	<i>Percentage of banks</i>
<i>Changes because of financial instruments originated or acquired during the reporting period</i>	81%
<i>Changes due to modifications that did not result in derecognition</i>	30%
<i>Amount of write-offs</i>	81%
<i>Amount of other derecognition events / repayments</i>	72%

<i>Transfers to stage 1</i>	81%
<i>Transfers to stage 2 from stage 1</i>	84%
<i>Transfers to stage 2 from stage 3</i>	79%
<i>Transfers to stage 3</i>	81%
<i>Increases due to changes in credit risk</i>	24%
<i>Decreases due to changes in credit risk</i>	20%
<i>Changes in models / parameters</i>	46%
<i>Other movements</i>	37%

147. ESMA found significant diversity in the presentation of the impact of changes in the calculation methodology and model parameters. While four banks presented those changes separately, 7 banks summarised the effect in one reconciliation item (the aggregated amount disclosed by five of those banks was zero). Furthermore, 6 banks presented in their reconciliations only the individual item related to changes in calculation methodology and three banks the individual item “Changes in the model parameters”. In many cases it was difficult to understand which specific changes were meant since no references to other notes were included.
148. Other individual items disclosed in the reconciliations include post-model adjustments, changes in FX rates, changes in the scope of consolidation, transfers under IFRS 5, unwinding and recoveries on loans previously written-off.
149. The reconciliations presented by a small number of banks showed a very low level of disaggregation including for example only “Additions”, “Utilisations”, “Reversals” and “Other changes” with no additional explanations.
150. There were some differences in the methodology used by banks when presenting the reconciliation items. For example, some banks included in the amount of transfers between stages the effect due to changes in the impairment amount during the reporting period whereas other banks included in the stage transfer amounts only the existing impairment (i.e. before stage change) and presented the change in the impairment amounts due to the stage transfer separately. For 17% of banks, it was not entirely clear which general methodology they applied when presenting the movements.
151. The following table provides details on the reconciliation items included in the reconciliation of gross carrying amounts.

Table 5: Items included individually in the reconciliation of gross carrying amounts

<i>Item name</i>	<i>Percentage of banks</i>
<i>Changes because of financial instruments originated or acquired during the reporting period</i>	62%
<i>Changes due to modifications that did not result in derecognition</i>	21%
<i>Amount of write-offs</i>	48%
<i>Amount of other derecognition events / repayments</i>	41%
<i>Transfers to stage 1</i>	68%
<i>Transfers to stage 2 from stage 1</i>	70%
<i>Transfers to stage 2 from stage 3</i>	70%
<i>Transfers to stage 3</i>	70%
<i>Other movements</i>	31%

152. When explaining the movements in loss allowances, 74% of issuers referred to specific issues related to COVID-19. Many banks provided this information in connection with the explanation of the management overlays.

153. ESMA noted that only around 25% of banks provided a direct link between ECL movements and income statement items, for example by indicating which reconciliation items affected the income statement and which did not.

6.4.3 Conclusions and recommendations

154. ESMA emphasises the importance of providing a tabular reconciliation by stage for all material assets classes and, separately, for off-balance sheet commitments such as loan commitments and financial guarantees. ESMA notes a lack of detail in the explanations of changes in loss allowances made by many banks. The disaggregation by class of financial instruments required by IFRS 7 paragraph 35H was often provided only to a very limited extent or in some cases not provided at all. Moreover, ESMA observes that many banks did not provide sufficient narrative explanations of the reasons for the changes in the loss allowance. ESMA highlights that, to provide sufficient transparency, reconciliations should be disclosed both at the entity level and for significant portfolios with shared credit risk characteristics and should be accompanied by narrative explanations of changes if those additional explanations are necessary to understand the reasons for the changes.

155. The review has also shown that the explanations on how significant changes in the gross carrying amount contributed to changes in loss allowances were often not sufficiently detailed. To ensure better transparency, ESMA strongly recommends that credit institutions disclose a joint reconciliation of loss allowance and gross carrying amount.

156. With regard to the reconciliation items, ESMA recommends that a clear distinction is made between the impact of changes in the calculation methodology and in model parameters, if relevant and material. In addition, narrative explanation of such changes (or cross-references to other notes, management commentary or risk report) should be included. For banks with significant management overlays, ESMA considers it appropriate to include specific reconciliation items that address the specific management overlays.
157. Finally, ESMA urges banks to provide a direct link between ECL movements and income statement items, for example by indicating which reconciliation items affected the income statement and which did not.
158. We refer to Examples 10 and 11 in the Appendix to this report which illustrate how IFRS 7 requirements with regard to changes in loss allowances can be implemented in practice.

6.5 Transparency of disclosures on credit risk exposures

6.5.1 Relevant requirements

159. IFRS 7 paragraphs 34(a) and 35B require disclosure of quantitative data about the exposure to credit risk. This disclosure shall include information on significant credit risk concentrations. More specifically, an entity shall disclose in accordance with IFRS 7 paragraph 35M, by credit risk rating grades, the gross carrying amount of financial assets and the exposure to credit risk on loan commitments and financial guarantee contracts. This information shall be provided separately per stage and for POCI financial assets.
160. When a concentration of credit risk exists, IFRS 7 paragraph B8H requires the provision of information that enables users of financial statements to understand whether there are groups or portfolios of financial instruments subject to risk concentration.
161. IFRS 7 paragraph B8I explains that the number of credit risk rating grades used to disclose the information in accordance with paragraph 35M shall be consistent with the number that the entity reports to key management personnel for credit risk management purposes. Furthermore, if past due information is the only borrower-specific information available and an entity uses past due information to assess SICR, an entity shall provide an analysis by past due status for those financial assets.
162. When an entity has measured expected credit losses on a collective basis and was not able to allocate credit risk exposures to the credit risk rating grades allocated to stage 2 and 3, IFRS 7 paragraph B8J requires application of the requirement in paragraph 35M to those financial instruments that can be directly allocated to a credit risk rating grade and a separate disclosure of the gross carrying amount of financial instruments for which lifetime expected credit losses have been measured on a collective basis.
163. To enable users of financial statements to understand the effect of collateral and other credit enhancements, IFRS 7 paragraph 35K requires disclosure of the amounts that best represents its maximum exposure to credit risk at the end of the reporting period by class

of financial instrument without taking account of any collateral held or other credit enhancements, a narrative description of collateral held as security and other credit enhancements as well as quantitative information about the credit enhancements for financial assets that are credit-impaired at the reporting date.

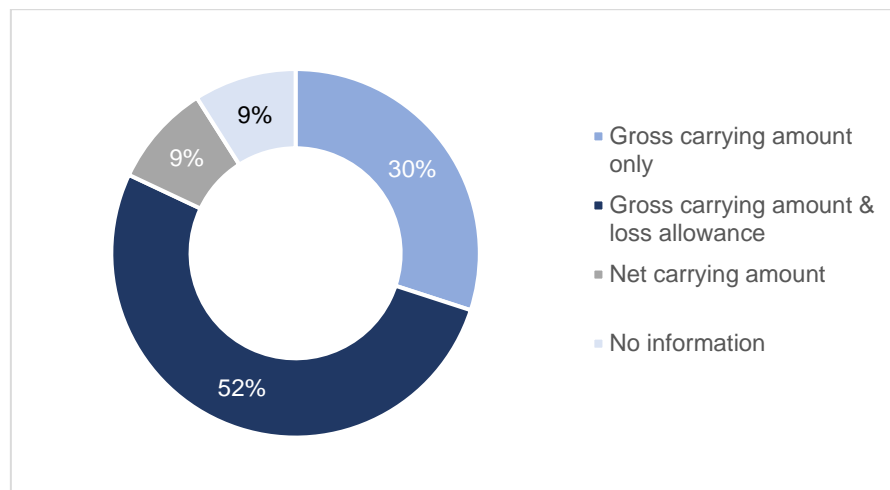
164. Moreover, according to IFRS 7 paragraph 35L, companies shall disclose the contractual amount outstanding on financial assets that were written off during the reporting period and are still subject to credit enforcement activity.

6.5.2 Evidence from reviews

Disaggregation by credit risk category and by stage

165. ESMA observed that while 90% of banks made disclosures of credit exposures by stage and by credit risk categories, there were differences in the level of detail provided. The graph below illustrates which amounts were disaggregated by the banks in the sample.

Figure 14: Disaggregated amounts disclosed by credit risk category and by stage (% of banks disclosed)

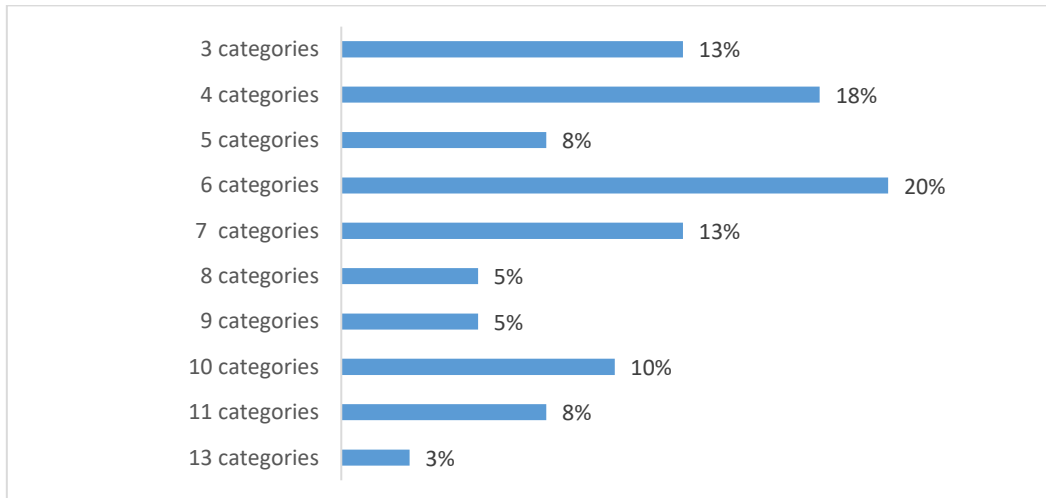


166. About half of the banks (61% of large banks and 28% of small banks) that disclosed credit exposures by credit risk categories disaggregated exposures by PD ranges. Another half of the banks disaggregated by internal or external credit risk classes or by rating categories. The level of disaggregation varied significantly, ranging from three classes (e.g. low/medium/high or investment grade/non-investment grade/not rated) to 13 rating classes.

167. The following graph illustrates the number of credit risk categories (ranges of PD or ranges of internal ratings or other credit categories) reported by the banks in the sample:¹¹

¹¹ For banks that use both internal and external rating categories, internal rating categories are presented.

Figure 15: Number of credit risk categories (% of banks disclosed)

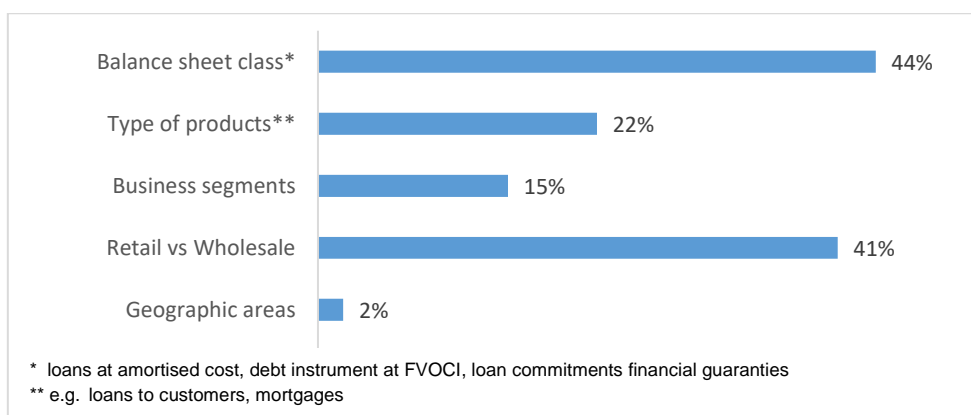


168. ESMA noted that only 57% of banks disclosed the mapping of their internal credit risk ratings to external ratings (such as S&P or Moody's) and/or ranges of PD.

169. 66% of banks disclosed a disaggregation of credit exposures for all balance sheet and off-balance sheet positions subject to impairment. 11% disaggregated credit exposures only partially (e.g. only for loan portfolios, only for lending at amortised cost or not for off-balance sheet items).

170. Around two-thirds of banks (61% of large banks, 72% of small banks) used at least one further breakdown dimension in addition to the breakdown by stages and risk categories, as shown in the graph below.

Figure 16: Granularity disclosed for disaggregation by stage and by credit risk category (% of banks disclosed)



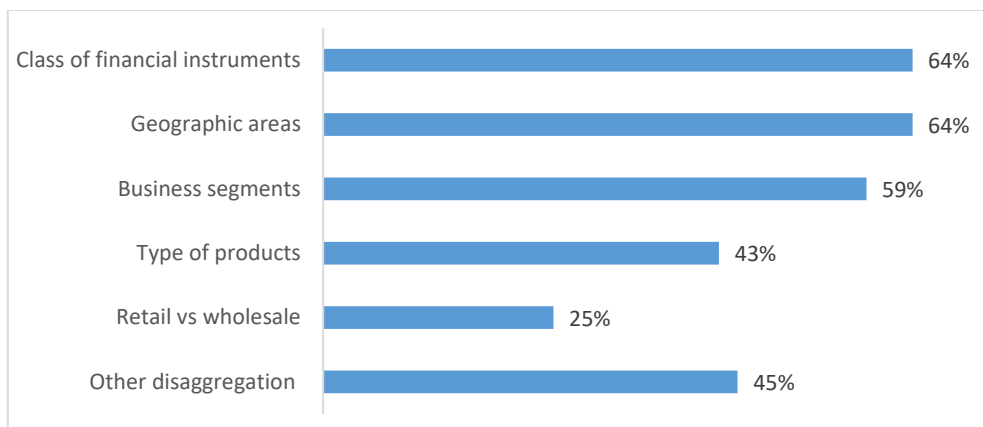
171. The category "Other" mainly includes the type of counterparty (e.g. central banks, corporates, SME, households) and forbearance status (e.g. forborne performing and forborne non-performing).

172. Four banks used two additional breakdown dimensions, and thus provided a particularly high level of disaggregation.

Disaggregation by stage only

173. Looking only at disaggregation by stage, around 80% of banks in the sample used at least one further breakdown dimension (59% used more than one additional dimension). The following graph illustrates the disaggregation criteria used.

Figure 17: Granularity disclosed for disaggregation by stage (% of banks disclosed)



174. Only 14% of banks commented on the disclosed disaggregation providing further explanations on the risk concentration.

Other disclosures

175. 61% of banks (54% of large banks and 70% of small banks) disaggregated their credit exposures by past due time buckets. 26% of those banks provided disaggregation for both gross carrying amount and loss allowance, 30% for gross carrying amount only, and 44% for carrying amount net of loss allowance. 56% disclosed this disaggregation separately for stage 2 and stage 3 financial instruments. 85% of the banks that provided a breakdown by past due time buckets also disclosed some more granular information such as product class, geographic area or business segment.

176. Almost 90% of the banks in the sample provided separately quantitative information regarding modified contracts exposures. Around three quarters of those banks disclosed details on forbore status. On the other hand, only very few banks disclosed quantitative information on the exposure under probation period.

177. About half of the banks provided quantitative information on loans subject to COVID-19 related support measures. However, only 9% of banks disclosed separately quantitative information on substantial and non-substantial modification of those loans or stated that the effect of substantial modifications was not material.

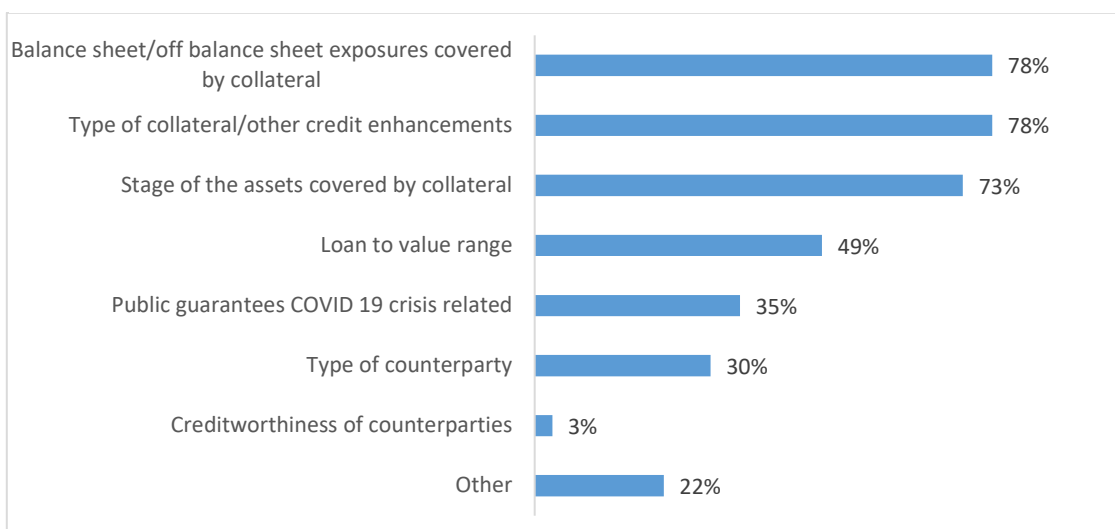
178. 75% of banks (83% of large banks and 65% of small banks) disclosed quantitative information regarding exposures under moratoria or other relief measures related to the COVID-19 pandemic. Two-thirds of these banks disclosed this information separately for

moratoria, while the remainder provided aggregated quantitative disclosures for moratoria and other relief measures (such as reduced payments, interest only payments, rescheduling of maturity days or interest rate reduction).

179. Around 60% of the banks with quantitative disclosures on relief measures disaggregated this information by stages. 36% (40% of large banks, 31% of small banks) provided a breakdown by type of relief measures (legislative moratoria, voluntary wide industry moratoria, individual initiative by institution), 24% (20% of large banks, 31% of small banks) by forbore status (e.g. performing/non-performing). A few banks disclosed reconciliations of forbore exposures between opening and closing balances. 36% provided a description of main features of moratoria and/or other relief measures (such as description of terms in the home country and abroad or details on the accounting treatment). Around 80% of banks provided other granular information such as collateralisation of exposures, breakdown by customer type, industry/business segment or geographic area. 36% placed a specific focus on the SME and provided separate information on the SME exposures subject to relief measures.

180. 48% of banks (63% of large banks and 30% of small banks) disclosed detailed quantitative information and a narrative description of collateral held as security and other credit enhancements providing e.g. specific information about the nature of collateral received and about the basis on which collateral is valued, or about the main types of collateral and guarantees. The collateral disclosures of a further 36% of banks included detailed quantitative information but only high-level narrative description. The remaining banks in the sample provided only insufficient (9%) or no (7%) quantitative and qualitative information. The disclosures were deemed insufficient when, for example, only information about repossessed collateral was disclosed. Another example of insufficient disclosure is providing only the value of collateral recoveries estimated under the recovery scenario for impaired exposures.

Figure 18: Criteria for disaggregation of quantitative credit enhancements information (% of banks disclosed)



181. Disaggregation by balance sheet exposures mostly included a breakdown into loans and debt securities as well as into loans to credit institutes and loans to customers. The



level of disaggregation by loan to value (LTV) range in the sample varied significantly, with some entities providing information for 6-7 LTV ranges, while the other banks only distinguished between undercollateralised and overcollateralised exposures or between fully and partially secured exposures.

182. Only 30% of banks disclosed contractual amounts that were written-off and still subject to enforcement activity.
183. In addition to the above information, 63% of banks disclosed information regarding some specific concentrations of credit risk. Examples of such disclosures include exposure-related ratios (gross amount to total large risk exposures, capital gross amount to total regulatory capital) for the top 1, 10, 50 and 100 borrowers; weight in total exposure of the group's 20 largest performing exposures in terms of EAD; exposure to country risk for countries with a credit rating lower than B). Only half of these banks provided information on the significance of adopted thresholds (e.g. no group entity is allowed to assume exposures exceeding 25% of its eligible capital with a single customer or group of associated customers).
184. Only a few banks in the sample disclosed details on the sectors most affected by COVID-19.

6.5.3 Conclusions and recommendations

185. ESMA observed that almost all banks in the sample disclosed quantitative data about the exposure to credit risk providing, in some cases, a high level of disaggregation. Around two-thirds of banks used at least one further breakdown dimension in addition to the breakdown by stages and risk categories.
186. ESMA emphasises that, in order to make significant credit risk concentrations transparent, issuers should provide disaggregation at an appropriate level of detail. For example, PD ranges should be sufficiently narrow to provide useful information about the credit quality of exposures, particularly for higher risk bands. ESMA considers it useful to provide a breakdown by stages for all levels of disaggregation. Moreover, ESMA strongly recommends disclosing the disaggregation of gross carrying amounts required by paragraph 35M of IFRS 7 with the corresponding ECL amounts.
187. If necessary for the understanding of the significant risk concentrations, narrative explanations of the quantitative data should be provided. Quantitative disclosures and the narrative descriptions included in different parts of the financial statements or in a management report/risk report should be clearly linked to each other. In some cases, ESMA observed that information relevant to assessing a bank's credit risk exposure and understanding its significant credit risk concentrations (such as credit risk by stage and/or by credit risk category) was partly disclosed within unaudited parts of banks' risk reports. ESMA recommends that banks and their auditors carefully review those parts of the risk reports and consider the inclusion of these disclosures in the audited parts of the risk report or in the financial statements.



188. ESMA encourages banks to disclose the mapping of banks' internal credit risk ratings to external ratings (such as S&P or Moody's) and/or ranges of PD. Furthermore, ESMA considers quantitative information on the modified financial assets as well as exposures under probation period (if material) to be useful.
189. ESMA emphasises that paragraphs 35K and 35D of IFRS 7 require disclosures on credit enhancements to be sufficiently granular to enable users to understand material concentrations of credit risk. ESMA stresses the importance of specific information about the nature of collateral received, the main types of collateral and guarantees and the basis on which collateral is valued. Where appropriate, disaggregation of exposures by loan to value (LTV) ranges at appropriate level of details can be provided.
190. Finally, ESMA reminds users of the requirement in IFRS 7 paragraph 35L to disclose the contractual amount outstanding on financial assets that were written off during the reporting period and are still subject to credit enforcement activity (if material).
191. We refer to Examples 12-18 in the Appendix to this report which illustrate how IFRS 7 requirements with regard to transparency of disclosures on credit risk exposures can be implemented in practice.

6.6 Expected credit losses (ECL) sensitivity disclosures

6.6.1 Relevant requirements

192. IFRS 7 paragraph 1 requires entities to provide disclosures that enable users to evaluate (a) the significance of financial instruments for the entity's financial position and performance and (b) the nature and extent of risks arising from financial instruments to which the entity is exposed. Moreover, IFRS 7 paragraph 35B(b) requires disclosure of quantitative and qualitative information that allows users of financial statements to evaluate the amounts in the financial statements arising from ECL and paragraph 35E requires disclosure of additional information that is necessary to meet objectives of paragraph 35(b) if the disclosures provided in accordance with paragraphs 35F-35N are insufficient. Furthermore, IFRS 7 paragraph 35D requires entities to consider the appropriate level of details.
193. In accordance with paragraphs 1 and 125 of IAS 1, information about the assumptions about the major sources of estimation uncertainty at the end of the reporting period shall be disclosed and presented in a manner that helps users of financial statements to understand the judgements that management makes. As examples of this type of disclosures, paragraph 129 mentions the sensitivity of carrying amounts to the methods, assumptions and estimates underlying their calculation, including the reasons for the sensitivity.

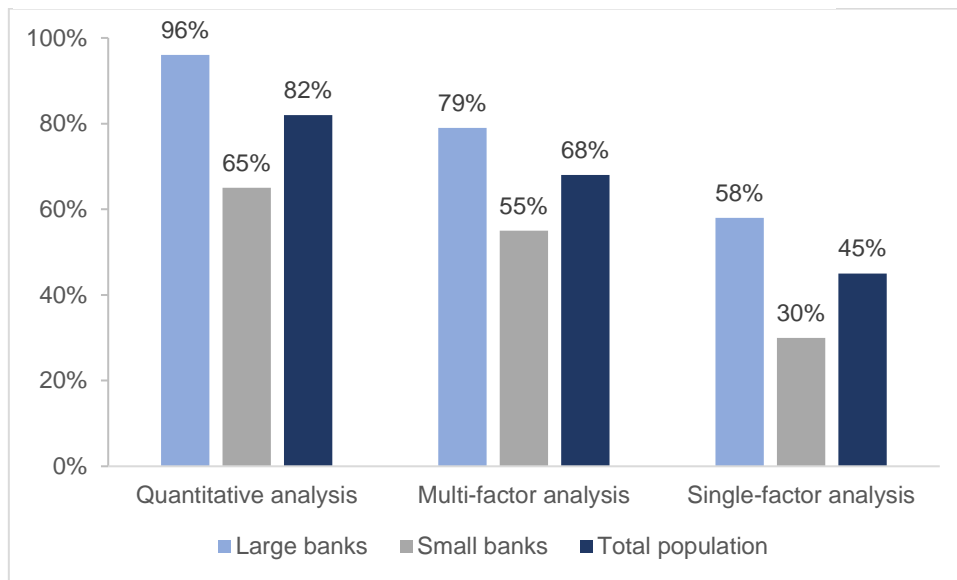
6.6.2 Evidence from reviews

194. ESMA observed that almost all banks in the sample (90%) explicitly described ECL as a source of estimation uncertainty. 75% of banks explicitly disclosed COVID-19 as a source of estimation uncertainty.

195. Almost all banks explained the nature of the assumptions or other ECL estimation uncertainty. However, 32% of the banks in the sample provided boilerplate disclosures and included only limited entity-specific details.

196. Around 80% of banks disclosed some sort of quantitative ECL sensitivity analysis data in the notes to the financial statements.

Figure 19: Quantitative sensitivity analysis (% of banks disclosed)



197. Thereby 68% of banks (83% of banks that provide quantitative ECL sensitivity disclosures) provided quantitative sensitivity disclosures based on their macro-economic scenarios (multi-factor sensitivity disclosures¹²). The multi-factor sensitivity analysis of 52% of all banks in the sample (77% of banks that provided multi-factor sensitivity disclosures) showed information resulting from applying a 100% weighting to all their macro-economic scenarios. The sensitivity disclosures of 16% of the banks (23% of the banks providing multi-factor sensitivity disclosures) represented either a 100% weighting of some (but not all) scenarios (e.g. downside scenarios only) or the impact of shifts in the weighting of scenarios (e.g. applying equal weighting to all scenarios, changing the baseline scenario, a 10-point reduction in the weighting of scenario 1 in favour of the less favourable scenario 2).

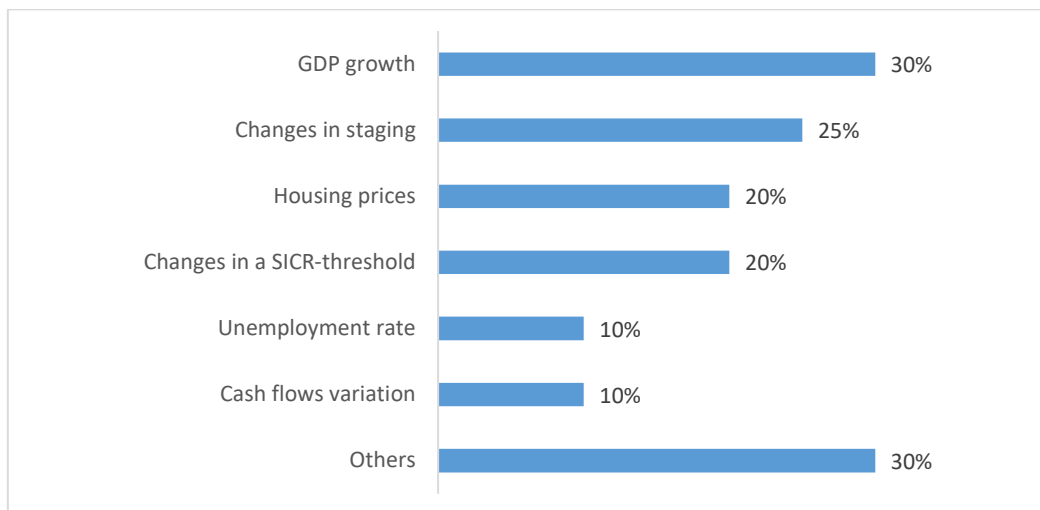
198. Around 40% of banks that provided multi-factor sensitivity disclosures presented disaggregated analysis disclosing sensitivities analysed by geographic region, business line or loan type. ESMA noted a high degree of diversity in terms of the level and type of

¹² A multi-factor approach measures the sensitivity to changing several parameters at the same time.

disaggregation. A few banks provided disaggregation analysed by ECL stage, PD and LGD components or point-in-time and forward-looking component. A small number of banks provided ECL sensitivity analysis by multiple factors, such as the impact of a change in staging (assumption that the entire accumulated impairment is measured based on 12-month expected losses) disaggregated per country and per industry group (high, moderate or low expected loss impact due to COVID-19 crisis).

199. The large majority of banks disclosed ECL sensitivity as a monetary amount. However, a small number of banks disclosed the effect as a percentage of ECL.
200. 45% of banks (56% of banks disclosing quantitative ECL sensitivity) disclosed an isolated quantitative impact of a change in an individual macroeconomic variable (single-factor sensitivity) for at least one variable, with 32% of banks providing both multi-factor and single-factor sensitivity disclosures.
201. The factors used for the purposes of single factor ECL analysis varied, with most banks disclosing ECL sensitivity to changes in GDP growth. Figure 17 shows the factors used by the banks (the percentage value refers only to the banks that performed the single-factor analysis).

Figure 20: Factors used for the single-factor analysis (% of banks disclosed)



202. Banks using the factor “Changes in staging” analysed, for example, the effect of the assumption that all performing assets are stage 2 or stage 1, or assumed a transfer of 1% of stage 1 assets to stage 2.
203. 45% of banks that provided a single-factor analysis disaggregated the sensitivity effect.
204. Only 20% of banks disclosed a good quality explanation of changes in prior assumptions (60% of banks did not disclose this information and a further 20% of disclosures were boilerplate and disclosed limited entity specific information). We note that a clear explanation and description of changes to past ECL assumptions and sensitivity is important information to users of the financial statements, particularly during the pandemic.



205. We note that 14% of banks quantified the changes in previous ECL assumptions (i.e. qualitative information) attributed by the bank to COVID-19.
206. 68% of banks (63% of large banks and 75% of small banks) did not disclose comparative information for the quantitative ECL sensitivity analysis. The lack of comparative data for ECL sensitivities limits the ability of users to understand changes in ECL sensitivity assumptions applied in the current period.
207. ESMA noted that 30% of banks improved sensitivity disclosures compared to the previous reporting period. A further 9% of banks included quantitative disclosure, although no such disclosure was provided in the previous year.
208. Examples of improved disclosures include the addition of a single-factor sensitivity analysis, providing further and relevant disaggregated ECL sensitivity information and including sensitivity data related to additional macroeconomic scenarios.
209. 16% of banks disclosed a material quantitative change in the ECL sensitivity during the period attributable to the COVID-19 pandemic, for example, by reporting the amount of ECL increase due to COVID-19 or disclosing the effect of moving all exposures affected by pandemic-related payment breaks from stage 1 to stage 2.
210. 25% of banks described limitations to the sensitivity analysis. 44% of these banks mentioned limitations that were explicitly attributable to the pandemic, such as not considering the impact of management overlays. Other limitations included not taking into account certain assets (e.g. stage 3 assets) or difficulties in considering the relationship between various macroeconomic variables. Some banks generally pointed out the high level of complexity of the ECL models used as a limitation factor.

6.6.3 Conclusions and recommendations

211. ESMA welcomes the fact that 30% of banks improved sensitivity disclosures compared to the previous reporting period. However, the review also showed that the ECL sensitivity disclosures were of varying quality. While almost all banks explained the nature of the assumptions or other ECL estimation uncertainty, a significant number of the banks in the sample provided boilerplate disclosures and included only limited entity-specific details.
212. Similarly, less than half of the banks in the sample that provided multi-factor sensitivity disclosures showed a disaggregated ECL sensitivity analysis. In the absence of specific requirements in the standard, there was a high degree of diversity in terms of the level and type of the disaggregation.
213. ESMA considers it very helpful to disclose (in addition to other information) the sensitivity analysis based on a 100% weighting of each macroeconomic scenario.
214. A low number of banks in the sample disclosed a good quality explanation of changes in prior assumptions. ESMA notes that a clear explanation and description of the changes in previous assumptions and the degree of sensitivity is important information for users of



financial statements, especially given the uncertainties arising from pandemic-related developments.

215. Taking in consideration that the majority of banks in the sample did not disclose comparative information for the quantitative ECL sensitivity analysis, ESMA points out that the lack of comparative data for ECL sensitivities limits the ability of users to understand changes in ECL sensitivity assumptions applied in the current period.
216. Based on the review findings, which indicate significant variety in banks' disclosures, ESMA will assess, in anticipation of the IASB's Post-implementation Review (PIR) of impairment requirements in IFRS 9 and related disclosures, whether specific requirements and guidance on the ECL sensitivity disclosures should be added to IFRS 7.
217. We refer to Examples 19-21 in the Appendix to this report which illustrate how IFRS 7 and IAS 1 requirements with regard to sensitivity disclosures can be implemented in practice.

7 Next steps

218. ESMA expects issuers and their auditors to consider the findings of this review when preparing and auditing the financial statements. ESMA expects European enforcers to take appropriate enforcement actions whenever material misstatements are identified. ESMA and European enforcers will monitor the progress of those actions.

8 Appendix: Examples of disclosures

The examples presented below illustrate how selected IFRS 7 requirements can be implemented in practice. These examples should not be seen as exhaustive or unique, as there might be different ways for meeting IFRS requirements and objectives based on individual facts and circumstances of each financial institution. Accordingly, certain elements of these examples might be further developed in order to better reflect individual circumstances of respective banks. By including these examples in this report, ESMA does not express any view on whether the disclosed information therein is complete and accurate or on whether it might not be further questioned as part of regular review by national enforcers.

In addition to extracts from the financial statements of some of the banks in our sample, examples from the financial statements of several UK banks are also presented below. As mentioned in section 4 of this report, best practice recommendations on banks' ECL disclosures were developed in the past by an industry task force established by the UK banking supervisors. Following the publication of these recommendations, the UK banks committed to adapt them. ESMA observed that the disclosures of several UK banks contain high quality, comprehensive and comparable ECL disclosures.

Example 1: Management overlays (post-model adjustments)

Post-model adjustments

Post-model adjustments to expected credit loss allowance estimates are adjustments which are used in circumstances where existing inputs, assumptions and model techniques do not capture all relevant risk factors. Existing inputs, assumptions and model techniques might not capture all relevant risk factors due to transient circumstances, insufficient time to appropriately incorporate relevant new information into the rating or re-segmentation of portfolios and when individual lending exposures within a group of lending exposures react to factors or events differently than initially expected. The emergence of new macroeconomic, microeconomic or political events, along with expected changes to parameters, models or data that are not incorporated in current parameters, internal risk rating migrations or forward-looking information are examples of such circumstances. In general RBI units use post-model adjustments to allowances for expected credit losses only as an interim solution. In order to reduce the potential for bias post-model adjustments are of a temporary nature and in general valid for no longer than one to two years. All material adjustments are authorized by the Group Risk Committee (GCM). From an accounting point of view all post-model adjustments are based on collective assessment, but do not necessarily result in a change in expected credit losses between the stages.

Due to the complexity of the expected credit loss calculation, and the dependency of variables on one another, the table below represents a best estimate of the included post-model-adjustments in the accumulated expected credit loss amounts in Stage 1 and 2 (balance sheet items and off-balance sheet items).

2020 in € thousand	Modelled ECL	Post-model adjustments				Total		Total
		COVID-19 related		Other				
Central banks	42	0	0.0%	0	0.0%	0	0.0%	42
General governments	10,316	1,714	16.6%	0	0.0%	1,714	16.6%	12,030
Banks	1,231	23	1.9%	1	0.0%	24	1.9%	1,255
Other financial corporations	46,122	0	0.0%	(0)	0.0%	(0)	0.0%	46,122
Non-financial corporations	208,667	202,710	97.1%	43,658	20.9%	246,367	118.1%	455,035
Households	334,331	56,060	16.8%	17,600	5.3%	73,660	22.0%	407,991
Total	600,710	260,507	43.4%	61,258	10.2%	321,765	53.6%	922,474

2019 in € thousand	Modelled ECL	Post-model adjustments				Total		Total
		COVID-19 related		Other				
Central banks	118	–	–	0	0.0%	0	0.0%	118
General governments	6,547	–	–	0	0.0%	0	0.0%	6,547
Banks	699	–	–	0	0.0%	0	0.0%	699
Other financial corporations	18,207	–	–	0	0.0%	0	0.0%	18,207
Non-financial corporations	185,707	–	–	57,960	31.2%	57,960	31.2%	243,667
Households	296,891	–	–	34,600	11.7%	34,600	11.7%	331,491
Total	508,170	–	–	92,560	18.2%	92,560	18.2%	600,612

The post-model adjustments resulted in additional Stage 1 and 2 provisions of € 321,765 thousand (2019: € 92,560 thousand), of which € 260,507 thousand are COVID-19 related. In addition to Stage 1 and 2, post-model adjustments of € 2,000 thousand were taken into account in Stage 3.

The COVID-19 pandemic necessitated post-model adjustments, as the ECL models do not fully capture the speed of the changes and the depth of the economic effects of the virus (e.g. the collapse in GDP in the second quarter of 2020 following the outbreak of the pandemic and the measures taken by governments to tackle it). COVID-19 related post-model adjustments reflected the collective impact on the sectors that were especially hard hit by the pandemic: tourism, hotels, further related industries as well as automobile, air travel, oil and gas, real estate and some consumer goods industries. The effects were due to demand shock, supply chain disruptions and crisis containment measures. The related post-model adjustments involve a qualitative assessment of exposures for the expected significant increase in credit risk and their subsequent transfer from Stage 1 to Stage 2. The criteria for the identification of such exposures were predominantly based on the above listed industries (for SMEs) and employment industries (for households) and further refined, where relevant, with information related to the application of the specific moratorium measures. As the adjustments to the expected credit losses are temporary and designed to adequately reflect the current risk situation of customers, it will take some time before a complete picture of the impact of COVID-19 and subsequent measures on individual customers emerges.

The majority of other post-model adjustments related to Russian corporate exposures to cover possible losses in connection with future sanctions. They also reflected slightly higher expected defaults on mortgage loans due to government-imposed interest rate clauses for retail customers in the Czech Republic and model adjustments for Croatia as a result of changed market expectations regarding the debt-to-income ratio.

Source: Raiffeisen Bank International Annual report 2020, pages 174-175 (extracts)

Example 2: Management overlays (post-model adjustments)

Post-model Group management adjustment

To ensure that the measurement of impairment reflects reasonable and supportable information that is available without undue cost or effort at the reporting date about past events, current conditions and forecasts of future economic conditions, the need for a Group management adjustment to the outputs of the Group's staging and impairment measurement methodologies is considered at each reporting date in arriving at the final impairment loss allowance. Such a need may arise, for example, due to a model limitation or late breaking event. At 31 December 2020, the Group's impairment loss allowance of €2.2 billion includes the total impact of a post-model Group management adjustment of c.€237 million. This comprises the total impact of a COVID-19 Group management adjustment of €163 million, a Group management adjustment for late breaking events €24 million, a stage 3 Group management adjustment for residential mortgages €50 million. Further details of each are outlined below.

COVID-19 Group management adjustment

At 31 December 2020, the Group considered the data and measurement limitations arising from the unprecedented impact of COVID-19, including the availability of government supports and the general availability of payment breaks during the year to all customers regardless of credit status. While the majority of payment breaks have expired prior to the reporting date the Group's view is that modelled impairment losses at 31 December 2020 may not fully capture expected credit losses relating to these customers as the days past due count was paused when payment breaks were applied in line with the industrywide approach. As a result, a post-model management adjustment of c.€152 million was applied, with €103 million of this management adjustment allocated to Stage 1 and €49 million to Stage 2. €49 million of the adjustment is related to RoI and UK residential mortgages, a further €72 million relates to the RoI and UK SME portfolios; €27 million is related to the Consumer portfolio; and €4 million relates to property and construction.

Individual assessments for corporate cases and the majority of relationship managed business banking cases, which received COVID-19 concessions have been completed. In addition, sector-level COVID-19 and Brexit risk assessments for the business banking portfolios were completed informed by the prevalence of payment breaks, macro-

prudential sector risk classifications, and management judgement. Certain sectors (e.g. hospitality and entertainment) were identified to be highly impacted where the risk was not considered to be adequately captured in the modelled PD estimates.

Payment break cohorts in the mortgage, consumer and asset finance portfolios were reviewed at a portfolio level. The above portfolio level review was completed with reference to the outputs of the IFRS 9 impairment models, combined with other available data sources including a customer vulnerability assessment and management judgement. The vulnerability assessments were informed by data on loans that availed of payment breaks during 2020 with cross reference to other credit characteristics (e.g. employment type; employment status; employment sector; IFRS 9 staging status).

Given the level at which this review was performed for mortgage, consumer, asset finance and micro SME portfolios, the Group did not reclassify any exposures into a different stage than that initially identified by the impairment models for these portfolios.

The total population remaining with payment breaks in place at 31 December 2020 was €1.2 billion (June 2020: was c.€11.5 billion). Further details in relation to payment breaks are set out on page 166. The Group's management adjustment of €103 million in Stage 1 is broadly equivalent to the impact from a transfer of c.6% of the Group's Stage 1 assets into Stage 2.

In addition, a post model staging adjustment has been applied to relationship managed business banking portfolios whereby all customers who operate in 'highly impacted' sectors, as referenced above, are classified as Stage 2 with a lifetime impairment loss allowance applied. The impact of this staging adjustment is c.€0.9 billion increase in Stage 2 volumes and a c.€11 million increase in impairment loss allowances (€8 million of which relates to RoI SME; €2 million to Investment property; and €1 million to UK SME).



Group management adjustment for late breaking events

A post-model management adjustment to the Group's impairment loss allowance of €24 million has been recognised as at the 31 December 2020 to reflect an acceleration in the incidence of COVID-19 and related announcements on increased social restrictions in the Group's key markets in late December 2020.

This adjustment reflects the estimated impact on impairment loss allowances if the probability weightings applied to the Group's multiple economic scenarios utilised in its impairment models were adjusted so that the upside scenario weighting was reduced to 15% (from 20%) and the downside scenario 1 weighting was increased to 30% (from 25%).

The adjustment is allocated across portfolios to reflect the estimated impacts of the adjusted scenario weightings on impairment loss allowance, with €6 million allocated to Stage 1, €15 million to Stage 2, and €3 million to Stage 3. The stage classification of assets was not changed through the application this management adjustment.

Stage 3 Group management adjustment for residential mortgages

The impairment loss allowance for residential mortgages of €479 million also includes a management adjustment of €50 million (2019: €56 million), for the Retail Ireland portfolio.

The management adjustment for the Retail Ireland mortgage portfolio primarily reflects the concentration of Stage 3 assets which are longer in default, where utilisation of alternative recovery strategies to achieve realisation may require higher impairment coverage on disposal that currently cannot be reasonably reflected in IFRS 9 impairment model methodology. The €50 million (2019: €50 million) management adjustment reflects the profile of the Stage 3 population at 31 December 2020 and has been calculated and applied through increases to the LGD component of modelled impairment loss allowances for Stage 3 residential mortgages that have been in default for more than five years.

The €6 million management adjustment previously applied across all stages in the Retail UK Mortgage portfolio at 31 December 2019, pending further evolution of impairment model methodology, is no longer considered to be required, noting that the combined COVID-19 and the adjustment for late breaking events includes €19 million relating to the Retail UK Mortgage portfolio and the amount of impairment loss allowance for the portfolio is considered to be appropriate.

Source: Bank of Ireland Annual report 2020, pages 228-229 (extracts)

Example 3: Types of management overlays

GDP adjustments

The sharp downturn in economic activity resulting from the lockdown measures taken by governments has led to high volatility of quarterly GDP growth rates (year-on-year) for the 2021 and 2022 forecasts in the countries where the Group operates.

In addition, the authorities have adopted financial support measures for households and businesses to help them cope with this sudden deterioration in activity. Therefore, it seems likely that a time-lag will appear between the deterioration in the portfolios' credit quality and that of activity, the first being delayed with respect to the second.

In order to account for this time-lag, the Group has revised its models and retained for each quarter from 2020 to 2022 the (logarithmic) average variation in GDP over the past eight quarters compared to a base of 100 in 2019.

This adjustment is applied to each of the four scenarios (SG Favourable, SG Central, SG Extended and SG Stress) for the GDP series used to model expected credit losses (see Note 1, paragraph 5).

Adjustment of the margin rate of French companies

In France, the pandemic economic shock caused a decrease in corporate profit margin. According to the Group's economists, this deteriorated margin rate does not, however, take sufficient account of State support measures to reduce the companies' financial difficulties, particularly through the PGE mechanism. To better reflect the impact of these measures, an add-on equivalent to 2.4 points of the 2019 added value has been included in all scenarios for 2020 and the first half of 2021 regarding the margin rate of French companies. However, no add-on has been applied over the remainder of the forecast horizon for expected credit losses.

It is worth noting that should the government stop some of the support measures put in place in the second quarter of 2020, the Group would have to scale down the margin rate add-on of French companies.

As at 31 December 2020, the adjustments in macroeconomic variables and probabilities of default led the Group to increase the amount of impairment and provisions for credit risk by EUR 496 million.

The table below results from the combination of the four scenarios after adjustment; it shows the adjusted GDP growth rates used in the models applied to estimate expected credit losses (in percentages):

	2020	2021	2022	2023	2024
Euro area	(2.8)	(5.8)	(3.8)	1.4	1.7
France	(3.3)	(7.1)	(5.3)	1.6	1.8
United States of America	(2.3)	(3.5)	(1.5)	2.3	2.2
China	(2.3)	1.8	4.6	4.5	4.5



ADJUSTMENTS MADE IN ADDITION TO THE APPLICATION OF MODELS

Sectoral adjustments

The different models used to estimate the expected credit losses may be supplemented by sectoral adjustments that increase or decrease the amount of expected credit losses. These adjustments allow to

better anticipate defaults or recoveries in certain cyclical sectors. These adjustments have been reviewed and supplemented to take account of the specific risk on sectors particularly affected by the Covid-19 crisis.

The total sectoral adjustments amount to EUR406 million as at 31 December 2020 (EUR 244 million as at 31 December 2019).

Adjustments in the context of simplified models

For entities lacking developed models for estimating the correlations between the macroeconomic variables and the probability of default, adjustments have also been performed to reflect the deterioration of credit risk on some portfolios when this deterioration could not be measured by a line by line analysis of the outstanding loans.

These adjustments amount to EUR 424 million as at 31 December 2020 (EUR 78 million as at 31 December 2019).

ADDITIONAL CRITERIA OF TRANSFER TO STAGE 2

In addition to the criteria applied at the individual level to classify deteriorated loans as Stage 2 under-performing loans, an additional analysis has been made on the loan portfolios for which a significant increase in credit risk has been observed since their granting. This analysis resulted in additional transfers to Stage 2 under-performing loans of loans granted to sectors particularly affected by the Covid-19 crisis.

These adjustments amount to EUR 122 million as at 31 December 2020.

Source: Société Générale – *Universal Registration Document 2020* – pages 424-425 (extracts)

Example 4: Governance and post model adjustments

Governance and post model adjustments

The IFRS 9 PD, EAD and LGD models are subject to NatWest Group's model risk policy that stipulates periodic model monitoring, periodic re-validation and defines approval procedures and authorities according to model materiality. Various post model adjustments (PMAs) were applied where management judged they were necessary to ensure an adequate level of overall ECL provision. All PMAs were subject to formal approval through provisioning governance, and were categorised as follows (business level commentary is provided below):

- Deferred model calibrations – ECL adjustments where PD model monitoring indicated that losses were being over predicted but where it was judged that an implied ECL release was not supportable. As a consequence, any potential ECL release was deferred and retained on the balance sheet.
- Economic uncertainty – ECL adjustments primarily arising from uncertainties associated with multiple economic scenarios (also for 2019) and credit outcomes as a result of the effect of COVID-19 and the consequences of government interventions. In both cases, management judged that additional ECL was required until further credit performance data became available on the behavioural and loss consequences of COVID-19.
- Other adjustments – ECL adjustments where it was judged that the modelled ECL required to be amended.

ECL post model adjustments

	Retail Banking £m	Ulster Bank Rol £m	Commercial Banking £m	Other £m	Total £m
2020					
Deferred model calibrations	34	2	13	—	49
Economic uncertainty	158	176	526	18	878
Other adjustments	20	26	19	3	68
Total	212	204	558	21	995
2019					
Deferred model calibrations	—	1	—	—	1
Economic uncertainty	83	14	98	7	202
Other adjustments	45	25	5	4	79
Total	128	40	103	11	282

Note:

(1) For 2019, the PMA for model calibrations of approximately £22 million was reported on a different basis. At that time, the value was based on the required ECL uplift pending systematic updates to model parameters, although the adjustment value was included in the reported ECL. For 2020, the value of PD calibration releases that were deemed not supportable and retained on the balance sheet is disclosed. Therefore, to be consistent in approach, the PMA value for 2019 has been reported as nil. For LGD, where model monitoring outcomes were less clear, and emerged over an extended period, monitoring focused on assessing the adequacy of loss estimates, and was duly assured and governed at the year end.

Source: NATWEST Group Annual report 2020, page 170 (extracts)

Example 5: SICR assessment

2. Accounting policies

(...)

ii. Financial instruments presentation

For the purposes of estimating the impairment amount, and in accordance with its internal policies, the Group

classifies its financial instruments (financial assets, commitments and guarantees) measured at amortised cost or fair value through other comprehensive income in one of the following categories:

- Normal Risk ('stage 1'): includes all instruments that do not meet the requirements to be classified in the rest of the categories.
- Normal risk under watchlist ('stage 2'): includes all instruments that, without meeting the criteria for classification as doubtful or default risk, have experienced significant increases in credit risk since initial recognition.

In order to determine whether a financial instrument has increased its credit risk since initial recognition and is to be classified in stage 2, the Group considers the following criteria:

	<p>Changes in the risk of a default occurring through the expected life of the financial instrument are analysed and quantified with respect to its credit level in its initial recognition.</p> <p>With the purpose of determining if such changes are considered as significant, with the consequent classification into stage 2, each Group unit has defined the quantitative thresholds to consider in each of its portfolios taking into account corporate guidelines ensuring a consistent interpretation in all units.</p>
Quantitative criteria	<p>Within the quantitative thresholds, two types are considered: A relative threshold is those that compare current credit quality with credit quality at the time of origination in percentage terms of change. In addition, an absolute threshold compares both references in total terms, calculating the difference between the two. These absolute/relative concepts are used homogeneously (with different values) in all geographies. The use of one type of threshold or another (or both) is determined in accordance with the process described in note 54, below, and is marked by the type of portfolio and characteristics such as the starting point of the average credit quality of the portfolio.</p>
Qualitative criteria	<p>In addition to the quantitative criteria indicated, various indicators are used that are aligned with those used by the Group in the normal management of credit risk. Irregular positions of more than 30 days and renewals are common criteria in all Group units. In addition, each unit can define other qualitative indicators, for each of its portfolios, according to the particularities and normal management practices in line with the policies currently in force (i.e. use of management alerts, etc.).</p> <p>The use of these qualitative criteria is complemented with the use of an expert judgement, under the corresponding governance.</p>

In the case of forbearances, instruments classified as 'normal risk under watchlist' may be generally reclassified to 'normal risk' in the following circumstances: at least two years have elapsed from the date of reclassification to that category or from its forbearance date, the client has paid the accrued principal and interest balance, and the client has no other instruments with more than 30 days past due balances.

(...)

53. Risk management

(...)

b) Credit risk

(...)

3.Detail of the main geographical areas

(...)

3.1. United Kingdom

(...)

With regards to the determination of classification in stage 2, the quantitative criteria applied by Santander UK are based on identifying whether any increase in PD for the expected life of the transaction is greater than both an absolute and a relative threshold (the PD used in that assessment are adjusted to the transaction's remaining term and also annualised in order to facilitate that the thresholds defined cover the whole range of the transactions maturity dates). The relative threshold established is common to all portfolios and a transaction is considered to exceed this threshold when the PD for the entire life of the transaction increases by 100% with respect to the PD at the time of initial recognition. The absolute threshold, on the other hand, is different for each portfolio depending on the characteristics of the transactions, ranging between 360 bp and 30 bp.

(...)

3.2. Spain

(...)

With regards to the stage 2 classification determination, the quantitative criteria applied in Santander Spain are based on identifying whether any increase in the PD for the expected lifetime of the transaction is greater than an absolute threshold. The threshold established is different for each portfolio based on the transactions characteristics, considering that a transaction is above this threshold when the PD for the life of the transaction increases by a certain quantity over the initial recognized PD. The values of these thresholds depend on their calibration, carried out periodically as indicated in the preceding paragraphs, which currently ranges from 25% to 1%, depending on the type of product and estimated sensitivity.

In the case of non-retail portfolios, Santander Spain uses the transaction's rating as a reference for its PD, taking into account its rating at the time of origination and its current rating, setting absolute thresholds for the different rating bands that depend on each portfolio characteristics. A SICR implies changes in the rating value between 0.1 and 4, depending on the portfolio and the estimated sensitivity (from lower to higher credit quality, the rating range goes from 1 to 9.3).

In addition, for each portfolio, a series of specific qualitative criteria are defined indicating that the exposure has had a significant increase in credit risk, regardless of the evolution of its PD since the time of initial recognition. Santander Spain, among other criteria, considers that an operation presents a significant increase in risk when positions have been past due for more than 30 days. These criteria depend on the risk management practices of each portfolio.

(...)

3.3. United States

(...)

In relation to the Stage 2 classification determination, the quantitative criteria applied at SBNA for retail portfolios uses the FICO (Fair Isaac Corporation) score at the time of origination and its current value, establishing different absolute threshold for each portfolio according to their characteristics. A SICR implies changes in that score ranging from 120 b.p. to 20 bp. In the case of some portfolios, the behaviour score supplements this criterion.

In the case of non-retail portfolios, SBNA uses the transaction's rating as a reference for its PD, taking into account its rating at the time of origination and its current rating, setting absolute thresholds for the different rating bands that depend on each portfolio characteristics. A SICR implies changes in the rating value between 2 and 0.1, depending on the portfolio and the estimated sensitivity (from lower to higher credit quality, the rating range goes from 1 to 9.3).

Additionally, for each portfolio, a series of specific qualitative criteria are defined, which indicate that the exposure has had a significant increase in credit risk, regardless of the evolution of its PD since the initial recognition. Santander Bank, National Association, among other criteria, considers that a transaction presents a significant increase in risk when it has arrears positions for more than 30 days. These criteria depend on the risk management practices of each portfolio.

(...)

In relation to the stage 2 classification determination, the quantitative criteria applied at SC USA uses the FICO (Fair Isaac Corporation) score at the time of origination and its current value, establishing different absolute threshold for each portfolio according to their characteristics. A SICR implies changes in that score ranging from 100 bp to 60 bp.

Additionally, for each portfolio, a series of specific qualitative criteria are defined, which indicate that the exposure has had a significant increase in credit risk, regardless of the evolution of its PD since the initial recognition. Santander Consumer USA Holdings Inc. among other criteria, considers that a transaction presents a significant increase in risk when it has irregular positions for more than 30 days. These criteria depend on the risk management practices of each portfolio.

(...)

3.4. Banco Santander (Brasil) S.A.

(...)

Regarding the stage 2 classification determination, Santander Brazil uses the transaction's rating as a reference for its PD, taking into account its rating at the time of origination and its current rating, setting different thresholds that depend on each portfolio characteristics. SICR is determined by observing the rating's evolution, considering that a significant reduction has occurred when this decrease reaches values between 3.2 and 1, depending on the rating's value at the time of origination.

In addition, for every portfolio, a set of specific qualitative criteria are defined to indicate that the exposure to credit risk has significantly risen, regardless of the evolution of its PD since the initial recognition. Santander Brazil, among other criteria, considers that an operations involves a significant increase in risk when it presents irregular positions for more than 30 days, but in Real State, Consigned and Financial portfolios, where, due to their particular attributes, they use a 60 days threshold. Such criteria depend upon each portfolio's risk management practices.

(...)

3.5. Santander Corporate & Investment Banking

(...)

With regards to the stage 2 classification determination, SCIB uses the customer's rating as a reference for its PD, taking into account its rating at the time of origination and its current rating for each transaction, setting absolute thresholds for the different rating bands. A SICR implies changes in the rating value between 3.6 and 0.1, depending on the estimated sensitivity of each rating band (from lower to higher credit quality, the rating range goes from 1 to 9.3).

Source: Banco Santander Annual report 2020, pages 567-780 (extracts)

Example 6: Quantitative and qualitative threshold used in SICR assessment

The framework comprises the following elements:

- **IFRS 9 lifetime PD assessment (the primary driver)** – on modelled portfolios, the assessment is based on the relative deterioration in forward-looking lifetime PD and is assessed monthly. To assess whether credit deterioration has occurred, the residual lifetime PD at balance sheet date (which PD is established at date of initial recognition (DOIR)) is compared to the current PD. If the current lifetime PD exceeds the residual origination PD by more than a threshold amount, deterioration is assumed to have occurred and the exposure transferred to Stage 2 for a lifetime loss assessment. For Wholesale, a doubling of PD would indicate a SICR subject to a minimum PD uplift of 0.1%. For Personal portfolios, the criteria vary by risk band, with lower risk exposures needing to deteriorate more than higher risk exposures, as outlined in the following table:

Personal risk bands	PD bandings (based on residual lifetime PD calculated at DOIR)	PD deterioration threshold criteria
Risk band A	<0.762%	PD@DOIR + 1%
Risk band B	<4.306%	PD@DOIR + 3%
Risk band C	>=4.306%	1.7 x PD@DOIR

- **Qualitative high-risk backstops** – the PD assessment is complemented with the use of qualitative high-risk backstops to further inform whether significant deterioration in lifetime risk of default has occurred. The qualitative high-risk backstop assessment includes the use of the mandatory 30+ days past due backstop, as prescribed by IFRS 9 guidance, and other features such as forbearance support, Wholesale exposures managed within the Risk of Credit Loss framework, and adverse credit bureau results for Personal customers. Where a Personal customer was granted a payment holiday (also referred to as a payment deferral) in response to COVID-19, they were not automatically transferred into Stage 2. However, a subset of Personal customers who had accessed payment holiday support, and where their risk profile was identified as relatively high risk, were collectively migrated to Stage 2 (if not in Stage 2 already). Any support provided beyond completion of the second payment holiday was considered forbearance. Wholesale customers accessing the various COVID-19 support mechanisms were assessed as detailed in the Impact of COVID-19 section.

Source: Natwest Group Annual Report 2020, page 171 (extracts)

Example 7: FLI disclosures (scenario weights and macroeconomic variables) by geographical area¹³

53. Risk management

(...)

b) Credit risk

(...)

3. Detail of the main geographical areas

(...)

3.3. United States

(...)

The evolution forecasted in 2020 for a period of five years of the main macroeconomic indicators used by in Santander Consumer USA Holdings Inc in the estimation of expected losses is shown below:

Variables	2021 - 2025			
	Unfavourable scenario 1	Unfavourable scenario 2	Base scenario	Favourable scenario
Interest rate (year averaged)	0.78%	0.27%	0.63%	0.99%
Unemployment rate	5.83%	7.34%	5.21%	4.36%
Housing price growth	2.67%	2.17%	3.40%	3.79%
GDP Growth	3.05%	2.76%	2.60%	3.40%
Manheim ¹³ index	1.60%	1.57%	1.61%	1.64%

A. US used vehicle price car index.

The five-year projected development generated in 2019 to estimate the expected loss is shown below:

Variables	2020 - 2024			
	Unfavourable scenario 1	Unfavourable scenario 2	Base scenario	Favourable scenario
Interest rate (year averaged)	1.06%	2.22%	2.29%	2.70%
Unemployment rate	7.71%	2.68%	-0.87%	-2.10%
Housing price growth	2.60%	3.68%	4.53%	4.69%
GDP Growth	1.60%	2.05%	2.07%	2.75%
Manheim ¹³ index	-1.20%	0.50%	1.60%	3.10%

A. US used vehicle price car index

Each of the macroeconomic scenarios is associated with a given probability of occurrence. Santander Consumer USA Inc. associates the highest weighting to the Base scenario, whereas it associates the lowest weightings to the most extreme or acid scenarios:

	2020	2019	2018
Pessimistic scenario 2	17.5%	17.5%	20.0%
Pessimistic scenario 1*	20.0%	20.0%	n.a.
Base scenario	32.5%	32.5%	60.0%
Optimistic scenario	30.0%	30.0%	20.0%

* The exercise carried out in 2019 includes two adverse scenarios compared to one in 2018, due to the evolution of the local methodology.

In the case of SC USA, no additional 'long-run' scenario was generated for the calculation of the post model adjustment, but the additional provisions for covid-19 were calculated using the own model.

¹³ For illustrative purposes, information for only two selected geographical areas is presented here (the financial statements of the bank include FLI disclosures for more than two geographical areas).



(...)

3.4. Banco Santander (Brasil) S.A.

(...)

For the expected losses estimation, prospective information is taken into account. Particularly, Santander Brazil considers three macroeconomic scenarios, periodically updated. The evolution for a period of five years of the main macroeconomic indicators used to estimate the expected losses in Santander Brazil is as follows:

Variables	2020 - 2024		
	Pessimistic scenario	Base scenario	Optimistic scenario
Interest rate	8.70%	5.60%	4.45%
Unemployment rate	16.48%	9.58%	8.04%
Housing price change	-1.24%	2.69%	6.39%
GDP Growth	-1.40%	2.38%	4.41%
Burden income	21.70%	20.39%	19.02%

In the case of Santander Brazil, the scenarios projected up to 2024 have been complemented with an additional scenario that counts with the appropriate extension to reflect loss materialization, taking into account the loan portfolios shorter average terms and the expected deterioration in the following periods.

Each macroeconomic scenario is associated with a determined likelihood of occurrence. Regarding its assignation, Brazil links the highest weight to the base scenario whilst links the lowest weights to the most extreme scenarios:

	2020	2019	2018
Pessimistic scenario	10 %	10 %	10 %
Base scenario	80 %	80 %	80 %
Optimistic scenario	10 %	10 %	10 %

Regarding the the additional scenario used to calculate the post-model adjustment, the projected evolution of the main macroeconomic indicators for a period of five years is shown below:

Variables	2020-2024		
	Pessimistic scenario	Base scenario	Optimistic scenario
Interest rate	5.97%	4.25%	4.25%
Unemployment rate	18.00%	12.34%	12.34%
Housing price change	-0.88%	1.84%	1.84%
GDP Growth	-1.62%	1.40%	1.40%
Burden income	22.30%	20.80%	20.80%

Source: Santander Annual Report 2020, pages 567-779 and following (extracts)

Example 8: Macroeconomic scenarios and ECL sensitivity

Macroeconomic scenarios in 2020 Audited

(in millions)	Weight	Macroeconomic variable	2021	2022	2023	2024	Unweighted ECL ¹	Weighted ECL ¹
Positive	10%	Real GDP Netherlands ¹	4.4%	4.3%	2.0%	1.7%	653	
		Unemployment ²	6.2%	6.2%	5.6%	4.8%		
		House price index ³	5.0%	3.0%	2.0%	3.0%		
Baseline	50%	Real GDP Netherlands	3.0%	3.6%	2.3%	1.8%	688	703
		Unemployment	6.4%	7.9%	6.9%	6.1%		
		House price index	0.0%	0.0%	2.0%	3.0%		
Negative	40%	Real GDP Netherlands	0.7%	3.0%	1.0%	1.4%	734	
		Unemployment	6.8%	8.4%	7.8%	6.8%		
		House price index	-3.0%	-5.0%	0.0%	3.0%		

¹ Real GDP Netherlands, % change year-on-year.

² Unemployment Netherlands, % of labour force.

³ House price index Netherlands – average % change year-on-year.

⁴ Excluding ECL for stage 3.

Source : ABN AMRO Annual Report 2020, page 115 (extracts)

Example 9: FLI disclosures – definition of new macroeconomic scenarios

These different elements consequent to the Covid-19 crisis are detailed below to shed light on the financial consequences of the crisis and on their consideration in the preparation of the consolidated financial statements.

DEFINITION OF NEW MACROECONOMIC SCENARIOS

To prepare its financial statements, the Group uses macroeconomic scenarios in the expected credit losses measurement models including forward-looking data (see Note 3.8).

These scenarios are developed by Societe Generale's Economic and Sector Studies Department for all the Group entities. A weighting ratio is attributed to each scenario and the outputs from the models correspond to a weighted average of these scenarios.

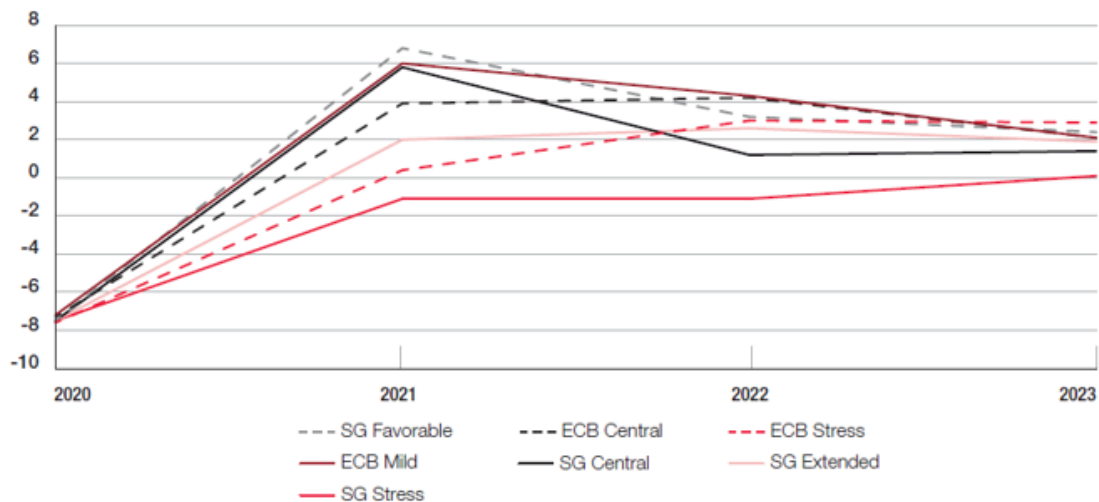
In the second quarter 2020, the Group developed four new macro-economic scenarios to better reflect the impacts and uncertainties generated by the Covid-19 crisis.

On 31 December 2020, the Group maintained the coexistence of four scenarios owing to a still high level of uncertainty, and adjusted them to reflect the best vision to date:

- the central scenario (SG Central) expects, after a significant fall in GDP in the countries where the Group has been operating in 2020, a gradual rebound from 2021, considering that the travel restrictions measures will be lifted by the beginning of 2022;
- a scenario of prolonged health crisis (SG Extended) expects that the travel restrictions measures will be lifted by the beginning of 2023;
- Finally, these two scenarios are supplemented by one favorable and one stressed scenarios. These last two scenarios are less severe as at 30 June 2020 owing to a less uncertain environment by the strengthening of support measures.

The illustration below compares the GDP previsions in the Euro area used by the Group for each scenario with the previsions provided by ECB in December 2020. By the end of 2021, the scenarios adopted by the Group are within the range of the ECB scenarios.

GDP FORECASTS BY SCENARIO, IN %



Source: Société Générale – Universal Registration Document 2020 – page 365 (extracts)

Example 10: Tabular reconciliation of the loss allowance from the opening balance to the closing balance with narrative explanations

Loan impairment charges and allowances Audited

(in millions)							2020
	Banks	Residential mortgages	Consumer loans	Corporate loans	Other loans	Total loans and advances	Off-balance
Balance at 1 January 2020	5	140	298	1,982	6	2,431	16
Transfer to stage 1		-7	-4	-12		-23	1
Transfer to stage 2		4	5	110		119	6
Transfer to stage 3		27	91	518		636	179
Remeasurements ¹	-2	-49	42	1,922	-3	1,910	5
Changes in models		6				6	
Changes in risk parameters	2	28	3	132		165	11
Originated or purchased		4	4	31		40	20
Matured or sold loans	-1	-13	-11	-668		-692	-9
Impairment charges (releases) on loans and advances	-1	1	130	2,033	-3	2,161	214
Write-offs		-16	-143	-1,035		-1,194	
Unwind discount/unearned interest accrued		2	-1	31		31	
Foreign exchange and other movements	1	-10	11	42		43	-182
Balance at 31 December 2020	6	116	294	3,053	3	3,472	48
Impairment charges (releases) on loans and advances	-1	1	130	2,033	-3	2,161	214
Credit-related modifications ²				36		36	
Recoveries and other charges (releases)		-19	-38	-33		-90	-17
Total impairment charges for the period³	-1	-18	92	2,035	-3	2,106	197

¹ Remeasurements represents the current year change of expected credit loss allowances mainly attributable to changes in volumes such as partial repayments and changes in the credit quality of existing loans remaining in their stage.

² The underlying exposure on which the modification loss is calculated is EUR 16.9 billion, almost fully related to the payment holidays.

³ The impairment charges for the period excludes charges (releases) for financial investments held at FVOCI 31 December 2020: EUR 0 million (31 December 2019: EUR 0 million).

(in millions)							2019
	Banks	Residential mortgages	Consumer loans	Corporate loans	Other loans	Total loans and advances	Off-balance
Balance at 1 January 2019	9	108	318	1,825	9	2,269	12
Transfer to stage 1		-7	-10	-21		-38	
Transfer to stage 2		2	4	14		19	1
Transfer to stage 3		48	47	298		393	3
Impairment charges for the period	3	44	144	765		956	9
Reversal of impairment allowances no longer required	-2	-14	-103	-487	-2	-608	-10
Modifications							
Remeasurements ¹		31	41	278	-2	348	-1
Changes in models		-13	4	20	-1	9	-2
Changes in risk parameters		2	8	13		23	2
Originated or purchased	1	4	12	36		53	5
Matured or sold loans	-5	-12	-13	-49		-78	-6
Impairment charges (releases) on loans and advances	-3	54	93	589	-3	730	3
Write-offs		-22	-122	-464		-608	
Unwind discount/unearned interest accrued		2	1	28		31	
Foreign exchange and other movements		-3	8	5		10	1
Balance at 31 December 2019	5	140	298	1,982	6	2,431	16
Impairment charges (releases) on loans and advances	-3	54	93	589	-3	730	3
Recoveries and other charges (releases)		-23	-43	-21		-87	11
Total impairment charges for the period³	-3	31	50	568	-3	643	14

¹ Remeasurements represents the current year change of expected credit loss allowances mainly attributable to changes in volumes such as partial repayments and changes in the credit quality of existing loans remaining in their stage.

² The impairment charges for the period excludes charges (releases) for financial investments held at FVOCI (31 December 2019: EUR 0 million).

Loan impairment charges and allowances per stage Audited

(in millions)	2020				2019			
	Stage 1	Stage 2	Stage 3	Total	Stage 1	Stage 2	Stage 3	Total
Balance at 1 January	180	258	1,993	2,431	214	192	1,862	2,269
Transfer to stage 1	39	-53	-9	-23	45	-66	-17	-38
Transfer to stage 2	-45	200	-36	119	-31	126	-76	19
Transfer to stage 3	-13	-76	725	636	-5	-32	429	393
Remeasurements ¹	472	50	1,388	1,910	-97	25	420	348
Changes in models	1	2	4	6	16	22	-29	9
Changes in risk parameters	100	46	19	165	9	12	3	23
Originated or purchased	40			40	53			53
Matured or sold	-479	-19	-195	-692	-22	-25	-30	-78
Impairment charges (releases) on loans and advances	115	149	1,896	2,161	-33	62	701	730
Write-offs			-1,194	-1,194			-608	-608
Unwind discount/unearned interest accrued			31	31			31	31
Foreign exchange and other movements	7	-8	44	43	-2	4	8	10
Balance at 31 December	301	400	2,771	3,472	180	258	1,993	2,431
Impairment charges (releases) on loans and advances	115	149	1,896	2,161	-33	62	701	730
Credit-related modifications		29	7	36				
Recoveries and other charges (releases)			-90	-90			-87	-87
Total impairment charges for the period	115	179	1,813	2,106	-33	62	613	643

¹ Remeasurements represents the current year change of expected credit loss allowances mainly attributable to changes in volumes such as partial repayments and changes in the credit quality of existing loans remaining in their stage.

The impairment charges in 2020 amounted to EUR 2,303 million (2019: EUR 657 million). These charges were high due to the impact that Covid-19 and oil price developments had on our client portfolio and to three exceptional client files. Individual impairments in stage 3 were recorded mainly for corporate loans. The impairment charges in stage 1 and stage 2 related mainly to management overlays.

Impairment charges for CIB amounted to EUR 1,659 million, which was considerably higher than the EUR 376 million recorded in 2019. Since the start of Covid-19, all individual CIB exposures have been reviewed, leading to a significant increased credit risk in stage 3. Of the total impairment charges for CIB, an amount of EUR 629 million was attributable to three exceptional client files. The other impairment charges related to other individual client files and were mostly recorded in the oil and gas and energy-offshore sectors.

Additions for Commercial Banking amounted to EUR 542 million (2019: EUR 182 million). The main contributions related to individual client files in the food and shipping sectors, and to a lesser extent to new inflow from industrial goods and services and the travel and leisure sector. In addition, management overlays were recorded for CB to incorporate risk not adequately captured by the models. The ECL outcomes would not appear to represent deteriorations that had been expected for individual counterparties, given that payment moratoria and government support measures had a positive effect on clients' payment behaviour. An increase in impairment charges was also observed because

of the transfer of clients from stage 1 to stage 2, with almost all CB clients being individually assessed during 2020 after the effects of Covid-19 became apparent. Some of these clients, mainly in the food, travel and leisure and real estate sectors, were transferred to stage 3 in 2020.

Impairment charges for consumer loans amounted to EUR 92 million (2019: EUR 50 million). The main additions were attributable to the economic impact of Covid-19, with clients being transferred to stage 2 due to a significant increased credit risk. The main client groups impacted were dentists, physiotherapists and pilots. During 2020, the various client groups were re-evaluated, and some of them were transferred back to stage 1. The new definition of default also resulted in higher impairments in 2020 because of some Retail Banking clients being transferred to stage 3.

A release of EUR 18 million was recorded for residential mortgages in 2020 (2019: EUR 31 million). This release was mainly attributable to the third quarter of the year. At that time, the 12-month PD deterioration was still being used as a proxy for lifetime PD deterioration. This proxy is more sensitive to steep economic downturns and to the subsequent recovery seen in later quarters. This resulted in a transfer from stage 2 to stage 1 in Q3. In addition, a release was recorded for interest-only mortgages. These releases were partly offset by increases resulting from transfers to stage 2 at the start of Covid-19, and from model refinements, including implementation of lifetime PD, and related mainly to stage 3.

Source: ABN AMRO Annual Report 2020, pages 112-113 (extracts)

Example 11: Joint tabular reconciliation of the loss allowance and gross carrying amount from the opening balance to the closing balance

Financial assets at amortised cost: loans and receivables due from customers

	Performing assets						Gross carrying amount (a) and Loss allowance (b)		Net carrying amount (a) + (b)
	Assets subject to 12-month ECL (Bucket 1)		Assets subject to lifetime ECL (Bucket 2)		Credit-impaired assets (Bucket 3)				
(in millions of euros)	Gross carrying amount	Loss allowance	Gross carrying amount	Loss allowance	Gross carrying amount	Loss allowance			
Balance at 31 December 2019	360,437	(743)	30,825	(1,277)	13,130	(7,192)	404,392	(9,212)	395,180
Transfers between buckets during the period	(13,335)	(20)	9,828	22	3,506	(1,273)	-	(1,270)	
Transfers from Bucket 1 to Bucket 2	(22,199)	59	22,199	(478)			-	(418)	
Return from Bucket 2 to Bucket 1	10,346	(91)	(10,346)	287	-	-	-	196	
Transfers to Bucket 3 ⁽¹⁾	(1,582)	13	(2,372)	238	3,953	(1,376)	-	(1,125)	
Return from Bucket 3 to Bucket 2/Bucket 1	100	(1)	347	(25)	(447)	103	-	77	
Total after transfers	347,102	(766)	40,653	(1,252)	16,636	(8,466)	404,392	(10,482)	393,911
Changes in gross carrying amounts and loss allowances	16,369	(154)	(1,440)	(472)	(4,044)	1,528	10,875	902	
New financial production: purchase, granting, origination... ⁽²⁾	204,892	(657)	11,317	(796)			216,209	(1,453)	
Derecognition: disposal, repayment, maturity...	(181,558)	482	(11,639)	741	(1,716)	431	(194,913)	1,655	
Write-offs					(2,012)	1,879	(2,012)	1,879	
Changes of cash flows resulting in restructuring due to financial difficulties	(1)	-	(10)	3	(16)	4	(27)	6	
Changes in models' credit risk parameters during the period ⁽³⁾		(20)		(497)		(1,049)	-	(1,566)	
Changes in model/methodology		-		17		-	-	17	
Changes in scope	272	(3)	28	(3)	40	(31)	340	(37)	
Other ⁽⁴⁾	(7,246)	44	(1,136)	63	(340)	294	(8,722)	401	
Total	363,461	(919)	39,213	(1,724)	12,592	(6,937)	415,267	(9,580)	405,686
Changes in carrying amount due to specific accounting assessment methods (with no significant impact on loss allowance) ⁽⁵⁾	(565)		3		812		250		
BALANCE AT 31 DECEMBER 2020⁽⁶⁾	362,896	(919)	39,216	(1,724)	13,404	(6,937)	415,517	(9,580)	405,937
Contractual amount outstanding of financial assets written off during the period, that are still subject to enforcement measures	-		-		-		-		

(1) Transfers to Bucket 3 correspond to outstanding amounts initially classified as Bucket 1 which, during the year, were downgraded directly to Bucket 3, or to Bucket 2 and later to Bucket 3.

(2) Originations in Bucket 2 could include some originated loans in Bucket 1 reclassified in Bucket 2 during the period.

(3) Includes the impacts of fair value adjustments of micro-hedged instruments, the impacts relating to the use of the EFR method (notably the amortisation of premiums/discounts), the impacts of the accretion of discounts on restructured loans (recovered as revenue over the remaining term of the asset), the changes in accrued interests.

(4) At 31 December 2020, the amount of French state-guaranteed loans (SGL) granted to customers of the Group as part of measures to support the economy in the wake of the COVID-19 health crisis amounted to €9.5 billion.

(5) Outstanding loans to customers in France with non-contractual due date postponements amounted to €16.6 billion in 2020, including €0.9 billion still outstanding as at 31 December 2020 at Crédit Agricole S.A. level.

(6) Concerning Bucket 3 – this line corresponds to the change in the assessment of the credit risk on files already in default.

(7) The items in the "Others" line are mainly transition adjustments and reclassifications under IFRS 5.

Source: Crédit Agricole 2020 Universal registration document, page 454 (extracts)

Example 12: Quality of credit risk: disaggregation of disclosures by stage and by credit risk category

Asset quality

The table below shows asset quality bands of gross loans and ECL, by stage, for the Personal portfolio.

2020	Gross loans				ECL provisions				ECL provisions coverage			
	Stage 1 £m	Stage 2 £m	Stage 3 £m	Total £m	Stage 1 £m	Stage 2 £m	Stage 3 £m	Total £m	Stage 1 %	Stage 2 %	Stage 3 %	Total %
UK mortgages												
AQ1-AQ4	108,869	6,634	—	115,503	10	33	—	43	0.01	0.50	—	0.04
AQ5-AQ8	38,347	20,254	—	58,601	14	146	—	160	0.04	0.72	—	0.27
AQ9	240	1,015	—	1,255	—	49	—	49	—	4.83	—	3.90
AQ10	—	—	1,507	1,507	—	—	254	254	—	—	16.85	16.85
	147,456	27,903	1,507	176,866	24	228	254	506	0.02	0.82	16.85	0.29
Roi mortgages												
AQ1-AQ4	8,247	777	—	9,024	20	38	—	58	0.24	4.89	—	0.64
AQ5-AQ8	2,677	560	—	3,237	7	34	—	41	0.26	6.07	—	1.27
AQ9	7	331	—	338	—	19	—	19	—	5.74	—	5.62
AQ10 (1)	—	—	1,051	1,051	—	—	381	381	—	—	36.25	36.25
	10,931	1,668	1,051	13,650	27	91	381	499	0.25	5.46	36.25	3.66
Credit cards												
AQ1-AQ4	23	4	—	27	1	2	—	3	4.35	50.00	—	11.11
AQ5-AQ8	2,384	1,329	—	3,713	52	208	—	260	2.18	15.65	—	7.00
AQ9	4	42	—	46	—	15	—	15	—	35.71	—	32.61
AQ10	—	—	109	109	—	—	76	76	—	—	69.72	69.72
	2,411	1,375	109	3,895	53	225	76	354	2.20	16.36	69.72	9.09
Other personal												
AQ1-AQ4	1,234	59	—	1,293	8	9	—	17	0.65	15.25	—	1.31
AQ5-AQ8	4,461	3,020	—	7,481	58	336	—	394	1.30	11.13	—	5.27
AQ9	55	327	—	382	1	107	—	108	1.82	32.72	—	28.27
AQ10	—	—	621	621	—	—	517	517	—	—	83.25	83.25
	5,750	3,406	621	9,777	67	452	517	1,036	1.17	13.27	83.25	10.60
Total personal												
AQ1-AQ4	118,373	7,474	—	125,847	39	82	—	121	0.03	1.10	—	0.10
AQ5-AQ8	47,869	25,163	—	73,032	131	724	—	855	0.27	2.88	—	1.17
AQ9	306	1,715	—	2,021	1	190	—	191	0.33	11.08	—	9.45
AQ10	—	—	3,288	3,288	—	—	1,228	1,228	—	—	37.35	37.35
	166,548	34,352	3,288	204,188	171	996	1,228	2,395	0.10	2.90	37.35	1.17

Source: Natwest Group 2020 Annual report, page 206 (extracts)

Example 13: Quality of credit risk: disaggregation of disclosures by stage and by credit risk category

Credit risk profile by internal PD grade for loans and advances at amortised cost (audited)

Grading	PD range %	Credit quality description	Gross carrying amount				Allowance for ECL				Net exposure £m	Coverage ratio %
			Stage 1 £m	Stage 2 £m	Stage 3 £m	Total £m	Stage 1 £m	Stage 2 £m	Stage 3 £m	Total £m		
As at 31 December 2020												
1-3	0.0 to <0.05%	Strong	82,312	3,095	—	85,407	6	35	—	41	85,366	—
4-5	0.05 to <0.15%	Strong	101,309	9,715	—	111,024	34	25	—	59	110,965	0.1
6-8	0.15 to <0.30%	Strong	30,697	6,263	—	36,960	47	64	—	111	36,849	0.3
9-11	0.30 to <0.60%	Strong	34,601	5,093	—	39,694	120	168	—	288	39,406	0.7
12-14	0.60 to <2.15%	Satisfactory	29,498	8,399	—	37,897	379	593	—	972	36,925	2.6
15-19	2.15 to <10%	Satisfactory	8,125	9,136	—	17,261	302	1,283	—	1,585	15,676	9.2
19	10 to <11.35%	Satisfactory	3,505	4,437	—	7,942	73	195	—	268	7,674	3.4
20-21	11.35 to <100%	Higher Risk	917	4,868	—	5,785	72	1,201	—	1,273	4,512	22.0
22	100%	Credit Impaired	—	—	8,997	8,997	—	—	3,738	3,738	5,259	41.5
Total			290,964	51,006	8,997	350,967	1,033	3,564	3,738	8,335	342,632	2.4

Source: Barclays PLC Annual Report 2020, page 193 (extracts)

Example 14: Quality of credit risk: disaggregation of disclosures by stage only

Exposures per stage [Audited]

Coverage and stage ratios [Audited]

(in millions)	31 December 2020			
	Gross carrying amount	Allowances for credit losses ²	Coverage ratio	Stage ratio
Stage 1				
Loans and advances banks	3,399	6	0.2%	100.0%
Residential mortgages	135,407	14	0.0%	93.0%
Consumer loans	9,707	38	0.4%	86.4%
Corporate loans	64,517	243	0.4%	74.4%
Other loans and advances customers	7,675		0.0%	99.3%
Total loans and advances customers	217,305	296	0.1%	86.4%
Stage 2				
Loans and advances banks			0.0%	0.0%
Residential mortgages	9,141	44	0.5%	6.3%
Consumer loans	1,068	41	3.8%	9.5%
Corporate loans	15,356	316	2.1%	17.7%
Other loans and advances customers	37		0.3%	0.5%
Total loans and advances customers	25,602	400	1.6%	10.2%
Stage 3				
Loans and advances banks				0.0%
Residential mortgages	1,124	58	5.2%	0.8%
Consumer loans	456	215	47.2%	4.1%
Corporate loans	6,873	2,494	36.3%	7.9%
Other loans and advances customers	21	3	14.6%	0.3%
Total loans and advances customers	8,474	2,771	32.7%	3.4%

Source: ABN AMRO Annual Report 2020, page 110 (extracts)

Example 15: Quality of credit risk: disaggregation of disclosures by stage only

► TABLE 44: PERFORMING AND NON PERFORMING EXPOSURES AND RELATED PROVISIONS (EU NPL4) [Audited]

In millions of euros	31 December 2020											
	Gross carrying amount						Accumulated impairment, accumulated negative changes in fair value due to credit risk and provisions					
	Performing exposures			Non-performing exposures			Performing exposures			Non-performing exposures		
	of which stage 1	of which stage 2		of which stage 1 and stage 2	of which stage 3		of which stage 1	of which stage 2		of which stage 1 and stage 2	of which stage 3	
Loans and advances	1,154,591	1,062,776	91,815	33,492	3,001	30,491	(5,165)	(2,369)	(2,796)	(16,469)	(374)	(16,095)
Central banks	308,765	308,180	585	-	-	-	(18)	(14)	(4)	-	-	-
General governments	27,952	26,413	1,539	525	408	117	(20)	(7)	(13)	(37)	(10)	(27)
Credit institutions	16,036	15,611	425	83	2	81	(26)	(18)	(8)	(73)	-	(73)
Other financial corporations	76,282	70,790	5,492	1,478	4	1,474	(160)	(75)	(85)	(885)	-	(885)
Non-financial corporations	402,193	350,376	51,817	17,060	642	16,418	(2,336)	(991)	(1,345)	(8,598)	(31)	(8,567)
of which SME	120,194	102,546	17,648	6,841	237	6,604	(851)	(346)	(505)	(3,163)	(24)	(3,139)
Households	323,363	291,406	31,957	14,346	1,945	12,401	(2,605)	(1,264)	(1,341)	(6,876)	(333)	(6,543)
Debt securities	179,970	178,923	1,047	528	-	528	(82)	(28)	(54)	(267)	-	(267)
Central banks	4,404	4,337	67	1	-	1	(4)	-	(4)	(1)	-	(1)
General governments	137,331	136,920	411	8	-	8	(31)	(26)	(5)	-	-	-
Credit institutions	15,975	15,975	-	101	-	101	-	-	-	(101)	-	(101)
Other financial corporations	18,506	17,984	522	167	-	167	(40)	(1)	(39)	(41)	-	(41)
Non-financial corporations	3,754	3,707	47	251	-	251	(7)	(1)	(6)	(124)	-	(124)

Source: BNP PARIBAS Universal registration document 2020, page 384 (extract)

Example 16: Quality of credit risk: disaggregation of disclosures by stage only

(Thousands of euros)

Segment	2020										
	Stage 1	Stage 2				Total	Stage 3		Total	POCI	Total
		No delays	Days past due <= 30 days	Days past due > 30 days	Days past due <= 90 days		Days past due > 90 days				
Gross Exposure											
Individuals-Mortgage	23,196,850	2,257,027	94,230	49,833	2,401,090	245,446	238,996	484,442	14,805	26,097,187	
Individuals-Other	7,705,016	723,194	84,846	37,072	845,112	304,008	382,718	686,726	71,552	9,308,406	
Financial Companies	2,968,646	456,900	37	1	456,938	145,907	90,861	236,768	–	3,662,352	
Non-financial comp. - Corporate	8,801,863	1,152,447	2,307	47	1,154,801	204,045	547,859	751,904	–	10,708,568	
Non-financial comp. - SME-Corporate	10,547,907	2,694,779	5,149	1,187	2,701,115	816,135	244,154	1,060,289	–	14,309,311	
Non-financial comp. -SME-Retail	5,459,793	1,418,540	14,916	3,672	1,437,128	269,042	156,306	425,348	–	7,322,269	
Non-financial comp.-Other	402,483	75,951	–	–	75,951	147	1,205	1,352	–	479,786	
Other loans	5,151,717	224,617	–	–	224,617	–	1	1	–	5,376,335	
Total	64,234,275	9,003,455	201,485	91,812	9,296,752	1,984,730	1,662,100	3,646,830	86,357	77,264,214	
Impairment											
Individuals-Mortgage	13,165	22,645	2,853	4,813	30,311	27,429	67,084	94,513	1,395	139,384	
Individuals-Other	49,118	25,156	14,197	9,188	48,541	124,521	216,529	341,050	11,549	450,258	
Financial Companies	3,398	6,440	4	–	6,444	124,059	66,087	190,146	–	199,988	
Non-financial comp. - Corporate	30,883	27,546	124	–	27,670	98,921	353,691	452,612	–	511,165	
Non-financial comp. -SME-Corporate	50,193	94,396	573	239	95,208	274,732	141,442	416,174	–	561,575	
Non-financial comp. -SME-Retail	38,767	43,623	1,984	957	46,564	120,207	79,296	199,503	–	284,834	
Non-financial comp.-Other	277	61	–	–	61	74	180	254	–	592	
Other loans	5,528	3,684	–	–	3,684	–	1	1	–	9,213	
Total	191,329	223,551	19,735	15,197	258,483	769,943	924,310	1,694,253	12,944	2,157,009	
Net exposure											
Individuals-Mortgage	23,183,685	2,234,382	91,377	45,020	2,370,779	218,017	171,912	389,929	13,410	25,957,803	
Individuals-Other	7,655,898	698,038	70,649	27,884	796,571	179,487	166,189	345,676	60,003	8,858,148	
Financial Companies	2,965,248	450,460	33	1	450,494	21,848	24,774	46,622	–	3,462,364	
Non-financial comp. - Corporate	8,770,980	1,124,901	2,183	47	1,127,131	105,124	194,168	299,292	–	10,197,403	
Non-financial comp. -SME-Corporate	10,497,714	2,600,383	4,576	948	2,605,907	541,403	102,712	644,115	–	13,747,736	
Non-financial comp. -SME-Retail	5,421,026	1,374,917	12,932	2,715	1,390,564	148,835	77,010	225,845	–	7,037,435	
Non-financial comp.-Other	402,206	75,890	–	–	75,890	73	1,025	1,098	–	479,194	
Other loans	5,146,189	220,933	–	–	220,933	–	–	–	–	5,367,122	
Total	64,042,946	8,779,904	181,750	76,615	9,038,269	1,214,787	737,790	1,952,577	73,413	75,107,205	
% of impairment coverage											
Individuals-Mortgage	0.06%	1.00%	3.03%	9.66%	1.26%	11.18%	28.07%	19.51%	9.42%	0.53%	
Individuals-Other	0.64%	3.48%	16.73%	24.78%	5.74%	40.96%	56.58%	49.66%	16.14%	4.84%	
Financial Companies	0.11%	1.41%	10.81%	0.00%	1.41%	85.03%	72.73%	80.31%	0.00%	5.46%	
Non-financial comp. - Corporate	0.35%	2.39%	5.37%	0.00%	2.40%	48.48%	64.56%	60.20%	0.00%	4.77%	
Non-financial comp. -SME-Corporate	0.48%	3.50%	11.13%	20.13%	3.52%	33.66%	57.93%	39.25%	0.00%	3.92%	
Non-financial comp. -SME-Retail	0.71%	3.08%	13.30%	26.06%	3.24%	44.68%	50.73%	46.90%	0.00%	3.89%	
Non-financial comp.-Other	0.07%	0.08%	0.00%	0.00%	0.08%	50.34%	14.94%	18.79%	0.00%	0.12%	
Other loans	0.11%	1.64%	0.00%	0.00%	1.64%	0.00%	100.00%	100.00%	0.00%	0.17%	
Total	0.30%	2.48%	9.79%	16.55%	2.78%	38.79%	55.61%	46.46%	14.99%	2.79%	

Source: Banco Comercial Portugues Annual Report 2020, page 382 (extracts)

Example 17: Quality of credit risk: disaggregation of loans subject to COVID-19 support measures by stage only

4.4a Loans measured at amortised cost subject to Covid-19 support measures: gross amount and total adjustments

(millions of euro)

	Gross value			Writedown			
	Stage 1	of which: low credit risk	Stage 2	Stage 3	Stage 1	Stage 2	Stage 3
1. EBA-compliant moratoria loans	19,850	-	12,226	439	-65	-473	-112
2. Other loans with COVID-19-related forbearance measures	52	-	107	35	-	-6	-11
3. Newly originated loans	29,562	-	2,369	30	-41	-20	-5
Total	49,464	-	14,702	504	-106	-499	-128

Source: Intesa Sanpaolo Annual Report 2020, page 297 (extracts)

Example 18: Quality of credit risk: disaggregation of exposures by level of collateral for key countries/territories and by stage

Wholesale lending – other corporate, commercial and financial (non-bank) loans and advances including loan commitments by level of collateral for key countries/territories (by stage)
(Audited)

	Total	Of which:				
		UK		Hong Kong		
	Gross carrying/ nominal amount \$m	ECL coverage %	Gross carrying/ nominal amount \$m	ECL coverage %	Gross carrying/ nominal amount \$m	ECL coverage %
Stage 1						
Not collateralised	617,592	0.2	122,554	0.4	95,061	0.1
Fully collateralised	110,528	0.2	28,232	0.3	40,207	0.1
LTV ratio:						
– less than 50%	37,991	0.1	7,367	0.3	14,744	0.1
– 51% to 75%	36,696	0.2	11,891	0.3	13,961	0.2
– 76% to 90%	13,542	0.2	2,624	0.4	6,522	0.1
– 91% to 100%	22,299	0.1	6,350	0.1	4,980	0.1
Partially collateralised (A):	52,892	0.2	6,826	0.5	19,163	0.1
– collateral value on A	25,903		3,524		9,208	
Total	781,012	0.2	157,612	0.4	154,431	0.1
Stage 2						
Not collateralised	118,959	1.6	37,430	2.6	19,466	0.4
Fully collateralised	37,753	1.3	9,316	2.1	15,044	0.8
LTV ratio:						
– less than 50%	11,992	1.3	2,498	1.5	3,920	0.7
– 51% to 75%	10,982	1.6	5,715	2.2	6,657	1.0
– 76% to 90%	3,727	1.2	502	3.2	2,150	0.7
– 91% to 100%	5,052	0.9	601	2.0	2,317	0.3
Partially collateralised (B):	16,829	1.5	3,984	2.7	3,849	0.9
– collateral value on B	9,425		1,714		2,104	
Total	173,541	1.5	50,730	2.5	38,359	0.6
Stage 3						
Not collateralised	7,852	50.0	2,793	28.5	865	66.0
Fully collateralised	1,939	17.3	585	7.9	342	6.4
LTV ratio:						
– less than 50%	637	24.0	151	8.6	83	6.0
– 51% to 75%	526	19.0	182	12.6	128	4.7
– 76% to 90%	294	9.2	211	1.9	49	14.3
– 91% to 100%	482	11.6	41	14.6	82	4.9
Partially collateralised (C):	2,847	35.5	553	23.1	592	26.4
– collateral value on C	1,619		337		322	
Total	12,638	41.7	3,931	24.7	1,799	41.6
POCI						
Not collateralised	211	39.8	54	63.0	1	–
Fully collateralised	63	41.3	–	–	45	51.1
LTV ratio:						
– less than 50%	6	50.0	–	–	–	–
– 51% to 75%	11	9.1	–	–	11	9.1
– 76% to 90%	34	64.7	–	–	34	64.7
– 91% to 100%	12	–	–	–	–	–
Partially collateralised (D):	4	75.0	–	–	–	–
– collateral value on D	4		–	–	–	–
Total	278	40.6	54	63.0	46	50.0
At 31 Dec 2020	967,469	1.0	212,327	1.3	194,635	0.6

Source: HSBC Holdings plc Annual Report and Accounts 2020, page 155 (extracts)

Example 19 Sensitivity analysis

Sensitivity analysis

To simulate a range for potential changes to estimates and the related changed impairments, the following sensitivity analyses of the most significant assumptions affecting the sensitivity of the expected impairments were performed as follows.

The sensitivity analysis involved a recalculation of the impairments for expected credit losses in the existing models. In cases in which the post-model adjustments were significant, the results of the recalculations were adjusted correspondingly in order to take account of that fact. As a result of the complexity of the model many drivers are not mutually exclusive.

The tables below provide a comparison between the reported accumulated impairment for expected credit losses for financial assets in Stages 1 and 2 (weighted by 25 per cent optimistic, 50 per cent base and 25 per cent pessimistic scenarios) and then each scenario weighted by 100 per cent on their own. The optimistic and pessimistic scenarios do not reflect extreme cases, but the average of the scenarios which are distributed in these cases. In general, IFRS 9-specific estimates of risk parameters take account of historical default information and in particular the current economic environment (point in time) without forward-looking information. The effects of the estimates based on macroeconomic forecasts are shown in the forward-looking component. This information is provided for illustrative purposes.

2020 in € thousand	Accumulated impairment (Stage 1 and 2)		
	Simulated scenario	Point in time component	Forward looking component
100% Optimistic	821,698	870,261	(48,564)
100% Base	900,784	870,261	30,523
100% Pessimistic	1,067,868	870,261	197,607
Weighted average (25/50/25%)	922,474	870,261	52,213

100 per cent weighted pessimistic scenario by country:

2020 in € thousand	Accumulated impairment (Stage 1 and 2)		
	Simulated pessimistic scenario	Point in time component	Forward looking component
Austria	201,911	184,198	17,713
Russia	130,539	89,496	41,043
Romania	66,844	54,122	12,721
Czech Republic	137,150	101,272	35,878
Slovakia	81,304	70,803	10,501
Poland	58,298	49,280	9,018
Croatia	73,481	65,442	8,038
Bulgaria	57,564	49,444	8,120
Hungary	114,314	83,508	30,805
Other	146,463	122,694	23,770
100% Pessimistic	1,067,868	870,261	197,607

The tables below show the impact of staging on accumulated impairment for financial assets on the assumption that all accumulated impairment is measured based on 12-month expected losses (Stage 1).

2020 in € thousand	Accumulated impairment (Stage 1 and 2)		
	Accumulated impairment if 100% in Stage 1	Weighted average (25/50/25%)	Additional amounts in Stage 2 due to staging
Austria	99,320	185,797	86,477
Russia	71,860	97,356	25,496
Romania	15,569	63,698	48,129
Czech Republic	73,027	111,920	38,894
Slovakia	38,147	71,568	33,421
Poland	20,370	50,533	30,163
Croatia	22,796	62,321	39,525
Bulgaria	26,244	49,671	23,427
Hungary	54,530	104,142	49,612
Other	82,410	125,467	43,058
Total	504,273	922,474	418,202

The tables below show the impact of staging on RBI's accumulated impairment for financial assets by comparing the reported amounts accumulated for all performing assets subject to impairment with the special case where all accumulated impairment is measured based on twelve-month expected losses (Stage 1). For non-retail exposures a split has been made into industries which are expected to have a high, moderate or low expected loss impact due to the COVID-19 crisis. The industries which are expected to be highly impacted by COVID-19 are tourism, hotels and related industries as well as automobile, air travel, oil and gas, real estate and some consumer goods industries.

2020	Accumulated impairment (Stage 1 and 2)		
	Accumulated impairment if 100% in Stage 1	Weighted average (25/50/25%)	Additional amounts in Stage 2 due to staging
in € thousand			
High Impact	99,037	216,181	117,144
Moderate Impact	70,686	119,858	49,172
Low Impact	57,220	97,234	40,014
Retail	277,330	489,202	211,872
Total	504,273	922,474	418,202

The table below shows the impact of staging on accumulated impairment for financial assets on the assumption that all accumulated impairment is measured based on lifetime expected losses (Stage 2).

2020	Accumulated impairment (Stage 1 and 2)		
	Accumulated impairment if 100% in Stage 2	Weighted average (25/50/25%)	Additional amounts in Stage 2
in € thousand			
Austria	278,994	185,797	93,197
Russia	136,042	97,356	38,686
Romania	108,989	63,698	45,291
Czech Republic	183,164	111,920	71,244
Slovakia	111,255	71,568	39,688
Poland	83,808	50,533	33,275
Croatia	90,495	62,321	28,174
Bulgaria	89,648	49,671	39,977
Hungary	196,455	104,142	92,313
Other	183,993	125,467	58,526
Total	1,462,844	922,474	540,370

The table below shows the impact of staging on RBI's accumulated impairment for financial assets by comparing the reported amounts accumulated for all performing assets subject to impairment with the special case where all accumulated impairment is measured based on lifetime expected losses (Stage 2). Non-retail industries were divided into high, moderate and low depending on the expected loss from the COVID-19 crisis. The industries which are expected to be highly impacted by COVID-19 are tourism, hotels and related industries as well as automobile, air travel, oil and gas, real estate and some consumer goods industries.

2020	Accumulated impairment (Stage 1 and 2)		
	Accumulated impairment if 100% in Stage 2	Weighted average (25/50/25%)	Additional amounts in Stage 2
in € thousand			
High Impact	275,331	216,181	59,150
Moderate Impact	178,897	119,858	59,039
Low Impact	181,379	97,234	84,145
Retail	827,238	489,202	338,036
Total	1,462,844	922,474	540,370

The table below provides a comparison between the reported accumulated impairment for expected credit losses for financial assets in Stage 3 and the pessimistic scenario weighted by 100 per cent. The pessimistic scenario does not reflect an extreme case, but the average of the scenarios which are distributed in this case.

2020	Accumulated impairment (Stage 3)			
	in € thousand	Pessimistic scenario	Weighted average	Increase in provisions due to pessimistic scenario
Austria		499,004	465,988	33,016
Russia		250,464	157,887	92,577
Romania		139,158	127,459	11,699
Czech Republic		234,897	185,103	49,794
Slovakia		170,063	157,329	12,735
Poland		95,656	88,535	7,121
Croatia		129,762	84,339	45,423
Bulgaria		115,868	61,201	54,667
Hungary		168,140	148,778	19,361
Other		296,232	227,502	68,730
Total		2,099,243	1,704,120	395,123

Source: Raiffeisen Bank International Annual Report 2020, pages 176-179 (extracts)

Example 20: Sensitivity analysis including changes in exposures by stage

As at 31 December 2020	Scenarios					
	Weighted	Upside 2	Upside 1	Baseline	Downside 1	Downside 2
Stage 1 Model Exposure (€m)						
Home loans	131,422	134,100	133,246	132,414	130,547	128,369
Credit cards, unsecured loans and other retail lending	51,952	53,271	52,932	51,995	50,168	48,717
Wholesale loans	149,099	155,812	154,578	152,141	144,646	131,415
Stage 1 Model ECL (€m)						
Home loans	6	4	5	6	14	42
Credit cards, unsecured loans and other retail lending	392	316	340	372	415	415
Wholesale loans	262	242	258	249	278	290
Stage 1 Coverage (%)						
Home loans	—	—	—	—	—	—
Credit cards, unsecured loans and other retail lending	0.8	0.6	0.6	0.7	0.8	0.9
Wholesale loans	0.2	0.2	0.2	0.2	0.2	0.2
Stage 2 Model Exposure (€m)						
Home loans	19,180	16,502	17,356	18,188	20,055	22,233
Credit cards, unsecured loans and other retail lending	13,399	10,572	11,579	13,176	16,477	19,322
Wholesale loans	32,677	25,963	27,198	29,635	37,130	50,361
Stage 2 Model ECL (€m)						
Home loans	37	31	32	33	42	63
Credit cards, unsecured loans and other retail lending	2,207	1,618	1,837	2,138	2,865	3,564
Wholesale loans	1,410	952	1,047	1,223	1,771	2,911
Stage 2 Coverage (%)						
Home loans	0.2	0.2	0.2	0.2	0.2	0.3
Credit cards, unsecured loans and other retail lending	16.5	15.3	15.9	16.2	17.4	18.4
Wholesale loans	4.3	3.7	3.8	4.1	4.8	5.8

Source: Barclays PLC Annual Report 2020, page 187 (extracts)

Example 21: ECL sensitivity to future economic conditions

Economic scenarios sensitivity analysis of ECL estimates

Management considered the sensitivity of the ECL outcome against the economic forecasts as part of the ECL governance process by recalculating the ECL under each scenario described above for selected portfolios, applying a 100% weighting to each scenario in turn. The weighting is reflected in both the determination of a significant increase in credit risk and the measurement of the resulting ECL.

The ECL calculated for the Upside and Downside scenarios should not be taken to represent the upper and lower limits of possible ECL outcomes. The impact of defaults that might occur in the future under different economic scenarios is captured by recalculating ECL for loans in stages 1 and 2 at the balance sheet date. The population of stage 3 loans (in default) at the balance sheet date is unchanged in these sensitivity calculations. Stage 3 ECL would only be sensitive to changes in forecasts of future economic conditions if the LGD of a particular portfolio was sensitive to these changes.

There is a particularly high degree of estimation uncertainty in numbers representing tail risk scenarios when assigned a 100% weighting.

For wholesale credit risk exposures, the sensitivity analysis excludes ECL and financial instruments related to defaulted obligors because the measurement of ECL is relatively more sensitive to credit factors specific to the obligor than future economic scenarios. Therefore, it is impracticable to separate the effect of macroeconomic factors in individual assessments. For retail credit risk exposures, the sensitivity analysis includes ECL for loans and advances to customers related to defaulted obligors. This is because the retail ECL for secured mortgage portfolios including loans in all stages is sensitive to macroeconomic variables.

Wholesale and retail sensitivity

The wholesale and retail sensitivity analysis is stated inclusive of management judgemental adjustments, as appropriate to each scenario. The results tables exclude portfolios held by the insurance business and small portfolios, and as such cannot be

directly compared to personal and wholesale lending presented in other credit risk tables. Additionally in both the wholesale and retail analysis, the comparative period results for additional/

alternative Downside scenarios are also not directly comparable with the current period, because they reflect different risk profiles relative to the consensus scenarios for the period end.

Wholesale analysis

IFRS 9 ECL sensitivity to future economic conditions

ECL of loans and advances to customers at 31 December 2020 ¹	Gross carrying amount ²	Reported ECL	Central scenario ECL	Upside scenario ECL	Downside scenario ECL	Additional Downside scenario ECL
	\$m	\$m	\$m	\$m	\$m	\$m
UK	430,555	2,077	1,514	1,026	2,271	3,869
US	201,263	369	314	219	472	723
Hong Kong	452,983	474	388	211	672	1,363
Mainland China	118,163	116	93	28	252	1,158
Canada	85,720	183	140	82	253	528
Mexico	25,920	246	222	177	285	437
UAE	44,777	250	241	190	330	536
France	164,899	117	109	97	131	238

IFRS 9 ECL sensitivity to future economic conditions³

ECL of loans and advances to customers at 31 December 2019 ¹	Gross carrying amount ²	Reported ECL	Central scenario ECL	Upside scenario ECL	Downside scenario ECL	Alternative scenarios ECL ⁴
	\$m	\$m	\$m	\$m	\$m	\$m
UK	346,035	725	536	480	635	1,050-2,100
US	203,610	148	149	132	161	
Hong Kong	418,102	328	243	241	244	550-700
Mainland China	104,004	124	118	95	106	150
Canada	74,620	80	79	63	108	
Mexico	32,632	69	68	48	99	
UAE	42,304	97	97	89	108	
France	124,618	55	53	50	79	

¹ ECL sensitivity includes off-balance sheet financial instruments that are subject to significant measurement uncertainty.

² Includes low credit-risk financial instruments such as debt instruments at FVOCI, which have high carrying amounts but low ECL under all the above scenarios.

³ ECL sensitivities for 2019 exclude portfolios utilising less complex modelling approaches and management judgemental adjustments only included in reported ECL.

⁴ The UK alternative Downside ('AD') scenario 1 had an ECL impact of \$1bn with AD2 and AD3 scenarios with ECL impacts of \$1.9bn and \$2.1bn respectively. The Hong Kong AD1 and AD2 scenarios had an impact of \$0.55bn and \$0.7bn respectively.

At 31 December 2020, the most significant level of ECL sensitivity was observed in the UK, Hong Kong and mainland China. This higher sensitivity is largely driven by significant exposure in these regions and more severe impacts of the Downside scenarios relative to the Central and probability-weighted scenarios. For mainland China, the additional Downside scenario weighting of

2% reflects a scenario that is considered highly unlikely and is significantly more adverse compared with the Central scenario, resulting in a higher ECL estimate relative to the reported and Central scenarios.

Source: HSBC Holdings plc Annual Report and Accounts 2020, pages 132-133 (extracts)