IFRS 9 IMPLEMENTATION BY EU INSTITUTIONS

2023 MONITORING REPORT

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Abbreviations

COREP	Common Reporting Framework
CORP	Corporate
CRR	Capital Requirements Regulation
EAD	Exposure At Default
EBA	European Banking Authority
ECL	Expected Credit Loss(es)
EEA	European Economic Area
ESG	Environmental, Social and Corporate Governance
EU	European Union
FINREP	Financial Reporting Framework
FLI	Forward-Looking Information
GDP	Gross Domestic Product
HDP	High Default Portfolio
IASB	International Accounting Standards Board
IFRS 9	International Financial Reporting Standard 9 – Financial Instruments
IRB	Internal Ratings Based
ITS	Implementing Technical Standards
LCRE	Low Credit Risk Exemption
LDP	Low Default Portfolio
LGD	Loss Given Default
LTV	Loan to Value
MoC	Margins of Conservatism
MORT	Retail Mortgages
PD	Probability of Default
RETO	Other Retail Non-SME
RQRR	Retail Qualifying Revolving
RSMS	Retail SMEs Secured by Real Estate
SICR	Significant Increase in Credit Risk
SME	Small and Medium Enterprises
SMEC	Corporates which are SMEs
SMOT	Other Retail SME

Executive summary

The EBA worked on the integration of the high default portfolios (HDPs) in the IFRS 9 benchmarking and ran a new exercise targeted to HDPs.

The benchmarking analyses on HDPs have confirmed that most of the findings already raised in the previous exercise are still relevant and that institutions need to address most of the practices already flagged as not fully in line with the EBA's expectations on IFRS 9 implementation in a timely manner.

Since the publication of the last EBA IFRS 9 monitoring report [1] (published in 2021) and following the envisaged staggered approach presented in the IFRS 9 roadmap [2], the EBA has worked on the integration of additional portfolios to the scope of the benchmarking exercise, namely the high default portfolios [3] (HDPs).

Following the approach already used for low default portfolios (LDPs), a new ad hoc data collection (the third ad hoc data collection), complemented by a qualitative survey, was launched by the EBA in June 2022 to test the quantitative templates to be introduced into the final ITS [4]. This data collection has also enabled targeted benchmarking analyses specific to HDPs to be performed and following up on the findings and areas of concern related to ECL modelling practices already flagged in the EBA 2021 IFRS 9 monitoring report.

Different from the last monitoring report, this exercise has focused only on ECL outputs and related modelling aspects. Other dimensions of analysis (e.g. classification and measurement, recognition and derecognition), for which additional investigations were deemed not needed at this stage and for which previous observations remain valid, have not been included. In addition, new areas have been analysed within this exercise, which relate to particular emerging risks (e.g. Russian-Ukrainian war, ESG) and to the ECL backtesting framework which, so far, has been less scrutinised from a supervisory perspective.

This report summarises the main findings arising from the EBA's IFRS 9 benchmarking analyses of the data and information collected on HDPs within the third ad hoc data collection on IFRS 9 [5], which complements the observations already included in the last IFRS 9 monitoring report published in November 2021 [6].

Since the date of the first implementation of IFRS 9, institutions have made significant progress in the implementation of their ECL impairment models, which have generally enabled the effective recognition of ECL by evaluating a range of possible outcomes also considering forward-looking information. During the COVID-19 crisis, for instance, these models permitted setting aside additional cushions of credit loss provisions based on the expectation of a rapid deterioration in the macroeconomic conditions, without waiting for the occurrence of a specific credit loss event, as it was requested by IAS 39 (incurred loss model). Significant efforts and investments have been made by institutions to implement these models, creating the infrastructure and adopting the practices needed to meet the requirements of IFRS 9.

Nonetheless, the analyses performed suggest that the ample room for judgement embedded in the principles laid down in IFRS 9 have resulted in quite different approaches being adopted by institutions for estimating ECLs. According to the benchmarking analy-

[1] EBA 2021 IFRS 9 monitoring report.

[2] EBA roadmap on IFRS 9 deliverables and IFRS 9 benchmarking exercise.

[3] HDP exposures classes have been defined, in line with the credit risk benchmarking exercise, as Corporate (CORP), Corporates which are SMEs (SMEC), Other retail SME (SMOT), Other retail non SME (RETO), Retail SMEs secured by real estate (RSMS), Retail mortgages (MORT), and Retail Qualifying revolving (RQRR) exposures.

[4] ITS package for 2024 benchmarking exercise.

[5] The third ad hoc exercise has been carried out on a sample of 37 EU institutions. See the paragraph 'Methodology and sample of banks' for further information.

[6] As the area of the investigation of the third ad hoc exercise has been more limited compared to the past exercise this document needs to be read in conjunction with the 2021 monitoring report, which remains a valid reference for other aspects that have not been extensively covered in the new exercise as well for the illustration of concepts related to the area under investigation such as the underlying principles of IFRS 9 and its links with IRB models. Refer to 'EBA monitoring report on IFRS 9 implementation by EU institutions', November 2021 for further details.

ses, these diverse practices might explain some of the variability observed on the final ECL figures on HDPs among institutions, which could have been translated into different impacts on prudential metrics. These analyses have also confirmed the existence of certain practices that raise prudential concerns, as already detected in the last monitoring exercise, within different parts of the IFRS 9 framework (e.g. SICR, PD modelling and FLI incorporation processes) that have not been addressed by many institutions yet.

Further, it was observed that, while most institutions have generally, developed backtesting methodologies for their ECL models, some institutions have either not yet backtested any parameters/risk factors or performed limited backtesting activities only to a few specific parameters (e.g. 12-month PD, LGD). Moreover, there is divergence in the scope of risk factors under consideration, the type of analysis performed and governance of the process. Most notably, it was observed that the effective use of backtesting for the periodic review of the IFRS 9 models has been, so far, quite limited, with backtesting results not often triggering concrete actions and model improvements, which raises supervisory concerns.

Despite many efforts to build IFRS 9 models, and while it is acknowledged that institutions have been operating in quite a challenging environment since the first application of IFRS 9, more progress is needed to fully meet the EBA's and supervisors' expectations on IFRS 9 implementation. In this regard, most of the EBA's previous observations are confirmed and remain valid.

Institutions are encouraged to continue improving their ECL models going forward and to promptly address those approaches that are highlighted as raising some prudential concerns. In this regard, the EBA GLs on credit institutions' credit risk management practices and accounting for ECL (EBA GLs on accounting for ECL), published in May 2017 ([7]), still represents a valid reference to assess the soundness and appropriateness of the credit risk management practices followed for accounting for ECLs.

Moreover, institutions are expected to continue improving their backtesting framework and to effectively use the backtesting analyses for the periodic update of the ECL models by promptly following up on the benchmarking results. This might lead to implementing improvements to the models needed to ensure more robust and consistent ECL outcomes.

Backtesting is an area that requires further improvements and institutions are expected to enlarge the scope of the area effectively backtested and to better frame the process on the effective use of the benchmarking results for the periodic review of IFRS 9 models.

All in all, given the significant implications that ECL figures have for the consistent application of the regulatory capital standards and for ultimately building appropriate levels of provisioning, the EBA expects institutions and supervisors to critically examine areas of major deviations highlighted by this report, and carefully evaluate whether these divergences are exclusively connected with the different risk levels of the respective portfolios (risk-based variability) or if some of these differences could also be linked to the set of data, input, statistical models and/or methodological approaches used to determine ECL estimates (risk-practice variability). This is meant to be a medium-/long-term evaluation and, at the same time, it is acknowledged that institutions have been operating in a challenging environment since the first implementation of IFRS 9. Nevertheless, it will be crucial to assess in a more definitive manner the areas of improvement detected, either from an implementation or standard setting side, and act accordingly.

More generally, supervisors are expected to continue playing a key role to ensure a high-quality and consistent application of IFRS 9 in the EU. Enhanced supervisory scrutiny on the ECL models adopted by institutions is necessary, also with a view to follow up on the main findings highlighted in the current and past monitoring reports.

Content of the report

This report ([8]) is structured in the following manner:

- Part 1 (Background and objective) includes background information on the EBA monitoring activities in the context of IFRS 9, incorporating the objectives of the analyses conducted;

([7]) EBA Guidelines on credit risk management practices and accounting for expected credit losses, May 2017.

([8]) This report should be read in conjunction with the EBA 2021 IFRS 9 monitoring report, especially with regard to concepts and/or definitions that were extensively explained in the previous publication and in didactic or methodological boxes.

- Part 2 (Main findings and observations) provides information on the main findings from this monitoring exercise for specific areas of the IFRS 9 framework;

- Part 3 (Focus on backtesting practices) provides more information on the evidence collected and main findings identified in the area of backtesting of IFRS 9 ECL models.

Main findings and observations

The data collected and benchmarking analyses have enabled relevant information gathering and understanding of potential implications of institutions' current ECL practices, specifically on HDPs. The main observations and findings of the third ad hoc exercise are related to the following aspects:

A. Staging assessment

Continued lack of use of collective SICR assessment as required by IFRS 9 despite the persistent macroeconomic uncertainties. Prudential concerns remain on practices employed to determine SICR thresholds that are not always in line with the main objectives of the impairment model of IFRS 9 and, in particular, with the concept of 'significance' as envisaged in the Standard.

The EBA restates its previous message and remains unconvinced by some of the arguments put forward for not using collective approaches more widely in the current environment.

The analyses carried out in the area of HDPs confirm the persistence of practices that can lead to delays in terms of transfers to Stage 2 and that might therefore contribute to increasing the variability in the final ECL outcomes among institutions. This might imply lower ECLs for those institutions that follow more lenient approaches.

The continuous lack of collective SICR assessment approaches ([9]) is one of the areas of attention, as already stressed in the EBA 2021 IFRS 9 monitoring report. Despite the ongoing difficulties in identifying relevant information at the individual level, similar to 2021, most institutions have continued not to rely on collective approaches to assessing SICR.

This limited use of collective assessments has been justified, in certain circumstances, with the use of alternative approaches (e.g. overlays). However, these have generally not resulted in significant transfers to Stage 2. In light of the possible alternatives, also considering the temporary nature and the limited governance of the application of overlays, these approaches should not be considered equivalent to collective SICR assessments which, in the EBA's view, remain the most suitable and aligned to the IFRS 9 tool to address the lack of information at the individual level, in particular, in the geopolitical and macroeconomic environment that has been experienced recently ([10]).

That said, collective SICR assessment approaches are expected to be used by institutions on a regular basis and not only in situations of uncertainties in the evolution of the current macroeconomic outlook and emerging novel risks in the financial landscape (e.g. inflation, interest rates, geopolitical risks). They would also need to be used in all those circumstances where information at the individual level is not available without undue cost or effort. In this regard, further improvements are expected from institutions and supervisors are expected to continue to follow up on this aspect in their ongoing discussions with institutions.

Another finding in the area of SICR is related to the approaches followed by a number of institutions to determine the SICR quantitative thresholds (generally expressed as relative changes in PDs since origination), in particular, when a statistical methodology based on the selection of a quantile of the historical distributions (generally referred to as a quantile approach) is envisaged. As already stated in the last IFRS 9 monitoring report ([11]), the use of quantile approaches may raise prudential concerns as it could result in inconsistent outcomes that potentially level out the proportion of transfers to Stage 2 across portfolios and/or over time as well as in setting higher relative thresholds for more volatile portfolios. Institutions using these approaches should therefore carefully assess the thresholds that are mechanically identified by their models and critically evaluate their appropriateness for ensuring a timely recognition of significant increases in credit risk.

Institutions are expected to not rely too extensively on a specific trigger for staging

([9]) Required by IFRS 9 B5.5.1, B5.5.6 and illustrated in IE38 and IE39 provided in IFRS 9.

([10]) EBA comment letter to IASB on Post-implementation Review of IFRS 9 impairment, October 2023

([11]) See page 33 of the EBA 2021 IFRS 9 monitoring report.

assessment only, but to have in place an adequate set of qualitative and quantitative indicators for SICR purposes. Additionally, following the practice already implemented by many institutions in the sample, it is expected that institutions use a threefold increase in the (annualised) lifetime PD as a backstop indicator for determining SICR. While the use of backstop indicators should be understood as a safeguard measure that would prevent delays in transfers to Stage 2, it should not prevent institutions from applying more prudent thresholds, which is generally expected in many circumstances, especially for higher PD levels. Leveraging on a robust and comprehensive set of indicators to assess SICR, among which the threefold increase backstop may also mitigate any potential risks associated with the usage of quantile approaches.

Lastly, for the exemptions and simplifications allowed under IFRS 9, the large usage by some institutions of the IFRS 9 low credit risk exemption (LCRE) ([12]) continues being a source of concern. Contrary to the expectations of limited usage, given the nature of the portfolio under the scope of the exercise, for most HDPs asset classes, this exemption has been broadly applied by some institutions. In addition, material diversity has been observed in terms of the PD levels used to define the scope of the low credit risk exception (i.e. a level of PD below which an exposure is considered a low credit risk). Considering that its use could prevent the assessment of SICR for a significant portion of exposures subject to the IFRS 9 impairment requirements, this might lead to delays of transfers to Stage 2. Therefore, institutions applying the LCRE for HDPs are expected to review their approaches bearing in mind the regulatory and supervisory expectations that were already set on this matter.

B. Expected Credit Loss models and use of overlays

Institutions continue to make extensive use of overlays, but different practices are observed. Their calibration often relies on a high degree of judgement, which underlines the importance for institutions to follow sound methodological approaches supported by appropriate governance processes.

Institutions are expected to incorporate, when appropriate, model adjustments at the level of model parameters and to continue progressing towards the integration of climate and sustainability-related risks in ECL outputs.

One key finding in this area is related to the approach taken by some institutions that have not developed targeted IFRS 9 models for some portfolios. For those institutions, data shows that ECLs are determined applying the same level of loan loss provisions as those used for other portfolios where IFRS 9 models have been applied. This evidence might raise prudential concerns regarding the reflection of the specific risk levels of these portfolios in the ECL figures and in the staging assessment process, especially when it is not demonstrated that reasonable and supportable information for those portfolios was not available without undue cost or effort. Institutions are therefore encouraged to review these approaches and address the limitations, ensuring consistent ECL outputs for all the portfolios under the scope of the IFRS 9 impairment model, notably for those more material portfolios.

Another important and renewed observation is related to the increased reliance on and the material impact of post-model adjustments or overlays on the final Q4 2021 ECL figures. In general, these overlays have been maintained or introduced to temporarily adjust the ECL outputs and reflect, in a timely manner, relevant emerging risk factors not yet captured by the models. Different practices have been observed in terms of risks being considered and approaches followed to quantify these overlays. This has led to diversity in terms of impact, introducing an additional source of variability to the final ECL outcomes across institutions.

At the end of 2021, the COVID-19 pandemic continued to be the main reason for the application of overlays, as institutions generally retained the overlays already introduced in 2020 to cover for potential losses not yet materialised. More recently, COVID-19 overlays were replaced or complemented with additional adjustments, aimed at capturing the emerging risks in the macroeconomic landscape (e.g. geopolitical risks, inflation, increase in interest rates), as well as ESG considerations, among others.

In most cases, overlays have been applied at the level of the final ECL outputs, with some institutions applying model adjustments at risk parameter level, which confirms previ-

([12]) IFRS 9 enables institutions to assume that the credit risk of a financial instrument has not increased significantly since initial recognition if the financial instrument is determined to have a low credit risk (e.g. an external rating of investment grade) at the reporting date.

ous EBA observations. The EBA considers the latter practice more risk sensitive and consistent with the need to incorporate the additional sources of risk, also for staging assessment, by evaluating any significant increase in credit risk at facility (or group of facilities) level. For this reason, the EBA expects that institutions will further improve the process on the calibration of overlays, reflecting, when appropriate, any adjustment in a more granular manner at single risk parameter level. When data or other model deficiencies do not enable the adjustment to be incorporated at risk parameter level, institutions should complement the quantification of overlays at ECL level with the collective SICR assessment envisaged by IFRS 9, in order to ensure that the additional sources of risks are fully reflected in the staging assessment also.

In recent years, overlays have become an integral part of the ECL framework and it is expected that this would remain the case, with some overlays being more temporary in nature and others more permanent, pending structural model changes. This consideration reinforces the need for institutions to follow a structured approach when overlays are used for loss provisioning purposes. As already stated in the last EBA risk assessment report ([13]), while it is acknowledged that these overlays may be necessary to timely account for specific circumstances that cannot be immediately embedded in the ECL model assumptions, it is expected that their usage falls under a robust methodological framework, strict governance processes and internal controls, and that the nature, significance and permanence or expected duration of the adjustments is well understood by all parties concerned.

Finally, very few institutions have considered climate and sustainability-related risks in their ECL models although considered to be material.

C. IFRS 9 PD estimation

The variability of IFRS 9 PD estimates observed calls for heightened supervisory scrutiny on a case-by-case basis. IFRS 9 PDs were generally lower than the correspondent IRB figures, largely reflecting the incorporation of the benign economic forecast feeding the models at the date of the exercise.

The representativeness of recent default data and effect on IFRS 9 models should be duly assessed.

The benchmarking analyses have highlighted the existence of variability in the IFRS 9 12-month PD estimates across institutions of the sample, both at portfolio and country level. While it is acknowledged that this is explained by the different risk levels of the respective HDP portfolios, it might also be driven by the use of different approaches to determine PD estimates.

For the vast majority of the institutions in the sample, the PDs assigned to HDPs under the IFRS 9 models have been significantly higher than the correspondent 1-year default rates observed in 2021. These results, however, need to be read in conjunction with the extraordinary macroeconomic circumstances experienced in recent years and, in particular, with the support measures provided to cope with COVID-19, which contributed to maintaining default rates at one of the lowest levels in the last 10 years.

On the contrary, IFRS 9 12-month PDs have generally been lower than the respective IRB PD values, due to the more point-in-time and forward-looking nature of the accounting estimates in combination with the positive macroeconomic outlook embedded in the models at the end of 2021.

Similar to what has already been highlighted in the previous report, for HDPs IFRS 9 PDs are generally estimated by leveraging the respective IRB models to different degrees. It was also noted that a significant number of institutions have reported relying on specific IFRS 9 models, disregarding, to a large extent, the IRB infrastructure. In this regard, justification from those institutions on the reasons underlying their modelling decisions is expected. In particular, it should be ensured that the data used, risk segmentation and models developed for IFRS 9 are fit for purpose and able to produce robust estimates aligned with sound risk management practices.

Finally, different approaches have been observed among institutions in the use of the recent observed default data for IFRS 9 purposes, which might have been very low due to the support measures applied for the COVID-19 crisis. Considering the potential bias of the default rates observed in this period, their inclusion in the data set for IFRS 9 calibration purposes might reduce the predictive power of the IFRS 9 PD estimates. This especially applies to institutions relying on a

([13]) Please see *Application of overlays in provisioning* as described on page 79 of the EBA Risk Assessment Report, December 2022.

shorter data series to calibrate IFRS 9 PDs. The inclusion of these data might also undermine the robustness of the results provided by the models used for the incorporation of forward-looking information, as the low default rates in the 2020-2021 period were generally associated with a significant drop in GDP. As a consequence, the historical correlations between the two variables could be jeopardised, resulting in less sensitivities of ECL to forward-looking information.

Considering the above-mentioned issues, the EBA expects institutions to carefully evaluate and monitor the performance of the PD models and forward-looking information components, taking remedial actions when there is reduced accuracy of the estimates and/or less statistical significance on the correlation between macroeconomic and risk variables ([14]).

D. Incorporation of forward-looking information

Impact of forward-looking information and non-linearity effect is confirmed to be generally modest but divergent practices may explain different sensitiveness observed across institutions. Some smoothening practices may prevent reflecting the point-in-time and forward-looking nature of IFRS 9 figures.

The sensitiveness of ECL figures to FLI has been limited overall, even if material impacts have been observed for certain institutions in the sample.

The different impacts observed stemming from the incorporation of FLI in the risk parameters could be partially explained by divergent practices put in place by institutions. Those include, among others, the assumptions underlying the macroeconomic forecasts, the framework developed to assign weights to the probability of each scenario and the list of indicators used to incorporate FLI in the risk parameters. Moreover, the analysis performed also confirms the already noted usage of smoothening practices from institutions to achieve more through-the-cycle figures. As previously indicated by the EBA 2021 IFRS 9 monitoring report for LDP, these approaches would not fully meet the expectations of IFRS 9 as they may prevent duly reflecting the point-in-time and forward-looking nature of the ECL figures. Against these considerations, institutions are therefore expected to refrain from pursuing smoothening practices and approaches when determining ECL figures.

The benchmarking analyses on FLI have also confirmed that, for HDPs as for LDPs, there is a similar and limited effect of non-linearity on the ECL estimates, with final figures mainly driven by the assumptions underlined in the baseline scenario. This evidence continues to raise prudential concerns as it implies that ECL figures would not fully incorporate the uncertainties embedded in the alternative macroeconomic forecasts nor the non-linearity between the evolution of the macroeconomic variables and final ECL figures. In this regard, institutions are expected to improve their FLI framework and better reflect the non-linearity in their ECL estimations going forward.

Finally, other approaches observed in the area of FLI incorporation that continue raising prudential concerns, refer to: (i) the usage of one economic scenario without further adjustments to account for non-linearity; (ii) the non-consideration of FLI aspects in the IFRS 9 LGD; (iii) the use of an excessively long forecasting period; and (iv) the extended time horizon to revert to long-term macroeconomic conditions.

As previously indicated by the EBA in its last report, these practices would not ensure that ECL figures are estimated evaluating a range of possible outcomes and based on reliable information that is representative of future conditions, as envisaged by IFRS 9. Therefore, institutions are expected to critically review their approaches against the existing guidance ([15]), implementing improvements when needed and ensuring the robustness and soundness of the different data, inputs, models and methodological choices undertaken for the incorporation of FLI. Supervisors are also expected to follow up on these aspects in their continuous discussions with institutions.

E. Backtesting

Backtesting methodologies have generally been developed for ECL models, but the scope and several parts of the framework need to be improved. Backtesting results should be effectively used for the periodic review and improvement of the IFRS 9 models.

([14]) See EBA Principles to be applied in ensuring representativeness of the IRB-relevant data.

([15]) EBA Guidelines on credit institutions' credit risk management practices and accounting for expected credit losses .

As mentioned above, in this monitoring report a new dimension explored by the EBA is the use of backtesting on IFRS 9 models, in line with the approaches that are used for credit risk models, in order to better understand the current status of its implementation among institutions as well as of the need for further improvements to ensure a fully-fledged and more effective backtesting framework. The evidence collected has revealed that institutions have, in overall terms, developed backtesting methodologies for their ECL models, leveraging the existing practices and tools developed for IRB purposes with parts of the framework more developed at the current stage (e.g. 12m PD backtesting), while other parts still require further improvement (e.g. ECL and overlays backtesting). It has also been observed that some institutions are lagging behind in developing backtesting frameworks for IFRS 9 as they have either not backtested any parameter/risk factor yet or have limited backtesting only to 12-month PD and/or LGD, while planning to develop and/or enlarge the scope of their backtesting activities.

Moreover, divergent approaches have been observed in different parts of the framework. Notably, approaches differed in the scope of risk factors under consideration, the type of analysis performed, governance of the process and, more remarkably, on the usage of the backtesting results for the periodic review of IFRS 9 models. The lack of proper follow-up actions on backtesting results raises prudential concerns, especially when the tests performed reveal underperformance and low predictive powers of the model's estimates, which might not ensure consistency of the reported ECL figures.

Therefore institutions are expected to continue to improve their backtesting framework going forward, enlarging the area of the ECL model being effectively backtested, while ensuring that the process is well framed under sound governance practices, and promptly following up on the benchmarking results, implementing the improvements needed to ensure more robust and consistent ECL outcomes.

Next steps

The EBA will continue monitoring and promoting consistent application of IFRS 9. The findings collected so far will feed future exchanges with the IASB on IFRS 9 implementation – including any further debates on the post-implementation review ('PiR') of IFRS 9 – and will also be used in the context of upcoming discussions with all interested parties and stakeholders (e.g. banks, professional associations, auditors, Basel Committee on Banking Supervision, etc.), as well as in the monitoring activities of IFRS 9 in general.

The benchmarking exercise will continue to be one of the main tools deployed for monitoring IFRS 9 implementation and to foster consistent implementation of the Standard among EU institutions. To this end, further changes will be introduced to the Benchmarking Regulation in the upcoming years to fully extend the ITS data collection and benchmarking analysis to the whole HDPs asset classes and, following the IFRS 9 roadmap, to include standardised/small institutions into the scope of the exercise.

Nonetheless, considering the more mature phase of the benchmarking exercise, a more crucial role of supervisors is expected now. More generally, supervisors are expected to continue to ensure a high-quality and consistent application of IFRS 9 in the EU, increasing their supervisory scrutiny and following up on the main findings highlighted by the EBA reports, which represent a good basis to ground future supervisory findings and remedial actions requests.

In addition, further consideration will be given to the opportunity to reflect the lessons learnt with the benchmarking exercises in the future update of the existing EBA GLs on accounting for ECL, published in 2017. This will also be done given the need to provide updated guidance to institutions and supervisors on several aspects of the ECL framework, including new aspects which were reflected less extensively in the current guidelines, such as overlays and backtesting.

Part 1: Background and Objectives

1.1. Implementation of IFRS 9 in the EU and objectives of the monitoring exercises

1. Since 2016, the EBA has been monitoring and scrutinising the effective implementation of International Financial Reporting Standard 9 Financial Instruments (IFRS 9) among European Union institutions. This has been done in several ways, starting with an initial report on the first impact assessment of IFRS 9, published in 2016, and the development of the EBA GLs on accounting for ECLs aiming to provide transparency on expectations of sound credit risk management practices associated with the implementation and ongoing application of the accounting for ECLs.
2. In line with the roadmap on IFRS 9 deliverables ([16]), published in July 2019, the EBA developed the IFRS 9 benchmarking exercise, leveraging infrastructure and methodology already provided by existing benchmarking exercises of banks' internal models, in order to better understand the interactions between the credit risk models and the ECL/IFRS 9 ones and whether the different methodologies, models, inputs and scenarios used for estimating ECLs could lead to material inconsistencies in the final ECL figures affecting own funds and prudential ratios. In addition, it also aims to compensate for the absence of validation of accounting models by regulators or supervisors, contrary to what takes place for credit risk models.
3. For this reason, the Supervisory Benchmarking Regulation ([17]) has been amended to integrate the accounting dimension in the exercise and include additional templates on IFRS 9. In a first stage, the benchmarking templates have been limited to the LDPs for which two ad hoc exercises were launched in July 2019 and in July 2020 with observations and findings published in November 2021 (EBA 2021 IFRS 9 monitoring report ([18]).
4. Since the publication of the last IFRS 9 monitoring report, and following the envisaged staggered approach presented in the IFRS 9 roadmap ([19]), the EBA has now worked on the integration of additional portfolios to the scope of the benchmarking exercise, namely the HDPs, ensuring a more comprehensive outlook of the area of variability of the ECLs outcomes, especially, considering that HDPs represent a large share of the financial instruments subject to the IFRS 9 impairment requirements.

METHODOLOGY

METHODOLOGICAL APPROACH

Benchmarking LDPs vs HDPs

The benchmarking of HDPs – carried out on a portfolio basis – is a more complex exercise compared to the benchmarking of LDPs, where the benchmarking is performed at the single counterparty level. For HDPs, comparing similar asset classes raises challenges in iSolating the practice-based variability from the risk-based variability, as the differences observed on ECL inputs, param-

([16]) Roadmap for IFRS 9 deliverables.

([17]) Commission Implementing Regulation (EU) 2016/2070.

([18]) EBA monitoring report on IFRS 9 implementation by EU institutions, November 2021.

([19]) EBA roadmap on IFRS 9 deliverables and IFRS 9 benchmarking exercise.

eters and outputs at portfolio level could also be explained by different credit and lending standards adopted by institutions and which result in different risk levels of similar portfolios.

Moreover, further benchmarking challenges stem from the way information is collected. Institutions need to aggregate data and parameters of different exposures that may potentially fall under different: (i) rating systems; (ii) rating grades; (iii) satellite models used for FLI incorporation; or (iv) different maturities, undermining in some circumstances the informative power of the reported information.

For these reasons, the template design, and following benchmarking analysis, has focused only on the meaningful and more comparable information which is generally used for detecting the area of major variability that could explain the different ECL outcomes.

Similar to LDPs, the IFRS 9 benchmarking on HDPs has focused on the following analyses: (i) variability of the ECL and IFRS 9 risk parameters; (ii) variability of the macroeconomic forecasts and the interaction between the lifetime PD curve and the macroeconomic scenarios; and (iii) variability of practices in the SICR assessment. These dimensions have also been considered in the integration of HDPs in the ITS on supervisory benchmarking, as published in May 2022.

Compared to the existing IRB benchmarking, at this stage, the IFRS 9 benchmarking on HDPs has focused only on limited portfolio breakdowns (i.e. geographical area, NACE code and IFRS 9 collateralisation status) while further portfolio splits (i.e. LTV, on/off balance sheet or combination of splits) may be introduced in a future version of the ITS on supervisory benchmarking.

Finally, the quantitative analyses and areas of major deviations detected have been complemented by the analysis of the qualitative information also collected from institutions, to ensure that the findings are grounded on robust evidence.

5. Following the same approach undertaken for the LDPs, a new ad hoc data collection (the third ad hoc data collection) – complemented by a qualitative survey – was launched by the EBA in June 2022 to test the quantitative templates to be introduced into the final ITS. This data collection has also enabled additional insights to be gathered on institutions' ECL approaches specific to HDPs and areas of high variability and concern on ECL model practices and related outputs to be identified.
6. This report is meant to summarise the observations and the findings arising from the data and information collected. It provides transparency on the most important areas of variability that have been observed in the different dimensions of analysis. The potential sources of divergent ECL outcomes produced by the IFRS 9 models have been highlighted in this report, flagging those practices that could raise prudential concerns as potentially not able to ensure consistent IFRS 9 ECL estimates.
7. Given the significant implications that ECL figures have on capital and regulatory ratios, the EBA expects institutions to evaluate the reasons and identify the root causes that might explain the area of deviations highlighted by this Report, and to carefully evaluate whether these deviations are either exclusively connected to the different risk levels of their portfolios, or also linked to the set of data, input, statistical models and methodological approaches used to determine ECL estimates. Moreover, institutions are also expected to continue to improve their ECL framework and to address those approaches that in the report are highlighted as potential matters of concern and not considered in line with the supervisory expectations.
8. Competent authorities are expected to continue to play a key role in ensuring a high-quality and consistent application of IFRS 9 in the EU; they will continue their investigations and assessments of the robustness and soundness of the IFRS 9 ECL impairment models adopted by the institutions in their jurisdictions, especially focusing on the areas of attention stressed in this Report. For this purpose, Commission Implementing Regulation (EU) 2016/2070 on benchmarking of internal models has been amended three times already to integrate some IFRS 9 dimensions ([20]). Given that the ITS data cover a wider array of institutions

([20]) EBA Final Draft ITS on supervisory benchmarking for the 2024 exercise.

compared to the third ad hoc exercise, the future benchmarking analyses will enable the view on the variability of the ECL approaches and model outcomes to be further enlarged, providing supervisors with additional benchmarking tools to inform their supervisory assessment on the IFRS 9 models. Further consideration will be given to the need to collect any additional qualitative information going forward.

9. Particularly, in the context of greater uncertainty on the evolution of the macroeconomic conditions, it remains of utmost importance that ECL approaches and practices adopted by institutions be consistent with the main objectives of the IFRS 9 ECL model, namely, to promptly recognise the ECLs considering a broad set of information, including forward-looking aspects, ensuring that capital and regulatory ratios reflect consistent ECL estimations.

1.2. Methodology and sample of banks

10. The sample of institutions considered for the third ad hoc exercise consists of 37 institutions from 14 EU countries ([21]). These institutions are mostly identified as global systemically important institutions or as other systemically important institutions, covering approximately 74% of the total assets of the EU banking groups applying IFRS.
11. Almost all institutions in the sample used IRB models, while only one institution relied entirely on the standardised approach for credit risk. In that respect, the IFRS 9 quantitative templates designed for HDPs have been collected only for IRB institutions that are applying IFRS 9 at their highest level of consolidation. The qualitative survey, however, has been collected for all institutions in the sample.

Figure 1: Sample of institutions within the IFRS 9 benchmarking exercise

In EUR Mn	Sample of IFRS 9 Benchmarking Exercise (third ad hoc exercise)	Of which only institutions considered for the quantitative analyses	EU IFRS Banking Groups at the highest level of consolidation in EEA
Number of banks	**37**	**36**	**311**
Total Assets	**20.530.850**	**20.456.033**	**27.478.340**
Of which assets measured at Fair Value through Profit or Loss (FVTPL)	3.014.334	3.010.519	3.848.191
Of which assets measured at Fair Value through Other Comprehensive Income (FVTOCI)	891.114	885.082	1.257.981
Of which assets measured at Amortised Cost (AC)	12.318.565	12.263.171	16.427.097
IRB Approach exposures	**13.347.587**	**13.347.587**	**15.498.586**
Sovereigns	2.199.011	2.199.011	2.408.797
Institutions	922.129	922.129	1.109.258
Corporates - Specialised Lending (COSP)	645.015	645.015	819.210
Corporates - Other (LCOR, CORP)	3.387.428	3.387.428	3.893.027
Corporates - SME (SMEC)	876.368	876.368	1.096.928
Retail - Secured by real estate SME (RSMS)	297.601	297.601	342.274
Retail - Secured by real estate non-SME (MORT)	3.743.423	3.743.423	4.418.199
Retail - Qualifying revolving (RQRR)	140.495	140.495	159.044
Retail - Other SME (SMOT)	436.997	436.997	466.503
Retail - Other non-SME (RETO)	699.118	699.118	785.347
Standardised Approach exposures	**5.894.221**	**5.814.680**	**10.541.761**

IRB exposure values are post credit risk mitigation substitution effects and post conversion factors effects. EU IFRS Banking groups are defined as those reporting FINREP, template F1.1 and COREP, either C.7.a and/or C8.1.a.

([21]) Including institutions in Austria, Belgium, Germany, Spain, Finland, France, Greece, Hungary, Ireland, Italy, Luxembourg, Netherlands, Portugal and Sweden.

12. The quantitative templates ([22]) envisaged for the data collection have enabled the collection of information on IFRS 9 ECL model inputs and related outcomes for HDPs with a reference date of 31 December 2021; thereby enabling the investigation of significant dimensions, in particular: (i) the variability of the ECL and IFRS 9 risk parameters; (ii) the variability of the macroeconomic forecasts and the interaction between the lifetime PD curve and the macroeconomic scenarios; and (iii) the variability of the practices in the SICR assessment.
13. The qualitative survey complemented the quantitative information, by collecting additional evidence on IFRS 9 modelling practices including, consistent with the previous exercises performed on LDPs, practices used for the SICR assessment, differences between IFRS 9 and IRB modelling practices, approaches used for the incorporation of forward-looking information, nature of overlays applied, impact of other emerging risks (e.g. inflation scenario, conflict RU/UA) and incorporation of sustainability-related risks into ECL estimates. Additionally, the survey contained a specific section dedicated to the important dimension of internal backtesting of IFRS 9 models, which have enabled information to be collected on the main practices used by institutions to backtest their ECL model outputs and assumptions against the realised figures.

1.3. Main caveats and limitations

14. The benchmarking analysis on HDPs leveraged, to the extent possible, the approach and methodology already adopted for LDPs. Nonetheless, dealing with HDPs for benchmarking purposes results in a more complex exercise compared to LDPs as the information on HDPs is collected on a portfolio basis rather than for single common counterparties (see methodological box).
15. To ensure a proportionate approach, the data collection and relevant templates have been designed by limiting, to the extent possible, the number of portfolios and relevant information collected. Compared to the analogous IRB credit risk benchmarking exercise, upon which the IFRS 9 benchmarking was built, this exercise has comprised much more limited portfolios and data points. In fact, to limit the reporting burdens for institutions, not all the portfolio splits envisaged for IRB purposes have been considered for the IFRS 9 benchmarking, but only selected portfolio breakdowns (i.e. geographical area ([23]), NACE code and IFRS 9 collateralisation status) have been used. Moreover, full data collection has been envisaged only for the corporate asset classes (CORP, SMEC and SMOT) while for other portfolios, information has been required only at the aggregated level.
16. Moreover, it is worth highlighting that even if the benchmarking analyses have been carried out following data quality checks and data cleansing activities, the nature of a first exercise on HDPs and the novelties in the templates and relevant instructions provided to institutions, suggest considering some of the values reported and analysed as potentially still being affected by data quality issues. For the reasons above, the main observations and findings on the third ad hoc data collection generally refer to the approaches and practices that could potentially raise some prudential concerns rather than on outliers, which is different compared to the benchmarking exercise on LDPs.

([22]) Ad-hoc data collection mostly aligned with IFRS 9 HDP templates in ITS package for 2024 benchmarking exercise.

([23]) For the third ad hoc data collection information at geographical level has been required only at EU level.

Part 2: Main findings and observations

2. SICR assessment approaches

KEY TAKEAWAYS

KEY TAKEAWAYS OF THIS SECTION

SICR practices remain one of the main drivers of the overall ECL measurement. Staging approaches that are not well designed and implemented by institutions may result in a delayed recognition of significant increases of credit risk, thus not ensuring the measurement of ECLs with the appropriate time horizon (i.e. lifetime ECLs or 12-month ECLs).

The analysis performed on SICR has unveiled approaches followed by institutions that continue to raise prudential concerns, in particular: the lack of collective SICR assessment, the use of the quantile approach for determining the quantitative thresholds for SICR assessment, and the extensive usage of LCRE. As already stated in the EBA 2021 IFRS 9 monitoring report:

- The use of collective approaches to assess SICR appears to be lacking for most institutions under the scope of this exercise. The fact that institutions have not continued to rely on collective approaches to assess SICR despite the ongoing difficulties in identifying relevant information at the individual level is one of the main areas of attention for supervisors in this area of the framework for HDPs.
- Concerns remain on the use of the quantile approach for determining the quantitative thresholds for SICR assessment. As was already highlighted in the past report for portfolios with higher volatility in credit risk, this approach, for a selected quantile of the distribution, mechanically leads to higher relative thresholds than for less volatile portfolios.
- IFRS 9 LCRE large application by institutions, especially, given the nature of the portfolio under the scope of exercise. As stressed for LDPs, the use of this exemption should be limited and always well-justified and documented. Moreover, some differences have been observed in terms of the PD levels used to define the scope of LCRE.

Institutions are therefore expected to critically review their current approaches against the existing regulatory and supervisory guidance, and to implement the necessary improvements to their SICR practices to ensure sound staging assessment processes that timely recognise any significant increase in credit risk, thus, preventing undue delays in the transfers to Stage 2.

2.1. Main update

MORE INFO

WHAT ARE THE INDICATORS USED TO ASSESS SICR?

The information provided below complements the explanation box provided in the previous EBA IFRS 9 Monitoring Report: 'What is Staging assessment under IFRS 9?' ([24]).

The SICR assessment requires entities to assess the change in the risk of a default occurring over the life of a financial instrument, comparing the credit risk on exposures at the reporting date to the one observed at initial recognition. If the increase in credit risk since initial recognition is deemed significant ([25]), the instrument should be transferred to Stage 2 and the loss allowance measured based on a lifetime basis.

Entities may apply various approaches when performing this assessment, which may not be the same across all their financial instruments. A non-exhaustive range of information to consider when performing the SICR assessment is provided in IFRS 9 B5.5.17, which describes different macroeconomic, industry or borrower-specific information that may affect the credit risk of an exposure. Often these indicators may be captured via internal rating systems and may not need to be assessed independently.

In practice, several assessment criteria are used by institutions simultaneously, and can be divided into the following categories: (i) quantitative thresholds; (ii) qualitative indicators; and (iii) backstop indicators.

Quantitative thresholds relate to (relative) comparisons on (lifetime) risk of a default occurring since origination, often leveraging the probability of default and/or internal ratings. As IFRS 9 does not prescribe specific levels at which SICR is expected to occur, institutions are expected to have in place sound governance, systems and controls ([26]) to validate and demonstrate the adequacy of their methodological approach.

Qualitative indicators relate to other relevant non-statistical information, which may not be adequately captured solely by quantitative triggers. Common qualitative indicators, for instance, include the application of forbearance measures and the borrower being included in a watchlist ([27]).

Forbearance is particularly relevant as it generally results from material financial difficulties of the borrower. Transfers of forborne exposures back to Stage 1 are expected to be sufficiently evidenced by good payment behaviour over a period of time before the credit risk is considered to have decreased ([28]). Similarly, the inclusion in a watchlist often indicates an increased probability that an exposure becomes credit impaired ([29]) and therefore also constitutes a relevant indicator to consider.

Lastly, IFRS 9 includes an operational simplification aimed to assist in determining whether SICR has occurred. When reasonable and supportable information that is more forward-looking than past due information is not available without undue cost or effort, IFRS 9 allows entities to use past due information to assess changes in credit risk ([30]). The use of this rebuttable presumption that SICR has occurred when contractual payments are more than 30 days past due is to serve as

([24]) Please see page 25 of the EBA 2021 IFRS 9 monitoring report.

([25]) Whether assessed on an individual or collective basis – and considering all reasonable and supportable information – including that which is forward-looking.

([26]) See paragraph 98 of the EBA GLs on accounting for ECL.

([27]) See indicators (m) and (o) of IFRS 9 B5.5.17.

([28]) See paragraph 126 of the EBA GLs on accounting for ECL and IFRS 9 B5.5.27.

([29]) As per IFRS 9 B5.5.7: 'Generally, there will be a significant increase in credit risk before a financial asset becomes credit impaired or an actual default occurs'.

([30]) See IFRS 9 5.511.

a backstop identifying those instruments that have experienced SICR. This implies that 30 days past due is assumed to be the latest point in time at which lifetime ECL should be recognised, and that should not be used as a primary indicator of transfer to lifetime ECL ([31]). The more than 30-days-past-due presumption can be rebutted on the basis that there has not been a SICR, which should be accompanied by a thorough analysis clearly demonstrating that 30 days past due is not correlated with a SICR ([32]).

([31]) See paragraph 135 of the EBA GLs on accounting for ECL.

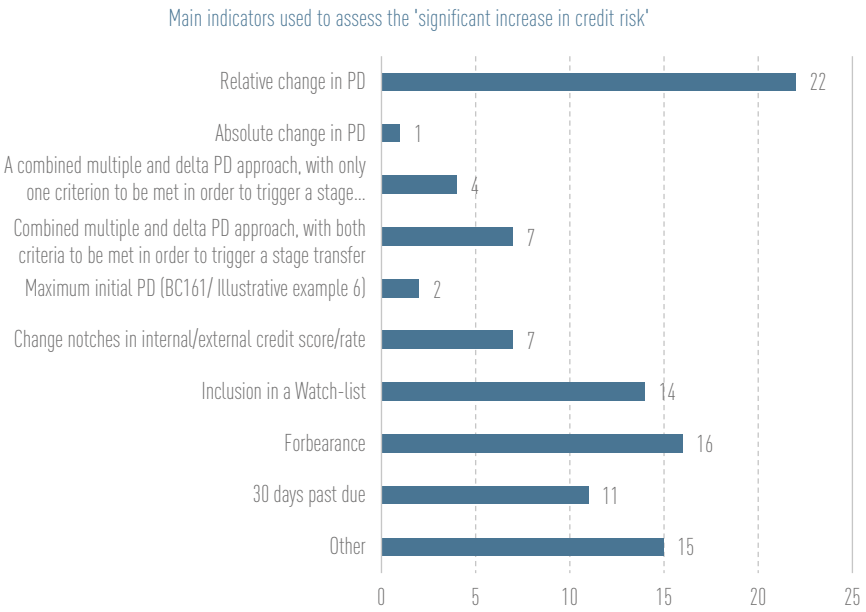
([32]) See paragraphs 136 to 138 of the EBA GLs on accounting for ECL.

17. For HDPs, institutions have generally reported limited changes to the SICR assessment approaches compared to the last EBA investigations. Some of the adjustments introduced were mainly driven by a revision of the existing quantitative SICR thresholds or to consider non-linearity in the SICR assessment. Other changes reported by some institutions referred to (i) introducing a threefold increase in (annualised) lifetime PD as an additional backstop indicator to prevent delays in transfers to Stage 2; (ii) using collective assessment and other sectoral approaches, in particular, related to COVID-19 factors such as vulnerable sectors, moratoria or state-guaranteed loans; (iii) adding the watchlist to the set of SICR qualitative indicators; and in some instances (iv) introducing a Stage 2 probation period under established conditions.
18. Data provided by institutions on the main indicators used to identify SICR on an individual basis, confirms that almost all institutions have relied on relative changes in PD as one of the quantitative indicators used to determine SICR. This approach proved to be of particular significance in terms of total transfers to Stage 2 (i.e. majority of Stage 2 transfers were triggered by the use of quantitative SICR thresholds). Qualitative indicators, for instance, forbearance (for all portfolios) and watchlists (mostly for CORP and SMEs portfolios), were also generally used by institutions and, similar to the latter, also led to relevant impact in terms of higher level of transfers to Stage 2.
19. The analyses on SICR practices have also confirmed that some institutions continue relying on the use of absolute thresholds only or on a combination of absolute and relative thresholds (with both criteria that need to be met as the trigger for Stage 2 transfers). In this regard, it should be recalled that SICR triggers that are defined only in absolute terms (either as an absolute PD level or an absolute PD increase) are generally not consistent with the requirements of IFRS 9 ([33]). Thus, institutions relying on these indicators are expected to review their approach against the expectations set out in this regard ([34]) and make changes accordingly.
20. The analysis carried out for HDPs unveiled other institutions making use of SICR methods based on change in notches in internal credit scores or ratings. While it is acknowledged that these indicators can be used to identify the existence of increased credit risk, they may not be appropriate if not complemented by a method that incorporates FLI in the staging assessment. In fact, the rating/scoring process generally leverages more past and current information than forward-looking information, especially, for some asset classes (e.g. SME, Retail). For this reason, institutions using these metrics/indicators are expected to complement the information from ratings/scores with other information (e.g. macroeconomic forecasts not incorporated in the ratings), when needed.

([33]) See for example IFRS 9 B5.5.9.

([34]) See pages 32-33 of the EBA 2021 IFRS 9 monitoring report, paragraphs BC5.160-162 of IFRS 9 and paragraph 209 of the EBA GLs on accounting for ECL.

Figure 2: Indicators used by institutions to assess significant increases in credit risk



The graph above displays the SICR indicators used by banks for at least one HDP. The SICR indicators used are not exhaustive however, meaning that banks using other SICR indicators in the list may not have reported using these indicators. Therefore, the values provided should rather be read for indicative purposes on main indicators used. To note: Relative changes in PD-aggregated approaches based on relative changes in lifetime PD, 12-month PD or annualised lifetime PDs.

2.2. Approaches for determining stage transfers

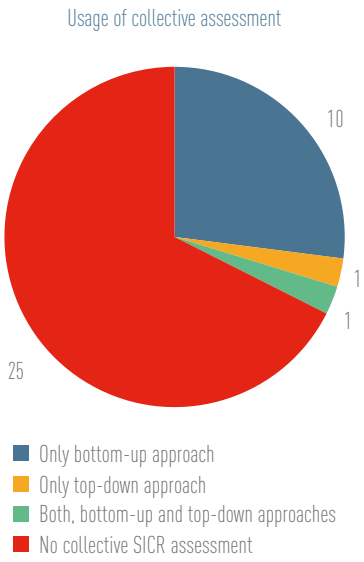
Individual vs collective SICR assessment

21. One of the most notable findings of the exercise has been the continued limited use of collective SICR ([35]) assessments, already flagged in the previous EBA report, despite the longer timeframe to assess and appropriately react to COVID-19 implications on credit risk. This lack of consideration raises some prudential concerns on the potential delay of transfers to Stage 2 under certain circumstances. Especially, where reasonable and supportable information, including that which is forward-looking, is not available at an individual instrument basis without undue cost or effort.
22. In this regard, some institutions have made use of specific SICR overlays to override the results of the staging assessment produced under their SICR ordinary methodologies. This has resulted in transfers to Stage 2 of exposures deemed to have experienced a significant increase in credit risk by using a judgemental process with these overlays, generally applied to account for the effects of the COVID-19 pandemic. Nonetheless, the supposed temporary nature of these adjustments and the limited governance of their application, do not enable these approaches to be considered as fully reflective of the effects of a collective SICR assessment, which remains the most suitable tool to address the lack of information at the individual level, as required by IFRS 9.
23. Against these considerations, institutions are expected to make use of collective assessments to complement individual assessments ([36]), not only during uncertainties in the evolution of the current macroeconomic outlook and the emerging novel risks, but primarily in those circumstances where information, including that which is forward-looking, is not available at the individual level without undue cost or effort. Supervisors are expected to follow up on this aspect and in their ongoing supervisory dialogues with institutions.

([35]) As required by IFRS 9 B5.5.1, B5.5.6 and illustrated in the illustrative examples IE38 and IE39 of IFRS 9.

([36]) See IFRS 9 B5.5.4.

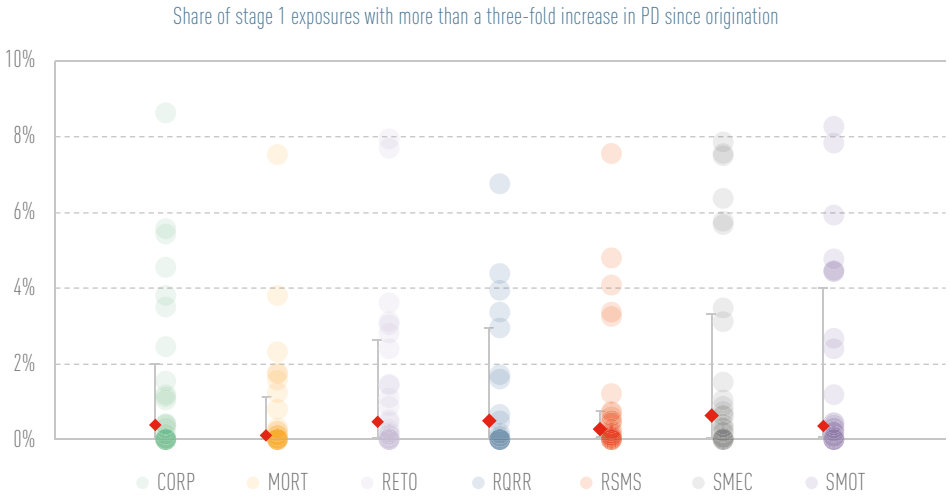
Figure 3: Limited implementation of a SICR collective assessment approach required by IFRS 9



Evaluation of the adequacy of SICR approaches

24. Different sets of indicators are generally used by institutions and supervisory authorities to review the adequacy of practices used to assess SICR. In this regard, one indicator that has been monitored in the benchmarking exercise to identify potential delays of transfers to Stage 2 is the number of exposures that remain in Stage 1 despite a threefold increase in PD since origination.
25. A significant dispersion among institutions was observed, with several institutions reporting more than 3% of exposures that remained in Stage 1 despite a threefold increase in PD ([37]). This evidence suggests that, for those institutions, delays in transfers to Stage 2 exist possibly due to the use of ineffective SICR processes and indicators. Additional supervisory scrutiny is therefore needed in this regard.
26. Institutions are expected to constantly monitor the level of exposures with more than a threefold increase in PD that remain in Stage 1, in order to promptly detect any signs of potential delays in transfers to Stage 2, and, when deemed necessary, improve their SICR practices.

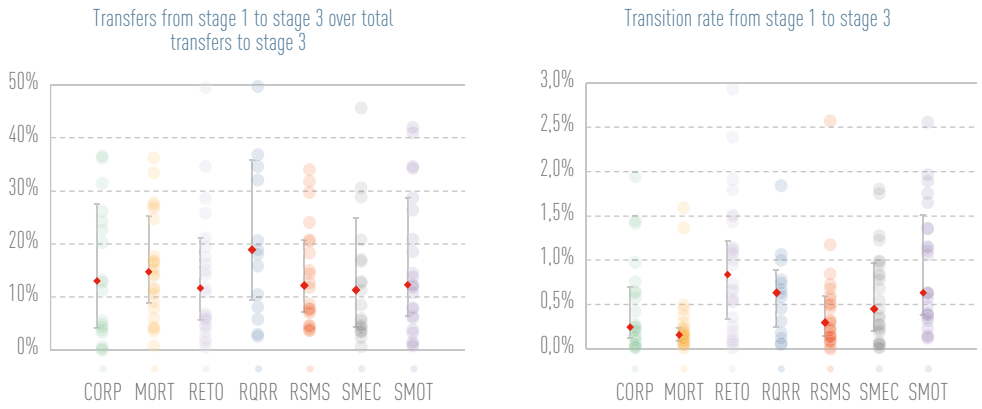
Figure 4: Comparison of the share of exposures classified in Stage 1 despite a threefold increase in PD since origination



[37] For LDPs, with a reference date of December 2020, approximately 2% of exposures were classified in Stage 1 despite having experienced a threefold increase in PD. Please refer to Figure 11 of the EBA 2021 IFRS 9 monitoring report for more information on the share of exposures classified in Stage 1, despite a threefold increase in PD since origination.

27. Other indicators used to assess the appropriateness of the SICR assessment in place relates to the transfers to Stage 3 directly from Stage 1 and transition rate from Stage 1 to Stage 3. Indeed, in accordance with IFRS 9 ([38]), generally a financial asset will be assessed as having increased significantly in credit risk earlier than when it becomes credit impaired. In this respect, benchmarking data indicates discrepancies across the values reported by the institutions. For instance, transition rates from Stage 1 to Stage 3, over a 1-year period, typically ranged from 0% to 3% across institutions, with higher rates observed on SME portfolios. This may call for further supervisory scrutiny if there are material outliers.

Figure 5: Total transfers from Stage 1 to Stage 3 for subgroups of institutions



Definition of SICR thresholds

MORE INFO

WHAT ARE QUANTILE APPROACHES?

As already explained in the report, institutions make use, among others, of quantitative indicators to assess SICR, which generally correspond – for entities using statistical IFRS 9 models – to a predetermined level of the relative increase in the lifetime PD since origination. The main issue with these kinds of indicators is identifying the specific level of increase in PD (i.e. the increase in the risk of a default occurring) to be considered significant according to IFRS 9 and which justifies the transfer of the exposure to Stage 2 (i.e. lifetime ECL recognition). In fact, IFRS 9 does not provide detailed guidance on which level of increase in the risk of default occurring is to be considered significant for SICR purposes.

In this regard, the 'quantile approach' includes a range of statistical approaches that identify the relevant thresholds (i.e. the level of the relative increase in the lifetime PD) by selecting the value(s) corresponding to a certain quantile of the distribution of changes of the (lifetime) PDs observed on the institutions' own credit exposures over a certain time horizon.

Basically, in those cases, SICR is identified based on a comparison between the PD at the reporting date and the forward PD (estimated at initial recognition). The significance of the change is evaluated based on an x% quantile of the observed probability distribution of changes in PD.

([38]) See IFRS 9 B5.5.7.

An example of a PD quantile approach is provided below:

- The institution collects historical data on relative changes in PD (either lifetime PDs or 12-month PDs) at instrument level. Those historical data constitute a distribution based on which it could be assessed how frequently a certain relative change in the risk of default since origination was observed.

- The institution identifies a x% quantile of this distribution. The relative change in PD corresponding to the x% quantile of the distribution represents the quantitative threshold of SICR.

Around the general scheme described, different approaches may be used by institutions to determine the thresholds. In particular, the calibration of these thresholds might be based on: (i) different time horizons (e.g. 1, 3, 5 year(s)) of the observed changes in the lifetime PD; (ii) different quantiles (e.g. 90th, 95th, 99th) of the observed changes in the lifetime PD distribution; and (iii) different levels of granularity (e.g. portfolio level, rating system level, rating grade level, differentiating for different maturities). In addition, different approaches might also be envisaged in terms of frequency of the update of the SICR thresholds, ranging from more static approaches, which do not envisage a recalibration of the thresholds over time, to more dynamic models, which envisage the periodic review of the SICR thresholds to incorporate the latest observations of the relative changes of lifetime PD.

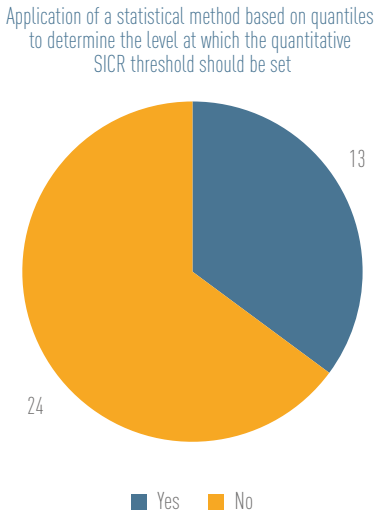
28. Similar to LDPs, it was observed that a relevant share of institutions in the sample have made use of the quantile approach in order to determine the quantitative thresholds (usually expressed as relative changes in (lifetime) PDs since origination) relevant for assessing the increase in credit risk. In general, those institutions that reported the use of quantile approaches did not provide a sufficient rationale to justify the use of such an approach.
29. As already stated in the 2021 IFRS 9 monitoring report, quantile approaches may result in inconsistent outcomes, potentially levelling out the proportion of transfers to Stage 2 across portfolios and/or over time and setting higher relative thresholds for more volatile portfolios. Institutions using these approaches should therefore carefully assess and challenge the thresholds that are mechanically identified by their models and evaluate their appropriateness for ensuring prompt recognition of Stage 2 transfers, and compare to the values that other approaches would otherwise determine.
30. Particular attention should be paid when quantile SICR thresholds are determined statistically based on a percentile of a distribution of historical relative changes in PDs, where the relative change in PD that corresponds to the percentile representing the quantitative threshold for SICR, are recalibrated dynamically. Such practices may result in situations where more lenient thresholds are applied in more adverse macroeconomic conditions which would not meet the requirements of IFRS 9 and the supervisory expectations in this regard.
31. Likewise, institutions should cautiously evaluate the appropriateness of quantile approaches that result in more lenient thresholds for riskier portfolios and assess whether such approaches could result in delays of transfers to Stage 2 for those portfolios. Further scrutiny from a supervisory perspective is also expected, in order to assess the appropriateness of approaches that mechanically identify SICR thresholds, evaluating their effectiveness for ensuring a timely recognition of significant increases in credit risk.
32. In general, it is of utmost importance that institutions have in place an adequate set of qualitative and quantitative indicators to assess SICR ([39]). It is expected that institutions would include, among others, the use of a threefold increase in (annualised) lifetime PD as a backstop indicator for assessing SICR. This should not imply, however, that SICR cannot be triggered at an earlier point in time and prevent institutions from applying more prudent thresholds, which is generally expected in many circumstances, especially for higher PD levels. In other words, the use of backstop indicators should be understood only as a safeguard measure, corresponding to the latest point in time at which SICR should be triggered,

([39]) See paragraphs B5.5.17(a)-(p) of IFRS 9 and paragraphs 107(a)-(f) of the EBA GLs on accounting for ECL.

that would prevent delays in transfers to Stage 2.

33. Institutions are strongly encouraged to follow the guidance set out in the EBA GLs on accounting for ECL ([40]) when SICR quantitative thresholds are being established and ensure that those SICR thresholds are not opportunistically relaxed where there is a deterioration in the credit quality and/or increased volatility of the portfolio.

Figure 6: Use of quantile approaches to assess SICR by institution

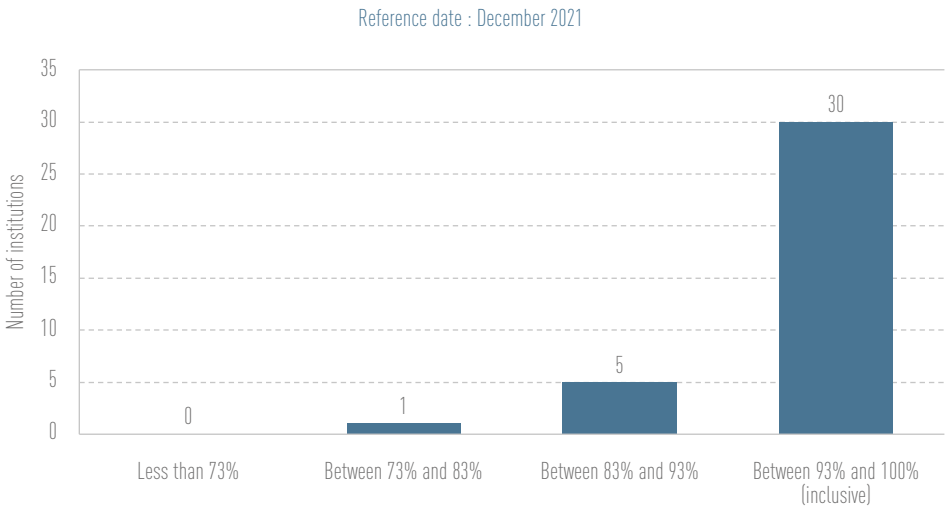


2.3. Alignment between the Definition of Default and IFRS 9 exposures in Stage 3

34. As already concluded under previous EBA investigations and reports, good alignment between the accounting and regulatory definitions continues to be observed.

35. Despite the differences between the concepts of non-performing exposures, the prudential definition of default and credit-impaired financial assets (i.e. Stage 3 under IFRS 9), in practice, it is observed that institutions tend to converge or try to achieve full alignment among the three definitions. Indeed, based on FINREP data, most institutions classified 93% to 100% of their non-performing assets in Stage 3. The most common rationales provided for observed deviations were: (i) the different definition of cure periods used for Stage 3 and defaulted exposures; and (ii) the different materiality thresholds applied.

Figure 7: Non-performing exposures allocated to IFRS 9 Stage 3



([40]) See Section 4.3.2 of the EBA GLs on accounting for ECL for more guidance in this regard.

2.4. Low credit risk exemption

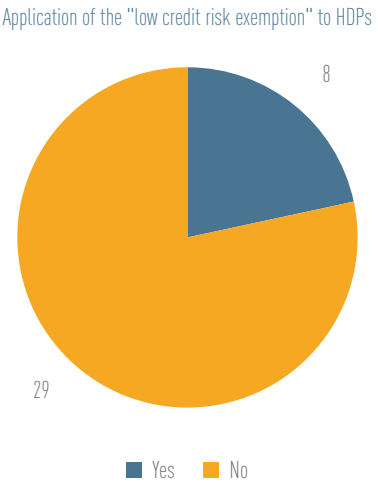
36. Another point of attention on the assessment of significant increases in credit risk is the extensive usage, by some institutions, of the LCRE envisaged under IFRS 9.
37. Contrary to the expectations of restricted usage ([41]), given the nature of HDPs, this exemption has been applied broadly by some institutions. In particular, almost one third of the institutions in the sample make use of the LCRE ([42]), which is, surprisingly, a significant proportion from an HDP perspective. Some of these institutions extend the use of the LCRE even to most portfolios under the scope of this exercise.
38. In addition, material divergences have been observed among institutions in terms of PD thresholds used to define the scope of the LCRE (i.e. the level of PD below which an exposure is considered to be of low credit risk ([43]). This evidence raises some prudential concerns for the following reasons:

- The use of the LCRE, especially for HDPs, should be limited. Although institutions have the option to apply the LCRE to certain exposures, under the assumption that the credit risk has not increased significantly since origination, prompt assessment for all exposures is expected accompanied by clear evidence that, indeed, SICR has not occurred. This is because an excessive application of LCRE will result in delays in transfers to Stage 2.

- The determination of LCRE should be consistent with the globally understood definition of low credit risk. When applying the LCRE, institutions are encouraged to harmonise their practices with the expectation of what is deemed to be low credit risk (i.e. investment grade ([44]). This should, however, not prevent institutions from applying stricter interpretations of what low credit risk should be considered.

39. Divergent practices in this regard will lead to delays in Stage 2 transfers that would, generally, favour institutions that apply more lenient thresholds to identify the low credit risk area. Institutions making usage of LCRE for HDPs are therefore expected to review their approaches accounting for the regulatory and supervisory expectations that were already set on this matter in the EBA GLs on accounting for ECL. Institutions should ensure that, when this exemption is used, the thresholds set to identify the scope of the LCRE are consistent with the globally understood definition of low credit risk (i.e. investment grade). Additionally, institutions are not expected to apply this exemption without adequate reassessment for each reporting period ([45]).

Figure 8: Application of the LCRE by institutions in the sample



([41]) See paragraph 132 of the EBA GLs on accounting for ECL.

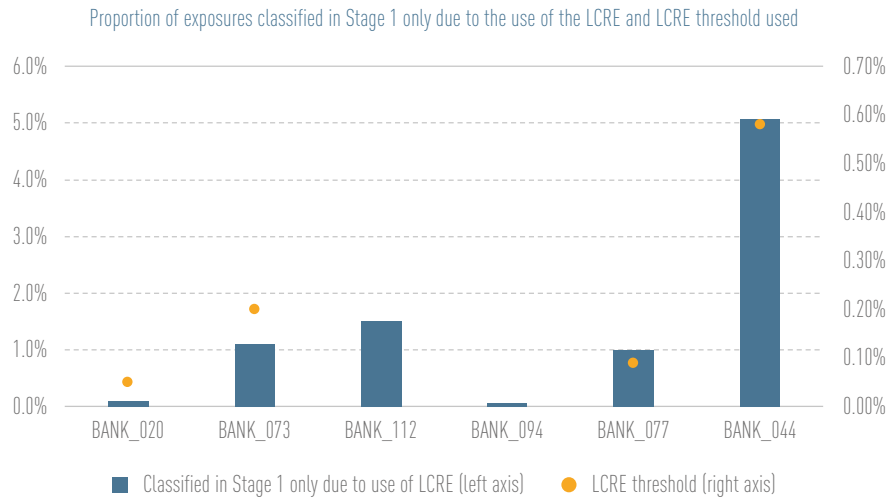
([42]) See *What is the application of the low credit risk exemption (LCRE) and 12-month PD as a proxy for lifetime PD* as described on page 30 of the EBA 2021 IFRS 9 monitoring report.

([43]) See paragraph B5.5.23 of IFRS 9.

([44]) See paragraph B5.5.22 of IFRS 9 and paragraph 134 of the EBA GLs on accounting for ECL.

([45]) In accordance with IFRS9. B5.5.24. 'Lifetime expected credit losses are not recognised on a financial instrument simply because it was considered to have low credit risk in the previous reporting period and is not considered to have low credit risk at the reporting date. In such a case, an entity shall determine whether there has been a significant increase in credit risk since initial recognition and thus whether lifetime expected credit losses are required to be recognised in accordance with paragraph 5.5.3.'

Figure 9: PD threshold associated with the LCRE



2.5. 12-month PD as proxy for lifetime PD

40. Consistent with what was observed for LDPs ([46]), while institutions in the sample generally used lifetime PD for the purposes of the SICR assessment, a significant percentage (almost 40%) have reported instead the use of the 12-month PD as a proxy for lifetime PD. The main reason provided for the use of the 12-month PD as a proxy for lifetime PD is that the former provides an outcome that is similar or highly correlated to the one obtained with the lifetime PD.
41. Answers provided by some institutions on the rationale behind the use of the 12-month PD as a proxy for lifetime PD raise prudential concerns and need to be further scrutinised from a supervisory perspective:

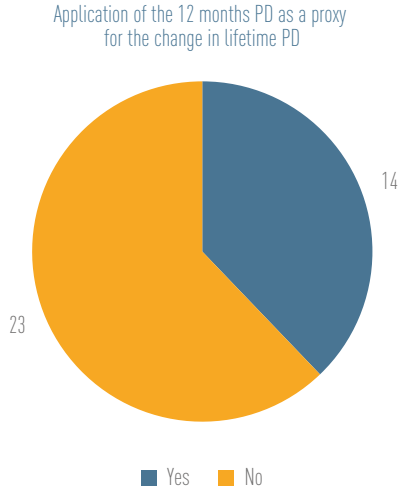
- Lifetime PDs are not available for exposures existing before the first application of IFRS 9. It should be recalled that, according to IFRS 9 ([47]), institutions should recognise a loss allowance at an amount equal to lifetime ECLs (i.e. transfer those exposures to Stage 2) if, at the date of initial application of the Standard, determining whether there has been SICR, since initial recognition would require undue cost or effort (unless it is of low credit risk at the reporting date).

- Lifetime PDs are not available for any of the financial instruments in the portfolios under the scope of this exercise.

- The 12-month PD is considered the best estimate of the quality of an exposure at origination.

42. Although the 12-month PD could indeed be a suitable starting point to estimate the credit quality of an exposure at origination, institutions are expected to perform a robust analysis in advance in order to demonstrate that changes in the 12-month risk of a default occurring is a reasonable approximation for the assessment of changes in lifetime risk of a default occurring. In this regard, the guidance provided by the Standard on circumstances where it may not be appropriate to use the 12-month PD should be followed by institutions ([48]).

Figure 10: Use of 12-month PD as a proxy for lifetime PD by institutions in the sample



([46]) See Section 2.6 of the EBA 2021 IFRS 9 monitoring report.

([47]) See paragraph 7.2.20 of IFRS 9.

([48]) See paragraph B5.5.14 of IFRS 9.

3. Expected Credit Loss Models

KEY TAKEAWAYS

KEY TAKEAWAYS OF THIS SECTION

Most institutions in the sample have implemented a PD*LGD*EAD approach for determining ECLs. For some specific portfolios, no designated IFRS 9 models were developed, which raises prudential concerns.

As observed in previous EBA investigations, post-model adjustments or overlays continued to be widely applied. These have generally been put in place by institutions to account for emerging risk factors not timely captured by models, and often considered temporary in nature. More recently, the emergence of novel risks in the macroeconomic landscape has led to the application of new model adjustments.

Overlays were introduced either at the level of final ECL amount or at risk parameter level (e.g. PD, LGD, internal rating). The latter practice is considered by the EBA more risk sensitive and consistent with the need to incorporate the additional source of risks also for staging assessment.

Pure judgmental approaches to estimate the level of overlays continued to be widely applied. Likewise, some institutions have used overlays for broadly defined risks. These approaches may introduce bias and constitute an area of supervisory attention.

Going forward, it remains essential that the use of overlays is accompanied by sound methodological approaches and supported by appropriate governance.

Currently, very few institutions have revised their IFRS 9 models to account for climate and sustainability-related risks. More progress is needed in this regard.

3.1. Types of Expected Credit Loss models

43. As observed in previous EBA investigations, different approaches have been applied for determining ECL. While most institutions have implemented PD*LGD*EAD approaches, other practices have also been followed by some institutions, for instance, relying on a probability of loss model ([49]). Furthermore, even when similar approaches were used, definitions and calibration methods of credit risk parameters have been quite diverse.
44. In some instances, institutions did not develop designated IFRS 9 models to estimate the ECL amount of specific portfolios, and instead linked coverage levels of these portfolios to other reference portfolios where IFRS 9 models were applied.
45. Such approach raises prudential concerns, especially for material portfolios, as it does not ensure ECL figures and the staging assessment are specifically tailored to the risk levels of the specific portfolios and their evolution over time, especially when it is not demonstrated, for example, that reliable information for those portfolios were not available and that undue costs and efforts were needed to produce specific estimations.
46. In this regard, according to the EBA GLs on accounting for ECL ([50]), institutions are expected to have access to relevant

([49]) See *'What are ECL models under IFRS 9?'* as described in page 43 of the EBA 2021 IFRS 9 monitoring report.

([50]) See paragraphs 17 and 21 of the EBA GLs on accounting for ECL.

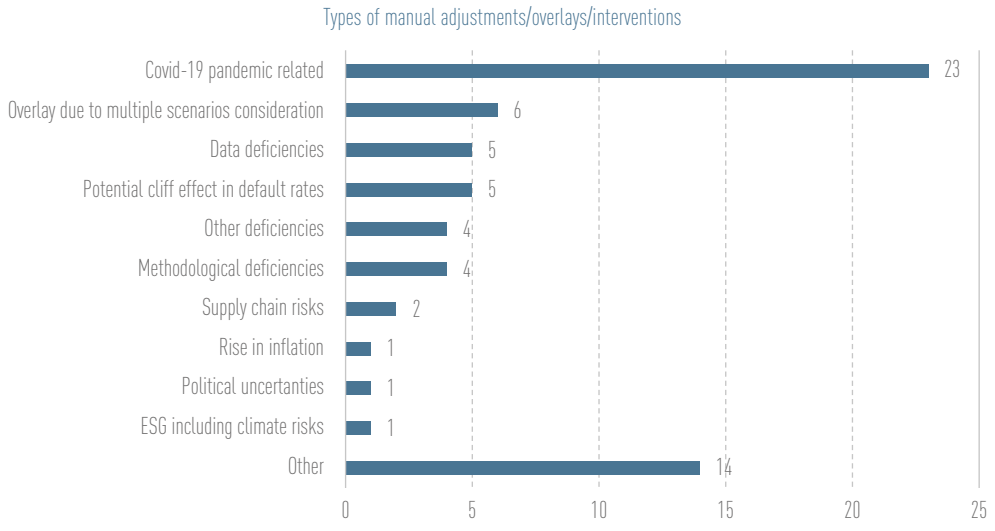
information for their exposures, considering that additional costs and operational burdens do not need to be incurred only where it is demonstrated that they do not contribute to a high-quality implementation of IFRS 9.

47. Institutions are therefore encouraged to review these approaches and to promptly address any limitations ensuring consistent ECL outputs for all the portfolios under the scope of the IFRS 9 impairment model.

3.2. Model limitations and use of overlays

48. Recent events have shown that ECL models were not always able to capture, in a timely manner, all relevant emerging credit risk factors and, as such, ensure that the aggregate amount of allowance is adequate. In this context, most institutions implemented overlays, which, for this exercise, refer to any manual adjustment or intervention affecting the IFRS 9 ECL or risk parameter estimates resulting from the ordinary application of the IFRS 9 ECL model adopted by the institution ([51]).
49. These overlays have mainly been introduced or maintained to more or less temporarily adjust the ECL outputs, in order to reflect, in a timely manner, relevant emerging risks not captured by the ECL models. The use of overlays however, as highlighted in the previous EBA report, relies on a high degree of judgement and therefore has also led to increased divergence across institutions in the outcome of IFRS 9 impairment requirements. As previously stated, their use should be subject to close scrutiny to investigate the nature of the risks that they intend to cover, their calibration, their expected rather temporary nature and the extent to which institutions will adjust their ECL models in order to incorporate the effects of overlays.
50. Benchmarking data at the end of 2021 indicate that almost all institutions continued to use overlays for reflecting perceptions of increased uncertainty and exceptional macroeconomic circumstances. In most cases, overlays were considered temporary in nature, and the effects from the COVID-19 pandemic remained a main driver for their application.
51. In consideration of these persisting uncertainties, institutions have generally retained the COVID-19 overlays, already introduced in 2020, to cover for potential losses not yet materialised. More recently, COVID-19 overlays were replaced or complemented with additional adjustments, related, for instance, to the emerging risks in the macroeconomic landscape (e.g. in 2022 geopolitical risks, inflation, increase in interest rates, etc.), as well as for ESG considerations and data deficiencies. Groups of exposures were generally identified in relation to these risk factors based on shared credit risk characteristics. In some instances, however, discrepancies were observed in the justification for the use of overlays and their linkages to well defined risk factors with some institutions instead using overlays for broadly defined risks.

Figure 11: Types of overlays used by institutions in the sample



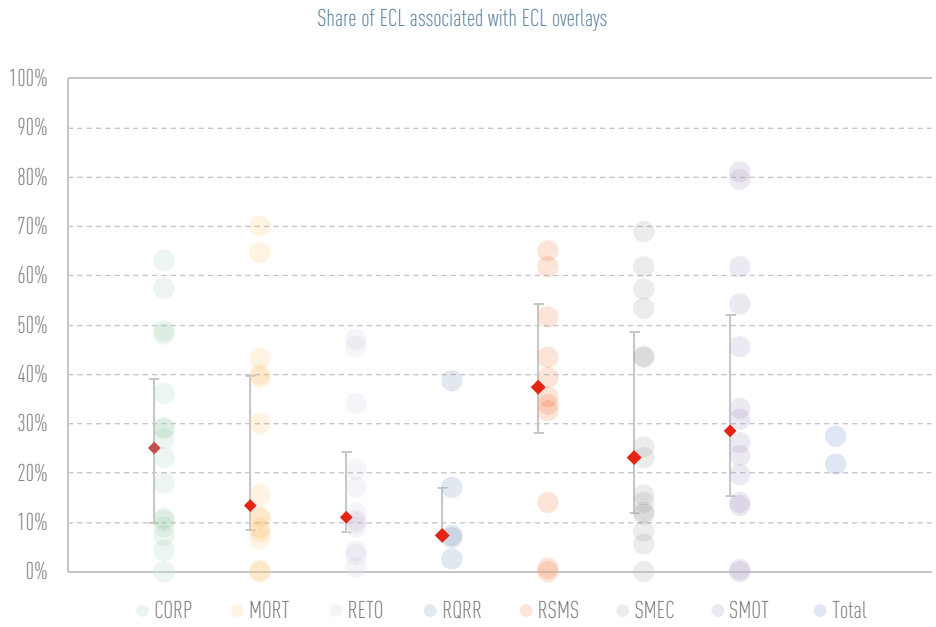
([51]) See *'What are Overlays?'* as described in page 45 of the EBA 2021 IFRS 9 monitoring report.

52. The materiality of impacts from these overlays was, on average, significant. The share of the total ECL amount associated with overlays varied from null or negligible to, in some cases, more than 50% at portfolio level, highlighting significant variability in their application.

Figure 12: Share of ECLs associated with the use of ECL overlays by type of portfolio

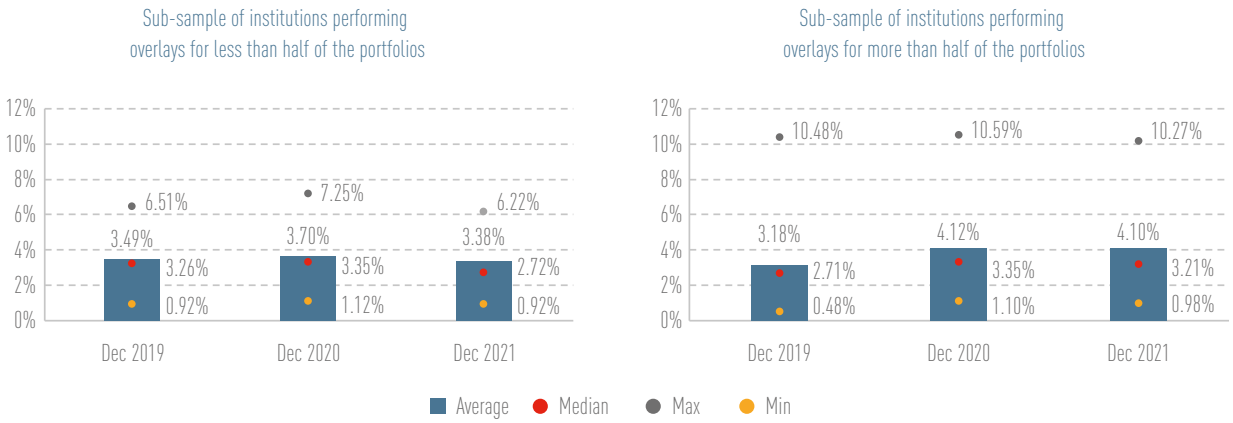
Portfolio	Number of institutions	Average impact	Median impact
CORP - Corporates which are not SMEs	16	26.3%	24.9%
MORT - Retail mortgages wich are not SMEs	14	24.9%	13.3%
RETO - Retail other	12	17.8%	11.1%
RQRR - Retail Qualified Revolving	5	14.5%	7.4%
RSMS - Retail SME exposures secured by real estate	12	38.1%	37.4%
SMEC - Corporate which are SMEs	15	29.6%	23.0%
SMOT - Other retail SME exposures	13	37.1%	30.8%
Total - No differentiation provided	2	24.6%	24.6%

Figure 13: Share of ECLs associated with the use of ECL overlays by institution



53. An analysis was conducted to better evaluate the effects of overlays on aggregated ECL figures. The evaluation, shown below, separated institutions into two sub-samples based on their degree of use of overlays and showed that institutions making use of overlays for more than half of their portfolios had, on average, higher Stage 2 coverage ratios compared to pre-pandemic levels, as compared to other peers. This suggested that model adjustments remained an important factor to consider when assessing variability in ECL estimates across institutions, and going forward, should remain an area of close supervisory monitoring.

Figure 14: Level of Stage 2 coverage ratios



54. In most cases, overlays have been applied at the level of the final ECL outputs, with some institutions applying model adjustments at risk parameter level (i.e. PD, LGD, internal rating). The latter practice is considered by the EBA more risk sensitive and consistent with the need to incorporate the additional source of risks – not captured by the models – also for staging assessment evaluating any significant increase in credit risk at facility (or group of facilities) level. For this reason, the EBA expects that institutions will further improve the process on the calibration of overlays, reflecting, when appropriate, any adjustment in a more granular manner at single risk parameter level. When data or other model deficiencies do not enable the incorporation of the adjustment at risk parameter level, institutions should complement the quantification of overlays at ECL level with the collective SICR assessment envisaged by IFRS 9, in order to ensure that the heightened risk level is fully reflected also in the staging assessment.

55. Approximately half of institutions of the sample mentioned using overlays at the level of individual parameters and, most often, these overlays were applied at the IFRS 9 PD level. In the most cases, institutions reported that these adjustments had a significant impact on the IFRS 9 12-month PD. Nevertheless, the application of these overlays did not always lead to a substantial increase in PD estimates when comparing to the parameters of other institutions in the sample. Furthermore, the relative increase in IFRS 9 12-month PD due to these overlays indicated diverse approaches in their magnitude, suggesting different methodologies and/or approaches across institutions.

Figure 15: Level of application of overlays

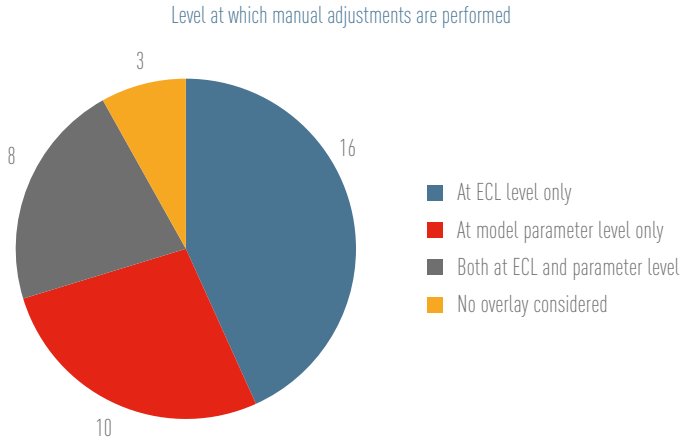
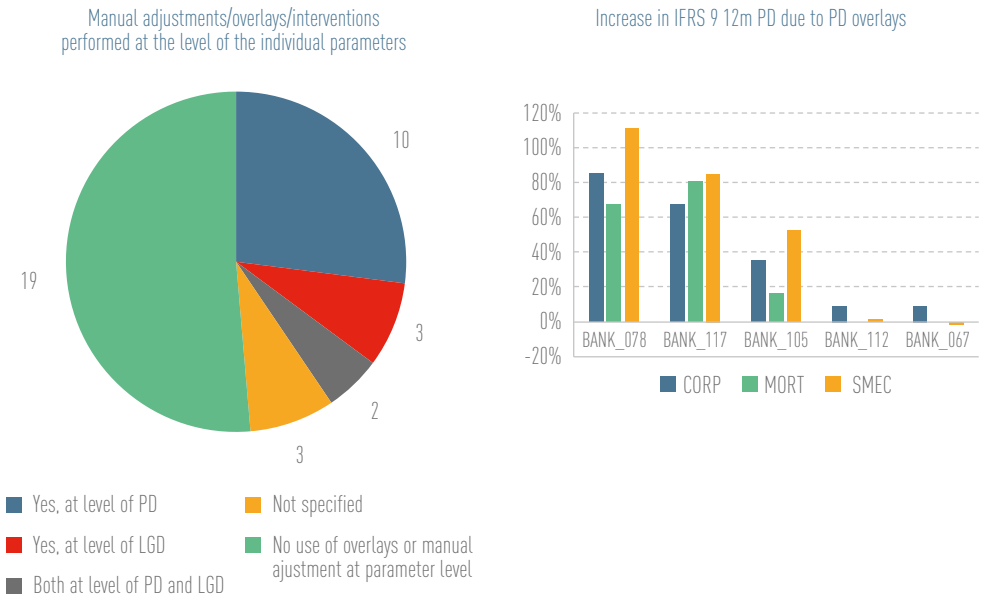
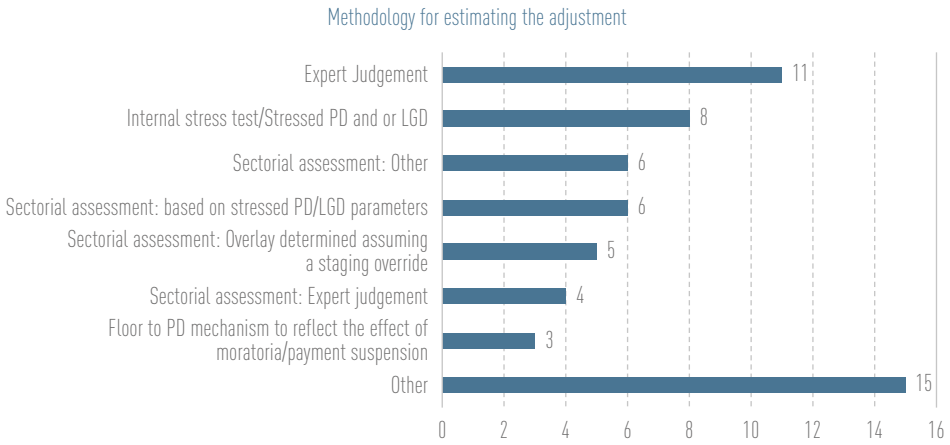


Figure 16: Application of overlays at the individual parameter level



56. Moreover, various methods have been used to estimate overlays. While some institutions continued to rely purely on expert judgement, internal stress-testing analysis and/or sectoral assessments have also been deployed which could have contributed to anchor the overlays calibration to a more robust methodological process. Other approaches like simulations or sensitivity analyses were also used.

Figure 17: Methodology followed by institutions for estimating overlays

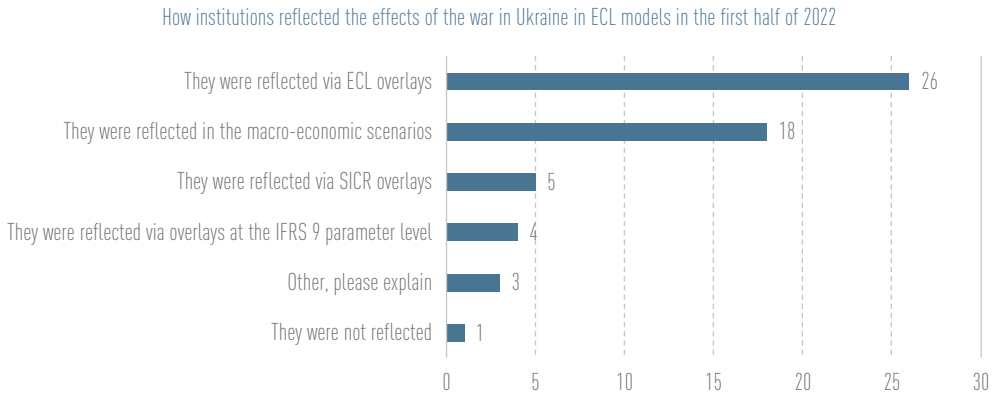


57. In recent years, overlays have become an integral part of the ECL framework despite being generally expected to cover only risks temporary in nature. This consideration reinforces the need for institutions to follow a more structured approach when overlays are used for loss provisioning purposes. While it is acknowledged that these overlays might be necessary to timely account for specific circumstances that cannot be immediately embedded in the ECL model assumptions, it is expected that their usage would fall under a robust methodological framework, be tailored to the specific risk factors they address and framed under strict governance processes and internal controls.

3.3. Effects from the Russian/ Ukrainian conflict

58. The effects of the Russian/Ukrainian war have been identified by institutions as a material risk at the beginning of 2022, driven by direct exposures to Russian and Ukraine counterparties as well as its effects on the macroeconomic environment (i.e. inflation and supply chain disruptions). Institutions have reflected these risks mostly by updating macroeconomic variables and using ECL overlays, with only a few institutions applying model adjustments at the level of the risk parameters or SICR assessments. These approaches have often been built upon the ones used in 2020-2021, for instance, via the use of internal stress-testing approaches, identification of vulnerable sectors and update of macroeconomic forecasts and scenario weights. Similar to during the COVID-19 pandemic, certain institutions considered that some macroeconomic variables operated outside their range of historically observed values. In other cases, institutions transferred COVID-19 related overlays to cover the emerging risks stemming from the RU/UA conflict.

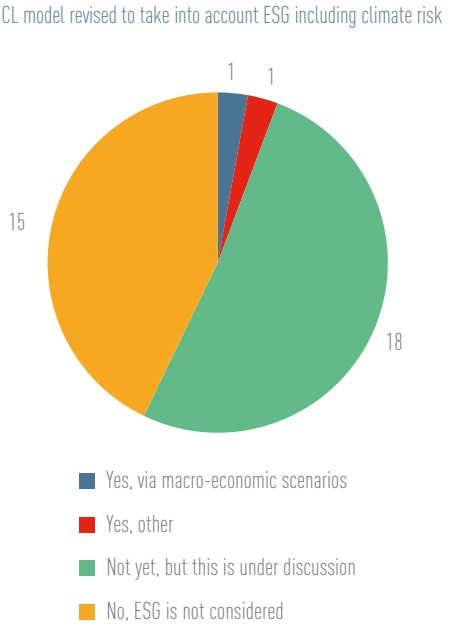
Figure 18: Impact of the Russian/Ukrainian conflict in ECL models



3.4. ESG including climate risks

59. Despite generally considering the risks stemming from ESG (including climate risk) as being material, very few institutions have taken ESG factors into account in their ECL models. In this regard, only two institutions reported having made specific adjustments to their ECL models to consider ESG aspects. Most institutions indicated however that, while not in place yet, the inclusion of ESG aspects in ECL models is still under discussion. Different methods were mentioned to include those risk factors, for instance, the update of existing rating assessment models or development of dedicated ESG ratings, the use of sectoral models or overlays, the inclusion of physical risk in collateral valuation or the adjustment to the macroeconomic scenarios.
60. The EBA welcomes ongoing work to adequately adjust ECL models to account for these novel risk factors and expects institutions to carefully assess the need for their inclusion in ECL estimates, even where data might be scarce and/or when there might be significant uncertainty in their expected impact.

Figure 19: Review of ECL models to incorporate ESG (including climate risk) factors



4. IFRS 9 PD variability and robustness

KEY TAKEAWAYS

KEY TAKEAWAYS OF THIS SECTION

As expected, considering the different inherent risk levels of respective institutions' portfolios, benchmarking data indicates some variability in IFRS 9 12-month PDs across institutions. Reported estimates were generally higher than corresponding default rates, justified by low observed defaults in 2021 supported by COVID-19 support measures. On the other hand, IFRS 9 PDs were generally lower than corresponding IRB PDs, which can be explained by the effects of positive macroeconomic projections at the time of investigation. Observed differences, nonetheless, call for further supervisory scrutiny to identify undue practice-based variability which may affect the reliability of ECL estimates.

Despite similarities between IFRS 9 and IRB models, a significant number of institutions reported making none or even limited use of IRB models for determining the IFRS 9 PDs. This is surprising and constitutes an area of attention considering the high degree of judgement in IFRS 9 models and absence of supervisory validation. In addition, while most banks have aligned their PD concept in both frameworks, differences were found in the specific definitions or in the modelling approaches used to estimate the risk parameters.

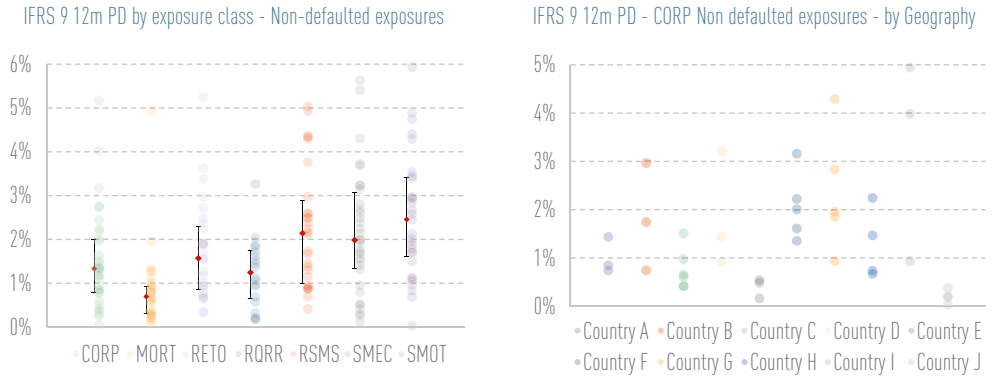
Some interesting evidence concerns the incorporation of recent default data [52] in the reference dataset for IFRS 9 PDs, considering noticeably subdued defaults in this period. While some institutions have excluded this data, other institutions have included it, in some instances, only with specific adjustments. Low observed defaults together with significant variability in GDP growth may also impair the historical correlations existing between the two variables. This calls for institutions to carefully assess the performance of their FLI models and take necessary remedial actions where appropriate.

[52] See EBA Principles to be applied in ensuring representativeness of the IRB-relevant data.

4.1. Variability in the IFRS 9 PD

61. In general, SME exposures classes have shown high default probabilities, while lower IFRS 9 PDs have been reported for retail mortgage portfolios. At the reference date of analysis, variability in IFRS 9 12-month PD estimates was nonetheless observed across institutions of the sample. Benchmarking analysis at geography level on the non-SME corporate exposures also indicated, in some cases, different IFRS 9 PD levels within a certain jurisdiction. While it is acknowledged that this variability may also be explained by the different credit standards and inherent riskiness of the respective portfolios, other differences driven by the application of divergent methodological approaches observed among institutions will require further supervisory scrutiny on a case-by-case basis.

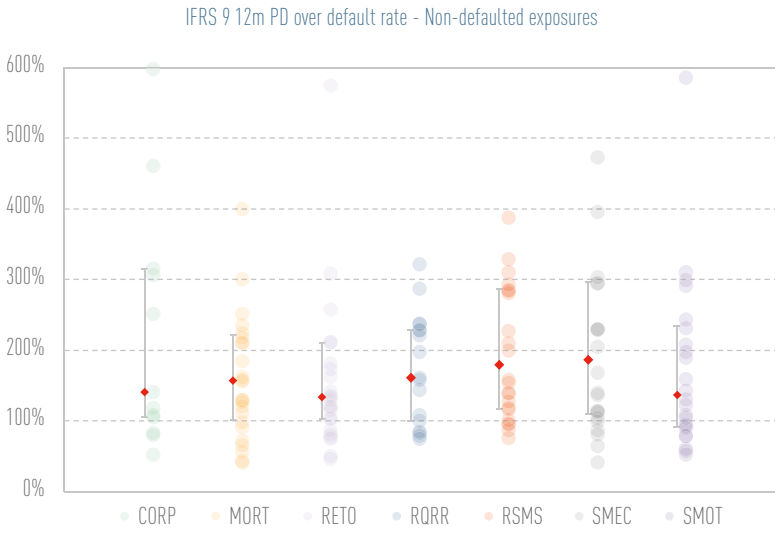
Figure 20: Variability in IFRS 9 12-month PD by exposure class and geographical area in December 2021



On the graph on the right, the analysis was limited to institutions with more than 10% of their total CORP exposures in that geography..

62. For the vast majority of the institutions in the sample, IFRS 9 12-month PDs assigned to HDPs have been significantly higher than the correspondent default rates observed in 2021. This backtesting evidence, however, needs to be read in conjunction with the extraordinary circumstances presented in 2020/2021 and, in particular, with the support measures provided to cope with the COVID-19 crisis, which contributed to maintain default rates at one of the lowest levels of the last 10 years.

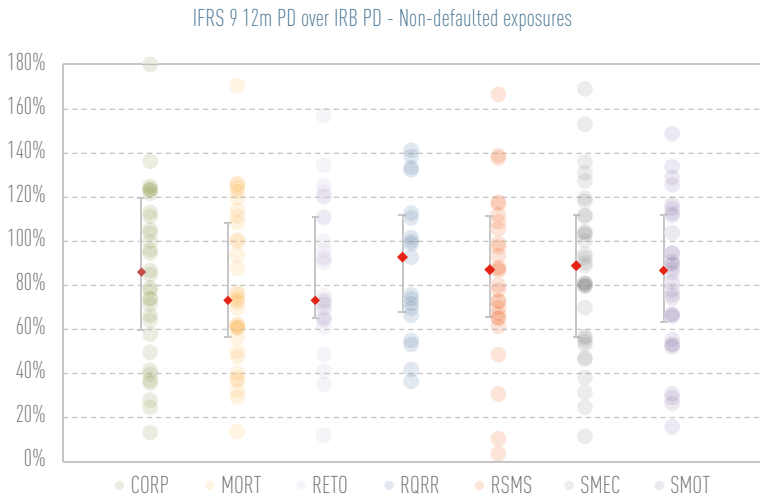
Figure 21: Comparison between the IFRS 9 12-month PD and 1-year default rate in December 2021



63. On the contrary, IFRS 9 12-month PDs have been generally lower than the respective IRB PDs values due to the more point-in-time and forward-looking nature of the accounting estimates as well as the positive macroeconomic outlook embedded in the model at year-end 2021. Nonetheless, in many cases, the IFRS 9 PDs were substantially higher than IRB figures. Relative differences between accounting and regulatory estimates should be further assessed in this regard to understand their key drivers ([53]), in particular, where significant divergence is observed.

([53]) See *What are the main differences between the IFRS and IRB PD?* as described on page 67 of the EBA 2021 IFRS 9 monitoring report.

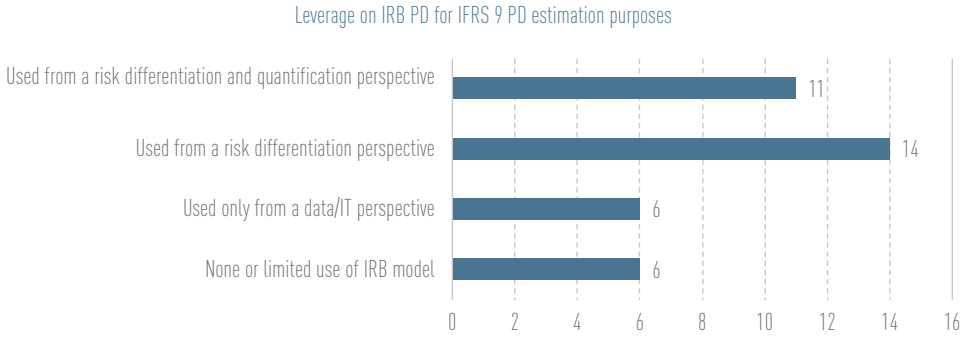
Figure 22: Comparison between the IFRS 9 12-month PD and IRB PD in December 2021



4.2. Differences in the use of IRB models for IFRS 9 estimates

64. Similar to what was already highlighted for the LDPs, HDPs IFRS 9 PDs have also generally been estimated by leveraging the respective IRB models, with most institutions in the sample leveraging IRB databases and IT infrastructure and risk differentiation and rating assignment provided for IRB purposes. Only one third of institutions also relied on IRB risk quantification to estimate IFRS 9 PDs, thus using IRB parameters as a starting point to estimate corresponding IFRS 9 estimates. It was also noted that a significant number of banks (14% considering only IRB institutions) have reported relying on specific IFRS 9 models disregarding, to a large extent, the IRB infrastructure. Considering the high degree of judgement in IFRS 9 and lack of supervisory validation, those institutions are expected to be able to justify the reasons underlying that choice and, more importantly, ensure that the data used, risk segmentation and models developed for IFRS 9 purposes are fit for purpose and enable the production of robust estimates aligned with sound risk management practices.

Figure 23: Type of adjustments performed on the IRB model in the risk quantification



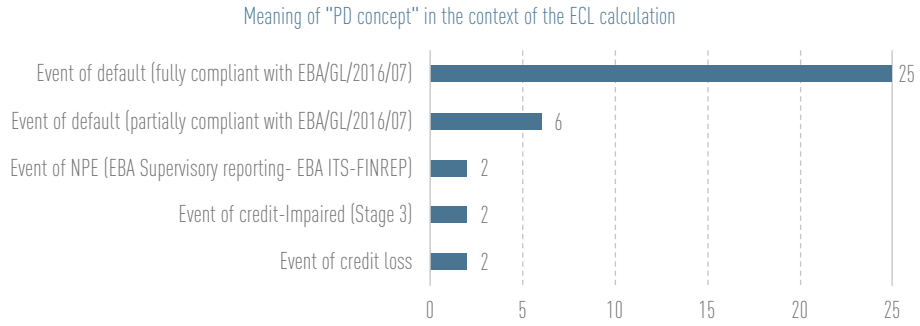
4.2.1. Differences in the definition of default

65. IFRS 9 credit risk parameters are estimated based on past realisations (e.g. default rates) and, are then adjusted to reflect current conditions and forward-looking information. As such, the definition of default used deserves particular attention. In most cases, the probability of occurrence of the event of default as defined in the EBA GLs on the definition of default ([54]) was used by institutions, in certain cases, with a partial degree of compliance. In a few others, institutions reported modelling other events, such as the credit-loss event. In this regard, it

([54]) EBA Guidelines on the application of the definition of default under Article 178 of Regulation (EU) No 575/2013.

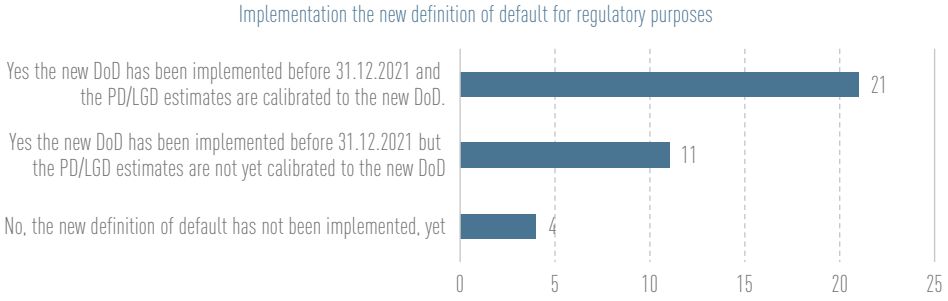
should be clarified that IFRS 9 does not prescribe the use of a specific approach for determining the ECLs. Therefore, the diversity in modelling practices does not, by itself, raise prudential concerns.

Figure 24: Meaning of the 'PD concept' for the purposes of ECL estimation



66. For those institutions applying the regulatory definition of default for IFRS 9 purposes, differences were also observed in the implementation and modelling of risk parameters based on the new definition of default as of December 2021. While most institutions calibrated their risk parameters based on this new definition, many others did not implement the change in their calibration models yet. In this regard, when using the new definition in the calibration process for regulatory purposes, institutions also implemented the change for accounting purposes. Nonetheless, most institutions reported an immaterial impact in terms of the ECL as a result of the changes introduced.

Figure 25: Implementation of the new definition of default for regulatory purposes



4.2.2. Differences in risk differentiation

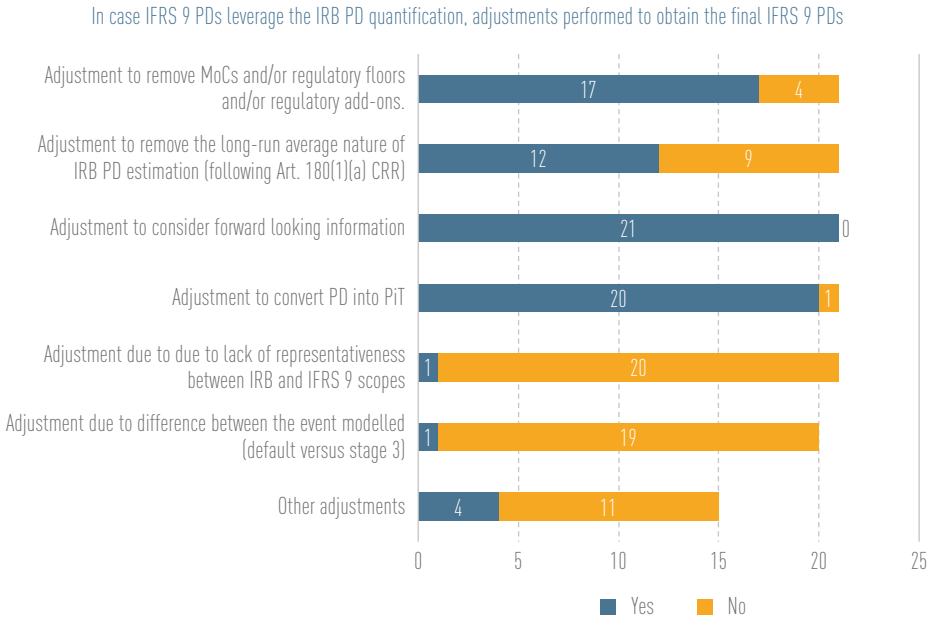
67. Most institutions leveraged IRB portfolio segmentation for IFRS 9 modelling. In other instances, however, differences were observed in the degree of alignment. Institutions suggested that such differences sought to better reflect specific IFRS 9 modelling practices, for example, to reflect a higher degree of geographical sensitivity in IFRS 9, different assignment choices of portfolios, and in some cases, further aggregation needs driven by specific data requirements in implemented IFRS 9 models. The application of IFRS 9 models sometimes also required a larger scope of application compared to the IRB perimeter. Furthermore, institutions which did not directly leverage IRB models indicated following a similar portfolio segmentation logic in IFRS 9 by, for example, differentiating real estate from non-real estate or retail from non-retail segments.
68. As highlighted in the EBA GLs on accounting for ECL ([55]), grouping based on shared credit risk characteristics should be sufficiently granular and, as such, exposures should not be grouped in such a way that an increase in the credit risk of particular exposures is obscured by the performance of the group as a whole. In that respect, the EBA expects the IFRS 9 methodology used for risk differentiation purposes to be well documented and subject to appropriate review.

([55]) See paragraphs 49 to 53 of the EBA GLs on accounting for ECL.

4.2.3. Differences in risk quantification

69. Institutions have used different approaches to estimate the IFRS 9 PD parameters. For those institutions using IRB estimates as a starting point (i.e. from a quantification perspective), the main adjustments related to the transformation of unconditional PDs into point-in-time estimates, the incorporation of forward-looking information and removal of margins of conservatism (MoCs), among other regulatory adjustments. Differences have been nonetheless observed in the specific adjustments made and models implemented. In a similar manner, for those institutions using historical default or loss data as a starting point instead, diverse approaches have been used to estimate the IFRS 9 PD estimates. For instance, based on regression analysis, parametric or non-parametric statistical approaches and/or transitional matrices. Almost all institutions, however, mentioned the incorporation of macroeconomic projections and achieving point-in-time estimates. This contrast with IRB estimates which shall be representative of long-run experience (i.e. reflecting a through-the-cycle approach) and include supervisory add-ons and adjustments aimed at reflecting, among others, the MoC. Methods used also differed in the approach for the estimation of cumulative PD curves and, in some cases, interpolation methods applied for longer maturities.

Figure 26: Adjustments performed to the IRB PD for the purposes of the calculation of IFRS 9 PD



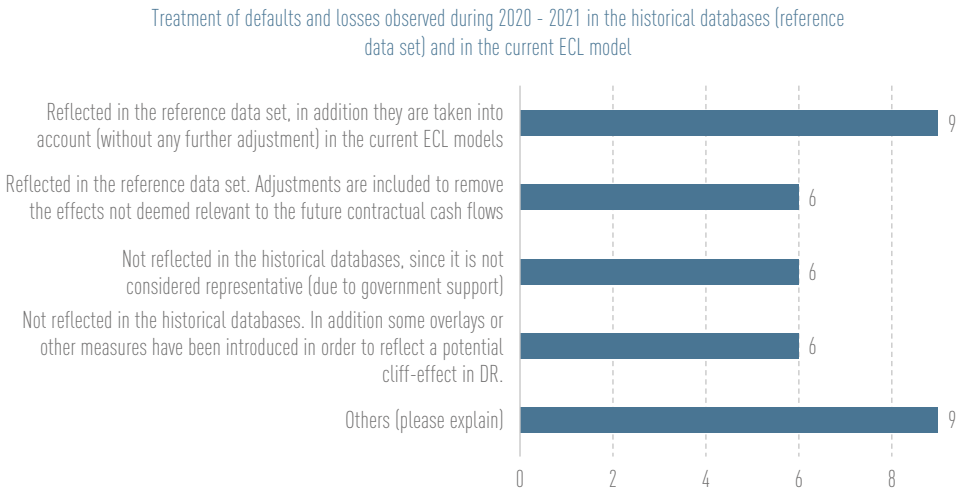
4.3. Treatment of 2020-2021 defaults

70. The support measures introduced in 2020-2021 provided to corporates and households to cope with the COVID-19 crisis, have contributed to curtailing the default rates significantly. In this regard, different treatments of the 2020-2021 observed default data have been noticed for IFRS 9 purposes. While some institutions have excluded this data from the reference data set for IFRS 9 PD, others have instead included it. Furthermore, only half of these institutions compensated for the inclusion of this data with specific adjustments.

71. Considering the possible bias of the default rates observed in this period, their inclusion in the data set for IFRS 9 calibration purposes may potentially reduce the predictive power of the IFRS 9 PD estimates. This applies especially for institutions relying on a shorter data series to estimate IFRS 9 PDs. The inclusion of this data could undermine the robustness of the results provided by the models used for the incorporation of FLI, as the low default rates in the 2020-2021 period were associated with significant variability in GDP growth. Thus, potentially jeopardising the historical correlations existing between the two variables.

72. Considering the highlighted issues, the EBA expects that institutions will carefully evaluate and monitor the performance of the PD models and FLI components and take necessary remedial actions if there is decreased accuracy of the estimates and/or less statistical significance in the correlation between macroeconomic and risk variables ([56]).

Figure 27: Treatment of defaults and losses observed during the 2020-2021 period for IFRS 9 purposes



([56]) In this respect, please see the EBA's Principles to be applied in ensuring representativeness of the IRB-relevant data. As per IFRS 9 B5.5.52, entities *shall adjust historical data, such as credit loss experience, on the basis of current observable data to [...] and to remove the effects of the conditions in the historical period that are not relevant to the future contractual cash flows.*

5. Incorporation of forward-looking information

KEY TAKEAWAYS

KEY TAKEAWAYS OF THIS SECTION

The impacts stemming from the incorporation of FLI and non-linearity effects to the ECL figures have been confirmed as generally modest, even though some institutions have shown higher sensitivities of their ECL estimates to their macroeconomic projections ([57]).

The different magnitude of the impacts can, in part, be explained by the existence of quite diverse practices followed by institutions to incorporate FLI into their ECL models which might lead to divergent ECL outcomes. Consistent with observations of past investigations, relevant areas of variability have in fact been observed in different parts of the FLI incorporation process, such as the definition of the relevant macroeconomic scenarios, the approaches used to incorporate the effects of the macroeconomic projections at risk parameter level and the methods envisaged for considering the non-linearity effects in the credit loss estimations.

In this regard, some observed practices (e.g. the usage of one single scenario without further adjustments for non-linearity, the non-consideration of FLI aspects in the IFRS 9 LGD, the use of an excessively long forecasting period and lengthy time horizon to revert on long-term macroeconomic conditions) continue to raise prudential concerns. Since the rationale and consistency of these practices with the IFRS 9 principles would be difficult to justify, institutions are expected to address these issues in a timely manner to ensure more consistent ECL outputs and broader alignment with supervisory expectations ([58]).

The benchmarking analysis on HDPs has unveiled other areas of heterogeneity in other aspects of the FLI framework, for example in the set of macroeconomic variables being considered or in the severity and probability weights assigned to the different scenarios. This heterogeneity might further explain the different sensitiveness of the ECL figures to FLI observed across institutions during 2021 and calls for additional supervisory scrutiny in these areas, to assess the robustness and the soundness of the different data, input, models and methodological choices taken by institutions to reflect FLI in the ECL estimations.

Finally, the new investigations confirm previous evidence on the tendency to smooth the effects of the incorporation of FLI into the ECL outcomes to achieve more stable ECL provisions. This tendency continues to represent a matter of concern as the objective of the IFRS 9 impairment model is to determine ECLs more anchored to point-in-time and forward-looking considerations rather than producing through-the-cycle figures.

([57]) Some banks have not provided the answer as the FLI are automatically incorporated into their ECL model (via the parameters) and it was not feasible to disentangle the effect of FLI from the final ECL figures.

([58]) In this respect paragraph 38 (b) of EBA GLs on accounting for ECLs sets out that *credit institutions should have a documented process for determining the time horizon of the scenarios and, if relevant, how ECL is estimated for exposures whose lives exceed the period covered by the economic forecast(s) used.*

5.1. Macroeconomic scenarios

73. Almost all institutions in the sample have updated the macroeconomic scenarios compared to the last annual reference date. Generally, scenarios were updated optimistically consistent with the forecast at the end of 2021 and the expectations of a rebound of the economy after the COVID-19 crisis (without anticipating the RU/UA conflict).
74. Similar to the observations of the past benchmarking exercise, it was noted that institutions have generally made use of internal macroeconomic forecasts, even if quite a large share of institutions have also relied on central banks' forecasts, at least for the baseline scenario. The high reliance on internal projections has caused some variability across institutions in the forecasted macroeconomic variables figures embedded in the ECL models, which has naturally resulted in divergent effects of the FLI incorporation and final ECL model's outputs. In this regard, the benchmarking analysis on HDPs has unveiled a quite relevant dispersion of the GDP values projected for the next 3 years for similar geographical areas which may question, in some cases, the soundness of the underlying assumptions behind the internal scenarios forecasted, especially, when a larger deviation among institutions is observed. This evidence reiterates the need for institutions that use internal macroeconomic projections to have the necessary forecasting expertise and proper internal resources, as well as, to rely on sound processes for setting out and selecting the scenarios to be used in the ECL assessment ([59]).

Figure 28: GDP growth forecasts used by EU institutions

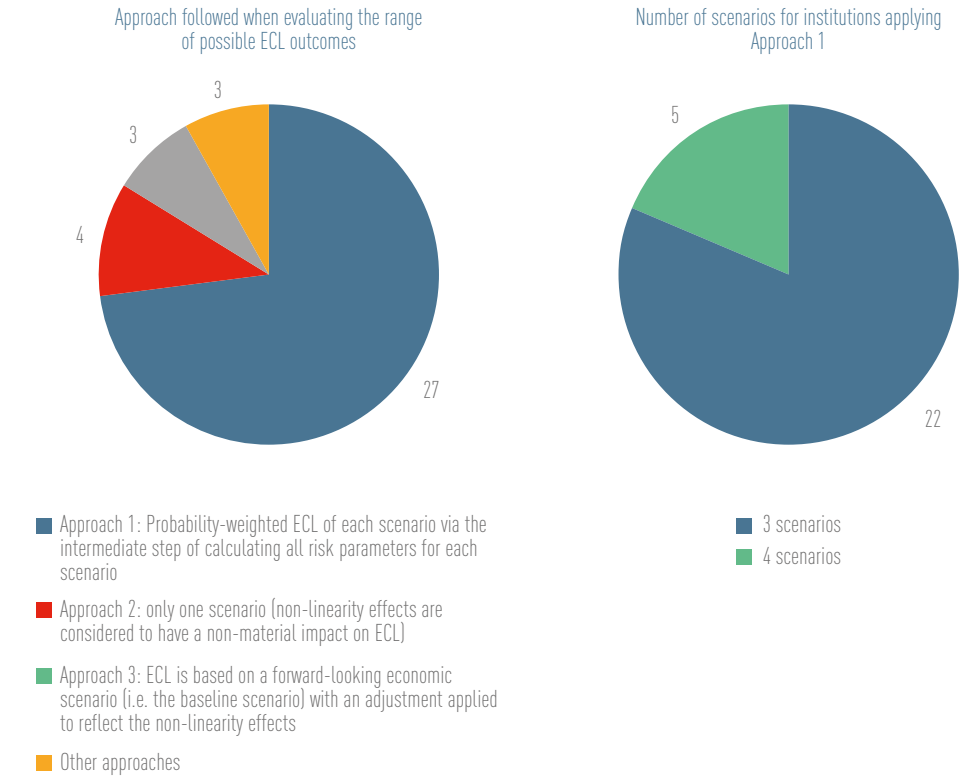
75. For some institutions reporting more outliers, the variability of the macroeconomic forecasts might also be linked to an attempt to smooth or mitigate the effects of the FLI components in the final ECL figures therefore stabilising the level of ECLs and avoiding a major release of provisions that would have otherwise materialised given the positive macroeconomic outlook forecasted.

([59]) See paragraph 38(c) of the EBA GLs on accounting for ECL.

5.2. Variability of the methodological approach for incorporation of FLI and reflection of non-linearity

76. Similar to previous findings on LDPs, different practices have been observed on HDPs on the approaches taken to incorporate FLI into the ECL measurement. Institutions have, generally, adopted multi-scenario approaches, calculating, in line with IFRS 9, a probability-weighted ECL based on scenarios, with an intermediate step of calculating risk parameters, for each scenario, reflecting scenario-specific macroeconomic information. The most common approach is to envisage three scenarios (i.e. baseline, downward and upward scenarios), with few institutions reporting using a simulative approach (i.e. Monte Carlo simulation). Others have reported the use of a single scenario approach (i.e. baseline) but reflecting the non-linearity with a specific adjustment (i.e. managerial overlay). Few institutions, instead, continue to use a single scenario without any adjustment. The latter practice, as already stated in the previous EBA IFRS 9 monitoring report, could raise some prudential concerns and may not meet the objectives of IFRS 9. For this reason, institutions should refrain from using this approach unless a sound and appropriate analysis demonstrates the existence of a linear relationship between the different forward-looking scenarios and the associated credit losses of the portfolios.

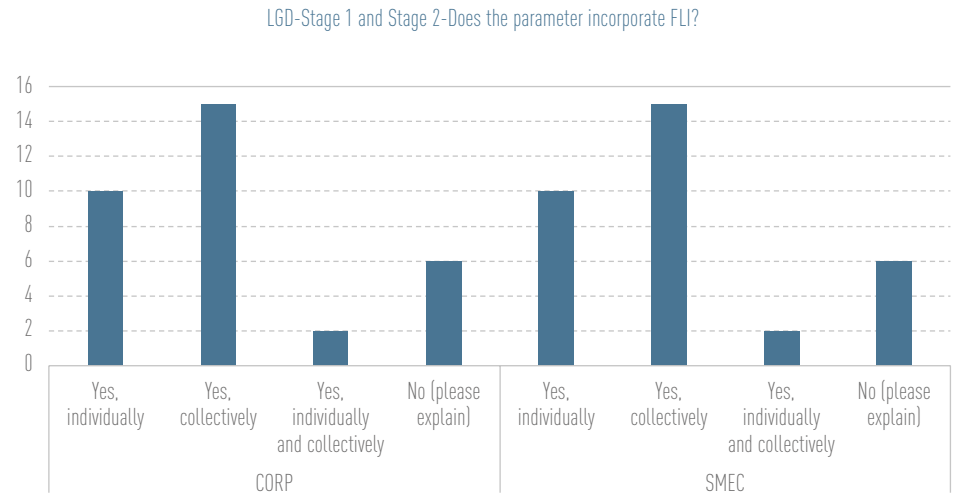
Figure 29: Approaches followed for the incorporation of FLI in ECL models



5.2.1. Incorporation of FLI at parameter level

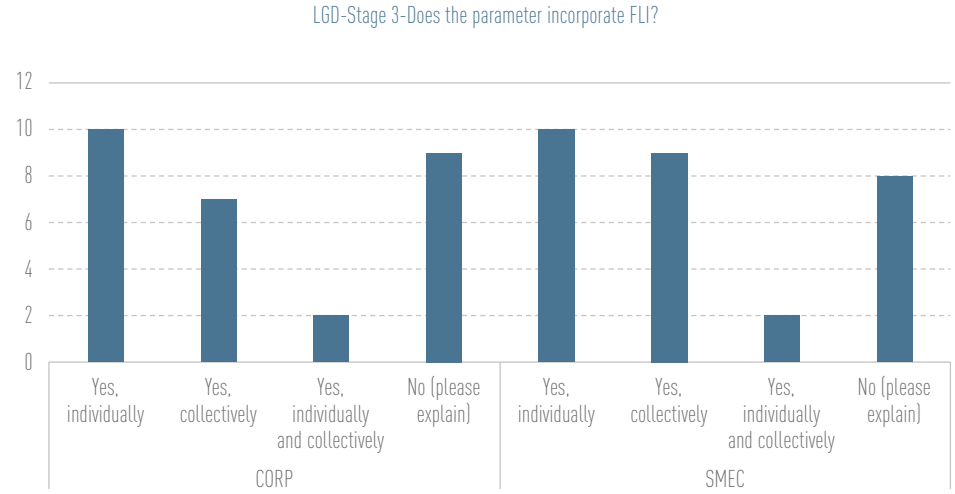
77. By construction, the incorporation of FLI in ECL models relies, to a significant extent, on parameter adjustments generally applied on PD and LGD variables, while EAD is not usually conditioned to the macroeconomic projections. While all the institutions in the sample have reported incorporating FLI in the PD parameter, not all have incorporated FLI in the LGD. This is particularly present in exposures evaluated as credit-impaired (Stage 3).

Figure 30: Incorporation of FLI for LGD parameter for exposures in Stage 1 and/or Stage 2



78. The absence of incorporating a forward-looking component in the LGD may introduce an additional layer of variability in the final ECL estimates and raises prudential concerns when it is not demonstrated (e.g. with statistical evidence) that there is a lack of correlation between the macroeconomic variables and the risk parameter. For instance, an institution may evaluate for collateralised portfolios the extent to which recovery values are influenced by the evolution of specific macroeconomic indicators such as the Housing Price Index.

Figure 31: Incorporation of FLI for LGD parameter for exposures in Stage 3



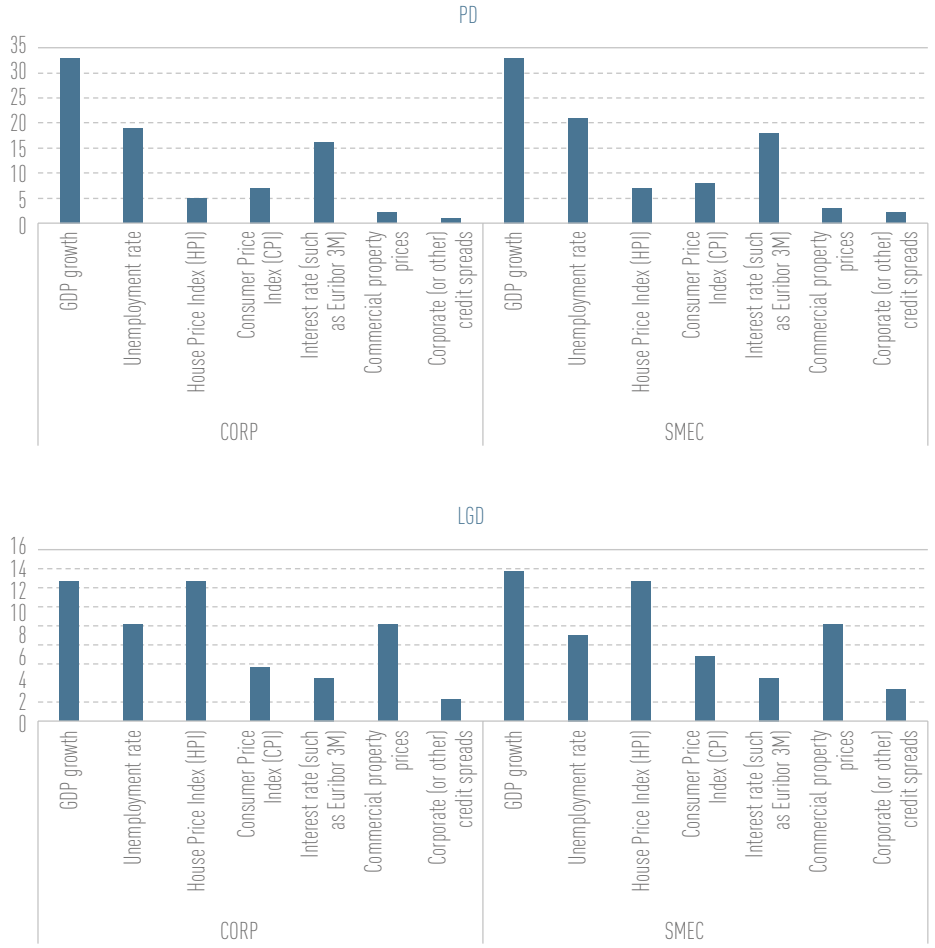
79. When not justified by robust evidence, the lack of consideration of FLI in IFRS 9 LGD parameters may lead to estimates not representative of forward-looking expectations and may therefore not meet the expectations of IFRS 9. These considerations suggest the need for institutions to carefully evaluate the relationship between the pattern of recoveries (including the evolution of the observed cure rates) against the changes in the macroeconomic conditions and to rely on sufficient data and a sound methodological framework to eventually justify their methodological choice of not considering FLI at the LGD parameter level. On that matter, institutions should refrain from making use of a priori and judgemental assertions about the lack of correlation between macroeconomic data and the relevant risk indicators.

5.2.2. List of macroeconomic variables used for FLI incorporation

80. Regarding the set of macroeconomic variables used to incorporate FLI, evidence collected on HDPs has shown some differences in the variables selected by institutions for similar portfolios,

especially on the LGD parameter. Generally, the selection process of the macroeconomic variables has been mainly driven by statistical tests of significance of these variables, while some institutions (25% of the respondents) have reported relying on expert judgement, especially for LGDs.

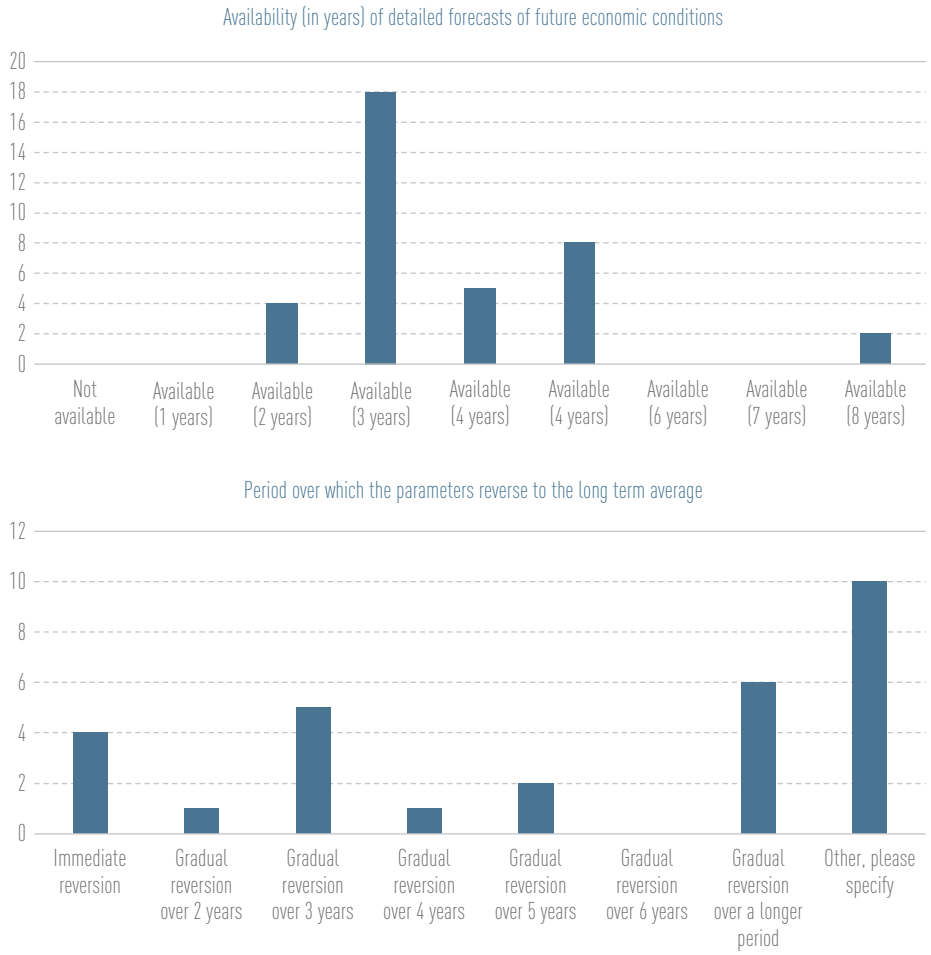
Figure 32: Macroeconomic variables used for incorporation of FLI for PD and LGD parameters



81. The variability observed in the macroeconomic factors used by institutions calls for further investigation from a supervisory perspective, in order to better understand if this heterogeneity – that can lead to divergent ECL outcomes – is fully explained by different sensitiveness of the risk indicators to the real set of data used to assess the correlation, or whether these are due to the different set of variables, practices, statistical approaches, type of data (internal/external) and length of the time series used in the selection process.

5.2.3. Forecasting period and reversion to long-term average

Figure 33: Availability (in years) of detailed forecasts of future economic conditions and time to mean reversion



82. The approaches followed by institutions in this area are quite aligned with those already detected in the past IFRS 9 monitoring report ([60]). In general, institutions have forecasted macroeconomic variables for 3 years, with some exceptions relying on a very long time horizon. The latter practice raises prudential concerns for those cases where this information cannot be considered sufficiently reliable as requested by IFRS 9. To ensure more alignment with IFRS 9 principles, institutions should therefore avoid anchoring their ECL estimation to excessively long forecasting periods in order to ensure that the final ECL figures are always based on reliable information that is available without undue cost or efforts at the time of estimation.
83. After the end of the forecasting period, most institutions have considered gradual reversions of macroeconomic variables to the long-term macroeconomic conditions ([61]) (then reflected in PD and LGD parameters). In other cases, gradually reverting ECL risk parameters directly to their long-term estimates (generally to the through-the-cycle estimates/long-run estimates). While a gradual reversion over the mean is generally carried out, divergent practices have been observed with some institutions immediately reverting to the mean estimates and others reverting in a cer-

([60]) See Figure 59 (page 78) of the 2021 EBA 2021 IFRS 9 monitoring report for the analysis performed in the past exercise and to the methodological box 'What is the incorporation of forward-looking information in the ECL measurement?' (page 71) for a further illustration of the IFRS 9 framework on FLI.

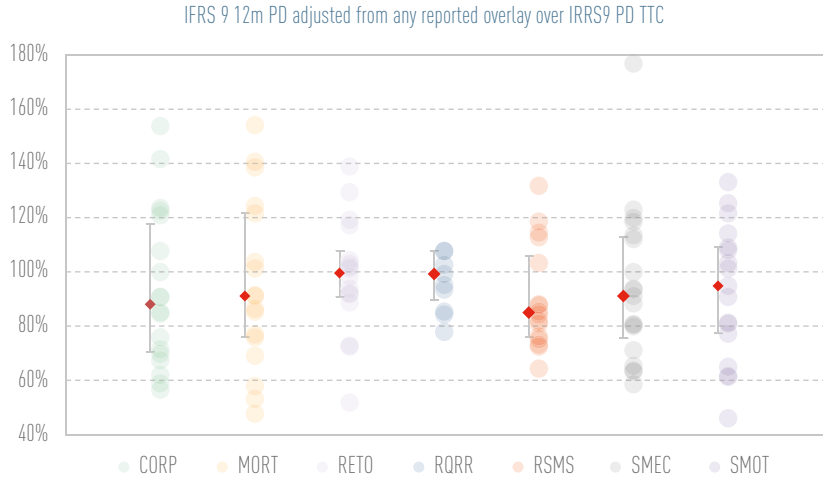
([61]) For clarity, with regard to GDP, mean reversion is understood as a return to long-term growth rates rather than reverting to the absolute levels of GDP that are expected in the long run. Similarly, with regard to unemployment rate, mean reversion is understood as a return to long-term unemployment rates rather than reverting to the absolute levels of employment expected in a certain economy.

tain number of years, which introduces divergences in the way FLI impacts the final ECL figures. As the effect of FLI may vary according to the approach taken, it is important for institutions to demonstrate consistency overtime in the approach taken to also ensure the absence of opportunistic behaviours. Institutions should also refrain from relying on excessively lengthy time horizons to revert to longer-term conditions, as this could result in introducing bias in the ECL estimates and may anchor final ECL figures on information not necessarily representative of future macroeconomic conditions.

5.3. Variability in the impact and different sensitivities from FLI

84. The impact of FLI at single ECL parameter level has been quite divergent across institutions. At the end of 2021, consistent with the more positive macroeconomic projections envisaged by the IFRS 9 models, FLI incorporation was observed to have generally decreased the level of PD and LGD estimated by the ECL models. This finding is also consistent with the observed increased usage of overlays that have enabled counter mitigating the drop in statistical ECL model outputs and reflecting management expectations of embedded risks in their lending portfolios. Thereby keeping the level of ECL recorded in Stage 1 and Stage 2 exposures during the year almost unchanged.

Figure 34: Comparison between the IFRS 9 PD (adjusted from any reported overlay at parameter level) and IFRS 9 PD TTC in December 2021

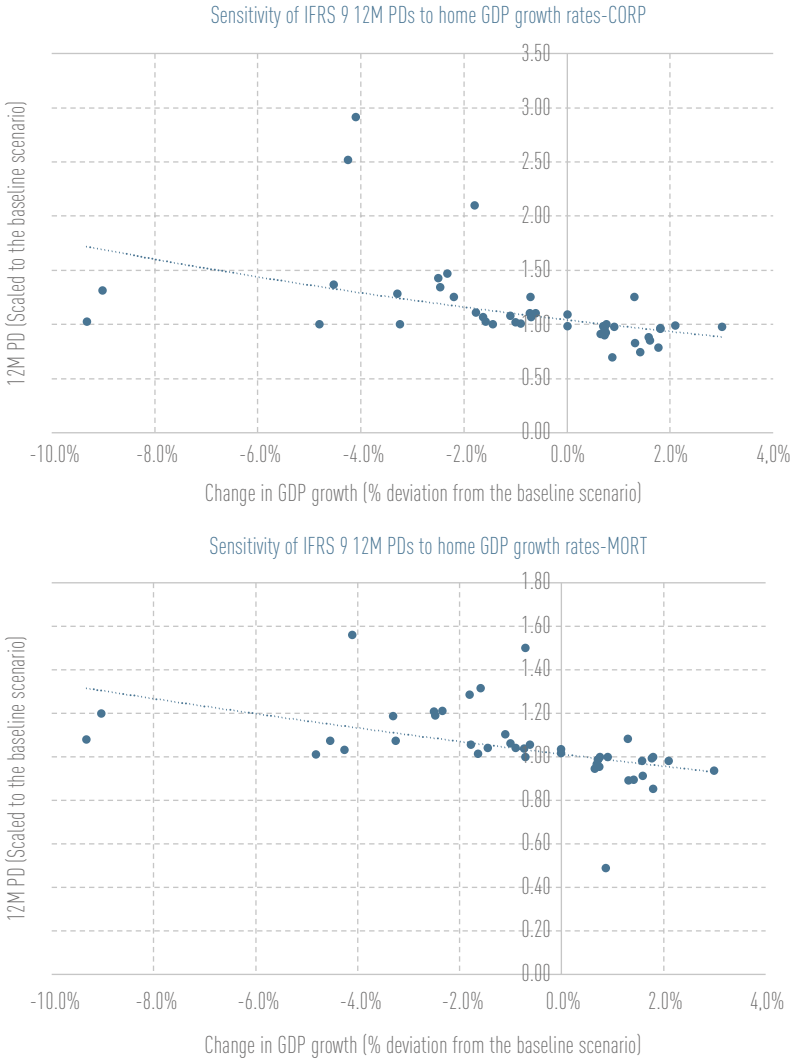


85. For the IFRS 9 PDs, for instance, the effect coming from the incorporation of FLI has been generally material (i.e. median value around 15% less than the long run/through-the-cycle (i.e. without FLI incorporated) IFRS 9 PD ([62]). Nonetheless, the high degree of variability of the impact and the presence of outliers, in particular, from those reporting negative impacts of FLI on IFRS 9 PD, may suggest the existence of additional aspects driving differences in the sensitiveness to FLI observed among institutions. Some of these aspects might be linked to the set of data, methodologies and statistical models used to incorporate FLI at PD level. This may require further supervisory scrutiny to understand if the choices and approaches developed by institutions are sufficiently sound and enable reflecting the macroeconomic forecast consistently and directionally at risk parameter level.
86. The data collected has also provided some insights into the sensitivity of PD estimates to the changes of the GDP values projected by institutions, and a specific analysis was conducted over the 3-year forecast horizon. In general, the PD sensitivity to GDP variation has proven not to be particularly high in 2021. Nonetheless, divergences have been observed with some institutions reporting outliers that would require further inves-

([62]) The IFRS 9 TTC PD has been defined in the template of the data collection as the unconditional probability of a default event within 12 months following the reporting date, which should correspond to the intermediate PD estimated by the relevant IFRS 9 model (e.g. Markov chains, Fitting with Weibull or Cox functions, etc...) before the application of any PIT and FLI shift/adjustment.

tigation. Especially for those reporting to have almost no impact on PDs from changes of GDP, which might be due to the incorporation of 2020-2021 default data but might also signal the existence of smoothening practices put in place to achieve more stable estimations. Even if these practices might have been used to capture the high uncertainty in the macroeconomic environment, ECL models that are not sensitive to the evolution of the macroeconomic variables represent a matter of concern. This is because, as per IFRS 9, impairment models should estimate ECLs to reflect the effects of present and forward-looking conditions (i.e. point-in-time estimates), and therefore achieving through-the-cycle results may not meet this objective ([63]).

Figure 35: Sensitivity of IFRS 9 12-month PD to GDP for CORP and MORT portfolios



([63]) According to IFRS 9.BC5.282 '[...] through-the-cycle approaches [...] result in a loss allowance that does not reflect the economic characteristics [...] at the reporting date'.

METHODOLOGY

METHODOLOGICAL APPROACH

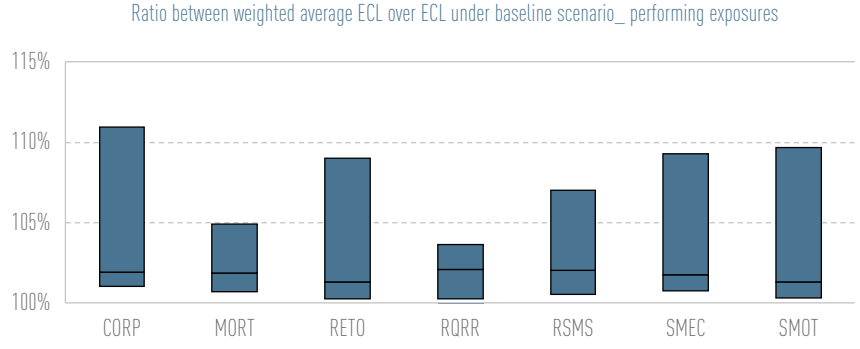
This analysis aimed to evaluate the sensitivities of IFRS 9 PD to macroeconomic variables, focusing on the GDP growth of the jurisdiction of the institution under consideration. For those institutions reporting more than one scenario, a PD scaled factor is computed for each macroeconomic scenario reported. The PD scaling factor is the baseline PD (i.e. the $Scaled_{PD} = \frac{PD_{scenario_j}}{PD_{scenario_{i-baseline}}}$) and is computed at portfolio level.

Similarly, the GDP is scaled to the baseline GDP estimate (i.e. the $Scaled_{PD} = GDP_{scen\ x} - GDP_{baseline\ scenario}$). The 12-month Δ GDP growth estimates are compared with the corresponding scaled PDs, associated with each scenario.

5.4. Effect of non-linearity and probability framework

87. The effect of non-linearity on the ECL estimates has been quite limited in 2021 for HDPs, confirming the same evidence detected in the previous exercise on LDPs. The low impact of non-linearity raises prudential concerns as this implies that the ECL figures remain mainly driven by the assumptions underlined in the baseline scenario and the effects of alternative scenarios continue to be quite limited. Consequently, the final ECL figures may not fully incorporate the uncertainties embedded in the different macroeconomic forecasts and may not properly reflect the presence of non-linearity between macroeconomic variables and final ECL figures, with the risk of not consistently representing the losses that would be realised should the evolution of the macroeconomic context materially deviate from the baseline assumptions. This evidence suggests the need for institutions – especially in the context of high uncertainty in the future macroeconomic evolution – to adequately reflect non-linearity effects in their ECL estimations, and the need for supervisors to further scrutinise institutions' practices in this regard.
88. The low impact of non-linearity might be a consequence of potential deficiencies in the probability-weighted framework adopted and in the process followed by institutions to define the alternative scenarios considered for ECL purposes.
89. In general, institutions using multi-scenario approaches did not differentiate the weights assigned to the probability of each scenario among exposure classes. The approaches adopted were generally also in alignment with those used for LDPs.

Figure 36: Comparison of the weighted average ECL and ECL under the baseline scenario (December 2021)



Box plot with the 25th, 50th and 75th percentiles.

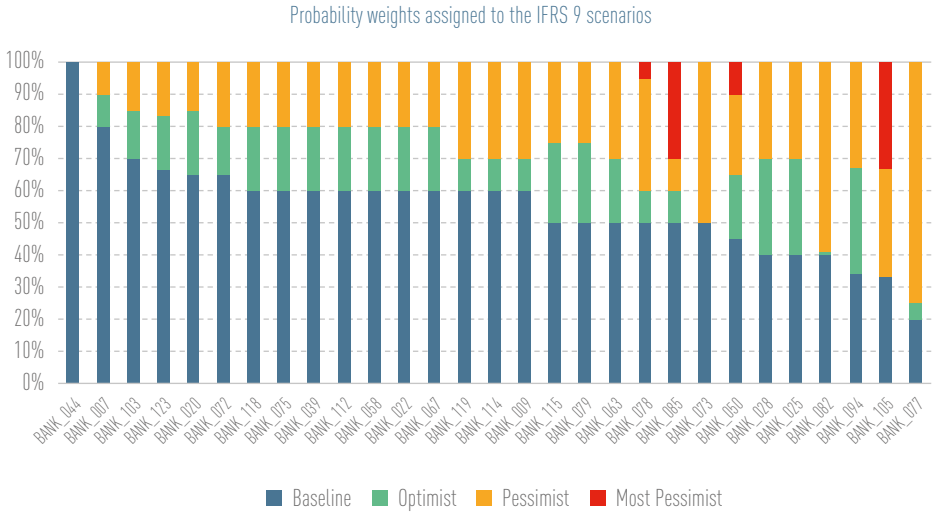
90. On average, the weights assigned to the baseline scenario accounted for the largest share (almost 60%), while the weights assigned to the alternative scenarios were slightly higher for the downward (27%) versus the upward scenario (17%).

Figure 37: Average of weights assigned to the three main macroeconomic scenarios of the institutions in the sample

Average weights assigned to the 3 macroeconomic scenarios	
Upward scenario	17%
Baseline scenario	57%
Downward scenario	27%

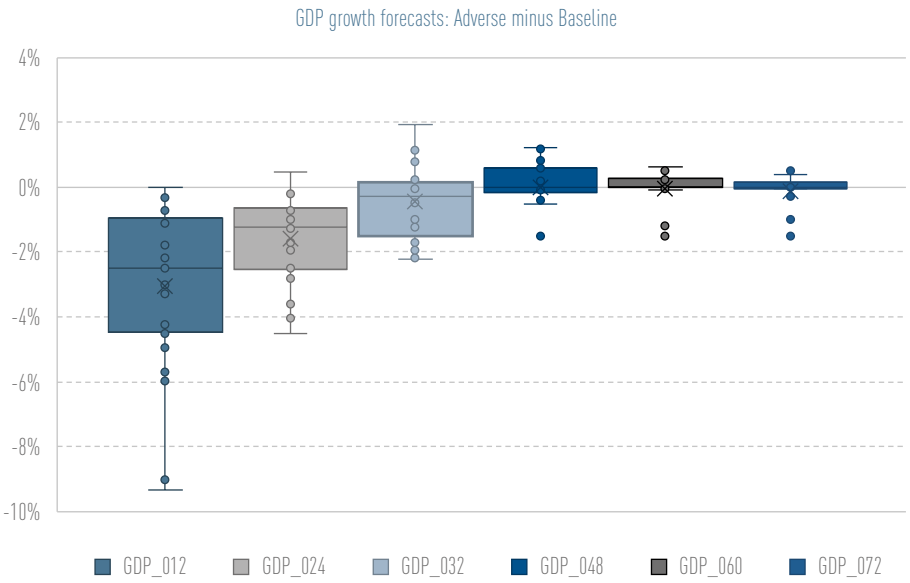
91. The benchmarking analysis of these figures at the individual institution level (comparing forecasts of the home jurisdiction) provides more meaningful insights on institutions' practices in this area of the framework. In fact, a quite relevant dispersion of values across institutions is observed and the existence of a robust relationship between the severity of the scenarios defined and their probability of occurrence needs to be further proved.

Figure 38: Probability weights assigned to the different IFRS 9 macroeconomic scenarios



92. This evidence suggests the need for institutions to further improve the definition of the probability assigned to the different scenarios considered in their ECL models, ensuring that the weights assigned to these probabilities are always driven by a robust methodological framework and strict governance rules and not making use of excessive judgement or simplistic choices that could otherwise introduce bias into the final ECL estimations.
93. On the definition of alternative scenarios, it was observed that the deviation between baseline and adverse scenarios has been, in some cases, quite limited for the first years of analytical projections and, for all institutions, has tended to gradually disappear after the third to fourth year due to the reversion techniques and anchoring to the baseline scenario after the end of the forecasting period. Nonetheless, the large dispersion in values observed among institutions' forecasts considered in the adverse scenarios and the mentioned interaction with the probability weights assigned call for further supervisory scrutiny, as this evidence could represent a relevant source of variability of ECL estimates.

Figure 39: Adverse minus baseline GDP growth forecasts (December 2021)



Box Plot with 25th, 50th and 75th percentile.

Part 3: Focus on backtesting practices

6. Backtesting

KEY TAKEAWAYS

KEY TAKEAWAYS OF THIS SECTION

The importance of backtesting is quite remarkable for ECL forecasts given that IFRS 9 models are not subject to a prior supervisory approval for their use. Given the particular business carried out by institutions – that implies relying on relevant credit risk information and developing sound credit risk management practices to manage exposures and assess the risks taken – the EBA expects backtesting to be part of a sound validation framework for IFRS 9 models, despite the lack of detailed guidance in IFRS 9 and in the EBA GLs on accounting for ECL thereon.

In the meantime, it is acknowledged that backtesting ECL lifetime estimations requires not only robust methodologies, tools, policies and effective processes to be established, but also sufficient sets of data and actual observations of realised figures. This might, in some cases, not be fully available for institutions at this stage, considering the relatively recent implementation of IFRS 9 in the EU.

The IFRS 9 benchmarking analysis has enabled the collection of important information in this area of the framework. The evidence collected has revealed that institutions have generally developed backtesting methodologies for their ECL models, also leveraging from the existing practices and tools developed for IRB purposes. Some parts of the framework are more developed at current stage (e.g. 12-month PD backtesting) while others require further improvements (e.g. ECL and overlays backtesting). It was also observed that some institutions (19%) have either not yet backtested any parameters/risk factors or have limited backtesting only to 12-month PD and/or LGD and are still planning to develop and/or enlarge the scope of their backtesting activities.

Moreover, divergent approaches have been observed in specific parts of the framework, especially on the type of analysis performed, governance of the process (i.e. clear policies, type of tests and related acceptance levels, role and responsibilities, etc.) and, more notably, on the usage of the backtesting results for the periodic review and improvement of the IFRS 9 models.

In general, it was observed that, institutions perform backtesting more at the individual model parameter and for staging allocation while other components such as the FLI and post-model adjustments/overlays or even final ECL levels are often less backtested.

It was also noted that only half of institutions that regularly perform backtesting have formalised their process developing internal policies which include, inter alia, the indicators to be used, the type and frequency of the tests to be carried out and the relevant thresholds of acceptance to determine the results of the backtesting analysis.

More surprisingly, it was observed that only a few institutions have reported effectively using the backtesting outcomes to regularly take specific actions to address the issues thereby encountered. While it is acknowledged that this evidence might be justified in some circumstances and potentially linked to the need to better test and train the ECL backtesting framework – given its still quite modest history – the lack of proper follow-up actions on backtesting results raises some prudential concerns, especially, when the tests performed revealed underperformance and low predictive powers of the model's estimates, which might not ensure the consistency of the reported ECL figures.

It is therefore expected that institutions will continue to improve their backtesting framework, enlarging the area of the ECL models being effectively backtested and ensuring that the process is well established under a sound governance framework and clearly defined in internal policies and procedures.

Moreover, institutions are expected to improve the process on the usage of backtesting analyses for the periodic review of IFRS 9 estimates and promptly follow up on the benchmarking results, implementing the improvements needed to ensure more robust and consistent ECL outcomes.

MORE INFO

WHAT IS BACKTESTING?

Backtesting is an important tool for institutions to challenge the main methodological modelling choices developed, to regularly and empirically assess the performance of these models for the periodic review and implementation of further improvements. This principle is valid for any credit risk model, including both IRB and IFRS 9 models.

As a general principle, backtesting is part of the quantitative validation of a model that is based on the comparison of forecasted against realised values. Validation is a broader term that encompasses backtesting but refers to the whole process and a wide array of analyses employed to assess the performance of the model.

For IRB credit risk models, the performance of the model is generally evaluated considering, among others, the following dimensions:

a. Risk differentiation: to assess if the model ensures meaningful differentiation of risks and if homogenous exposures are assigned the same grade or pool. Generally, this implies developing quantitative metrics to evaluate the model's discriminatory power, as well as the homogeneity within and heterogeneity across grades or pools.

b. Risk quantification: to assess if the model's estimates have good predictive power. Generally, this implies performing backtesting analysis where forecasted and realised values are compared and evaluated by means of statistical tests.

As the backtesting of credit risk models entails the comparison of the forecasted value of each estimated parameter (e.g. PD, LGD, EAD) with the correspondent evidence/realised value, one of the key issues of the process is the proper definition of what should be considered actual realisation for each risk estimate and the consistency of the two comparable terms, as well as the time windows used to track these observations.

In this regard, the CRR explicitly prescribes that IRB models compare realised default rates with estimated PDs for each grade and perform analogous tests for estimated LGDs (against economic

and realised LGD) and conversion factors (against realised EAD) when institutions use own estimates of these parameters. Moreover, a definition of the realised factors is provided by the CRR and complemented by the EBA RTS on assessment methodology ([64]), and by the EBA GLs on PD and LGD estimation ([65]).

In addition, the CRR contains specific provisions that require effective use of the backtesting results for improving the models (and their conservativeness). Essentially, institutions are required to analyse any deviations shown by the backtesting results, to have in place sound internal procedures for situations where deviations in realised parameters signal a decrease in model accuracy and to revise the estimates conservatively if there is continued underestimation.

While IFRS 9 does not explicitly require validating ECL models and performing backtesting on model estimates (consistent with the lack in the Standard of any prescriptive method to measure ECL), the EBA GLs on accounting for ECL have set the expectation of the validation of IFRS 9 estimates. This should include, among other dimensions, validating the performance of the model (which includes backtesting). On the latter, the guidelines clarify that institutions should have internally established standards for defining what is an acceptable model performance and, more remarkably, that when performance thresholds are significantly breached, remedial actions to the extent of model recalibration or redevelopment need to be taken.

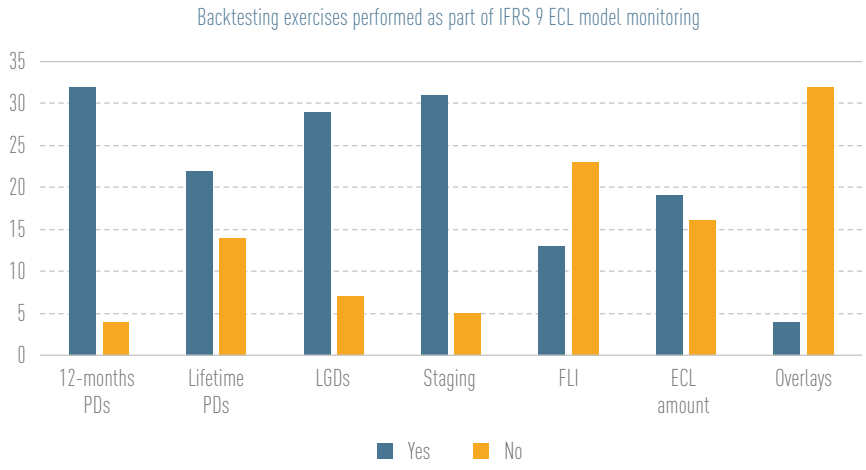
Nonetheless, the guidance is not very detailed in the way validation – and backtesting – should be performed. Indeed, it does not provide expectations or related definitions on which forecasted and realised values should be compared for backtesting purposes, which may create challenges considering that IFRS 9 estimates also refer to lifetime estimations that require long time series to be tracked.

Notwithstanding the significant difference between the IRB (which is based on a 1-year time horizon) and IFRS 9 (which includes a lifetime dimension) framework, the provisions and principles already stated for the regulatory credit risk models may represent a valid starting point for developing sound backtesting approaches for accounting purposes also.

([64]) Final Draft RTS on Assessment Methodology for IRB, July 2016

([65]) EBA Guidelines on PD and LGD estimation, November 2017

Figure 40: Use of backtesting per IFRS 9 ECL model factor



6.1. Staging allocation

94. Most institutions (80%) have implemented backtesting for staging allocation while only a few institutions envisage its incorporation in the (near) future.
95. The main rationale provided by institutions for not performing backtesting at the staging allocation level has been the consideration that staging outcomes are already reviewed in other credit risk processes (e.g. via the general monitoring of the quality of credit exposures or early warning systems), which does not justify or compensate for the lack of backtesting.
96. In general, the objectives of the test performed on staging allocation are related to the evaluation of the predictive power of the quantitative thresholds used for SICR assessment, the prior classification to Stage 2 before moving to Stage 3 and the stability of the stage allocation over time.
97. Backtesting of staging allocation is performed with different indicators and tests which include, in most cases: (i) assessing transition matrix among stages; and (ii) analysing the proportion of exposures which move to Stage 2 only as a result of qualitative/backstop indicators.
98. Almost all institutions have set internal policies which include the relevant thresholds and acceptance levels for assessing backtesting results. Nonetheless, only few institutions have reported following up on any breach in the thresholds with envisaged remedial actions that would generally depend on the severity of the results.
99. The EBA considers backtesting of staging assessment an important dimension of analysis that might provide useful information for evaluating the performance of the staging process and the soundness of the indicators used for determining SICR, which would enable institutions to identify possible deficiencies in the process and trigger specific actions to ensure a timely recognition of lifetime ECLs. Further improvements are therefore expected in this area of the framework, which might require enlarging the list of tests and indicators used for the analysis and, more importantly, better defining the process on the usage of the backtesting results.

Figure 41: Objective of the backtesting performed at the level of the staging allocation

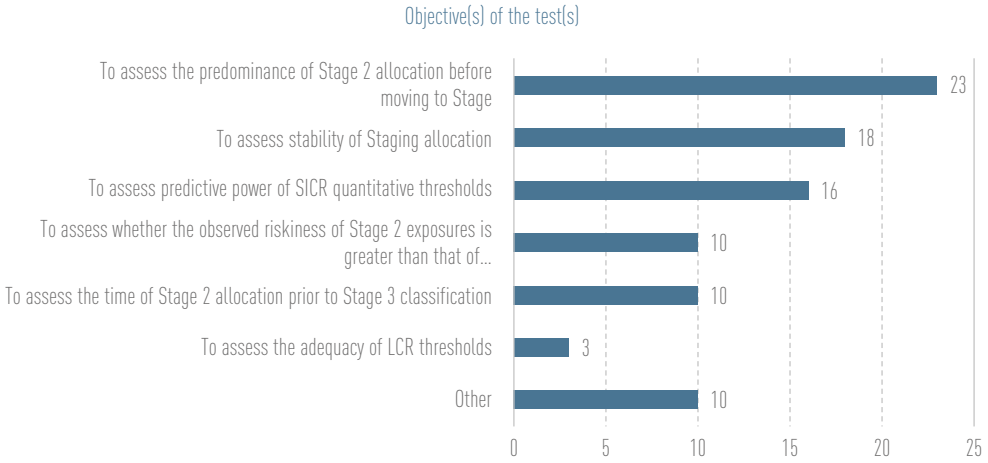
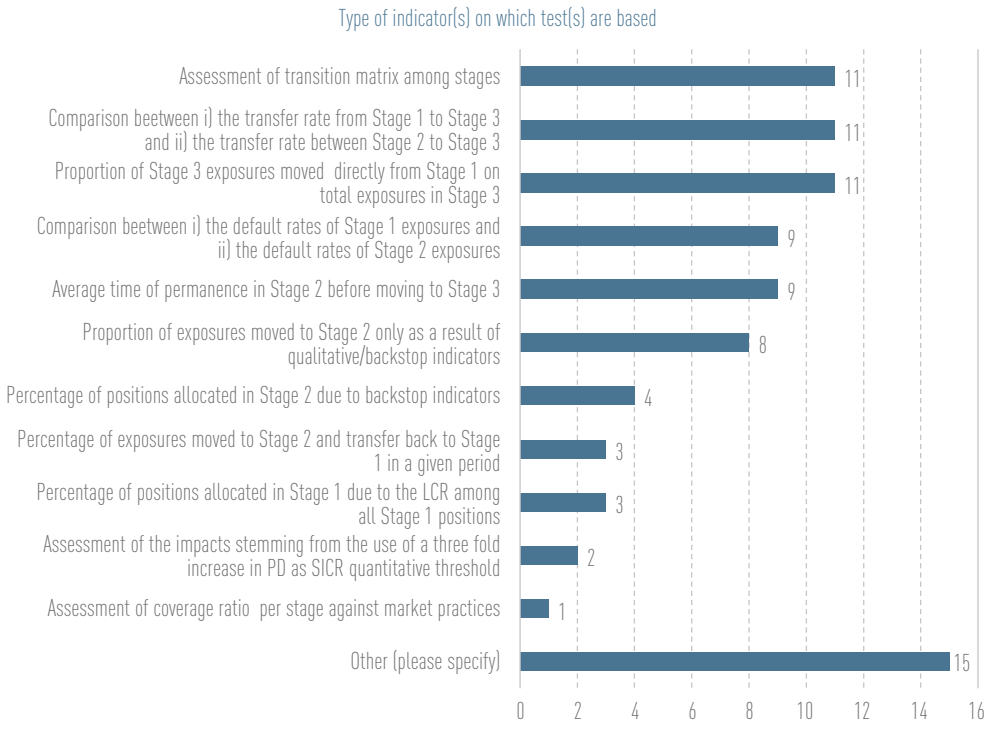


Figure 42: Type of indicator used for the backtesting of the staging allocation



6.2. ECL measurement

100. It was observed that more than half of the institutions under the sample perform backtesting of the ECL amount. For those institutions that have not implemented the backtesting yet, more than half envisage incorporating it in the near future. The main rationale provided for the current lack of consideration of backtesting at ECL level has been the assumption that ECL is indirectly tested via the performance of backtesting at the level of the individual model parameters (e.g. IFRS 9 PD and LGD).
101. The main objectives of the backtesting of ECL, as reported by institutions, have been to evaluate whether the estimates of changes in ECL are consistent with the changes in related observable data. For this, institutions have generally compared the lifetime ECL amount (without overlays) with the cumulated credit losses incurred in a given period of time, while others have compared the estimated ECL to the amount of actual losses incurred in the first year after the reporting period under consideration.
102. On the latter, it is worth mentioning that the losses effectively incurred in a year might not represent the correct observed value to be compared with the ECL of the instruments at reporting date, given the generally long timeframe between the prediction of the models and realisation of the losses. Therefore, institutions are expected to ensure that the comparison between predicted and realised values are performed on a similar basis and portfolios, developing robust methodologies for this purpose, and tracking the information needed to perform meaningful tests at ECL level.
103. Only half of the institutions in the sample have set internal policies that include the relevant thresholds and acceptance levels for determining backtesting results at ECL level. Those institutions have reported no breaches of any thresholds during the last round of backtesting analysis performed.
104. ECL backtesting is considered extremely important and a key dimension of analysis to test the overall robustness of the ECL framework and the accuracy of the model's predictions. While it is acknowledged that backtesting ECL outputs may require long time series not fully available yet, institutions are encouraged to implement this dimension of analysis into their ECL backtesting framework, and develop sound methodologies that would enable a comparison of model estimations with real observations.

Figure 43: Objective of the backtesting performed at the level of the total ECL amount

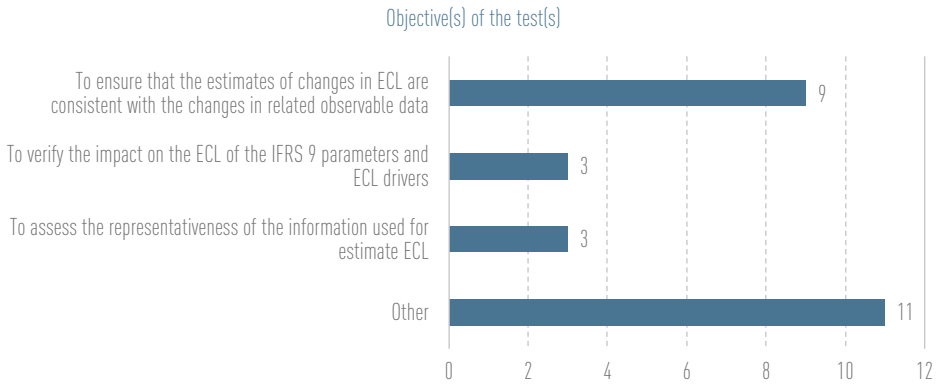
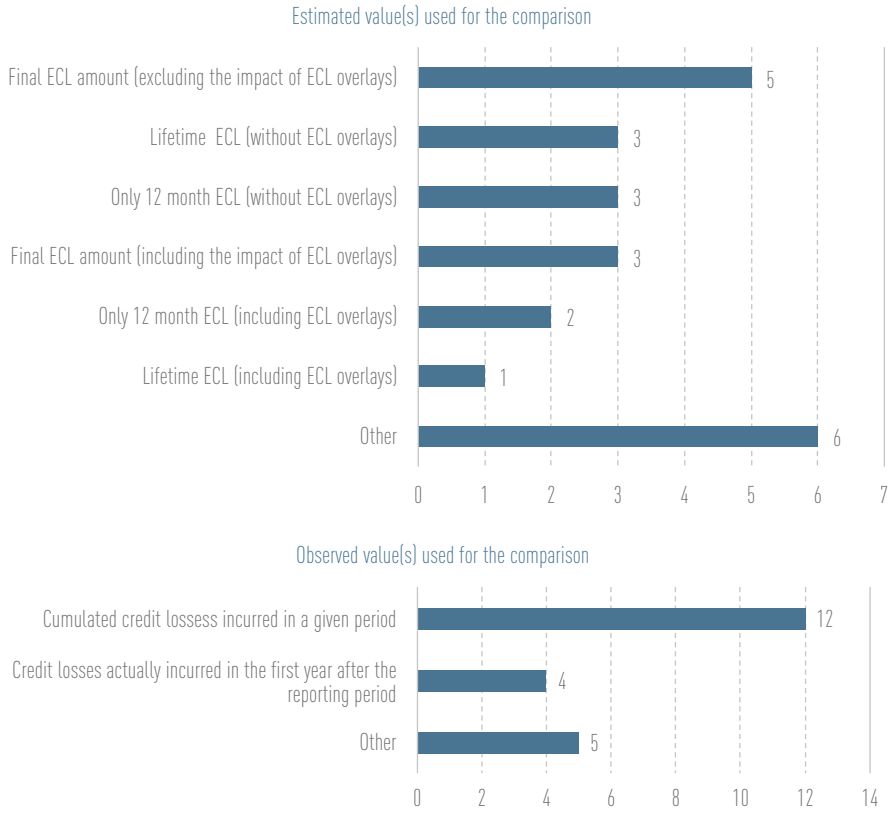


Figure 44: Estimated and observed value(s) used for the comparison in the backtesting of the total ECL amount



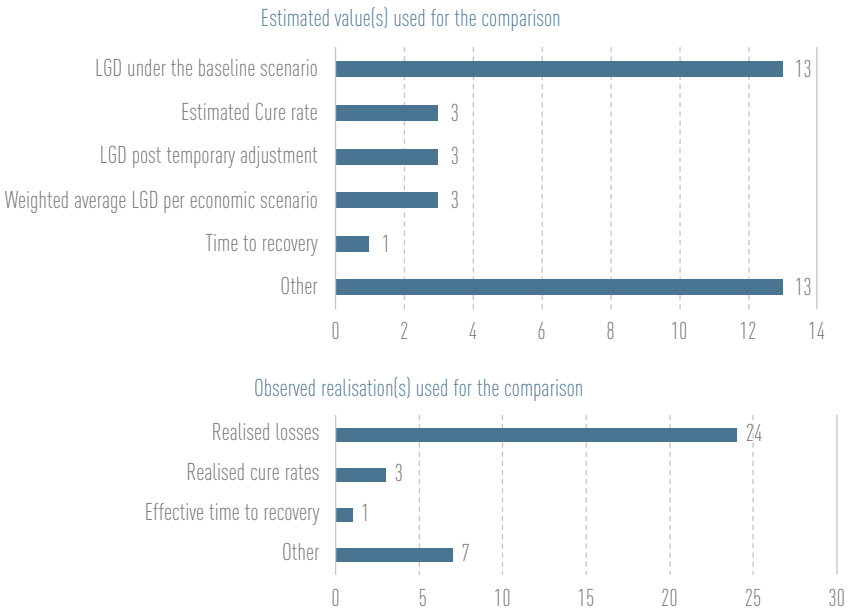
6.3. IFRS 9 LGD estimates

105. Most of the institutions in the sample have reported the implementation of backtesting for the LGD parameter, with few institutions still planning to carry out this activity in the near future, mainly due to lack of available data as justification for the delay.
106. In most cases, institutions have reported using as estimated value the LGD under the baseline scenario, while a few banks have directly used the weighted average LGD. On the contrary, the choice of the observed value used has been more consistent, which generally corresponds to the realised losses. The same considerations already stated for ECL backtesting related to the need to ensure a homogeneous comparison between predicted and realised values are also valid for LGD.
107. Moreover, while it is acknowledged that the LGD estimated under the baseline assumptions can provide a meaningful basis on the ECLs envisaged by the model, further considerations are required in this regard. This should imply evaluating whether the weighted average LGD

might be considered a more suitable proxy of the best estimates of the LGD, in particular, as it would incorporate the consideration of the FLI and non-linearity in the ECL model, which might also be important aspects to backtest.

108. Even though most institutions have set internal policies with relevant thresholds and acceptance levels, not all of them have performed the backtesting of LGD in practice, assessing whether the internal thresholds were breached. The few institutions that have carried out backtesting analysis and that have observed breaches of the thresholds have, nonetheless, taken follow-up actions were deemed necessary to address the issues encountered.
109. This evidence confirms the need for institutions to improve their backtesting framework in the area of LGD, ensuring robust governance of the process which includes relevant timelines and frequency of the analysis to be performed and clearly defined in internal policies and procedures.
110. While it is acknowledged that there may be reasons justifying the lack of performance of LGD backtesting at the current stage of implementation (e.g. the need to collect sufficient observations of the realised figures for different portfolios) institutions are expected to improve the process on the usage of the backtesting analyses for the periodic review of IFRS 9 estimates and to timely follow-up on the benchmarking results. This would ensure the introduction of improvements to the models needed for more robust and consistent ECL outcomes.

Figure 45: Estimated and observed value(s) used for the comparison in the backtesting of the LGD parameter

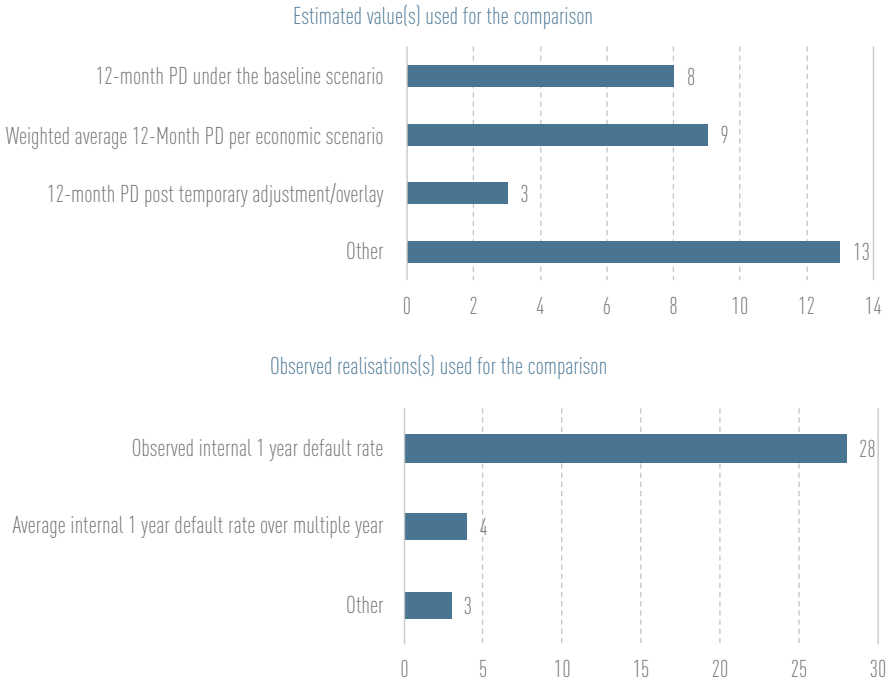


6.4. IFRS 9 PD estimates

12-month PD

111. The analyses performed have revealed that the backtesting of 12-month PD is the area of framework more developed at the current stage, which may be explained by the possibility of relying to a larger extent on similar practices and data of actual realisations already developed and collected for IRB purposes.
112. Almost all the institutions under the scope of this exercise have reported the performance of backtesting at the level of the 12-month PD with a few institutions reporting divergent practices on the envisaged way forward. The backtesting is, in overall terms, performed by comparing the 12-month PD under the baseline scenario and/or the weighted average 12-month PD per economic scenario as estimated value, together with the realised 1-year default rate as the observed value.
113. Contrary to what has been observed for other dimensions of analysis, institutions have reported to have internal policies with relevant thresholds in place to assess the backtesting results and have properly followed-up with remedial actions and model improvements when deviations were deemed significant.

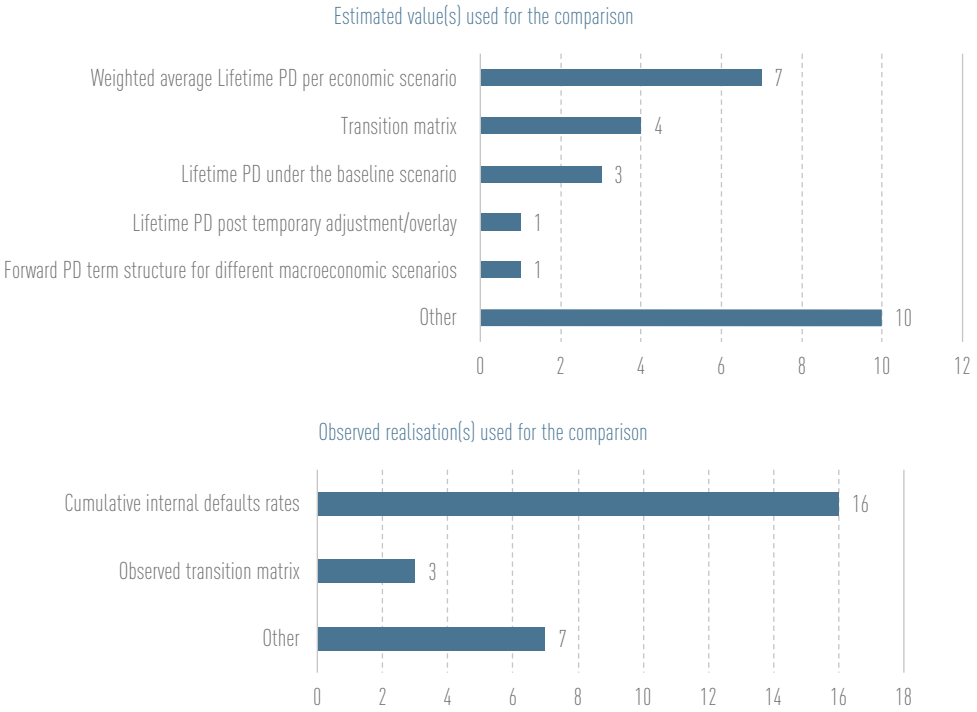
Figure 46: Estimated and observed value(s) used for the comparison in the backtesting of the 12-month PD parameter



Lifetime PD

114. More than half of institutions have reported performing backtesting at lifetime PD level. Looking at those institutions that do not currently backtest the lifetime PD, different trends were observed, with almost half of them not envisaging its implementation in the near future.
115. Based on the data provided by institutions, the absence of backtesting at the level of the lifetime PD does not seem to be justified by main arguments, which include the consideration of lack of usefulness of the backtesting for lifetime PD estimation and the non-availability of data.
116. When backtesting of lifetime PD is performed, the analyses are generally carried out by comparing the weighted average lifetime PD per economic scenario with the cumulative internal default rates as the estimated and observed values, respectively. Generally, institutions have developed internal policies with thresholds for assessing backtesting results and if there are deviations considered material, follow-up actions to review and/or recalibrating the parameter were performed.
117. The absence of backtesting for the lifetime parameter may raise prudential concerns as the lack of analysis between the estimated lifetime PD with the actual cumulative default observations may lack important information needed to evaluate the soundness of the models built to determine the lifetime estimates. This would not ensure that these models provide consistent ECL outcomes and prevent the implementation of improvements when needed.
118. For this reason, it is expected that those institutions currently not performing backtesting for lifetime PD reconsider their approach, by developing the methodologies and the related tests, as well as by collecting all the relevant data necessary to implement backtesting analyses on lifetime PDs.

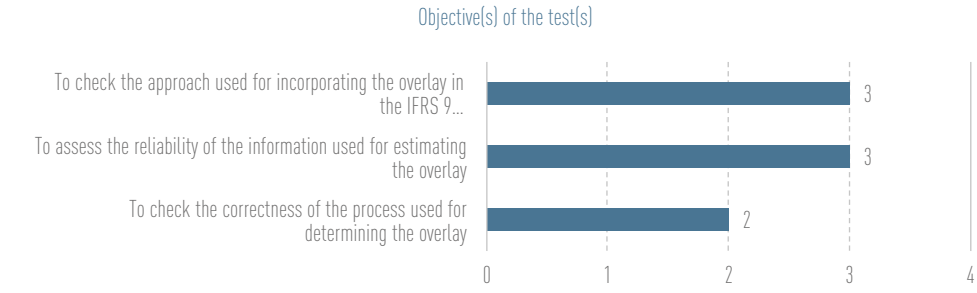
Figure 47: Estimated and observed value(s) used for the comparison in the backtesting of the lifetime PD



6.5. Overlays

119. Contrary to the pattern confirmed for other parameters within the ECL measurement, it was observed that post-model adjustments/overlays have often not been backtested, with the vast majority of institutions having no plans to implement such backtesting in the near future.
120. While it is acknowledged that the lack of backtesting on overlays can be driven by the consideration of their temporary nature and the high use of expert judgement for determining these adjustments, it should be noted that in recent years these overlays have become an integral part of the ECL framework, and have significant impacts on the total ECL figures.
121. In light of these considerations, the quantification of overlays is expected to be subject to backtesting analysis, in order to assess the accuracy of the adjustments introduced against actual realised figures.
122. Even though overlays' backtesting might be designed in different ways (e.g. as a separate backtesting component or implicitly derived from ECL's backtesting) depending on the level at which overlays are applied (i.e. at ECL or parameter level), these analyses are considered valuable to gather important insights about the performance of the methodologies used for quantifying the model adjustments that may lead to further improvements in their framework.

Figure 48: Objective of the backtesting performed at the level of the application of overlays



6.6. Forward-looking information

123. As regards the backtesting practices observed for the incorporation of FLI, it was noted that more than half of the institutions in the sample have not implemented backtesting. In most circumstances this finding is linked to the use of external macroeconomic forecasts provided by central banks or other relevant international bodies (which imply not producing estimated value on FLI to be backtested).
124. The main objective of backtesting of the FLI reported by institutions has generally been assessing the reliability of the forecast of the macroeconomic variables incorporated into the models. This is usually performed by comparing the forecast of certain macroeconomic variables during the previous reporting period with the realised macroeconomic figures. While some institutions reported having internal policies with thresholds, only half of them have assessed the results triggering potential remedial actions.
125. In this regard, it is generally expected that backtesting analyses are periodically performed by all institutions to evaluate the performance of the projections of the internal macroeconomic forecasts used for ECL purposes. Where major deviations exist, proper remedial actions should be triggered, including the option to evaluate a different source of FLI (e.g. usage of external macroeconomic forecast provided by international bodies/ central banks).

Figure 49: Objective of the backtesting performed at the level of the incorporation of FLI

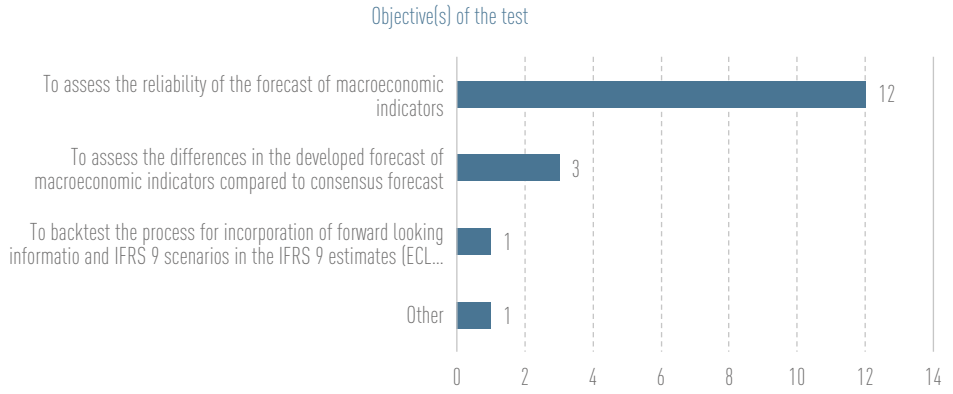
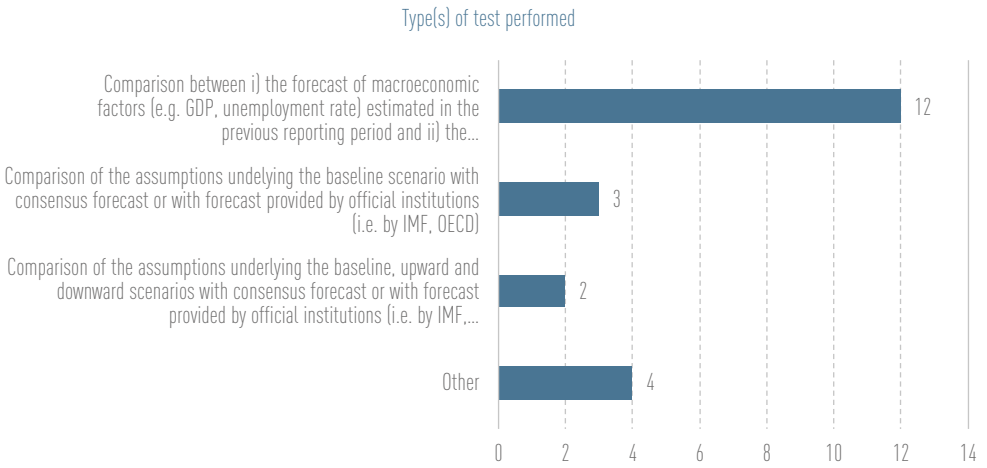


Figure 50: Type of indicator used for the backtesting of the incorporation of FLI



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